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PHASE I & II  
ASSESSMENT  
MONITORING  
REPORTS

YEAR(S):

2005

**PHASE I AND PHASE II  
ENVIRONMENTAL SITE ASSESSMENT  
AND SITE RESTORATION REPORT  
JAMAR OIL PROCESSING AND TREATING PLANT  
MONUMENT, LEA COUNTY, NEW MEXICO**

Topical Report RSI-1832

NM-0-014

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April 4, 2005

## EXECUTIVE SUMMARY

RESPEC was retained by the Oil Conservation Division (OCD) of the Energy, Minerals and Natural Resources Department of the State of New Mexico to perform a Phase I and Phase II Environmental Site Assessment (ESA) and Site Restoration of the property known as the JAMAR Oil Processing and Treating Plant site, located 2.7 miles south of Monument, New Mexico, along State Route 8 in Lea County, New Mexico (hereafter referred to as "the subject property"). The ESA and property restoration were performed in a manner consistent with the methods and procedures described in the latest version of the American Society for Testing and Materials (ASTM) *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*.

The objective of RESPEC's ESA was to evaluate whether current or past activities on or adjacent to the subject property may have resulted in significant contamination by hazardous materials or wastes, a condition subsequently referred to in this report as a "Recognized Environmental Condition."

The objective of the Site Restoration was to remove from the site any known tanks and, to the extent feasible, contaminated soil, fluids, and debris identified during the ESA portion of the project.

RESPEC's scope of services for the Phase I and Phase II ESA and Site Restoration consisted of the following:

- An inspection of the subject property and nearby area.
- A review of historical information about activities on the subject property.
- A review of readily available regulatory information concerning the subject property and nearby properties of environmental concern.
- An investigation of the extent of total petroleum hydrocarbons, chloride, and total dissolved solids in the soil and groundwater of the subject property.
- An investigation to determine if groundwater had been impacted as a result of an on-site release or on-site operations.
- The decommissioning, decontamination, and removal of 15 aboveground storage tanks for recycling.
- The removal of contaminated soil, fluids, and debris for off-site disposal.
- The preparation of this report detailing RESPEC's results, conclusions, and recommendations.

The subject property is located in the SE/4 of Section 8, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico. (A vicinity map is presented as Figure 1 and a site map is presented as Figure 2.) The search radius for facilities of potential environmental concern in the vicinity of the subject property is in conformance with ASTM Standard E1527-00. Based on its site inspection and review of available information, RESPEC identified on-site sources that have created, or have the potential to create, a Recognized Environmental Condition.

Recognized Environmental Conditions identified during the ESA phase of the project included:

- 20 large-capacity steel aboveground storage tanks.
- Solids and fluids of unknown composition in the aboveground tanks.
- Hydrocarbon-stained surface soils.
- Four large debris piles containing wood, steel, iron, and trash.
- Two small outbuildings and one small office building of unknown age and contents.

Site restoration procedures were implemented for the conditions above after completion of the ESA, as required by the scope of work included in RESPEC's contract for services with the OCD.

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## 1.0 INTRODUCTION

RESPEC was retained in April 2004 by the Oil Conservation Division (OCD) of the Energy, Minerals and Natural Resources Department of the State of New Mexico to perform a Phase I Environmental Site Assessment (ESA) and Phase II Site Investigation and Site Restoration for the subject property, the site of the JAMAR Oil Processing and Treating Plant, located 2.7 miles south of Monument, Lea County, New Mexico, along State Route 8. The ESA was performed in a manner consistent with the methods and procedures described in the American Society for Testing and Materials (ASTM) *Standard Practice for Environmental Site Assessment: Phase I and Phase II Environmental Site Assessment Process* (Standard Designation E 1527-00), published in July 2000. Signatures of RESPEC personnel involved in the preparation of this report are included in Appendix A. The ESA and Site Restoration objectives and the scope of work are presented in the following sections.

### 1.1 PURPOSE

The purpose of the Phase I and Phase II ESA was to evaluate whether current or past activities on the subject property may have resulted in significant contamination by hazardous materials or regulated wastes, a condition referred to in this report as a "Recognized Environmental Condition." A Recognized Environmental Condition is defined in the ASTM Phase I Standard as:

The presence or likely presence of any hazardous substances or petroleum products on a property under conditions that indicate an existing release, a past release, or a material threat of a release of any hazardous substances or petroleum products into structures on the property or into the ground, groundwater or surface water of the property. The term includes hazardous substances or petroleum products even under conditions in compliance with laws. The term is not intended to include *de minimis* conditions that generally do not present a material risk of harm to public health or the environment and that generally would not be the subject of an enforcement action if brought to the attention of appropriate governmental agencies.

### 1.2 SCOPE OF SERVICES

RESPEC's scope of services for the Phase I and Phase II ESA and Site Restoration consisted of the following:

- An inspection of the subject property and nearby area.

- A review of historical information about activities on the subject property.
- A review of readily available regulatory information concerning the subject property and nearby properties of environmental concern.
- An investigation into the extent of hazardous or regulated substances, including hydrocarbons (volatile and semivolatile), hydrocarbon constituents (volatile and semivolatile), and inorganic compounds (total dissolved solids, chlorides, and fluorides) in shallow subsurface and surface soils.
- An investigation into the nature and extent of groundwater contamination, by means of six groundwater monitoring wells on the subject property.
- Decommissioning, decontamination, and removal of 15 aboveground storage tanks (ASTs), including all contents, for proper disposal and recycling.
- Removal and disposal of hazardous and regulated substances and debris and trash from the entire site, approximately 8.2 acres in area.
- The preparation of this report detailing RESPEC's results, conclusions, and recommendations.

The radius of search for facilities of potential environmental concern in the vicinity of the subject property is in conformance with ASTM Standard E1527-00.

## **2.0 SITE DESCRIPTION**

Information concerning the subject property was obtained from a site inspection conducted by representatives of RESPEC and a review of the documents referenced in Section 7.0 of this report.

### **2.1 LOCATION AND LEGAL DESCRIPTION**

The subject property is located in the SE/4 of Section 8, Township 20 South, Range 37 East, N.M.P.M., Lea County, New Mexico, 2.7 miles south of Monument, New Mexico along State Route 8. A vicinity map is presented as Figure 1 and a site map is presented as Figure 2.

### **2.2 SITE AND VICINITY GENERAL CHARACTERISTICS**

Site and vicinity characteristics, including topography, geology, and hydrogeology, were evaluated on the basis of site observations, published literature, and maps. According to the topographic map for Monument, New Mexico, produced with the software package DeLorme

Topo USA® 3.0, Southwest Region © 2001, the subject property is at an elevation of approximately 3,542 feet above mean sea level. Depth to groundwater at the subject property is approximately 28 feet below ground surface (BGS) and has a gradient direction generally toward the southeast, as confirmed by monitoring well completions.

The regional geology of Lea County, in the area known as the “Llano Estacado” because of the flat-lying surface topography, includes Cenozoic deposits of sands and gravels. The base of the Cenozoic sediments marks the disconformity to Paleozoic sedimentary bedrock deposits of sandstones, shales, and limestones that are prolific oil and gas producers in the Permian Basin.

Monitoring well drilling at the subject property revealed subsurface lithology consisting of alluvial deposits overlying an approximate 25-foot layer of caliche. At the base of the caliche at approximately 27 feet BGS, the top of the Ogallala Formation was penetrated. The water-bearing Ogallala consisted of unconsolidated, poorly graded sands and gravels in this area. Groundwater, with a southeasterly gradient, was encountered at approximately 28 feet BGS (see Figure 3. Groundwater Gradient Map).

## **2.3 CURRENT USE OF THE PROPERTY**

The subject property is currently being used for cattle grazing only. Mr. Jim Cooper of Monument, New Mexico, maintains ownership of five of the original 20 ASTs and various oil field-type surface equipment throughout the site.

## **2.4 DESCRIPTION OF STRUCTURES**

The subject property is unpaved and originally had two small outbuildings, one small office, and 20 steel ASTs of various capacities. During the subsequent site restoration activities, the office building and 15 of the ASTs were removed from the subject property.

## **2.5 ADJOINING PROPERTIES**

RESPEC performed a visual inspection of readily visible areas of adjacent properties as well as a review of plat maps from the County Assessor’s Office in order to document adjacent property owners. Mr. Jim Cooper is the landowner of all the adjacent properties.

## **3.0 USER-PROVIDED INFORMATION**

### **3.1 OWNER, PROPERTY MANAGER, AND OCCUPANT INFORMATION**

According to the Lea County Assessor's Office and a discussion with owner, the current owner of the subject property is Jim Cooper.

### **3.2 REASON FOR PERFORMING THE ESA**

The client required the ESA to be implemented as the initial phase of the project as outlined in the Scope of Work section of RESPEC's contract with the OCD.

## **4.0 SITE INSPECTION**

Mr. Jorge Armstrong, a representative of RESPEC, conducted a site inspection on April 17, 2004. Weather conditions at the time of the inspection were mostly sunny, with a temperature of approximately 87°F. RESPEC's site inspection included a walking inspection of the subject property and adjacent and surrounding properties, and a windshield survey of the surrounding area. Photographs taken during RESPEC's site inspection are provided in Appendix B.

### **4.1 CURRENT USES OF THE PROPERTY**

The subject property is currently vacant, without any commercial activity.

### **4.2 PAST USES OF THE PROPERTY**

The subject property formerly housed a crude oil processing and treatment plant. Twenty ASTs were used for the production of crude oil and paraffin by recycling oil production tank bottoms.

### **4.3 SITE OBSERVATIONS**

A RESPEC environmental professional conducted a site reconnaissance of the property on April 17, 2004. He noted that the ASTs on the subject property were corroded, and there was evidence of spilled and leaking fluids throughout the tank area. Soils with oil stains were noted between the two tank battery areas. Wind-blown trash, steel pipe and scrap iron, and empty 55-gallon drums, as well as numerous discarded items and other solid waste, were observed.

#### **4.3.1 Hazardous Wastes**

The laboratory tests conducted on the contents of the ASTs revealed exempt nonhazardous oil field waste. The laboratory results were certified by the OCD Hobbs District Office in Hobbs, New Mexico, as exempt nonhazardous oil field waste.

Asbestos-containing material (ACM) was identified in used piping during an ACM investigation of the subject property on April 17, 2004. The complete report of the ACM investigation and abatement, complete with all laboratory results as well as conclusions and recommendations, is included in Appendix C of this report.

#### **4.3.2 Underground/Aboveground Storage Tanks**

Twenty ASTs—three steel-bolted 500-barrel tanks, five steel-bolted 250-barrel tanks, two 210-barrel welded steel tanks, six 500-barrel welded steel tanks, two 750-barrel welded steel tanks, one 1,000-barrel welded steel tank, and one 100-barrel corrugated steel tank—were observed on the subject property. Exempt nonhazardous oil field waste of an unknown volume was observed in 19 of the ASTs. The remaining AST, the 100-barrel corrugated steel tank, was empty and dry.

#### **4.3.3 Drums and Containers**

Thirty empty 55-gallon drums were observed on the subject property.

#### **4.3.4 Polychlorinated Biphenyl (PCB)-Containing Equipment**

No PCB-containing equipment was observed on the subject property at the time of the inspection.

#### **4.3.5 Solid Waste**

Four large piles of scrap metal (an estimated 20 tons), wind-blown trash and numerous discarded items, and other solid waste, such as discarded pallets, concrete rubble, and piping, were observed on the subject property.

#### **4.3.6 Liquid Waste**

No uncontained liquid waste was observed on the subject property.

#### **4.3.7 Drains and Sumps**

RESPEC's site inspector observed a drain line and a steel sump (55-gallon drum) connected to the fill line of each AST.

#### **4.3.8 Wastewater**

No wastewater or wastewater treatment systems were observed on the subject property during the site inspection.

#### **4.3.9 Wells**

Two water wells (W-01 and W-02) were observed on the subject property. A third water well (W-03) was found approximately 300 feet northeast of the northeast corner of the property.

#### **4.3.10 Pits, Ponds, and Lagoons**

No pits, ponds, or lagoons were observed on the subject property.

#### **4.3.11 Other Physical Evidence of Contamination (If Any)**

Oil-stained surface soil was observed adjacent to and surrounding each tank battery.

## **5.0 HISTORIC SITE AND SURROUNDING PROPERTY CONDITIONS**

### **5.1 AERIAL PHOTOGRAPHS**

RESPEC reviewed four available aerial photographs of the subject property, filed at the University of New Mexico Earth Data Analysis Center (UNM/EDAC). The following aerial photographs are included in Appendix F:

- 1949 aerial photograph (poor quality): The subject property is developed with several buildings and ASTs. There are a few scattered tank batteries in the general vicinity of the subject property.
- 1954 aerial photograph (fair quality): There appears to be some additional development at the subject property. There appears to be more oil production activity, with tank batteries surrounding the subject property.
- 1966 aerial photograph (poor quality): There do not appear to be any significant changes to the subject property. The oil production and tank batteries surrounding the subject property appear approximately the same as in the 1954 photograph.
- 1978 aerial photograph (poor quality): The subject property and surrounding areas appear approximately the same as in the 1966 photograph.

## 6.0 REGULATORY AGENCY REVIEW

### 6.1 REVIEW OF ENVIRONMENTAL DATABASES

RESPEC reviewed information gathered from several environmental databases by Environmental Data Resources, Inc. (EDR), to determine whether activities on or near the subject property have the potential to create a Recognized Environmental Condition on the subject property. EDR reviews databases compiled by federal, state, and local governmental agencies. EDR's database report is included as Appendix E.

The information obtained from the databases searched is summarized in Sections 7.2 through 7.5.

### 6.2 SUBJECT PROPERTY

The subject property was not found in EDR's search of available government records that would identify it as having a preexisting or known environmental condition.

### 6.3 DATABASES SEARCHED WITH NO MAPPED SITES FOUND

No mapped sites were found in EDR's search of available government records, either on the subject property or within the ASTM E 1527-00 search radius (one mile), in the following databases:

#### FEDERAL ASTM STANDARD

NPL.....	National Priority List
Proposed NPL .....	Proposed National Priority List Sites
CERCLIS .....	Comprehensive Environmental Response, Compensation and Liability Information System
CERC-NFRAP CERCLIS .....	No Further Remedial Action Planned
CORRACTS .....	Corrective Action Report
RCRIS-TSD .....	Resource Conservation and Recovery Information System, Treatment, Storage, and Disposal Facilities
RCRIS-LQG .....	Resource Conservation and Recovery Information System, Large Quantity Generators of Hazardous Waste

RCRIS-SQG ..... Resource Conservation and Recovery Information System,  
Small Quantity Generators of Hazardous Waste  
ERNS ..... Emergency Response Notification System

**STATE ASTM STANDARD**

SHWS ..... This state does not maintain a SHWS list. See the Federal CERCLIS list.  
SWF/LF ..... Solid Waste Facilities

**FEDERAL ASTM SUPPLEMENTAL**

CONSENT ..... Superfund (CERCLA) Consent Decrees  
ROD ..... Records of Decision  
Delisted NPL ..... National Priority List Deletions  
FINDS .... Facility Index System/Facility Identification Initiative Program Summary Report  
HMIRS ..... Hazardous Materials Information Reporting System  
MLTS ..... Material Licensing Tracking System  
MINES ..... Mines Master Index File  
NPL ..... Liens Federal Superfund Liens  
PADS ..... PCB Activity Database System  
RAATS ..... RCRA Administrative Action Tracking System  
TRIS ..... Toxic Chemical Release Inventory System  
TSCA ..... Toxic Substances Control Act  
FTTS FIFRA/ ..... TSCA Tracking System – FIFRA (Federal Insecticide, Fungicide, &  
Rodenticide Act)/TSCA (Toxic Substances Control Act)

**STATE OR LOCAL ASTM SUPPLEMENTAL**

AST ..... Aboveground Storage Tanks List

*Unmapped (orphan) sites are not considered in the foregoing analysis.*

## 6.4 Databases Searched with Mapped Sites Found

Seven mapped sites within the ASTM E 1527-00 search radius around the subject property were found in EDR's search of available government records, in the following databases:

LUST ..... Leaking Underground Storage Tank Prioritization Database

UST ..... Listing of Underground Storage Tanks

STATE OIL/GAS WELL INFORMATION ..... Listing of Oil and Gas Wells

There are 210 oil and gas production wells within a one-mile radius of the subject property. The EDR report does not indicate the depths of the oil and gas production.

## 6.5 Orphan Sites

RESPEC reviewed the list of orphan sites, which are sites that because of a lack of sufficient data regarding their exact location within the general area have not been geocoded. The review of the list of orphan sites did not identify any properties that could potentially create a Recognized Environmental Condition on the subject property.

# 7.0 PHASE II INVESTIGATION

## 7.1 HORIZONTAL AND VERTICAL EXTENT OF SOIL CONTAMINATION

Soil samples were collected from multiple sample points during trenching and soil-boring activities at the subject property. They revealed elevated chloride (Cl), relative to site background levels (estimated to be between 20 and 275 milligrams per kilogram (mg/kg)) and elevated total petroleum hydrocarbon concentrations (TPHC), for which the regulatory limit is 100 mg/kg in soils. The soil samples collected for laboratory analysis from Excavations #1 through #8 had TPHC concentrations ranging from 132 mg/kg to 77,000 mg/kg and Cl concentrations ranging from 1,210 mg/kg to 3,250 mg/kg. Soil Borings SB-1/MW-1 through SB-6/MW-6 had Cl concentrations below background levels (see Figures 4 and 5 for trench and soil boring locations) except for SB-3, which at 2 to 3 feet BGS had a TPHC concentration of 29,200 mg/kg. The vertical and horizontal extent of TPHC contaminants and Cl in soils was fully defined. The source for elevated concentrations of Cl (in all groundwater wells) and benzene (in MW-6) in the groundwater remains undetermined.

The horizontal and vertical extent of hydrocarbon contamination of soil in the vadose zone was delineated on site by head space analysis with a portable photoionization detector (PID) unit and confirmed by laboratory analysis by Environmental Protection Agency (EPA) Method

418.1 for gasoline range organics (GRO) and diesel range organics (DRO). The laboratory results and chain of custody for all soil samples can be found in Appendix F.

The vertical extent of elevated Cl concentrations in the vadose zone was delineated by laboratory analysis (EPA Method 300E). The concentrations of Cl in soil samples collected at maximum depth from all soil borings were below regulatory limits. These concentrations fall within the background levels for the subject property.

Attached are the boring/lithology logs for the six groundwater monitoring wells, which were advanced into the subsurface during the Phase II Investigation (see Appendix G). The subsurface lithology is fairly consistent throughout the investigation area and is basically as follows:

- 0-5 feet BGS: tan, sandy loam (dry to moist)
- 5-27 feet BGS: hard caliche with minor sand and gravels (dry)
- 27-40 feet BGS: light brown, unconsolidated, poorly sorted sands interbedded with clayey silt (moist to saturated)

## 7.2 EXTENT OF GROUNDWATER CONTAMINATION

The Phase II Investigation conducted at the subject property included the installation of six groundwater monitoring wells. The newly installed wells MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6 were purged and sampled for laboratory analysis during the course of the investigation.

The wells were analyzed for benzene, toluene, ethylbenzene, and xylenes (BTEX); methyl tertiary butyl ether (MTBE); and ethylene dichloride (EDC) by EPA Method 8021B; for polynuclear aromatic hydrocarbons by EPA Method 8270C; for Resource Conservation and Recovery Act (RCRA) metals by EPA Method 6010B; for major cations and anions; for cation/anion balance; and for general chemistry—total dissolved solids (TDS) and total nitrate/sulfate. A quick-look sheet of aqueous laboratory results is presented in Appendix F along with the original laboratory reports and chains of custodies.

There was no evidence of hydrocarbon contamination in five of the six groundwater monitoring wells. However, MW-6, installed immediately south of the ASTs that were not removed during site restoration activities, had a benzene level of 53.1 parts per billion (ppb), which is above the New Mexico Water Quality Control Commission (NMWQCC) limit of 10 ppb. There was also evidence of slightly elevated inorganic compounds of TDS, Cl, and fluoride in all wells (see Figure 6 for BTEX, Cl, and TDS concentrations in groundwater). It is unknown whether these levels have resulted from some past activity on the subject property or may be present throughout the aquifer in the region.

### 7.3 HYDROLOGY/GROUNDWATER CHARACTERISTICS

The Phase II Investigation revealed that the groundwater aquifer was at approximately 27 feet BGS. The six monitoring wells (MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6) were completed for groundwater observation, including static water level measurements, the potentiometric surface from the survey, and water quality analysis.

MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6 were all completed to a total depth of approximately 38 feet, with a 15-foot screened interval from approximately 38 feet to 23 feet BGS. (These completion depths and screen intervals are approximations. For exact measurements, please see soil boring logs with well completion diagrams in Appendix G).

Water level measurements and survey results are included in Appendix H. Monitoring well measurements were established by placing a permanent mark on the north rim of each well casing, and measurements were taken with an electronic water level instrument. Water level measurements from below the top of the well casing were as follows:

- MW-1 – 28.00 feet
- MW-2 – 26.50 feet
- MW-3 – 26.88 feet
- MW-4 – 26.50 feet
- MW-5 – 27.10 feet
- MW-6 – 27.13 feet
- W-01 – 28.42 feet
- W-02 – 29.83 feet
- W-03 – 28.32 feet

A registered land survey determined the x, y, and z coordinates at the top of the well casings for MW-1, MW-2, MW-3, MW-4, MW-5, and MW-6. The groundwater gradient map (Figure 3) indicates that the groundwater has an average gradient magnitude of 0.002 foot/foot in a southeasterly direction (S5°E).

## 8.0 SITE RESTORATION ACTIVITIES

### 8.1 AST Decommissioning, Decontamination, and Recycling

RESPEC initiated the decommissioning, decontamination, and recycling of 15 ASTs after the development of the scope of work, design criteria, subcontractor team formation, construction/remedial action timeline, and project cost. The tasks can be summarized as follows.

- A work plan was prepared, which included the design criteria, reconnaissance of the site, cost estimates, formation of a subcontracting team, and a prejob conference with the OCD project manager.
- A site-specific health and safety plan (HASP) was completed before fieldwork began. The HASP contained a site information summary; a list of key personnel on site and their responsibilities; a list of site hazards; emergency information; a job hazard assessment; and procedures for decontamination and disposal, employee training, and emergencies. On-site safety meetings were in the form of weekly tailgate meetings with all workers in attendance.
- Before starting on-site field activities, RESPEC called the New Mexico One Call System to locate, mark, and map all buried pipelines and utilities at the subject property. A One Call log was kept and updated for the duration of the project.
- Crain Hot Oil Service (Crain) personnel mobilized to the subject property on a daily basis during the entire project. All fluids and solids were removed from 15 ASTs located throughout the subject property (Figures 2, 4 and 5). The tanks ranged in size from 100-barrel capacity to 1,000-barrel capacity. Crain provided a hot oil unit, trans-vac units, and all appurtenances for removal and disposal of tank contents. All fluids and solids were disposed of at Sundance Services Inc., an OCD-permitted disposal facility for exempt non-hazardous oil field waste. Crain then triple-rinsed all the tanks to inert them for removal from the subject property and recycling. All triple-rinse fluids were removed to the Sundance facility. The RESPEC project manager oversaw all operations and tracked all transport disposal manifests and disposal certifications.
- Crain performed a naturally occurring radioactive materials (NORM) survey of all pipes, tanks, and miscellaneous equipment before disposal or recycling. This task was ongoing throughout the demolition and disposal activities at the subject property. All empty tanks were inspected and surveyed internally before demolition and surveyed externally before disposal or recycling. A registered NORM surveyor performed the survey in accordance with 19.15.9.714 New Mexico Administrative Code (NMAC) and 20.3.14 NMAC.

- Fifteen tanks were removed from the site and recycled. Crain provided a shear for on-site crushing and provided all necessary transportation of material to Hobbs Iron Works in Hobbs, New Mexico, for recycling. In addition, Crain removed and recycled other iron and metal objects from the site. The RESPEC project manager oversaw these operations, including tank testing, to ensure that tanks were inerted, and provided tank death certificates.
- A total of 939 cubic yards and 3,300 barrels of exempt non-hazardous oil field waste (solids and fluids) was removed from the subject property for disposal at Sundance.

## 8.2 Other Site Restoration Activities

All trash and debris piles were removed from the site for proper disposal or recycling. Approximately 5,000 pounds of refuse was hauled to Lea County Landfill in Eunice, New Mexico. Approximately 20,000 pounds of scrap iron was hauled to Hobbs Iron Works for recycling. Thirty empty 55-gallon drums were hauled to Sundance Services Inc. for disposal. Approximately 200 linear feet of asbestos-coated steel pipe was cut and bagged for disposal at Otero/Lincoln County Regional Landfill.

## 9.0 CONCLUSIONS

RESPEC conducted a Phase I and Phase II ESA and Site Restoration in conformance with the scope and limitations of ASTM Practice E 1527-00. The subject property (approximately 8.2 acres in area) is located in the SE/4 of Section 8, Township 20 South, Range 37 East, NMPM, Lea County, New Mexico. The purpose of this assessment was to evaluate the potential for a Recognized Environmental Condition to exist on the subject property from on-site or off-site activities. RESPEC's conclusions are presented below.

### 9.1 ON-SITE RECOGNIZED ENVIRONMENTAL CONDITIONS

From the review of available information and the site inspection, RESPEC identified on-site sources that have created, or have the potential to create, a Recognized Environmental Condition on the subject property. The term *Recognized Environmental Condition* refers to the effects of hazardous substances or petroleum products even under conditions in compliance with state laws.

Elevated Cl, relative to site background levels (estimated to be between 20 and 275 milligrams per kilogram (mg/kg), based on multiple sample points on the subject property), and elevated TPHC (for which the regulatory limit is 100 mg/kg in soils) were discovered in soil

samples collected during trenching and soil-boring activities at the subject property. Trenching activities across each tank footprint revealed elevated levels of Cl and TPHC in soils. The soil samples collected from Excavations #1 through #8 for laboratory analysis had TPHC concentrations ranging from 132 mg/kg to 77,000 mg/kg and Cl concentrations ranging from 1,210 mg/kg to 3,250 mg/kg. Soil Borings SB-1/MW-1 through SB-6/MW-6 had Cl concentrations below background levels (see Figures 4 and 5 for trench and soil boring locations) except for SB-3, which at 2 to 3 feet BGS had a TPHC concentration of 29,200 mg/kg. The vertical and horizontal extent of TPHC contaminants and Cl in soils was fully defined. The source for elevated concentrations of Cl (in all groundwater wells) and benzene (in MW-6) in the groundwater remains undetermined.

Twenty ASTs—three steel-bolted 500-barrel tanks, five steel-bolted 250-barrel tanks, two 210-barrel welded steel tanks, six 500-barrel welded steel tanks, two 750-barrel welded steel tanks, one 1,000-barrel welded steel tank, and one 100-barrel corrugated steel tank were observed on the subject property. Exempt nonhazardous oil field waste of an unknown volume was observed in 19 of the ASTs. The 100-barrel AST was empty and dry.

Four large piles of scrap metal (an estimated 20 tons), wind-blown trash and numerous discarded items, and other solid waste, such as discarded pallets, concrete rubble, and piping, were observed on the subject property.

ACM was identified in the coating of 200 linear feet of steel pipe during an ACM investigation of the subject property on April 23, 2004. The complete report on ACM is found in Appendix D and includes all laboratory results as well as conclusions and recommendations.

The restoration activities at the subject property included the removal and disposal of approximately 3,310 barrels (solids and fluids) and 939 cubic yards of exempt non-hazardous oil field waste for off-site disposal. Fifteen of the existing twenty ASTs were decontaminated, dismantled, and taken off site for recycling.

All other waste identified at the subject property (scrap metal, ACM, wind-blown trash, and miscellaneous debris) was removed for off-site disposal.

## **9.2 OFF-SITE RECOGNIZED ENVIRONMENTAL CONDITIONS**

In its review of available information, RESPEC identified off-site Recognized Environmental Conditions as potential contributors to the elevated Cl, TDS and benzene concentrations in the groundwater beneath the subject property. The site lies within an active oil- and gas-producing region of the Permian Basin. Off-site analysis of groundwater in the monitoring well designated W-03 revealed Cl concentrations of 1,240 milligrams per liter and TDS concentrations of 2,190 milligrams per liter. The well is located 300 feet northeast (upgradient) of the subject property.

The subject property is bounded on the northwest by an oil production well and a salt water disposal system operated by Rice Engineering of Hobbs, New Mexico. Numerous pipelines cross and lie directly adjacent to the subject property, including an EOTT Energy high-pressure natural gas line, a Navajo Refinery oil pipeline, a Dynergy oil pipeline, a Link Energy oil pipeline, and Rice Engineering salt water disposal pipelines. Attached as Figure 2, the JAMAR Site Diagram depicts pipelines lying adjacent to and crossing the subject property.

## 10.0 RECOMMENDATIONS

Recognized environmental conditions were identified on and close to the subject property. Based on the results of RESPEC's Phase I and Phase II Environmental Site Assessment, RESPEC recommends further action for the following reasons:

- Three areas of petroleum-contaminated soils were confirmed by field and laboratory analysis but were not excavated and removed during this operation. South of the lease road, the area designated Excavation #3 contains buried paraffin, oil-saturated soil, and trash. This area is estimated to contain 2,000 cubic yards of exempt oil field waste. North of the lease road, the areas designated Excavation 8 and T-13 contain soils saturated with an estimated quantity of 1,500 cubic yards of exempt oil field waste. It is recommended that these areas be treated by excavation, transport, and disposal of the exempt non-hazardous oil field waste.
- Groundwater laboratory analysis by EPA Method 8260 revealed benzene concentrations of 53 micrograms per liter in MW-6. Additional groundwater investigation is needed to confirm the source and extent of contaminants of concern. At least four additional groundwater monitoring wells should be installed to complete the hydrogeological investigation.
- The groundwater impacted by contaminants of concern may require engineered remedial action, which may include pilot tests, risk-based corrective action, natural attenuation, an engineered system (pump and treat, soil vapor extraction, or dual-phased system), and/or excavation of source points.

## 11.0 LIMITATIONS

### 11.1 Limiting Conditions

RESPEC's site inspection included a walking inspection of areas that were accessible by foot, and a drive-by inspection of surrounding and adjacent properties, including those properties identified in the environmental database search. No conditions that would limit RESPEC's ability to complete the scope of work were encountered during the performance of the Phase I and Phase II ESA.

### 11.2 Limitations of the Assessment

The Phase I and Phase II ESA was prepared in accordance with the scope of services described in Section 1.2. The work conducted by RESPEC is limited to the services upon which RESPEC and the OCD agreed, and no other services beyond those explicitly stated should be inferred or are implied.

The conclusions presented in this report are professional opinions based solely upon RESPEC's visual observations of the site and the immediate site vicinity, and upon RESPEC's interpretations of the readily available historical information, conversations with personnel knowledgeable about the site, and other readily available information, as referenced in the report. These conclusions are intended exclusively for the purpose stated herein, at the site indicated, and for the project indicated.

The environmental database information is reported as RESPEC received it from EDR, which in turn reports information as it is provided in various government databases. It is not possible for either RESPEC or EDR to verify the accuracy or completeness of information contained in these databases. However, the use of and reliance on this information is a generally accepted practice in the conduct of environmental due diligence.

It is agreed that the information provided by RESPEC is for the exclusive use of the OCD. The scope of services performed during this investigation may not be appropriate for other users, and any use or reuse of this document or the findings, conclusions, or recommendations presented herein is at the sole risk of said user.

This study was not intended to be a definitive investigation of contamination at the subject property. The purpose and scope of this investigation was to determine if there is reason to suspect the possibility of contamination at the site. Other than as discussed in this report, no additional exploratory borings, soil or groundwater sampling, or laboratory analyses were performed at the property; therefore, the conclusions set forth herein are made without the benefit of such additional investigation.

This report is intended for use in its entirety. No excerpts may be taken to be representative of the findings of this assessment.

Opinions and recommendations presented in this report apply to site conditions and features as they existed at the time of RESPEC's site visit and to those reasonably foreseeable. They cannot necessarily apply to conditions and features of which RESPEC is unaware and which RESPEC has not had the opportunity to evaluate.

## 12.0 REFERENCES

**American Society for Testing and Materials (ASTM).** Standard E 1527-00, *Standard Practice for Environmental Site Assessments: Phase I Environmental Site Assessment Process*, May 2000.

**DeLorme Topo USA® 3.0, Southwest Region © 2001.** 1:24,000 scale topographic map for Monument, New Mexico.

**Environmental Data Resources, Inc.** March, 2005, EDR-Radius Map with Geocheck, CR 33 & Hwy 8, Monument, New Mexico, Inquiry Number 0825932.1r.

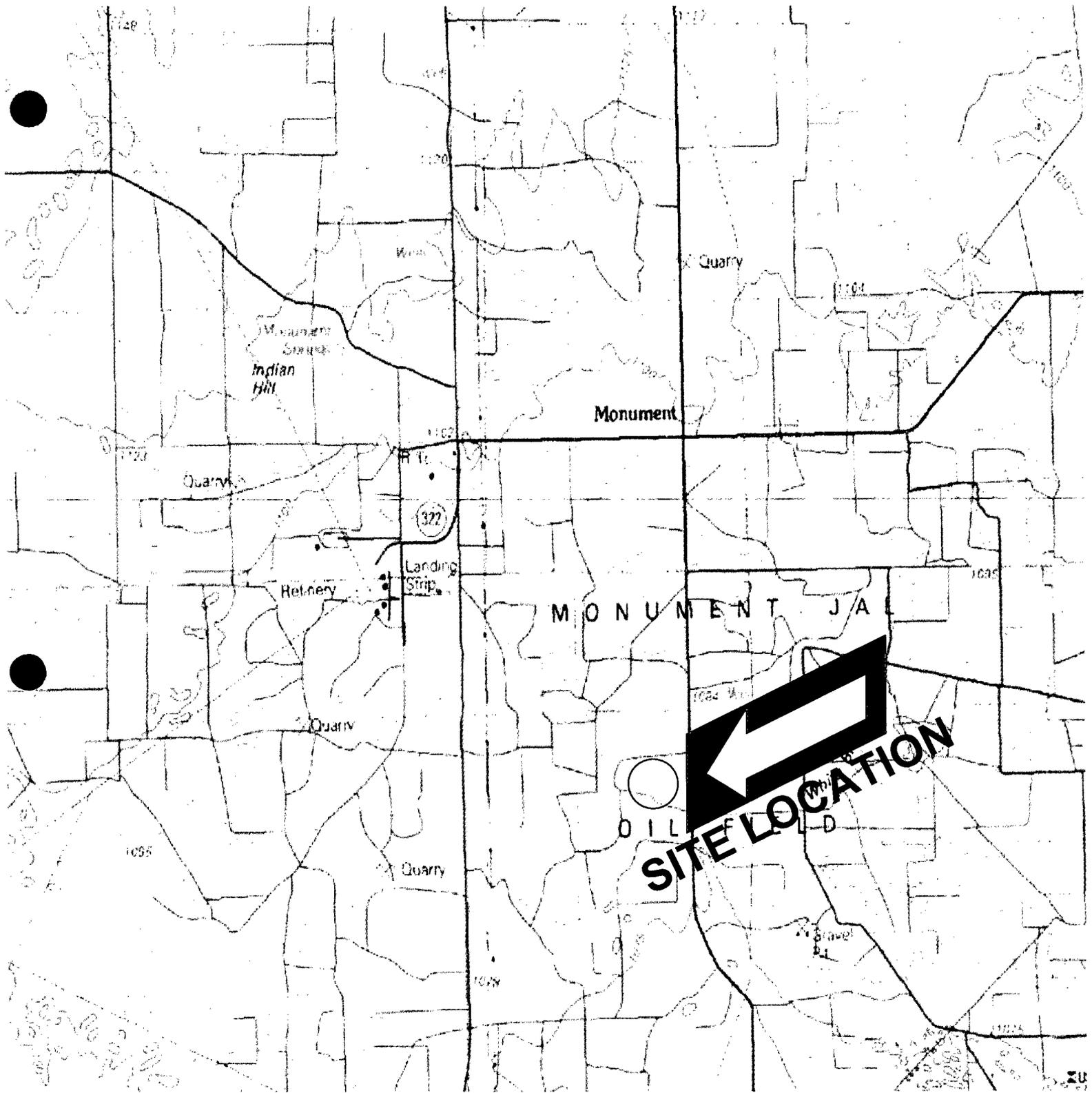
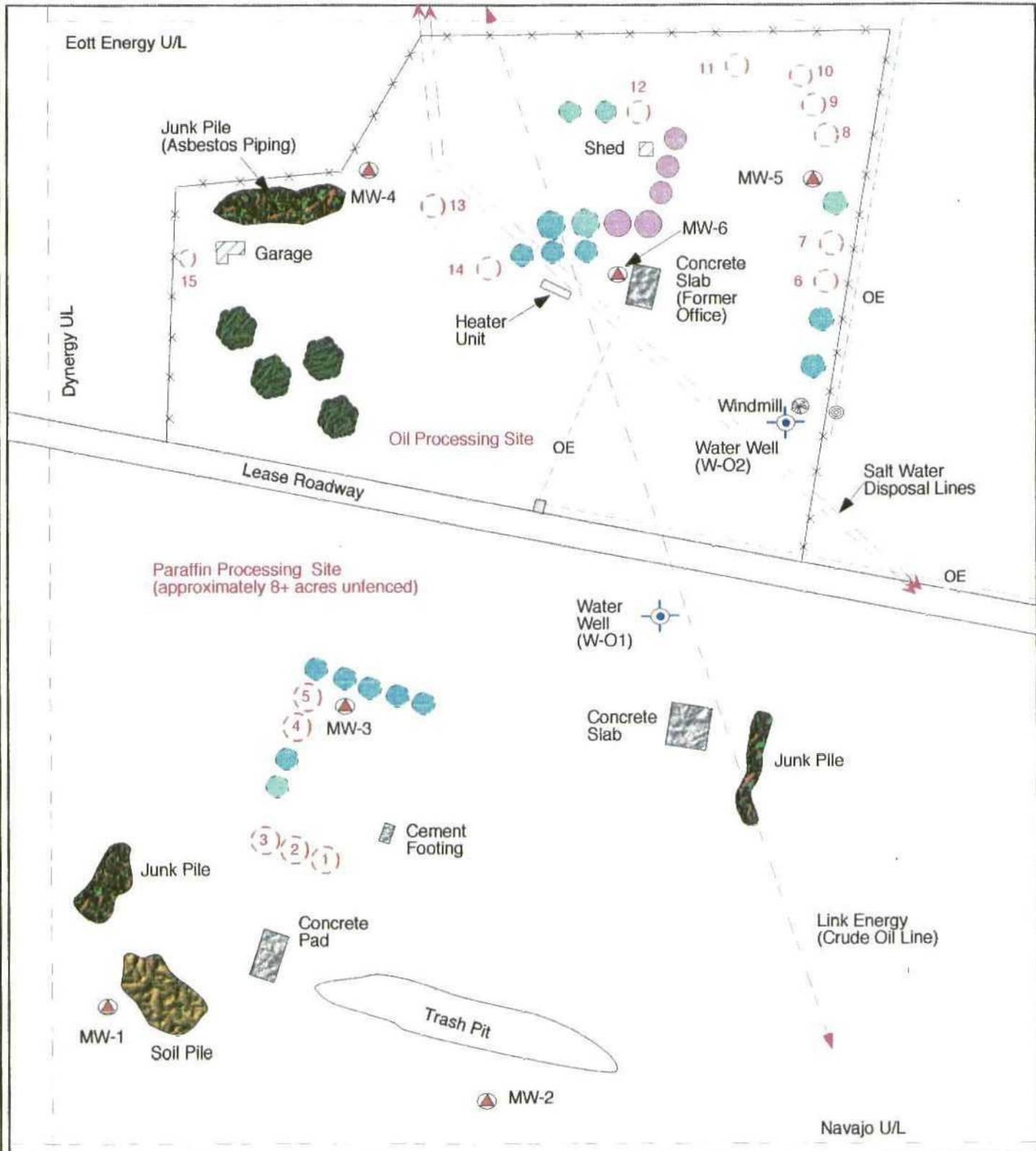


FIGURE 1  
VICINITY MAP



FIGURE 1  
VICINITY MAP



**EXPLANATION:**

- Location of Monitor Well
- Building
- Concrete /Cement
- Fence

- Removed Tanks
- Tank Foot prints
- Existing Tanks

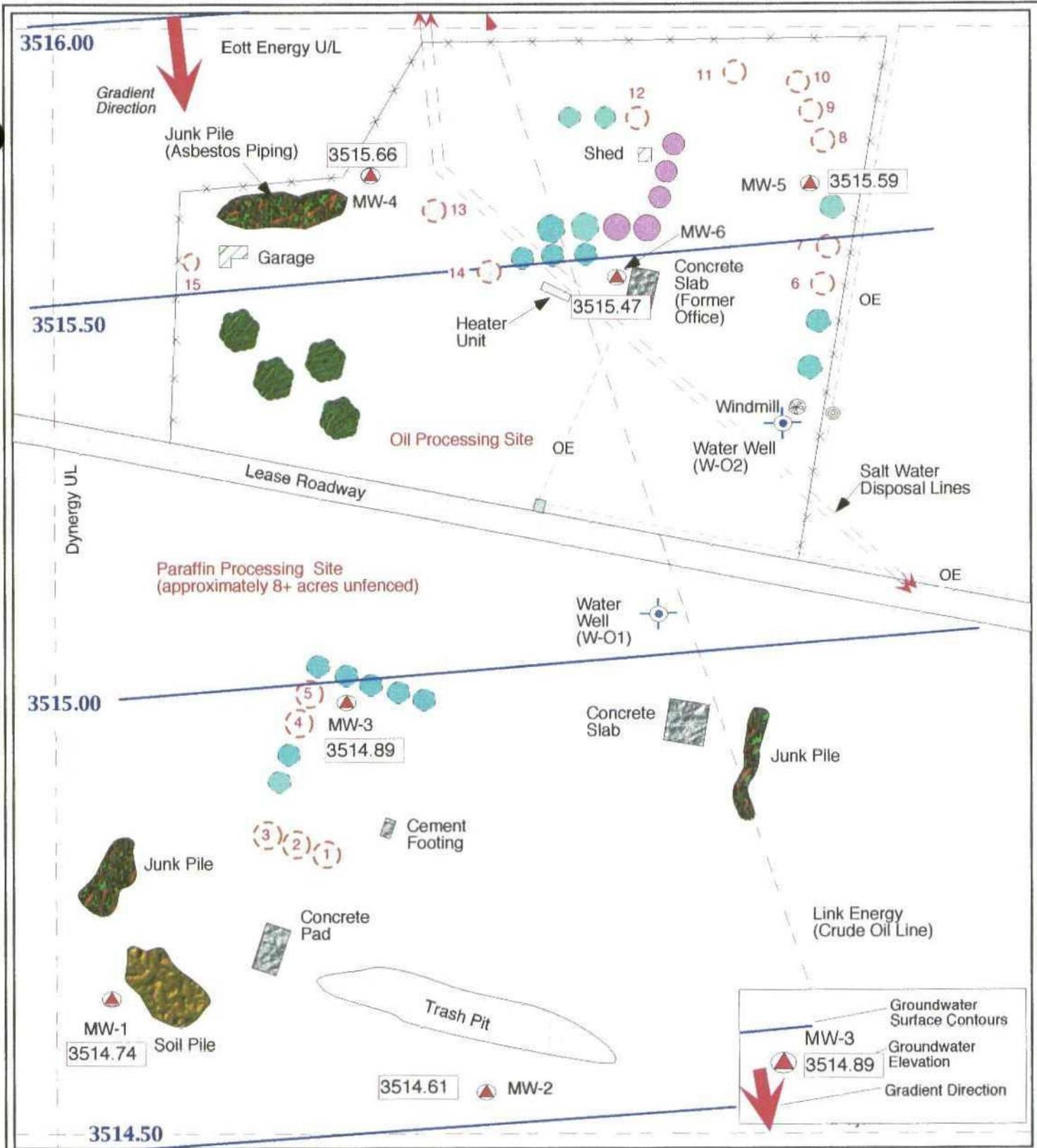


**JAMAR SITE MAP**  
Monument, New Mexico

Drawn by: JB 3/05  
 Drafted by: ABL 3/05  
 Approved by: JB 3/05



Job #1494/2.0  
 Figure 2



 Groundwater Surface Contours  
 MW-3  
 3514.89  
 Groundwater Elevation  
 Gradient Direction

**EXPLANATION:**

-  Location of Monitor Well
-  Building
-  Concrete /Cement
-  Fence
-  5 (1-5) Removed Tanks
-  Tank Foot prints
-  Existing Tanks

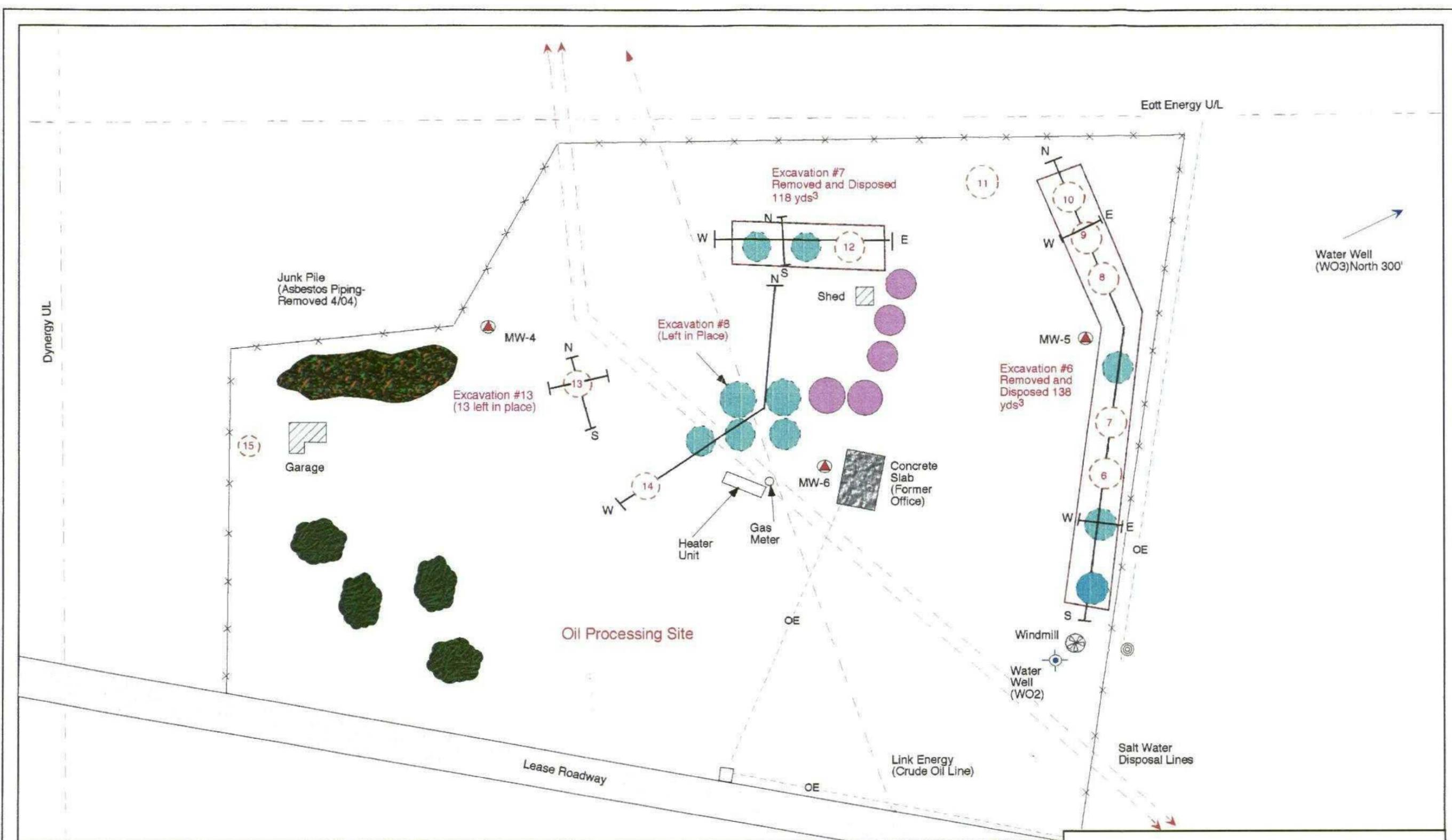


**GROUNDWATER GRADIENT MAP**  
**Jamar Site**  
**Monument, New Mexico**

Drawn by: JB 7/04  
 Drafted by: ABL 7/04  
 Approved by: JB 3/05



Job #1494/2.0  
 Figure 3



**EXPLANATION:**

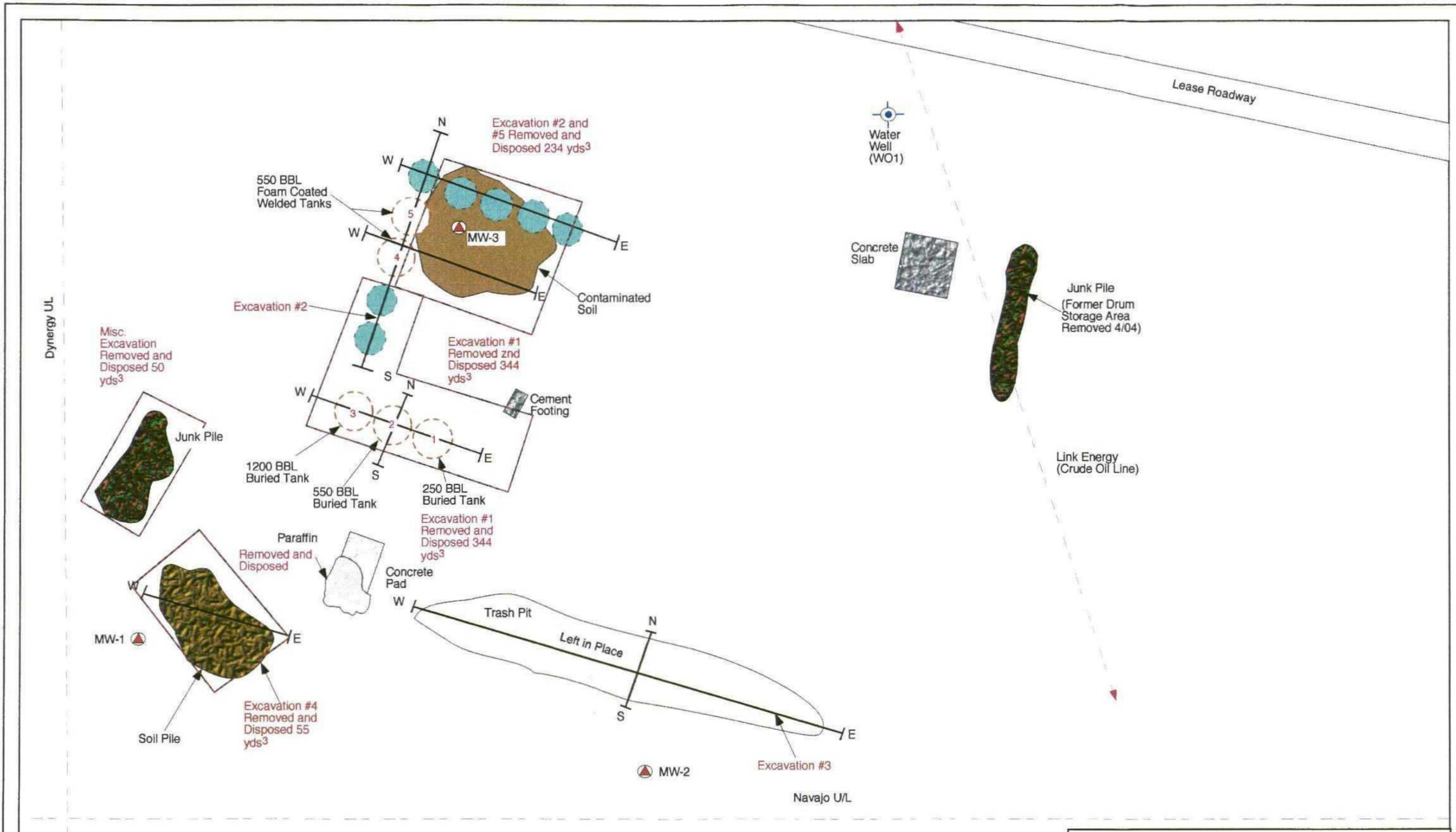
Location of Monitor Well	Tank Footprints	Building	Fence
Removed Tanks	Existing Tanks	Concrete /Cement	
Excavation Cross Sections	Overhead Electric Line		

Scale 1"=50'

0 50 ft

**JAMAR SITE DIAGRAM**  
Area North of Lease Road  
Monument, New Mexico

Drawn by: DH	3/05	RESPEC An Integrated Consulting and Services Company	Job # 1494/2.0
Drafted by: ABL	3/05		Figure 4
Approved by: DH	3/05		



**EXPLANATION:**

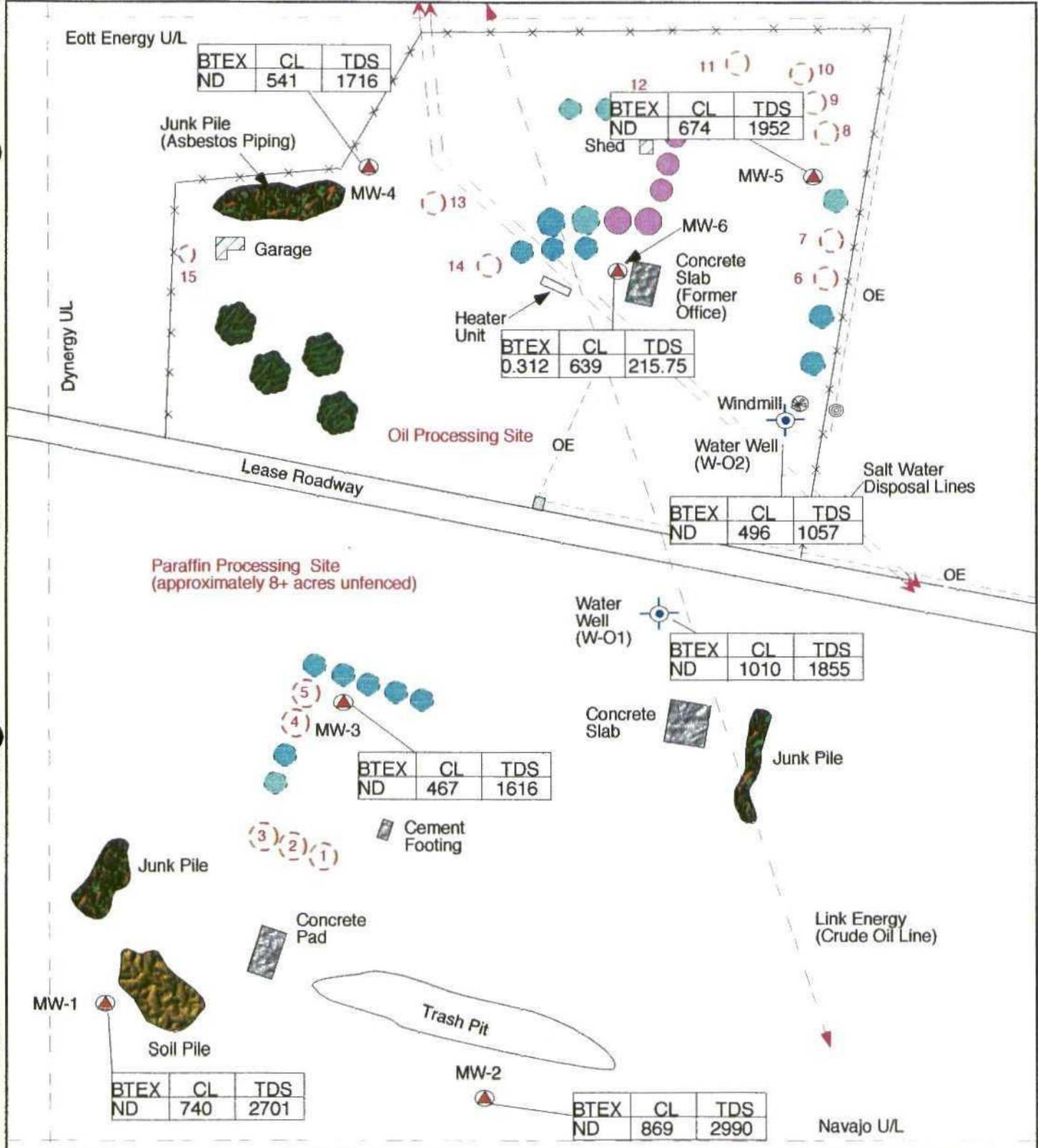
	Location of Monitor Well		Tank Footprints		Building		Fence
	Removed Tanks		Existing Tanks		Concrete /Cement		Overhead Electric Line
	Excavation Cross Sections						

Scale 1"=50'

0 50 ft

**JAMAR SITE DIAGRAM**  
 Area South of Lease Road  
 Lea County, New Mexico

Drawn by: DH	3/05		RESPEC An Integrated Consulting and Services Company	Job # 1494/2.0
Drafted by: ABL	3/05			Figure 5
Approved by: DH	3/05			



**EXPLANATION:**

- Location of Monitor Well
  - Building
  - Concrete /Cement
  - Fence
  - Removed Tanks
  - Tank Foot prints
  - Existing Tanks
- Concentrations in mg/L
- 0 100 ft  
Scale 1"=100'

**BTEX, CHLORIDE, TDS CONTAMINANT CONCENTRATION MAP**  
**Jamar Site**  
**Monument, New Mexico**

Drawn by: JB 3/05  
 Drafted by: ABL 3/05  
 Approved by: JB 3/05

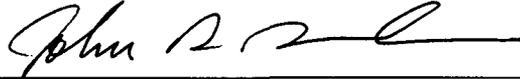


Job #1494/2.0  
 Figure 6

**APPENDIX A**  
**SIGNATURES OF RESPEC PERSONNEL**

## APPENDIX A

Signatures of RESPEC environmental professionals involved in the preparation of this report:



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John R. Bunch, P.G.  
Project Geologist



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David A. Henard  
Manager, Environmental Department

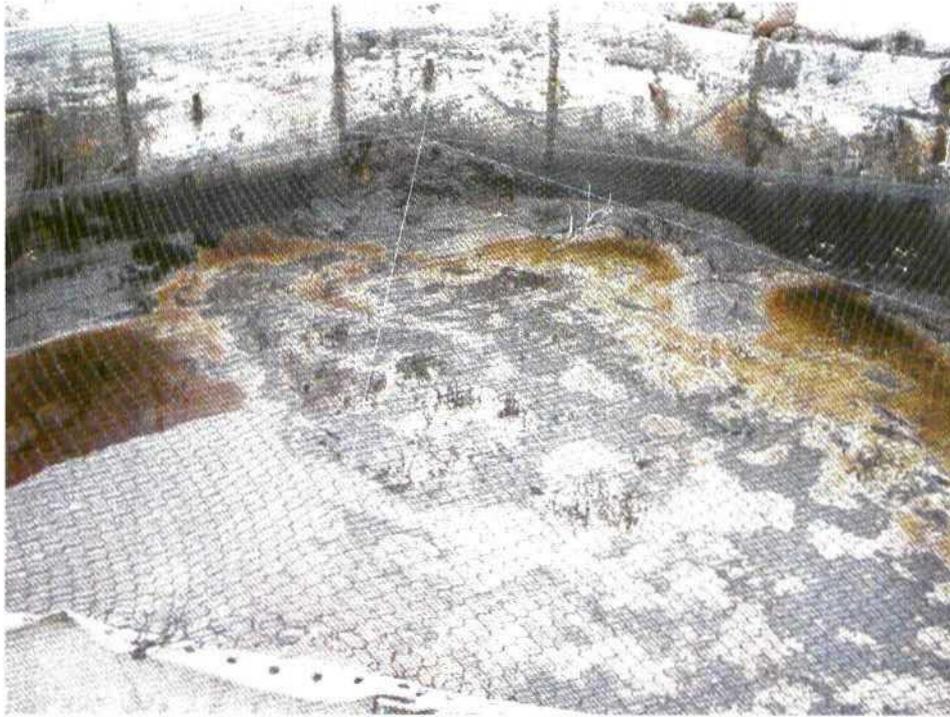
**APPENDIX B**  
**SITE PHOTOGRAPHS**



**Photograph No. 1.** Asbestos-coated piping located north of the lease road. All piping and asbestos were disposed of during site reclamation.



**Photograph No. 2.** Empty steel drums, trash, and debris located south of the lease road. All this material was removed and disposed of during the site reclamation.



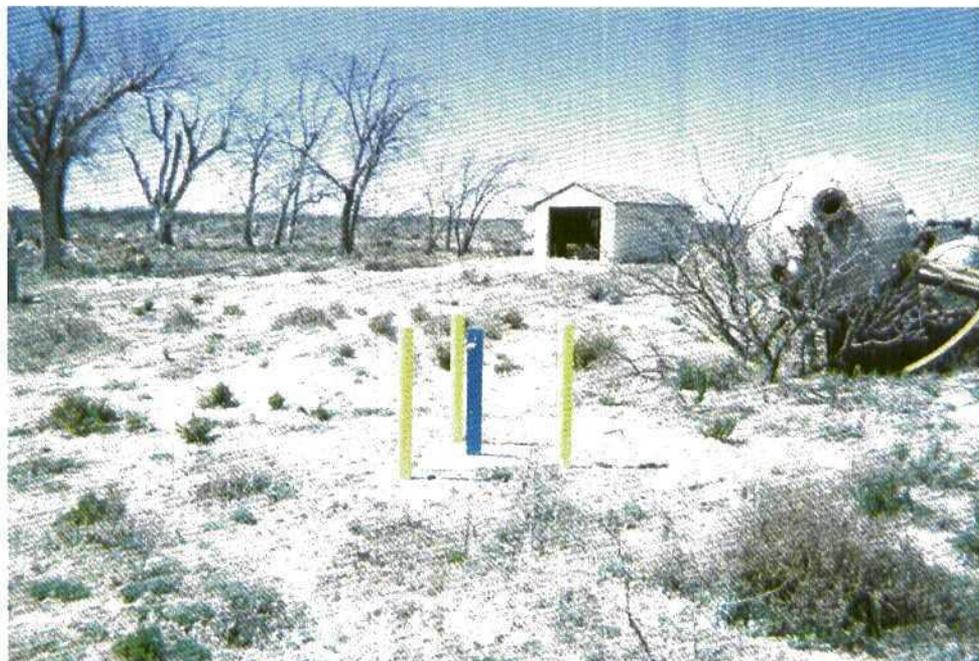
**Photograph No. 3.** A 1,200-barrel buried tank filled with oil field waste. The tank was located south of the lease road, which was cleaned, excavated, and disposed of during the site reclamation.



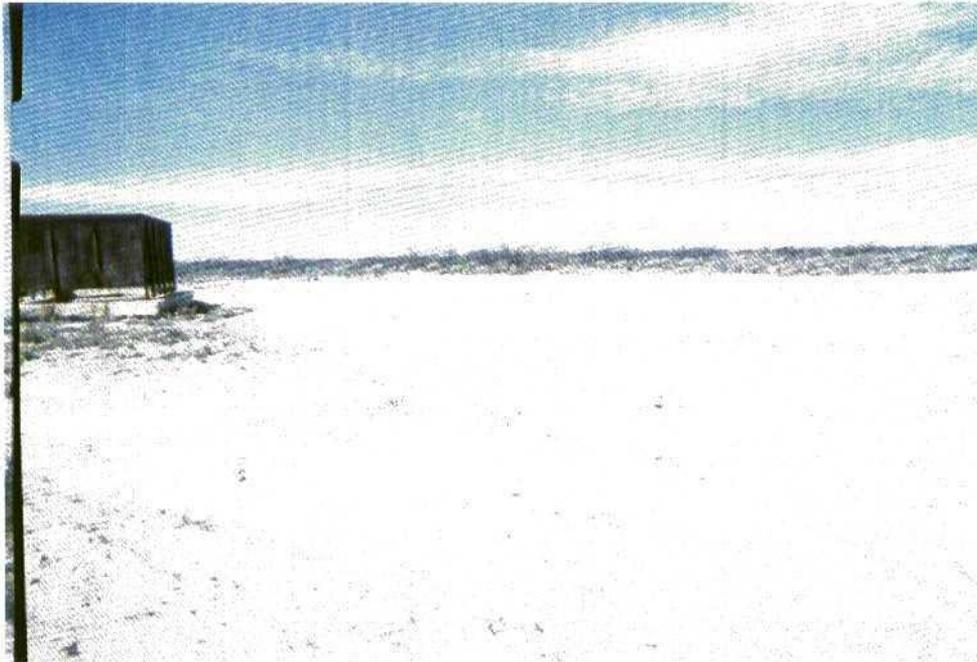
**Photograph No. 4.** A monitoring well (MW-6), located adjacent to the concrete slab of the former office, is located in the area on the north side of the lease road, along with the existing tanks, which were left in place.



**Photograph No. 5.** View to the south on the north side of the lease road, where Tanks Nos. 6, 7, 8, 9, and 10 were located. A monitoring well (MW-5) and a windmill are visible.



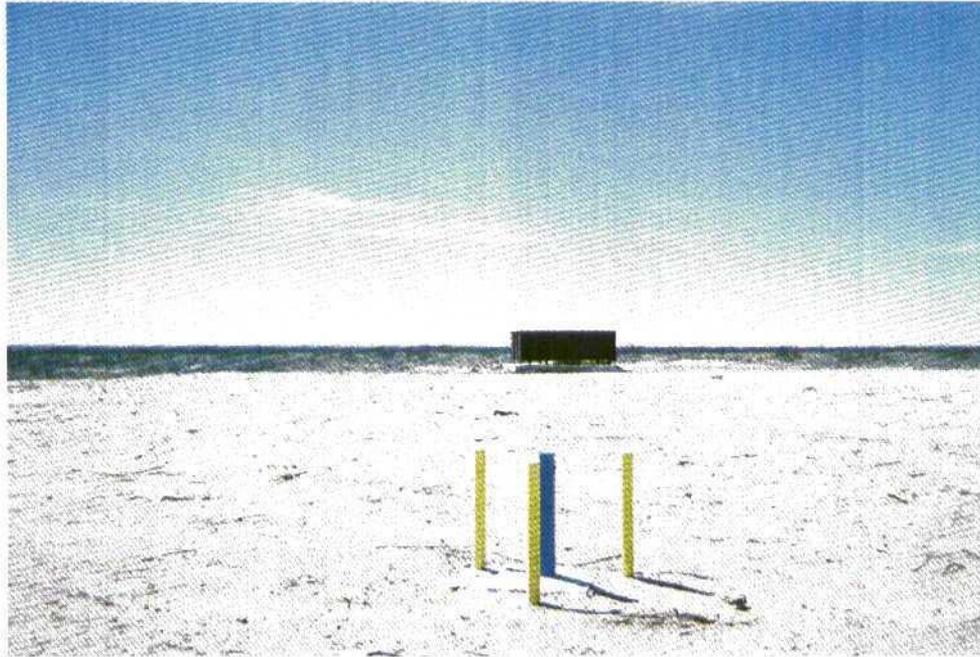
**Photograph No. 6.** View to the west on the north side of the lease road. This is the former location of the asbestos piping, which was removed and disposed of during the site reclamation. A monitoring well (MW-4) is visible in the foreground.



**Photograph No. 7.** View to the south near the former location of the buried tanks on the south side of the lease road. All of the tanks, debris, and contaminated soil have been removed from this area.



**Photograph No. 8.** A monitoring well (MW-2) and buried trash pit on the south side of the lease road. The trash pit has not been excavated and remains in place.



**Photograph No. 9.** A monitoring well (MW-3) on the south side of the lease road is visible, with a concrete slab and metal box left in place. This area is where Tanks Nos. 1, 2, 3, 4, and 5 were located, along with seven tank bottoms. All tanks and contaminated soil were removed and disposed of during the site reclamation.

**APPENDIX C**  
**ASBESTOS INVESTIGATION REPORT**

**ASBESTOS INVESTIGATION  
OF  
STRUCTURES AND PIPING  
ON  
THE OCD JAMAR PROJECT SITE**

**NEW MEXICO HIGHWAY 8  
2.7 MILES SOUTH  
OF  
MONUMENT  
LEA COUNTY, NEW MEXICO**

**PREPARED FOR:  
NEW MEXICO OIL CONSERVATION DIVISION**

**PREPARED BY:  
RESPEC**

**MAY 12, 2004  
PROJECT NO. 1494-1.0**



**An Integrated Consulting and Services Company**

**ASBESTOS INVESTIGATION  
OF  
STRUCTURES AND PIPING  
ON  
THE OCD JAMAR PROJECT SITE**

**NEW MEXICO HIGHWAY 8  
2.7 MILES SOUTH  
OF  
MONUMENT  
LEA COUNTY, NEW MEXICO**

**SUBMITTED TO:**

**NEW MEXICO OIL CONSERVATION DIVISION  
1220 SOUTH SAINT FRANCIS DRIVE  
SANTA FE, NEW MEXICO 87505**

**SUBMITTED BY:**

**RESPEC  
4775 INDIAN SCHOOL ROAD, NE  
SUITE 300  
ALBUQUERQUE, NM 87110**

**MAY 12, 2004**

---

**L. E. Archambault, RHSP  
Certified Asbestos Inspector  
Certification # 031904-07  
(certificate expiration date 03/21/05)**

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## **ATTACHMENTS**

<b>Attachment 1</b>	Site Plan and Asbestos Sampling Locations
<b>Attachment 2</b>	Asbestos NESHAP Inspection, Sampling, and Analysis Plan
<b>Attachment 3</b>	Asbestos Field Notes and Sampling Logs
<b>Attachment 4</b>	Asbestos Sampling Site Photographs
<b>Attachment 5</b>	Asbestos Chain-of-Custody Forms and Laboratory Reports

## 1.0 INTRODUCTION

RESPEC Environmental (RESPEC) was retained by the New Mexico Oil Conservation Division (OCD) to conduct an asbestos inspection with sampling of the structures and piping located on an old oil refining site that is to be remediated. The structures and piping on some parts of the site are to be demolished and removed. The site, known as the JAMAR Project site, is located on the west side of New Mexico State Highway 8 (NM 8) approximately 2.7 miles south of the town of Monument in Lea County, New Mexico.

The asbestos inspection and sampling were conducted to satisfy the pre-demolition/renovation requirements of the asbestos National Emission Standards for Hazardous Air Pollutants (NESHAP). The project manager for RESPEC was Ms. Lucy Archambault, certified asbestos inspector/management planner (Inspection Certification Number 031904-07 and Management Planner Certification Number 031904-16).

## 2.0 SCOPE OF WORK

The purpose of the asbestos inspection and sampling was to establish the presence or absence of asbestos in suspect materials and to identify the quantity, class, and condition of those materials. Knowledge of the presence and condition of the asbestos-containing materials (ACMs) and the overall condition of the materials and the structures they are in or on will allow the development of an abatement plan for the ACMs, the completion of a pre-renovation/demolition notification, and the development of a demolition plan with appropriate personal and public protection measures if the ACMs cannot be abated prior to demolition.

The following steps were to be used to complete the project:

- Develop a site asbestos inspection, sampling, and analysis plan based on information provided by OCD and site visits by RESPEC personnel prior to the project bid.
- Conduct a site inspection to establish the actual number of asbestos samples to be taken and the asbestos sampling locations.
- Sample the suspect materials in accordance with the inspection, sampling, and analysis plan.
- Evaluate the results of the laboratory analyses.
- Prepare a report of the findings and recommendations.

An estimated 30 bulk samples were to be taken and analyzed for asbestos by polarized light microscopy (PLM) in accordance with 40CFR763 Subpart F, Appendix A. Laboratory analysis was to be done with an extended turn-around time, guaranteed 15 working days from laboratory receipt of the samples.

The inspection and sampling were conducted and completed on Friday, April 23, 2004, by Ms. Archambault. A total of 23 samples were taken.

The asbestos results were to be verbally reported to Mr. Dave Henard and Mr. Jorge Armstrong of RESPEC on April 29, 2004. Mr. Henard made arrangements for the abatement of the on-ground piping identified in the investigation. Abatement of the remaining identified materials will be done in the next phase of work on the site. The abatement is scheduled for May 18, 2004. This asbestos investigation report and a summary report of the abatement activities will be included in the RESPEC project report to OCD.

### 3.0 LIMITATIONS

This report has been prepared for the exclusive use of RESPEC on behalf of OCD to support proposed renovation/demolition activities at the subject property. Any other use of the report may be inappropriate. All work has been performed in accordance with generally accepted environmental assessment practices. No warranty is expressed or implied.

The asbestos investigations were conducted based on observations of the investigator at the time of the site visits, on information from individuals familiar with asbestos regulations, and on information from individuals familiar with the site. The investigation was conducted in accordance with the Asbestos Hazard Emergency Response Act (AHERA) guidelines. Unless contradicted by conflicting data obtained independently during the conduct of the work, all information obtained has been accepted at face value. Information from interviews or from the independent laboratory may be inaccurate and/or incomplete. The information and conclusions in this report are subject to the accuracy, completeness, and availability of such data.

A not-to-scale site plan was provided to RESPEC by OCD. The site plan is provided in Attachment 1. The square and linear footage of materials were calculated from measurements taken on site. Although the insulation on one of the tanks on site was sampled as a precaution, the material appeared to be sprayed-on foam and was not expected to contain asbestos. No attempt was made to calculate the square footage of tank surface.

The number of suspect materials sampled and analyzed for asbestos was based on the AHERA sampling guidelines as described in the Inspection, Sampling, and Analysis Plan developed for this project (Attachment 2). The NESHAP pre-renovation/demolition inspection regulations require, but do not define, thorough inspection and sampling. RESPEC believes that the

ASHERA guidelines provide a reliable definition of thorough inspection and sampling that is suitable for NESHAP work. Those guidelines were followed for this project.

Implementation of any recommendations contained in this report does not ensure that all environmental risks will be eliminated or that all legal obligations will be met.

#### 4.0 ASBESTOS INVESTIGATION

##### 4.1 Introduction and Background

Based on aerial photography, the site was developed after 1978. The exact construction dates of the various structures is not known. The structures on the site on the north side of the site road include:

- 14 storage tanks on the north side of the site road,
- A 20-foot by 30-foot office building located on the south side of a curved row of tanks on the north side of the site road.
- A horizontal heater unit located off the southwest corner of the office building.
- An elevated pipe run from the heater north to the west end of the curved row of tanks and east to the second tank from the west end of the tank row.
- A windmill tower with a small shed constructed around the top of the well head.
- A stucco surfaced storage shed located near the western site boundary on the north side of the site road.
- Several insulated pipe runs with elbows on the ground off the northeast corner of the storage building next to the north site fence.
- A second horizontal heater unit lying at the east end of the abandoned pipe.

Structures on the south side of the site road include:

- Five storage tanks.
- A 36-foot by 20-foot concrete pad with a steel-plate frame mounted on it.
- A junk pile containing drums, a car body, and miscellaneous pipe west of the row of three tanks.
- A 50-foot by 30-foot slab located northeast of the row of three tanks.
- A small junk pile located east of the slab.
- An abandoned water well north of the slab.
- A 10-foot by 12-foot footing concrete footing frame located slightly northeast of the east tank in the row of three tanks.

The current project at this site consists of the removal of the contents and the tanks on the south side of the site road, clean up of the junk piles on the south side of the site, removal of the contents and all but the curved row of five tanks on the north side of the site road, and removal of the pipe runs on the ground near the storage shed on the north side of the road.

Asbestos materials were banned from use in building materials in 1978. However, the existing supplies of building materials containing asbestos could still be sold and were widely used in building construction until the early 1980s. For some applications such as boiler gaskets and brake shoes asbestos was used as late as the mid-1990s. Today, there is still limited use in roofing and in items such as brake shoes and boiler door gaskets. Although, the structures and piping on the site were put in place after 1978, the requirements for insulation properties and fire resistance may have mandated the use of asbestos at the site.

The inspection of the site found the following materials that could potentially contain asbestos:

- Asphalt roofing materials on the storage shed and office building.
- Sheetrock that had been textured and painted in the office building.
- Thermal insulation on the elevated pipe run, the two heater units, and the piping on the ground near the storage shed.
- Insulation on the well head and piping for the windmill.
- Exterior stucco on the storage shed.

Additionally, the sprayed-on tank insulation on one of the tanks was sampled as a precaution.

Asphalt roofing materials are considered a Class I Non-Friable materials. The stucco, textures, sheet rock, and thermal insulation are considered to be friable materials.

The quantities, classes, and conditions of the suspect materials are summarized in Table 1.

**TABLE 1: SUSPECT ASBESTOS MATERIALS - TYPE AND QUANTITY**

SUSPECT MATERIALS	MATERIAL CLASS	CONDITION	ESTIMATED TOTAL QUANTITY
Asphalt Roofing	Class I Non-Friable	Good to Poor	1,002 square feet
Ceiling Sheetrock – Office Building	Friable	Good to Fair	396 square feet
Sheetrock Walls – Office Building	Friable	Good to Poor	615 square feet
Stucco Walls – Storage Shed	Friable	Fair to Poor	589 square feet

SUSPECT MATERIALS	MATERIAL CLASS	CONDITION	ESTIMATED TOTAL QUANTITY
Ceramic Heater near Storage Shed	Friable	Fair	216 square feet surface 108 cubic feet of insulation
Ceramic Heater north of Office Building	Friable	Fair	377 square feet 188 cubic feet of insulation
Large-diameter Pipe on Ground by Storage Shed	Friable	Fair to Poor	52 linear feet 4 elbows
Small-diameter Pipe on Ground by Storage Shed	Friable	Fair to Poor	74 linear feet 2 elbows
Elevated Pipe Run West Side of Office Building	Friable	Poor	100 linear feet
Windmill Pump and Piping	Friable	Poor	50 square feet
Storage Tanks	Friable	Poor	Not Estimated

#### 4.2 Sampling Procedures

Once the types, conditions, and quantities of suspect materials had been identified, the number of each type of sample and the sampling locations were established in accordance with the Asbestos Inspection, Sampling, and Analysis Plan (the Plan) provided as Attachment 2.

Twenty-three (23) samples of suspect materials were collected and analyzed in accordance with the Plan.

Field notes and sampling logs are provided as Attachment 3.

Photographs of the asbestos sample sites are provided as Attachment 4.

The numbers in each photograph correspond to the sample numbers found on the sample log in Attachment 3. Sampling locations are shown on the site plan (Attachment 1).

The samples were shipped to TraceAnalysis, Inc., in Lubbock, Texas, by United Parcel Service on Friday, April 23, 2004. TraceAnalysis, Inc., forwarded the samples to Kevco Laboratory and Consulting Services, a certified asbestos laboratory in Butler, Pennsylvania, on Monday, April 26, 2004. A faxed report of the analytical results was received by RESPEC on Wednesday, April 28, 2004. The written detailed report was received by RESPEC on Thursday, April 29, 2004. RESPEC gave a verbal report on the asbestos to Mr. David Henard and Mr. Jorge Armstrong of RESPEC on Thursday, April 29, 2004. A copy of the final laboratory asbestos report and the chain-of-custody forms are provided as Attachment 5. The analytical results are summarized in Table 2.

**TABLE 2: ASBESTOS ANALYTICAL RESULTS**

SAMPLE NUMBER	SAMPLE LOCATION	SAMPLE DESCRIPTION	PERCENT ASBESTOS	ASSESSED CONDITION
1	Windmill	Pipe and pump insulation	NAD*	Friable – fair to poor condition
2	Office Building – East wall toward SE corner	Sheetrock, texture, and tape joint compound	NAD	Friable – good to fair condition
3	Office Building – West wall under air conditioner	Sheetrock, texture, and tape joint compound	NAD	Friable – good to fair condition
4	Office Building – Ceiling by NW light fixture toward ceiling center	Sheetrock, texture, and tape joint compound	NAD	Friable – good to fair condition
5	Office Building – West side roof	Gray-black shingle with roofing adhesive and roofing paper	NAD	Potentially friable during removal - good condition
6	Storage Shed – South side roof	Green-white-black shingle with roofing adhesive and roofing paper	NAD	Potentially friable during removal – poor condition
7	Storage Shed – East side on north side of door	Stucco and felting	<1%	Friable – fair to poor condition
8	Storage Shed Addition – south side	Stucco	<1%	Friable – fair to poor condition
9	Eastern most tank in the tank group on the south side of the site road	White and yellow sprayed insulation	NAD	Friable – poor condition
10	Ceramic heater north of office building – East end	Insulation	Amosite 30-35 Chrysotile 5-10	Friable under metal sheath – fair condition

SAMPLE NUMBER	SAMPLE LOCATION	SAMPLE DESCRIPTION	PERCENT ASBESTOS	ASSESSED CONDITION
11	Ceramic heater north of office building – West end	Insulation	Amosite 25-30 Chrysotile 15-20	Friable under metal sheath – fair condition
12	Long run of elevated pipes on west side of office building	Black asphaltic insulation	Chrysotile 10-15	Friable – poor condition
13	Short run of elevated pipes on north side of office building and south side of two orange tanks	Black wrapped Insulation	NAD	Friable – poor condition
14	Ceramic heater off north east corner of stucco storage shed – East end	Insulation	Amosite 20-25 Chrysotile 5-10	Friable under metal sheath – fair condition
15	Ceramic heater off north east corner of stucco storage shed – West end	Insulation	Amosite 35-40	Friable under metal sheath – fair condition
16	Southern length of small pipe on ground	Insulation	Amosite 70-80	Friable under metal sheath – fair to poor condition
17	Northern length of small pipe on ground	Insulation	Amosite 30-35 Chrysotile 1-5	Friable under metal sheath – fair to poor condition
18	Southern length of large pipe on ground	Insulation	Amosite 75-85	Friable under metal sheath – fair to poor condition. Exposed areas poor condition
19	Northern length of large pipe on ground	Insulation	Amosite 85-95	Friable under metal sheath – fair to poor condition. Exposed areas poor condition
20	Southern large pipe upright	Insulation	Amosite 80-90	Friable under metal sheath – fair to poor condition. Exposed areas poor condition

SAMPLE NUMBER	SAMPLE LOCATION	SAMPLE DESCRIPTION	PERCENT ASBESTOS	ASSESSED CONDITION
21	Southern large pipe elbow	Insulation	Amosite 85-95	Friable – poor condition
22	Northern large pipe elbow	Insulation	Amosite 85-95	Friable – poor condition
23	Northern large pipe upright	Insulation	Amosite 80-90	Friable – poor condition

\* NAD means no asbestos detected

### 4.3 Analytical Results

Laboratory results indicate that asbestos was present in the thermal insulation found on both heater units, on the piping on the ground by the storage shed and on the north/south elevated piping run. The other insulation sampled was negative for asbestos. The sheetrock systems in the office building and the roofing for the office building and the storage shed were also negative for asbestos. Because the stucco on the storage shed contained less than one percent asbestos it is not considered an asbestos-containing building material (ACBM). However, the presence of any asbestos would require appropriate precautions under the Occupational Safety and Health Act (OSHA) regulations.

### 4.4 Discussion

The total square and/or linear footage of each identified, homogeneous, ACM that contains one percent or more asbestos and that has been identified as friable or is considered friable, is sufficient to require NESHAP demolition/renovation reporting. Therefore, all ACM materials must be reported. The ACM thermal insulation is in fair to poor condition and is friable. The stucco is also in fair to poor condition and is friable. The roofing on the office building is in good to fair condition. By classification, it is non-friable. However, the shingles will become friable on removal. The asphalt mastics beneath the shingles are non-friable.

Abatement will be necessary for the thermal insulation and should be considered for the stucco. The removed materials will need to be disposed at a facility permitted to accept ACMs.

The roofing materials do not require abatement prior to disposal nor does the sheetrock in the office building or the insulation identified as fiberglass or glass wool. The fiberglass/glass wool insulation is present on one pipe run, on the windmill piping and well head, and on some of the piping in a junk pile on the south side of the site road.

## 5.0 CONCLUSIONS

Based on the NESHAP requirements for renovation/demolition, the identified, friable ACMs that may be or will be disturbed by the renovation/demolition activities will require abatement before renovation can proceed. If abatement is not feasible for a structure, then all debris from the demolition/renovation must be considered asbestos-contaminated and must be disposed as ACMs. Also, if the ACMs are not abated, appropriate renovation procedures must be followed to confine and contain the asbestos fibers in the renovation debris. At least 10 days prior to the start of abatement or renovation, appropriate pre-demolition forms must be completed and submitted to the New Mexico Environment Department. The information required to complete the notifications is contained in Tables 1 and 2.

## 6.0 RECOMMENDATIONS

Based on observations made during the site visit and based on the analytical results, RESPEC makes the following recommendations:

- Where feasible, abate the ACMs and take them to a landfill permitted to accept ACMs. The materials to be abated include the thermal insulation on the piping near the storage building, the thermal insulation on the north/south elevated pipe run, the insulation on the two heater units, and the stucco on the storage building.
- Use contractors certified to abate the asbestos.
- Use certified waste haulers for the asbestos waste.
- Use a disposal facility permitted to accept asbestos waste.

## 7.0 CONTACTS

Mr. David Henard, RESPEC, Albuquerque, New Mexico, (505) 268-2661.

Mr. Jorge Armstrong, RESPEC, Albuquerque, New Mexico, (505) 268-2661.

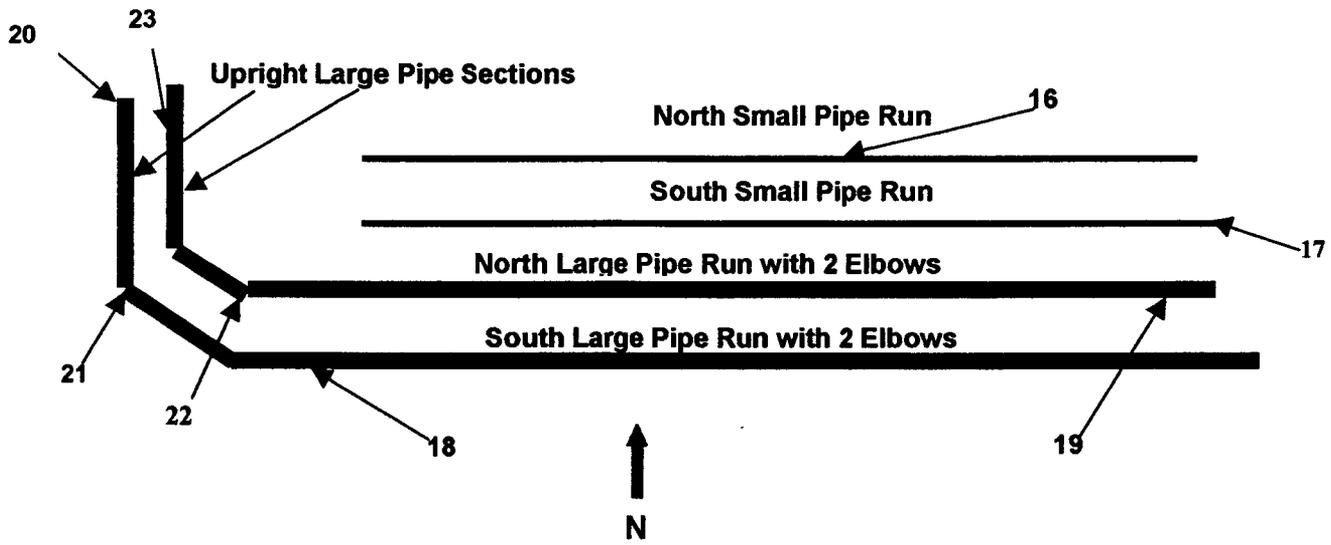
Asbestos Investigation of  
Structures and Pipes  
OCD JAMAR Project Site  
RESPEC Project No. 1494-1.0

**ATTACHMENT 1**

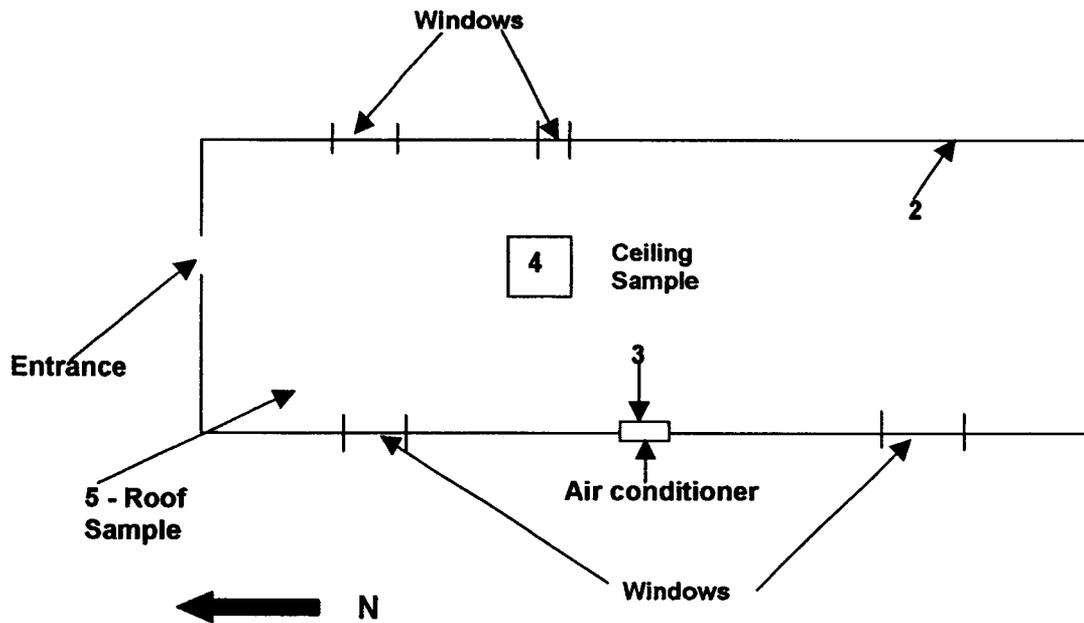
**Site Plan and Asbestos Sampling Locations**



**Sketch of Pipe Runs with Sample Locations**  
(Not to Scale)



**Sketch of Office Building with Sample Locations**  
(Not to Scale)



Asbestos Investigation of  
Structures and Pipes  
OCD JAMAR Project Site  
RESPEC Project No. 1494-1.0

**ATTACHMENT 2**

**Asbestos NESHAP Inspection, Sampling, and Analysis Plan**

**ASBESTOS INSPECTION, SAMPLING, AND ANALYSIS PLAN  
OCD PROJECT  
MONUMENT, NEW MEXICO**

**1.0 Introduction**

This plan has been prepared for the asbestos inspection, with sampling, of the remaining infrastructure of an abandoned refinery being remediated for the New Mexico Oil Conservation Division (OCD). The initial primary concern is the wrapped pipe lying on the property.

The general inspection procedure shall be:

- Prepare a site sketch.
- Inspect structures on the site to identify asbestos-suspect materials. Log the location, quantity, type, condition, and friability of each asbestos-suspect material.
- Group asbestos-suspect materials into homogeneous areas.
- Select random sampling locations and collect samples in accordance with Section 2.0 of this procedure. All sample locations will be logged and described in detail to allow the sample points to be identified in the future. Where possible, sample points will be marked with the sample number on a post-it note pad. Because the buildings are in use the sample-number markers will be removed. Photographs will be taken of the sampling locations.

For NESHAP purposes, each asbestos-suspect material shall be classified as follows during the inspection:

- Category I Non-Friable (packings, gaskets, resilient floor coverings, and asphalt roofing products).
- Category II Non-Friable (any other asbestos-containing material that is not friable).
- Friable.

A copy of this plan shall be present at the sampling site.

**2.0 Sample Requirements**

Sufficient samples have to be collected to demonstrate that suspect materials either contain or are free of asbestos. To accomplish this, Asbestos Hazard Emergency Response Act (AHERA) sample requirements will be met. AHERA does not include materials that are not building materials. The

inspection being conducted under this plan covers AHERA identified asbestos-suspect materials in the facilities.

For each homogenous area, the minimum sample requirements are:

Surfacing Materials

Homogeneous area < 1000 square feet - three samples  
Homogeneous area 1000-5000 square feet - five samples  
Homogeneous area > 5000 square feet - seven samples

Thermal System Insulation

Each homogeneous area - three samples  
Each patched section - one sample  
Cemented fittings - one sample

Miscellaneous Material

Each Material - one sample

Normal (five-to-ten days) laboratory turn-around time is required.

For budgetary purposes, the required number of samples is estimated to be 20.

**3.0 Analysis Methods and Quality Control**

Each sample shall be analyzed for asbestos content using the Polarized Light Microscopy (PLM) method described in 40CFR763, Subpart F, Appendix A. The asbestos content of samples of friable materials that contain between trace (less than one percent) and one percent asbestos shall be subjected to a point-count analysis. Point counting shall be used on any sample for which doubt exists about the percent asbestos.

Asbestos samples will be analyzed at a laboratory that is accredited for AHERA program bulk analyses by the National Voluntary Laboratory Accreditation Program (NVLAP) under the National Institute of Standards and Technology and the NIOSH Proficiency in Analytical Testing Program (PAT). Unless conditions at the time of sampling dictate otherwise, the samples are to be analyzed at a certified laboratory used by Trace Laboratories in Lubbock, Texas.

Split samples and field-blank protocols are not required for this project.

#### **4.0 Personal Safety**

The safety of the inspector is paramount. The inspector is not expected to place himself in danger for the sake of inspecting or collecting samples. The decision to enter a building or collect samples rests with the inspector.

The personnel taking the samples shall use safety glasses, half-face respirators with High Efficiency Particulate Air (HEPA) filters and disposable gloves when collecting the samples of potentially friable materials.

A disposable coverall shall be worn for overhead sampling and for sampling of friable materials.

Disposable personal protective equipment shall be bagged at the conclusion of sampling and managed as asbestos-containing waste.

When friable or potentially friable materials are being sampled, the client or building-owner representative(s) accompanying the sampler will either wear their personal and appropriately fitted protective equipment (half-face respirator with HEPA filters and disposable coveralls) or will be asked to leave the immediate area of sampling.

Because the site is being demolished, hard hats, steel-toed boots, and safety glasses will be required. Hearing protection will be required if the sampling area is in a high noise area.

#### **5.0 Sampling Procedures**

Sampling procedures to be used will depend upon the type of materials encountered. When suspect materials may contain more than one layer, core samples shall be collected.

Samples of floor tiles and other materials which may be glued shall include the mastic or glue.

Every effort will be made to avoid unnecessary disturbance of the materials. Because the structures are to be demolished, no attempt will be made to patch sample areas.

The inspector is may be required to breach building structures to ascertain whether asbestos-suspect materials are contained within.

When suspect material has to be cut, cored, or broken to obtain a sample, or when sampling loose friable materials, the area will be dampened with water to minimize the release of fibers. After a sample is taken, the immediate area of the sample points should be wet cleaned with a paper towel and the towel placed in the waste-accumulation bag.

When sampling friable materials, or loose overhead materials, disposable plastic sheets will be used under the area to control the spread of debris. Sheets shall be collected and managed as waste materials.

About one ounce of material is required for each sample. The sample will be placed in a plastic ziplock bag. The bag will be sealed with tape and marked with a sample number. Other suitable sample containers may be used as long as they can be sealed to minimize the chance of inadvertent opening and can be marked with a sample number.

Care shall be taken to prevent sample cross-contamination. If a knife or coring tool has been used to cut out material, the knife or coring tool will be cleaned with water and paper towels before being used again. Disposable gloves will be discarded following use on a friable material.

Tools used to obtain samples of petroleum-based material such as roofing tar will be cleaned with paint thinner and paper towels before being used for a succeeding sample.

The inspector shall collect all waste material and shall dispose of the material off-site commensurate with the nature of the waste. When possible, de-minimus debris will be forwarded to the laboratory for disposal.

## **6.0 Sample Preservation and Preparation for Transportation**

The samples being collected do not require sample-preservation action.

For transportation to the laboratory, the sample containers will be placed in a heavy plastic bag (or double bag) and the bag sealed with tape.

The samples will be placed in a shipping container (sturdy cardboard box) along with a completed analysis-request/chain-of-custody form. The container will be sealed with filament tape.

The sampler shall sign and place a business card across the opening and tape the card and container such that the card will have to be destroyed to open the package. The package shall be forwarded to the laboratory by Federal Express or United Postal Service (UPS) priority service.

## **7.0 Records and Logs**

### **7.1 Sampling Log**

A field-activity log and a sampling log covering all sampling operations will be maintained.

## 7.2 Chain-of-Custody and Analysis-Request Form

A combined chain-of-custody and analysis-request form shall accompany all samples forwarded to a laboratory for analysis.

## 7.3 Laboratory Reports

The laboratory report shall include the following information:

- sample number,
- laboratory identification number,
- analysis parameter,
- analysis results,
- units of measurement,
- analysis detection level,
- analysis method used, and
- signature of analyzer or supervisor.

## 8.0 Subcontractors

No subcontractors are required to accomplish the sampling specified in this plan.

## 9.0 Sampling Equipment and Supplies

The following equipment and supplies are required to conduct the sampling described in this plan:

- disposable gloves
- half-face respirator with HEPA filters
- sample shipping container
- indelible marking pen
- clear filament tape and duct tape
- heavy-duty, one-quart, zip-lock plastic bags
- knife, corer, and related hand tools
- paper towels
- supply of water and plastic wash bottle
- supply of paint thinner
- non-asbestos roof patch
- spackling plaster or similar patch for sheetrock
- plastic, 30-gallon trash bag
- measuring tape
- clip board and any necessary forms.

Asbestos Investigation of  
Structures and Pipes  
OCD JAMAR Project Site  
RESPEC Project No. 1494-1.0

**ATTACHMENT 3**

**Asbestos Field Notes and Sampling Logs**

Sample Log

Client: RESPEC: OCD 1494-1.0

Date: 4/23/04

Purpose of Sampling: NESHAPS ASBESTOS

p 1 of 2

Sample Number	Type of Sample	Sample Volume	Sample Location	Remarks
1	INSULATION <del>PLATE</del>	BULK	WINDMILL	APPEARS TO BE FIBERGLASS
2	SHEETROCK WALL		OFFICE BLDG E. WALL toward SE corner under air conditioning	25.5 x 15.5 x 7.5 sq ft. Sheetrock TOILET
3	SHEETROCK WALL		OFFICE BLDG (S) WALL	walls & ceiling.
4	SHEETROCK CEILING		by old Lt. E. x tower OFFICE BLDG CEILING CENTERED	
5	ROOF OFFICE		W Side Shingles & roof paper on asphalt	Roof Shingled 25.5 x 8 x 2
6	ROOF STORAGE SHED		S. Side Shingle addition w/ glass - intro	Same Shingle over
7	STUCCO STORAGE SHED		Door side (E) has some feltine with stucco	Shed 20.25 x 7.5 x 12 wide
8	<del>INSULATION</del> STUCCO STORAGE SHED		SHED ADDITION S. SIDE 9 x 12 x 7 hi.	
9	TANK INSULATION		N. SIDE	FI #11 ID 19, 10, 10 2, 10, 10
10	INSULATION		E. end ceramic heater 1 by office bldg	
11	insulation		W end. ceramic heater by office bldg.	
12	insulation			
13	insulation		pipes from ceramic heater to large orange tanks Short E/W pipe run by orange tanks	same as insul. in junk pile
14	insulation		E. end ceramic heater 2 by pipes	
15	insulation		W. end ceramic heater 2 by pipes	
16	insulation		(S) small pipe on ground	all pipes have metal jackets
17	insulation		(N) small pipe on ground	as do ceramic heaters.
18	insulation		(S) large pipe on ground	pipes appear clean on interior
19	insulation		(N) large pipe on ground	unknown on heaters.
20	insulation		(S) large pipe up right	





PROJECT NAME:	JAMAR PROJECT	DATE	4	23	04
PROJECT NUMBER:	1494-1.0	PAGE	1	of	1
LOCATION:	NMB 2.7 mi south of Monument, NM				

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS (PROVIDE NECESSARY SKETCHES):

Travel 6 AM - 12 noon

off: sheet rock structure		3
ceramic heater, pipe wrap to T-2, T-1	2	2
coating over foam <del>HT</del> fact tank (white)		
stucco other stud - roofing both	2	2
well head insul. - appears to be fiberglass - confirm	1	
end ceramic heater near pipes	2	
pipes	6	

overby sample 9: trash piles - nothing of note. some of the piping to the east of white tank has remnants of glass wool or fiberglass insulation - NOT sampled. Fiberglass pipe in RESPEC preliminary photos observed W of tanks being dismantled

off site 4:22 3 samples taken  
 UPS delivered @ SPM in Hobbs  
 time 5-1045 (095.6 miles)

WEATHER CONDITIONS:	LAST NIGHT	VISITORS ON SITE: Jorge Armstrong ABATEMENT CREW OF 4
TEMPERATURE RANGE: to °F	°F	
PRECIPITATION: inches of	inches	
WIND: to M.P.H.		TELEPHONE CALLS (PROVIDE RECORD OF CONVERSATIONS):
ATTACHMENTS:		
1.	4.	
2.	5.	
3.	6.	

LEA PERSONNEL ON SITE: Lucy E. Archambault

PREPARED BY: *Lucy E. Archambault* DATE: 4/23/04

RECEIVED BY: *Lucy E. Archambault* DATE: 4/23/04

Sample Log

Client: RESPEC: OCD 1494-1.0

Date: 4/23/04

Purpose of Sampling: NESHAPS ASBESTOS

p1 of 2

Sample Number	Type of Sample	Sample Volume	Sample Location	Remarks
1	INSULATION <del>BLANK</del>	BULK	WINDMILL	APPEARS TO BE FIBERGLASS
2	SHEETROCK WALL		OFFICE BLDG E. WALL toward SE corner under air conditioning	29.5 x 15.5 x 7.5 sq ft. Sheetrock TOTAL
3	SHEETROCK WALL		OFFICE BLDG (S) WALL	walls & ceiling.
4	SHEETROCK CEILING		by old Lt. E. x tower OFFICE BLDG CEILING CENTERED	
5	ROOF OFFICE		Side Shingle & roofing paper asphalt	Roof Shingled 25.5 x 8 x 2
6	ROOF STORAGE SHED		S. Side Shingle addition w/ fiberglass - ultra	Same Shingle over
7	STUCCO STORAGE SHED		Door side (E) has some feltine with stucco	Shed 20.25 x 7.5 x 12 wide
8	<del>FROM INSULATION</del> STUCCO STORAGE SHED		SHED ADDITION S. SIDE 9 x 12 x 7 hi.	
9	TANK INSULATION		NSIDE	FI #11 ID 19, 10, 10 10, 10
10	INSULATION		E. end ceramic heater 1 by office bldg	
11	insulation		W end. ceramic heater by office bldg.	
12	insulation			
13	insulation		pipes from ceramic heater to large orange tanks Short E/W pipe run by orange tanks	same as insul. in junk pile
14	insulation		E. end ceramic heater 2 by pipes	
15	insulation		W. end ceramic heater 2 by pipes	
16	insulation		(S) small pipe on ground	all pipes have metal jackets
17	insulation		(N) small pipe on ground	as do ceramic heaters.
18	insulation		(S) large pipe on ground	pipes appear clean on interior
19	insulation		(N) large pipe on ground	unknown on heaters.
20	insulation		(S) large pipe up right	

Sample Log

Client: BESPEC-OCD 1494-1.0 Date: 4/23/04

Purpose of Sampling: NESHAPS ASBESTOS p 2 of 2

Sample Number	Type of Sample	Sample Volume	Sample Location	Remarks
21	insulation		(S) large pipe elbow	4 large elbows
22	insulation		(N) large pipe elbow	<del>1 small elbow</del> (NOT Sampled)
23	insulation		(N) large pipe upright	3 small studs 74' 6 large studs 52'



PROJECT NAME: JAMAR PROJECT	DATE: 4/23/04
PROJECT NUMBER: 1494-1.0	PAGE: 1 of 1
LOCATION: NMB 2.7 mi South of Monument, NM	

DESCRIPTION OF DAILY ACTIVITIES AND EVENTS (PROVIDE NECESSARY SKETCHES):

Travel 6 AM - 12 noon

off: sheet rock texture	3
Ceramic heater, pipe wrap to T-2, T-1	2
Coating over from #2 tank (white)	
stucco other stud - roofing both	2
Well head insul. - appears to be fiberglass - confirm	1
End ceramic heater near pipes	2
pipes	6

over by sample 9: trash piles - nothing of note. some of the piping to the east of white tank has remnants of glass wool or fiberglass insulation - NOT sampled. Fiberglass pipes in respect preliminary photos observed W of tanks being dismantled

off site 4:22 3 samples taken  
 UPS delivered @ SPM in Hobbs  
 from 5-1045 (095.6 miles)

WEATHER CONDITIONS:	LAST NIGHT	VISITORS ON SITE: Jorge Armstrong ABATEMENT CREW OF 4
TEMPERATURE RANGE: to °F	°F	
PRECIPITATION: inches of	inches	
WIND: to M.P.H.		
ATTACHMENTS:	TELEPHONE CALLS (PROVIDE RECORD OF CONVERSATIONS):	
1. 4.		
2. 5.		
3. 6.		

LEA PERSONNEL ON SITE: Lucy E. Archambault

PREPARED BY: *Lucy E. Archambault* DATE: 4/23/04

RECEIVED BY: *Lucy E. Archambault* DATE: 4/23/04

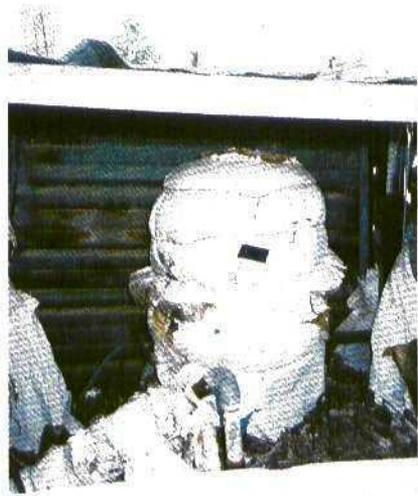
Asbestos Investigation of  
Structures and Pipes  
OCD JAMAR Project Site  
RESPEC Project No. 1494-1.0

**ATTACHMENT 4**

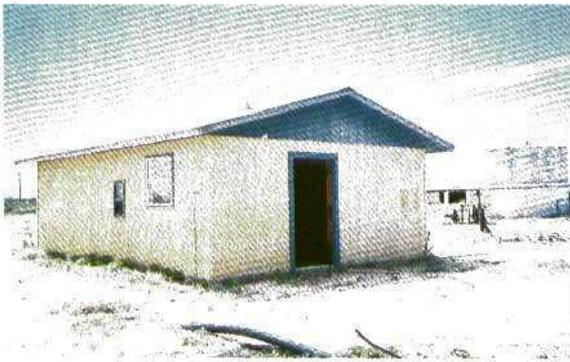
**Asbestos Sampling Site Photographs**



**Sample 1: Windmill well head insulation**



**View of windmill well head shelter**



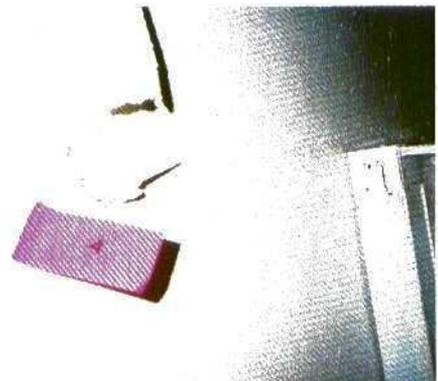
**View Office Building**



**Sample 2: Office building sheetrock wall east side**



**Sample 3: Office building sheetrock wall under air conditioner west side**



**Sample 4: Office building sheetrock ceiling.**

Asbestos Investigation of  
Structures and Pipes  
OCD JAMAR Project  
RESPEC Project No. 1494-1.0



**Sample 5: Office building roofing**



**View office building roofing underlayment**



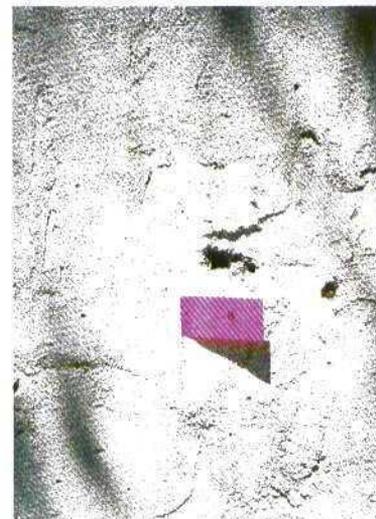
**View Storage Shed**



**Sample 6: Storage Shed Roofing**



**Sample 7: Storage shed east sidewall north of door**



**Sample 8: Storage shed south side wall**



**View of sampled storage tank south side of site road**



**Sample 9: South side storage tank insulation**



**View Heater Unit by Office Building**



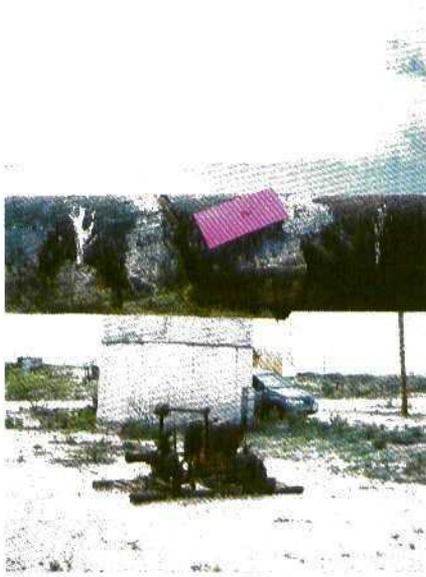
**Sample 10: Heater unit insulation east end**



**Sample 11: Heater unit insulation from west end**



**View elevated piping from heater unit to storage tanks running along north side of office building**



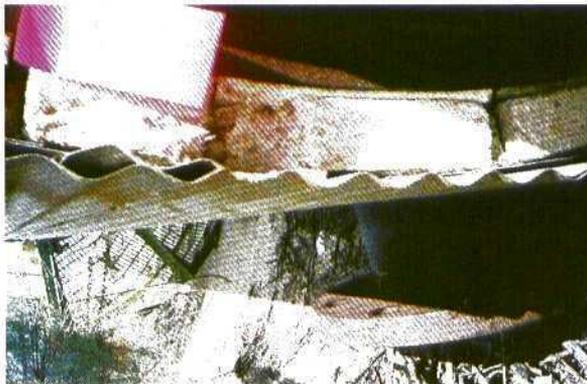
**Sample 12: Asphaltic pipe insulation on north/south elevated pipe run.**



**Sample 13: Pipe insulation on east/west short elevated pipe run**



**View of second heater unit (photo right) and on-ground pipe runs (arrow)**



**Sample 15: Insulation west end second heater unit**



**Sample 14: Insulation east end of second heater unit**



**Sample 16: Insulation south small on-ground pipe run**



**Sample 17: Insulation north small on-ground pipe run**



**Sample 18: Insulation south large on-ground pipe run**



**Sample 19: Insulation north large on-ground pipe run**



**Sample 20: Insulation upright section south large pipe**



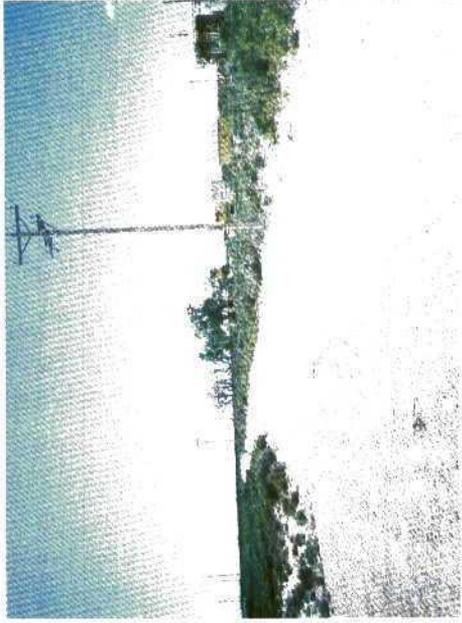
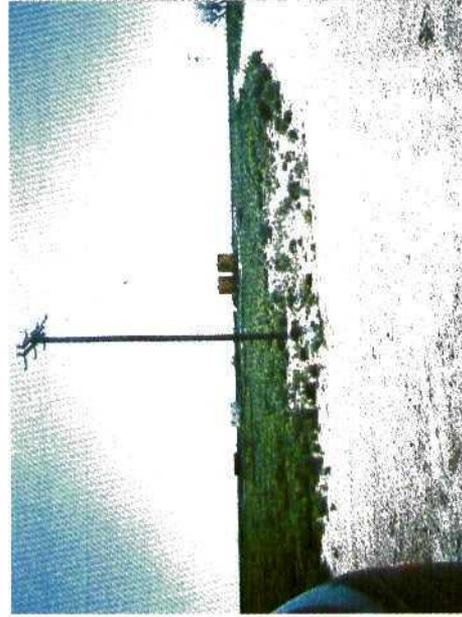
**Sample 21: Insulation south large pipe elbow**



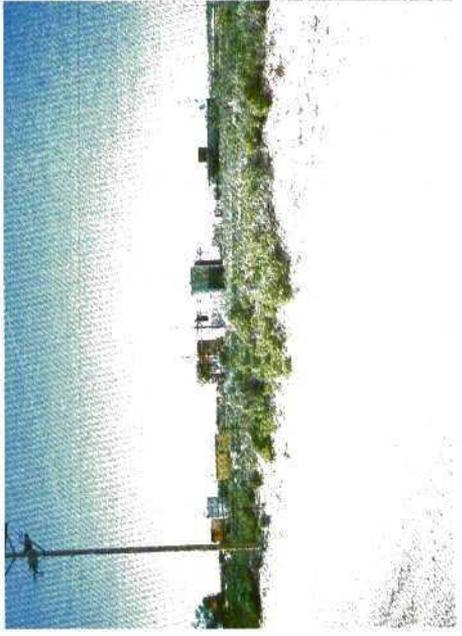
Sample 22: Insulation north large pipe elbow



Sample 23: Insulation north large pipe upright



View of the site from the east side. Left to  
right is south to north



Asbestos Investigation of  
Structures and Pipes  
OCD JAMAR Project Site  
RESPEC Project No. 1494-1.0

**ATTACHMENT 5**

**Asbestos Chain-of-Custody Forms  
and  
Laboratory Reports**

05/12/04

**RESPEC**

# Kevco

LABORATORY & CONSULTING SERVICES

BULK ASBESTOS SAMPLE ANALYSIS REPORT

REPORT DATE: 4/28/04

TEST METHOD: 40 CFR CH. I (1-1-87 EDITION) PT 763,  
SUBPT. F APP. A. PAGES 293-299.

REPORT TO: TRACEANALYSIS, INC.  
6701 ABERDEEN AVENUE  
LUBBOCK TX 79424  
ATTENTION: NELL GREEN

ANALYST SIGNATURE:

*Gary Landini*  
GARY LANDINI

KEVCO JOB NUMBER:	18550	18550	18550
DATE RECEIVED:	4/27/04	4/27/04	4/27/04
DATE ANALYZED:	4/28/04	4/28/04	4/28/04
CLIENT SAMPLE ID:	32572	32573	32574
PROJECT ID:			
SAMPLE LOCATION:			
IS THE SAMPLE HOMOGENEOUS?	NO	NO	NO
DOES IT CONTAIN LAYERS?	YES	YES	YES
IS THE SAMPLE FIBROUS?	YES	NO	NO
SAMPLE COLOR:	GRAY/YELLOW	WHITE/TAN	WHITE/TAN
SAMPLE CONTAIN ASBESTOS FIBERS?	NO	NO	NO
ASBESTOS TYPE AND PERCENT:			
TOTAL PERCENT ASBESTOS:	0 PERCENT	0 PERCENT	0 PERCENT
FIBROUS MATERIALS AND PERCENT:	FIBROUS GLASS 70 - 75 CELLULOSE 05 - 10	CELLULOSE 20 - 25 SYNTHETIC < 1%	FIBROUS GLASS < 1% CELLULOSE 25 - 30
NONFIBROUS CONSTITUENTS:	BINDER/FILLER GLASS BEADS	BINDER/FILLER	BINDER/FILLER
DEVIATION FROM TEST METHOD:			

- THIS TEST REPORT RELATES ONLY TO THE ITEMS TESTED AND MUST NOT BE REPRODUCED EXCEPT WITH THE APPROVAL OF THE LABORATORY.
  - ALL SAMPLES WILL BE DISPOSED OF 90 DAYS FOLLOWING SAMPLE RECEIPT UNLESS OTHERWISE INSTRUCTED BY THE CLIENT.
  - UNDER CURRENT EPA REGULATIONS, AN "ASBESTOS CONTAINING MATERIAL" CONTAINS MORE THAN ONE PERCENT ASBESTOS.
  - UNLESS OTHERWISE STATED, TEST METHOD DOES NOT UTILIZE POINT COUNTING. QUANTITATION OF COMPONENTS BY VISUAL ESTIMATION DURING MACROSCOPIC AND/OR PLM EXAMINATIONS.
  - UNDER CURRENT NESHAP REGULATIONS, 40 CFR PART 61, ASBESTOS CONTENT IN SAMPLES WITH LESS THAN 10 PERCENT ASBESTOS MUST BE REVERIFIED BY PLM POINT COUNTING.
- THIS TEST REPORT MUST NOT BE USED BY THE CLIENT TO CLAIM PRODUCT ENDORSEMENT BY NVLAP OR ANY AGENCY OF THE U.S. GOVERNMENT.

# Kevco

LABORATORY & CONSULTING SERVICES

BULK ASBESTOS SAMPLE ANALYSIS REPORT

REPORT DATE: 4/28/04

TEST METHOD: 40 CFR CH. I (1-1-87 EDITION) PT 763, SUBPT. F APP. A. PAGES 293-299.

REPORT TO: TRACEANALYSIS, INC.  
6701 ABERDEEN AVENUE  
LUBBOCK TX 79424  
ATTENTION: NELL GREEN

ANALYST SIGNATURE:

*Gary Landini*  
GARY LANDINI

KEVCO JOB NUMBER:	18550	18550	18550
DATE RECEIVED:	4/27/04	4/27/04	4/27/04
DATE ANALYZED:	4/28/04	4/28/04	4/28/04
CLIENT SAMPLE ID:	32575	32576	32577
PROJECT ID:			
SAMPLE LOCATION:			
IS THE SAMPLE HOMOGENEOUS?	NO	NO	NO
DOES IT CONTAIN LAYERS?	YES	YES	YES
IS THE SAMPLE FIBROUS?	NO	NO	NO
SAMPLE COLOR:	WHITE/TAN	GRAY/BLACK	GREEN/WHITE/BLACK
SAMPLE CONTAIN ASBESTOS FIBERS?	NO	NO	NO
ASBESTOS TYPE AND PERCENT:			
TOTAL PERCENT ASBESTOS:	0 PERCENT	0 PERCENT	0 PERCENT
FIBROUS MATERIALS AND PERCENT:	FIBROUS GLASS < 1% CELLULOSE 30 - 35	FIBROUS GLASS 15 - 20 CELLULOSE 10 - 15 SYNTHETIC < 1%	FIBROUS GLASS < 1% CELLULOSE 20 - 25 SYNTHETIC 01 - 05
NONFIBROUS CONSTITUENTS:	BINDER/FILLER	FILLER/MATRIX	FILLER/MATRIX
DEVIATION FROM TEST METHOD:		*1	*1

- THIS TEST REPORT RELATES ONLY TO THE ITEMS TESTED AND MUST NOT BE REPRODUCED EXCEPT WITH THE APPROVAL OF THE LABORATORY.
  - ALL SAMPLES WILL BE DISPOSED OF 90 DAYS FOLLOWING SAMPLE RECEIPT UNLESS OTHERWISE INSTRUCTED BY THE CLIENT.
  - UNDER CURRENT EPA REGULATIONS, AN "ASBESTOS CONTAINING MATERIAL" CONTAINS MORE THAN ONE PERCENT ASBESTOS.
  - UNLESS OTHERWISE STATED, TEST METHOD DOES NOT UTILIZE POINT COUNTING. QUANTITATION OF COMPONENTS BY VISUAL ESTIMATION DURING MACROSCOPIC AND/OR PLM EXAMINATIONS.
  - UNDER CURRENT NESHAP REGULATIONS, 40 CFR PART 61, ASBESTOS CONTENT IN SAMPLES WITH LESS THAN 10 PERCENT ASBESTOS MUST BE REVERIFIED BY PLM POINT COUNTING.
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\*1 MATRIX OF SAMPLE DISSOLVED IN TETRAHYDROFURAN, HEATED, EVAPORATED, THEN ANALYSIS CONTINUES ACCORDING TO TEST METHOD.

# Kevco

LABORATORY & CONSULTING SERVICES

BULK ASBESTOS SAMPLE ANALYSIS REPORT

REPORT DATE: 4/28/04

TEST METHOD: 40 CFR CH. I (1-1-87 EDITION) PT 763, SUBPT. F APP. A. PAGES 293-299.

REPORT TO: TRACEANALYSIS, INC.  
6701 ABERDEEN AVENUE  
LUBBOCK TX 79424  
ATTENTION: NELL GREEN

ANALYST SIGNATURE: *Gary Landini*

GARY LANDINI

KEYCO JOB NUMBER:	18550	18550	18550
DATE RECEIVED:	4/27/04	4/27/04	4/27/04
DATE ANALYZED:	4/28/04	4/28/04	4/28/04
CLIENT SAMPLE ID:	32578	32579	32580
PROJECT ID:			
SAMPLE LOCATION:			
IS THE SAMPLE HOMOGENEOUS?	NO	NO	NO
DOES IT CONTAIN LAYERS?	YES	YES	YES
IS THE SAMPLE FIBROUS?	NO	NO	NO
SAMPLE COLOR:	GRAY/WHITE/BLACK	GRAY/WHITE	WHITE/YELLOW
SAMPLE CONTAIN ASBESTOS FIBERS?	YES	YES	NO
ASBESTOS TYPE AND PERCENT:	CHRYSTILE < 1%	CHRYSTILE < 1%	
TOTAL PERCENT ASBESTOS:	LESS THAN 1 PERCENT	LESS THAN 1 PERCENT	0 PERCENT
FIBROUS MATERIALS AND PERCENT:	CELLULOSE 05 - 10 SYNTHETIC < 1% HAIR (WOOL) < 1%	CELLULOSE < 1% HAIR (WOOL) < 1%	CELLULOSE < 1% SYNTHETIC < 1%
NONFIBROUS CONSTITUENTS:	BINDER/FILLER/MATRIX	BINDER/FILLER	MATRIX/FOAM INSUL.
DEVIATION FROM TEST METHOD:	*1		*1

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# Kevco

LABORATORY & CONSULTING SERVICES

BULK ASBESTOS SAMPLE ANALYSIS REPORT

REPORT DATE: 4/28/04

TEST METHOD: 40 CFR CH. I (1-1-87 EDITION) PT 763, SUBPT. F APP. A. PAGES 293-299.

REPORT TO: TRACEANALYSIS, INC.  
6701 ABERDEEN AVENUE  
LUBBOCK TX 79424  
ATTENTION: NELL GREEN

ANALYST SIGNATURE:   
GARY LANDINI

KEVCO JOB NUMBER:	18550	18550	18550
DATE RECEIVED:	4/27/04	4/27/04	4/27/04
DATE ANALYZED:	4/28/04	4/28/04	4/28/04
CLIENT SAMPLE ID:	32581	32582	32583
PROJECT ID:			
SAMPLE LOCATION:			
IS THE SAMPLE HOMOGENEOUS?	NO	NO	NO
DOES IT CONTAIN LAYERS?	YES	YES	YES
IS THE SAMPLE FIBROUS?	YES	YES	NO
SAMPLE COLOR:	GRAY/WHITE	TAN/BLACK/WHITE	GRAY/TAN/BLACK
SAMPLE CONTAIN ASBESTOS FIBERS?	YES	YES	YES
ASBESTOS TYPE AND PERCENT:	CHRYBOTILE 05 - 10 AMOSITE 30 - 35	CHRYBOTILE 15 - 20 AMOSITE 25 - 30	CHRYBOTILE 10 - 15
TOTAL PERCENT ASBESTOS:	TOTAL: 35 - 45	TOTAL: 40 - 50	TOTAL: 10 - 15
FIBROUS MATERIALS AND PERCENT:	FIBROUS GLASS < 1% CELLULOSE 01 - 02 HAIR (WOOL) < 1%	FIBROUS GLASS < 1% CELLULOSE 01 - 02	FIBROUS GLASS 10 - 15 CELLULOSE < 1% HAIR (WOOL) < 1%
NONFIBROUS CONSTITUENTS:	BINDER/FILLER	BINDER/MATRIX	BINDER/MATRIX
DEVIATION FROM TEST METHOD:		*1	*1

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  - ALL SAMPLES WILL BE DISPOSED OF 90 DAYS FOLLOWING SAMPLE RECEIPT UNLESS OTHERWISE INSTRUCTED BY THE CLIENT.
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# Kevco

LABORATORY & CONSULTING SERVICES

BULK ASBESTOS SAMPLE ANALYSIS REPORT

REPORT DATE: 4/28/04

TEST METHOD: 40 CFR CH. I (1-1-87 EDITION) PT 763, SUBPT. F APP. A. PAGES 293-299.

REPORT TO: TRACEANALYSIS, INC.  
6701 ABERDEEN AVENUE  
LUBBOCK TX 79424  
ATTENTION: NELL GREEN

ANALYST SIGNATURE:   
GARY LANDINI

KEVCO JOB NUMBER:	18550	18550	18550
DATE RECEIVED:	4/27/04	4/27/04	4/27/04
DATE ANALYZED:	4/28/04	4/28/04	4/28/04
CLIENT SAMPLE ID:	32584	32585	32586
PROJECT ID:			
SAMPLE LOCATION:			
IS THE SAMPLE HOMOGENEOUS?	NO	NO	NO
DOES IT CONTAIN LAYERS?	YES	NO	NO
IS THE SAMPLE FIBROUS?	YES	YES	YES
SAMPLE COLOR:	BLACK	PINK/GRAY	WHITE/GRAY
SAMPLE CONTAIN ASBESTOS FIBERS?	NO	YES	YES
ASBESTOS TYPE AND PERCENT:		CHRYBOTILE 05 - 10 AMOSITE 20 - 25	AMOSITE 35 - 40
TOTAL PERCENT ASBESTOS:	0 PERCENT	TOTAL: 25 - 35	TOTAL: 35 - 40
FIBROUS MATERIALS AND PERCENT:	FIBROUS GLASS 50 - 55 CELLULOSE 25 - 30	FIBROUS GLASS 30 - 35	FIBROUS GLASS 01 - 05 CELLULOSE < 1%
NONFIBROUS CONSTITUENTS:	BINDER/MATRIX GLASS BEADS	BINDER/GLASS BEADS	BINDER/GLASS BEADS
DEVIATION FROM TEST METHOD:	*1	*2	

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\*2 SAMPLE RECEIVED WET; SAMPLE DRIED PRIOR TO ANALYSIS

# Kevco

LABORATORY & CONSULTING SERVICES

BULK ASBESTOS SAMPLE ANALYSIS REPORT

REPORT DATE: 4/28/04

TEST METHOD: 40 CFR CH. I (1-1-87 EDITION) PT 763, SUBPT. F APP. A. PAGES 293-299.

REPORT TO: TRACEANALYSIS, INC.  
6701 ABERDEEN AVENUE  
LUBBOCK TX 79424  
ATTENTION: NELL GREEN

ANALYST SIGNATURE:   
GARY LANDINI

KEVCO JOB NUMBER:	18550	18550	18550
DATE RECEIVED:	4/27/04	4/27/04	4/27/04
DATE ANALYZED:	4/28/04	4/28/04	4/28/04
CLIENT SAMPLE ID:	32587	32588	32589
PROJECT ID:			
SAMPLE LOCATION:			
IS THE SAMPLE HOMOGENEOUS?	YES	NO	YES
DOES IT CONTAIN LAYERS?	NO	NO	NO
IS THE SAMPLE FIBROUS?	YES	YES	YES
SAMPLE COLOR:	GRAY	TAN/PINK	GRAY
SAMPLE CONTAIN ASBESTOS FIBERS?	YES	YES	YES
ASBESTOS TYPE AND PERCENT:	AMOSITE 70 - 80	CHRYSOTILE 01 - 05 AMOSITE 30 - 35	AMOSITE 75 - 85
TOTAL PERCENT ASBESTOS:	TOTAL: 70 - 80	TOTAL: 31 - 40	TOTAL: 75 - 85
FIBROUS MATERIALS AND PERCENT:	CELLULOSE < 1% HAIR (WOOL) < 1%	CELLULOSE < 1%	CELLULOSE < 1%
NONFIBROUS CONSTITUENTS:	BINDER/FILLER	BINDER/FILLER	BINDER/FILLER
DEVIATION FROM TEST METHOD:			

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# Kevco

LABORATORY & CONSULTING SERVICES

BULK ASBESTOS SAMPLE ANALYSIS REPORT

REPORT DATE: 4/28/04

TEST METHOD: 40 CFR CH. I (1-1-87 EDITION) PT 763, SUBPT. F APP. A. PAGES 293-299.

REPORT TO: TRACEANALYSIS, INC.  
6701 ABERDEEN AVENUE  
LUBBOCK TX 79424  
ATTENTION: NELL GREEN

ANALYST SIGNATURE:   
GARY LANDINI

KEVCO JOB NUMBER:	18550	18550	18550
DATE RECEIVED:	4/27/04	4/27/04	4/27/04
DATE ANALYZED:	4/28/04	4/28/04	4/28/04
CLIENT SAMPLE ID:	32590	32591	32592
PROJECT ID:			
SAMPLE LOCATION:			
IS THE SAMPLE HOMOGENEOUS?	YES	YES	YES
DOES IT CONTAIN LAYERS?	NO	NO	NO
IS THE SAMPLE FIBROUS?	YES	YES	YES
SAMPLE COLOR:	GRAY	TAN/LT. GRAY	LT. GRAY
SAMPLE CONTAIN ASBESTOS FIBERS?	YES	YES	YES
ASBESTOS TYPE AND PERCENT:	AMOSITE 85 - 95	CHRYSOTILE < 1% AMOSITE 80 - 90	AMOSITE 85 - 95
TOTAL PERCENT ASBESTOS:	TOTAL: 85 - 95	TOTAL: 80 - 90	TOTAL: 85 - 95
FIBROUS MATERIALS AND PERCENT:		FIBROUS GLASS < 1% CELLULOSE < 1%	CELLULOSE < 1%
NONFIBROUS CONSTITUENTS:	BINDER/FILLER	BINDER/FILLER	BINDER/FILLER
DEVIATION FROM TEST METHOD:			

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BULK ASBESTOS SAMPLE ANALYSIS REPORT

REPORT DATE: 4/28/04

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REPORT TO: TRACEANALYSIS, INC.  
6701 ABERDEEN AVENUE  
LUBBOCK TX 79424  
ATTENTION: NELL GREEN

ANALYST SIGNATURE:   
GARY LANDINI

KEVCO JOB NUMBER:	18550	18550
DATE RECEIVED:	4/27/04	4/27/04
DATE ANALYZED:	4/28/04	4/28/04
CLIENT SAMPLE ID:	32593	32594
PROJECT ID:		
SAMPLE LOCATION:		
IS THE SAMPLE HOMOGENEOUS?	YES	YES
DOES IT CONTAIN LAYERS?	NO	NO
IS THE SAMPLE FIBROUS?	YES	YES
SAMPLE COLOR:	LT. GRAY	GRAY
SAMPLE CONTAIN ASBESTOS FIBERS?	YES	YES
ASBESTOS TYPE AND PERCENT:	AMOSITE 85 - 95	AMOSITE 80 - 90
TOTAL PERCENT ASBESTOS:	TOTAL: 85 - 95	TOTAL: 80 - 90
FIBROUS MATERIALS AND PERCENT:		FIBROUS GLASS < 1% CELLULOSE 01 - 02
NONFIBROUS CONSTITUENTS:	BINDER/FILLER	BINDER/FILLER
DEVIATION FROM TEST METHOD:		

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6701 Aberdeen Av  
Lubbock, Texas 79424  
Tel (806) 794-1296  
Fax (806) 794-1298  
1 (800) 378-1296

# Trace Analysis, Inc.

McClellan, Suite H  
Lubbock, Texas 79932  
Tel (915) 585-3443  
Fax (915) 585-4944  
1 (888) 588-3443

Company Name: **RESPEC** Phone #: **(505) 890-2815**  
 Address: **4775 INDIAN School Rd, NE Suite 300, Albuquerque, NM 87110** Fax #: **(505) 890-2881**  
 Contact Person: **Lucey Archambault**  
 Invoice to: **(if different from above) OCT**  
 Project #: **1494-110**  
 Project Name: **JAMAR SITE**  
 Project Location: **MONUMENT, NM** Sampler Signature: *Suzie Archambault*

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD					SAMPLING DATE	TIME
				WATER	SOIL	AIR	SLUDGE	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH	ICE		
32583	12	1					X						4/23/04	12-4pm
584	13	1					X						4/23/04	
585	14	1					X						4/23/04	
586	15	1					X						4/23/04	
587	16	1					X						4/23/04	
588	17	1					X						4/23/04	
589	18	1					X						4/23/04	
590	19	1					X						4/23/04	
591	20	1					X						4/23/04	
592	21	1					X						4/23/04	
593	22	1					X						4/23/04	
594	23	1					X						4/23/04	

Relinquished by: *Suzie Archambault* Date: **4/23/04** Time: **5PM** Received by: **UPS** Date: **4/23/04** Time: **5PM**  
 Relinquished by: **UPS** Date: **4/23/04** Time: **10:46** Received by: *Suzie Archambault* Date: **4/26/04** Time: **10:46**

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST  
 LAB Order ID # **4042614**

ANALYSIS REQUEST  
 (Circle or Specify Method No.)

MTBE 8021B/602	
BTEX 8021B/602	
TPH 418.1/TX1005	
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
FCI	
GC/MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCBs 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	

Hold \_\_\_\_\_  
 Turn Around Time if different from standard \_\_\_\_\_

LAB USE ONLY  
 Intact Y / N  
 Headspace Y / N  
 Temp \_\_\_\_\_  
 Log-in Review \_\_\_\_\_

REMARKS:  
 SEND REPORT & SIGNED CHAIN OF CUSTODY TO  
**102-24 SANDHILL DR NW**  
**ALBUQUERQUE, NM 87114**  
 Check Special Reporting Limits Are Needed

Carrier # \_\_\_\_\_  
 Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.  
 ORIGINAL COPY

## Work Order Receipt

**Order**

Work Order	4042614
Receiv Date	at
Requestor	Lucy E Archambault - RESPEC
Invoicing	Wayne Price - OCD-Santa Fe
Purchase Order	N/A
Project	JAMAR
	Project Location = Monument, NM
	Project Name = JAMAR
Comment	N/A

Sample	Field Code	Priority	Matrix	Collect Date	Collect Time	Quantity
32572	1	Normal	solid	2004-04-23	12:00	1
32573	2	Normal	solid	2004-04-23	12:10	1
32574	3	Normal	solid	2004-04-23	12:20	1
32575	4	Normal	solid	2004-04-23	12:30	1
32576	5	Normal	solid	2004-04-23	12:40	1
32577	6	Normal	solid	2004-04-23	12:50	1
32578	7	Normal	solid	2004-04-23	13:00	1
32579	8	Normal	solid	2004-04-23	13:10	1
32580	9	Normal	solid	2004-04-23	13:20	1
32581	10	Normal	solid	2004-04-23	13:30	1
32582	11	Normal	solid	2004-04-23	13:40	1
32583	12	Normal	solid	2004-04-23	13:50	1
32584	13	Normal	solid	2004-04-23	14:00	1
32585	14	Normal	solid	2004-04-23	14:10	1
32586	15	Normal	solid	2004-04-23	14:20	1
32587	16	Normal	solid	2004-04-23	14:30	1
32588	17	Normal	solid	2004-04-23	14:40	1
32589	18	Normal	solid	2004-04-23	14:50	1
32590	19	Normal	solid	2004-04-23	15:00	1
32591	20	Normal	solid	2004-04-23	15:10	1
32592	21	Normal	solid	2004-04-23	15:20	1
32593	22	Normal	solid	2004-04-23	15:30	1
32594	23	Normal	solid	2004-04-23	16:00	1

Sample	Test	Method	Prep	Priority	Duc Date
32572	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:09.954009-05
32573	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:10.064086-05
32574	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:10.160681-05
32575	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:10.254944-05
32576	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:10.347844-05
32577	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:10.439662-05
32578	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:10.531311-05
32579	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:10.622858-05
32580	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:10.714515-05
32581	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:10.806204-05
32582	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:10.898128-05
32583	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:10.990175-05
32584	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:11.083273-05
32585	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:11.184882-05
32586	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:11.282218-05
32587	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:11.373998-05
32588	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:11.465826-05
32589	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:11.557631-05

# Work Order Receipt

Sample	Test	Method	Prep	Priority	Due Date
32590	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:11.649508-05
32591	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:11.741074-05
32592	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:11.832869-05
32593	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:11.924868-05
32594	Asbestos	Outside Testing	N/A	Normal	2004-04-26 10:58:12.018821-05

3824 Jet Drive, P.O. Box 725  
Rapid City, South Dakota 57709-0725  
Phone: 605.394.6400 • Fax: 605.394.6456

4775 Indian School Road NE, Suite 300  
Albuquerque, New Mexico 87110-3927  
Phone: 505.268.2661 • Fax: 505.268.0040

1600 University Avenue, Suite 311  
St. Paul, Minnesota 55104-3825  
Phone: 651.649.0400 • Fax: 651.649.0600

1601 North Harrison Avenue, Suite 2B  
Pierre, South Dakota 57501-2312  
Phone: 605.224.0990 • Fax: 605.224.2763

302 North Canal, Suite C, P.O. Box 2261  
Carlsbad, New Mexico 88221-2261  
Phone: 505.885.1583 • Fax: 505.885.9329

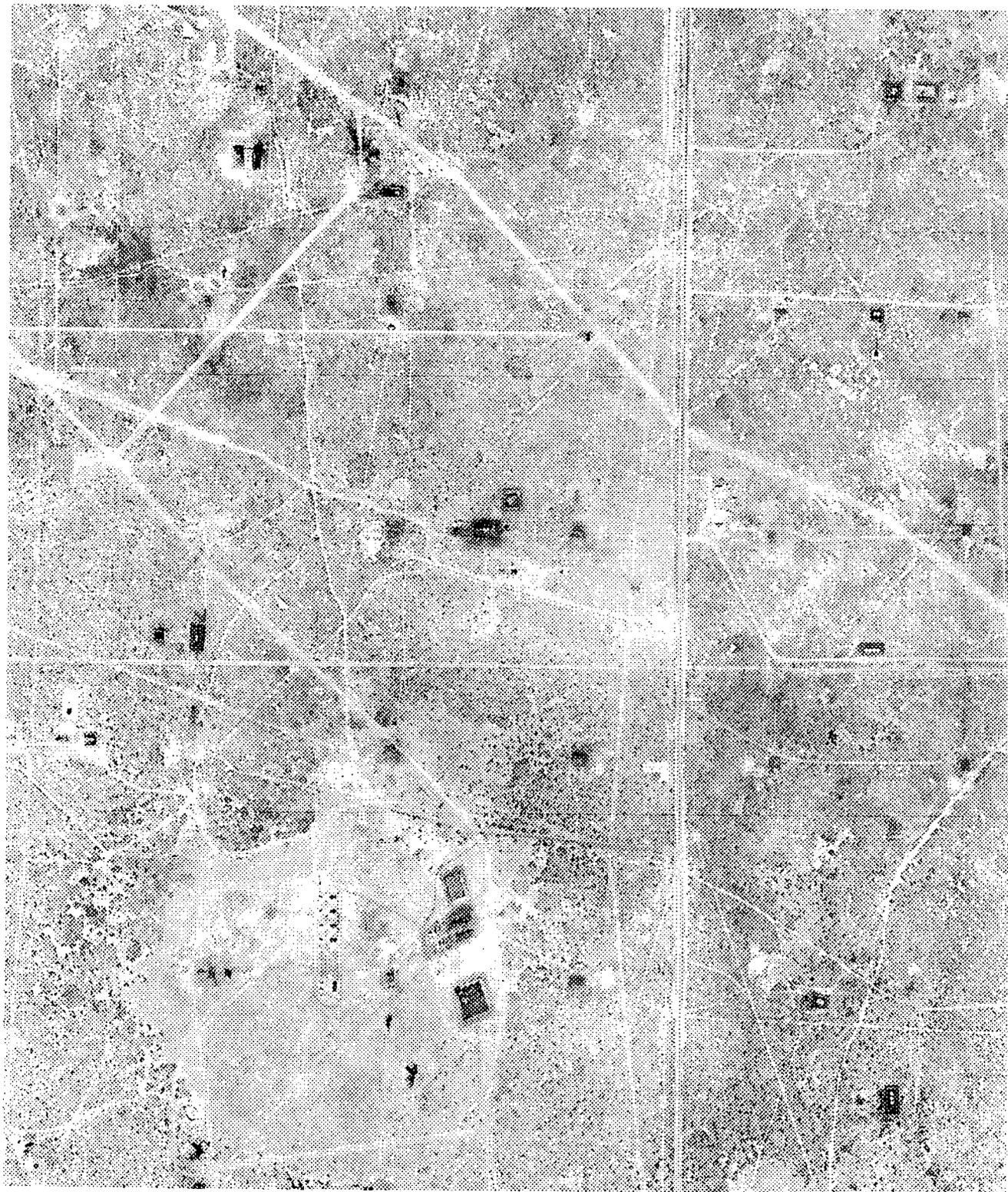


An Integrated Consulting and Services Company

<http://www.respec.com>

APPENDIX D  
AERIAL PHOTOGRAPHS

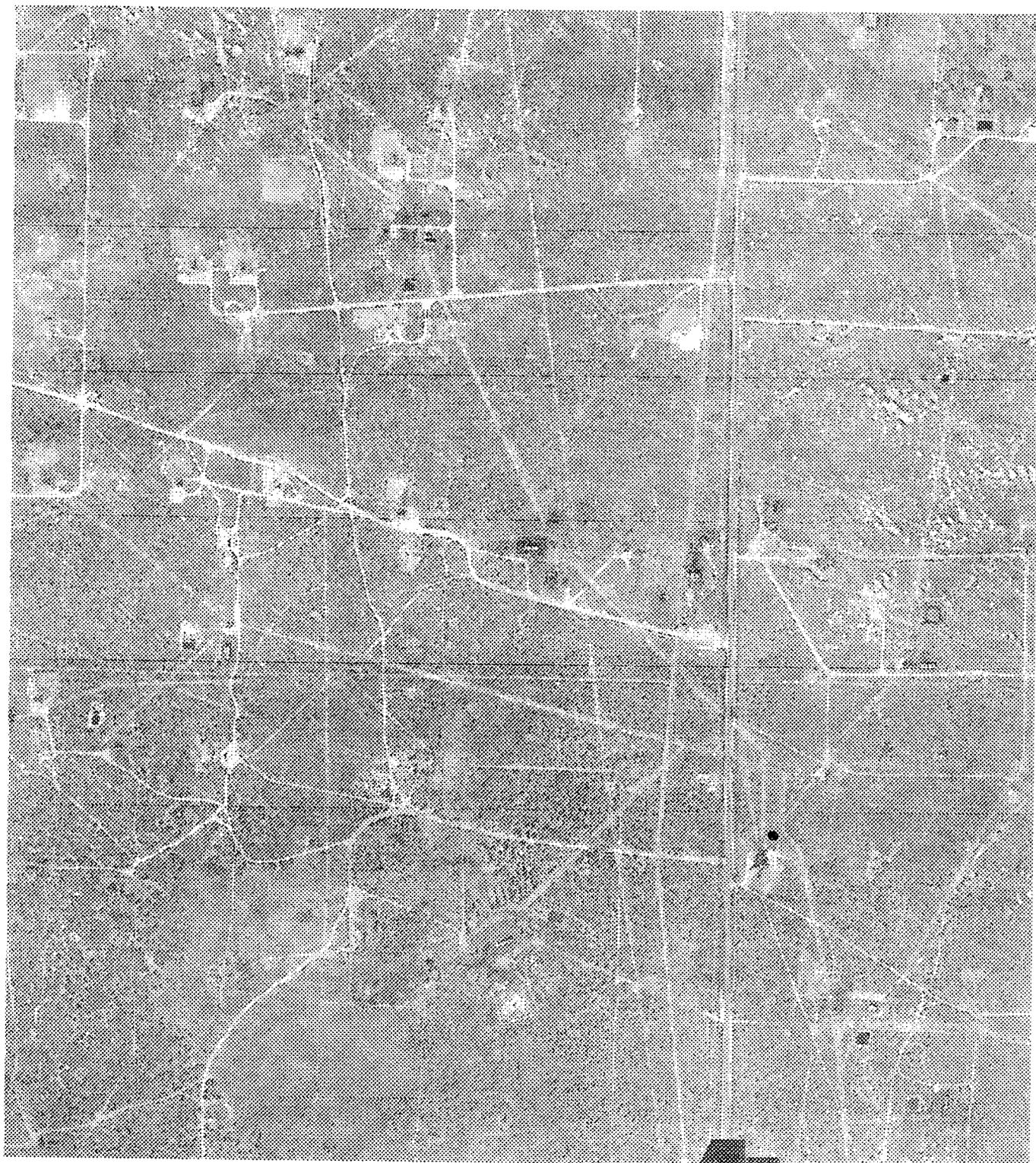
MONUMENT (JAMAR SITE) 1949



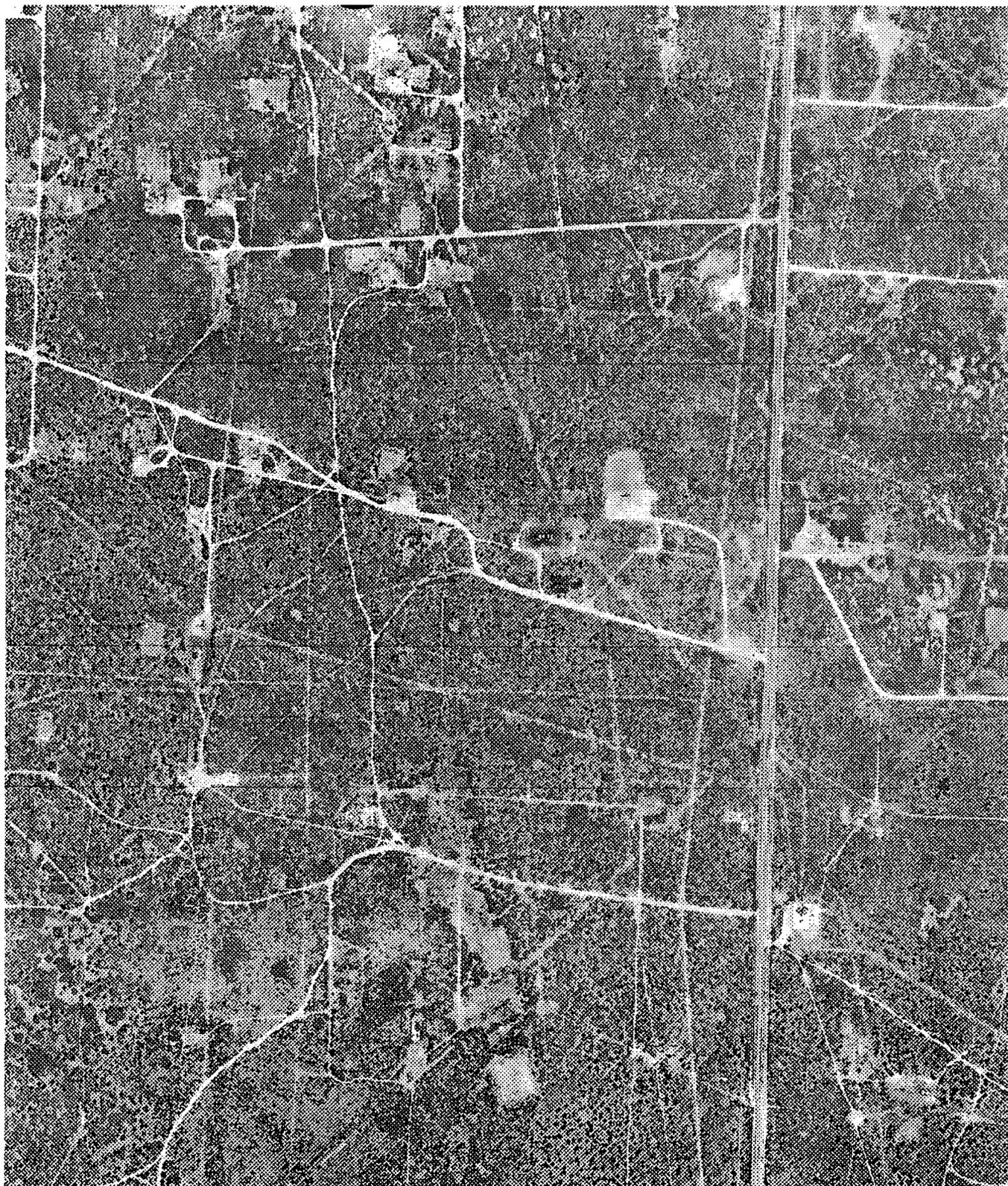
MONUMENT (JAMAR SITE) 1954



**MONUMENT (JAMAR SITE) 1966**



MONUMENT (JAMAR SITE) 1978



**APPENDIX E**  
**EDR ENVIRONMENTAL DATABASE REPORT**



**EDR™** Environmental  
Data Resources Inc

## **The EDR Radius Map with GeoCheck®**

**JAMAR  
Highway 8  
MONUMENT, NM 88265**

**Inquiry Number: 01372035.1r**

**March 04, 2005**

## **The Standard in Environmental Risk Management Information**

440 Wheelers Farms Road  
Milford, Connecticut 06460

### **Nationwide Customer Service**

Telephone: 1-800-352-0050  
Fax: 1-800-231-6802  
Internet: [www.edrnet.com](http://www.edrnet.com)

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***Thank you for your business.***  
 Please contact EDR at 1-800-352-0050  
 with any questions or comments.

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## EXECUTIVE SUMMARY

A search of available environmental records was conducted by Environmental Data Resources, Inc. (EDR). The report meets the government records search requirements of ASTM Standard Practice for Environmental Site Assessments, E 1527-00. Search distances are per ASTM standard or custom distances requested by the user.

### TARGET PROPERTY INFORMATION

#### ADDRESS

HIGHWAY 8  
MONUMENT, NM 88265

#### COORDINATES

Latitude (North): 32.587800 - 32° 35' 16.1"  
Longitude (West): 103.273100 - 103° 16' 23.2"  
Universal Transverse Mercator: Zone 13  
UTM X (Meters): 662079.6  
UTM Y (Meters): 3606718.0  
Elevation: 3548 ft. above sea level

#### USGS TOPOGRAPHIC MAP ASSOCIATED WITH TARGET PROPERTY

Target Property: 32103-E3 MONUMENT SOUTH, NM  
Source: USGS 7.5 min quad index

### TARGET PROPERTY SEARCH RESULTS

The target property was not listed in any of the databases searched by EDR.

### DATABASES WITH NO MAPPED SITES

No mapped sites were found in EDR's search of available ( "reasonably ascertainable ") government records either on the target property or within the ASTM E 1527-00 search radius around the target property for the following databases:

#### FEDERAL ASTM STANDARD

NPL..... National Priority List  
Proposed NPL..... Proposed National Priority List Sites  
CERCLIS..... Comprehensive Environmental Response, Compensation, and Liability Information System  
CERC-NFRAP..... CERCLIS No Further Remedial Action Planned  
CORRACTS..... Corrective Action Report  
RCRA-TSDF..... Resource Conservation and Recovery Act Information  
RCRA-LQG..... Resource Conservation and Recovery Act Information  
RCRA-SQG..... Resource Conservation and Recovery Act Information  
ERNS..... Emergency Response Notification System

#### STATE ASTM STANDARD

SHWS..... This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

## EXECUTIVE SUMMARY

SWF/LF.....	Solid Waste Facilities
LUST.....	Leaking Underground Storage Tank Priorization Database
UST.....	Listing of Underground Storage Tanks
INDIAN UST.....	Underground Storage Tanks on Indian Land
VCP.....	Voluntary Remediation Program Sites
INDIAN LUST.....	Leaking Underground Storage Tanks on Indian Land

### FEDERAL ASTM SUPPLEMENTAL

CONSENT.....	Superfund (CERCLA) Consent Decrees
ROD.....	Records Of Decision
Delisted NPL.....	National Priority List Deletions
FINDS.....	Facility Index System/Facility Identification Initiative Program Summary Report
HMIRS.....	Hazardous Materials Information Reporting System
MLTS.....	Material Licensing Tracking System
MINES.....	Mines Master Index File
NPL Liens.....	Federal Superfund Liens
PADS.....	PCB Activity Database System
DOD.....	Department of Defense Sites
FUDS.....	Formerly Used Defense Sites
ODI.....	Open Dump Inventory
UMTRA.....	Uranium Mill Tailings Sites
INDIAN RESERV.....	Indian Reservations
RAATS.....	RCRA Administrative Action Tracking System
TRIS.....	Toxic Chemical Release Inventory System
TSCA.....	Toxic Substances Control Act
SSTS.....	Section 7 Tracking Systems
FTTS INSP.....	FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

### STATE OR LOCAL ASTM SUPPLEMENTAL

AST.....	Aboveground Storage Tanks List
LAST.....	Leaking Aboveground Storage Tank Sites
SPILLS.....	Spill Data

### BROWNFIELDS DATABASES

US BROWNFIELDS.....	A Listing of Brownfields Sites
VCP.....	Voluntary Remediation Program Sites

### SURROUNDING SITES: SEARCH RESULTS

Surrounding sites were not identified.

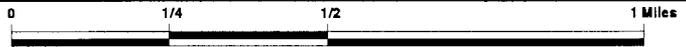
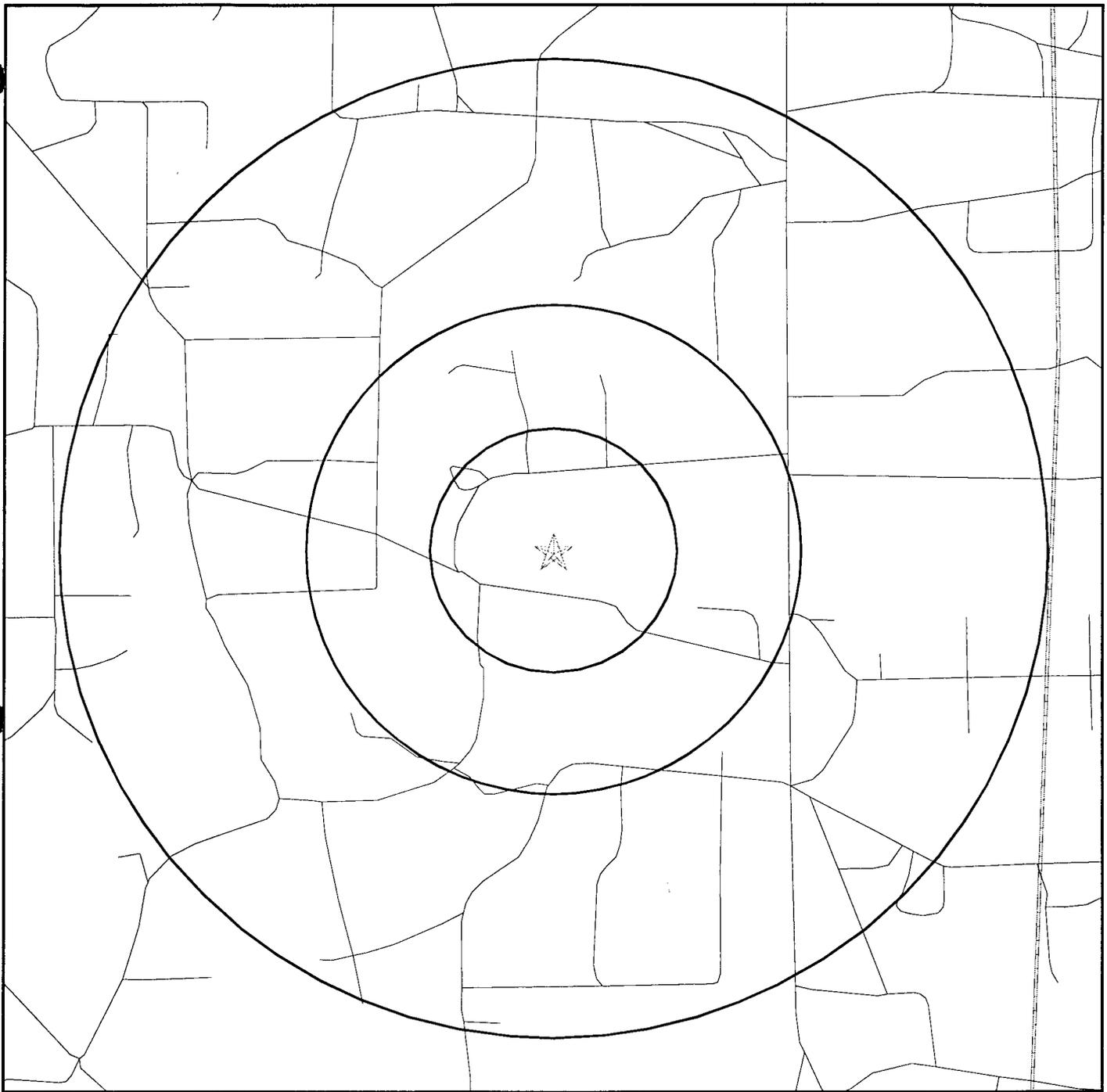
Unmappable (orphan) sites are not considered in the foregoing analysis.

## EXECUTIVE SUMMARY

Due to poor or inadequate address information, the following sites were not mapped:

<u>Site Name</u>	<u>Database(s)</u>
LINAM RANCH SITE	CERCLIS
HIGHWAY 18 SOLVENTS	CERCLIS, FINDS
SNYDER STREET PCE	CERCLIS, FINDS
WESTERN OIL TRANS CO INC HOBBS SHOP	CERC-NFRAP
NEW MEXICO POTASH CORP	CERC-NFRAP
BLM-KERR-MCGEE LAGUNA TOSTON SITE	CERC-NFRAP
SOUTHERN UNION TRUCK FACILITY	CERC-NFRAP
CARDINAL SURVEYS CO	CERC-NFRAP
OIL PROCESSING INC.	CERC-NFRAP
RESOURCE PROTECTION INC	RCRA-SQG, FINDS, CORRACTS
HOBBS LANDFILL	SWF/LF
FERGUSON CONSTR CO	LUST
HOBBS #2/ENRON	LUST
HOBBS YARD	UST
BULL ROGERS INC	UST
HOBBS PLANT 6	UST
HOBBS PLANT	UST
HOBBS GATHERING 4	UST
HANLAD STATE 1	UST
GTSW HOBBS NORTH CENTRAL OFFICE	UST
LOCO HILLS AREA OFFICE	UST
BUCKEYE SERVICE STATION	UST
HOBBS PLANT 2	UST
MONUMENT DISTRICT OFFICE	UST
EUNICE GASOLINE PLANT	UST
H MARKER	UST
CHAMPION TECHNOLOGIES INC HOBBS DIST	RCRA-SQG, FINDS
HOBBS PLANT	RCRA-SQG, FINDS
NALCO EXXON CHEMICAL CO	RCRA-SQG, FINDS
NOWSCO WELL SERVICE INC	RCRA-SQG, FINDS
UNICHEM	RCRA-SQG, FINDS
BJ TITAN HOBBS STA	RCRA-SQG, FINDS
TEPPCO CRUDE HOBBS STATION	RCRA-SQG, FINDS
DUKE ENERGY(LINAM RANCH PLANT)	RCRA-SQG
EL PASO NATURAL GAS MONUMENT COMPRESSOR STATION	RCRA-SQG, FINDS
SUN OIL CO M E LAUGHLIN	RCRA-SQG, FINDS
AMERADA HESS CORP MONUMENT	RCRA-SQG, FINDS

OVERVIEW MAP - 01372035.1r - RE/SPEC, Inc.



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Coal Gasification Sites
- ▨ National Priority List Sites
- ▨ Landfill Sites
- ▨ Dept. Defense Sites

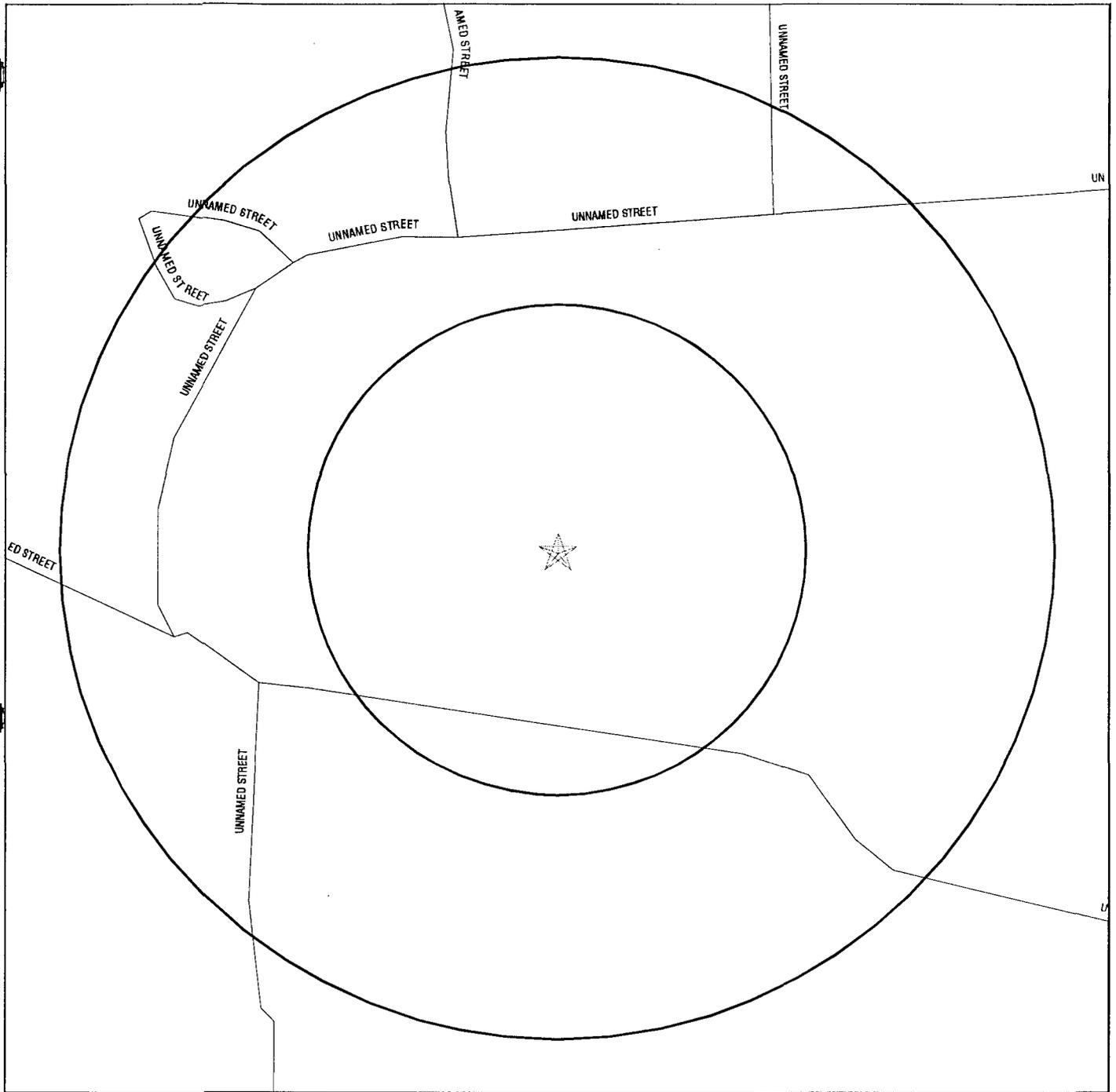
- ▨ Indian Reservations BIA
- W Oil & Gas pipelines



TARGET PROPERTY: JAMAR  
 ADDRESS: Highway 8  
 CITY/STATE/ZIP: MONUMENT NM 88265  
 LAT/LONG: 32.5878 / 103.2731

CUSTOMER: RE/SPEC, Inc.  
 CONTACT: John Bunch  
 INQUIRY #: 01372035.1r  
 DATE: March 04, 2005 1:10 pm

DETAIL MAP - 01372035.1r - RE/SPEC, Inc.



- ★ Target Property
- ▲ Sites at elevations higher than or equal to the target property
- ◆ Sites at elevations lower than the target property
- ▲ Coal Gasification Sites
- Sensitive Receptors
- ▨ National Priority List Sites
- ▨ Landfill Sites
- ▨ Dept. Defense Sites



- ▨ Indian Reservations BIA
- W Oil & Gas pipelines



<b>TARGET PROPERTY:</b> JAMAR <b>ADDRESS:</b> Highway 8 <b>CITY/STATE/ZIP:</b> MONUMENT NM 88265 <b>LAT/LONG:</b> 32.5878 / 103.2731	<b>CUSTOMER:</b> RE/SPEC, Inc. <b>CONTACT:</b> John Bunch <b>INQUIRY #:</b> 01372035.1r <b>DATE:</b> March 04, 2005 1:10 pm
---	--

## MAP FINDINGS SUMMARY

Database	Target Property	Search Distance (Miles)	< 1/8	1/8 - 1/4	1/4 - 1/2	1/2 - 1	> 1	Total Plotted
<b><u>FEDERAL ASTM STANDARD</u></b>								
	NPL	1.000	0	0	0	0	NR	0
	Proposed NPL	1.000	0	0	0	0	NR	0
	CERCLIS	0.500	0	0	0	NR	NR	0
	CERC-NFRAP	0.250	0	0	NR	NR	NR	0
	CORRACTS	1.000	0	0	0	0	NR	0
	RCRA TSD	0.500	0	0	0	NR	NR	0
	RCRA Lg. Quan. Gen.	0.250	0	0	NR	NR	NR	0
	RCRA Sm. Quan. Gen.	0.250	0	0	NR	NR	NR	0
	ERNS	TP	NR	NR	NR	NR	NR	0
<b><u>STATE ASTM STANDARD</u></b>								
	State Haz. Waste	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	State Landfill	0.500	0	0	0	NR	NR	0
	LUST	0.500	0	0	0	NR	NR	0
	UST	0.250	0	0	NR	NR	NR	0
	INDIAN UST	0.250	0	0	NR	NR	NR	0
	VCP	0.500	0	0	0	NR	NR	0
	INDIAN LUST	0.500	0	0	0	NR	NR	0
<b><u>FEDERAL ASTM SUPPLEMENTAL</u></b>								
	CONSENT	1.000	0	0	0	0	NR	0
	ROD	1.000	0	0	0	0	NR	0
	Delisted NPL	1.000	0	0	0	0	NR	0
	FINDS	TP	NR	NR	NR	NR	NR	0
	HMIRS	TP	NR	NR	NR	NR	NR	0
	MLTS	TP	NR	NR	NR	NR	NR	0
	MINES	0.250	0	0	NR	NR	NR	0
	NPL Liens	TP	NR	NR	NR	NR	NR	0
	PADS	TP	NR	NR	NR	NR	NR	0
	DOD	1.000	0	0	0	0	NR	0
	FUDS	1.000	0	0	0	0	NR	0
	ODI	0.500	0	0	0	NR	NR	0
	UMTRA	0.500	0	0	0	NR	NR	0
	INDIAN RESERV	1.000	0	0	0	0	NR	0
	RAATS	TP	NR	NR	NR	NR	NR	0
	TRIS	TP	NR	NR	NR	NR	NR	0
	TSCA	TP	NR	NR	NR	NR	NR	0
	SSTS	TP	NR	NR	NR	NR	NR	0
	FTTS	TP	NR	NR	NR	NR	NR	0
<b><u>STATE OR LOCAL ASTM SUPPLEMENTAL</u></b>								
	AST	TP	NR	NR	NR	NR	NR	0
	LAST	TP	NR	NR	NR	NR	NR	0

## MAP FINDINGS SUMMARY

<u>Database</u>	<u>Target Property</u>	<u>Search Distance (Miles)</u>	<u>&lt; 1/8</u>	<u>1/8 - 1/4</u>	<u>1/4 - 1/2</u>	<u>1/2 - 1</u>	<u>&gt; 1</u>	<u>Total Plotted</u>
SPILLS		TP	NR	NR	NR	NR	NR	0
<b><u>BROWNFIELDS DATABASES</u></b>								
US BROWNFIELDS		0.500	0	0	0	NR	NR	0
VCP		0.500	0	0	0	NR	NR	0

**NOTES:**

AQUIFLOW - see EDR Physical Setting Source Addendum

TP = Target Property

NR = Not Requested at this Search Distance

Sites may be listed in more than one database

N/A = This State does not maintain a SHWS list. See the Federal CERCLIS list.

MAP FINDINGS

Map ID  
Direction  
Distance  
Distance (ft.)  
Elevation    Site

Database(s)    EDR ID Number  
EPA ID Number

Coal Gas Site Search: EDR does not presently have coal gas site information available in this state.

NO SITES FOUND

ORPHAN SUMMARY

City	EDR ID	Site Name	Site Address	Zip	Database(s)
HOBBS	1003873620	WESTERN OIL TRANS CO INC HOBBS SHOP	HWY 18 NORTH	88240	CERC-NFRAP
HOBBS	1000638110	CHAMPION TECHNOLOGIES INC HOBBS DIST	HWY 18 2M S OF HOBBS	88240	RCRA-SQG, FINDS
HOBBS	1000833112	HOBBS PLANT	HWY 61 & 80 13M W	88240	RCRA-SQG, FINDS
HOBBS	1007117463	LINAM RANCH SITE	HWY 62	88240	CERCLIS
HOBBS	S105426947	FERGUSON CONSTR CO	6601 CARLSBAD HWY	88240	LUST
HOBBS	1002980292	NEW MEXICO POTASH CORP	CARLSBAD HWY	88240	CERC-NFRAP
HOBBS	1001222067	NALCO EXXON CHEMICAL CO	6520 CARLSBAD HWY	88240	RCRA-SQG, FINDS
HOBBS	1000183109	NOWSCO WELL SERVICE INC	5514 CARLSBAD HWY	88240	RCRA-SQG, FINDS
HOBBS	1000455327	RESOURCE PROTECTION INC	CTY RD 29 1M W HWY 62 180	88240	RCRA-SQG, FINDS, CORRACTS
HOBBS	S105421574	HOBBS LANDFILL	FACILITY CLOSED	88240	SWFLF
HOBBS	1004753982	UNICHEM	12M N HWY 18 WEST SIDE	88240	RCRA-SQG, FINDS
HOBBS	1003873653	BLM-KERR-MCGEE LAGUNA TOSTON SITE	JCT HWY 62 & 180	88240	CERC-NFRAP
HOBBS	1001404223	HIGHWAY 18 SOLVENTS	JOE HARVEY BLVD	88240	CERCLIS, FINDS
HOBBS	1003873634	SOUTHERN UNION TRUCK FACILITY	LEVINGTON HWY	88240	CERC-NFRAP
HOBBS	1003873593	CARDINAL SURVEYS CO	LOVINGTON HWY	88240	CERC-NFRAP
HOBBS	1000413928	BJ TITAN HOBBS STA	LOVINGTON HIGHWAY	88240	RCRA-SQG, FINDS
HOBBS	U003965187	HOBBS YARD	LOVINGTON HIGHWAY	88240	UST
HOBBS	U003973648	BULL ROGERS INC	3 MILES OF HOBBS ON HWY 18	88240	UST
HOBBS	1001404221	SNYDER STREET PCE	N OF HOBBS HWY 18 5 MILES	88240	UST
HOBBS	1004754007	TEPPCO CRUDE HOBBS STATION	SNYDER STREET	88240	CERCLIS, FINDS
HOBBS	U003723639	HOBBS PLANT 6	5 MI SOUTH OF TOWN ON HWY 18 W	88240	RCRA-SQG, FINDS
HOBBS	U003711631	HOBBS PLANT	STAR RTE A	88240	UST
HOBBS	U003191557	HOBBS GATHERING 4	STAR RTE A	88240	UST
HOBBS	U003191553	HANLAD STATE 1	STAR RTE A	88240	UST
HOBBS	U001387707	GTSW HOBBS NORTH CENTRAL OFFICE	STATE HWY 132 AND GARDEN	88240	UST
HOBBS	1006931162	DUKE ENERGY(LINAM RANCH PLANT)	7 M W OF HOBBS ON HWY 180	88240	RCRA-SQG
LOCO HILLS	U003192062	LOCO HILLS AREA OFFICE	HWY 82	88240	UST
LOVINGTON	U003192158	BUCKEYE SERVICE STATION	STATE RD 8	88240	UST
MONUMENT	U003192315	HOBBS PLANT 2	RTE A	88240	UST
MONUMENT	S105510948	HOBBS #2/ENRON	RTE A, PO BOX 338	88240	LUST
MONUMENT	1000345396	EL PASO NATURAL GAS MONUMENT COMPRESSOR STATION	5 KILOMETERS EAST OF MONUMENT WEST OF HIGHWAY 8	88265	RCRA-SQG, FINDS
MONUMENT	1000126605	SUN OIL CO M E LAUGHLIN	1 1/2 MI S MONUMENT ON SH 8	88265	RCRA-SQG, FINDS
MONUMENT	1000899776	AMERADA HESS CORP MONUMENT	2.5M W ON HWY 322	88265	RCRA-SQG, FINDS
MONUMENT	1003875445	OIL PROCESSING INC.	2.5 MI S MONUMENT ON HWY 8	88265	CERC-NFRAP
MONUMENT	U003192316	MONUMENT DISTRICT OFFICE	STATE HWY 322	88265	UST
OIL CENTER	U003192387	EUNICE GASOLINE PLANT	STATE RD 175	88240	UST
ROS WELL	U003192644	H MARKER	CHAVES HWY 285	88240	UST

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

To maintain currency of the following federal and state databases, EDR contacts the appropriate governmental agency on a monthly or quarterly basis, as required.

**Elapsed ASTM days:** Provides confirmation that this EDR report meets or exceeds the 90-day updating requirement of the ASTM standard.

### **FEDERAL ASTM STANDARD RECORDS**

#### **NPL: National Priority List**

Source: EPA  
Telephone: N/A

National Priorities List (Superfund). The NPL is a subset of CERCLIS and identifies over 1,200 sites for priority cleanup under the Superfund Program. NPL sites may encompass relatively large areas. As such, EDR provides polygon coverage for over 1,000 NPL site boundaries produced by EPA's Environmental Photographic Interpretation Center (EPIC) and regional EPA offices.

Date of Government Version: 12/14/04  
Date Made Active at EDR: 02/03/05  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 02/01/05  
Elapsed ASTM days: 2  
Date of Last EDR Contact: 02/01/05

#### **NPL Site Boundaries**

##### Sources:

EPA's Environmental Photographic Interpretation Center (EPIC)  
Telephone: 202-564-7333

EPA Region 1  
Telephone 617-918-1143

EPA Region 3  
Telephone 215-814-5418

EPA Region 4  
Telephone 404-562-8033

EPA Region 6  
Telephone: 214-655-6659

EPA Region 8  
Telephone: 303-312-6774

#### **Proposed NPL: Proposed National Priority List Sites**

Source: EPA  
Telephone: N/A

Date of Government Version: 12/14/04  
Date Made Active at EDR: 02/03/05  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 02/01/05  
Elapsed ASTM days: 2  
Date of Last EDR Contact: 02/01/05

#### **CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System**

Source: EPA  
Telephone: 703-413-0223

CERCLIS contains data on potentially hazardous waste sites that have been reported to the USEPA by states, municipalities, private companies and private persons, pursuant to Section 103 of the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA). CERCLIS contains sites which are either proposed to or on the National Priorities List (NPL) and sites which are in the screening and assessment phase for possible inclusion on the NPL.

Date of Government Version: 12/14/04  
Date Made Active at EDR: 02/08/05  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/21/04  
Elapsed ASTM days: 49  
Date of Last EDR Contact: 12/21/04

#### **CERCLIS-NFRAP: CERCLIS No Further Remedial Action Planned**

Source: EPA  
Telephone: 703-413-0223

As of February 1995, CERCLIS sites designated "No Further Remedial Action Planned" (NFRAP) have been removed from CERCLIS. NFRAP sites may be sites where, following an initial investigation, no contamination was found, contamination was removed quickly without the need for the site to be placed on the NPL, or the contamination was not serious enough to require Federal Superfund action or NPL consideration. EPA has removed approximately 25,000 NFRAP sites to lift the unintended barriers to the redevelopment of these properties and has archived them as historical records so EPA does not needlessly repeat the investigations in the future. This policy change is part of the EPA's Brownfields Redevelopment Program to help cities, states, private investors and affected citizens to promote economic redevelopment of unproductive urban sites.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/14/04  
Date Made Active at EDR: 02/08/05  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 12/21/04  
Elapsed ASTM days: 49  
Date of Last EDR Contact: 12/21/04

### **CORRACTS:** Corrective Action Report

Source: EPA

Telephone: 800-424-9346

CORRACTS identifies hazardous waste handlers with RCRA corrective action activity.

Date of Government Version: 12/15/04  
Date Made Active at EDR: 02/25/05  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 01/07/05  
Elapsed ASTM days: 49  
Date of Last EDR Contact: 12/07/04

### **RCRA:** Resource Conservation and Recovery Act Information

Source: EPA

Telephone: 800-424-9346

RCRAInfo is EPA's comprehensive information system, providing access to data supporting the Resource Conservation and Recovery Act (RCRA) of 1976 and the Hazardous and Solid Waste Amendments (HSWA) of 1984. RCRAInfo replaces the data recording and reporting abilities of the Resource Conservation and Recovery Information System (RCRIS). The database includes selective information on sites which generate, transport, store, treat and/or dispose of hazardous waste as defined by the Resource Conservation and Recovery Act (RCRA). Conditionally exempt small quantity generators (CESQGs) generate less than 100 kg of hazardous waste, or less than 1 kg of acutely hazardous waste per month. Small quantity generators (SQGs) generate between 100 kg and 1,000 kg of hazardous waste per month. Large quantity generators (LQGs) generate over 1,000 kilograms (kg) of hazardous waste, or over 1 kg of acutely hazardous waste per month. Transporters are individuals or entities that move hazardous waste from the generator off-site to a facility that can recycle, treat, store, or dispose of the waste. TSDFs treat, store, or dispose of the waste.

Date of Government Version: 11/23/04  
Date Made Active at EDR: 01/18/05  
Database Release Frequency: Quarterly

Date of Data Arrival at EDR: 11/24/04  
Elapsed ASTM days: 55  
Date of Last EDR Contact: 11/24/04

### **ERNS:** Emergency Response Notification System

Source: National Response Center, United States Coast Guard

Telephone: 202-260-2342

Emergency Response Notification System. ERNS records and stores information on reported releases of oil and hazardous substances.

Date of Government Version: 12/31/03  
Date Made Active at EDR: 03/12/04  
Database Release Frequency: Annually

Date of Data Arrival at EDR: 01/26/04  
Elapsed ASTM days: 46  
Date of Last EDR Contact: 01/27/05

### **FEDERAL ASTM SUPPLEMENTAL RECORDS**

#### **BRS:** Biennial Reporting System

Source: EPA/NTIS

Telephone: 800-424-9346

The Biennial Reporting System is a national system administered by the EPA that collects data on the generation and management of hazardous waste. BRS captures detailed data from two groups: Large Quantity Generators (LQG) and Treatment, Storage, and Disposal Facilities.

Date of Government Version: 12/01/01  
Database Release Frequency: Biennially

Date of Last EDR Contact: 12/13/04  
Date of Next Scheduled EDR Contact: 03/14/05

#### **CONSENT:** Superfund (CERCLA) Consent Decrees

Source: Department of Justice, Consent Decree Library

Telephone: Varies

Major legal settlements that establish responsibility and standards for cleanup at NPL (Superfund) sites. Released periodically by United States District Courts after settlement by parties to litigation matters.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 03/05/04  
Database Release Frequency: Varies

Date of Last EDR Contact: 10/25/04  
Date of Next Scheduled EDR Contact: 01/24/05

**ROD: Records Of Decision**

Source: EPA  
Telephone: 703-416-0223

Record of Decision. ROD documents mandate a permanent remedy at an NPL (Superfund) site containing technical and health information to aid in the cleanup.

Date of Government Version: 09/09/04  
Database Release Frequency: Annually

Date of Last EDR Contact: 01/05/05  
Date of Next Scheduled EDR Contact: 04/04/05

**DELISTED NPL: National Priority List Deletions**

Source: EPA  
Telephone: N/A

The National Oil and Hazardous Substances Pollution Contingency Plan (NCP) establishes the criteria that the EPA uses to delete sites from the NPL. In accordance with 40 CFR 300.425.(e), sites may be deleted from the NPL where no further response is appropriate.

Date of Government Version: 12/14/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 02/01/05  
Date of Next Scheduled EDR Contact: 05/02/05

**FINDS: Facility Index System/Facility Identification Initiative Program Summary Report**

Source: EPA  
Telephone: N/A

Facility Index System. FINDS contains both facility information and 'pointers' to other sources that contain more detail. EDR includes the following FINDS databases in this report: PCS (Permit Compliance System), AIRS (Aerometric Information Retrieval System), DOCKET (Enforcement Docket used to manage and track information on civil judicial enforcement cases for all environmental statutes), FURS (Federal Underground Injection Control), C-DOCKET (Criminal Docket System used to track criminal enforcement actions for all environmental statutes), FFIS (Federal Facilities Information System), STATE (State Environmental Laws and Statutes), and PADS (PCB Activity Data System).

Date of Government Version: 09/09/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/03/05  
Date of Next Scheduled EDR Contact: 04/04/05

**HMIRS: Hazardous Materials Information Reporting System**

Source: U.S. Department of Transportation  
Telephone: 202-366-4555

Hazardous Materials Incident Report System. HMIRS contains hazardous material spill incidents reported to DOT.

Date of Government Version: 09/08/04  
Database Release Frequency: Annually

Date of Last EDR Contact: 01/19/05  
Date of Next Scheduled EDR Contact: 04/18/05

**MLTS: Material Licensing Tracking System**

Source: Nuclear Regulatory Commission  
Telephone: 301-415-7169

MLTS is maintained by the Nuclear Regulatory Commission and contains a list of approximately 8,100 sites which possess or use radioactive materials and which are subject to NRC licensing requirements. To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 11/30/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/03/05  
Date of Next Scheduled EDR Contact: 04/04/05

**MINES: Mines Master Index File**

Source: Department of Labor, Mine Safety and Health Administration  
Telephone: 303-231-5959

Contains all mine identification numbers issued for mines active or opened since 1971. The data also includes violation information.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 09/13/04  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 12/28/04  
Date of Next Scheduled EDR Contact: 03/28/05

## **NPL LIENS:** Federal Superfund Liens

Source: EPA  
Telephone: 202-564-4267

Federal Superfund Liens. Under the authority granted the USEPA by the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) of 1980, the USEPA has the authority to file liens against real property in order to recover remedial action expenditures or when the property owner receives notification of potential liability. USEPA compiles a listing of filed notices of Superfund Liens.

Date of Government Version: 10/15/91  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 02/22/05  
Date of Next Scheduled EDR Contact: 05/23/05

## **PADS:** PCB Activity Database System

Source: EPA  
Telephone: 202-564-3887

PCB Activity Database. PADS Identifies generators, transporters, commercial storers and/or brokers and disposers of PCB's who are required to notify the EPA of such activities.

Date of Government Version: 09/30/04  
Database Release Frequency: Annually

Date of Last EDR Contact: 02/23/05  
Date of Next Scheduled EDR Contact: 05/09/05

## **DOD:** Department of Defense Sites

Source: USGS  
Telephone: 703-692-8801

This data set consists of federally owned or administered lands, administered by the Department of Defense, that have any area equal to or greater than 640 acres of the United States, Puerto Rico, and the U.S. Virgin Islands.

Date of Government Version: 10/01/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/08/05  
Date of Next Scheduled EDR Contact: 05/09/05

## **UMTRA:** Uranium Mill Tailings Sites

Source: Department of Energy  
Telephone: 505-845-0011

Uranium ore was mined by private companies for federal government use in national defense programs. When the mills shut down, large piles of the sand-like material (mill tailings) remain after uranium has been extracted from the ore. Levels of human exposure to radioactive materials from the piles are low; however, in some cases tailings were used as construction materials before the potential health hazards of the tailings were recognized. In 1978, 24 inactive uranium mill tailings sites in Oregon, Idaho, Wyoming, Utah, Colorado, New Mexico, Texas, North Dakota, South Dakota, Pennsylvania, and on Navajo and Hopi tribal lands, were targeted for cleanup by the Department of Energy.

Date of Government Version: 04/22/04  
Database Release Frequency: Varies

Date of Last EDR Contact: 12/21/04  
Date of Next Scheduled EDR Contact: 03/21/05

## **ODI:** Open Dump Inventory

Source: Environmental Protection Agency  
Telephone: 800-424-9346

An open dump is defined as a disposal facility that does not comply with one or more of the Part 257 or Part 258 Subtitle D Criteria.

Date of Government Version: 06/30/85  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 05/23/95  
Date of Next Scheduled EDR Contact: N/A

## **FUDS:** Formerly Used Defense Sites

Source: U.S. Army Corps of Engineers  
Telephone: 202-528-4285

The listing includes locations of Formerly Used Defense Sites properties where the US Army Corps of Engineers is actively working or will take necessary cleanup actions.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 12/31/03  
Database Release Frequency: Varies

Date of Last EDR Contact: 01/03/05  
Date of Next Scheduled EDR Contact: 04/04/05

**INDIAN RESERV:** Indian Reservations

Source: USGS

Telephone: 202-208-3710

This map layer portrays Indian administered lands of the United States that have any area equal to or greater than 640 acres.

Date of Government Version: 10/01/03  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: 02/08/05  
Date of Next Scheduled EDR Contact: 05/09/05

**RAATS:** RCRA Administrative Action Tracking System

Source: EPA

Telephone: 202-564-4104

RCRA Administration Action Tracking System. RAATS contains records based on enforcement actions issued under RCRA pertaining to major violators and includes administrative and civil actions brought by the EPA. For administration actions after September 30, 1995, data entry in the RAATS database was discontinued. EPA will retain a copy of the database for historical records. It was necessary to terminate RAATS because a decrease in agency resources made it impossible to continue to update the information contained in the database.

Date of Government Version: 04/17/95  
Database Release Frequency: No Update Planned

Date of Last EDR Contact: 12/06/04  
Date of Next Scheduled EDR Contact: 03/07/05

**TRIS:** Toxic Chemical Release Inventory System

Source: EPA

Telephone: 202-566-0250

Toxic Release Inventory System. TRIS identifies facilities which release toxic chemicals to the air, water and land in reportable quantities under SARA Title III Section 313.

Date of Government Version: 12/31/02  
Database Release Frequency: Annually

Date of Last EDR Contact: 12/20/04  
Date of Next Scheduled EDR Contact: 03/21/05

**TSCA:** Toxic Substances Control Act

Source: EPA

Telephone: 202-260-5521

Toxic Substances Control Act. TSCA identifies manufacturers and importers of chemical substances included on the TSCA Chemical Substance Inventory list. It includes data on the production volume of these substances by plant site.

Date of Government Version: 12/31/02  
Database Release Frequency: Every 4 Years

Date of Last EDR Contact: 12/06/04  
Date of Next Scheduled EDR Contact: 03/07/05

**FTTS INSP:** FIFRA/ TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Source: EPA

Telephone: 202-564-2501

Date of Government Version: 04/13/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/01/04  
Date of Next Scheduled EDR Contact: 03/21/05

**SSTS:** Section 7 Tracking Systems

Source: EPA

Telephone: 202-564-5008

Section 7 of the Federal Insecticide, Fungicide and Rodenticide Act, as amended (92 Stat. 829) requires all registered pesticide-producing establishments to submit a report to the Environmental Protection Agency by March 1st each year. Each establishment must report the types and amounts of pesticides, active ingredients and devices being produced, and those having been produced and sold or distributed in the past year.

Date of Government Version: 12/31/03  
Database Release Frequency: Annually

Date of Last EDR Contact: 11/29/04  
Date of Next Scheduled EDR Contact: 04/18/05

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

### **FTTS:** FIFRA/TSCA Tracking System - FIFRA (Federal Insecticide, Fungicide, & Rodenticide Act)/TSCA (Toxic Substances Control Act)

Source: EPA/Office of Prevention, Pesticides and Toxic Substances

Telephone: 202-564-2501

FTTS tracks administrative cases and pesticide enforcement actions and compliance activities related to FIFRA, TSCA and EPCRA (Emergency Planning and Community Right-to-Know Act). To maintain currency, EDR contacts the Agency on a quarterly basis.

Date of Government Version: 09/13/04  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 12/01/04  
Date of Next Scheduled EDR Contact: 03/21/05

### **STATE OF NEW MEXICO ASTM STANDARD RECORDS**

#### **SHWS:** This state does not maintain a SHWS list. See the Federal CERCLIS list and Federal NPL list.

Source: EPA

Telephone: 703-413-0223

State Hazardous Waste Sites. State hazardous waste site records are the states' equivalent to CERCLIS. These sites may or may not already be listed on the federal CERCLIS list. Priority sites planned for cleanup using state funds (state equivalent of Superfund) are identified along with sites where cleanup will be paid for by potentially responsible parties. Available information varies by state.

Date of Government Version: N/A  
Date Made Active at EDR: N/A  
Database Release Frequency: N/A

Date of Data Arrival at EDR: N/A  
Elapsed ASTM days: N/A  
Date of Last EDR Contact: 01/25/05

#### **SWF/LF:** Solid Waste Facilities

Source: New Mexico Environment Department

Telephone: 505-827-0347

Solid Waste Facilities/Landfill Sites. SWF/LF type records typically contain an inventory of solid waste disposal facilities or landfills in a particular state. Depending on the state, these may be active or inactive facilities or open dumps that failed to meet RCRA Subtitle D Section 4004 criteria for solid waste landfills or disposal sites.

Date of Government Version: 12/23/03  
Date Made Active at EDR: 01/20/04  
Database Release Frequency: Semi-Annually

Date of Data Arrival at EDR: 12/23/03  
Elapsed ASTM days: 28  
Date of Last EDR Contact: 12/06/04

#### **LUST:** Leaking Underground Storage Tank Priorization Database

Source: New Mexico Environment Department

Telephone: 505-984-1741

Leaking Underground Storage Tank Incident Reports. LUST records contain an inventory of reported leaking underground storage tank incidents. Not all states maintain these records, and the information stored varies by state.

Date of Government Version: 01/31/05  
Date Made Active at EDR: 03/04/05  
Database Release Frequency: Varies

Date of Data Arrival at EDR: 01/31/05  
Elapsed ASTM days: 32  
Date of Last EDR Contact: 01/31/05

#### **UST:** Listing of Underground Storage Tanks

Source: New Mexico Environment Department

Telephone: 505-984-1741

Registered Underground Storage Tanks. UST's are regulated under Subtitle I of the Resource Conservation and Recovery Act (RCRA) and must be registered with the state department responsible for administering the UST program. Available information varies by state program.

Date of Government Version: 11/01/04  
Date Made Active at EDR: 12/01/04  
Database Release Frequency: Varies

Date of Data Arrival at EDR: 11/02/04  
Elapsed ASTM days: 29  
Date of Last EDR Contact: 01/31/05

#### **INDIAN UST:** Underground Storage Tanks on Indian Land

Source: EPA Region 9

Telephone: 415-972-3368

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 11/02/04  
Date Made Active at EDR: 12/08/04  
Database Release Frequency: Varies

Date of Data Arrival at EDR: 11/03/04  
Elapsed ASTM days: 35  
Date of Last EDR Contact: 02/22/05

**INDIAN LUST:** Leaking Underground Storage Tanks on Indian Land  
Source: Environmental Protection Agency  
Telephone: 415-972-3372  
LUSTs on Indian land in Arizona, California, New Mexico and Nevada

Date of Government Version: 01/14/05  
Date Made Active at EDR: 02/28/05  
Database Release Frequency: Varies

Date of Data Arrival at EDR: 01/14/05  
Elapsed ASTM days: 45  
Date of Last EDR Contact: 02/22/05

**INDIAN UST:** USTs on Indian Land  
Source: Environmental Protection Agency, Region 6  
Telephone: 214-665-7591

Date of Government Version: 01/04/05  
Date Made Active at EDR: 02/28/05  
Database Release Frequency: Varies

Date of Data Arrival at EDR: 01/14/05  
Elapsed ASTM days: 45  
Date of Last EDR Contact: 02/22/05

**VCP:** Voluntary Remediation Program Sites  
Source: Environment Department  
Telephone: 505-827-2754  
Sites involved in the Voluntary Remediation Program.

Date of Government Version: 09/30/04  
Date Made Active at EDR: 01/17/05  
Database Release Frequency: Varies

Date of Data Arrival at EDR: 12/03/04  
Elapsed ASTM days: 45  
Date of Last EDR Contact: 02/17/05

**INDIAN LUST:** Leaking Underground Storage Tanks on Indian Land  
Source: EPA Region 6  
Telephone: 214-665-6597  
LUSTs on Indian land in New Mexico and Oklahoma.

Date of Government Version: 01/04/05  
Date Made Active at EDR: 02/28/05  
Database Release Frequency: Varies

Date of Data Arrival at EDR: 01/21/05  
Elapsed ASTM days: 38  
Date of Last EDR Contact: 02/22/05

### STATE OF NEW MEXICO ASTM SUPPLEMENTAL RECORDS

**AST:** Aboveground Storage Tanks List  
Source: Environment Department  
Telephone: 505-984-1926  
Aboveground tanks that have been inspected by the State Fire Marshal.

Date of Government Version: 12/27/04  
Database Release Frequency: Varies

Date of Last EDR Contact: 12/27/04  
Date of Next Scheduled EDR Contact: 03/28/05

**LAST:** Leaking Aboveground Storage Tank Sites  
Source: Environment Department  
Telephone: 505-984-1926  
A listing of leaking aboveground storage tank sites.

Date of Government Version: 01/31/05  
Database Release Frequency: Quarterly

Date of Last EDR Contact: 01/31/05  
Date of Next Scheduled EDR Contact: 05/02/05

**SPILLS:** Spill Data  
Source: Environment Department  
Telephone: 505-827-0166  
Hazardous materials spills data.

# GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

Date of Government Version: 10/04/04  
Database Release Frequency: Varies

Date of Last EDR Contact: 02/22/05  
Date of Next Scheduled EDR Contact: 04/25/05

## EDR PROPRIETARY HISTORICAL DATABASES

**Former Manufactured Gas (Coal Gas) Sites:** The existence and location of Coal Gas sites is provided exclusively to EDR by Real Property Scan, Inc. ©Copyright 1993 Real Property Scan, Inc. For a technical description of the types of hazards which may be found at such sites, contact your EDR customer service representative.

### **Disclaimer Provided by Real Property Scan, Inc.**

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## BROWNFIELDS DATABASES

### **US BROWNFIELDS:** A Listing of Brownfields Sites

Source: Environmental Protection Agency  
Telephone: 202-566-2777

Included in the listing are brownfields properties addresses by Cooperative Agreement Recipients and brownfields properties addressed by Targeted Brownfields Assessments. Targeted Brownfields Assessments-EPA's Targeted Brownfields Assessments (TBA) program is designed to help states, tribes, and municipalities--especially those without EPA Brownfields Assessment Demonstration Pilots--minimize the uncertainties of contamination often associated with brownfields. Under the TBA program, EPA provides funding and/or technical assistance for environmental assessments at brownfields sites throughout the country. Targeted Brownfields Assessments supplement and work with other efforts under EPA's Brownfields Initiative to promote cleanup and redevelopment of brownfields. Cooperative Agreement Recipients-States, political subdivisions, territories, and Indian tribes become Brownfields Cleanup Revolving Loan Fund (BCRLF) cooperative agreement recipients when they enter into BCRLF cooperative agreements with the U.S. EPA. EPA selects BCRLF cooperative agreement recipients based on a proposal and application process. BCRLF cooperative agreement recipients must use EPA funds provided through BCRLF cooperative agreement for specified brownfields-related cleanup activities.

Date of Government Version: N/A  
Database Release Frequency: Semi-Annually

Date of Last EDR Contact: N/A  
Date of Next Scheduled EDR Contact: N/A

### **VCP:** Voluntary Remediation Program Sites

Source: Environment Department  
Telephone: 505-827-2754

Sites involved in the Voluntary Remediation Program.

Date of Government Version: 09/30/04  
Database Release Frequency: Varies

Date of Last EDR Contact: 02/17/05  
Date of Next Scheduled EDR Contact: 04/25/05

## OTHER DATABASE(S)

Depending on the geographic area covered by this report, the data provided in these specialty databases may or may not be complete. For example, the existence of wetlands information data in a specific report does not mean that all wetlands in the area covered by the report are included. Moreover, the absence of any reported wetlands information does not necessarily mean that wetlands do not exist in the area covered by the report.

## GOVERNMENT RECORDS SEARCHED / DATA CURRENCY TRACKING

**Oil/Gas Pipelines:** This data was obtained by EDR from the USGS in 1994. It is referred to by USGS as GeoData Digital Line Graphs from 1:100,000-Scale Maps. It was extracted from the transportation category including some oil, but primarily gas pipelines.

### **Electric Power Transmission Line Data**

Source: PennWell Corporation

Telephone: (800) 823-6277

This map includes information copyrighted by PennWell Corporation. This information is provided on a best effort basis and PennWell Corporation does not guarantee its accuracy nor warrant its fitness for any particular purpose. Such information has been reprinted with the permission of PennWell.

**Sensitive Receptors:** There are individuals deemed sensitive receptors due to their fragile immune systems and special sensitivity to environmental discharges. These sensitive receptors typically include the elderly, the sick, and children. While the location of all sensitive receptors cannot be determined, EDR indicates those buildings and facilities - schools, daycares, hospitals, medical centers, and nursing homes - where individuals who are sensitive receptors are likely to be located.

### **AHA Hospitals:**

Source: American Hospital Association, Inc.

Telephone: 312-280-5991

The database includes a listing of hospitals based on the American Hospital Association's annual survey of hospitals.

### **Medical Centers: Provider of Services Listing**

Source: Centers for Medicare & Medicaid Services

Telephone: 410-786-3000

A listing of hospitals with Medicare provider number, produced by Centers of Medicare & Medicaid Services, a federal agency within the U.S. Department of Health and Human Services.

### **Nursing Homes**

Source: National Institutes of Health

Telephone: 301-594-6248

Information on Medicare and Medicaid certified nursing homes in the United States.

### **Public Schools**

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on elementary and secondary public education in the United States. It is a comprehensive, annual, national statistical database of all public elementary and secondary schools and school districts, which contains data that are comparable across all states.

### **Private Schools**

Source: National Center for Education Statistics

Telephone: 202-502-7300

The National Center for Education Statistics' primary database on private school locations in the United States.

### **Daycare Centers: Licensed Child Day Care Providers**

Source: Office of Child Development

Telephone: 505-827-7946

**Flood Zone Data:** This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

### **STREET AND ADDRESS INFORMATION**

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## GEOCHECK® - PHYSICAL SETTING SOURCE ADDENDUM

### TARGET PROPERTY ADDRESS

JAMAR  
HIGHWAY 8  
MONUMENT, NM 88265

### TARGET PROPERTY COORDINATES

Latitude (North):	32.587799 - 32° 35' 16.1"
Longitude (West):	103.273102 - 103° 16' 23.2"
Universal Tranverse Mercator:	Zone 13
UTM X (Meters):	662079.6
UTM Y (Meters):	3606718.0
Elevation:	3548 ft. above sea level

EDR's GeoCheck Physical Setting Source Addendum has been developed to assist the environmental professional with the collection of physical setting source information in accordance with ASTM 1527-00, Section 7.2.3. Section 7.2.3 requires that a current USGS 7.5 Minute Topographic Map (or equivalent, such as the USGS Digital Elevation Model) be reviewed. It also requires that one or more additional physical setting sources be sought when (1) conditions have been identified in which hazardous substances or petroleum products are likely to migrate to or from the property, and (2) more information than is provided in the current USGS 7.5 Minute Topographic Map (or equivalent) is generally obtained, pursuant to local good commercial or customary practice, to assess the impact of migration of recognized environmental conditions in connection with the property. Such additional physical setting sources generally include information about the topographic, hydrologic, hydrogeologic, and geologic characteristics of a site, and wells in the area.

Assessment of the impact of contaminant migration generally has two principle investigative components:

1. Groundwater flow direction, and
2. Groundwater flow velocity.

Groundwater flow direction may be impacted by surface topography, hydrology, hydrogeology, characteristics of the soil, and nearby wells. Groundwater flow velocity is generally impacted by the nature of the geologic strata. EDR's GeoCheck Physical Setting Source Addendum is provided to assist the environmental professional in forming an opinion about the impact of potential contaminant migration.

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## GROUNDWATER FLOW DIRECTION INFORMATION

Groundwater flow direction for a particular site is best determined by a qualified environmental professional using site-specific well data. If such data is not reasonably ascertainable, it may be necessary to rely on other sources of information, such as surface topographic information, hydrologic information, hydrogeologic data collected on nearby properties, and regional groundwater flow information (from deep aquifers).

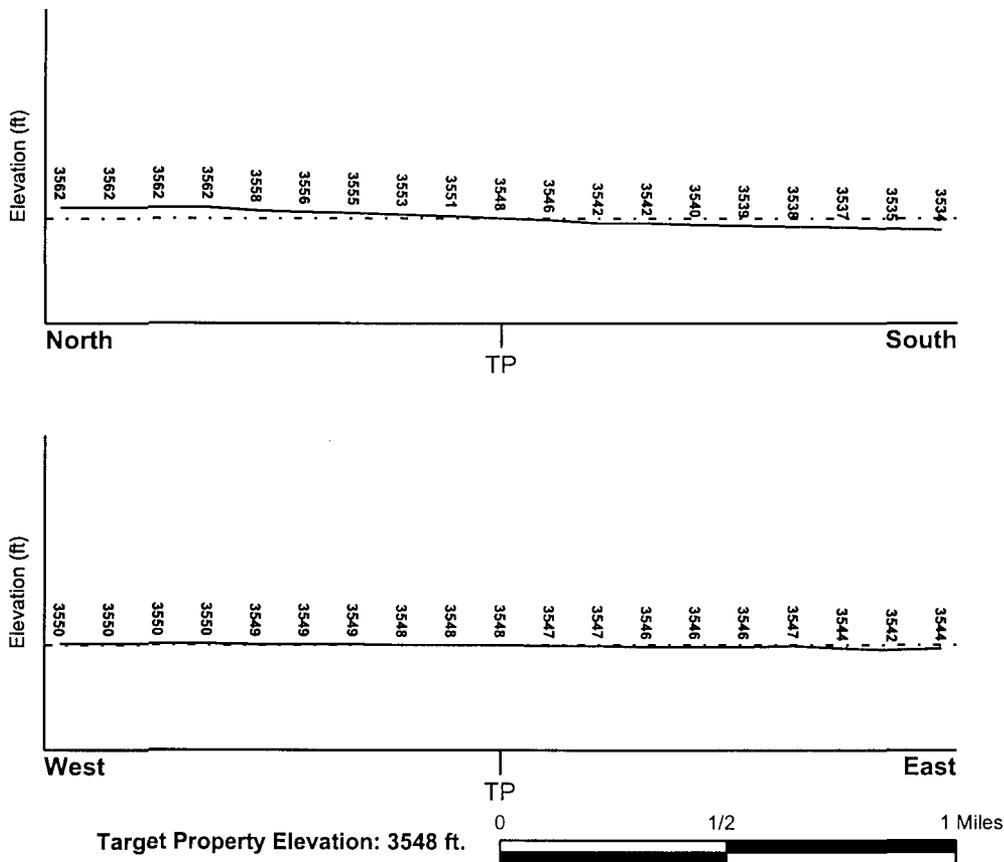
## TOPOGRAPHIC INFORMATION

Surface topography may be indicative of the direction of surficial groundwater flow. This information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

## TARGET PROPERTY TOPOGRAPHY

USGS Topographic Map: 32103-E3 MONUMENT SOUTH, NM  
 General Topographic Gradient: General South  
 Source: USGS 7.5 min quad index

## SURROUNDING TOPOGRAPHY: ELEVATION PROFILES



Source: Topography has been determined from the USGS 7.5' Digital Elevation Model and should be evaluated on a relative (not an absolute) basis. Relative elevation information between sites of close proximity should be field verified.

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### HYDROLOGIC INFORMATION

Surface water can act as a hydrologic barrier to groundwater flow. Such hydrologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

Refer to the Physical Setting Source Map following this summary for hydrologic information (major waterways and bodies of water).

### FEMA FLOOD ZONE

Target Property County  
LEA, NM

FEMA Flood  
Electronic Data  
Not Available

Flood Plain Panel at Target Property: Not Reported

Additional Panels in search area: Not Reported

### NATIONAL WETLAND INVENTORY

NWI Quad at Target Property  
NOT AVAILABLE

NWI Electronic  
Data Coverage  
Not Available

### HYDROGEOLOGIC INFORMATION

Hydrogeologic information obtained by installation of wells on a specific site can often be an indicator of groundwater flow direction in the immediate area. Such hydrogeologic information can be used to assist the environmental professional in forming an opinion about the impact of nearby contaminated properties or, should contamination exist on the target property, what downgradient sites might be impacted.

#### *Site-Specific Hydrogeological Data\*:*

Search Radius: 1.25 miles  
Status: Not found

### AQUIFLOW®

Search Radius: 1.000 Mile.

EDR has developed the AQUIFLOW Information System to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted by environmental professionals to regulatory authorities at select sites and has extracted the date of the report, groundwater flow direction as determined hydrogeologically, and the depth to water table.

<u>MAP ID</u>	<u>LOCATION FROM TP</u>	<u>GENERAL DIRECTION GROUNDWATER FLOW</u>
Not Reported		

\* ©1996 Site-specific hydrogeological data gathered by CERCLIS Alerts, Inc., Bainbridge Island, WA. All rights reserved. All of the information and opinions presented are those of the cited EPA report(s), which were completed under a Comprehensive Environmental Response Compensation and Liability Information System (CERCLIS) investigation.

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

### GROUNDWATER FLOW VELOCITY INFORMATION

Groundwater flow velocity information for a particular site is best determined by a qualified environmental professional using site specific geologic and soil strata data. If such data are not reasonably ascertainable, it may be necessary to rely on other sources of information, including geologic age identification, rock stratigraphic unit and soil characteristics data collected on nearby properties and regional soil information. In general, contaminant plumes move more quickly through sandy-gravelly types of soils than silty-clayey types of soils.

### GEOLOGIC INFORMATION IN GENERAL AREA OF TARGET PROPERTY

Geologic information can be used by the environmental professional in forming an opinion about the relative speed at which contaminant migration may be occurring.

#### ROCK STRATIGRAPHIC UNIT

Era:	Cenozoic
System:	Quaternary
Series:	Pleistocene
Code:	Qp (decoded above as Era, System & Series)

#### GEOLOGIC AGE IDENTIFICATION

Category: Stratified Sequence

Geologic Age and Rock Stratigraphic Unit Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - a digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

### DOMINANT SOIL COMPOSITION IN GENERAL AREA OF TARGET PROPERTY

The U.S. Department of Agriculture's (USDA) Soil Conservation Service (SCS) leads the National Cooperative Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps. The following information is based on Soil Conservation Service STATSGO data.

Soil Component Name:	PYOTE
Soil Surface Texture:	fine sand
Hydrologic Group:	Class A - High infiltration rates. Soils are deep, well drained to excessively drained sands and gravels.
Soil Drainage Class:	Well drained. Soils have intermediate water holding capacity. Depth to water table is more than 6 feet.
Hydric Status:	Soil does not meet the requirements for a hydric soil.
Corrosion Potential - Uncoated Steel:	MODERATE
Depth to Bedrock Min:	> 60 inches
Depth to Bedrock Max:	> 60 inches

## GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

Soil Layer Information							
Layer	Boundary		Soil Texture Class	Classification		Permeability Rate (in/hr)	Soil Reaction (pH)
	Upper	Lower		AASHTO Group	Unified Soil		
1	0 inches	36 inches	fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 20.00 Min: 6.00	Max: 7.80 Min: 6.60
2	36 inches	74 inches	fine sandy loam	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 6.00 Min: 2.00	Max: 8.40 Min: 6.60
3	74 inches	80 inches	loamy fine sand	Granular materials (35 pct. or less passing No. 200), Silty, or Clayey Gravel and Sand.	COARSE-GRAINED SOILS, Sands, Sands with fines, Silty Sand.	Max: 20.00 Min: 6.00	Max: 8.40 Min: 6.60

### OTHER SOIL TYPES IN AREA

Based on Soil Conservation Service STATSGO data, the following additional subordinant soil types may appear within the general area of target property.

Soil Surface Textures: fine sandy loam  
loamy fine sand  
sandy loam

Surficial Soil Types: fine sandy loam  
loamy fine sand  
sandy loam

Shallow Soil Types: sandy clay loam

Deeper Soil Types: indurated  
fine sand  
gravelly - loamy fine sand  
sandy loam  
clay loam  
loamy sand  
loam

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## ADDITIONAL ENVIRONMENTAL RECORD SOURCES

According to ASTM E 1527-00, Section 7.2.2, "one or more additional state or local sources of environmental records may be checked, in the discretion of the environmental professional, to enhance and supplement federal and state sources... Factors to consider in determining which local or additional state records, if any, should be checked include (1) whether they are reasonably ascertainable, (2) whether they are sufficiently useful, accurate, and complete in light of the objective of the records review (see 7.1.1), and (3) whether they are obtained, pursuant to local, good commercial or customary practice." One of the record sources listed in Section 7.2.2 is water well information. Water well information can be used to assist the environmental professional in assessing sources that may impact groundwater flow direction, and in forming an opinion about the impact of contaminant migration on nearby drinking water wells.

## WELL SEARCH DISTANCE INFORMATION

<u>DATABASE</u>	<u>SEARCH DISTANCE (miles)</u>
Federal USGS	1.000
Federal FRDS PWS	Nearest PWS within 1 mile

## FEDERAL USGS WELL INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
1	USGS0747252	1/2 - 1 Mile NNW

## FEDERAL FRDS PUBLIC WATER SUPPLY SYSTEM INFORMATION

<u>MAP ID</u>	<u>WELL ID</u>	<u>LOCATION FROM TP</u>
No PWS System Found		

Note: PWS System location is not always the same as well location.

## STATE OIL/GAS WELL INFORMATION

<u>DISTANCE FROM TP (Miles)</u>	<u>DISTANCE FROM TP (Miles)</u>
1/2 - 1 Mile North	1/2 - 1 Mile NNW
1/2 - 1 Mile NNW	1/2 - 1 Mile NNW
1/2 - 1 Mile NNW	1/2 - 1 Mile NNW
1/2 - 1 Mile NNW	1/2 - 1 Mile North
1/2 - 1 Mile North	1/2 - 1 Mile North
1/2 - 1 Mile NNE	1/2 - 1 Mile NNE
1/2 - 1 Mile NNW	1/2 - 1 Mile NNW
1/2 - 1 Mile NNW	1/2 - 1 Mile NNW
1/2 - 1 Mile NW	1/2 - 1 Mile NW
1/2 - 1 Mile NNW	1/2 - 1 Mile NNW
1/2 - 1 Mile NW	1/2 - 1 Mile NW
1/2 - 1 Mile NW	1/2 - 1 Mile NW
1/2 - 1 Mile NW	1/2 - 1 Mile NW
1/2 - 1 Mile NW	1/2 - 1 Mile NW
1/2 - 1 Mile NNW	1/2 - 1 Mile NNW
1/2 - 1 Mile NNW	1/2 - 1 Mile NNW
1/2 - 1 Mile NNW	1/2 - 1 Mile NNW
1/2 - 1 Mile North	1/2 - 1 Mile North
1/2 - 1 Mile North	1/2 - 1 Mile NNE
1/2 - 1 Mile NE	1/2 - 1 Mile NW

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## STATE OIL/GAS WELL INFORMATION

DISTANCE  
FROM TP (Miles)

1/2 - 1 Mile NW  
 1/2 - 1 Mile NNW  
 1/2 - 1 Mile NW  
 1/2 - 1 Mile NE  
 1/2 - 1 Mile NE  
 1/2 - 1 Mile NW  
 1/2 - 1 Mile WNW  
 1/2 - 1 Mile WNW  
 1/2 - 1 Mile WNW  
 1/4 - 1/2 Mile NNW  
 1/2 - 1 Mile NW  
 1/2 - 1 Mile NW  
 1/2 - 1 Mile WNW  
 1/4 - 1/2 Mile NNW  
 1/4 - 1/2 Mile NNW  
 1/4 - 1/2 Mile NNE  
 1/2 - 1 Mile WNW  
 1/4 - 1/2 Mile NE  
 1/2 - 1 Mile ENE  
 1/2 - 1 Mile ENE  
 1/2 - 1 Mile ENE  
 1/4 - 1/2 Mile North  
 1/4 - 1/2 Mile WNW  
 1/4 - 1/2 Mile WNW  
 1/2 - 1 Mile WNW  
 1/8 - 1/4 Mile NW  
 1/2 - 1 Mile WNW  
 1/4 - 1/2 Mile WNW  
 1/4 - 1/2 Mile WNW  
 1/2 - 1 Mile West  
 0 - 1/8 Mile NNE  
 1/8 - 1/4 Mile NE  
 1/8 - 1/4 Mile NE  
 1/2 - 1 Mile West  
 1/4 - 1/2 Mile ENE  
 1/4 - 1/2 Mile ENE  
 1/4 - 1/2 Mile ENE  
 1/2 - 1 Mile East  
 1/2 - 1 Mile West  
 1/4 - 1/2 Mile East  
 1/8 - 1/4 Mile WSW  
 1/4 - 1/2 Mile WSW  
 1/4 - 1/2 Mile WSW  
 1/2 - 1 Mile West  
 1/2 - 1 Mile West  
 1/4 - 1/2 Mile ESE  
 1/4 - 1/2 Mile ESE  
 1/8 - 1/4 Mile SSE  
 1/2 - 1 Mile West  
 1/4 - 1/2 Mile ESE  
 1/2 - 1 Mile ESE  
 1/2 - 1 Mile ESE  
 1/8 - 1/4 Mile SSE  
 1/8 - 1/4 Mile SSE  
 1/8 - 1/4 Mile SW  
 1/8 - 1/4 Mile SW

DISTANCE  
FROM TP (Miles)

1/2 - 1 Mile NNW  
 1/2 - 1 Mile NW  
 1/2 - 1 Mile North  
 1/2 - 1 Mile NE  
 1/2 - 1 Mile NW  
 1/2 - 1 Mile WNW  
 1/2 - 1 Mile NW  
 1/2 - 1 Mile NW  
 1/4 - 1/2 Mile NNW  
 1/4 - 1/2 Mile NNW  
 1/4 - 1/2 Mile NNE  
 1/2 - 1 Mile WNW  
 1/4 - 1/2 Mile NE  
 1/2 - 1 Mile ENE  
 1/2 - 1 Mile ENE  
 1/2 - 1 Mile ENE  
 1/4 - 1/2 Mile North  
 1/4 - 1/2 Mile WNW  
 1/2 - 1 Mile WNW  
 1/4 - 1/2 Mile WNW  
 1/4 - 1/2 Mile NW  
 1/8 - 1/4 Mile NW  
 1/2 - 1 Mile East  
 1/4 - 1/2 Mile WNW  
 1/2 - 1 Mile West  
 1/8 - 1/4 Mile NW  
 1/8 - 1/4 Mile NE  
 1/8 - 1/4 Mile NE  
 1/2 - 1 Mile West  
 1/2 - 1 Mile West  
 1/4 - 1/2 Mile ENE  
 1/4 - 1/2 Mile ENE  
 1/2 - 1 Mile East  
 1/2 - 1 Mile East  
 1/2 - 1 Mile West  
 1/2 - 1 Mile East  
 1/2 - 1 Mile East  
 1/8 - 1/4 Mile SW  
 1/4 - 1/2 Mile WSW  
 1/4 - 1/2 Mile WSW  
 1/2 - 1 Mile West  
 1/4 - 1/2 Mile ESE  
 1/4 - 1/2 Mile ESE  
 1/4 - 1/2 Mile ESE  
 1/8 - 1/4 Mile SSE  
 1/4 - 1/2 Mile ESE  
 1/2 - 1 Mile ESE  
 1/2 - 1 Mile ESE  
 1/2 - 1 Mile East  
 1/8 - 1/4 Mile SSE  
 1/8 - 1/4 Mile SW  
 1/8 - 1/4 Mile SW  
 1/8 - 1/4 Mile SW

# GEOCHECK® - PHYSICAL SETTING SOURCE SUMMARY

## STATE OIL/GAS WELL INFORMATION

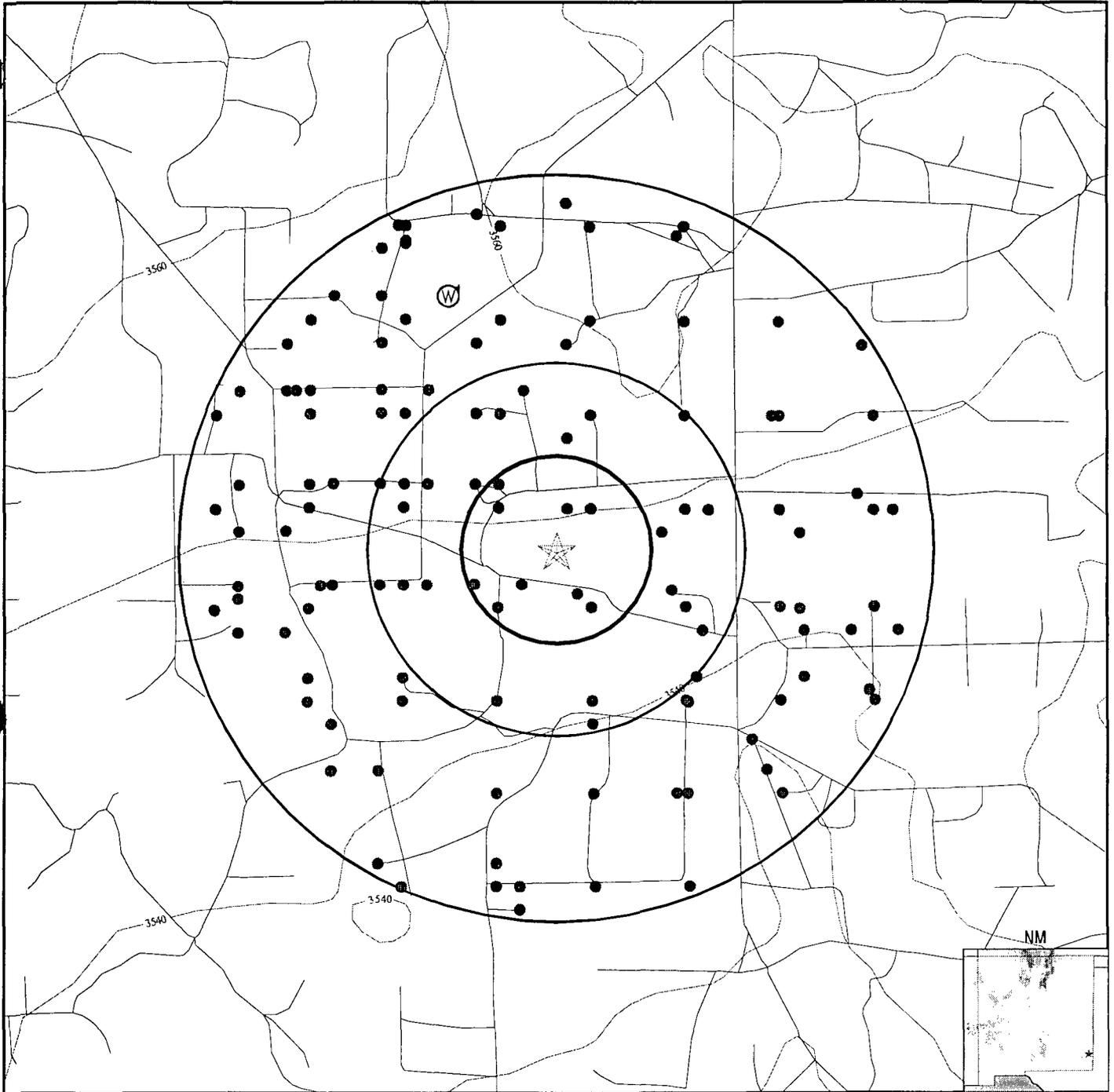
### DISTANCE FROM TP (Miles)

1/2 - 1 Mile WSW  
1/2 - 1 Mile ESE  
1/2 - 1 Mile West  
1/2 - 1 Mile ESE  
1/2 - 1 Mile ESE  
1/4 - 1/2 Mile ESE  
1/2 - 1 Mile ESE  
1/2 - 1 Mile WSW  
1/2 - 1 Mile ESE  
1/2 - 1 Mile ESE  
1/2 - 1 Mile WSW  
1/2 - 1 Mile ESE  
1/2 - 1 Mile SE  
1/2 - 1 Mile ESE  
1/4 - 1/2 Mile SSE  
1/2 - 1 Mile SW  
1/4 - 1/2 Mile SSW  
1/2 - 1 Mile WSW  
1/4 - 1/2 Mile SSE  
1/4 - 1/2 Mile SSE  
1/2 - 1 Mile SE  
1/2 - 1 Mile SW  
1/2 - 1 Mile SSE  
1/2 - 1 Mile SE  
1/2 - 1 Mile SE  
1/2 - 1 Mile SSW  
1/2 - 1 Mile South  
1/2 - 1 Mile South  
1/2 - 1 Mile SSE  
1/2 - 1 Mile South  
1/2 - 1 Mile South  
1/2 - 1 Mile South  
1/2 - 1 Mile SSW  
1/2 - 1 Mile South

### DISTANCE FROM TP (Miles)

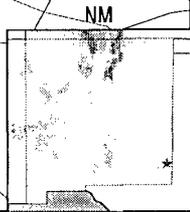
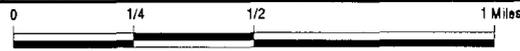
1/2 - 1 Mile WSW  
1/2 - 1 Mile West  
1/2 - 1 Mile West  
1/2 - 1 Mile ESE  
1/2 - 1 Mile WSW  
1/2 - 1 Mile SE  
1/2 - 1 Mile ESE  
1/2 - 1 Mile SW  
1/2 - 1 Mile WSW  
1/2 - 1 Mile SE  
1/2 - 1 Mile SE  
1/2 - 1 Mile ESE  
1/4 - 1/2 Mile SSE  
1/2 - 1 Mile SW  
1/4 - 1/2 Mile SSW  
1/2 - 1 Mile SE  
1/4 - 1/2 Mile SSE  
1/2 - 1 Mile SW  
1/2 - 1 Mile SE  
1/2 - 1 Mile SW  
1/2 - 1 Mile SSE  
1/2 - 1 Mile SE  
1/2 - 1 Mile SE  
1/2 - 1 Mile South  
1/2 - 1 Mile SSW  
1/2 - 1 Mile South  
1/2 - 1 Mile SSE  
1/2 - 1 Mile South  
1/2 - 1 Mile South  
1/2 - 1 Mile SSW  
1/2 - 1 Mile SSW

PHYSICAL SETTING SOURCE MAP - 01372035.1r



- County Boundary
- Major Roads
- Contour Lines
- Earthquake epicenter, Richter 5 or greater
- Water Wells
- Public Water Supply Wells
- Cluster of Multiple Icons

- Groundwater Flow Direction
- Indeterminate Groundwater Flow at Location
- Groundwater Flow Varies at Location
- Closest Hydrogeological Data
- Oil, gas or related wells



TARGET PROPERTY:	JAMAR	CUSTOMER:	RE/SPEC, Inc.
ADDRESS:	Highway 8	CONTACT:	John Bunch
CITY/STATE/ZIP:	MONUMENT NM 88265	INQUIRY #:	01372035.1r
LAT/LONG:	32.5878 / 103.2731	DATE:	March 04, 2005 1:10 pm

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# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Map ID  
 Direction  
 Distance  
 Elevation

Database      EDR ID Number

**1**  
**NNW**      **FED USGS**      **USGS0747252**  
**1/2 - 1 Mile**  
**Higher**

Agency:	USGS	Site ID:	323551103163901
Site Name:	20S.37E.05.13440		
Dec. Latitude:	32.59762		
Dec. Longitude:	-103.27798		
Coord Sys:	NAD83		
State:	NM		
County:	Lea County		
Altitude:	3555.00		
Hydrologic code:	Landreth Monument Draws. New Mexico, Texas. Area = 4270 sq.mi.		
Topographic:	Not Reported		
Site Type:	Ground-water other than Spring		
Const Date:	Not Reported	Inven Date:	Not Reported
Well Type:	Single well, other than collector or Ranney type		
Primary Aquifer:	ALLUVIUM, BOLSON DEPOSITS AND OTHER SURFACE DEPOSITS		
Aquifer type:	Not Reported		
Well depth:	80		
Hole depth:	Not Reported	Source:	Not Reported
Project no:	Not Reported		

Ground-water levels, Number of Measurements: 7

Date	Feet below Surface	Feet to Sealevel	Date	Feet below Surface	Feet to Sealevel
1996-03-14	30.75		1991-01-29	31.00	
1986-03-25	29.88		1981-02-12	28.11	
1976-01-30	24.48		1971-01-14	28.39	
1968-04-30	29.43				

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ FDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**North**  
 1/2 - 1 Mile

**OIL\_GAS NMOG062037**

Api ID:	3002525667	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	CITIES LAUGHLIN	County ID:	25
County Name:	Lea	Operator ID:	162683
Op. Name:	GRUY PETROLEUM MANAGEMENT CO.		
Latitude:	32.60109		
Longitude:	-103.2722	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	J	Ft. N/S Dist:	2310
Ft. N/S dir:	S	Ft. E/W Dist:	2310
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**NNW**  
 1/2 - 1 Mile

**OIL\_GAS NMOG070840**

Api ID:	3002533919	Pool ID:	46970
Pool Name:	MONUMENT;ABO	Well ID:	016
Well Name:	BERTHA BARBER	County ID:	25
County Name:	Lea	Operator ID:	14021
Op. Name:	MARATHON OIL CO		
Latitude:	32.60065		
Longitude:	-103.27624	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	K	Ft. N/S Dist:	2140
Ft. N/S dir:	S	Ft. E/W Dist:	1650
Ft. E/W Dir:	W	Elevation:	3560 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**NNW**  
 1/2 - 1 Mile

**OIL\_GAS NMOG070784**

Api ID:	3002533919	Pool ID:	47090
Pool Name:	MONUMENT;TUBB	Well ID:	016
Well Name:	BERTHA BARBER	County ID:	25
County Name:	Lea	Operator ID:	14021
Op. Name:	MARATHON OIL CO		
Latitude:	32.60065		
Longitude:	-103.27624	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	K	Ft. N/S Dist:	2140
Ft. N/S dir:	S	Ft. E/W Dist:	1650
Ft. E/W Dir:	W	Elevation:	3560 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction  
Distance

Database      EDR ID Number

**NNW**

1/2 - 1 Mile

OIL\_GAS

NMOG048241

Api ID:	3002505915	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	010
Well Name:	BERTHA BARBER	County ID:	25
County Name:	Lea	Operator ID:	14021
Op. Name:	MARATHON OIL CO		
Latitude:	32.60024		
Longitude:	-103.27978	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	L	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	560
Ft. E/W Dir:	W	Elevation:	3572 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**NNW**

1/2 - 1 Mile

OIL\_GAS

NMOG118709

Api ID:	3052505712	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	012
Well Name:	BERTHA BARBER	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.60023		
Longitude:	-103.27945	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	L	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**NNW**

1/2 - 1 Mile

OIL\_GAS

NMOG048240

Api ID:	3002505911	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	006
Well Name:	BERTHA BARBER	County ID:	25
County Name:	Lea	Operator ID:	14021
Op. Name:	MARATHON OIL CO		
Latitude:	32.60023		
Longitude:	-103.27945	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	L	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction  
Distance

Database FDR ID Number

**NNW**  
**1/2 - 1 Mile**

**OIL\_GAS NMOG118735**

Api ID:	3052505711	Pool ID:	81400
Pool Name:	MONUMENT;MCKEE-ELLENBURG (PRO GAS)	Well ID:	012
Well Name:	BERTHA BARBER	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.60023		
Longitude:	-103.27945	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	L	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**North**  
**1/2 - 1 Mile**

**OIL\_GAS NMOG048182**

Api ID:	3002505909	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	004
Well Name:	BERTHA BARBER	County ID:	25
County Name:	Lea	Operator ID:	14021
Op. Name:	MARATHON OIL CO		
Latitude:	32.6002		
Longitude:	-103.27517	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	K	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	3571 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**North**  
**1/2 - 1 Mile**

**OIL\_GAS NMOG118720**

Api ID:	3052505710	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	LAUGHLIN	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.60017		
Longitude:	-103.27113	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	J	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**North**  
 1/2 - 1 Mile

OIL\_GAS      NMOG048181

Api ID:	3002505904	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVR-S-QUEEN (PRO GAS)	Well ID:	008
Well Name:	BRITT-LAUGHLIN COM	County ID:	25
County Name:	Lea	Operator ID:	6473
Op. Name:	DOYLE HARTMAN		
Latitude:	32.60017		
Longitude:	-103.27113	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	J	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	3562 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**NNE**  
 1/2 - 1 Mile

OIL\_GAS      NMOG048195

Api ID:	3002505918	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDRE	Well ID:	009
Well Name:	NORTH MONUMENT G/SA UNIT	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.60017		
Longitude:	-103.26685	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	I	Ft. N/S Dist:	1990
Ft. N/S dir:	S	Ft. E/W Dist:	663
Ft. E/W Dir:	E	Elevation:	3569 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**NNE**  
 1/2 - 1 Mile

OIL\_GAS      NMOG067628

Api ID:	3002531105	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVR-S-QUEEN (PRO GAS)	Well ID:	006
Well Name:	BRITT-LAUGHLIN COM	County ID:	25
County Name:	Lea	Operator ID:	6473
Op. Name:	DOYLE HARTMAN		
Latitude:	32.59981		
Longitude:	-103.26717	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	I	Ft. N/S Dist:	1860
Ft. N/S dir:	S	Ft. E/W Dist:	760
Ft. E/W Dir:	E	Elevation:	3559 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ FDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NNW**  
**1/2 - 1 Mile** **OIL\_GAS** **NMOG071341**

Api ID: 3002534327	Pool ID: 46970
Pool Name: MONUMENT;ABO	Well ID: 018Y
Well Name: BERTHA BARBER	County ID: 25
County Name: Lea	Operator ID: 14021
Op. Name: MARATHON OIL CO	
Latitude: 32.59965	
Longitude: -103.27944	Section: 5
Township: 20.0S	Range: 37E
Unit ID: L	Ft. N/S Dist: 1766
Ft. N/S dir: S	Ft. E/W Dist: 663
Ft. E/W Dir: W	Elevation: 3560 GL
Depth: 0	Complate: Not Reported
Plugdate: Not Reported	Datasource: Ongard

**NNW**  
**1/2 - 1 Mile** **OIL\_GAS** **NMOG071364**

Api ID: 3002534327	Pool ID: 47090
Pool Name: MONUMENT;TUBB	Well ID: 018Y
Well Name: BERTHA BARBER	County ID: 25
County Name: Lea	Operator ID: 14021
Op. Name: MARATHON OIL CO	
Latitude: 32.59965	
Longitude: -103.27944	Section: 5
Township: 20.0S	Range: 37E
Unit ID: L	Ft. N/S Dist: 1766
Ft. N/S dir: S	Ft. E/W Dist: 663
Ft. E/W Dir: W	Elevation: 3560 GL
Depth: 0	Complate: Not Reported
Plugdate: Not Reported	Datasource: Ongard

**NNW**  
**1/2 - 1 Mile** **OIL\_GAS** **NMOG071175**

Api ID: 3002534205	Pool ID: Not Reported
Pool Name: Not Reported	Well ID: 018
Well Name: BERTHA BARBER	County ID: 25
County Name: Lea	Operator ID: 14021
Op. Name: MARATHON OIL CO	
Latitude: 32.59955	
Longitude: -103.27945	Section: 5
Township: 20.0S	Range: 37E
Unit ID: L	Ft. N/S Dist: 1730
Ft. N/S dir: S	Ft. E/W Dist: 660
Ft. E/W Dir: W	Elevation: 3560 GL
Depth: 0	Complate: Not Reported
Plugdate: 1998-02-12	Datasource: Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction  
Distance

Database FDR ID Number

**NNW**

1/2 - 1 Mile

OIL\_GAS

NMOG048194

Api ID:	3002505917	Pool ID:	Not Reported
Pool Name: Not Reported		Well ID:	012
Well Name:	BERTHA BARBER (DO NOT USE)	County ID:	25
County Name:	Lea	Operator ID:	14021
Op. Name:	MARATHON OIL CO		
Latitude:	32.59935		
Longitude:	-103.28053	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	L	Ft. N/S Dist:	1653
Ft. N/S dir:	S	Ft. E/W Dist:	330
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	1993-09-02	Datasource:	Ongard

**NW**

1/2 - 1 Mile

OIL\_GAS

NMOG048276

Api ID:	3002505948	Pool ID:	47080
Pool Name: MONUMENT;PADDOCK		Well ID:	007
Well Name:	G C MATTHEWS	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.59752		
Longitude:	-103.28267	Section:	6
Township:	20.0S	Range:	37E
Unit ID:	P	Ft. N/S Dist:	990
Ft. N/S dir:	S	Ft. E/W Dist:	330
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**NW**

1/2 - 1 Mile

OIL\_GAS

NMOG048239

Api ID:	3002505902	Pool ID:	Not Reported
Pool Name: Not Reported		Well ID:	005
Well Name:	E M E SWD	County ID:	25
County Name:	Lea	Operator ID:	19174
Op. Name:	RICE OPERATING CO		
Latitude:	32.59752		
Longitude:	-103.28053	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	M	Ft. N/S Dist:	990
Ft. N/S dir:	S	Ft. E/W Dist:	330
Ft. E/W Dir:	W	Elevation:	3554 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ FDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NNW** **OIL\_GAS** **NMOG048072**  
**1/2 - 1 Mile**

Api ID:	3002505901	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDRE	Well ID:	001
Well Name:	E S ADKINS	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.59661		
Longitude:	-103.27946	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	M	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Complate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**NNW** **OIL\_GAS** **NMOG118749**  
**1/2 - 1 Mile**

Api ID:	3052505713	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	005
Well Name:	EUNICE MONUMENT EUMONT	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59661		
Longitude:	-103.27946	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	M	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Complate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**NW** **OIL\_GAS** **NMOG118740**  
**1/2 - 1 Mile**

Api ID:	3052505772	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	012
Well Name:	G C MATTHEWS	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59659		
Longitude:	-103.28374	Section:	6
Township:	20.0S	Range:	37E
Unit ID:	P	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Complate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ FDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NW**  
**1/2 - 1 Mile** **OIL\_GAS** **NMOG118827**

Api ID:	3052505770	Pool ID:	47020
Pool Name:	MONUMENT (G-SA)(CONSOLIDATED)**	Well ID:	012
Well Name:	G C MATTHEWS	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59659		
Longitude:	-103.28374	Section:	6
Township:	20.0S	Range:	37E
Unit ID:	P	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**NW**  
**1/2 - 1 Mile** **OIL\_GAS** **NMOG118768**

Api ID:	3052505770	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	012
Well Name:	G C MATTHEWS	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59659		
Longitude:	-103.28374	Section:	6
Township:	20.0S	Range:	37E
Unit ID:	P	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**NW**  
**1/2 - 1 Mile** **OIL\_GAS** **NMOG118839**

Api ID:	3052505773	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	003
Well Name:	G C MATTHEWS	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59659		
Longitude:	-103.28374	Section:	6
Township:	20.0S	Range:	37E
Unit ID:	P	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NW**  
 1/2 - 1 Mile

**OIL\_GAS NMOG048256**

Api ID:	3002505944	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	003
Well Name:	G C MATHEWS	County ID:	25
County Name:	Lea	Operator ID:	9515
Op. Name:	GULF OIL CORP		
Latitude:	32.59659		
Longitude:	-103.28374	Section:	6
Township:	20.0S	Range:	37E
Unit ID:	P	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

**NW**  
 1/2 - 1 Mile

**OIL\_GAS NMOG118712**

Api ID:	3052505771	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	007
Well Name:	G C MATTHEWS	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59659		
Longitude:	-103.28374	Section:	6
Township:	20.0S	Range:	37E
Unit ID:	P	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**NNW**  
 1/2 - 1 Mile

**OIL\_GAS NMOG048253**

Api ID:	3002505923	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVR-S-QUEEN (PRO GAS)	Well ID:	001
Well Name:	BRITT B	County ID:	25
County Name:	Lea	Operator ID:	23762
Op. Name:	UNION TEXAS PETROLEUM CORP		
Latitude:	32.59658		
Longitude:	-103.27517	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	N	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NNW**  
**1/2 - 1 Mile** **OIL\_GAS** **NMOG118636**

Api ID:	3052505716	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	BRITT B	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59658		
Longitude:	-103.27517	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	N	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**NNW**  
**1/2 - 1 Mile** **OIL\_GAS** **NMOG118653**

Api ID:	3052505714	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	002
Well Name:	BRITT B	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59658		
Longitude:	-103.27517	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	N	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**NNW**  
**1/2 - 1 Mile** **OIL\_GAS** **NMOG118654**

Api ID:	3052505717	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	002
Well Name:	BRITT B	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59658		
Longitude:	-103.27517	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	N	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NNW** **OIL\_GAS** **NMOG118779**  
**1/2 - 1 Mile**

Api ID:	3052505715	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	002
Well Name:	BRITT B	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59658		
Longitude:	-103.27517	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	N	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**NNW** **OIL\_GAS** **NMOG118792**  
**1/2 - 1 Mile**

Api ID:	3052505718	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	002
Well Name:	BRITT B	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59658		
Longitude:	-103.27517	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	N	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**North** **OIL\_GAS** **NMOG118721**  
**1/2 - 1 Mile**

Api ID:	3052505720	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	002
Well Name:	LAUGHLIN	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59655		
Longitude:	-103.27112	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	O	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**North**  
**1/2 - 1 Mile**

**OIL\_GAS NMOG118666**

Api ID:	3052505719	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	005
Well Name:	LAUGHLIN B	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59655		
Longitude:	-103.27112	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	O	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**North**  
**1/2 - 1 Mile**

**OIL\_GAS NMOG048036**

Api ID:	3002505905	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	002
Well Name:	LAUGHLIN	County ID:	25
County Name:	Lea	Operator ID:	9224
Op. Name:	GRAHAM ROYALTY LTD		
Latitude:	32.59655		
Longitude:	-103.27112	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	O	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

**NNE**  
**1/2 - 1 Mile**

**OIL\_GAS NMOG048132**

Api ID:	3002505906	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	016
Well Name:	NORTH MONUMENT G/SA UNIT	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.59651		
Longitude:	-103.26683	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	P	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NE** **OIL\_GAS** **NMOG048238**  
**1/2 - 1 Mile**

Api ID:	3002505889	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	013
Well Name:	NORTH MONUMENT G/SA UNIT	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.59649		
Longitude:	-103.26255	Section:	4
Township:	20.0S	Range:	37E
Unit ID:	M	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	3570 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**NW** **OIL\_GAS** **NMOG048229**  
**1/2 - 1 Mile**

Api ID:	3002505903	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	003
Well Name:	E S ADKINS	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.59571		
Longitude:	-103.28053	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	M	Ft. N/S Dist:	330
Ft. N/S dir:	S	Ft. E/W Dist:	330
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**NW** **OIL\_GAS** **NMOG048085**  
**1/2 - 1 Mile**

Api ID:	3002505903	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	003
Well Name:	E S ADKINS	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.59571		
Longitude:	-103.28053	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	M	Ft. N/S Dist:	330
Ft. N/S dir:	S	Ft. E/W Dist:	330
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NNW**

1/2 - 1 Mile

OIL\_GAS

NMOG048144

Api ID:	3002505924	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	002
Well Name:	BRITT-LAUGHLIN COM	County ID:	25
County Name:	Lea	Operator ID:	6473
Op. Name:	DOYLE HARTMAN		
Latitude:	32.59568	Section:	5
Longitude:	-103.27625	Range:	37E
Township:	20.0S	Ft. N/S Dist:	330
Unit ID:	N	Ft. E/W Dist:	1650
Ft. N/S dir:	S	Elevation:	3565 GL
Ft. E/W Dir:	W	Compdate:	Not Reported
Depth:	0	Datasource:	Ongard
Plugdate:	Not Reported		

**NNW**

1/2 - 1 Mile

OIL\_GAS

NMOG048222

Api ID:	3002505924	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	002
Well Name:	BRITT-LAUGHLIN COM	County ID:	25
County Name:	Lea	Operator ID:	6473
Op. Name:	DOYLE HARTMAN		
Latitude:	32.59568	Section:	5
Longitude:	-103.27625	Range:	37E
Township:	20.0S	Ft. N/S Dist:	330
Unit ID:	N	Ft. E/W Dist:	1650
Ft. N/S dir:	S	Elevation:	3565 GL
Ft. E/W Dir:	W	Compdate:	Not Reported
Depth:	0	Datasource:	Ongard
Plugdate:	Not Reported		

**NW**

1/2 - 1 Mile

OIL\_GAS

NMOG048206

Api ID:	3002505953	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	012
Well Name:	G C MATTHEWS	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.59566	Section:	6
Longitude:	-103.28481	Range:	37E
Township:	20.0S	Ft. N/S Dist:	330
Unit ID:	P	Ft. E/W Dist:	990
Ft. N/S dir:	S	Elevation:	3556 GL
Ft. E/W Dir:	E	Compdate:	Not Reported
Depth:	0	Datasource:	Ongard
Plugdate:	Not Reported		

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction  
Distance

Database      EDR ID Number

**NW**  
1/2 - 1 Mile

**OIL\_GAS      NMOG048207**

Api ID:	3002505953	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRs-QUEEN (PRO GAS)	Well ID:	012
Well Name:	G C MATTHEWS	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.59566		
Longitude:	-103.28481	Section:	6
Township:	20.0S	Range:	37E
Unit ID:	P	Ft. N/S Dist:	330
Ft. N/S dir:	S	Ft. E/W Dist:	990
Ft. E/W Dir:	E	Elevation:	3556 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**North**  
1/2 - 1 Mile

**OIL\_GAS      NMOG048192**

Api ID:	3002505907	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRs-QUEEN (PRO GAS)	Well ID:	005
Well Name:	BRITT-LAUGHLIN COM	County ID:	25
County Name:	Lea	Operator ID:	6473
Op. Name:	DOYLE HARTMAN		
Latitude:	32.59565		
Longitude:	-103.27219	Section:	5
Township:	20.0S	Range:	37E
Unit ID:	O	Ft. N/S Dist:	330
Ft. N/S dir:	S	Ft. E/W Dist:	2310
Ft. E/W Dir:	E	Elevation:	3566 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**NE**  
1/2 - 1 Mile

**OIL\_GAS      NMOG072041**

Api ID:	3002534975	Pool ID:	96764
Pool Name:	MONUMENT;ABO, SOUTHEAST	Well ID:	001
Well Name:	LAUGHLIN	County ID:	25
County Name:	Lea	Operator ID:	14245
Op. Name:	MATADOR OPERATING CO		
Latitude:	32.59558		
Longitude:	-103.25875	Section:	4
Township:	20.0S	Range:	37E
Unit ID:	N	Ft. N/S Dist:	330
Ft. N/S dir:	S	Ft. E/W Dist:	1830
Ft. E/W Dir:	W	Elevation:	3555 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NE**  
 1/2 - 1 Mile OIL\_GAS NMOG071988

Api ID: 3002534975	Pool ID: 47090
Pool Name: MONUMENT;TUBB	Well ID: 001
Well Name: LAUGHLIN	County ID: 25
County Name: Lea	Operator ID: 14245
Op. Name: MATADOR OPERATING CO	
Latitude: 32.59558	
Longitude: -103.25875	Section: 4
Township: 20.0S	Range: 37E
Unit ID: N	Ft. N/S Dist: 330
Ft. N/S dir: S	Ft. E/W Dist: 1830
Ft. E/W Dir: W	Elevation: 3555 GL
Depth: 0	Compdate: Not Reported
Plugdate: Not Reported	Datasource: Ongard

**NE**  
 1/2 - 1 Mile OIL\_GAS NMOG071931

Api ID: 3002534975	Pool ID: 57000
Pool Name: SKAGGS;DRINKARD	Well ID: 001
Well Name: LAUGHLIN	County ID: 25
County Name: Lea	Operator ID: 14245
Op. Name: MATADOR OPERATING CO	
Latitude: 32.59558	
Longitude: -103.25875	Section: 4
Township: 20.0S	Range: 37E
Unit ID: N	Ft. N/S Dist: 330
Ft. N/S dir: S	Ft. E/W Dist: 1830
Ft. E/W Dir: W	Elevation: 3555 GL
Depth: 0	Compdate: Not Reported
Plugdate: Not Reported	Datasource: Ongard

**NW**  
 1/2 - 1 Mile OIL\_GAS NMOG048329

Api ID: 3002506023	Pool ID: 46990
Pool Name: MONUMENT;BLINEBRY	Well ID: 008
Well Name: BERTHA J BARBER	County ID: 25
County Name: Lea	Operator ID: 189535
Op. Name: SAPIENT ENERGY CORPORATION	
Latitude: 32.59389	
Longitude: -103.28054	Section: 8
Township: 20.0S	Range: 37E
Unit ID: D	Ft. N/S Dist: 330
Ft. N/S dir: N	Ft. E/W Dist: 330
Ft. E/W Dir: W	Elevation: 3557 GL
Depth: 0	Compdate: Not Reported
Plugdate: Not Reported	Datasource: Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NW**  
 1/2 - 1 Mile

OIL\_GAS NMOG048343

Api ID:	3002506021	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDRE	Well ID:	004
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.59388		
Longitude:	-103.2784	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	D	Ft. N/S Dist:	330
Ft. N/S dir:	N	Ft. E/W Dist:	990
Ft. E/W Dir:	W	Elevation:	3566 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WNW**  
 1/2 - 1 Mile

OIL\_GAS NMOG048277

Api ID:	3002505978	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	012
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	189535
Op. Name:	SAPIENT ENERGY CORPORATION		
Latitude:	32.59387		
Longitude:	-103.28375	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	A	Ft. N/S Dist:	330
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	3557 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WNW**  
 1/2 - 1 Mile

OIL\_GAS NMOG048315

Api ID:	3002505978	Pool ID:	96968
Pool Name:	MONUMENT;TUBB, WEST (GAS)	Well ID:	012
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	189535
Op. Name:	SAPIENT ENERGY CORPORATION		
Latitude:	32.59387		
Longitude:	-103.28375	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	A	Ft. N/S Dist:	330
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	3557 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction  
Distance

Database EDR ID Number

**WNW**  
1/2 - 1 Mile

**OIL\_GAS** **NMOG048111**

Api ID:	3002505978	Pool ID:	46970
Pool Name:	MONUMENT;ABO	Well ID:	012
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	189535
Op. Name:	SAPIENT ENERGY CORPORATION		
Latitude:	32.59387		
Longitude:	-103.28375	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	A	Ft. N/S Dist:	330
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	3557 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WNW**  
1/2 - 1 Mile

**OIL\_GAS** **NMOG048110**

Api ID:	3002505977	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	009
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	189535
Op. Name:	SAPIENT ENERGY CORPORATION		
Latitude:	32.59386		
Longitude:	-103.28439	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	A	Ft. N/S Dist:	330
Ft. N/S dir:	N	Ft. E/W Dist:	855
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WNW**  
1/2 - 1 Mile

**OIL\_GAS** **NMOG048268**

Api ID:	3002505974	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	002
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.59385		
Longitude:	-103.28483	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	A	Ft. N/S Dist:	330
Ft. N/S dir:	N	Ft. E/W Dist:	990
Ft. E/W Dir:	E	Elevation:	3574 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NNW**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG048259**

Api ID:	3002506007	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	002
Well Name:	BRITT B 8	County ID:	25
County Name:	Lea	Operator ID:	6473
Op. Name:	DOYLE HARTMAN		
Latitude:	32.59385		
Longitude:	-103.27411	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	C	Ft. N/S Dist:	330
Ft. N/S dir:	N	Ft. E/W Dist:	2310
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WNW**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG048307**

Api ID:	3002505997	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	010
Well Name:	BRITT	County ID:	25
County Name:	Lea	Operator ID:	6473
Op. Name:	DOYLE HARTMAN		
Latitude:	32.59381		
Longitude:	-103.28697	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	B	Ft. N/S Dist:	330
Ft. N/S dir:	N	Ft. E/W Dist:	1650
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**NW**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG048344**

Api ID:	3002506028	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	015
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	1271
Op. Name:	ATLANTIC RICHFIELD CO		
Latitude:	32.59299		
Longitude:	-103.28055	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	D	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	330
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ FDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NW** **OIL\_GAS** **NMOG118729**  
**1/2 - 1 Mile**

Api ID:	3052505799	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	004
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59298		
Longitude:	-103.27948	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	D	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**NW** **OIL\_GAS** **NMOG118714**  
**1/2 - 1 Mile**

Api ID:	3052505798	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	015
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59298		
Longitude:	-103.27948	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	D	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**NW** **OIL\_GAS** **NMOG056720**  
**1/2 - 1 Mile**

Api ID:	3002520436	Pool ID:	96838
Pool Name:	DRY & ABND	Well ID:	001
Well Name:	BARBER ADKINS UNIT	County ID:	25
County Name:	Lea	Operator ID:	20885
Op. Name:	SINCLAIR OIL & GAS CO		
Latitude:	32.59298		
Longitude:	-103.27948	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	D	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**WNW** **OIL\_GAS** **NMOG118769**  
**1/2 - 1 Mile**

Api ID:	3052505774	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDRE	Well ID:	002
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59296		
Longitude:	-103.28377	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	A	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**NNW** **OIL\_GAS** **NMOG048342**  
**1/4 - 1/2 Mile**

Api ID:	3002506008	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	003
Well Name:	BRITT B 8	County ID:	25
County Name:	Lea	Operator ID:	6473
Op. Name:	DOYLE HARTMAN		
Latitude:	32.59296		
Longitude:	-103.27627	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	C	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	1650
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	1994-04-09	Datasource:	Ongard

**NNW** **OIL\_GAS** **NMOG118854**  
**1/4 - 1/2 Mile**

Api ID:	3052505797	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDRE	Well ID:	001
Well Name:	BRITT B 8	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59295		
Longitude:	-103.27519	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	C	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NNW**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG048172**

Api ID:	3002506006	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	001
Well Name:	BRITT-LAUGHLIN COM	County ID:	25
County Name:	Lea	Operator ID:	6473
Op. Name:	DOYLE HARTMAN		
Latitude:	32.59295		
Longitude:	-103.27519	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	C	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	3566 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**NNW**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG118753**

Api ID:	3052505797	Pool ID:	47020
Pool Name:	MONUMENT (G-SA)(CONSOLIDATED)**	Well ID:	001
Well Name:	BRITT B 8	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59295		
Longitude:	-103.27519	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	C	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**NNE**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG048317**

Api ID:	3002506012	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	002
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	962
Op. Name:	ARCH PETROLEUM INC		
Latitude:	32.59291		
Longitude:	-103.2711	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	B	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	3466 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NNE** **OIL\_GAS** **NMOG048173**  
**1/4 - 1/2 Mile**

Api ID:	3002506012	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	002
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	962
Op. Name:	ARCH PETROLEUM INC		
Latitude:	32.59291		
Longitude:	-103.2711	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	B	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	3466 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WNW** **OIL\_GAS** **NMOG048271**  
**1/2 - 1 Mile**

Api ID:	3002505992	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	004
Well Name:	BRITT	County ID:	25
County Name:	Lea	Operator ID:	6473
Op. Name:	DOYLE HARTMAN		
Latitude:	32.59289		
Longitude:	-103.28806	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	B	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	3565 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WNW** **OIL\_GAS** **NMOG118795**  
**1/2 - 1 Mile**

Api ID:	3052505775	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	004
Well Name:	BRITT	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59289		
Longitude:	-103.28806	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	B	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NE** **OIL\_GAS** **NMOG048171**  
**1/4 - 1/2 Mile**

Api ID:	3002506005	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	004
Well Name:	BRITT-LAUGHLIN COM	County ID:	25
County Name:	Lea	Operator ID:	6473
Op. Name:	DOYLE HARTMAN		
Latitude:	32.59288		
Longitude:	-103.26682	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	A	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	3567 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**NE** **OIL\_GAS** **NMOG118696**  
**1/4 - 1/2 Mile**

Api ID:	3052505796	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	004
Well Name:	LAUGHLIN	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59288		
Longitude:	-103.26682	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	A	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**ENE** **OIL\_GAS** **NMOG048293**  
**1/2 - 1 Mile**

Api ID:	3002506034	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	V LAUGHLIN	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.59286		
Longitude:	-103.26286	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	D	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	560
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**ENE** **OIL\_GAS** **NMOG048379**  
**1/2 - 1 Mile**

Api ID:	3002506034	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	001
Well Name:	V LAUGHLIN	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.59286		
Longitude:	-103.26286	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	D	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	560
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

**ENE** **OIL\_GAS** **NMOG118799**  
**1/2 - 1 Mile**

Api ID:	3052505818	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	001
Well Name:	V LAUGHLIN	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59286		
Longitude:	-103.26253	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	D	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**ENE** **OIL\_GAS** **NMOG118790**  
**1/2 - 1 Mile**

Api ID:	3052505817	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	V LAUGHLIN	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59286		
Longitude:	-103.26253	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	D	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**ENE** **OIL\_GAS** **NMOG118855**  
**1/2 - 1 Mile**

Api ID:	3052505816	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	002
Well Name:	V LAUGHLIN	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.59286		
Longitude:	-103.25825	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	C	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**ENE** **OIL\_GAS** **NMOG048391**  
**1/2 - 1 Mile**

Api ID:	3002506035	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	002
Well Name:	V LAUGHLIN	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.59286		
Longitude:	-103.25825	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	C	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	3560 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**North** **OIL\_GAS** **NMOG048308**  
**1/4 - 1/2 Mile**

Api ID:	3002506016	Pool ID:	96764
Pool Name:	MONUMENT;ABO, SOUTHEAST	Well ID:	006
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	962
Op. Name:	ARCH PETROLEUM INC		
Latitude:	32.59202		
Longitude:	-103.27216	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	B	Ft. N/S Dist:	990
Ft. N/S dir:	N	Ft. E/W Dist:	2310
Ft. E/W Dir:	E	Elevation:	3554 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**North**  
 1/4 - 1/2 Mile

OIL\_GAS NMOG048186

Api ID:	3002506016	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	006
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	962
Op. Name:	ARCH PETROLEUM INC		
Latitude:	32.59202		
Longitude:	-103.27216	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	B	Ft. N/S Dist:	990
Ft. N/S dir:	N	Ft. E/W Dist:	2310
Ft. E/W Dir:	E	Elevation:	3554 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WNW**  
 1/4 - 1/2 Mile

OIL\_GAS NMOG048366

Api ID:	3002506024	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	010
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	189535
Op. Name:	SAPIENT ENERGY CORPORATION		
Latitude:	32.59027		
Longitude:	-103.28059	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	E	Ft. N/S Dist:	1650
Ft. N/S dir:	N	Ft. E/W Dist:	330
Ft. E/W Dir:	W	Elevation:	3553 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WNW**  
 1/4 - 1/2 Mile

OIL\_GAS NMOG048162

Api ID:	3002506024	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	010
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	189535
Op. Name:	SAPIENT ENERGY CORPORATION		
Latitude:	32.59027		
Longitude:	-103.28059	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	E	Ft. N/S Dist:	1650
Ft. N/S dir:	N	Ft. E/W Dist:	330
Ft. E/W Dir:	W	Elevation:	3553 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**WNW** **OIL\_GAS** **NMOG048278**  
**1/2 - 1 Mile**

Api ID:	3002505981	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	003
Well Name:	BARBER GAS COM	County ID:	25
County Name:	Lea	Operator ID:	990
Op. Name:	ARCO PERMIAN		
Latitude:	32.59026		
Longitude:	-103.28272	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	H	Ft. N/S Dist:	1650
Ft. N/S dir:	N	Ft. E/W Dist:	330
Ft. E/W Dir:	E	Elevation:	3554 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WNW** **OIL\_GAS** **NMOG048249**  
**1/4 - 1/2 Mile**

Api ID:	3002506026	Pool ID:	96838
Pool Name:	DRY & ABND	Well ID:	013
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	20885
Op. Name:	SINCLAIR OIL & GAS CO		
Latitude:	32.59026		
Longitude:	-103.27951	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	E	Ft. N/S Dist:	1650
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

**WNW** **OIL\_GAS** **NMOG048309**  
**1/4 - 1/2 Mile**

Api ID:	3002506022	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	001
Well Name:	BARBER GAS COM	County ID:	25
County Name:	Lea	Operator ID:	990
Op. Name:	ARCO PERMIAN		
Latitude:	32.59025		
Longitude:	-103.27844	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	E	Ft. N/S Dist:	1650
Ft. N/S dir:	N	Ft. E/W Dist:	990
Ft. E/W Dir:	W	Elevation:	3562 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**WNW**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG048170**

Api ID:	3002505979	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	014
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	189535
Op. Name:	SAPIENT ENERGY CORPORATION		
Latitude:	32.59024		
Longitude:	-103.2838	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	H	Ft. N/S Dist:	1650
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**NW**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG048292**

Api ID:	3002506015	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	005
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	962
Op. Name:	ARCH PETROLEUM INC		
Latitude:	32.59023		
Longitude:	-103.2763	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	F	Ft. N/S Dist:	1650
Ft. N/S dir:	N	Ft. E/W Dist:	1650
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	1997-09-17	Datasource:	Ongard

**NW**  
 1/8 - 1/4 Mile

**OIL\_GAS**      **NMOG048318**

Api ID:	3002506018	Pool ID:	96764
Pool Name:	MONUMENT;ABO, SOUTHEAST	Well ID:	008
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	962
Op. Name:	ARCH PETROLEUM INC		
Latitude:	32.59023		
Longitude:	-103.27523	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	F	Ft. N/S Dist:	1650
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	3552 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NW**  
 1/8 - 1/4 Mile

**OIL\_GAS**      **NMOG048237**

Api ID:	3002506018	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	008
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	962
Op. Name:	ARCH PETROLEUM INC		
Latitude:	32.59023		
Longitude:	-103.27523	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	F	Ft. N/S Dist:	1650
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	3552 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WNW**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG048280**

Api ID:	3002505998	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	011
Well Name:	BRITT	County ID:	25
County Name:	Lea	Operator ID:	6473
Op. Name:	DOYLE HARTMAN		
Latitude:	32.59019		
Longitude:	-103.28701	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	G	Ft. N/S Dist:	1650
Ft. N/S dir:	N	Ft. E/W Dist:	1650
Ft. E/W Dir:	E	Elevation:	3565 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**East**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG071241**

Api ID:	3002534341	Pool ID:	96764
Pool Name:	MONUMENT;ABO, SOUTHEAST	Well ID:	008
Well Name:	W H LAUGHLIN	County ID:	25
County Name:	Lea	Operator ID:	14021
Op. Name:	MARATHON OIL CO		
Latitude:	32.58984		
Longitude:	-103.25896	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	F	Ft. N/S Dist:	1760
Ft. N/S dir:	N	Ft. E/W Dist:	1750
Ft. E/W Dir:	W	Elevation:	3545 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**WNW**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG118715**

Api ID:	3052505800	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	BARBER	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58935		
Longitude:	-103.27953	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	E	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**WNW**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG118797**

Api ID:	3052505800	Pool ID:	47020
Pool Name:	MONUMENT (G-SA)(CONSOLIDATED)**	Well ID:	001
Well Name:	BARBER	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58935		
Longitude:	-103.27953	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	E	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**WNW**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG048283**

Api ID:	3002506027	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	013Y
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	169415
Op. Name:	FALCON CREEK RESOURCES, INC.		
Latitude:	32.58935		
Longitude:	-103.27953	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	E	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	3552 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**West**  
 1/2 - 1 Mile

**OIL\_GAS NMOG118796**

Api ID:	3052505788	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	018
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58933	Section:	7
Longitude:	-103.28381	Range:	37E
Township:	20.0S	Ft. N/S Dist:	1980
Unit ID:	H	Ft. E/W Dist:	660
Ft. N/S dir:	N	Elevation:	Not Reported
Ft. E/W Dir:	E	Compdate:	Not Reported
Depth:	0	Datasource:	Preongard
Plugdate:	Not Reported		

**West**  
 1/2 - 1 Mile

**OIL\_GAS NMOG118595**

Api ID:	3052505787	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58933	Section:	7
Longitude:	-103.28381	Range:	37E
Township:	20.0S	Ft. N/S Dist:	1980
Unit ID:	H	Ft. E/W Dist:	660
Ft. N/S dir:	N	Elevation:	Not Reported
Ft. E/W Dir:	E	Compdate:	Not Reported
Depth:	0	Datasource:	Preongard
Plugdate:	Not Reported		

**NW**  
 1/8 - 1/4 Mile

**OIL\_GAS NMOG048248**

Api ID:	3002506013	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	003
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	962
Op. Name:	ARCH PETROLEUM INC		
Latitude:	32.58932	Section:	8
Longitude:	-103.27524	Range:	37E
Township:	20.0S	Ft. N/S Dist:	1980
Unit ID:	F	Ft. E/W Dist:	1980
Ft. N/S dir:	N	Elevation:	3555 GL
Ft. E/W Dir:	W	Compdate:	Not Reported
Depth:	0	Datasource:	Ongard
Plugdate:	Not Reported		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NNE**  
**0 - 1/8 Mile**

**OIL\_GAS**      **NMOG048236**

Api ID:	3002506017	Pool ID:	Not Reported
Pool Name:	Not Reported	Well ID:	008
Well Name:	E M E SWD	County ID:	25
County Name:	Lea	Operator ID:	19174
Op. Name:	RICE OPERATING CO		
Latitude:	32.58929		
Longitude:	-103.27214	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	G	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	2310
Ft. E/W Dir:	E	Elevation:	3560 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**NE**  
**1/8 - 1/4 Mile**

**OIL\_GAS**      **NMOG118813**

Api ID:	3052505802	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58929		
Longitude:	-103.27107	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	G	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**NE**  
**1/8 - 1/4 Mile**

**OIL\_GAS**      **NMOG118697**

Api ID:	3052505801	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	007
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58929		
Longitude:	-103.27107	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	G	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ FDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**NE**  
 1/8 - 1/4 Mile

**OIL\_GAS NMOG048213**

Api ID:	3002506011	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	001
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	962
Op. Name:	ARCH PETROLEUM INC		
Latitude:	32.58929	Section:	8
Longitude:	-103.27107	Range:	37E
Township:	20.0S	Ft. N/S Dist:	1980
Unit ID:	G	Ft. E/W Dist:	1980
Ft. N/S dir:	N	Elevation:	3557 GL
Ft. E/W Dir:	E	Compdate:	Not Reported
Depth:	0	Datasource:	Ongard
Plugdate:	Not Reported		

**NE**  
 1/8 - 1/4 Mile

**OIL\_GAS NMOG118897**

Api ID:	3052505803	Pool ID:	22800
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (OIL)	Well ID:	001
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58929	Section:	8
Longitude:	-103.27107	Range:	37E
Township:	20.0S	Ft. N/S Dist:	1980
Unit ID:	G	Ft. E/W Dist:	1980
Ft. N/S dir:	N	Elevation:	Not Reported
Ft. E/W Dir:	E	Compdate:	Not Reported
Depth:	0	Datasource:	Preongard
Plugdate:	Not Reported		

**West**  
 1/2 - 1 Mile

**OIL\_GAS NMOG118811**

Api ID:	3052505785	Pool ID:	47020
Pool Name:	MONUMENT (G-SA)(CONSOLIDATED)**	Well ID:	003
Well Name:	BRITT	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58926	Section:	7
Longitude:	-103.28809	Range:	37E
Township:	20.0S	Ft. N/S Dist:	1980
Unit ID:	G	Ft. E/W Dist:	1980
Ft. N/S dir:	N	Elevation:	Not Reported
Ft. E/W Dir:	E	Compdate:	Not Reported
Depth:	0	Datasource:	Preongard
Plugdate:	Not Reported		

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**West**  
**1/2 - 1 Mile**

**OIL\_GAS NMOG118852**

Api ID:	3052505786	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	011
Well Name:	BRITT	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58926		
Longitude:	-103.28809	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	G	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**West**  
**1/2 - 1 Mile**

**OIL\_GAS NMOG118867**

Api ID:	3052505785	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	003
Well Name:	BRITT	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58926		
Longitude:	-103.28809	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	G	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**ENE**  
**1/4 - 1/2 Mile**

**OIL\_GAS NMOG048273**

Api ID:	3002506014	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	004
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	9515
Op. Name:	GULF OIL CORP		
Latitude:	32.58926		
Longitude:	-103.26678	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	H	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**ENE** **OIL\_GAS** **NMOG118798**  
 1/4 - 1/2 Mile

Api ID:	3052505804	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	004
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58926		
Longitude:	-103.26678	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	H	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**ENE** **OIL\_GAS** **NMOG118698**  
 1/4 - 1/2 Mile

Api ID:	3052505804	Pool ID:	47020
Pool Name:	MONUMENT (G-SA)(CONSOLIDATED)**	Well ID:	004
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58926		
Longitude:	-103.26678	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	H	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**ENE** **OIL\_GAS** **NMOG057004**  
 1/4 - 1/2 Mile

Api ID:	3002520686	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	009
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	962
Op. Name:	ARCH PETROLEUM INC		
Latitude:	32.58924		
Longitude:	-103.26572	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	H	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	330
Ft. E/W Dir:	E	Elevation:	3549 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**ENE**  
**1/4 - 1/2 Mile**

**OIL\_GAS NMOG056852**

Api ID:	3002520686	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	009
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	962
Op. Name:	ARCH PETROLEUM INC		
Latitude:	32.58924		
Longitude:	-103.26572	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	H	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	330
Ft. E/W Dir:	E	Elevation:	3549 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**East**  
**1/2 - 1 Mile**

**OIL\_GAS NMOG048367**

Api ID:	3002506038	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	005
Well Name:	NORTH MONUMENT G/SA UNIT	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.58923		
Longitude:	-103.2625	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	E	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**East**  
**1/2 - 1 Mile**

**OIL\_GAS NMOG048331**

Api ID:	3002506039	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	006
Well Name:	NORTH MONUMENT G/SA UNIT	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.58923		
Longitude:	-103.25822	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	F	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction  
Distance

Database EDR ID Number

East  
1/2 - 1 Mile

OIL\_GAS NMOG069188

Api ID:	3002532465	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	006
Well Name:	W H LAUGHLIN	County ID:	25
County Name:	Lea	Operator ID:	14021
Op. Name:	MARATHON OIL CO		
Latitude:	32.58923		
Longitude:	-103.25734	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	F	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	2250
Ft. E/W Dir:	W	Elevation:	3544 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

West  
1/2 - 1 Mile

OIL\_GAS NMOG048146

Api ID:	3002505973	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.58841		
Longitude:	-103.28489	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	H	Ft. N/S Dist:	2310
Ft. N/S dir:	N	Ft. E/W Dist:	990
Ft. E/W Dir:	E	Elevation:	3560 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

West  
1/2 - 1 Mile

OIL\_GAS NMOG048270

Api ID:	3002505991	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	003
Well Name:	BRITT	County ID:	25
County Name:	Lea	Operator ID:	6473
Op. Name:	DOYLE HARTMAN		
Latitude:	32.58837		
Longitude:	-103.28703	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	G	Ft. N/S Dist:	2310
Ft. N/S dir:	N	Ft. E/W Dist:	1650
Ft. E/W Dir:	E	Elevation:	3568 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction  
Distance

Database      FDR ID Number

**East**  
1/4 - 1/2 Mile

**OIL\_GAS      NMOG071422**

Api ID:	3002534483	Pool ID:	Not Reported
Pool Name:	Not Reported	Well ID:	010
Well Name:	BERTIE WHITMIRE	County ID:	25
County Name:	Lea	Operator ID:	962
Op. Name:	ARCH PETROLEUM INC		
Latitude:	32.58836		
Longitude:	-103.26785	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	H	Ft. N/S Dist:	2310
Ft. N/S dir:	N	Ft. E/W Dist:	990
Ft. E/W Dir:	E	Elevation:	3547 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**East**  
1/2 - 1 Mile

**OIL\_GAS      NMOG069977**

Api ID:	3002533141	Pool ID:	47090
Pool Name:	MONUMENT;TUBB	Well ID:	007
Well Name:	W H LAUGHLIN	County ID:	25
County Name:	Lea	Operator ID:	14021
Op. Name:	MARATHON OIL CO		
Latitude:	32.58833		
Longitude:	-103.26159	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	E	Ft. N/S Dist:	2310
Ft. N/S dir:	N	Ft. E/W Dist:	940
Ft. E/W Dir:	W	Elevation:	3554 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WSW**  
1/8 - 1/4 Mile

**OIL\_GAS      NMOG048114**

Api ID:	3002506003	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	003
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.58633		
Longitude:	-103.27634	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	K	Ft. N/S Dist:	2310
Ft. N/S dir:	S	Ft. E/W Dist:	1650
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**SW**  
 1/8 - 1/4 Mile

**OIL\_GAS**      **NMOG048212**

Api ID:	3002506004	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	004
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.58633		
Longitude:	-103.2742	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	K	Ft. N/S Dist:	2310
Ft. N/S dir:	S	Ft. E/W Dist:	2310
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WSW**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG048174**

Api ID:	3002506025	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	011
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	189535
Op. Name:	SAPIENT ENERGY CORPORATION		
Latitude:	32.58632		
Longitude:	-103.28063	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	L	Ft. N/S Dist:	2310
Ft. N/S dir:	S	Ft. E/W Dist:	330
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WSW**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG048274**

Api ID:	3002506029	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	004
Well Name:	BARBER GAS COM	County ID:	25
County Name:	Lea	Operator ID:	990
Op. Name:	ARCO PERMIAN		
Latitude:	32.58632		
Longitude:	-103.27956	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	L	Ft. N/S Dist:	2310
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	3550 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction  
Distance

Database EDR ID Number

**WSW**

1/4 - 1/2 Mile

OIL\_GAS

NMOG048330

Api ID:	3002506029	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	004
Well Name:	BARBER GAS COM	County ID:	25
County Name:	Lea	Operator ID:	990
Op. Name:	ARCO PERMIAN		
Latitude:	32.58632		
Longitude:	-103.27956	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	L	Ft. N/S Dist:	2310
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	3550 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WSW**

1/4 - 1/2 Mile

OIL\_GAS

NMOG048282

Api ID:	3002506020	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	003
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.58632		
Longitude:	-103.27849	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	L	Ft. N/S Dist:	2310
Ft. N/S dir:	S	Ft. E/W Dist:	990
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**West**

1/2 - 1 Mile

OIL\_GAS

NMOG048316

Api ID:	3002505982	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	019
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	189535
Op. Name:	SAPIENT ENERGY CORPORATION		
Latitude:	32.5863		
Longitude:	-103.28278	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	I	Ft. N/S Dist:	2310
Ft. N/S dir:	S	Ft. E/W Dist:	330
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**West**  
**1/2 - 1 Mile**

**OIL\_GAS NMOG048185**

Api ID:	3002505980	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	017
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	1271
Op. Name:	ATLANTIC RICHFIELD CO		
Latitude:	32.58629		
Longitude:	-103.28331	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	I	Ft. N/S Dist:	2310
Ft. N/S dir:	S	Ft. E/W Dist:	495
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

**West**  
**1/2 - 1 Mile**

**OIL\_GAS NMOG048281**

Api ID:	3002506000	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	013
Well Name:	BRITT	County ID:	25
County Name:	Lea	Operator ID:	6473
Op. Name:	DOYLE HARTMAN		
Latitude:	32.58624		
Longitude:	-103.28706	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	J	Ft. N/S Dist:	2310
Ft. N/S dir:	S	Ft. E/W Dist:	1650
Ft. E/W Dir:	E	Elevation:	3562 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**ESE**  
**1/4 - 1/2 Mile**

**OIL\_GAS NMOG061702**

Api ID:	3002525292	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	013
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.5861		
Longitude:	-103.26739	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	I	Ft. N/S Dist:	2223
Ft. N/S dir:	S	Ft. E/W Dist:	853
Ft. E/W Dir:	E	Elevation:	3547 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**ESE**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG061606**

Api ID:	3002525292	Pool ID:	47090
Pool Name:	MONUMENT;TUBB	Well ID:	013
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.5861		
Longitude:	-103.26739	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	I	Ft. N/S Dist:	2223
Ft. N/S dir:	S	Ft. E/W Dist:	853
Ft. E/W Dir:	E	Elevation:	3547 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**ESE**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG061719**

Api ID:	3002525292	Pool ID:	58595
Pool Name:	TEAGUE;GLORIETA-UPPER PADDOCK, SW	Well ID:	013
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.5861		
Longitude:	-103.26739	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	I	Ft. N/S Dist:	2223
Ft. N/S dir:	S	Ft. E/W Dist:	853
Ft. E/W Dir:	E	Elevation:	3547 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**ESE**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG061655**

Api ID:	3002525292	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	013
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.5861		
Longitude:	-103.26739	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	I	Ft. N/S Dist:	2223
Ft. N/S dir:	S	Ft. E/W Dist:	853
Ft. E/W Dir:	E	Elevation:	3547 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**ESE**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG061646**

Api ID:	3002525292	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	013
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.5861		
Longitude:	-103.26739	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	I	Ft. N/S Dist:	2223
Ft. N/S dir:	S	Ft. E/W Dist:	853
Ft. E/W Dir:	E	Elevation:	3547 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**SSE**  
 1/8 - 1/4 Mile

**OIL\_GAS**      **NMOG048378**

Api ID:	3002506031	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	003
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58596		
Longitude:	-103.27168	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	J	Ft. N/S Dist:	2173
Ft. N/S dir:	S	Ft. E/W Dist:	2173
Ft. E/W Dir:	E	Elevation:	3546 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**SSE**  
 1/8 - 1/4 Mile

**OIL\_GAS**      **NMOG048285**

Api ID:	3002506031	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	003
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58596		
Longitude:	-103.27168	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	J	Ft. N/S Dist:	2173
Ft. N/S dir:	S	Ft. E/W Dist:	2173
Ft. E/W Dir:	E	Elevation:	3546 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**West**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG071354**

Api ID:	3002534330	Pool ID:	Not Reported
Pool Name:	Not Reported	Well ID:	002
Well Name:	BARBER FEDERAL	County ID:	25
County Name:	Lea	Operator ID:	5073
Op. Name:	CONOCO INC		
Latitude:	32.58574		
Longitude:	-103.28706	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	J	Ft. N/S Dist:	2130
Ft. N/S dir:	S	Ft. E/W Dist:	1650
Ft. E/W Dir:	E	Elevation:	3551 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**ESE**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG118754**

Api ID:	3052505805	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	002
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58544		
Longitude:	-103.26675	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	I	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**ESE**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG048260**

Api ID:	3002506032	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	002
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58544		
Longitude:	-103.26675	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	I	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**ESE** **OIL\_GAS** **NMOG048416**  
**1/2 - 1 Mile**

Api ID:	3002506041	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	001
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58544		
Longitude:	-103.26247	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	L	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	3552 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**ESE** **OIL\_GAS** **NMOG118814**  
**1/2 - 1 Mile**

Api ID:	3052505824	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	009
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58544		
Longitude:	-103.26247	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	L	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**ESE** **OIL\_GAS** **NMOG118856**  
**1/2 - 1 Mile**

Api ID:	3052505823	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58544		
Longitude:	-103.26247	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	L	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction  
Distance

Database EDR ID Number

**ESE**  
1/2 - 1 Mile

**OIL\_GAS** NMOG118884

Api ID:	3052505825	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	009
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58544		
Longitude:	-103.26247	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	L	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**East**  
1/2 - 1 Mile

**OIL\_GAS** NMOG048286

Api ID:	3002506044	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	004
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58544		
Longitude:	-103.25819	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	K	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**SSE**  
1/8 - 1/4 Mile

**OIL\_GAS** NMOG048284

Api ID:	3002506030	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58543		
Longitude:	-103.27104	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	J	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**SSE**  
 1/8 - 1/4 Mile

**OIL\_GAS**      **NMOG118742**

Api ID:	3052505807	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	003
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58543		
Longitude:	-103.27104	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	J	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**SSE**  
 1/8 - 1/4 Mile

**OIL\_GAS**      **NMOG118755**

Api ID:	3052505806	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58543		
Longitude:	-103.27104	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	J	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**SW**  
 1/8 - 1/4 Mile

**OIL\_GAS**      **NMOG048328**

Api ID:	3002506001	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	001
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.58542		
Longitude:	-103.27528	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	K	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	3543 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**SW** **OIL\_GAS** **NMOG118868**  
**1/8 - 1/4 Mile**

Api ID:	3052505808	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	003
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58542		
Longitude:	-103.27528	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	K	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**SW** **OIL\_GAS** **NMOG118771**  
**1/8 - 1/4 Mile**

Api ID:	3052505809	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	003
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58542		
Longitude:	-103.27528	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	K	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**SW** **OIL\_GAS** **NMOG118912**  
**1/8 - 1/4 Mile**

Api ID:	3052505811	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	004
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58542		
Longitude:	-103.27528	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	K	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**SW**  
 1/8 - 1/4 Mile

**OIL\_GAS NMOG118911**

Api ID:	3052505810	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58542		
Longitude:	-103.27528	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	K	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**WSW**  
 1/2 - 1 Mile

**OIL\_GAS NMOG118770**

Api ID:	3052505789	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	017
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58538		
Longitude:	-103.28385	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	I	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**WSW**  
 1/2 - 1 Mile

**OIL\_GAS NMOG118788**

Api ID:	3052505790	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	017
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58538		
Longitude:	-103.28385	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	I	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**ESE**  
**1/2 - 1 Mile**

**OIL\_GAS**      **NMOG069686**

Api ID:	3002532881	Pool ID:	63780
Pool Name:	WEIR;BLINEBRY	Well ID:	016
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58537		
Longitude:	-103.26157	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	L	Ft. N/S Dist:	1955
Ft. N/S dir:	S	Ft. E/W Dist:	940
Ft. E/W Dir:	W	Elevation:	3547 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**West**  
**1/2 - 1 Mile**

**OIL\_GAS**      **NMOG118853**

Api ID:	3052505791	Pool ID:	47020
Pool Name:	MONUMENT (G-SA)(CONSOLIDATED)**	Well ID:	013
Well Name:	BRITT	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58531		
Longitude:	-103.28814	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	J	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**West**  
**1/2 - 1 Mile**

**OIL\_GAS**      **NMOG118741**

Api ID:	3052505792	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	013
Well Name:	BRITT	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58531		
Longitude:	-103.28814	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	J	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**West** **OIL\_GAS** **NMOG118896**  
 1/2 - 1 Mile

Api ID:	3052505791	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	013
Well Name:	BRITT	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58531		
Longitude:	-103.28814	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	J	Ft. N/S Dist:	1980
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**ESE** **OIL\_GAS** **NMOG068312**  
 1/2 - 1 Mile

Api ID:	3002531727	Pool ID:	96764
Pool Name:	MONUMENT;ABO, SOUTHEAST	Well ID:	013
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58454		
Longitude:	-103.25712	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	K	Ft. N/S Dist:	1653
Ft. N/S dir:	S	Ft. E/W Dist:	2307
Ft. E/W Dir:	W	Elevation:	3541 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**ESE** **OIL\_GAS** **NMOG068339**  
 1/2 - 1 Mile

Api ID:	3002531727	Pool ID:	47090
Pool Name:	MONUMENT;TUBB	Well ID:	013
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58454		
Longitude:	-103.25712	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	K	Ft. N/S Dist:	1653
Ft. N/S dir:	S	Ft. E/W Dist:	2307
Ft. E/W Dir:	W	Elevation:	3541 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**ESE** **OIL\_GAS** **NMOG068260**  
**1/2 - 1 Mile**

Api ID:	3002531727	Pool ID:	63780
Pool Name:	WEIR;BLINEBRY	Well ID:	013
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58454		
Longitude:	-103.25712	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	K	Ft. N/S Dist:	1653
Ft. N/S dir:	S	Ft. E/W Dist:	2307
Ft. E/W Dir:	W	Elevation:	3541 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**ESE** **OIL\_GAS** **NMOG068281**  
**1/2 - 1 Mile**

Api ID:	3002531727	Pool ID:	10450
Pool Name:	CASS;PENN	Well ID:	013
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58454		
Longitude:	-103.25712	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	K	Ft. N/S Dist:	1653
Ft. N/S dir:	S	Ft. E/W Dist:	2307
Ft. E/W Dir:	W	Elevation:	3541 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**ESE** **OIL\_GAS** **NMOG070127**  
**1/4 - 1/2 Mile**

Api ID:	3002533296	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	005
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58453		
Longitude:	-103.26601	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	I	Ft. N/S Dist:	1650
Ft. N/S dir:	S	Ft. E/W Dist:	430
Ft. E/W Dir:	E	Elevation:	3543 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**ESE** **OIL\_GAS** **NMOG048275**  
 1/2 - 1 Mile

Api ID:	3002506049	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	009
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58453		
Longitude:	-103.26139	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	L	Ft. N/S Dist:	1650
Ft. N/S dir:	S	Ft. E/W Dist:	990
Ft. E/W Dir:	W	Elevation:	3540 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**ESE** **OIL\_GAS** **NMOG069707**  
 1/2 - 1 Mile

Api ID:	3002532896	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	017
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58453		
Longitude:	-103.25925	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	K	Ft. N/S Dist:	1650
Ft. N/S dir:	S	Ft. E/W Dist:	1650
Ft. E/W Dir:	W	Elevation:	3540 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WSW** **OIL\_GAS** **NMOG048160**  
 1/2 - 1 Mile

Api ID:	3002505976	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	006
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.58445		
Longitude:	-103.28493	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	I	Ft. N/S Dist:	1650
Ft. N/S dir:	S	Ft. E/W Dist:	990
Ft. E/W Dir:	E	Elevation:	3557 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction  
Distance

Database FDR ID Number

**WSW**  
1/2 - 1 Mile

OIL\_GAS NMOG048211

Api ID:	3002505995	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	007
Well Name:	BRITT	County ID:	25
County Name:	Lea	Operator ID:	15043
Op. Name:	MKA OIL PROPERTIES		
Latitude:	32.58442		
Longitude:	-103.28708	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	J	Ft. N/S Dist:	1650
Ft. N/S dir:	S	Ft. E/W Dist:	1650
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	1995-07-21	Datasource:	Ongard

**SE**  
1/2 - 1 Mile

OIL\_GAS NMOG070059

Api ID:	3002533236	Pool ID:	63780
Pool Name:	WEIR;BLINEBRY	Well ID:	010
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.58272		
Longitude:	-103.26627	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	P	Ft. N/S Dist:	990
Ft. N/S dir:	S	Ft. E/W Dist:	515
Ft. E/W Dir:	E	Elevation:	3534 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**ESE**  
1/2 - 1 Mile

OIL\_GAS NMOG069226

Api ID:	3002532518	Pool ID:	96764
Pool Name:	MONUMENT;ABO, SOUTHEAST	Well ID:	014
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58272		
Longitude:	-103.26138	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	M	Ft. N/S Dist:	990
Ft. N/S dir:	S	Ft. E/W Dist:	990
Ft. E/W Dir:	W	Elevation:	3534 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**ESE** **OIL\_GAS** **NMOG069272**  
**1/2 - 1 Mile**

Api ID:	3002532518	Pool ID:	63780
Pool Name:	WEIR;BLINEBRY	Well ID:	014
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58272		
Longitude:	-103.26138	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	M	Ft. N/S Dist:	990
Ft. N/S dir:	S	Ft. E/W Dist:	990
Ft. E/W Dir:	W	Elevation:	3534 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**ESE** **OIL\_GAS** **NMOG069213**  
**1/2 - 1 Mile**

Api ID:	3002532518	Pool ID:	47090
Pool Name:	MONUMENT;TUBB	Well ID:	014
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58272		
Longitude:	-103.26138	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	M	Ft. N/S Dist:	990
Ft. N/S dir:	S	Ft. E/W Dist:	990
Ft. E/W Dir:	W	Elevation:	3534 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**SW** **OIL\_GAS** **NMOG048175**  
**1/2 - 1 Mile**

Api ID:	3002506033	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	001
Well Name:	GILLULLY FEDERAL	County ID:	25
County Name:	Lea	Operator ID:	999618
Op. Name:	RODMAN PETROLEUM CORP		
Latitude:	32.58269		
Longitude:	-103.2796	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	M	Ft. N/S Dist:	990
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**WSW**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG048305**

Api ID:	3002505983	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	002
Well Name:	BARBER GAS COM	County ID:	25
County Name:	Lea	Operator ID:	990
Op. Name:	ARCO PERMIAN		
Latitude:	32.58266		
Longitude:	-103.28389	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	P	Ft. N/S Dist:	990
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	3545 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WSW**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG048327**

Api ID:	3002505983	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	002
Well Name:	BARBER GAS COM	County ID:	25
County Name:	Lea	Operator ID:	990
Op. Name:	ARCO PERMIAN		
Latitude:	32.58266		
Longitude:	-103.28389	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	P	Ft. N/S Dist:	990
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	3545 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**ESE**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG069706**

Api ID:	3002532880	Pool ID:	63780
Pool Name:	WEIR;BLINEBRY	Well ID:	015
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.5822		
Longitude:	-103.25842	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	N	Ft. N/S Dist:	800
Ft. N/S dir:	S	Ft. E/W Dist:	1900
Ft. E/W Dir:	W	Elevation:	3535 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**SE**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG048353**

Api ID:	3002506010	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	003
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.58181		
Longitude:	-103.26673	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	P	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	3548 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	1994-04-29	Datasource:	Ongard

**SE**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG048294**

Api ID:	3002506042	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	002
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58181		
Longitude:	-103.26244	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	M	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	3537 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**SE**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG118700**

Api ID:	3052505826	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	002
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58181		
Longitude:	-103.26244	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	M	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**ESE**

1/2 - 1 Mile

OIL\_GAS

NMOG048319

Api ID:	3002506043	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	003
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	22351
Op. Name:	TEXACO EXPLORATION & PRODUCTION INC		
Latitude:	32.58181		
Longitude:	-103.25816	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	N	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	3548 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**ESE**

1/2 - 1 Mile

OIL\_GAS

NMOG118800

Api ID:	3052505827	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	003
Well Name:	L VAN ETTEN	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58181		
Longitude:	-103.25816	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	N	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**SSE**

1/4 - 1/2 Mile

OIL\_GAS

NMOG048272

Api ID:	3002506009	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVR-S-QUEEN (PRO GAS)	Well ID:	001
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.5818		
Longitude:	-103.27101	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	O	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	3547 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**SSE**  
 1/4 - 1/2 Mile OIL\_GAS NMOG118899

Api ID:	3052505814	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.5818		
Longitude:	-103.27101	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	O	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**SW**  
 1/2 - 1 Mile OIL\_GAS NMOG118899

Api ID:	3052505812	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	001
Well Name:	GILLULLY FEDERAL	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58179		
Longitude:	-103.27961	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	M	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**SW**  
 1/2 - 1 Mile OIL\_GAS NMOG048161

Api ID:	3002506019	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	GILLULLY A FEDERAL	County ID:	25
County Name:	Lea	Operator ID:	12024
Op. Name:	JOHN H HENDRIX CORP		
Latitude:	32.58179		
Longitude:	-103.27961	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	M	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	3555 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**SSW**  
 1/4 - 1/2 Mile

OIL\_GAS NMOG118898

Api ID:	3052505813	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	002
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58179		
Longitude:	-103.27533	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	N	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**SSW**  
 1/4 - 1/2 Mile

OIL\_GAS NMOG048235

Api ID:	3002506002	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	002
Well Name:	T ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.58179		
Longitude:	-103.27533	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	N	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	3540 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**WSW**  
 1/2 - 1 Mile

OIL\_GAS NMOG118812

Api ID:	3052505795	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	005
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.58175		
Longitude:	-103.2839	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	P	Ft. N/S Dist:	660
Ft. N/S dir:	S	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**SE**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG071041**

Api ID:	3002534021	Pool ID:	96764
Pool Name:	MONUMENT;ABO, SOUTHEAST	Well ID:	012
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.58174		
Longitude:	-103.26663	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	P	Ft. N/S Dist:	634
Ft. N/S dir:	S	Ft. E/W Dist:	631
Ft. E/W Dir:	E	Elevation:	3533 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**SSE**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG066377**

Api ID:	3002529962	Pool ID:	47080
Pool Name:	MONUMENT;PADDOCK	Well ID:	001
Well Name:	ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	150065
Op. Name:	MID-CONTINENT ENERGY OPERATING COMPANY		
Latitude:	32.58089		
Longitude:	-103.271	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	O	Ft. N/S Dist:	330
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	3538 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**SSE**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG066472**

Api ID:	3002529962	Pool ID:	46990
Pool Name:	MONUMENT;BLINEBRY	Well ID:	001
Well Name:	ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	150065
Op. Name:	MID-CONTINENT ENERGY OPERATING COMPANY		
Latitude:	32.58089		
Longitude:	-103.271	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	O	Ft. N/S Dist:	330
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	3538 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**SSE**  
 1/4 - 1/2 Mile

**OIL\_GAS**      **NMOG066533**

Api ID:	3002529962	Pool ID:	47090
Pool Name:	MONUMENT;TUBB	Well ID:	001
Well Name:	ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	150065
Op. Name:	MID-CONTINENT ENERGY OPERATING COMPANY		
Latitude:	32.58089		
Longitude:	-103.271	Section:	8
Township:	20.0S	Range:	37E
Unit ID:	O	Ft. N/S Dist:	330
Ft. N/S dir:	S	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	3538 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**SW**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG048290**

Api ID:	3002505975	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	005
Well Name:	BERTHA J BARBER	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.58086		
Longitude:	-103.28284	Section:	7
Township:	20.0S	Range:	37E
Unit ID:	P	Ft. N/S Dist:	330
Ft. N/S dir:	S	Ft. E/W Dist:	330
Ft. E/W Dir:	E	Elevation:	3554 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**SE**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG056170**

Api ID:	3002512801	Pool ID:	Not Reported
Pool Name:	Not Reported	Well ID:	009
Well Name:	E M E SWD	County ID:	25
County Name:	Lea	Operator ID:	19174
Op. Name:	RICE OPERATING CO		
Latitude:	32.58027		
Longitude:	-103.26376	Section:	9
Township:	20.0S	Range:	37E
Unit ID:	M	Ft. N/S Dist:	100
Ft. N/S dir:	S	Ft. E/W Dist:	250
Ft. E/W Dir:	W	Elevation:	3522 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**SE**  
**1/2 - 1 Mile**

**OIL\_GAS NMOG065396**

Api ID:	3002528818	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	002
Well Name:	GENERAL G STATE	County ID:	25
County Name:	Lea	Operator ID:	150628
Op. Name:	PURE RESOURCES, LP		
Latitude:	32.57909		
Longitude:	-103.26308	Section:	16
Township:	20.0S	Range:	37E
Unit ID:	D	Ft. N/S Dist:	330
Ft. N/S dir:	N	Ft. E/W Dist:	450
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**SW**  
**1/2 - 1 Mile**

**OIL\_GAS NMOG048413**

Api ID:	3002506137	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	002
Well Name:	STATE H 17	County ID:	25
County Name:	Lea	Operator ID:	127535
Op. Name:	OIL & GAS OPERATIONS		
Latitude:	32.57906		
Longitude:	-103.28071	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	D	Ft. N/S Dist:	330
Ft. N/S dir:	N	Ft. E/W Dist:	330
Ft. E/W Dir:	W	Elevation:	3515 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**SW**  
**1/2 - 1 Mile**

**OIL\_GAS NMOG048533**

Api ID:	3002506163	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	MEXICO	County ID:	25
County Name:	Lea	Operator ID:	12024
Op. Name:	JOHN H HENDRIX CORP		
Latitude:	32.57904		
Longitude:	-103.28285	Section:	18
Township:	20.0S	Range:	37E
Unit ID:	A	Ft. N/S Dist:	330
Ft. N/S dir:	N	Ft. E/W Dist:	330
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**SSE** **OIL\_GAS** **NMOG071273**  
 1/2 - 1 Mile

Api ID:	3002534281	Pool ID:	96764
Pool Name:	MONUMENT;ABO, SOUTHEAST	Well ID:	014
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.57818		
Longitude:	-103.26715	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	A	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	810
Ft. E/W Dir:	E	Elevation:	3534 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**SSE** **OIL\_GAS** **NMOG048373**  
 1/2 - 1 Mile

Api ID:	3002506142	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	006
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.57818		
Longitude:	-103.26666	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	A	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	3542 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	1994-04-28	Datasource:	Ongard

**SE** **OIL\_GAS** **NMOG118946**  
 1/2 - 1 Mile

Api ID:	3052505902	Pool ID:	22800
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (OIL)	Well ID:	001
Well Name:	GENERAL G STATE	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.57818		
Longitude:	-103.26237	Section:	16
Township:	20.0S	Range:	37E
Unit ID:	D	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction  
Distance

Database EDR ID Number

SE  
1/2 - 1 Mile

OIL\_GAS NMOG048359

Api ID:	3002506123	Pool ID:	22800
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (OIL)	Well ID:	001
Well Name:	GENERAL G STATE	County ID:	25
County Name:	Lea	Operator ID:	15144
Op. Name:	MOBIL PRODUCING TEXAS & NEW MEXICO		
Latitude:	32.57818		
Longitude:	-103.26237	Section:	16
Township:	20.0S	Range:	37E
Unit ID:	D	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

SE  
1/2 - 1 Mile

OIL\_GAS NMOG119016

Api ID:	3052505901	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	GENERAL G STATE	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.57818		
Longitude:	-103.26237	Section:	16
Township:	20.0S	Range:	37E
Unit ID:	D	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

SE  
1/2 - 1 Mile

OIL\_GAS NMOG048451

Api ID:	3002506123	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	GENERAL G STATE	County ID:	25
County Name:	Lea	Operator ID:	15144
Op. Name:	MOBIL PRODUCING TEXAS & NEW MEXICO		
Latitude:	32.57818		
Longitude:	-103.26237	Section:	16
Township:	20.0S	Range:	37E
Unit ID:	D	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**SSW**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG048473**

Api ID:	3002506139	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	002
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.57817		
Longitude:	-103.27535	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	C	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	3544 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	1994-04-26	Datasource:	Ongard

**South**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG048427**

Api ID:	3002506140	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	004
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.57817		
Longitude:	-103.27095	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	B	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	3545 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**South**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG118865**

Api ID:	3052505917	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	004
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.57817		
Longitude:	-103.27095	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	B	Ft. N/S Dist:	660
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**SSW**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG056246**

Api ID:	3002520100	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	001
Well Name:	STATE H 17	County ID:	25
County Name:	Lea	Operator ID:	127535
Op. Name:	OIL & GAS OPERATIONS		
Latitude:	32.57544		
Longitude:	-103.28071	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	E	Ft. N/S Dist:	1650
Ft. N/S dir:	N	Ft. E/W Dist:	330
Ft. E/W Dir:	W	Elevation:	3543 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**South**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG058880**

Api ID:	3002522600	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	009
Well Name:	ANDERSON A	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.57544		
Longitude:	-103.27535	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	F	Ft. N/S Dist:	1650
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**South**  
 1/2 - 1 Mile

**OIL\_GAS**      **NMOG048457**

Api ID:	3002506144	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	008
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.57455		
Longitude:	-103.27085	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	G	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	E	Elevation:	3543 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	1994-04-27	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction \_\_\_\_\_ Database \_\_\_\_\_ EDR ID Number \_\_\_\_\_  
 Distance \_\_\_\_\_

**SSE** **OIL\_GAS** **NMOG118921**  
 1/2 - 1 Mile

Api ID:	3052505920	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	007
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.57455		
Longitude:	-103.26656	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	H	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**SSE** **OIL\_GAS** **NMOG048496**  
 1/2 - 1 Mile

Api ID:	3002506143	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	007
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.57455		
Longitude:	-103.26656	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	H	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	E	Elevation:	3544 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

**South** **OIL\_GAS** **NMOG048474**  
 1/2 - 1 Mile

Api ID:	3002506141	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	005
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	9515
Op. Name:	GULF OIL CORP		
Latitude:	32.57454		
Longitude:	-103.27535	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	F	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

## GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction  
Distance

Database      EDR ID Number

**South**  
**1/2 - 1 Mile**

**OIL\_GAS      NMOG118848**

Api ID:	3052505919	Pool ID:	47020
Pool Name:	MONUMENT (G-SA)(CONSOLIDATED)**	Well ID:	005
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.57454		
Longitude:	-103.27535	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	F	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**South**  
**1/2 - 1 Mile**

**OIL\_GAS      NMOG118908**

Api ID:	3052505919	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	005
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.57454		
Longitude:	-103.27535	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	F	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	1980
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**South**  
**1/2 - 1 Mile**

**OIL\_GAS      NMOG070639**

Api ID:	3002533891	Pool ID:	76480
Pool Name:	EUMONT;YATES-7 RVRS-QUEEN (PRO GAS)	Well ID:	011
Well Name:	THEODORE ANDERSON	County ID:	25
County Name:	Lea	Operator ID:	4323
Op. Name:	CHEVRON U S A INC		
Latitude:	32.57454		
Longitude:	-103.27428	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	F	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	2310
Ft. E/W Dir:	W	Elevation:	3533 GL
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Ongard

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS

Direction  
Distance

Database EDR ID Number

**SSW**  
1/2 - 1 Mile

**OIL\_GAS**      **NMOG118907**

Api ID:	3052505918	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	002
Well Name:	WULFF STATE	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.57453		
Longitude:	-103.27964	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	E	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**SSW**  
1/2 - 1 Mile

**OIL\_GAS**      **NMOG118948**

Api ID:	3052505918	Pool ID:	47020
Pool Name:	MONUMENT (G-SA)(CONSOLIDATED)**	Well ID:	002
Well Name:	WULFF STATE	County ID:	25
County Name:	Lea	Operator ID:	0
Op. Name:	Not Reported		
Latitude:	32.57453		
Longitude:	-103.27964	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	E	Ft. N/S Dist:	1980
Ft. N/S dir:	N	Ft. E/W Dist:	660
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Preongard

**South**  
1/2 - 1 Mile

**OIL\_GAS**      **NMOG062380**

Api ID:	3002525928	Pool ID:	23000
Pool Name:	EUNICE MONUMENT;GRAYBURG-SAN ANDREW	Well ID:	009
Well Name:	ANDERSON A	County ID:	25
County Name:	Lea	Operator ID:	495
Op. Name:	AMERADA HESS CORP		
Latitude:	32.57363		
Longitude:	-103.27428	Section:	17
Township:	20.0S	Range:	37E
Unit ID:	F	Ft. N/S Dist:	2310
Ft. N/S dir:	N	Ft. E/W Dist:	2310
Ft. E/W Dir:	W	Elevation:	Not Reported
Depth:	0	Compdate:	Not Reported
Plugdate:	Not Reported	Datasource:	Hobbs

# GEOCHECK® - PHYSICAL SETTING SOURCE MAP FINDINGS RADON

## AREA RADON INFORMATION

Federal EPA Radon Zone for LEA County: 2

Note: Zone 1 indoor average level > 4 pCi/L.  
 : Zone 2 indoor average level >= 2 pCi/L and <= 4 pCi/L.  
 : Zone 3 indoor average level < 2 pCi/L.

Federal Area Radon Information for LEA COUNTY, NM

Number of sites tested: 48

Area	Average Activity	% <4 pCi/L	% 4-20 pCi/L	% >20 pCi/L
Living Area - 1st Floor	1.585 pCi/L	94%	6%	0%
Living Area - 2nd Floor	Not Reported	Not Reported	Not Reported	Not Reported
Basement	1.900 pCi/L	100%	0%	0%

# PHYSICAL SETTING SOURCE RECORDS SEARCHED

## TOPOGRAPHIC INFORMATION

### **USGS 7.5' Digital Elevation Model (DEM)**

Source: United States Geologic Survey

EDR acquired the USGS 7.5' Digital Elevation Model in 2002. 7.5-Minute DEMs correspond to the USGS 1:24,000- and 1:25,000-scale topographic quadrangle maps.

## HYDROLOGIC INFORMATION

**Flood Zone Data:** This data, available in select counties across the country, was obtained by EDR in 1999 from the Federal Emergency Management Agency (FEMA). Data depicts 100-year and 500-year flood zones as defined by FEMA.

**NWI:** National Wetlands Inventory. This data, available in select counties across the country, was obtained by EDR in 2002 from the U.S. Fish and Wildlife Service.

## HYDROGEOLOGIC INFORMATION

### **AQUIFLOW<sup>R</sup> Information System**

Source: EDR proprietary database of groundwater flow information

EDR has developed the AQUIFLOW Information System (AIS) to provide data on the general direction of groundwater flow at specific points. EDR has reviewed reports submitted to regulatory authorities at select sites and has extracted the date of the report, hydrogeologically determined groundwater flow direction and depth to water table information.

## GEOLOGIC INFORMATION

### **Geologic Age and Rock Stratigraphic Unit**

Source: P.G. Schruben, R.E. Arndt and W.J. Bawiec, Geology of the Conterminous U.S. at 1:2,500,000 Scale - A digital representation of the 1974 P.B. King and H.M. Beikman Map, USGS Digital Data Series DDS - 11 (1994).

### **STATSGO: State Soil Geographic Database**

Source: Department of Agriculture, Natural Resources Conservation Services

The U.S. Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) leads the national Conservation Soil Survey (NCSS) and is responsible for collecting, storing, maintaining and distributing soil survey information for privately owned lands in the United States. A soil map in a soil survey is a representation of soil patterns in a landscape. Soil maps for STATSGO are compiled by generalizing more detailed (SSURGO) soil survey maps.

## ADDITIONAL ENVIRONMENTAL RECORD SOURCES

### **FEDERAL WATER WELLS**

#### **PWS: Public Water Systems**

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Public Water System data from the Federal Reporting Data System. A PWS is any water system which provides water to at least 25 people for at least 60 days annually. PWSs provide water from wells, rivers and other sources.

#### **PWS ENF: Public Water Systems Violation and Enforcement Data**

Source: EPA/Office of Drinking Water

Telephone: 202-564-3750

Violation and Enforcement data for Public Water Systems from the Safe Drinking Water Information System (SDWIS) after August 1995. Prior to August 1995, the data came from the Federal Reporting Data System (FRDS).

#### **USGS Water Wells: USGS National Water Inventory System (NWIS)**

This database contains descriptive information on sites where the USGS collects or has collected data on surface water and/or groundwater. The groundwater data includes information on wells, springs, and other sources of groundwater.

## PHYSICAL SETTING SOURCE RECORDS SEARCHED

### STATE RECORDS

#### Oil and Gas Well Locations

Source: New Mexico Institute of Mining and Technology  
Telephone: 505-835-5142

### RADON

#### State Database: NM Radon

Source: Environment Department  
Telephone: 505-827-1093  
Radon Test Results

#### Area Radon Information

Source: USGS  
Telephone: 703-356-4020  
The National Radon Database has been developed by the U.S. Environmental Protection Agency (USEPA) and is a compilation of the EPA/State Residential Radon Survey and the National Residential Radon Survey. The study covers the years 1986 - 1992. Where necessary data has been supplemented by information collected at private sources such as universities and research institutions.

#### EPA Radon Zones

Source: EPA  
Telephone: 703-356-4020  
Sections 307 & 309 of IRAA directed EPA to list and identify areas of U.S. with the potential for elevated indoor radon levels.

### OTHER

#### Airport Landing Facilities: Private and public use landing facilities

Source: Federal Aviation Administration, 800-457-6656

#### Epicenters: World earthquake epicenters, Richter 5 or greater

Source: Department of Commerce, National Oceanic and Atmospheric Administration

APPENDIX F

LABORATORY REPORTS  
WITH  
CHAIN-OF-CUSTODY FORMS

### JAMAR WATER SAMPLES

(Laboratory Results)

Date	Sample ID	Conductivity (µs)	Ph	Temp (C)	DTW (ft)	BTEX (mg/L)	B	T	E	X	Naph (mg/L)	Chloride (mg/L)	TDS (mg/L)
5/27/2004	MW-1	3.03	7.05	20.97	28.00	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.000200	748	2200
5/27/2004	MW-2	4.27	7.18	20.63	26.50	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.000200	869	2990
5/27/2004	MW-3	2.50	7.42	19.93	26.88	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	0.00095	467	1616
5/27/2004	MW-4	2.47	7.47	20.40	26.50	<0.00100	<0.00100	<0.00100	<0.00100	<0.00100	<0.000200	511	1716
5/27/2004	MW-5	3.00	7.42	19.80	27.10	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.000200	694	1952
5/27/2004	MW-6	3.00	7.48	19.83	27.13	0.05	0.0608	0.0591	0.139	0.00072	0.00072	639	2152
4/23/2004	W-01				28.42	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	0.00039	1610	2855
4/23/2004	W-03				29.83	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.000200	1240	2190
4/29/2004	W-02				28.32	<0.00500	<0.00500	<0.00500	<0.00500	<0.00500	<0.000200	480	1052
<b>NMWQCC Stds.</b>						<b>0.01</b>	<b>0.75</b>	<b>0.75</b>	<b>0.75</b>	<b>0.62</b>	<b>0.03</b>	<b>250</b>	<b>1000</b>











**JAMAR SOIL SAMPLES  
(FIELD RESULTS)**

Date	Sample ID	Conductivity (µs)	PID	EAB	B	T	E	X	TPH (mg/Kg)	DRO (mg/Kg)	TPH (mg/Kg)	GRO (mg/Kg)	Chloride (mg/Kg)	NOTES
5/26/2004	SB5 @ 10-12	109.6	0	N										
5/26/2004	SB5 @ 15-17	162.7	0	N										
5/26/2004	SB5 @ 20-22	207	0	N										
5/26/2004	SB5 @ 25-27	235	0	N										
5/26/2004	SB5 @ 5-7	307	0	N										
5/26/2004	SB6 @ 10-12	78.7	0	N										
5/26/2004	SB6 @ 15-17	136.7	0	N										
5/26/2004	SB6 @ 20-22	139.1	0	N										
5/26/2004	SB6 @ 25-27	119.3	0	Y	<0.0100	<0.0100	<0.0100	<0.0100	<0.0100	<.50	<1.0			BTEX/TPH
5/26/2004	SB6 @ 5-7	180.7	0	N										
2/2/2005	Exc 8S @ 1'	793	0	Y	NA	NA	NA	NA	NA	510	ND	ND	670	
2/2/2005	Exc 8S @ 2'	638	0	Y	NA	NA	NA	NA	NA	13	ND	ND	940	
2/2/2005	Exc 8M @ 1'	164.4	11.1	Y	NA	NA	NA	NA	NA	5500	ND	ND	ND	
2/2/2005	Exc 8M @ 2'	72.8	0	Y	NA	NA	NA	NA	NA	52	ND	ND	ND	
2/2/2005	T-13 @ 1'	137.9	11.2	Y	NA	NA	NA	NA	NA	48000	ND	ND	1400	
2/2/2005	T-13 @ 2'	112.6	0	Y	NA	NA	NA	NA	NA	120	ND	ND	8.7	
<b>NMRBCA TIER 1</b>														
					<b>0.02</b>	<b>1.88</b>	<b>17.23</b>	<b>2.59</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>1000</b>	

## Summary Report

Dave Henard  
RESPEC  
4775 Indian School Rd. NE  
Suite 300  
Albuquerque, NM 87110

Report Date: May 25, 2004

Work Order: 4051321

Project Location: Monument, NM  
Project Name: Jamar  
Project Number: 1494

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
33947	Exc 1 M @ 23'	soil	2004-05-12	00:00	2004-05-13
33948	Exc 1 W @ 21'	soil	2004-05-12	00:00	2004-05-13
33949	Exc 1 N @ 6'	soil	2004-05-12	00:00	2004-05-13
33950	Exc 1 S @ 21'	soil	2004-05-12	00:00	2004-05-13
33951	Exc 2 M @ 10'	soil	2004-05-12	00:00	2004-05-13
33952	Exc 3 M @ 3'	soil	2004-05-12	00:00	2004-05-13
33953	Exc 3 M @ 10'	soil	2004-05-12	00:00	2004-05-13
33954	Exc 4 M @ 1'	soil	2004-05-12	00:00	2004-05-13
33955	Exc 4 M @ 3'	soil	2004-05-12	00:00	2004-05-13

Sample - Field Code	TPH DRO DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
33947 - Exc 1 M @ 23'	<50.0	<1.00
33948 - Exc 1 W @ 21'	50.2	<1.00
33949 - Exc 1 N @ 6'	132	<1.00
33950 - Exc 1 S @ 21'	<50.0	<1.00
33951 - Exc 2 M @ 10'	<50.0	<1.00
33952 - Exc 3 M @ 3'	24300	1620
33953 - Exc 3 M @ 10'	<50.0	<1.00
33954 - Exc 4 M @ 1'	77000	218
33955 - Exc 4 M @ 3'	<50.0	<1.00

**Sample: 33947 - Exc 1 M @ 23'**

Param	Flag	Result	Units	RL
Chloride		414	mg/Kg	1.00

**Sample: 33948 - Exc 1 W @ 21'**

Param	Flag	Result	Units	RL
Chloride		614	mg/Kg	1.00

**Sample: 33949 - Exc 1 N @ 6'**

Param	Flag	Result	Units	RL
Chloride		764	mg/Kg	1.00

**Sample: 33950 - Exc 1 S @ 21'**

Param	Flag	Result	Units	RL
Chloride		165	mg/Kg	1.00

**Sample: 33951 - Exc 2 M @ 10'**

Param	Flag	Result	Units	RL
Chloride		59.2	mg/Kg	1.00

**Sample: 33952 - Exc 3 M @ 3'**

Param	Flag	Result	Units	RL
Chloride		468	mg/Kg	1.00

**Sample: 33953 - Exc 3 M @ 10'**

Param	Flag	Result	Units	RL
Chloride		373	mg/Kg	1.00

**Sample: 33954 - Exc 4 M @ 1'**

Param	Flag	Result	Units	RL
Chloride		605	mg/Kg	1.00

**Sample: 33955 - Exc 4 M @ 3'**

Param	Flag	Result	Units	RL
Chloride		293	mg/Kg	1.00

# TRACE ANALYSIS, INC.

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El Paso, Texas 79932

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## Analytical and Quality Control Report

Dave Henard  
RESPEC  
4775 Indian School Rd. NE  
Suite 300  
Albuquerque, NM 87110

Report Date: May 25, 2004

Work Order: 4051321

Project Location: Monument, NM  
Project Name: Jamar  
Project Number: 1494

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
33947	Exc 1 M @ 23'	soil	2004-05-12	00:00	2004-05-13
33948	Exc 1 W @ 21'	soil	2004-05-12	00:00	2004-05-13
33949	Exc 1 N @ 6'	soil	2004-05-12	00:00	2004-05-13
33950	Exc 1 S @ 21'	soil	2004-05-12	00:00	2004-05-13
33951	Exc 2 M @ 10'	soil	2004-05-12	00:00	2004-05-13
33952	Exc 3 M @ 3'	soil	2004-05-12	00:00	2004-05-13
33953	Exc 3 M @ 10'	soil	2004-05-12	00:00	2004-05-13
33954	Exc 4 M @ 1'	soil	2004-05-12	00:00	2004-05-13
33955	Exc 4 M @ 3'	soil	2004-05-12	00:00	2004-05-13

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 12 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

## Analytical Report

**Sample: 33947 - Exc 1 M @ 23'**

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 9913	Date Analyzed: 2004-05-24	Analyzed By: JSW
Prep Batch: 8786	Date Prepared: 2004-05-21	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		414	mg/Kg	50	1.00

**Sample: 33947 - Exc 1 M @ 23'**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 9672	Date Analyzed: 2004-05-14	Analyzed By: BP
Prep Batch: 8588	Date Prepared: 2004-05-14	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		128	mg/Kg	1	150	85	64.7 - 162

**Sample: 33947 - Exc 1 M @ 23'**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 9808	Date Analyzed: 2004-05-18	Analyzed By: MT
Prep Batch: 8702	Date Prepared: 2004-05-18	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.765	mg/Kg	10	0.100	76	70 - 130
4-Bromofluorobenzene (4-BFB)		0.790	mg/Kg	10	0.100	79	70 - 130

**Sample: 33948 - Exc 1 W @ 21'**

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 9913	Date Analyzed: 2004-05-24	Analyzed By: JSW
Prep Batch: 8786	Date Prepared: 2004-05-21	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		614	mg/Kg	50	1.00

**Sample: 33948 - Exc 1 W @ 21'**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 9672	Date Analyzed: 2004-05-14	Analyzed By: BP
Prep Batch: 8588	Date Prepared: 2004-05-14	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		50.2	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		139	mg/Kg	1	150	93	64.7 - 162

**Sample: 33948 - Exc 1 W @ 21'**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 9808	Date Analyzed: 2004-05-18	Analyzed By: MT
Prep Batch: 8702	Date Prepared: 2004-05-18	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.20	mg/Kg	10	0.100	120	70 - 130
4-Bromofluorobenzene (4-BFB)		0.790	mg/Kg	10	0.100	79	70 - 130

**Sample: 33949 - Exc 1 N @ 6'**

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 9913	Date Analyzed: 2004-05-24	Analyzed By: JSW
Prep Batch: 8786	Date Prepared: 2004-05-21	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		764	mg/Kg	50	1.00

**Sample: 33949 - Exc 1 N @ 6'**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 9672	Date Analyzed: 2004-05-14	Analyzed By: BP
Prep Batch: 8588	Date Prepared: 2004-05-14	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		132	mg/Kg	1	50.0





Analysis: Chloride (IC)  
QC Batch: 9913  
Prep Batch: 8786

Analytical Method: E 300.0  
Date Analyzed: 2004-05-24  
Date Prepared: 2004-05-21

Prep Method: N/A  
Analyzed By: JSW  
Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		468	mg/Kg	50	1.00

**Sample: 33952 - Exc 3 M @ 3'**

Analysis: TPH DRO  
QC Batch: 9672  
Prep Batch: 8588

Analytical Method: Mod. 8015B  
Date Analyzed: 2004-05-14  
Date Prepared: 2004-05-14

Prep Method: N/A  
Analyzed By: BP  
Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		24300	mg/Kg	200	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	1	2480	mg/Kg	200	0.750	1653	64.7 - 162

**Sample: 33952 - Exc 3 M @ 3'**

Analysis: TPH GRO  
QC Batch: 9808  
Prep Batch: 8702

Analytical Method: S 8015B  
Date Analyzed: 2004-05-18  
Date Prepared: 2004-05-18

Prep Method: S 5035  
Analyzed By: MT  
Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		1620	mg/Kg	500	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	2	1.72	mg/Kg	500	0.100	3	70 - 130
4-Bromofluorobenzene (4-BFB)	3	82.2	mg/Kg	500	0.100	164	70 - 130

**Sample: 33953 - Exc 3 M @ 10'**

Analysis: Chloride (IC)  
QC Batch: 9913  
Prep Batch: 8786

Analytical Method: E 300.0  
Date Analyzed: 2004-05-24  
Date Prepared: 2004-05-21

Prep Method: N/A  
Analyzed By: JSW  
Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		373	mg/Kg	10	1.00

<sup>1</sup>Surrogate recovery out of range due to peak interference. QC show the process within control.

<sup>2</sup>Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

<sup>3</sup>High surrogate recovery due to peak interference.

**Sample: 33953 - Exc 3 M @ 10'**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 9672	Date Analyzed: 2004-05-14	Analyzed By: BP
Prep Batch: 8588	Date Prepared: 2004-05-14	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		134	mg/Kg	1	150	90	64.7 - 162

**Sample: 33953 - Exc 3 M @ 10'**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 9808	Date Analyzed: 2004-05-18	Analyzed By: MT
Prep Batch: 8702	Date Prepared: 2004-05-18	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	4	0.686	mg/Kg	10	0.100	69	70 - 130
4-Bromofluorobenzene (4-BFB)		0.843	mg/Kg	10	0.100	84	70 - 130

**Sample: 33954 - Exc 4 M @ 1'**

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 9913	Date Analyzed: 2004-05-24	Analyzed By: JSW
Prep Batch: 8786	Date Prepared: 2004-05-21	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		605	mg/Kg	100	1.00

**Sample: 33954 - Exc 4 M @ 1'**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 9672	Date Analyzed: 2004-05-14	Analyzed By: BP
Prep Batch: 8588	Date Prepared: 2004-05-14	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		77000	mg/Kg	200	50.0

<sup>4</sup>Low TFT surrogate recovery due to matrix interference. BFB surrogate recovery shows the method to be in control.



Prep Batch: 8702

Date Prepared: 2004-05-18

Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.704	mg/Kg	10	0.100	70	70 - 130
4-Bromofluorobenzene (4-BFB)		0.812	mg/Kg	10	0.100	81	70 - 130

**Method Blank (2)** QC Batch: 9672

Parameter	Flag	Result	Units	RL
DRO		<50.0	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		131	mg/Kg	1	150	87	64.7 - 162

**Method Blank (1)** QC Batch: 9808

Parameter	Flag	Result	Units	RL
GRO		1.37	mg/Kg	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.758	mg/Kg	10	0.100	76	70 - 130
4-Bromofluorobenzene (4-BFB)		0.717	mg/Kg	10	0.100	72	70 - 130

**Matrix Blank (1)** QC Batch: 9913

Parameter	Flag	Result	Units	RL
Chloride		12.9	mg/Kg	1

**Laboratory Control Spike (LCS-2)** QC Batch: 9672

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	246	240	mg/Kg	1	250	<12.0	98	3	64.2 - 138	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	137	136	mg/Kg	1	150	91	90	64.7 - 162

**Laboratory Control Spike (LCS-1) QC Batch: 9808**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	9.24	9.57	mg/Kg	10	1.00	<0.381	92	4	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.878	0.861	mg/Kg	10	0.100	88	86	70 - 130
4-Bromofluorobenzene (4-BFB)	0.893	0.877	mg/Kg	10	0.100	89	88	70 - 130

**Laboratory Control Spike (LCS-1) QC Batch: 9913**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	24.4	24.5	mg/Kg	1	12.5	12.9	92	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1) QC Batch: 9808**

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO <sup>8</sup>	12.5	13.2	mg/Kg	10	1.00	<0.381	125	5	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.10	1.11	mg/Kg	10	0.1	110	111	70 - 130
4-Bromofluorobenzene (4-BFB)	1.07	1.08	mg/Kg	10	0.1	107	108	70 - 130

**Matrix Spike (MS-1) QC Batch: 9913**

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	859	857	mg/Kg	50	12.5	293	90	0	69.4 - 118	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Standard (CCV-4) QC Batch: 9672**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	253	101	64.2 - 138	2004-05-14

**Standard (CCV-5) QC Batch: 9672**

<sup>8</sup>GRO outside normal limits in MS/MSD. LCS/LCSD and the RPD show the method to be in control.

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	247	99	64.2 - 138	2004-05-14

**Standard (CCV-6)** QC Batch: 9672

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	244	98	64.2 - 138	2004-05-14

**Standard (ICV-1)** QC Batch: 9808

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.00	100	85 - 115	2004-05-18

**Standard (CCV-1)** QC Batch: 9808

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.957	96	85 - 115	2004-05-18

**Standard (CCV-2)** QC Batch: 9808

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.921	92	85 - 115	2004-05-18

**Standard (ICV-1)** QC Batch: 9913

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.6	93	90 - 110	2004-05-24

**Standard (CCV-1)** QC Batch: 9913

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.5	92	90 - 110	2004-05-24

**TraceAnalysis, Inc.**  
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Tel (915) 585-3443  
Fax (915) 585-4944  
1 (888) 588-3443

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

LAB Order ID # 4051321

**ANALYSIS REQUEST**  
(Circle or Specify Method No.)

MTBE 8021B/602	
BTEX 8021B/602	
TPH 418 1/TX1005	X
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/2007	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol 8260B/624	
GC/MS Semi Vol 8270C/625	
PCB's 8082/608	
Pesticides 8081A/608	
BOD TSS pH	
Chlorides	X
Hold	

Company Name: RESPEC Phone #: 505 268 2441

Address: (Street, City, Zip) 4775 Indian School BLVD, ABO, NM 87110 Fax #: 505 268 0040

Contact Person: DAVE HENARD

Invoice to: (If different from above) NM OCD

Project #: 1494 Project Name: JAMAR

Project Location: MONUMENT NM Sampler Signature: [Signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING				
				WATER	SOIL	AIR	SLUDGE	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH	ICE	NONE	DATE	TIME	
33947	Exc 1 Me 23'	1	4oz	X												
48	Exc 1 We 21'	1	4oz	X												
49	Exc 1 Ne 6'	1	4oz	X												
60	Exc 1 Se 21'	1	4oz	X												
51	Exc 2 Me 10'	1	4oz	X												
52	Exc 3 Me 3'	1	4oz	X												
53	Exc 3 Mc 10'	1	4oz	X												
54	Exc 4 Me 1'	1	4oz	X												
55	Exc 4 Me 3'	1	4oz	X												

Relinquished by: [Signature] Date: 5/14/04 Time: 3:30

Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: [Signature] Date: 5-13-04 Time: 13:37

**LAB USE ONLY**

Intact  Y  N

Headspace  Y  N

Temp  Y  N

Log-in Review  Y  N

Check if Special Reporting Limits Are Needed

REMARKS: \_\_\_\_\_

Carrier # LUPS 12762 46E 22 100 530-3

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.  
ORIGINAL COPY

## Summary Report

Dave Henard  
RESPEC  
4775 Indian School Rd. NE  
Suite 300  
Albuquerque, NM 87110

Report Date: May 25, 2004

Work Order: 4051321

Project Location: Monument, NM  
Project Name: Jamar  
Project Number: 1494

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
33947	Exc 1 M @ 23'	soil	2004-05-12	00:00	2004-05-13
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33952	Exc 3 M @ 3'	soil	2004-05-12	00:00	2004-05-13
33953	Exc 3 M @ 10'	soil	2004-05-12	00:00	2004-05-13
33954	Exc 4 M @ 1'	soil	2004-05-12	00:00	2004-05-13
33955	Exc 4 M @ 3'	soil	2004-05-12	00:00	2004-05-13

Sample - Field Code	TPH DRO DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
33947 - Exc 1 M @ 23'	<50.0	<1.00
33948 - Exc 1 W @ 21'	50.2	<1.00
33949 - Exc 1 N @ 6'	132	<1.00
33950 - Exc 1 S @ 21'	<50.0	<1.00
33951 - Exc 2 M @ 10'	<50.0	<1.00
33952 - Exc 3 M @ 3'	24300	1620
33953 - Exc 3 M @ 10'	<50.0	<1.00
33954 - Exc 4 M @ 1'	77000	218
33955 - Exc 4 M @ 3'	<50.0	<1.00

Sample: 33947 - Exc 1 M @ 23'

Param	Flag	Result	Units	RL
Chloride		414	mg/Kg	1.00

Sample: 33948 - Exc 1 W @ 21'

Param	Flag	Result	Units	RL
Chloride		614	mg/Kg	1.00

**Sample: 33949 - Exc 1 N @ 6'**

Param	Flag	Result	Units	RL
Chloride		764	mg/Kg	1.00

**Sample: 33950 - Exc 1 S @ 21'**

Param	Flag	Result	Units	RL
Chloride		165	mg/Kg	1.00

**Sample: 33951 - Exc 2 M @ 10'**

Param	Flag	Result	Units	RL
Chloride		59.2	mg/Kg	1.00

**Sample: 33952 - Exc 3 M @ 3'**

Param	Flag	Result	Units	RL
Chloride		468	mg/Kg	1.00

**Sample: 33953 - Exc 3 M @ 10'**

Param	Flag	Result	Units	RL
Chloride		373	mg/Kg	1.00

**Sample: 33954 - Exc 4 M @ 1'**

Param	Flag	Result	Units	RL
Chloride		605	mg/Kg	1.00

**Sample: 33955 - Exc 4 M @ 3'**

Param	Flag	Result	Units	RL
Chloride		293	mg/Kg	1.00

# TRACEANALYSIS, INC

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## Analytical and Quality Control Report

Dave Henard  
RESPEC  
4775 Indian School Rd. NE  
Suite 300  
Albuquerque, NM 87110

Report Date: May 25, 2004

Work Order: 4051321

Project Location: Monument, NM  
Project Name: Jamar  
Project Number: 1494

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
33947	Exc 1 M @ 23'	soil	2004-05-12	00:00	2004-05-13
33948	Exc 1 W @ 21'	soil	2004-05-12	00:00	2004-05-13
33949	Exc 1 N @ 6'	soil	2004-05-12	00:00	2004-05-13
33950	Exc 1 S @ 21'	soil	2004-05-12	00:00	2004-05-13
33951	Exc 2 M @ 10'	soil	2004-05-12	00:00	2004-05-13
33952	Exc 3 M @ 3'	soil	2004-05-12	00:00	2004-05-13
33953	Exc 3 M @ 10'	soil	2004-05-12	00:00	2004-05-13
33954	Exc 4 M @ 1'	soil	2004-05-12	00:00	2004-05-13
33955	Exc 4 M @ 3'	soil	2004-05-12	00:00	2004-05-13

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 12 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

## Analytical Report

**Sample: 33947 - Exc 1 M @ 23'**

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 9913	Date Analyzed: 2004-05-24	Analyzed By: JSW
Prep Batch: 8786	Date Prepared: 2004-05-21	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		414	mg/Kg	50	1.00

**Sample: 33947 - Exc 1 M @ 23'**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 9672	Date Analyzed: 2004-05-14	Analyzed By: BP
Prep Batch: 8588	Date Prepared: 2004-05-14	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		128	mg/Kg	1	150	85	64.7 - 162

**Sample: 33947 - Exc 1 M @ 23'**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 9808	Date Analyzed: 2004-05-18	Analyzed By: MT
Prep Batch: 8702	Date Prepared: 2004-05-18	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.765	mg/Kg	10	0.100	76	70 - 130
4-Bromofluorobenzene (4-BFB)		0.790	mg/Kg	10	0.100	79	70 - 130

**Sample: 33948 - Exc 1 W @ 21'**

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 9913	Date Analyzed: 2004-05-24	Analyzed By: JSW
Prep Batch: 8786	Date Prepared: 2004-05-21	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		614	mg/Kg	50	1.00

**Sample: 33948 - Exc 1 W @ 21'**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 9672	Date Analyzed: 2004-05-14	Analyzed By: BP
Prep Batch: 8588	Date Prepared: 2004-05-14	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		50.2	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		139	mg/Kg	1	150	93	64.7 - 162

**Sample: 33948 - Exc 1 W @ 21'**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 9808	Date Analyzed: 2004-05-18	Analyzed By: MT
Prep Batch: 8702	Date Prepared: 2004-05-18	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.20	mg/Kg	10	0.100	120	70 - 130
4-Bromofluorobenzene (4-BFB)		0.790	mg/Kg	10	0.100	79	70 - 130

**Sample: 33949 - Exc 1 N @ 6'**

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 9913	Date Analyzed: 2004-05-24	Analyzed By: JSW
Prep Batch: 8786	Date Prepared: 2004-05-21	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		764	mg/Kg	50	1.00

**Sample: 33949 - Exc 1 N @ 6'**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 9672	Date Analyzed: 2004-05-14	Analyzed By: BP
Prep Batch: 8588	Date Prepared: 2004-05-14	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		132	mg/Kg	1	50.0



Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.784	mg/Kg	10	0.100	78	70 - 130
4-Bromofluorobenzene (4-BFB)		0.810	mg/Kg	10	0.100	81	70 - 130

**Sample: 33951 - Exc 2 M @ 10'**

Analysis: Chloride (IC)                      Analytical Method: E 300.0                      Prep Method: N/A  
 QC Batch: 9913                                  Date Analyzed: 2004-05-24                      Analyzed By: JSW  
 Prep Batch: 8786                                Date Prepared: 2004-05-21                      Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		59.2	mg/Kg	5	1.00

**Sample: 33951 - Exc 2 M @ 10'**

Analysis: TPH DRO                              Analytical Method: Mod. 8015B                      Prep Method: N/A  
 QC Batch: 9672                                  Date Analyzed: 2004-05-14                      Analyzed By: BP  
 Prep Batch: 8588                                Date Prepared: 2004-05-14                      Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		133	mg/Kg	1	150	88	64.7 - 162

**Sample: 33951 - Exc 2 M @ 10'**

Analysis: TPH GRO                              Analytical Method: S 8015B                      Prep Method: S 5035  
 QC Batch: 9808                                  Date Analyzed: 2004-05-18                      Analyzed By: MT  
 Prep Batch: 8702                                Date Prepared: 2004-05-18                      Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.828	mg/Kg	10	0.100	83	70 - 130
4-Bromofluorobenzene (4-BFB)		0.838	mg/Kg	10	0.100	84	70 - 130

**Sample: 33952 - Exc 3 M @ 3'**



**Sample: 33953 - Exc 3 M @ 10'**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 9672	Date Analyzed: 2004-05-14	Analyzed By: BP
Prep Batch: 8588	Date Prepared: 2004-05-14	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		134	mg/Kg	1	150	90	64.7 - 162

**Sample: 33953 - Exc 3 M @ 10'**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 9808	Date Analyzed: 2004-05-18	Analyzed By: MT
Prep Batch: 8702	Date Prepared: 2004-05-18	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	4	0.686	mg/Kg	10	0.100	69	70 - 130
4-Bromofluorobenzene (4-BFB)		0.843	mg/Kg	10	0.100	84	70 - 130

**Sample: 33954 - Exc 4 M @ 1'**

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 9913	Date Analyzed: 2004-05-24	Analyzed By: JSW
Prep Batch: 8786	Date Prepared: 2004-05-21	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		605	mg/Kg	100	1.00

**Sample: 33954 - Exc 4 M @ 1'**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 9672	Date Analyzed: 2004-05-14	Analyzed By: BP
Prep Batch: 8588	Date Prepared: 2004-05-14	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		77000	mg/Kg	200	50.0

<sup>4</sup>Low TFT surrogate recovery due to matrix interference. BFB surrogate recovery shows the method to be in control.



Prep Batch: 8702

Date Prepared: 2004-05-18

Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.704	mg/Kg	10	0.100	70	70 - 130
4-Bromofluorobenzene (4-BFB)		0.812	mg/Kg	10	0.100	81	70 - 130

**Method Blank (2)** QC Batch: 9672

Parameter	Flag	Result	Units	RL
DRO		<50.0	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		131	mg/Kg	1	150	87	64.7 - 162

**Method Blank (1)** QC Batch: 9808

Parameter	Flag	Result	Units	RL
GRO		1.37	mg/Kg	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.758	mg/Kg	10	0.100	76	70 - 130
4-Bromofluorobenzene (4-BFB)		0.717	mg/Kg	10	0.100	72	70 - 130

**Matrix Blank (1)** QC Batch: 9913

Parameter	Flag	Result	Units	RL
Chloride		12.9	mg/Kg	1

**Laboratory Control Spike (LCS-2)** QC Batch: 9672

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	246	240	mg/Kg	1	250	<12.0	98	3	64.2 - 138	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	137	136	mg/Kg	1	150	91	90	64.7 - 162

**Laboratory Control Spike (LCS-1)** QC Batch: 9808

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	9.24	9.57	mg/Kg	10	1.00	<0.381	92	4	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.878	0.861	mg/Kg	10	0.100	88	86	70 - 130
4-Bromofluorobenzene (4-BFB)	0.893	0.877	mg/Kg	10	0.100	89	88	70 - 130

**Laboratory Control Spike (LCS-1)** QC Batch: 9913

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	24.4	24.5	mg/Kg	1	12.5	12.9	92	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** QC Batch: 9808

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO <sup>8</sup>	12.5	13.2	mg/Kg	10	1.00	<0.381	125	5	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.10	1.11	mg/Kg	10	0.1	110	111	70 - 130
4-Bromofluorobenzene (4-BFB)	1.07	1.08	mg/Kg	10	0.1	107	108	70 - 130

**Matrix Spike (MS-1)** QC Batch: 9913

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	859	857	mg/Kg	50	12.5	293	90	0	69.4 - 118	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Standard (CCV-4)** QC Batch: 9672

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	253	101	64.2 - 138	2004-05-14

**Standard (CCV-5)** QC Batch: 9672

<sup>8</sup>GRO outside normal limits in MS/MSD. LCS/LCSD and the RPD show the method to be in control.

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	247	99	64.2 - 138	2004-05-14

**Standard (CCV-6)** QC Batch: 9672

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	244	98	64.2 - 138	2004-05-14

**Standard (ICV-1)** QC Batch: 9808

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.00	100	85 - 115	2004-05-18

**Standard (CCV-1)** QC Batch: 9808

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.957	96	85 - 115	2004-05-18

**Standard (CCV-2)** QC Batch: 9808

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.921	92	85 - 115	2004-05-18

**Standard (ICV-1)** QC Batch: 9913

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.6	93	90 - 110	2004-05-24

**Standard (CCV-1)** QC Batch: 9913

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.5	92	90 - 110	2004-05-24



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Fax (915) 585-4944  
1 (888) 588-3443

Company Name: **Respec** Phone #: **505 268 2211**

Address: (Street, City, Zip) **4775 Indian School Lane, ABO, NM 87110** Fax #: **505 268 0040**

Contact Person: **DAVE HEARAD**

Invoice to: (if different from above) **NM OLD**

Project #: **1494** Project Name: **JANAR**

Project Location: **Museum NM** Sampler Signature: *[Signature]*

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD					SAMPLING				
				WATER	SOIL	AIR	SLUDGE	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH	ICE	NONE	DATE	TIME		
3947	Exc 1 Me 23'	1	4oz	X	X												
48	Exc 1 W e 21'	1	4oz	X	X												
49	Exc 1 N e 6'	1	4oz	X	X												
50	Exc 1 S e 21'	1	4oz	X	X												
51	Exc 2 M e 10'	1	4oz	X	X												
52	Exc 3 M e 3'	1	4oz	X	X												
53	Exc 3 M e 10'	1	4oz	X	X												
54	Exc 4 M e 1'	1	4oz	X	X												
55	Exc 4 M e 3'	1	4oz	X	X												

Relinquished by: **Don Heard** Date: **5/14/04** Time: **3:30** Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_ Received at Laboratory by: **Bill Dun** Date: **5/13/04** Time: **13:37**

Submission of sample constitutes agreement to Terms and Conditions listed on reverse side of C.O.C. ORIGINAL COPY

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST  
LAB Order ID # **4051321**

ANALYSIS REQUEST (Circle or Specify Method No.)	
MTBE 8021B/602	
BTEX 8021B/602	
TPH 418.1/TX1005	<b>DRO + GRO</b>
PAH 8270C	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCB's 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	
Chlorides	<b>X</b>
Turn Around Time if different from standard	
Hold	

LAB USE ONLY

Intact  Y  N

Headspace  Y  N

Temp

Log-in/Review

Carrier # **WPS 12762 46E 22 100 530-3**

Check If Special Reporting Limits Are Needed

REMARKS:

**5/26/04**

## Summary Report

John Bunch  
RESPEC  
4775 Indian School Rd. NE  
Suite 300  
Albuquerque, NM 87110

Report Date: June 8, 2004

Work Order: 4060103

Project Location: Monument,NM  
Project Name: Jamar  
Project Number: 1494

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
35567	SB1 @ 25-27	soil	2004-05-25	00:00	2004-05-29
35568	SB1 @ 15-17	soil	2004-05-25	00:00	2004-05-29
35569	SB2 @ 25-27	soil	2004-05-25	00:00	2004-05-29
35570	SB2 @ 15-17	soil	2004-05-25	00:00	2004-05-29
35571	SB3 @ 2-3	soil	2004-05-25	00:00	2004-05-29
35572	SB3 @ 25-27	soil	2004-05-25	00:00	2004-05-29
35573	SB4 @ 25-27	soil	2004-05-26	00:00	2004-05-29
35574	SB4 @ 28-29	soil	2004-05-26	00:00	2004-05-29
35575	SB6 @ 25-27	soil	2004-05-26	00:00	2004-05-29
35576	EXC 2E @ 1	soil	2004-05-27	00:00	2004-05-29
35577	EXC 5E @ 1	soil	2004-05-27	00:00	2004-05-29
35578	EXC 5E @ 6	soil	2004-05-25	17:00	2004-05-29
35579	EXC 5N @ 1	soil	2004-05-26	14:00	2004-05-29
35580	EXC 5N @ 6	soil	2004-05-26	14:30	2004-05-29
35581	EXC 5W @ 6	soil	2004-05-26	15:15	2004-05-29
35582	EXC 2E @ 3	soil	2004-05-26	16:30	2004-05-29

Sample - Field Code	BTEX				TPH DRO	TPH GRO
	Benzene (mg/Kg)	Toluene (mg/Kg)	Ethylbenzene (mg/Kg)	Xylene (mg/Kg)	DRO (mg/Kg)	GRO (mg/Kg)
35567 - SB1 @ 25-27	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
35569 - SB2 @ 25-27	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	4.15
35571 - SB3 @ 2-3	<0.0100	<0.0100	0.187	0.471	29200	49.8
35572 - SB3 @ 25-27	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
35573 - SB4 @ 25-27	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
35574 - SB4 @ 28-29	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
35575 - SB6 @ 25-27	<0.0100	<0.0100	<0.0100	<0.0100	<50.0	<1.00
35576 - EXC 2E @ 1					10900	<1.00
35577 - EXC 5E @ 1					<50.0	<1.00
35578 - EXC 5E @ 6					<50.0	<1.00
35579 - EXC 5N @ 1					<50.0	<1.00
35580 - EXC 5N @ 6					<50.0	<1.00
35581 - EXC 5W @ 6					<50.0	<1.00
35582 - EXC 2E @ 3					<50.0	<1.00

*Exc SM*

?

>?

Sample: 35568 - SB1 @ 15-17

Param	Flag	Result	Units	RL
Chloride		568	mg/Kg	1.00

Sample: 35570 - SB2 @ 15-17

Param	Flag	Result	Units	RL
Chloride		535	mg/Kg	1.00

Sample: 35577 - EXC 5E @ 1

Param	Flag	Result	Units	RL
Chloride		6.27	mg/Kg	1.00

Sample: 35578 - EXC 5E @ 6

Param	Flag	Result	Units	RL
Chloride		131	mg/Kg	1.00

Sample: 35579 - EXC 5N @ 1

Param	Flag	Result	Units	RL
Chloride		42.4	mg/Kg	1.00

Sample: 35580 - EXC 5N @ 6

Param	Flag	Result	Units	RL
Chloride		1210	mg/Kg	1.00

Sample: 35581 - EXC 5W @ 6

Param	Flag	Result	Units	RL
Chloride		17.5	mg/Kg	1.00

Sample: 35582 - EXC 2E @ 3

Param	Flag	Result	Units	RL
Chloride		14.7	mg/Kg	1.00



# TRACE ANALYSIS, INC.

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## Analytical and Quality Control Report

John Bunch  
RESPEC  
4775 Indian School Rd. NE  
Suite 300  
Albuquerque, NM 87110

Report Date: June 8, 2004

Work Order: 4060103

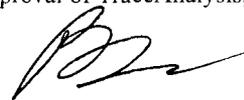
Project Location: Monument, NM  
Project Name: Jamar  
Project Number: 1494

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
35567	SB1 @ 25-27	soil	2004-05-25	00:00	2004-05-29
35568	SB1 @ 15-17	soil	2004-05-25	00:00	2004-05-29
35569	SB2 @ 25-27	soil	2004-05-25	00:00	2004-05-29
35570	SB2 @ 15-17	soil	2004-05-25	00:00	2004-05-29
35571	SB3 @ 2-3	soil	2004-05-25	00:00	2004-05-29
35572	SB3 @ 25-27	soil	2004-05-25	00:00	2004-05-29
35573	SB4 @ 25-27	soil	2004-05-26	00:00	2004-05-29
35574	SB4 @ 28-29	soil	2004-05-26	00:00	2004-05-29
35575	SB6 @ 25-27	soil	2004-05-26	00:00	2004-05-29
35576	EXC 2E @ 1	soil	2004-05-27	00:00	2004-05-29
35577	EXC 5E @ 1	soil	2004-05-27	00:00	2004-05-29
35578	EXC 5E @ 6	soil	2004-05-25	17:00	2004-05-29
35579	EXC 5N @ 1	soil	2004-05-26	14:00	2004-05-29
35580	EXC 5N @ 6	soil	2004-05-26	14:30	2004-05-29
35581	EXC 5W @ 6	soil	2004-05-26	15:15	2004-05-29
35582	EXC 2E @ 3	soil	2004-05-26	16:30	2004-05-29

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 25 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

## Analytical Report

**Sample: 35567 - SB1 @ 25-27**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5035
QC Batch: 10132	Date Analyzed: 2004-06-01	Analyzed By: MS
Prep Batch: 8978	Date Prepared: 2004-06-01	Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.755	mg/Kg	10	0.100	76	74.4 - 114
4-Bromofluorobenzene (4-BFB)	1	0.764	mg/Kg	10	0.100	76	76.9 - 112

**Sample: 35567 - SB1 @ 25-27**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 10110	Date Analyzed: 2004-06-01	Analyzed By: BP
Prep Batch: 8957	Date Prepared: 2004-06-01	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		133	mg/Kg	1	150	88	64.7 - 162

**Sample: 35567 - SB1 @ 25-27**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 10133	Date Analyzed: 2004-06-01	Analyzed By: MS
Prep Batch: 8978	Date Prepared: 2004-06-01	Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.876	mg/Kg	10	0.100	88	70 - 130
4-Bromofluorobenzene (4-BFB)		0.910	mg/Kg	10	0.100	91	70 - 130

**Sample: 35568 - SB1 @ 15-17**

<sup>1</sup>Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.









Prep Batch: 8978

Date Prepared: 2004-06-01

Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.856	mg/Kg	10	0.100	86	70 - 130
4-Bromofluorobenzene (4-BFB)		0.906	mg/Kg	10	0.100	91	70 - 130

**Sample: 35574 - SB4 @ 28-29**

Analysis: BTEX  
QC Batch: 10132  
Prep Batch: 8978

Analytical Method: S 8021B  
Date Analyzed: 2004-06-01  
Date Prepared: 2004-06-01

Prep Method: S 5035  
Analyzed By: MS  
Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.747	mg/Kg	10	0.100	75	74.4 - 114
4-Bromofluorobenzene (4-BFB)		0.774	mg/Kg	10	0.100	77	76.9 - 112

**Sample: 35574 - SB4 @ 28-29**

Analysis: TPH DRO  
QC Batch: 10110  
Prep Batch: 8957

Analytical Method: Mod. 8015B  
Date Analyzed: 2004-06-01  
Date Prepared: 2004-06-01

Prep Method: N/A  
Analyzed By: BP  
Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		141	mg/Kg	1	150	94	64.7 - 162

**Sample: 35574 - SB4 @ 28-29**

Analysis: TPH GRO  
QC Batch: 10133  
Prep Batch: 8978

Analytical Method: S 8015B  
Date Analyzed: 2004-06-01  
Date Prepared: 2004-06-01

Prep Method: S 5035  
Analyzed By: MS  
Prepared By: MS

*continued ...*

sample 35574 continued...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.870	mg/Kg	10	0.100	87	70 - 130
4-Bromofluorobenzene (4-BFB)		0.924	mg/Kg	10	0.100	92	70 - 130

**Sample: 35575 - SB6 @ 25-27**

Analysis: BTEX Analytical Method: S 8021B Prep Method: S 5035  
 QC Batch: 10132 Date Analyzed: 2004-06-01 Analyzed By: MS  
 Prep Batch: 8978 Date Prepared: 2004-06-01 Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.0100	mg/Kg	10	0.00100
Toluene		<0.0100	mg/Kg	10	0.00100
Ethylbenzene		<0.0100	mg/Kg	10	0.00100
Xylene		<0.0100	mg/Kg	10	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	<sup>10</sup>	0.718	mg/Kg	10	0.100	72	74.4 - 114
4-Bromofluorobenzene (4-BFB)	<sup>11</sup>	0.729	mg/Kg	10	0.100	73	76.9 - 112

**Sample: 35575 - SB6 @ 25-27**

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A  
 QC Batch: 10175 Date Analyzed: 2004-06-02 Analyzed By: BP  
 Prep Batch: 9008 Date Prepared: 2004-06-02 Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		135	mg/Kg	1	150	90	64.7 - 162

**Sample: 35575 - SB6 @ 25-27**

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035

<sup>10</sup>Low TFT surrogate recovery due to matrix interference. ICV/CCV surrogate recovery shows the method to be in control.

<sup>11</sup>Low BFB surrogate recovery due to matrix interference. ICV/CCV surrogate recovery shows the method to be in control.

QC Batch: 10133  
Prep Batch: 8978

Date Analyzed: 2004-06-01  
Date Prepared: 2004-06-01

Analyzed By: MS  
Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.838	mg/Kg	10	0.100	84	70 - 130
4-Bromofluorobenzene (4-BFB)		0.874	mg/Kg	10	0.100	87	70 - 130

**Sample: 35576 - EXC 2E @ 1**

Analysis: TPH DRO  
QC Batch: 10110  
Prep Batch: 8957

Analytical Method: Mod. 8015B  
Date Analyzed: 2004-06-01  
Date Prepared: 2004-06-01

Prep Method: N/A  
Analyzed By: BP  
Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		10900	mg/Kg	100	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	<sup>12</sup>	2770	mg/Kg	100	1.50	1847	64.7 - 162

**Sample: 35576 - EXC 2E @ 1**

Analysis: TPH GRO  
QC Batch: 10206  
Prep Batch: 9030

Analytical Method: S 8015B  
Date Analyzed: 2004-06-03  
Date Prepared: 2004-06-03

Prep Method: S 5035  
Analyzed By: MT  
Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.714	mg/Kg	10	0.100	71	70 - 130
4-Bromofluorobenzene (4-BFB)		0.787	mg/Kg	10	0.100	79	70 - 130

**Sample: 35577 - EXC 5E @ 1**

Analysis: Chloride (IC)  
QC Batch: 10275  
Prep Batch: 9089

Analytical Method: E 300.0  
Date Analyzed: 2004-06-08  
Date Prepared: 2004-06-07

Prep Method: N/A  
Analyzed By: JSW  
Prepared By: JSW

*continued ...*

<sup>12</sup>Surrogate recovery out of range due to peak interference. QC show the process within control.

sample 35577 continued...

Parameter	Flag	RL Result	Units	Dilution	RL
Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		6.27	mg/Kg	5	1.00

**Sample: 35577 - EXC 5E @ 1**

Analysis: TPH DRO                      Analytical Method: Mod. 8015B                      Prep Method: N/A  
 QC Batch: 10110                      Date Analyzed: 2004-06-01                      Analyzed By: BP  
 Prep Batch: 8957                      Date Prepared: 2004-06-01                      Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		146	mg/Kg	1	150	97	64.7 - 162

**Sample: 35577 - EXC 5E @ 1**

Analysis: TPH GRO                      Analytical Method: S 8015B                      Prep Method: S 5035  
 QC Batch: 10133                      Date Analyzed: 2004-06-01                      Analyzed By: MS  
 Prep Batch: 8978                      Date Prepared: 2004-06-01                      Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.847	mg/Kg	10	0.100	85	70 - 130
4-Bromofluorobenzene (4-BFB)		0.904	mg/Kg	10	0.100	90	70 - 130

**Sample: 35578 - EXC 5E @ 6**

Analysis: Chloride (IC)                      Analytical Method: E 300.0                      Prep Method: N/A  
 QC Batch: 10275                      Date Analyzed: 2004-06-08                      Analyzed By: JSW  
 Prep Batch: 9089                      Date Prepared: 2004-06-07                      Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		131	mg/Kg	10	1.00

**Sample: 35578 - EXC 5E @ 6**



**Sample: 35579 - EXC 5N @ 1**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 10133	Date Analyzed: 2004-06-01	Analyzed By: MS
Prep Batch: 8978	Date Prepared: 2004-06-01	Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.920	mg/Kg	10	0.100	92	70 - 130
4-Bromofluorobenzene (4-BFB)		0.949	mg/Kg	10	0.100	95	70 - 130

**Sample: 35580 - EXC 5N @ 6**

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 10275	Date Analyzed: 2004-06-08	Analyzed By: JSW
Prep Batch: 9089	Date Prepared: 2004-06-07	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1210	mg/Kg	100	1.00

**Sample: 35580 - EXC 5N @ 6**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 10110	Date Analyzed: 2004-06-01	Analyzed By: BP
Prep Batch: 8957	Date Prepared: 2004-06-01	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		141	mg/Kg	1	150	94	64.7 - 162

**Sample: 35580 - EXC 5N @ 6**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 10133	Date Analyzed: 2004-06-01	Analyzed By: MS
Prep Batch: 8978	Date Prepared: 2004-06-01	Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.901	mg/Kg	10	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)		0.935	mg/Kg	10	0.100	94	70 - 130

**Sample: 35581 - EXC 5W @ 6**

Analysis: Chloride (IC)      Analytical Method: E 300.0      Prep Method: N/A  
 QC Batch: 10275      Date Analyzed: 2004-06-08      Analyzed By: JSW  
 Prep Batch: 9089      Date Prepared: 2004-06-07      Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		17.5	mg/Kg	10	1.00

**Sample: 35581 - EXC 5W @ 6**

Analysis: TPH DRO      Analytical Method: Mod. 8015B      Prep Method: N/A  
 QC Batch: 10110      Date Analyzed: 2004-06-01      Analyzed By: BP  
 Prep Batch: 8957      Date Prepared: 2004-06-01      Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		145	mg/Kg	1	150	97	64.7 - 162

**Sample: 35581 - EXC 5W @ 6**

Analysis: TPH GRO      Analytical Method: S 8015B      Prep Method: S 5035  
 QC Batch: 10133      Date Analyzed: 2004-06-01      Analyzed By: MS  
 Prep Batch: 8978      Date Prepared: 2004-06-01      Prepared By: MS

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.896	mg/Kg	10	0.100	90	70 - 130
4-Bromofluorobenzene (4-BFB)		0.914	mg/Kg	10	0.100	91	70 - 130

**Sample: 35582 - EXC 2E @ 3**

Analysis: Chloride (IC)      Analytical Method: E 300.0      Prep Method: N/A  
 QC Batch: 10275      Date Analyzed: 2004-06-08      Analyzed By: JSW  
 Prep Batch: 9089      Date Prepared: 2004-06-07      Prepared By: JSW



method blank continued...

Parameter	Flag	Result	Units	RL
Ethylbenzene		<0.0100	mg/Kg	0.001
Xylene		<0.0100	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.842	mg/Kg	10	0.100	84	70 - 130
4-Bromofluorobenzene (4-BFB)	<sup>13</sup>	0.658	mg/Kg	10	0.100	66	70 - 130

Method Blank (1) QC Batch: 10133

Parameter	Flag	Result	Units	RL
GRO		<1.00	mg/Kg	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.987	mg/Kg	10	0.100	99	70 - 130
4-Bromofluorobenzene (4-BFB)		0.794	mg/Kg	10	0.100	79	70 - 130

Method Blank (1) QC Batch: 10175

Parameter	Flag	Result	Units	RL
DRO		<50.0	mg/Kg	50

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	138		mg/Kg	1	150	92	64.7 - 162

Method Blank (1) QC Batch: 10200

Parameter	Flag	Result	Units	RL
Benzene		<0.0100	mg/Kg	0.001
Toluene		<0.0100	mg/Kg	0.001
Ethylbenzene		<0.0100	mg/Kg	0.001
Xylene		<0.0100	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.980	mg/Kg	10	0.100	98	70 - 130
4-Bromofluorobenzene (4-BFB)		0.809	mg/Kg	10	0.100	81	70 - 130

Method Blank (1) QC Batch: 10202

<sup>13</sup>Low BFB surrogate recovery due to prep. TFT surrogate recovery shows the method to be in control.

Parameter	Flag	Result	Units	RL
GRO		<1.00	mg/Kg	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		1.02	mg/Kg	10	0.100	102	70 - 130
4-Bromofluorobenzene (4-BFB)		0.851	mg/Kg	10	0.100	85	70 - 130

**Method Blank (1)** QC Batch: 10204

Parameter	Flag	Result	Units	RL
Benzene		<0.0100	mg/Kg	0.001
Toluene		<0.0100	mg/Kg	0.001
Ethylbenzene		<0.0100	mg/Kg	0.001
Xylene		<0.0100	mg/Kg	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.865	mg/Kg	10	0.100	86	70 - 130
4-Bromofluorobenzene (4-BFB)		0.709	mg/Kg	10	0.100	71	70 - 130

**Method Blank (1)** QC Batch: 10206

Parameter	Flag	Result	Units	RL
GRO		1.68	mg/Kg	0.1

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.912	mg/Kg	10	0.100	91	70 - 130
4-Bromofluorobenzene (4-BFB)		0.757	mg/Kg	10	0.100	76	70 - 130

**Matrix Blank (1)** QC Batch: 10275

Parameter	Flag	Result	Units	RL
Chloride		40.9	mg/Kg	1

**Laboratory Control Spike (LCS-1)** QC Batch: 10110

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	238	236	mg/Kg	1	250	<12.0	95	1	64.2 - 138	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	137	136	mg/Kg	1	150	91	91	64.7 - 162

**Laboratory Control Spike (LCS-1) QC Batch: 10132**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.881	0.880	mg/Kg	10	0.100	<0.0333	88	0	70 - 130	20
Toluene	0.887	0.887	mg/Kg	10	0.100	<0.0353	89	0	70 - 130	20
Ethylbenzene	0.878	0.881	mg/Kg	10	0.100	<0.0339	88	0	70 - 130	20
Xylene	2.68	2.69	mg/Kg	10	0.300	<0.103	89	0	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.896	0.914	mg/Kg	10	0.100	90	91	70 - 130
4-Bromofluorobenzene (4-BFB)	0.868	0.881	mg/Kg	10	0.100	87	88	70 - 130

**Laboratory Control Spike (LCS-1) QC Batch: 10133**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	1.08	1.07	mg/Kg	1	1.00	<0.0381	108	1	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.103	0.104	mg/Kg	1	0.100	103	104	70 - 130
4-Bromofluorobenzene (4-BFB)	0.102	0.103	mg/Kg	1	0.100	102	103	70 - 130

**Laboratory Control Spike (LCS-1) QC Batch: 10175**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	237	242	mg/Kg	1	250	<12.0	95	2	64.2 - 138	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	141	138	mg/Kg	1	150	94	92	64.7 - 162

**Laboratory Control Spike (LCS-1) QC Batch: 10200**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	1.01	1.02	mg/Kg	10	0.100	<0.0333	101	1	70 - 130	20
Toluene	1.02	1.02	mg/Kg	10	0.100	<0.0353	102	0	70 - 130	20

continued ...

control spikes continued ...

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Ethylbenzene	1.05	1.04	mg/Kg	10	0.100	<0.0339	105	1	70 - 130	20
Xylene	3.17	3.17	mg/Kg	10	0.300	<0.103	106	0	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.980	0.991	mg/Kg	10	0.100	98	99	70 - 130
4-Bromofluorobenzene (4-BFB)	0.978	0.985	mg/Kg	10	0.100	98	98	70 - 130

Laboratory Control Spike (LCS-1) QC Batch: 10202

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	9.98	11.3	mg/Kg	10	1.00	<0.381	100	12	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	1.01	1.01	mg/Kg	10	0.100	101	101	70 - 130
4-Bromofluorobenzene (4-BFB)	1.01	1.01	mg/Kg	10	0.100	101	101	70 - 130

Laboratory Control Spike (LCS-1) QC Batch: 10204

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.976	0.996	mg/Kg	10	0.100	<0.0333	98	2	70 - 130	20
Toluene	0.979	1.00	mg/Kg	10	0.100	<0.0353	98	2	70 - 130	20
Ethylbenzene	0.996	1.02	mg/Kg	10	0.100	<0.0339	100	2	70 - 130	20
Xylene	3.00	3.05	mg/Kg	10	0.300	<0.103	100	2	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.870	0.889	mg/Kg	10	0.100	87	89	70 - 130
4-Bromofluorobenzene (4-BFB)	0.844	0.866	mg/Kg	10	0.100	84	86	70 - 130

Laboratory Control Spike (LCS-1) QC Batch: 10206

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	9.27	9.50	mg/Kg	10	1.00	<0.381	93	2	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.952	0.951	mg/Kg	10	0.100	95	95	70 - 130

continued ...

control spikes continued ...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
4-Bromofluorobenzene (4-BFB)	0.878	0.869	mg/Kg	10	0.100	88	87	70 - 130

**Laboratory Control Spike (LCS-1)** QC Batch: 10275

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride <sup>1415</sup>	51.5	51.4	mg/Kg	1	12.5	40.9	85	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** QC Batch: 10110

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	240	222	mg/Kg	1	250	<12.0	96	8	62.4 - 128	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	139	134	mg/Kg	1	150	93	90	64.7 - 162

**Matrix Spike (MS-1)** QC Batch: 10132

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.739	0.772	mg/Kg	10	0.100	<0.0333	74	4	70 - 130	20
Toluene	0.767	0.803	mg/Kg	10	0.100	<0.0353	77	4	70 - 130	20
Ethylbenzene	0.784	0.813	mg/Kg	10	0.100	<0.0339	78	4	70 - 130	20
Xylene	2.39	2.51	mg/Kg	10	0.300	<0.103	80	5	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.758	0.822	mg/Kg	10	0.1	76	82	70 - 130
4-Bromofluorobenzene (4-BFB)	0.812	0.847	mg/Kg	10	0.1	81	85	70 - 130

**Matrix Spike (MS-1)** QC Batch: 10133

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	7.95	8.36	mg/Kg	10	1.00	<0.381	80	5	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

<sup>14</sup>Contamination in blank soil. To high in chloride. MS%EA, ICV, CCV within control limits.

<sup>15</sup>Contamination in blank soil. To high in chloride. MS%EA, ICV, CCV within control limits.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.818	0.829	mg/Kg	10	0.1	82	83	70 - 130
4-Bromofluorobenzene (4-BFB)	0.983	0.984	mg/Kg	10	0.1	98	98	70 - 130

**Matrix Spike (MS-1)** QC Batch: 10175

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	204	210	mg/Kg	1	250	<12.0	82	3	62.4 - 128	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	133	129	mg/Kg	1	150	88	86	64.7 - 162

**Matrix Spike (MS-1)** QC Batch: 10200

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.875	0.882	mg/Kg	10	0.100	<0.0333	88	1	70 - 130	20
Toluene	0.912	0.921	mg/Kg	10	0.100	<0.0353	91	1	70 - 130	20
Ethylbenzene	0.968	0.982	mg/Kg	10	0.100	<0.0339	97	1	70 - 130	20
Xylene	2.94	2.98	mg/Kg	10	0.300	<0.103	98	1	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.881	0.889	mg/Kg	10	0.1	88	89	70 - 130
4-Bromofluorobenzene (4-BFB)	0.916	0.928	mg/Kg	10	0.1	92	93	70 - 130

**Matrix Spike (MS-1)** QC Batch: 10202

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	8.81	8.27	mg/Kg	10	1.00	<0.381	88	6	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.854	0.840	mg/Kg	10	0.1	85	84	70 - 130
4-Bromofluorobenzene (4-BFB)	1.00	0.986	mg/Kg	10	0.1	100	99	70 - 130

**Matrix Spike (MS-1)** QC Batch: 10204

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.862	0.840	mg/Kg	10	0.100	<0.0333	86	2	70 - 130	20

continued ...

matrix spikes continued ...

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Toluene	0.894	0.874	mg/Kg	10	0.100	<0.0353	89	2	70 - 130	20
Ethylbenzene	0.940	0.922	mg/Kg	10	0.100	<0.0339	94	2	70 - 130	20
Xylene	2.86	2.80	mg/Kg	10	0.300	<0.103	95	2	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.780	0.762	mg/Kg	10	0.1	78	76	70 - 130
4-Bromofluorobenzene (4-BFB)	0.810	0.806	mg/Kg	10	0.1	81	81	70 - 130

Matrix Spike (MS-1) QC Batch: 10206

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	7.22	7.67	mg/Kg	10	1.00	<0.381	72	6	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	<sup>1617</sup> 0.663	0.693	mg/Kg	10	0.1	66	69	70 - 130
4-Bromofluorobenzene (4-BFB)	0.790	0.809	mg/Kg	10	0.1	79	81	70 - 130

Matrix Spike (MS-1) QC Batch: 10275

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	2370	2370	mg/Kg	100	12.5	1210	93	0	69.4 - 118	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (ICV-1) QC Batch: 10110

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	235	94	64.2 - 138	2004-06-01

Standard (CCV-1) QC Batch: 10110

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	240	96	64.2 - 138	2004-06-01

Standard (CCV-2) QC Batch: 10110

<sup>16</sup>TFT surrogate recovery outside normal limits in MS/MSD. Other analyte recoveries show the method to be in control.

<sup>17</sup>TFT surrogate recovery outside normal limits in MS/MSD. Other analyte recoveries show the method to be in control.

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	241	96	64.2 - 138	2004-06-01

**Standard (ICV-1)** QC Batch: 10132

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene	<sup>18</sup>	mg/Kg	0.100	0.0837	84	85 - 115	2004-06-01
Toluene		mg/Kg	0.100	0.0846	85	85 - 115	2004-06-01
Ethylbenzene	<sup>19</sup>	mg/Kg	0.100	0.0839	84	85 - 115	2004-06-01
Xylene		mg/Kg	0.300	0.256	85	85 - 115	2004-06-01

**Standard (CCV-1)** QC Batch: 10132

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0864	86	85 - 115	2004-06-01
Toluene		mg/Kg	0.100	0.0866	87	85 - 115	2004-06-01
Ethylbenzene		mg/Kg	0.100	0.0859	86	85 - 115	2004-06-01
Xylene		mg/Kg	0.300	0.261	87	85 - 115	2004-06-01

**Standard (CCV-2)** QC Batch: 10132

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0907	91	85 - 115	2004-06-01
Toluene		mg/Kg	0.100	0.0912	91	85 - 115	2004-06-01
Ethylbenzene		mg/Kg	0.100	0.0899	90	85 - 115	2004-06-01
Xylene		mg/Kg	0.300	0.275	92	85 - 115	2004-06-01

**Standard (ICV-1)** QC Batch: 10133

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.02	102	85 - 115	2004-06-01

**Standard (CCV-1)** QC Batch: 10133

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.975	97	85 - 115	2004-06-01

<sup>18</sup>Benzene outside normal limits in ICV. Average of ICV components fall within acceptable range.

<sup>19</sup>Ethylbenzene outside normal limits in ICV. Average of ICV components fall within acceptable range.

**Standard (CCV-2) QC Batch: 10133**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.994	99	85 - 115	2004-06-01

**Standard (ICV-1) QC Batch: 10175**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	229	92	64.2 - 138	2004-06-02

**Standard (CCV-1) QC Batch: 10175**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	232	93	64.2 - 138	2004-06-02

**Standard (ICV-1) QC Batch: 10200**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.100	100	85 - 115	2004-06-02
Toluene		mg/Kg	0.100	0.102	102	85 - 115	2004-06-02
Ethylbenzene		mg/Kg	0.100	0.105	105	85 - 115	2004-06-02
Xylene		mg/Kg	0.300	0.318	106	85 - 115	2004-06-02

**Standard (CCV-1) QC Batch: 10200**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0975	98	85 - 115	2004-06-02
Toluene		mg/Kg	0.100	0.0987	99	85 - 115	2004-06-02
Ethylbenzene		mg/Kg	0.100	0.0992	99	85 - 115	2004-06-02
Xylene		mg/Kg	0.300	0.302	101	85 - 115	2004-06-02

**Standard (ICV-1) QC Batch: 10202**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.14	114	85 - 115	2004-06-02

**Standard (CCV-1) QC Batch: 10202**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.11	111	85 - 115	2004-06-02

**Standard (ICV-1) QC Batch: 10204**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0973	97	85 - 115	2004-06-03
Toluene		mg/Kg	0.100	0.0980	98	85 - 115	2004-06-03
Ethylbenzene		mg/Kg	0.100	0.100	100	85 - 115	2004-06-03
Xylene		mg/Kg	0.300	0.302	100	85 - 115	2004-06-03

**Standard (CCV-1) QC Batch: 10204**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/Kg	0.100	0.0978	98	85 - 115	2004-06-03
Toluene		mg/Kg	0.100	0.0998	100	85 - 115	2004-06-03
Ethylbenzene		mg/Kg	0.100	0.102	102	85 - 115	2004-06-03
Xylene		mg/Kg	0.300	0.309	103	85 - 115	2004-06-03

**Standard (ICV-1) QC Batch: 10206**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.11	111	85 - 115	2004-06-03

**Standard (CCV-1) QC Batch: 10206**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	1.12	112	85 - 115	2004-06-03

**Standard (ICV-1) QC Batch: 10275**

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.7	94	90 - 110	2004-06-08

**Standard (CCV-1) QC Batch: 10275**

Report Date: June 8, 2004  
1494

Work Order: 4060103  
Jamar

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Monument, NM

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Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.6	93	90 - 110	2004-06-08

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6701 Aberdeen Avenue, Ste. 9  
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# Trace Analysis, Inc.

155 McCutcheon, Suite H  
El Paso, Texas 79932  
Tel (915) 585-3443  
Fax (915) 585-4944  
1 (888) 588-3443

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # 4060103

Company Name: Respec Phone #: 505 268-2661  
 Address: 4661 Indian School NE #300 Fax #: 505 268-0040  
 Contact Person: John Bunch  
 Invoice to: NM OGD  
 Project #: 1494-1.0 Project Name: Sumar  
 Project Location: Monument, NM Sampler Signature: [Signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING DATE	TIME	
				WATER	SOIL	AIR	SLUDGE	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH			ICE
35567	SB@ 25-24	1	4oz	X									7/24/04	
68	SB@ 15-17	1	4oz	X										
69	SB@ 25-21	1	4oz	X										
70	SB@ 15-17	1	4oz	X										
71	SB@ 2-3	1	4oz	X										
72	SB@ 25-21	1	4oz	X										
73	SB@ 15-22	1	4oz	X									7/24/04	
74	SB@ 28-29	1	4oz	X										
75	SB@ 25-27	1	4oz	X										
76	EXC 26@1	1	4oz	X									8/11/04	
77	EXC 5E@1	1	4oz	X									3-10	

Relinquished by: [Signature] Date: 8/11/04 Time: 10:15  
 Relinquished by: [Signature] Date: 5-29-04 Time: 10:15  
 Relinquished by: [Signature] Date: 5-29-04 Time: 10:15

ANALYSIS REQUEST (Circle or Specify Method No.)	LAB USE ONLY	REMARKS:
PAH 8270C	<input checked="" type="checkbox"/>	NO EXC ON EXC samples
BTEX 8021B/602	<input checked="" type="checkbox"/>	
TFH 418.1/TX1005	<input checked="" type="checkbox"/>	
Mod for 60.000	<input checked="" type="checkbox"/>	
MTBE 8021B/602	<input checked="" type="checkbox"/>	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	<input checked="" type="checkbox"/>	
TCLP Volatiles	<input checked="" type="checkbox"/>	
TCLP Semi Volatiles	<input checked="" type="checkbox"/>	
TCLP Pesticides	<input checked="" type="checkbox"/>	
GC/MS Vol. 8260B/624	<input checked="" type="checkbox"/>	
GC/MS Semi. Vol. 8270C/625	<input checked="" type="checkbox"/>	
PCB's 8082/608	<input checked="" type="checkbox"/>	
Pesticides 8081A/608	<input checked="" type="checkbox"/>	
BOD, TSS, pH	<input checked="" type="checkbox"/>	
Chloride	<input checked="" type="checkbox"/>	
Turn Around Time if different from standard		

LAB USE ONLY  
 Intact  Y  N  
 Headspace Y / N  
 Temp 4 °  
 Log-in Review [Signature]  
 Carrier # UPS  
 Check If Special Reporting Limits Are Needed

6701 Aberdeen Avenue, Ste. 9  
Lubbock, Texas 79424  
Tel (806) 794-1296  
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# TraceAnalysis, Inc.

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El Paso, Texas 79932  
Tel (915) 585-3443  
Fax (915) 585-4944  
1 (888) 588-3443

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # 4660103

Company Name: Resdee Phone #: 505-268-7661  
Address: 4661 Indian School NE # 300 (Street, City, Zip)  
Contact Person: John Bunch Fax #: 505-268-0040

Invoice to: NM 000 (If different from above)

Project #: 4994-1.0 Project Name: JMAN

Project Location: Monument, NM Sampler Signature: [Signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX			PRESERVATIVE METHOD					SAMPLING	
				WATER	SOIL	AIR	SLUDGE	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH	ICE	NONE
35578	EXCSE@6			/								5/15	5:00
79	EXCSM@1			/								5/26	2:00
80	EXCSM@6			/								11	2:30
81	EXSW@6			/								11	3:15
82	EXC2E@1			/								11	4:00
82	EXC2E@3			/								11	4:20

Relinquished by: John Bunch Date: 5/27/04 Time: 6:30  
Relinquished by: [Signature] Date: 5/29/04 Time: 10:15  
Relinquished by: [Signature] Date: 5/29/04 Time: 10:15

Received by: [Signature] Date: 5/29/04 Time: 10:15

Received by: [Signature] Date: 5/29/04 Time: 10:15

### ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	<input checked="" type="checkbox"/>
BTEX 8021B/602	<input checked="" type="checkbox"/>
TPH 418.1/TX1005	<input checked="" type="checkbox"/>
PAH 8270C	<input checked="" type="checkbox"/>
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	<input checked="" type="checkbox"/>
TCLP Volatiles	<input checked="" type="checkbox"/>
TCLP Semi Volatiles	<input checked="" type="checkbox"/>
TCLP Pesticides	<input checked="" type="checkbox"/>
RCI	<input checked="" type="checkbox"/>
GC/MS Vol. 8260B/624	<input checked="" type="checkbox"/>
GC/MS Sem. Vol. 8270C/625	<input checked="" type="checkbox"/>
PCBs 8082/608	<input checked="" type="checkbox"/>
Pesticides 8081A/608	<input checked="" type="checkbox"/>
BOD, TSS, pH	<input checked="" type="checkbox"/>
Turn Around Time if different from standard	

### REMARKS:

LAB USE ONLY  
Intact Y N  
Headspace Y / N  
Temp 4 °  
Log-in Review B  
Carrier # UPS

NO STEX

Check If Special Reporting Limits Are Needed

## Summary Report

John Bunch  
RESPEC  
4775 Indian School Rd. NE  
Suite 300  
Albuquerque, NM 87110

Report Date: May 5, 2004

Work Order: 4042615

Project Location: Monument, NM  
Project Name: JAMAR

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
32595	W-01	water	2004-04-23	00:00	2004-04-26
32596	W-03	water	2004-04-23	00:00	2004-04-26

Sample - Field Code	BTEX			
	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
32595 - W-01	<0.00500	<0.00500	<0.00500	<0.00500
32596 - W-03	<0.00500	<0.00500	<0.00500	<0.00500

### Sample: 32595 - W-01

Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1.00
Bicarbonate Alkalinity		120	mg/L as CaCo3	4.00
Total Alkalinity		120	mg/L as CaCo3	4.00
Dissolved Calcium		365	mg/L	0.500
Dissolved Potassium		32.2	mg/L	0.500
Dissolved Magnesium		98.5	mg/L	0.500
Dissolved Sodium		423	mg/L	0.500
Chloride		1610	mg/L	0.500
Fluoride		<3.00	mg/L	0.200
Sulfate		41.7	mg/L	0.500
Nitrate-N	1	<3.00	mg/L	0.200
Naphthalene		0.000390	mg/L	0.200
Acenaphthylene		<0.000200	mg/L	0.200
Acenaphthene		<0.000200	mg/L	0.200
Fluorene		<0.000200	mg/L	0.200
Phenanthrene		0.000490	mg/L	0.200
Anthracene		<0.000200	mg/L	0.200
Fluoranthene		<0.000200	mg/L	0.200
Pyrene		<0.000200	mg/L	0.200
Benzo(a)anthracene		<0.000200	mg/L	0.200

continued ...

<sup>1</sup>Received out of holding time.

sample 32595 continued . . .

Param	Flag	Result	Units	RL
Chrysene		<0.000200	mg/L	0.200
Benzo(b)fluoranthene		<0.000200	mg/L	0.200
Benzo(k)fluoranthene		<0.000200	mg/L	0.200
Benzo(a)pyrene		<0.000200	mg/L	0.200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.200
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.200
Total Dissolved Solids		2855	mg/L	10.00

## Sample: 32596 - W-03

Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1.00
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3	4.00
Total Alkalinity		<4.00	mg/L as CaCo3	4.00
Dissolved Calcium		467	mg/L	0.500
Dissolved Potassium		6.52	mg/L	0.500
Dissolved Magnesium		60.9	mg/L	0.500
Dissolved Sodium		127	mg/L	0.500
Chloride		1240	mg/L	0.500
Fluoride		3.06	mg/L	0.200
Sulfate		27.8	mg/L	0.500
Nitrate-N	2	3.17	mg/L	0.200
Naphthalene		<0.000200	mg/L	0.200
Acenaphthylene		<0.000200	mg/L	0.200
Acenaphthene		<0.000200	mg/L	0.200
Fluorene		<0.000200	mg/L	0.200
Phenanthrene		<0.000200	mg/L	0.200
Anthracene		<0.000200	mg/L	0.200
Fluoranthene		<0.000200	mg/L	0.200
Pyrene		<0.000200	mg/L	0.200
Benzo(a)anthracene		<0.000200	mg/L	0.200
Chrysene		<0.000200	mg/L	0.200
Benzo(b)fluoranthene		<0.000200	mg/L	0.200
Benzo(k)fluoranthene		<0.000200	mg/L	0.200
Benzo(a)pyrene		<0.000200	mg/L	0.200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.200
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.200
Total Dissolved Solids		2190	mg/L	10.00

<sup>2</sup>Received out of holding time.



# TRACE ANALYSIS, INC.

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E-Mail: lab@traceanalysis.com

## Analytical and Quality Control Report

John Bunch  
RESPEC  
4775 Indian School Rd. NE  
Suite 300  
Albuquerque, NM 87110

Report Date: May 5, 2004

Work Order: 4042615

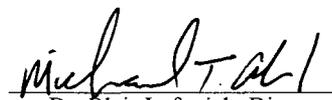
Project Location: Monument, NM  
Project Name: JAMAR  
Project Number: JAMAR

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
32595	W-01	water	2004-04-23	00:00	2004-04-26
32596	W-03	water	2004-04-23	00:00	2004-04-26

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 14 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

  
Dr. Blair Leftwich, Director

## Analytical Report

**Sample: 32595 - W-01**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 9317	Date Analyzed: 2004-04-29	Analyzed By: RS
Prep Batch: 8279	Date Prepared: 2004-04-29	Prepared By: RS

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		120	mg/L as CaCo3	1	4.00
Total Alkalinity		120	mg/L as CaCo3	1	4.00

**Sample: 32595 - W-01**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 9210	Date Analyzed: 2004-04-27	Analyzed By: MT
Prep Batch: 8179	Date Prepared: 2004-04-27	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.454	mg/L	5	0.100	91	71.2 - 115
4-Bromofluorobenzene (4-BFB)	1	0.377	mg/L	5	0.100	75	76.5 - 116

**Sample: 32595 - W-01**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 9339	Date Analyzed: 2004-04-28	Analyzed By: BC
Prep Batch: 8171	Date Prepared: 2004-04-27	Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		365	mg/L	1	0.500
Dissolved Potassium		32.2	mg/L	1	0.500
Dissolved Magnesium		98.5	mg/L	1	0.500
Dissolved Sodium		423	mg/L	1	0.500

**Sample: 32595 - W-01**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 9182	Date Analyzed: 2004-04-27	Analyzed By: JSW

<sup>1</sup>Low BFB surrogate recovery due to matrix interference. TFT surrogate recovery shows the method to be in control.



Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 9287	Date Analyzed: 2004-04-30	Analyzed By: JSW
Prep Batch: 8251	Date Prepared: 2004-04-29	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		2855	mg/L	5	10.00

**Sample: 32596 - W-03**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 9317	Date Analyzed: 2004-04-29	Analyzed By: RS
Prep Batch: 8279	Date Prepared: 2004-04-29	Prepared By: RS

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3	1	4.00
Total Alkalinity		<4.00	mg/L as CaCo3	1	4.00

**Sample: 32596 - W-03**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 9210	Date Analyzed: 2004-04-27	Analyzed By: MT
Prep Batch: 8179	Date Prepared: 2004-04-27	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.440	mg/L	5	0.100	88	71.2 - 115
4-Bromofluorobenzene (4-BFB)		0.387	mg/L	5	0.100	77	76.5 - 116

**Sample: 32596 - W-03**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 9339	Date Analyzed: 2004-04-28	Analyzed By: BC
Prep Batch: 8171	Date Prepared: 2004-04-27	Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		467	mg/L	1	0.500
Dissolved Potassium		6.52	mg/L	1	0.500
Dissolved Magnesium		60.9	mg/L	1	0.500

*continued ...*

sample 32596 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Sodium		127	mg/L	1	0.500

**Sample: 32596 - W-03**

Analysis: Ion Chromatography      Analytical Method: E 300.0      Prep Method: N/A  
 QC Batch: 9182      Date Analyzed: 2004-04-27      Analyzed By: JSW  
 Prep Batch: 8153      Date Prepared: 2004-04-26      Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1240	mg/L	100	0.500
Fluoride		3.06	mg/L	15	0.200
Sulfate		27.8	mg/L	15	0.500

**Sample: 32596 - W-03**

Analysis: NO3 (IC)      Analytical Method: E 300.0      Prep Method: N/A  
 QC Batch: 9182      Date Analyzed: 2004-04-27      Analyzed By: JSW  
 Prep Batch: 8153      Date Prepared: 2004-04-26      Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Nitrate-N	<sup>3</sup>	3.17	mg/L	15	0.200

**Sample: 32596 - W-03**

Analysis: PAH      Analytical Method: S 8270C      Prep Method: S 3510C  
 QC Batch: 9397      Date Analyzed: 2004-05-02      Analyzed By: RC  
 Prep Batch: 8174      Date Prepared: 2004-04-27      Prepared By: JH

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	0.001	0.200
Acenaphthylene		<0.000200	mg/L	0.001	0.200
Acenaphthene		<0.000200	mg/L	0.001	0.200
Fluorene		<0.000200	mg/L	0.001	0.200
Phenanthrene		<0.000200	mg/L	0.001	0.200
Anthracene		<0.000200	mg/L	0.001	0.200
Fluoranthene		<0.000200	mg/L	0.001	0.200
Pyrene		<0.000200	mg/L	0.001	0.200
Benzo(a)anthracene		<0.000200	mg/L	0.001	0.200
Chrysene		<0.000200	mg/L	0.001	0.200
Benzo(b)fluoranthene		<0.000200	mg/L	0.001	0.200
Benzo(k)fluoranthene		<0.000200	mg/L	0.001	0.200
Benzo(a)pyrene		<0.000200	mg/L	0.001	0.200

continued ...

<sup>3</sup>Received out of holding time.

sample 32596 continued...

Parameter	Flag	RL Result	Units	Dilution	RL
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.001	0.200
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.001	0.200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.001	0.200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0319	mg/L	0.001	80.0	40	0 - 128
2-Fluorobiphenyl		0.0378	mg/L	0.001	80.0	47	0 - 140
Terphenyl-d14		0.0431	mg/L	0.001	80.0	54	0 - 165

**Sample: 32596 - W-03**

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 9287	Date Analyzed: 2004-04-30	Analyzed By: JSW
Prep Batch: 8251	Date Prepared: 2004-04-29	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		2190	mg/L	5	10.00

**Method Blank (1) QC Batch: 9182**

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

**Method Blank (1) QC Batch: 9182**

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

**Method Blank (1) QC Batch: 9210**

Parameter	Flag	Result	Units	RL
Benzene		<0.00100	mg/L	0.001
Toluene		<0.00100	mg/L	0.001
Ethylbenzene		<0.00100	mg/L	0.001
Xylene		<0.00100	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0915	mg/L	1	0.100	92	64.1 - 117
4-Bromofluorobenzene (4-BFB)		0.0828	mg/L	1	0.100	83	72.2 - 118

**Method Blank (1)** QC Batch: 9287

Parameter	Flag	Result	Units	RL
Total Dissolved Solids		<10.00	mg/L	10

**Method Blank (1)** QC Batch: 9317

Parameter	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3	4
Total Alkalinity		<4.00	mg/L as CaCo3	4

**Method Blank (1)** QC Batch: 9339

Parameter	Flag	Result	Units	RL
Dissolved Calcium		<0.500	mg/L	0.5
Dissolved Potassium		<0.500	mg/L	0.5
Dissolved Magnesium		<0.500	mg/L	0.5
Dissolved Sodium		<0.500	mg/L	0.5

**Method Blank (1)** QC Batch: 9397

Parameter	Flag	Result	Units	RL
Naphthalene		<0.000200	mg/L	0.2
Acenaphthylene		<0.000200	mg/L	0.2
Acenaphthene		<0.000200	mg/L	0.2
Fluorene		<0.000200	mg/L	0.2
Phenanthrene		<0.000200	mg/L	0.2
Anthracene		<0.000200	mg/L	0.2
Fluoranthene		<0.000200	mg/L	0.2
Pyrene		<0.000200	mg/L	0.2
Benzo(a)anthracene		<0.000200	mg/L	0.2
Chrysene		<0.000200	mg/L	0.2
Benzo(b)fluoranthene		<0.000200	mg/L	0.2
Benzo(k)fluoranthene		<0.000200	mg/L	0.2
Benzo(a)pyrene		<0.000200	mg/L	0.2
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.2
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.2

continued ...

method blank continued...

Parameter	Flag	Result	Units	RL
Benzo(g,h,i)perylene		<0.000200	mg/L	0.2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0382	mg/L	0.001	80.0	48	0 - 128
2-Fluorobiphenyl		0.0449	mg/L	0.001	80.0	56	0 - 140
Terphenyl-d14		0.0477	mg/L	0.001	80.0	60	0 - 165

**Duplicate (1)** QC Batch: 9287

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1158	1262	mg/L	2	8	8.7

**Duplicate (1)** QC Batch: 9317

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Bicarbonate Alkalinity	136	134	mg/L as CaCo3	1	1	20
Total Alkalinity	136	134	mg/L as CaCo3	1	1	4.8

**Laboratory Control Spike (LCS-1)** QC Batch: 9182

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2.46	2.45	mg/L	1	2.50	<0.0217	98	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Laboratory Control Spike (LCS-1)** QC Batch: 9182

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	12.0	12.3	mg/L	1	12.5	<0.337	96	2	90 - 110	20
Fluoride	2.50	2.49	mg/L	1	2.50	<0.0594	100	0	90 - 110	20
Sulfate	12.4	12.5	mg/L	1	12.5	<0.409	99	1	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Laboratory Control Spike (LCS-1)** QC Batch: 9210

continued...

control spikes continued...

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.0868	0.0986	mg/L	1	0.100	<0.000255	87	13	79.2 - 113	20
Toluene	0.0864	0.0972	mg/L	1	0.100	<0.000153	86	12	78.8 - 114	20
Ethylbenzene	0.0866	0.0975	mg/L	1	0.100	<0.000226	87	12	79.8 - 112	20
Xylene	0.264	0.295	mg/L	1	0.300	<0.000531	88	11	76.8 - 114	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0815	0.0910	mg/L	1	0.100	82	91	71.2 - 115
4-Bromofluorobenzene (4-BFB)	0.0868	0.0927	mg/L	1	0.100	87	93	76.5 - 116

Laboratory Control Spike (LCS-1) QC Batch: 9339

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	97.1	96.7	mg/L	1	100	<0.102	97	0	85 - 115	20
Dissolved Potassium	97.6	97.6	mg/L	1	100	<0.101	98	0	85 - 115	20
Dissolved Magnesium	95.1	94.9	mg/L	1	100	<0.110	95	0	85 - 115	20
Dissolved Sodium	101	100	mg/L	1	100	<0.120	101	1	85 - 115	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1) QC Batch: 9397

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Naphthalene	36.0	36.8	mg/L	1	80.0	<0.0445	45	2	22.5 - 119	20
Acenaphthylene	49.4	49.5	mg/L	1	80.0	<0.0383	62	0	42.3 - 127	20
Acenaphthene	47.5	47.6	mg/L	1	80.0	<0.0421	59	0	38 - 125	20
Fluorene	56.6	57.1	mg/L	1	80.0	<0.0655	71	1	36.6 - 130	20
Phenanthrene	61.6	62.5	mg/L	1	80.0	<0.0383	77	1	40.3 - 131	20
Anthracene	63.2	64.6	mg/L	1	80.0	<0.0468	79	2	36.7 - 135	20
Fluoranthene	68.2	68.5	mg/L	1	80.0	<0.0550	85	0	43.2 - 133	20
Pyrene	69.2	70.3	mg/L	1	80.0	<0.0904	86	2	48.8 - 157	20
Benzo(a)anthracene	71.9	73.5	mg/L	1	80.0	<0.0993	90	2	40.2 - 138	20
Chrysene	125	127	mg/L	1	80.0	<0.121	156	2	5.5 - 179	20
Benzo(b)fluoranthene	66.0	64.2	mg/L	1	80.0	<0.171	82	3	16.4 - 156	20
Benzo(k)fluoranthene	75.0	77.3	mg/L	1	80.0	<0.0951	94	3	40.9 - 150	20
Benzo(a)pyrene	73.4	74.0	mg/L	1	80.0	<0.135	92	1	38.7 - 149	20
Indeno(1,2,3-cd)pyrene	79.9	79.7	mg/L	1	80.0	<0.176	100	0	32 - 153	20
Dibenzo(a,h)anthracene	108	107	mg/L	1	80.0	<0.184	135	1	0 - 202	20
Benzo(g,h,i)perylene	76.2	76.0	mg/L	1	80.0	<0.134	95	0	39.1 - 144	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

continued...

control spikes continued...

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Nitrobenzene-d5	22.2	22.6	mg/L	1	80.0	28	28	0 - 128
2-Fluorobiphenyl	30.4	30.3	mg/L	1	80.0	38	38	0 - 140
Terphenyl-d14	49.5	50.0	mg/L	1	80.0	62	62	0 - 165

Matrix Spike (MS-1) QC Batch: 9182

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	256	258	mg/L	100	2.50	19.1	95	1	79.6 - 109	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) QC Batch: 9182

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	2430	2470	mg/L	100	12.5	1240	95	2	74.3 - 118	20
Fluoride <sup>45</sup>	264	266	mg/L	100	2.50	<5.94	106	1	84.9 - 104	20
Sulfate	1280	1320	mg/L	100	12.5	83.1	96	3	77.8 - 112	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) QC Batch: 9339

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium <sup>67</sup>	197	203	mg/L	1	100	132	65	3	75 - 125	20
Dissolved Potassium	114	113	mg/L	1	100	3.19	111	1	75 - 125	20
Dissolved Magnesium	188	187	mg/L	1	100	100	88	0	75 - 125	20
Dissolved Sodium	118	121	mg/L	1	100	18.3	100	2	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Standard (ICV-1) QC Batch: 9182

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.44	98	90 - 110	2004-04-27

Standard (ICV-1) QC Batch: 9182

<sup>4</sup>matrix difficulties.

<sup>5</sup>matrix difficulties.

<sup>6</sup>ms recovery out of limits due to matrix effect, use lcs/lcsd

<sup>7</sup>ms recovery out of limits due to matrix effect, use lcs/lcsd

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.0	96	90 - 110	2004-04-27
Fluoride		mg/L	2.50	2.50	100	90 - 110	2004-04-27
Sulfate		mg/L	12.5	12.4	99	90 - 110	2004-04-27

**Standard (CCV-1)** QC Batch: 9182

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.45	98	90 - 110	2004-04-27

**Standard (CCV-1)** QC Batch: 9182

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	12.1	97	90 - 110	2004-04-27
Fluoride		mg/L	2.50	2.50	100	90 - 110	2004-04-27
Sulfate		mg/L	12.5	12.4	99	90 - 110	2004-04-27

**Standard (ICV-1)** QC Batch: 9210

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0943	94	85 - 115	2004-04-27
Toluene		mg/L	0.100	0.0937	94	85 - 115	2004-04-27
Ethylbenzene		mg/L	0.100	0.0944	94	85 - 115	2004-04-27
Xylene		mg/L	0.300	0.287	96	85 - 115	2004-04-27

**Standard (CCV-1)** QC Batch: 9210

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0981	98	85 - 115	2004-04-27
Toluene		mg/L	0.100	0.0979	98	85 - 115	2004-04-27
Ethylbenzene		mg/L	0.100	0.0988	99	85 - 115	2004-04-27
Xylene		mg/L	0.300	0.299	100	85 - 115	2004-04-27

**Standard (ICV-1)** QC Batch: 9287

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1004	100	90 - 110	2004-04-30

**Standard (CCV-1)** QC Batch: 9287

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1008	101	90 - 110	2004-04-30

**Standard (ICV-1)** QC Batch: 9317

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2004-04-29
Carbonate Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2004-04-29
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	<4.00		0 - 200	2004-04-29
Total Alkalinity		mg/L as CaCo3	250	244	98	90 - 110	2004-04-29

**Standard (CCV-1)** QC Batch: 9317

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2004-04-29
Carbonate Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2004-04-29
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	<4.00		0 - 200	2004-04-29
Total Alkalinity		mg/L as CaCo3	250	242	97	90 - 110	2004-04-29

**Standard (ICV-1)** QC Batch: 9339

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	24.9	100	90 - 110	2004-04-28
Dissolved Potassium		mg/L	25.0	24.6	98	90 - 110	2004-04-28
Dissolved Magnesium		mg/L	25.0	24.6	98	90 - 110	2004-04-28
Dissolved Sodium		mg/L	25.0	26.0	104	90 - 110	2004-04-28

**Standard (CCV-1)** QC Batch: 9339

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	24.6	98	90 - 110	2004-04-28
Dissolved Potassium		mg/L	25.0	25.5	102	90 - 110	2004-04-28
Dissolved Magnesium		mg/L	25.0	24.5	98	90 - 110	2004-04-28
Dissolved Sodium		mg/L	25.0	26.0	104	90 - 110	2004-04-28

**Standard (CCV-1)** QC Batch: 9397

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	61.7	103	80 - 120	2004-05-02

continued...

standard continued . . .

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Acenaphthylene		mg/L	60.0	58.4	97	80 - 120	2004-05-02
Acenaphthene		mg/L	60.0	58.0	97	80 - 120	2004-05-02
Fluorene		mg/L	60.0	59.1	98	80 - 120	2004-05-02
Phenanthrene		mg/L	60.0	58.4	97	80 - 120	2004-05-02
Anthracene		mg/L	60.0	57.7	96	80 - 120	2004-05-02
Fluoranthene		mg/L	60.0	60.0	100	80 - 120	2004-05-02
Pyrene		mg/L	60.0	61.3	102	80 - 120	2004-05-02
Benzo(a)anthracene		mg/L	60.0	61.1	102	80 - 120	2004-05-02
Chrysene		mg/L	60.0	66.4	111	80 - 120	2004-05-02
Benzo(b)fluoranthene		mg/L	60.0	54.7	91	80 - 120	2004-05-02
Benzo(k)fluoranthene		mg/L	60.0	59.0	98	80 - 120	2004-05-02
Benzo(a)pyrene		mg/L	60.0	60.9	102	80 - 120	2004-05-02
Indeno(1,2,3-cd)pyrene		mg/L	60.0	63.7	106	80 - 120	2004-05-02
Dibenzo(a,h)anthracene		mg/L	60.0	69.7	116	80 - 120	2004-05-02
Benzo(g,h,i)perylene		mg/L	60.0	63.5	106	80 - 120	2004-05-02

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5	<sup>8</sup>	37.8	mg/L	1	60.0	63	80 - 120
2-Fluorobiphenyl	<sup>9</sup>	42.7	mg/L	1	60.0	71	80 - 120
Terphenyl-d14	<sup>10</sup>	42.4	mg/L	1	60.0	71	80 - 120

<sup>8</sup>The average of the CCV's compounds shows that the process is in control.

<sup>9</sup>The average of the CCV's compounds shows that the process is in control.

<sup>10</sup>The average of the CCV's compounds shows that the process is in control.

Page 1 of 1

**CHAIN-OF-CUSTODY AND ANALYSIS REQUEST**

LAB Order ID # 4042615

**ANALYSIS REQUEST**  
(Circle or Specify Method No.)

Hold	
Turn Around Time if different from standard	
BOD TSS pH	X X
Pesticides 8081A/608	
PCBs 8082/608	
GC/MS Semi Vol 8270C/625	
GC/MS Vol 8260B/624	
RCI	
TCLP Pesticides	
TCLP Semi Volatiles	
TCLP Volatiles	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/2007	
PAH 8270C	X
TPH 418 1/TX1005	X
BTEX 8021B/602	X
MTBE 8021B/602	X

REMARKS:

**LAB USE ONLY**

Intact Y / N  
Headspace Y / N  
Temp      °  
Log-in Review MM

Check if Special Reporting Limits Are Needed

Carrier #     

155 McCutcheon, Suite H  
El Paso, Texas 79932  
Tel (915) 585-3443  
Fax (915) 585-4944  
1 (888) 588-3443

**Trace Analysis, Inc.**

Company Name: Respec Phone # 505 379-0276  
Address: 4745 Indian School NE (505) 264-0040  
City, Zip: Albany, NM 87110  
Contact Person: John Bunch  
Invoice to: OC (Wayne Price)  
Project #:     

Project Name: Sumner  
Sampler Signature: [Signature]

Project Location: Monument, NM

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING			
				WATER	SOIL	AIR	SLUDGE	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH	ICE	NONE	DATE	TIME
32595	W-01	4	X												
596	W-03	4	X												

Relinquished by: [Signature] Date: 4/23/04 Time: 1:44 PM  
Received by: [Signature] Date: 4/26/04 Time: 11:13

Relinquished by: [Signature] Date:      Time:       
Received by: [Signature] Date:      Time:     

Relinquished by: [Signature] Date:      Time:       
Received by: [Signature] Date:      Time:     

Submitted of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.  
ORIGINAL COPY

6701 Aberdeen Avenue, Ste. 9  
Lubbock, Texas 79424  
Tel (806) 794-1296  
Fax (806) 794-1298  
1 (800) 378-1296

# Trace Analysis, Inc.

155 McCutcheon, Suite H  
El Paso, Texas 79932  
Tel (915) 585-3443  
Fax (915) 585-4944  
1 (888) 588-3443

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # 4042615

Company Name: Respec Phone #: (505) 379-0276  
 Address: PO Box 47MS Indian School NE (505) 268-0000 City, Zip: Monument, NM 87110  
 Contact Person: John Bunch Atty, NM 87110  
 Invoice to: OLD (Wayne Price)  
 Project #: \_\_\_\_\_

Project Location: Monument, NM  
 Project Name: Samay  
 Sampler Signature: [Signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX				PRESERVATIVE METHOD				SAMPLING DATE	TIME
				WATER	SOIL	AIR	SLUDGE	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH		
32595	W-01	4		X									
596	W-03	4		X									

### ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	X
BTEX 8021B/602	X
TPH 418.1/TX1005	X
PAH 8270C	X
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B/624	
GC/MS Semt. Vol. 8270C/625	
PCE's 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	

Turn Around Time if different from standard \_\_\_\_\_

Hold \_\_\_\_\_

X X ANIONS, CATIONS, TDS. F & C No's 504 200

### REMARKS:

**LAB USE ONLY**

Intact Y / N  
 Headspace Y / N  
 Temp o  
 Log-in Review MS

Check If Special Reporting Limits Are Needed

Carrier # \_\_\_\_\_

Relinquished by: [Signature] Date: 4/23/04 Time: 1:44 PM  
 Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_  
 Received by: Drenda Ward Date: 4/26/04 Time: 11:13

## Summary Report

Ginger Gritzco  
RESPEC  
4775 Indian School Rd. NE  
Suite 300  
Albuquerque, NM 87110

Report Date: May 10, 2004

Work Order: 4043013

Project Location: Monument,NM  
Project Name: Jamar  
Project Number: 1459-01

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
32883	WO2	water	2004-04-29	09:00	2004-04-30

Sample - Field Code	BTEX			
	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
32883 - WO2	<0.00500	<0.00500	<0.00500	<0.00500

**Sample: 32883 - WO2**

Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1.00
Bicarbonate Alkalinity		72.0	mg/L as CaCo3	4.00
Total Alkalinity		72.0	mg/L as CaCo3	4.00
Dissolved Calcium		66.7	mg/L	0.500
Dissolved Potassium		7.67	mg/L	0.500
Dissolved Magnesium		23.0	mg/L	0.500
Dissolved Sodium		257	mg/L	0.500
Chloride		480	mg/L	0.500
Fluoride		1.50	mg/L	0.200
Sulfate		49.8	mg/L	0.500
Nitrate-N	1	<1.00	mg/L	0.200
Naphthalene		<0.000200	mg/L	0.200
Acenaphthylene		0.000210	mg/L	0.200
Acenaphthene		0.000200	mg/L	0.200
Fluorene		<0.000200	mg/L	0.200
Phenanthrene		0.000210	mg/L	0.200
Anthracene		<0.000200	mg/L	0.200
Fluoranthene		<0.000200	mg/L	0.200
Pyrene		<0.000200	mg/L	0.200
Benzo(a)anthracene		<0.000200	mg/L	0.200

*continued ...*

<sup>1</sup>Sample was ran within holding time for Nitrates( <1.00), but QC's did not pass. Sample reran out of holding time and got the same answer. <1.00 mg/L

sample 32883 continued ...

Param	Flag	Result	Units	RL
Chrysene		<0.000200	mg/L	0.200
Benzo(b)fluoranthene		<0.000200	mg/L	0.200
Benzo(k)fluoranthene		<0.000200	mg/L	0.200
Benzo(a)pyrene		<0.000200	mg/L	0.200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.200
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.200
Total Dissolved Solids		1052	mg/L	10.00



# TRACE ANALYSIS, INC.

6701 Aberdeen Avenue, Suite 9  
155 McCutcheon, Suite H

Lubbock, Texas 79424 800•378•1296  
El Paso, Texas 79932 888•588•3443  
E-Mail: lab@traceanalysis.com

806•794•1296 FAX 806•794•1298  
915•585•3443 FAX 915•585•4944

## Analytical and Quality Control Report

Ginger Gritzco  
RESPEC  
4775 Indian School Rd. NE  
Suite 300  
Albuquerque, NM 87110

Report Date: May 10, 2004

Work Order: 4043013

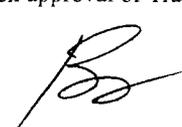
Project Location: Monument, NM  
Project Name: Jamar  
Project Number: 1459-01

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
32883	WO2	water	2004-04-29	09:00	2004-04-30

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 11 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



Dr. Blair Leftwich, Director

## Analytical Report

**Sample: 32883 - WO2**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 9375	Date Analyzed: 2004-05-04	Analyzed By: RS
Prep Batch: 8328	Date Prepared: 2004-05-04	Prepared By: RS

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		72.0	mg/L as CaCo3	1	4.00
Total Alkalinity		72.0	mg/L as CaCo3	1	4.00

**Sample: 32883 - WO2**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 9318	Date Analyzed: 2004-04-30	Analyzed By: MT
Prep Batch: 8281	Date Prepared: 2004-04-30	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00500	mg/L	5	0.00100
Toluene		<0.00500	mg/L	5	0.00100
Ethylbenzene		<0.00500	mg/L	5	0.00100
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.489	mg/L	5	0.100	98	71.2 - 115
4-Bromofluorobenzene (4-BFB)		0.401	mg/L	5	0.100	80	76.5 - 116

**Sample: 32883 - WO2**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 9496	Date Analyzed: 2004-05-07	Analyzed By: BC
Prep Batch: 8346	Date Prepared: 2004-05-05	Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		66.7	mg/L	1	0.500
Dissolved Potassium		7.67	mg/L	1	0.500
Dissolved Magnesium		23.0	mg/L	1	0.500
Dissolved Sodium		257	mg/L	1	0.500

**Sample: 32883 - WO2**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 9306	Date Analyzed: 2004-05-03	Analyzed By: JSW
Prep Batch: 8271	Date Prepared: 2004-04-30	Prepared By: JSW



Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 9462	Date Analyzed: 2004-05-07	Analyzed By: JSW
Prep Batch: 8401	Date Prepared: 2004-05-06	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		1052	mg/L	2	10.00

**Method Blank (1)** QC Batch: 9306

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Fluoride		<0.200	mg/L	0.2
Sulfate		<0.500	mg/L	0.5

**Method Blank (1)** QC Batch: 9318

Parameter	Flag	Result	Units	RL
Benzene		<0.00100	mg/L	0.001
Toluene		<0.00100	mg/L	0.001
Ethylbenzene		<0.00100	mg/L	0.001
Xylene		<0.00100	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.0977	mg/L	1	0.100	98	64.1 - 117
4-Bromofluorobenzene (4-BFB)		0.0799	mg/L	1	0.100	80	72.2 - 118

**Method Blank (1)** QC Batch: 9359

Parameter	Flag	Result	Units	RL
Naphthalene		<0.000200	mg/L	0.2
Acenaphthylene		<0.000200	mg/L	0.2
Acenaphthene		<0.000200	mg/L	0.2
Fluorene		<0.000200	mg/L	0.2
Phenanthrene		<0.000200	mg/L	0.2
Anthracene		<0.000200	mg/L	0.2
Fluoranthene		<0.000200	mg/L	0.2
Pyrene		<0.000200	mg/L	0.2
Benzo(a)anthracene		<0.000200	mg/L	0.2
Chrysene		<0.000200	mg/L	0.2
Benzo(b)fluoranthene		<0.000200	mg/L	0.2
Benzo(k)fluoranthene		<0.000200	mg/L	0.2
Benzo(a)pyrene		<0.000200	mg/L	0.2
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.2

continued...

method blank continued ...

Parameter	Flag	Result	Units	RL
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.2
Benzo(g,h,i)perylene		<0.000200	mg/L	0.2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0602	mg/L	0.001	80.0	75	0 - 128
2-Fluorobiphenyl		0.0640	mg/L	0.001	80.0	80	0 - 140
Terphenyl-d14		0.0718	mg/L	0.001	80.0	90	0 - 165

Method Blank (1) QC Batch: 9363

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

Method Blank (1) QC Batch: 9375

Parameter	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3	4
Total Alkalinity		<4.00	mg/L as CaCo3	4

Method Blank (1) QC Batch: 9462

Parameter	Flag	Result	Units	RL
Total Dissolved Solids		<10.00	mg/L	10

Method Blank (1) QC Batch: 9496

Parameter	Flag	Result	Units	RL
Dissolved Calcium		<0.500	mg/L	0.5
Dissolved Potassium		<0.500	mg/L	0.5
Dissolved Magnesium		<0.500	mg/L	0.5
Dissolved Sodium		<0.500	mg/L	0.5

Duplicate (1) QC Batch: 9375

continued ...

*duplicate continued ...*

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Bicarbonate Alkalinity	298	288	mg/L as CaCo3	1	3	20
Total Alkalinity	298	288	mg/L as CaCo3	1	3	4.8

**Duplicate (1)** QC Batch: 9462

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	1484	1616	mg/L	2	8	8.7

**Laboratory Control Spike (LCS-1)** QC Batch: 9306

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	11.7	11.9	mg/L	1	12.5	<0.337	94	2	90 - 110	20
Fluoride	2.30	2.31	mg/L	1	2.50	<0.0594	92	0	90 - 110	20
Sulfate	11.7	11.7	mg/L	1	12.5	<0.409	94	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Laboratory Control Spike (LCS-1)** QC Batch: 9318

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.100	0.102	mg/L	1	0.100	<0.000255	100	1	79.2 - 113	20
Toluene	0.100	0.102	mg/L	1	0.100	<0.000153	100	1	78.8 - 114	20
Ethylbenzene	0.0998	0.101	mg/L	1	0.100	<0.000226	100	1	79.8 - 112	20
Xylene	0.304	0.309	mg/L	1	0.300	<0.000531	101	2	76.8 - 114	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0989	0.0980	mg/L	1	0.100	99	98	71.2 - 115
4-Bromofluorobenzene (4-BFB)	0.0963	0.0958	mg/L	1	0.100	96	96	76.5 - 116

**Laboratory Control Spike (LCS-1)** QC Batch: 9359

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Naphthalene	41.8	41.8	mg/L	1	80.0	<0.0445	52	0	22.5 - 119	20
Acenaphthylene	47.5	48.3	mg/L	1	80.0	<0.0383	59	2	42.3 - 127	20
Acenaphthene	45.9	46.5	mg/L	1	80.0	<0.0421	57	1	38 - 125	20

*continued ...*

control spikes continued . . .

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Fluorene	52.9	53.3	mg/L	1	80.0	<0.0655	66	1	36.6 - 130	20
Phenanthrene	60.1	60.2	mg/L	1	80.0	<0.0383	75	0	40.3 - 131	20
Anthracene	64.8	65.1	mg/L	1	80.0	<0.0468	81	0	36.7 - 135	20
Fluoranthene	67.5	67.7	mg/L	1	80.0	<0.0550	84	0	43.2 - 133	20
Pyrene	65.8	65.4	mg/L	1	80.0	<0.0904	82	1	48.8 - 157	20
Benzo(a)anthracene	68.6	68.0	mg/L	1	80.0	<0.0993	86	1	40.2 - 138	20
Chrysene	108	105	mg/L	1	80.0	<0.121	135	3	5.5 - 179	20
Benzo(b)fluoranthene	65.5	65.5	mg/L	1	80.0	<0.171	82	0	16.4 - 156	20
Benzo(k)fluoranthene	67.7	67.8	mg/L	1	80.0	<0.0951	85	0	40.9 - 150	20
Benzo(a)pyrene	69.8	69.5	mg/L	1	80.0	<0.135	87	0	38.7 - 149	20
Indeno(1,2,3-cd)pyrene	73.3	73.9	mg/L	1	80.0	<0.176	92	1	32 - 153	20
Dibenzo(a,h)anthracene	90.3	90.5	mg/L	1	80.0	<0.184	113	0	0 - 202	20
Benzo(g,h,i)perylene	70.6	70.4	mg/L	1	80.0	<0.134	88	0	39.1 - 144	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Nitrobenzene-d5	41.7	41.2	mg/L	1	80.0	52	52	0 - 128
2-Fluorobiphenyl	46.1	45.8	mg/L	1	80.0	58	57	0 - 140
Terphenyl-d14	69.5	69.1	mg/L	1	80.0	87	86	0 - 165

**Laboratory Control Spike (LCS-1)** QC Batch: 9363

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2.37	2.37	mg/L	1	2.50	<0.0217	95	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Laboratory Control Spike (LCS-1)** QC Batch: 9496

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	105	103	mg/L	1	100	<0.102	105	2	85 - 115	20
Dissolved Potassium	95.2	97.0	mg/L	1	100	<0.101	95	2	85 - 115	20
Dissolved Magnesium	102	101	mg/L	1	100	<0.110	102	1	85 - 115	20
Dissolved Sodium	100	99.2	mg/L	1	100	<0.120	100	1	85 - 115	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** QC Batch: 9306

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1270	1280	mg/L	50	12.5	684	94	1	74.3 - 118	20
Fluoride	122	122	mg/L	50	2.50	9.82	90	0	84.9 - 104	20
Sulfate	615	612	mg/L	50	12.5	39.3	92	0	77.8 - 112	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** QC Batch: 9363

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	15.4	15.5	mg/L	5	2.50	3.55	95	1	79.6 - 109	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** QC Batch: 9496

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	124	131	mg/L	1	100	33.5	90	5	75 - 125	20
Dissolved Potassium	108	110	mg/L	1	100	2.59	105	2	75 - 125	20
Dissolved Magnesium	101	106	mg/L	1	100	9.31	92	5	75 - 125	20
Dissolved Sodium	115	118	mg/L	1	100	17.6	97	2	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Standard (ICV-1)** QC Batch: 9306

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.9	95	90 - 110	2004-05-03
Fluoride		mg/L	2.50	2.40	96	90 - 110	2004-05-03
Sulfate		mg/L	12.5	11.8	94	90 - 110	2004-05-03

**Standard (CCV-1)** QC Batch: 9306

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.4	91	90 - 110	2004-05-03
Fluoride		mg/L	2.50	2.31	92	90 - 110	2004-05-03
Sulfate		mg/L	12.5	11.5	92	90 - 110	2004-05-03

**Standard (ICV-1)** QC Batch: 9318

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.101	101	85 - 115	2004-04-30
Toluene		mg/L	0.100	0.102	102	85 - 115	2004-04-30
Ethylbenzene		mg/L	0.100	0.102	102	85 - 115	2004-04-30
Xylene		mg/L	0.300	0.310	103	85 - 115	2004-04-30

**Standard (CCV-1)** QC Batch: 9318

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.102	102	85 - 115	2004-04-30
Toluene		mg/L	0.100	0.103	103	85 - 115	2004-04-30
Ethylbenzene		mg/L	0.100	0.104	104	85 - 115	2004-04-30
Xylene		mg/L	0.300	0.312	104	85 - 115	2004-04-30

**Standard (CCV-1)** QC Batch: 9359

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	61.4	102	80 - 120	2004-05-03
Acenaphthylene		mg/L	60.0	60.3	100	80 - 120	2004-05-03
Acenaphthene		mg/L	60.0	59.9	100	80 - 120	2004-05-03
Fluorene		mg/L	60.0	62.7	104	80 - 120	2004-05-03
Phenanthrene		mg/L	60.0	59.9	100	80 - 120	2004-05-03
Anthracene		mg/L	60.0	60.5	101	80 - 120	2004-05-03
Fluoranthene		mg/L	60.0	60.9	102	80 - 120	2004-05-03
Pyrene		mg/L	60.0	60.9	102	80 - 120	2004-05-03
Benzo(a)anthracene		mg/L	60.0	61.5	102	80 - 120	2004-05-03
Chrysene		mg/L	60.0	61.1	102	80 - 120	2004-05-03
Benzo(b)fluoranthene		mg/L	60.0	64.6	108	80 - 120	2004-05-03
Benzo(k)fluoranthene		mg/L	60.0	58.8	98	80 - 120	2004-05-03
Benzo(a)pyrene		mg/L	60.0	62.3	104	80 - 120	2004-05-03
Indeno(1,2,3-cd)pyrene		mg/L	60.0	63.0	105	80 - 120	2004-05-03
Dibenzo(a,h)anthracene		mg/L	60.0	63.9	106	80 - 120	2004-05-03
Benzo(g,h,i)perylene		mg/L	60.0	62.2	104	80 - 120	2004-05-03

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		62.1	mg/L	1	60.0	104	80 - 120
2-Fluorobiphenyl		57.5	mg/L	1	60.0	96	80 - 120
Terphenyl-d14		61.0	mg/L	1	60.0	102	80 - 120

**Standard (ICV-1)** QC Batch: 9363

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.37	95	90 - 110	2004-05-04

**Standard (CCV-1)** QC Batch: 9363

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.37	95	90 - 110	2004-05-04

**Standard (ICV-1)** QC Batch: 9375

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2004-05-04
Carbonate Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2004-05-04
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	<4.00		0 - 200	2004-05-04
Total Alkalinity		mg/L as CaCo3	250	244	98	90 - 110	2004-05-04

**Standard (CCV-1)** QC Batch: 9375

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Hydroxide Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2004-05-04
Carbonate Alkalinity		mg/L as CaCo3	0.00	<1.00		0 - 200	2004-05-04
Bicarbonate Alkalinity		mg/L as CaCo3	0.00	<4.00		0 - 200	2004-05-04
Total Alkalinity		mg/L as CaCo3	250	240	96	90 - 110	2004-05-04

**Standard (ICV-1)** QC Batch: 9462

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	988.0	99	90 - 110	2004-05-07

**Standard (CCV-1)** QC Batch: 9462

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	997.0	100	90 - 110	2004-05-07

**Standard (ICV-1)** QC Batch: 9496

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	25.8	103	90 - 110	2004-05-07
Dissolved Potassium		mg/L	25.0	25.1	100	90 - 110	2004-05-07
Dissolved Magnesium		mg/L	25.0	25.5	102	90 - 110	2004-05-07
Dissolved Sodium		mg/L	25.0	25.2	101	90 - 110	2004-05-07

**Standard (CCV-1)** QC Batch: 9496

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	26.3	105	90 - 110	2004-05-07
Dissolved Potassium		mg/L	25.0	25.2	101	90 - 110	2004-05-07
Dissolved Magnesium		mg/L	25.0	25.9	104	90 - 110	2004-05-07
Dissolved Sodium		mg/L	25.0	25.4	102	90 - 110	2004-05-07

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<b>Trice Analysis, Inc.</b> 6701 Aberdeen Avenue, Ste. 9 Lubbock, Texas 79424 Tel (806) 784-1286 Fax (806) 784-1288 1 (800) 378-1288		155 McCutcheon, Suite H El Paso, Texas 79932 Tel (915) 585-3443 Fax (915) 585-4944 1 (888) 588-3443				
Company Name: <u>R. J. Jamar</u> Address: <u>1175 Indian School Rd NE # 200</u> Contact Person: <u>Ginger Grillo</u> Invoice to: <u>(if different from above)</u> Project #: <u>1459-01</u> Project Location: <u>Monument, NM</u>		Phone #: <u>505 268-2661</u> Fax #: <u>505-265-0040</u> City: <u>Abq.</u> State: <u>NM</u> Zip: <u>87110</u> Project Name: <u>JAMAR</u> Sample Description: <u>Soils</u>				
LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	VOLUME/AMOUNT	WATER	DATE	SAMPLING TIME
32813	WOZ -W-DY				04/29/04	9:00
					4/29/04	9:30

Relinquished by: <u>Ginger Grillo</u>	Date: <u>4/29/04</u>	Time: <u>12:00</u>	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received by:	Date:	Time:
Relinquished by:	Date:	Time:	Received at Laboratory by: <u>J. Jamar</u>	Date: <u>4-30-04</u>	Time: <u>7:03</u>

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST LAB Orig ID # <u>4043013</u>	
ANALYSIS REQUEST (Circle or Specify Method No.)	Turn Around Time if different from standard
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/2007 TCLP Volatiles TCLP Semi Volatiles TCLP Pesticides FCI GC/MS Vol 8260B/624 GC/MS Semi Vol 8270C/625 PCB's 8082/608 Pesticides 8081A/608 BOD TSS pH	15 days

LAB USE ONLY Intact: <input checked="" type="checkbox"/> Y <input type="checkbox"/> N Headspace: <input type="checkbox"/> Y <input type="checkbox"/> N Temp: <u>30</u> Log-in Review: <u>1/1</u>	REMARKS: <u>received woz only.</u>
Check if Special Reporting Limits Are Needed <input type="checkbox"/>	Camera # <u>UP 5 12 9 62 46E 22 1001 523-2</u>

Submital of samples constitutes agreement to Terms and Conditions listed on reverse side of C.O.C.  
ORIGINAL COPY

6701 Aberdeen Avenue, Ste. 9  
Lubbock, Texas 79424  
Tel (806) 794-1296  
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1 (800) 378-1296

# TraceAnalysis, Inc.

15501 Cutcheon, Suite H  
El Paso, Texas 79932  
Tel (915) 585-3443  
Fax (915) 585-4944  
1 (888) 588-3443

## CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

LAB Order ID # **4043013**

Company Name: **Russell** Phone #: **505 265-2661**

Address: **4175 Indian School Rd NE # 300** Fax #: **505-265-0040**

Contact Person: **Glenn Grillo** **Atty, NM 87110**

Invoice to: (If different from above) **Red-Heine Price - Amar**

Project #: **1459-01** Project Name: **Amargosa**

Project Location: **Monument, NM**

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	WATER	SAMPLING	
					DATE	TIME
32883	W02 W-04				4/28/04	9:00
					4/29/04	9:30

Relinquished by: **Glenn Grillo** Date: **4/28/04** Time: **12:00**

Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Relinquished by: \_\_\_\_\_ Date: \_\_\_\_\_ Time: \_\_\_\_\_

Received at Laboratory by: **Glenn Grillo** Date: **4-30-04** Time: **10:53**

### ANALYSIS REQUEST

(Circle or Specify Method No.)

MTBE 8021B/602	X
BTEX 8021B/602	X
TPH 418.1/TX1005	X
PAH 8270C	X
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
HCI	
GC/MS Vol. 8260B/624	
GC/MS Semi. Vol. 8270C/625	
PCB's 8082/608	
Pesticides 8081A/608	
BOD, TSS, pH	

**ANALYSIS, ATOMS, TDS**

Limit/Amount Time if different from standard

### LAB USE ONLY

Intact  N

Headspace  Y N

Temp **30**

Log-in Review **MS**

### REMARKS:

**received woz only.**  
**Lab chared coc**  
**white drying. Recoid**

Check If Special Reporting Limits Are Needed

Carrier # **UP 5 12 762 40E 221001 523-2**

**5/10/04**

## Summary Report

John Bunch  
RESPEC  
4775 Indian School Rd. NE  
Suite 300  
Albuquerque, NM 87110

Report Date: June 9, 2004

Work Order: 4060102

Project Location: Monument, NM  
Project Name: Jamar  
Project Number: 1494

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
35561	MW-1	water	2004-05-27	17:00	2004-05-29
35562	MW-2	water	2004-05-27	17:15	2004-05-29
35563	MW-3	water	2004-05-27	17:30	2004-05-29
35564	MW-4	water	2004-05-27	17:45	2004-05-29
35565	MW-5	water	2004-05-27	18:00	2004-05-29
35566	MW-6	water	2004-05-27	18:15	2004-05-29

Sample - Field Code	BTEX			
	Benzene (mg/L)	Toluene (mg/L)	Ethylbenzene (mg/L)	Xylene (mg/L)
35561 - MW-1	<0.00100	<0.00100	<0.00100	<0.00100
35562 - MW-2	<0.00100	<0.00100	<0.00100	<0.00100
35563 - MW-3	<0.00100	<0.00100	<0.00100	<0.00100
35564 - MW-4	<0.00100	<0.00100	<0.00100	<0.00100
35565 - MW-5	<0.00500	<0.00500	<0.00500	<0.00500
35566 - MW-6	0.0531	0.0608	0.0591	0.139

**Sample: 35561 - MW-1**

Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1.00
Bicarbonate Alkalinity		304	mg/L as CaCo3	4.00
Total Alkalinity		304	mg/L as CaCo3	4.00
Dissolved Calcium		204	mg/L	0.500
Dissolved Potassium		10.8	mg/L	0.500
Dissolved Magnesium		83.6	mg/L	0.500
Dissolved Sodium		392	mg/L	0.500
Chloride		748	mg/L	0.500
Fluoride		2.91	mg/L	0.200
Sulfate		439	mg/L	0.500
Nitrate-N		<2.00	mg/L	0.200
Naphthalene		<0.000200	mg/L	0.200
Acenaphthylene		<0.000200	mg/L	0.200

*continued ...*

sample 35561 continued ...

Param	Flag	Result	Units	RL
Acenaphthene		<0.000200	mg/L	0.200
Fluorene		<0.000200	mg/L	0.200
Phenanthrene		<0.000200	mg/L	0.200
Anthracene		<0.000200	mg/L	0.200
Fluoranthene		<0.000200	mg/L	0.200
Pyrene		<0.000200	mg/L	0.200
Benzo(a)anthracene		<0.000200	mg/L	0.200
Chrysene		<0.000200	mg/L	0.200
Benzo(b)fluoranthene		<0.000200	mg/L	0.200
Benzo(k)fluoranthene		<0.000200	mg/L	0.200
Benzo(a)pyrene		<0.000200	mg/L	0.200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.200
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.200
Total Dissolved Solids		2200	mg/L	10.00
Total Silver		<0.0125	mg/L	0.0125
Total Arsenic		<0.0100	mg/L	0.0100
Total Barium		0.569	mg/L	0.0100
Total Cadmium		0.0120	mg/L	0.00500
Total Chromium		0.114	mg/L	0.0100
Total Mercury		<0.000200	mg/L	0.000200
Total Lead		<0.0100	mg/L	0.0100
Total Selenium		<0.0100	mg/L	0.0100

Sample: 35562 - MW-2

Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1.00
Bicarbonate Alkalinity		350	mg/L as CaCo3	4.00
Total Alkalinity		350	mg/L as CaCo3	4.00
Dissolved Calcium		190	mg/L	0.500
Dissolved Potassium		13.4	mg/L	0.500
Dissolved Magnesium		82.8	mg/L	0.500
Dissolved Sodium		476	mg/L	0.500
Chloride		869	mg/L	0.500
Fluoride		<4.00	mg/L	0.200
Sulfate		717	mg/L	0.500
Nitrate-N		<20.0	mg/L	0.200
Naphthalene		<0.000200	mg/L	0.200
Acenaphthylene		<0.000200	mg/L	0.200
Acenaphthene		<0.000200	mg/L	0.200
Fluorene		<0.000200	mg/L	0.200
Phenanthrene		<0.000200	mg/L	0.200
Anthracene		<0.000200	mg/L	0.200
Fluoranthene		<0.000200	mg/L	0.200
Pyrene		<0.000200	mg/L	0.200
Benzo(a)anthracene		<0.000200	mg/L	0.200
Chrysene		<0.000200	mg/L	0.200
Benzo(b)fluoranthene		<0.000200	mg/L	0.200
Benzo(k)fluoranthene		<0.000200	mg/L	0.200
Benzo(a)pyrene		<0.000200	mg/L	0.200

continued ...

sample 35562 continued ...

Param	Flag	Result	Units	RL
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.200
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.200
Total Dissolved Solids		2990	mg/L	10.00
Total Silver		<0.0125	mg/L	0.0125
Total Arsenic		<0.0100	mg/L	0.0100
Total Barium		0.318	mg/L	0.0100
Total Cadmium		<0.00500	mg/L	0.00500
Total Chromium		0.0380	mg/L	0.0100
Total Mercury		<0.000200	mg/L	0.000200
Total Lead		<0.0100	mg/L	0.0100
Total Selenium		<0.0100	mg/L	0.0100

Sample: 35563 - MW-3

Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1.00
Bicarbonate Alkalinity		332	mg/L as CaCo3	4.00
Total Alkalinity		332	mg/L as CaCo3	4.00
Dissolved Calcium		109	mg/L	0.500
Dissolved Potassium		7.60	mg/L	0.500
Dissolved Magnesium		60.0	mg/L	0.500
Dissolved Sodium		299	mg/L	0.500
Chloride		467	mg/L	0.500
Fluoride		3.56	mg/L	0.200
Sulfate		263	mg/L	0.500
Nitrate-N		<1.00	mg/L	0.200
Naphthalene		0.000950	mg/L	0.200
Acenaphthylene		<0.000200	mg/L	0.200
Acenaphthene		<0.000200	mg/L	0.200
Fluorene		<0.000200	mg/L	0.200
Phenanthrene		<0.000200	mg/L	0.200
Anthracene		<0.000200	mg/L	0.200
Fluoranthene		<0.000200	mg/L	0.200
Pyrene		<0.000200	mg/L	0.200
Benzo(a)anthracene		<0.000200	mg/L	0.200
Chrysene		<0.000200	mg/L	0.200
Benzo(b)fluoranthene		<0.000200	mg/L	0.200
Benzo(k)fluoranthene		<0.000200	mg/L	0.200
Benzo(a)pyrene		<0.000200	mg/L	0.200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.200
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.200
Total Dissolved Solids		1616	mg/L	10.00
Total Silver		<0.0125	mg/L	0.0125
Total Arsenic		<0.0100	mg/L	0.0100
Total Barium		0.508	mg/L	0.0100
Total Cadmium		0.00600	mg/L	0.00500
Total Chromium		0.0680	mg/L	0.0100
Total Mercury		<0.000200	mg/L	0.000200
Total Lead		<0.0100	mg/L	0.0100

continued ...

sample 35563 continued ...

Param	Flag	Result	Units	RL
Total Selenium		<0.0100	mg/L	0.0100

**Sample: 35564 - MW-4**

Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1.00
Bicarbonate Alkalinity		314	mg/L as CaCo3	4.00
Total Alkalinity		314	mg/L as CaCo3	4.00
Dissolved Calcium		123	mg/L	0.500
Dissolved Potassium		5.71	mg/L	0.500
Dissolved Magnesium		73.9	mg/L	0.500
Dissolved Sodium		243	mg/L	0.500
Chloride		511	mg/L	0.500
Fluoride		3.87	mg/L	0.200
Sulfate		236	mg/L	0.500
Nitrate-N		<1.00	mg/L	0.200
Naphthalene		<0.000200	mg/L	0.200
Acenaphthylene		<0.000200	mg/L	0.200
Acenaphthene		<0.000200	mg/L	0.200
Fluorene		<0.000200	mg/L	0.200
Phenanthrene		<0.000200	mg/L	0.200
Anthracene		<0.000200	mg/L	0.200
Fluoranthene		<0.000200	mg/L	0.200
Pyrene		<0.000200	mg/L	0.200
Benzo(a)anthracene		<0.000200	mg/L	0.200
Chrysene		<0.000200	mg/L	0.200
Benzo(b)fluoranthene		<0.000200	mg/L	0.200
Benzo(k)fluoranthene		<0.000200	mg/L	0.200
Benzo(a)pyrene		<0.000200	mg/L	0.200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.200
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.200
Total Dissolved Solids		1716	mg/L	10.00
Total Silver		<0.0125	mg/L	0.0125
Total Arsenic		<0.0100	mg/L	0.0100
Total Barium		0.410	mg/L	0.0100
Total Cadmium		<0.00500	mg/L	0.00500
Total Chromium		0.0150	mg/L	0.0100
Total Mercury		<0.000200	mg/L	0.000200
Total Lead		<0.0100	mg/L	0.0100
Total Selenium		<0.0100	mg/L	0.0100

**Sample: 35565 - MW-5**

Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1.00
Bicarbonate Alkalinity		330	mg/L as CaCo3	4.00
Total Alkalinity		330	mg/L as CaCo3	4.00

continued ...

sample 35565 continued ...

Param	Flag	Result	Units	RL
Dissolved Calcium		135	mg/L	0.500
Dissolved Potassium		9.01	mg/L	0.500
Dissolved Magnesium		110	mg/L	0.500
Dissolved Sodium		297	mg/L	0.500
Chloride		694	mg/L	0.500
Fluoride		3.62	mg/L	0.200
Sulfate		252	mg/L	0.500
Nitrate-N		3.26	mg/L	0.200
Naphthalene		<0.000200	mg/L	0.200
Acenaphthylene		<0.000200	mg/L	0.200
Acenaphthene		<0.000200	mg/L	0.200
Fluorene		<0.000200	mg/L	0.200
Phenanthrene		<0.000200	mg/L	0.200
Anthracene		<0.000200	mg/L	0.200
Fluoranthene		<0.000200	mg/L	0.200
Pyrene		<0.000200	mg/L	0.200
Benzo(a)anthracene		<0.000200	mg/L	0.200
Chrysene		<0.000200	mg/L	0.200
Benzo(b)fluoranthene		<0.000200	mg/L	0.200
Benzo(k)fluoranthene		<0.000200	mg/L	0.200
Benzo(a)pyrene		<0.000200	mg/L	0.200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.200
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.200
Total Dissolved Solids		1952	mg/L	10.00
Total Silver		<0.0125	mg/L	0.0125
Total Arsenic		<0.0100	mg/L	0.0100
Total Barium		1.85	mg/L	0.0100
Total Cadmium		<0.00500	mg/L	0.00500
Total Chromium		0.0410	mg/L	0.0100
Total Mercury		<0.000200	mg/L	0.000200
Total Lead		<0.0100	mg/L	0.0100
Total Selenium		<0.0100	mg/L	0.0100

Sample: 35566 - MW-6

Param	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1.00
Bicarbonate Alkalinity		332	mg/L as CaCo3	4.00
Total Alkalinity		332	mg/L as CaCo3	4.00
Dissolved Calcium		97.9	mg/L	0.500
Dissolved Potassium		7.36	mg/L	0.500
Dissolved Magnesium		62.8	mg/L	0.500
Dissolved Sodium		409	mg/L	0.500
Chloride		639	mg/L	0.500
Fluoride		3.89	mg/L	0.200
Sulfate		329	mg/L	0.500
Nitrate-N		<1.00	mg/L	0.200
Naphthalene		0.000720	mg/L	0.200
Acenaphthylene		<0.000200	mg/L	0.200
Acenaphthene		<0.000200	mg/L	0.200

continued ...

sample 35566 continued ...

Param	Flag	Result	Units	RL
Fluorene		<0.000200	mg/L	0.200
Phenanthrene		<0.000200	mg/L	0.200
Anthracene		<0.000200	mg/L	0.200
Fluoranthene		<0.000200	mg/L	0.200
Pyrene		<0.000200	mg/L	0.200
Benzo(a)anthracene		<0.000200	mg/L	0.200
Chrysene		<0.000200	mg/L	0.200
Benzo(b)fluoranthene		<0.000200	mg/L	0.200
Benzo(k)fluoranthene		<0.000200	mg/L	0.200
Benzo(a)pyrene		<0.000200	mg/L	0.200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.200
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.200
Total Dissolved Solids		2152	mg/L	10.00
Total Silver		<0.0125	mg/L	0.0125
Total Arsenic		<0.0100	mg/L	0.0100
Total Barium		0.841	mg/L	0.0100
Total Cadmium		0.0150	mg/L	0.00500
Total Chromium		0.117	mg/L	0.0100
Total Mercury		<0.000200	mg/L	0.000200
Total Lead		<0.0100	mg/L	0.0100
Total Selenium		<0.0100	mg/L	0.0100



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## Analytical and Quality Control Report

John Bunch  
RESPEC  
4775 Indian School Rd. NE  
Suite 300  
Albuquerque, NM 87110

Report Date: June 9, 2004

Work Order: 4060102

Project Location: Monument, NM  
Project Name: Jamar  
Project Number: 1494

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
35561	MW-1	water	2004-05-27	17:00	2004-05-29
35562	MW-2	water	2004-05-27	17:15	2004-05-29
35563	MW-3	water	2004-05-27	17:30	2004-05-29
35564	MW-4	water	2004-05-27	17:45	2004-05-29
35565	MW-5	water	2004-05-27	18:00	2004-05-29
35566	MW-6	water	2004-05-27	18:15	2004-05-29

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 31 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.



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Dr. Blair Leftwich, Director

## Analytical Report

**Sample: 35561 - MW-1**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 10258	Date Analyzed: 2004-06-04	Analyzed By: RS
Prep Batch: 9077	Date Prepared: 2004-06-04	Prepared By: RS

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		304	mg/L as CaCo3	1	4.00
Total Alkalinity		304	mg/L as CaCo3	1	4.00

**Sample: 35561 - MW-1**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 10177	Date Analyzed: 2004-06-01	Analyzed By: MT
Prep Batch: 9009	Date Prepared: 2004-06-01	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.103	mg/L	1	0.100	103	78.4 - 118
4-Bromofluorobenzene (4-BFB)		0.0752	mg/L	1	0.100	75	53.1 - 149

**Sample: 35561 - MW-1**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 10313	Date Analyzed: 2004-06-08	Analyzed By: BC
Prep Batch: 9020	Date Prepared: 2004-06-03	Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		204	mg/L	1	0.500
Dissolved Potassium		10.8	mg/L	1	0.500
Dissolved Magnesium		83.6	mg/L	1	0.500
Dissolved Sodium		392	mg/L	1	0.500

**Sample: 35561 - MW-1**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 10155	Date Analyzed: 2004-06-02	Analyzed By: JSW
Prep Batch: 8991	Date Prepared: 2004-06-01	Prepared By: JSW

QC Batch: 10277  
Prep Batch: 9091

Date Analyzed: 2004-06-08  
Date Prepared: 2004-06-07

Analyzed By: JSW  
Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		748	mg/L	100	0.500
Fluoride		2.91	mg/L	10	0.200
Sulfate		439	mg/L	10	0.500

**Sample: 35561 - MW-1**

Analysis: NO3 (IC)  
QC Batch: 10155  
Prep Batch: 8991

Analytical Method: E 300.0  
Date Analyzed: 2004-06-02  
Date Prepared: 2004-06-01

Prep Method: N/A  
Analyzed By: JSW  
Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Nitrate-N		<2.00	mg/L	10	0.200

**Sample: 35561 - MW-1**

Analysis: PAH  
QC Batch: 10247  
Prep Batch: 8990

Analytical Method: S 8270C  
Date Analyzed: 2004-06-04  
Date Prepared: 2004-06-02

Prep Method: S 3510C  
Analyzed By: RC  
Prepared By: RC

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	0.001	0.200
Acenaphthylene		<0.000200	mg/L	0.001	0.200
Acenaphthene		<0.000200	mg/L	0.001	0.200
Fluorene		<0.000200	mg/L	0.001	0.200
Phenanthrene		<0.000200	mg/L	0.001	0.200
Anthracene		<0.000200	mg/L	0.001	0.200
Fluoranthene		<0.000200	mg/L	0.001	0.200
Pyrene		<0.000200	mg/L	0.001	0.200
Benzo(a)anthracene		<0.000200	mg/L	0.001	0.200
Chrysene		<0.000200	mg/L	0.001	0.200
Benzo(b)fluoranthene		<0.000200	mg/L	0.001	0.200
Benzo(k)fluoranthene		<0.000200	mg/L	0.001	0.200
Benzo(a)pyrene		<0.000200	mg/L	0.001	0.200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.001	0.200
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.001	0.200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.001	0.200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0795	mg/L	0.001	80.0	99	0 - 128
2-Fluorobiphenyl		0.0741	mg/L	0.001	80.0	93	0 - 140
Terphenyl-d14		0.0772	mg/L	0.001	80.0	96	0 - 165

**Sample: 35561 - MW-1**

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 10162	Date Analyzed: 2004-06-02	Analyzed By: RS
Prep Batch: 8997	Date Prepared: 2004-06-01	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		2200	mg/L	5	10.00

**Sample: 35561 - MW-1**

Analysis: Total 8 Metals	Analytical Method: S 6010B	Prep Method: S 3010A
QC Batch: 10220	Date Analyzed: 2004-06-04	Analyzed By: RR
Prep Batch: 9001	Date Prepared: 2004-06-02	Prepared By: TP
Analysis: Total 8 Metals	Analytical Method: S 7470A	Prep Method: N/A
QC Batch: 10318	Date Analyzed: 2004-06-09	Analyzed By: BC
Prep Batch: 9123	Date Prepared: 2004-06-08	Prepared By: BC

Parameter	Flag	RL Result	Units	Dilution	RL
Total Silver		<0.0125	mg/L	1	0.0125
Total Arsenic		<0.0100	mg/L	1	0.0100
Total Barium		0.569	mg/L	1	0.0100
Total Cadmium		0.0120	mg/L	1	0.00500
Total Chromium		0.114	mg/L	1	0.0100
Total Mercury		<0.000200	mg/L	1	0.000200
Total Lead		<0.0100	mg/L	1	0.0100
Total Selenium		<0.0100	mg/L	1	0.0100

**Sample: 35562 - MW-2**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
QC Batch: 10258	Date Analyzed: 2004-06-04	Analyzed By: RS
Prep Batch: 9077	Date Prepared: 2004-06-04	Prepared By: RS

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		350	mg/L as CaCo3	1	4.00
Total Alkalinity		350	mg/L as CaCo3	1	4.00

**Sample: 35562 - MW-2**

Analysis: BTEX	Analytical Method: S 8021B	Prep Method: S 5030B
QC Batch: 10177	Date Analyzed: 2004-06-01	Analyzed By: MT
Prep Batch: 9009	Date Prepared: 2004-06-01	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100

*continued...*

sample 35562 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.106	mg/L	1	0.100	106	78.4 - 118
4-Bromofluorobenzene (4-BFB)		0.0799	mg/L	1	0.100	80	53.1 - 149

**Sample: 35562 - MW-2**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 10313	Date Analyzed: 2004-06-08	Analyzed By: BC
Prep Batch: 9020	Date Prepared: 2004-06-03	Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		190	mg/L	1	0.500
Dissolved Potassium		13.4	mg/L	1	0.500
Dissolved Magnesium		82.8	mg/L	1	0.500
Dissolved Sodium		476	mg/L	1	0.500

**Sample: 35562 - MW-2**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 10155	Date Analyzed: 2004-06-02	Analyzed By: JSW
Prep Batch: 8991	Date Prepared: 2004-06-01	Prepared By: JSW
QC Batch: 10277	Date Analyzed: 2004-06-08	Analyzed By: JSW
Prep Batch: 9091	Date Prepared: 2004-06-07	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		869	mg/L	100	0.500
Fluoride		<4.00	mg/L	20	0.200
Sulfate		717	mg/L	20	0.500

**Sample: 35562 - MW-2**

Analysis: NO3 (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 10155	Date Analyzed: 2004-06-02	Analyzed By: JSW
Prep Batch: 8991	Date Prepared: 2004-06-01	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Nitrate-N		<20.0	mg/L	100	0.200

**Sample: 35562 - MW-2**

Analysis: PAH	Analytical Method: S 8270C	Prep Method: S 3510C
QC Batch: 10247	Date Analyzed: 2004-06-04	Analyzed By: RC
Prep Batch: 8990	Date Prepared: 2004-06-02	Prepared By: RC

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	0.001	0.200
Acenaphthylene		<0.000200	mg/L	0.001	0.200
Acenaphthene		<0.000200	mg/L	0.001	0.200
Fluorene		<0.000200	mg/L	0.001	0.200
Phenanthrene		<0.000200	mg/L	0.001	0.200
Anthracene		<0.000200	mg/L	0.001	0.200
Fluoranthene		<0.000200	mg/L	0.001	0.200
Pyrene		<0.000200	mg/L	0.001	0.200
Benzo(a)anthracene		<0.000200	mg/L	0.001	0.200
Chrysene		<0.000200	mg/L	0.001	0.200
Benzo(b)fluoranthene		<0.000200	mg/L	0.001	0.200
Benzo(k)fluoranthene		<0.000200	mg/L	0.001	0.200
Benzo(a)pyrene		<0.000200	mg/L	0.001	0.200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.001	0.200
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.001	0.200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.001	0.200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0707	mg/L	0.001	80.0	88	0 - 128
2-Fluorobiphenyl		0.0676	mg/L	0.001	80.0	84	0 - 140
Terphenyl-d14		0.0731	mg/L	0.001	80.0	91	0 - 165

**Sample: 35562 - MW-2**

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 10162	Date Analyzed: 2004-06-02	Analyzed By: RS
Prep Batch: 8997	Date Prepared: 2004-06-01	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		2990	mg/L	5	10.00

**Sample: 35562 - MW-2**

Analysis: Total 8 Metals	Analytical Method: S 6010B	Prep Method: S 3010A
QC Batch: 10220	Date Analyzed: 2004-06-04	Analyzed By: RR
Prep Batch: 9001	Date Prepared: 2004-06-02	Prepared By: TP
Analysis: Total 8 Metals	Analytical Method: S 7470A	Prep Method: N/A
QC Batch: 10318	Date Analyzed: 2004-06-09	Analyzed By: BC
Prep Batch: 9123	Date Prepared: 2004-06-08	Prepared By: BC

continued ...



Prep Batch: 9020

Date Prepared: 2004-06-03

Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		109	mg/L	1	0.500
Dissolved Potassium		7.60	mg/L	1	0.500
Dissolved Magnesium		60.0	mg/L	1	0.500
Dissolved Sodium		299	mg/L	1	0.500

**Sample: 35563 - MW-3**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 10155	Date Analyzed: 2004-06-02	Analyzed By: JSW
Prep Batch: 8991	Date Prepared: 2004-06-01	Prepared By: JSW
QC Batch: 10277	Date Analyzed: 2004-06-08	Analyzed By: JSW
Prep Batch: 9091	Date Prepared: 2004-06-07	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		467	mg/L	50	0.500
Fluoride		3.56	mg/L	5	0.200
Sulfate		263	mg/L	50	0.500

**Sample: 35563 - MW-3**

Analysis: NO3 (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 10155	Date Analyzed: 2004-06-02	Analyzed By: JSW
Prep Batch: 8991	Date Prepared: 2004-06-01	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Nitrate-N		<1.00	mg/L	5	0.200

**Sample: 35563 - MW-3**

Analysis: PAH	Analytical Method: S 8270C	Prep Method: S 3510C
QC Batch: 10247	Date Analyzed: 2004-06-04	Analyzed By: RC
Prep Batch: 8990	Date Prepared: 2004-06-02	Prepared By: RC

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		0.000950	mg/L	0.001	0.200
Acenaphthylene		<0.000200	mg/L	0.001	0.200
Acenaphthene		<0.000200	mg/L	0.001	0.200
Fluorene		<0.000200	mg/L	0.001	0.200
Phenanthrene		<0.000200	mg/L	0.001	0.200
Anthracene		<0.000200	mg/L	0.001	0.200
Fluoranthene		<0.000200	mg/L	0.001	0.200
Pyrene		<0.000200	mg/L	0.001	0.200
Benzo(a)anthracene		<0.000200	mg/L	0.001	0.200

continued ...

sample 35563 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Chrysene		<0.000200	mg/L	0.001	0.200
Benzo(b)fluoranthene		<0.000200	mg/L	0.001	0.200
Benzo(k)fluoranthene		<0.000200	mg/L	0.001	0.200
Benzo(a)pyrene		<0.000200	mg/L	0.001	0.200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.001	0.200
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.001	0.200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.001	0.200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0489	mg/L	0.001	80.0	61	0 - 128
2-Fluorobiphenyl		0.0485	mg/L	0.001	80.0	61	0 - 140
Terphenyl-d14		0.0535	mg/L	0.001	80.0	67	0 - 165

**Sample: 35563 - MW-3**

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 10162	Date Analyzed: 2004-06-02	Analyzed By: RS
Prep Batch: 8997	Date Prepared: 2004-06-01	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		1616	mg/L	4	10.00

**Sample: 35563 - MW-3**

Analysis: Total 8 Metals	Analytical Method: S 6010B	Prep Method: S 3010A
QC Batch: 10220	Date Analyzed: 2004-06-04	Analyzed By: RR
Prep Batch: 9001	Date Prepared: 2004-06-02	Prepared By: TP
Analysis: Total 8 Metals	Analytical Method: S 7470A	Prep Method: N/A
QC Batch: 10318	Date Analyzed: 2004-06-09	Analyzed By: BC
Prep Batch: 9123	Date Prepared: 2004-06-08	Prepared By: BC

Parameter	Flag	RL Result	Units	Dilution	RL
Total Silver		<0.0125	mg/L	1	0.0125
Total Arsenic		<0.0100	mg/L	1	0.0100
Total Barium		0.508	mg/L	1	0.0100
Total Cadmium		0.00600	mg/L	1	0.00500
Total Chromium		0.0680	mg/L	1	0.0100
Total Mercury		<0.000200	mg/L	1	0.000200
Total Lead		<0.0100	mg/L	1	0.0100
Total Selenium		<0.0100	mg/L	1	0.0100

**Sample: 35564 - MW-4**

Analysis: Alkalinity	Analytical Method: SM 2320B	Prep Method: N/A
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QC Batch: 10258  
Prep Batch: 9077

Date Analyzed: 2004-06-04  
Date Prepared: 2004-06-04

Analyzed By: RS  
Prepared By: RS

Parameter	Flag	RL Result	Units	Dilution	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1	1.00
Bicarbonate Alkalinity		314	mg/L as CaCo3	1	4.00
Total Alkalinity		314	mg/L as CaCo3	1	4.00

**Sample: 35564 - MW-4**

Analysis: BTEX  
QC Batch: 10177  
Prep Batch: 9009

Analytical Method: S 8021B  
Date Analyzed: 2004-06-01  
Date Prepared: 2004-06-01

Prep Method: S 5030B  
Analyzed By: MT  
Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
Benzene		<0.00100	mg/L	1	0.00100
Toluene		<0.00100	mg/L	1	0.00100
Ethylbenzene		<0.00100	mg/L	1	0.00100
Xylene		<0.00100	mg/L	1	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.114	mg/L	1	0.100	114	78.4 - 118
4-Bromofluorobenzene (4-BFB)		0.0745	mg/L	1	0.100	74	53.1 - 149

**Sample: 35564 - MW-4**

Analysis: Cations  
QC Batch: 10313  
Prep Batch: 9020

Analytical Method: S 6010B  
Date Analyzed: 2004-06-08  
Date Prepared: 2004-06-03

Prep Method: S 3005A  
Analyzed By: BC  
Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		123	mg/L	1	0.500
Dissolved Potassium		5.71	mg/L	1	0.500
Dissolved Magnesium		73.9	mg/L	1	0.500
Dissolved Sodium		243	mg/L	1	0.500

**Sample: 35564 - MW-4**

Analysis: Ion Chromatography  
QC Batch: 10155  
Prep Batch: 8991  
QC Batch: 10277  
Prep Batch: 9091

Analytical Method: E 300.0  
Date Analyzed: 2004-06-02  
Date Prepared: 2004-06-01  
Date Analyzed: 2004-06-08  
Date Prepared: 2004-06-07

Prep Method: N/A  
Analyzed By: JSW  
Prepared By: JSW  
Analyzed By: JSW  
Prepared By: JSW





sample 35565 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Xylene		<0.00500	mg/L	5	0.00100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	1	0.599	mg/L	5	0.100	120	79.7 - 119
4-Bromofluorobenzene (4-BFB)		0.498	mg/L	5	0.100	100	65.6 - 141

**Sample: 35565 - MW-5**

Analysis: Cations	Analytical Method: S 6010B	Prep Method: S 3005A
QC Batch: 10313	Date Analyzed: 2004-06-08	Analyzed By: BC
Prep Batch: 9020	Date Prepared: 2004-06-03	Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		135	mg/L	1	0.500
Dissolved Potassium		9.01	mg/L	1	0.500
Dissolved Magnesium		110	mg/L	1	0.500
Dissolved Sodium		297	mg/L	1	0.500

**Sample: 35565 - MW-5**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 10155	Date Analyzed: 2004-06-02	Analyzed By: JSW
Prep Batch: 8991	Date Prepared: 2004-06-01	Prepared By: JSW
QC Batch: 10277	Date Analyzed: 2004-06-08	Analyzed By: JSW
Prep Batch: 9091	Date Prepared: 2004-06-07	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		694	mg/L	50	0.500
Fluoride		3.62	mg/L	5	0.200
Sulfate		252	mg/L	50	0.500

**Sample: 35565 - MW-5**

Analysis: NO3 (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 10155	Date Analyzed: 2004-06-02	Analyzed By: JSW
Prep Batch: 8991	Date Prepared: 2004-06-01	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Nitrate-N		3.26	mg/L	5	0.200

<sup>1</sup>High surrogate recovery due to peak interference.

**Sample: 35565 - MW-5**

Analysis: PAH	Analytical Method: S 8270C	Prep Method: S 3510C
QC Batch: 10247	Date Analyzed: 2004-06-04	Analyzed By: RC
Prep Batch: 8990	Date Prepared: 2004-06-02	Prepared By: RC

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		<0.000200	mg/L	0.001	0.200
Acenaphthylene		<0.000200	mg/L	0.001	0.200
Acenaphthene		<0.000200	mg/L	0.001	0.200
Fluorene		<0.000200	mg/L	0.001	0.200
Phenanthrene		<0.000200	mg/L	0.001	0.200
Anthracene		<0.000200	mg/L	0.001	0.200
Fluoranthene		<0.000200	mg/L	0.001	0.200
Pyrene		<0.000200	mg/L	0.001	0.200
Benzo(a)anthracene		<0.000200	mg/L	0.001	0.200
Chrysene		<0.000200	mg/L	0.001	0.200
Benzo(b)fluoranthene		<0.000200	mg/L	0.001	0.200
Benzo(k)fluoranthene		<0.000200	mg/L	0.001	0.200
Benzo(a)pyrene		<0.000200	mg/L	0.001	0.200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.001	0.200
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.001	0.200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.001	0.200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0737	mg/L	0.001	80.0	92	0 - 128
2-Fluorobiphenyl		0.0694	mg/L	0.001	80.0	87	0 - 140
Terphenyl-d14		0.0779	mg/L	0.001	80.0	97	0 - 165

**Sample: 35565 - MW-5**

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 10162	Date Analyzed: 2004-06-02	Analyzed By: RS
Prep Batch: 8997	Date Prepared: 2004-06-01	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		1952	mg/L	4	10.00

**Sample: 35565 - MW-5**

Analysis: Total 8 Metals	Analytical Method: S 6010B	Prep Method: S 3010A
QC Batch: 10220	Date Analyzed: 2004-06-04	Analyzed By: RR
Prep Batch: 9001	Date Prepared: 2004-06-02	Prepared By: TP
Analysis: Total 8 Metals	Analytical Method: S 7470A	Prep Method: N/A
QC Batch: 10318	Date Analyzed: 2004-06-09	Analyzed By: BC
Prep Batch: 9123	Date Prepared: 2004-06-08	Prepared By: BC

*continued ...*



Prep Batch: 9020

Date Prepared: 2004-06-03

Prepared By: TP

Parameter	Flag	RL Result	Units	Dilution	RL
Dissolved Calcium		97.9	mg/L	1	0.500
Dissolved Potassium		7.36	mg/L	1	0.500
Dissolved Magnesium		62.8	mg/L	1	0.500
Dissolved Sodium		409	mg/L	1	0.500

**Sample: 35566 - MW-6**

Analysis: Ion Chromatography	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 10156	Date Analyzed: 2004-06-02	Analyzed By: JSW
Prep Batch: 8992	Date Prepared: 2004-06-01	Prepared By: JSW
QC Batch: 10277	Date Analyzed: 2004-06-08	Analyzed By: JSW
Prep Batch: 9091	Date Prepared: 2004-06-07	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		639	mg/L	50	0.500
Fluoride		3.89	mg/L	5	0.200
Sulfate		329	mg/L	50	0.500

**Sample: 35566 - MW-6**

Analysis: NO3 (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 10156	Date Analyzed: 2004-06-02	Analyzed By: JSW
Prep Batch: 8992	Date Prepared: 2004-06-01	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Nitrate-N		<1.00	mg/L	5	0.200

**Sample: 35566 - MW-6**

Analysis: PAH	Analytical Method: S 8270C	Prep Method: S 3510C
QC Batch: 10247	Date Analyzed: 2004-06-04	Analyzed By: RC
Prep Batch: 8990	Date Prepared: 2004-06-02	Prepared By: RC

Parameter	Flag	RL Result	Units	Dilution	RL
Naphthalene		0.000720	mg/L	0.001	0.200
Acenaphthylene		<0.000200	mg/L	0.001	0.200
Acenaphthene		<0.000200	mg/L	0.001	0.200
Fluorene		<0.000200	mg/L	0.001	0.200
Phenanthrene		<0.000200	mg/L	0.001	0.200
Anthracene		<0.000200	mg/L	0.001	0.200
Fluoranthene		<0.000200	mg/L	0.001	0.200
Pyrene		<0.000200	mg/L	0.001	0.200
Benzo(a)anthracene		<0.000200	mg/L	0.001	0.200

continued ...

sample 35566 continued ...

Parameter	Flag	RL Result	Units	Dilution	RL
Chrysene		<0.000200	mg/L	0.001	0.200
Benzo(b)fluoranthene		<0.000200	mg/L	0.001	0.200
Benzo(k)fluoranthene		<0.000200	mg/L	0.001	0.200
Benzo(a)pyrene		<0.000200	mg/L	0.001	0.200
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.001	0.200
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.001	0.200
Benzo(g,h,i)perylene		<0.000200	mg/L	0.001	0.200

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0748	mg/L	0.001	80.0	94	0 - 128
2-Fluorobiphenyl		0.0702	mg/L	0.001	80.0	88	0 - 140
Terphenyl-d14		0.0815	mg/L	0.001	80.0	102	0 - 165

**Sample: 35566 - MW-6**

Analysis: TDS	Analytical Method: SM 2540C	Prep Method: N/A
QC Batch: 10162	Date Analyzed: 2004-06-02	Analyzed By: RS
Prep Batch: 8997	Date Prepared: 2004-06-01	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Total Dissolved Solids		2152	mg/L	4	10.00

**Sample: 35566 - MW-6**

Analysis: Total 8 Metals	Analytical Method: S 6010B	Prep Method: S 3010A
QC Batch: 10220	Date Analyzed: 2004-06-04	Analyzed By: RR
Prep Batch: 9001	Date Prepared: 2004-06-02	Prepared By: TP
Analysis: Total 8 Metals	Analytical Method: S 7470A	Prep Method: N/A
QC Batch: 10318	Date Analyzed: 2004-06-09	Analyzed By: BC
Prep Batch: 9123	Date Prepared: 2004-06-08	Prepared By: BC

Parameter	Flag	RL Result	Units	Dilution	RL
Total Silver		<0.0125	mg/L	1	0.0125
Total Arsenic		<0.0100	mg/L	1	0.0100
Total Barium		0.841	mg/L	1	0.0100
Total Cadmium		0.0150	mg/L	1	0.00500
Total Chromium		0.117	mg/L	1	0.0100
Total Mercury		<0.000200	mg/L	1	0.000200
Total Lead		<0.0100	mg/L	1	0.0100
Total Selenium		<0.0100	mg/L	1	0.0100

**Method Blank (1)**    QC Batch: 10155

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

**Method Blank (1)** QC Batch: 10155

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Sulfate		<0.500	mg/L	0.5

**Method Blank (1)** QC Batch: 10156

Parameter	Flag	Result	Units	RL
Nitrate-N		<0.200	mg/L	0.2

**Method Blank (1)** QC Batch: 10156

Parameter	Flag	Result	Units	RL
Chloride		<0.500	mg/L	0.5
Sulfate		<0.500	mg/L	0.5

**Method Blank (1)** QC Batch: 10162

Parameter	Flag	Result	Units	RL
Total Dissolved Solids		<10.00	mg/L	10

**Method Blank (1)** QC Batch: 10177

Parameter	Flag	Result	Units	RL
Benzene		<0.00100	mg/L	0.001
Toluene		<0.00100	mg/L	0.001
Ethylbenzene		<0.00100	mg/L	0.001
Xylene		<0.00100	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.110	mg/L	1	0.100	110	70 - 130

*continued...*

method blank continued ...

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
4-Bromofluorobenzene (4-BFB)	<sup>2</sup>	0.0678	mg/L	1	0.100	68	70 - 130

Method Blank (1) QC Batch: 10182

Parameter	Flag	Result	Units	RL
Benzene		<0.00100	mg/L	0.001
Toluene		<0.00100	mg/L	0.001
Ethylbenzene		<0.00100	mg/L	0.001
Xylene		<0.00100	mg/L	0.001

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.106	mg/L	1	0.100	106	76.2 - 119
4-Bromofluorobenzene (4-BFB)		0.0850	mg/L	1	0.100	85	58.5 - 136

Method Blank (1) QC Batch: 10220

Parameter	Flag	Result	Units	RL
Total Silver		<0.0125	mg/L	0.0125
Total Arsenic		<0.0100	mg/L	0.01
Total Barium		<0.0100	mg/L	0.01
Total Cadmium		<0.00500	mg/L	0.005
Total Chromium		<0.0100	mg/L	0.01
Total Lead		<0.0100	mg/L	0.01
Total Selenium		<0.0100	mg/L	0.01

Method Blank (1) QC Batch: 10247

Parameter	Flag	Result	Units	RL
Naphthalene		<0.000200	mg/L	0.2
Acenaphthylene		<0.000200	mg/L	0.2
Acenaphthene		<0.000200	mg/L	0.2
Fluorene		<0.000200	mg/L	0.2
Phenanthrene		<0.000200	mg/L	0.2
Anthracene		<0.000200	mg/L	0.2
Fluoranthene		<0.000200	mg/L	0.2
Pyrene		<0.000200	mg/L	0.2
Benzo(a)anthracene		<0.000200	mg/L	0.2
Chrysene		<0.000200	mg/L	0.2
Benzo(b)fluoranthene		<0.000200	mg/L	0.2
Benzo(k)fluoranthene		<0.000200	mg/L	0.2
Benzo(a)pyrene		<0.000200	mg/L	0.2

continued ...

<sup>2</sup>Low surrogate recovery due to prep. ICV/CCV show the method to be in control.

method blank continued ...

Parameter	Flag	Result	Units	RL
Indeno(1,2,3-cd)pyrene		<0.000200	mg/L	0.2
Dibenzo(a,h)anthracene		<0.000200	mg/L	0.2
Benzo(g,h,i)perylene		<0.000200	mg/L	0.2

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Nitrobenzene-d5		0.0390	mg/L	0.001	80.0	49	0 - 128
2-Fluorobiphenyl		0.0340	mg/L	0.001	80.0	42	0 - 140
Terphenyl-d14		0.0755	mg/L	0.001	80.0	94	0 - 165

**Method Blank (1)** QC Batch: 10258

Parameter	Flag	Result	Units	RL
Hydroxide Alkalinity		<1.00	mg/L as CaCo3	1
Carbonate Alkalinity		<1.00	mg/L as CaCo3	1
Bicarbonate Alkalinity		<4.00	mg/L as CaCo3	4
Total Alkalinity		<4.00	mg/L as CaCo3	4

**Method Blank (1)** QC Batch: 10277

Parameter	Flag	Result	Units	RL
Fluoride		<0.200	mg/L	0.2

**Method Blank (1)** QC Batch: 10313

Parameter	Flag	Result	Units	RL
Dissolved Calcium		<0.500	mg/L	0.5
Dissolved Potassium		<0.500	mg/L	0.5
Dissolved Magnesium		<0.500	mg/L	0.5
Dissolved Sodium		<0.500	mg/L	0.5

**Method Blank (1)** QC Batch: 10318

Parameter	Flag	Result	Units	RL
Total Mercury		<0.000200	mg/L	0.0002

**Duplicate (1)** QC Batch: 10162

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Total Dissolved Solids	364.0	346.0	mg/L	1	5	8.7

**Duplicate (1)** QC Batch: 10258

Param	Duplicate Result	Sample Result	Units	Dilution	RPD	RPD Limit
Hydroxide Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Carbonate Alkalinity	<1.00	<1.00	mg/L as CaCo3	1	0	20
Bicarbonate Alkalinity	388	398	mg/L as CaCo3	1	2	20
Total Alkalinity	388	398	mg/L as CaCo3	1	2	4.8

**Laboratory Control Spike (LCS-1)** QC Batch: 10155

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2.40	2.37	mg/L	1	2.50	<0.0217	96	1	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Laboratory Control Spike (LCS-1)** QC Batch: 10155

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	11.7	11.4	mg/L	1	12.5	<0.337	94	2	90 - 110	20
Sulfate	12.1	11.4	mg/L	1	12.5	<0.409	97	6	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Laboratory Control Spike (LCS-1)** QC Batch: 10156

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	2.37	2.38	mg/L	1	2.50	<0.0217	95	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Laboratory Control Spike (LCS-1)** QC Batch: 10156

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	11.3	11.3	mg/L	1	12.5	<0.337	90	0	90 - 110	20
Sulfate	11.2	11.3	mg/L	1	12.5	<0.409	90	1	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Laboratory Control Spike (LCS-1)** QC Batch: 10177

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.0916	0.0896	mg/L	1	0.100	<0.000136	92	2	70 - 130	20
Toluene	0.0929	0.0926	mg/L	1	0.100	<0.000247	93	0	70 - 130	20
Ethylbenzene	0.0942	0.0928	mg/L	1	0.100	<0.000550	94	1	70 - 130	20
Xylene	0.290	0.285	mg/L	1	0.300	<0.00156	97	2	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.0952	0.0945	mg/L	1	0.100	95	94	70 - 130
4-Bromofluorobenzene (4-BFB)	0.0985	0.0977	mg/L	1	0.100	98	98	70 - 130

**Laboratory Control Spike (LCS-1) QC Batch: 10182**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Benzene	0.0954	0.100	mg/L	1	0.100	<0.000338	95	5	84.6 - 117	20
Toluene	0.0896	0.0955	mg/L	1	0.100	<0.000299	90	6	80.9 - 115	20
Ethylbenzene	0.0874	0.0929	mg/L	1	0.100	<0.000469	87	6	77.6 - 119	20
Xylene	0.261	0.278	mg/L	1	0.300	<0.000787	87	6	76.2 - 122	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.101	0.104	mg/L	1	0.100	101	104	79.7 - 119
4-Bromofluorobenzene (4-BFB)	0.0874	0.0901	mg/L	1	0.100	87	90	65.6 - 141

**Laboratory Control Spike (LCS-1) QC Batch: 10220**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Total Silver	0.118	0.121	mg/L	1	0.125	<0.00274	94	2	85 - 115	20
Total Arsenic	0.456	0.479	mg/L	1	0.500	<0.00489	91	5	85 - 115	20
Total Barium	0.960	0.960	mg/L	1	1.00	<0.000450	96	0	85 - 114	20
Total Cadmium	0.233	0.234	mg/L	1	0.250	<0.000268	93	0	86 - 115	20
Total Chromium	0.0900	0.0910	mg/L	1	0.100	<0.00357	90	1	85 - 115	20
Total Lead	0.458	0.452	mg/L	1	0.500	<0.00698	92	1	86.1 - 112	20
Total Selenium	0.444	0.453	mg/L	1	0.500	<0.00556	89	2	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Laboratory Control Spike (LCS-1) QC Batch: 10247**

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Naphthalene	85.1	85.4	mg/L	1	80.0	<0.0445	106	0	22.5 - 119	20
Acenaphthylene	95.4	95.5	mg/L	1	80.0	<0.0383	119	0	42.3 - 127	20
Acenaphthene	87.8	87.0	mg/L	1	80.0	<0.0421	110	1	38 - 125	20
Fluorene	87.3	86.3	mg/L	1	80.0	<0.0655	109	1	36.6 - 130	20
Phenanthrene	82.0	82.5	mg/L	1	80.0	<0.0383	102	1	40.3 - 131	20

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Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Anthracene	86.5	87.0	mg/L	1	80.0	<0.0468	108	0	36.7 - 135	20
Fluoranthene	88.3	87.4	mg/L	1	80.0	<0.0550	110	1	43.2 - 133	20
Pyrene	87.3	88.9	mg/L	1	80.0	<0.0904	109	2	48.8 - 157	20
Benzo(a)anthracene	90.2	90.0	mg/L	1	80.0	<0.0993	113	0	40.2 - 138	20
Chrysene	69.6	70.1	mg/L	1	80.0	<0.121	87	1	5.5 - 179	20
Benzo(b)fluoranthene	84.2	87.8	mg/L	1	80.0	<0.171	105	4	16.4 - 156	20
Benzo(k)fluoranthene	91.2	89.7	mg/L	1	80.0	<0.0951	114	2	40.9 - 150	20
Benzo(a)pyrene	92.6	93.6	mg/L	1	80.0	<0.135	116	1	38.7 - 149	20
Indeno(1,2,3-cd)pyrene	91.2	91.3	mg/L	1	80.0	<0.176	114	0	32 - 153	20
Dibenzo(a,h)anthracene	83.3	85.2	mg/L	1	80.0	<0.184	104	2	0 - 202	20
Benzo(g,h,i)perylene	93.1	94.4	mg/L	1	80.0	<0.134	116	1	39.1 - 144	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Nitrobenzene-d5	89.9	90.8	mg/L	1	80.0	112	114	0 - 128
2-Fluorobiphenyl	84.9	83.8	mg/L	1	80.0	106	105	0 - 140
Terphenyl-d14	86.5	87.0	mg/L	1	80.0	108	109	0 - 165

Laboratory Control Spike (LCS-1) QC Batch: 10277

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Fluoride	2.25	2.24	mg/L	1	2.50	<0.0594	90	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1) QC Batch: 10313

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	98.1	98.6	mg/L	1	100	<0.102	98	0	85 - 115	20
Dissolved Potassium	96.7	92.0	mg/L	1	100	<0.101	97	5	85 - 115	20
Dissolved Magnesium	98.7	98.8	mg/L	1	100	<0.110	99	0	85 - 115	20
Dissolved Sodium	93.9	94.0	mg/L	1	100	<0.120	94	0	85 - 115	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1) QC Batch: 10318

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Total Mercury	0.000990	0.00100	mg/L	1	0.00100	<0.000329	99	1	82 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) QC Batch: 10155

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	126	125	mg/L	50	2.50	8.47	94	1	79.6 - 109	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** QC Batch: 10155

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1230	1240	mg/L	50	12.5	694	86	1	74.3 - 118	20
Sulfate	805	829	mg/L	50	12.5	252	88	3	77.8 - 112	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** QC Batch: 10156

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Nitrate-N	123	123	mg/L	50	2.50	6.35	93	0	79.6 - 109	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** QC Batch: 10156

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	1190	1190	mg/L	50	12.5	639	88	0	74.3 - 118	20
Sulfate	880	890	mg/L	50	12.5	329	88	1	77.8 - 112	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** QC Batch: 10220

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Total Silver	0.128	0.128	mg/L	1	0.125	<0.00274	102	0	75 - 125	20
Total Arsenic	0.451	0.476	mg/L	1	0.500	<0.00489	90	5	75 - 125	20
Total Barium	1.09	0.971	mg/L	1	1.00	<0.000450	109	12	75 - 125	20
Total Cadmium	0.241	0.241	mg/L	1	0.250	<0.000268	96	0	75 - 125	20
Total Chromium	0.0920	0.0910	mg/L	1	0.100	<0.00357	92	1	75 - 125	20
Total Lead	0.493	0.496	mg/L	1	0.500	<0.00698	99	1	75 - 125	20
Total Selenium	0.483	0.441	mg/L	1	0.500	<0.00556	97	9	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** QC Batch: 10277

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Fluoride	46.6	47.6	mg/L	20	2.50	3.15	87	2	84.9 - 104	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** QC Batch: 10313

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Dissolved Calcium	<sup>3</sup> 304	275	mg/L	1	100	204	100	10	75 - 125	20
Dissolved Potassium	113	116	mg/L	1	100	10.8	102	3	75 - 125	20
Dissolved Magnesium	182	169	mg/L	1	100	83.6	98	7	75 - 125	20
Dissolved Sodium	<sup>45</sup> 453	439	mg/L	1	100	392	61	3	75 - 125	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** QC Batch: 10318

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Total Mercury	0.00108	0.00108	mg/L	1	0.00100	<0.0000329	108	0	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-2)** QC Batch: 10318

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Total Mercury	0.000990	0.00101	mg/L	1	0.00100	<0.0000329	99	2	80 - 120	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Standard (ICV-1)** QC Batch: 10155

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.38	95	90 - 110	2004-06-02

**Standard (ICV-1)** QC Batch: 10155

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.5	92	90 - 110	2004-06-02
Sulfate		mg/L	12.5	11.5	92	90 - 110	2004-06-02

**Standard (CCV-1)** QC Batch: 10155

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.37	95	90 - 110	2004-06-02

<sup>3</sup>ms recovery out of limits due to matrix effect, use lcs/lcsd

<sup>4</sup>ms recovery out of limits due to matrix effect, use lcs/lcsd

<sup>5</sup>ms recovery out of limits due to matrix effect, use lcs/lcsd

**Standard (CCV-1)** QC Batch: 10155

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.3	90	90 - 110	2004-06-02
Sulfate		mg/L	12.5	11.3	90	90 - 110	2004-06-02

**Standard (ICV-1)** QC Batch: 10156

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.37	95	90 - 110	2004-06-02

**Standard (ICV-1)** QC Batch: 10156

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.3	90	90 - 110	2004-06-02
Sulfate		mg/L	12.5	11.3	90	90 - 110	2004-06-02

**Standard (CCV-1)** QC Batch: 10156

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Nitrate-N		mg/L	2.50	2.39	96	90 - 110	2004-06-02

**Standard (CCV-1)** QC Batch: 10156

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/L	12.5	11.5	92	90 - 110	2004-06-02
Sulfate		mg/L	12.5	11.5	92	90 - 110	2004-06-02

**Standard (ICV-1)** QC Batch: 10162

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	1028	103	90 - 110	2004-06-02

**Standard (CCV-1)** QC Batch: 10162

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Dissolved Solids		mg/L	1000	982.0	98	90 - 110	2004-06-02

**Standard (ICV-1)** QC Batch: 10177

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0928	93	85 - 115	2004-06-01
Toluene		mg/L	0.100	0.0949	95	85 - 115	2004-06-01
Ethylbenzene		mg/L	0.100	0.0947	95	85 - 115	2004-06-01
Xylene		mg/L	0.300	0.291	97	85 - 115	2004-06-01

**Standard (CCV-1)** QC Batch: 10177

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.100	100	85 - 115	2004-06-01
Toluene		mg/L	0.100	0.102	102	85 - 115	2004-06-01
Ethylbenzene		mg/L	0.100	0.101	101	85 - 115	2004-06-01
Xylene		mg/L	0.300	0.308	103	85 - 115	2004-06-01

**Standard (CCV-1)** QC Batch: 10182

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0966	97	85 - 115	2004-06-02
Toluene		mg/L	0.100	0.0917	92	85 - 115	2004-06-02
Ethylbenzene		mg/L	0.100	0.0892	89	85 - 115	2004-06-02
Xylene		mg/L	0.300	0.264	88	85 - 115	2004-06-02

**Standard (CCV-2)** QC Batch: 10182

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Benzene		mg/L	0.100	0.0983	98	85 - 115	2004-06-02
Toluene		mg/L	0.100	0.0939	94	85 - 115	2004-06-02
Ethylbenzene		mg/L	0.100	0.0908	91	85 - 115	2004-06-02
Xylene		mg/L	0.300	0.270	90	85 - 115	2004-06-02

**Standard (ICV-1)** QC Batch: 10220

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Silver		mg/L	0.125	0.120	96	90 - 110	2004-06-04
Total Arsenic		mg/L	1.00	0.966	97	90 - 110	2004-06-04
Total Barium		mg/L	1.00	0.953	95	90 - 110	2004-06-04
Total Cadmium		mg/L	1.00	0.959	96	90 - 110	2004-06-04
Total Chromium		mg/L	1.00	0.961	96	90 - 110	2004-06-04
Total Lead		mg/L	1.00	0.953	95	90 - 110	2004-06-04
Total Selenium		mg/L	1.00	0.961	96	90 - 110	2004-06-04

**Standard (CCV-1)** QC Batch: 10220

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Silver		mg/L	0.125	0.126	101	90 - 110	2004-06-04
Total Arsenic		mg/L	1.00	0.972	97	90 - 110	2004-06-04
Total Barium		mg/L	1.00	1.01	101	90 - 110	2004-06-04
Total Cadmium		mg/L	1.00	0.978	98	90 - 110	2004-06-04
Total Chromium		mg/L	1.00	1.00	100	90 - 110	2004-06-04
Total Lead		mg/L	1.00	0.979	98	90 - 110	2004-06-04
Total Selenium		mg/L	1.00	0.953	95	90 - 110	2004-06-04

**Standard (CCV-1)** QC Batch: 10247

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Naphthalene		mg/L	60.0	61.0	102	80 - 120	2004-06-04
Acenaphthylene		mg/L	60.0	61.2	102	80 - 120	2004-06-04
Acenaphthene		mg/L	60.0	60.4	101	80 - 120	2004-06-04
Fluorene		mg/L	60.0	61.7	103	80 - 120	2004-06-04
Phenanthrene		mg/L	60.0	60.1	100	80 - 120	2004-06-04
Anthracene		mg/L	60.0	60.4	101	80 - 120	2004-06-04
Fluoranthene		mg/L	60.0	59.9	100	80 - 120	2004-06-04
Pyrene		mg/L	60.0	62.1	104	80 - 120	2004-06-04
Benzo(a)anthracene		mg/L	60.0	61.9	103	80 - 120	2004-06-04
Chrysene		mg/L	60.0	61.3	102	80 - 120	2004-06-04
Benzo(b)fluoranthene		mg/L	60.0	65.1	108	80 - 120	2004-06-04
Benzo(k)fluoranthene		mg/L	60.0	62.8	105	80 - 120	2004-06-04
Benzo(a)pyrene		mg/L	60.0	63.2	105	80 - 120	2004-06-04
Indeno(1,2,3-cd)pyrene		mg/L	60.0	62.4	104	80 - 120	2004-06-04
Dibenzo(a,h)anthracene		mg/L	60.0	62.2	104	80 - 120	2004-06-04
Benzo(g,h,i)perylene		mg/L	60.0	62.4	104	80 - 120	2004-06-04

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limit
Nitrobenzene-d5		66.0	mg/L	1	60.0	110	80 - 120
2-Fluorobiphenyl		59.0	mg/L	1	60.0	98	80 - 120
Terphenyl-d14		61.3	mg/L	1	60.0	102	80 - 120

**Standard (ICV-1)** QC Batch: 10258

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Alkalinity		mg/L as CaCo3	250	242	97	90 - 110	2004-06-04

**Standard (CCV-1)** QC Batch: 10258

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Alkalinity		mg/L as CaCo3	250	240	96	90 - 110	2004-06-04

**Standard (ICV-1)** QC Batch: 10277

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Fluoride		mg/L	2.50	2.28	91	90 - 110	2004-06-08

**Standard (CCV-1)** QC Batch: 10277

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Fluoride		mg/L	2.50	2.27	91	90 - 110	2004-06-08

**Standard (ICV-1)** QC Batch: 10313

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	25.1	100	90 - 110	2004-06-08
Dissolved Potassium		mg/L	25.0	24.0	96	90 - 110	2004-06-08
Dissolved Magnesium		mg/L	25.0	24.6	98	90 - 110	2004-06-08
Dissolved Sodium		mg/L	25.0	24.9	100	90 - 110	2004-06-08

**Standard (CCV-1)** QC Batch: 10313

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Dissolved Calcium		mg/L	25.0	26.5	106	90 - 110	2004-06-08
Dissolved Potassium		mg/L	25.0	23.7	95	90 - 110	2004-06-08
Dissolved Magnesium		mg/L	25.0	25.7	103	90 - 110	2004-06-08
Dissolved Sodium		mg/L	25.0	24.7	99	90 - 110	2004-06-08

**Standard (ICV-1)** QC Batch: 10318

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.00100	0.00100	100	80 - 120	2004-06-09

**Standard (CCV-1)** QC Batch: 10318

---

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.00100	0.000950	95	80 - 120	2004-06-09

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**Standard (CCV-2)**    QC Batch: 10318

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Total Mercury		mg/L	0.00100	0.000950	95	80 - 120	2004-06-09

---





## Summary Report

Dave Henard  
RESPEC  
4775 Indian School Rd. NE  
Suite 300  
Albuquerque, NM 87110

Report Date: June 10, 2004

Work Order: 4060812

Project Location: Monument,NM  
Project Name: Jamar  
Project Number: 1494

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
35958	Exc 6 E @ 6'	soil	2004-06-02	14:35	2004-06-08
35959	Exc 6 N @ 1'	soil	2004-06-02	14:00	2004-06-08
35960	Exc 6 M @ 3'	soil	2004-06-02	16:00	2004-06-08
35961	Exc 6 M @ 6'	soil	2004-06-02	16:35	2004-06-08
35962	Exc 6 W @ 1'	soil	2004-06-03	09:30	2004-06-08
35963	Exc 6 W @ 6'	soil	2004-06-03	10:00	2004-06-08
35964	Exc 7 M @ 1'	soil	2004-06-03	13:00	2004-06-08
35965	Exc 7 M @ 3'	soil	2004-06-03	13:41	2004-06-08
35966	Exc 7 M @ 6'	soil	2004-06-03	14:18	2004-06-08
35967	Exc 7 N @ 3'	soil	2004-06-03	15:40	2004-06-08
35968	Exc 7 S @ 3'	soil	2004-06-03	16:30	2004-06-08

Sample - Field Code	TPH DRO DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
35958 - Exc 6 E @ 6'	<50.0	<1.00
35959 - Exc 6 N @ 1'	8280	100
35960 - Exc 6 M @ 3'	<50.0	<1.00
35961 - Exc 6 M @ 6'	<50.0	<1.00
35962 - Exc 6 W @ 1'	<50.0	<1.00
35963 - Exc 6 W @ 6'	<50.0	<1.00
35964 - Exc 7 M @ 1'	92.4	<1.00
35965 - Exc 7 M @ 3'	<50.0	<1.00
35966 - Exc 7 M @ 6'	<50.0	<1.00
35967 - Exc 7 N @ 3'	<50.0	<1.00
35968 - Exc 7 S @ 3'	<50.0	<1.00

Sample: 35958 - Exc 6 E @ 6'

Param	Flag	Result	Units	RL
Chloride		739	mg/Kg	1.00

Sample: 35959 - Exc 6 N @ 1'

Param	Flag	Result	Units	RL
Chloride		1760	mg/Kg	1.00

**Sample: 35960 - Exc 6 M @ 3'**

Param	Flag	Result	Units	RL
Chloride		41.9	mg/Kg	1.00

**Sample: 35961 - Exc 6 M @ 6'**

Param	Flag	Result	Units	RL
Chloride		155	mg/Kg	1.00

**Sample: 35962 - Exc 6 W @ 1'**

Param	Flag	Result	Units	RL
Chloride		50.6	mg/Kg	1.00

**Sample: 35963 - Exc 6 W @ 6'**

Param	Flag	Result	Units	RL
Chloride		71.1	mg/Kg	1.00

**Sample: 35964 - Exc 7 M @ 1'**

Param	Flag	Result	Units	RL
Chloride		880	mg/Kg	1.00

**Sample: 35965 - Exc 7 M @ 3'**

Param	Flag	Result	Units	RL
Chloride		3250	mg/Kg	1.00

**Sample: 35966 - Exc 7 M @ 6'**

Param	Flag	Result	Units	RL
Chloride		100	mg/Kg	1.00

**Sample: 35967 - Exc 7 N @ 3'**

Param	Flag	Result	Units	RL
Chloride		752	mg/Kg	1.00

Report Date: June 10, 2004  
1494

Work Order: 4060812  
Jamar

Page Number: 3 of 3  
Monument, NM

Sample: 35968 - Exc 7 S @ 3'

Param	Flag	Result	Units	RL
Chloride		1340	mg/Kg	1.00

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## Analytical and Quality Control Report

Dave Henard  
RESPEC  
4775 Indian School Rd. NE  
Suite 300  
Albuquerque, NM 87110

Report Date: June 10, 2004

Work Order: 4060812

Project Location: Monument, NM  
Project Name: Jamar  
Project Number: 1494

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
35958	Exc 6 E @ 6'	soil	2004-06-02	14:35	2004-06-08
35959	Exc 6 N @ 1'	soil	2004-06-02	14:00	2004-06-08
35960	Exc 6 M @ 3'	soil	2004-06-02	16:00	2004-06-08
35961	Exc 6 M @ 6'	soil	2004-06-02	16:35	2004-06-08
35962	Exc 6 W @ 1'	soil	2004-06-03	09:30	2004-06-08
35963	Exc 6 W @ 6'	soil	2004-06-03	10:00	2004-06-08
35964	Exc 7 M @ 1'	soil	2004-06-03	13:00	2004-06-08
35965	Exc 7 M @ 3'	soil	2004-06-03	13:41	2004-06-08
35966	Exc 7 M @ 6'	soil	2004-06-03	14:18	2004-06-08
35967	Exc 7 N @ 3'	soil	2004-06-03	15:40	2004-06-08
35968	Exc 7 S @ 3'	soil	2004-06-03	16:30	2004-06-08

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 15 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

  
Dr. Blair Leftwich, Director

## Analytical Report

**Sample: 35958 - Exc 6 E @ 6'**

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 10335	Date Analyzed: 2004-06-10	Analyzed By: JSW
Prep Batch: 9140	Date Prepared: 2004-06-09	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		739	mg/Kg	50	1.00

**Sample: 35958 - Exc 6 E @ 6'**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 10310	Date Analyzed: 2004-06-09	Analyzed By: BP
Prep Batch: 9118	Date Prepared: 2004-06-08	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		142	mg/Kg	1	150	95	64.7 - 162

**Sample: 35958 - Exc 6 E @ 6'**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 10298	Date Analyzed: 2004-06-08	Analyzed By: MT
Prep Batch: 9110	Date Prepared: 2004-06-08	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.770	mg/Kg	10	0.100	77	70 - 130
4-Bromofluorobenzene (4-BFB)		0.833	mg/Kg	10	0.100	83	70 - 130

**Sample: 35959 - Exc 6 N @ 1'**

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 10335	Date Analyzed: 2004-06-10	Analyzed By: JSW
Prep Batch: 9140	Date Prepared: 2004-06-09	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		1760	mg/Kg	100	1.00

**Sample: 35959 - Exc 6 N @ 1'**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 10310	Date Analyzed: 2004-06-09	Analyzed By: BP
Prep Batch: 9118	Date Prepared: 2004-06-08	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		8280	mg/Kg	40	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane	1	2040	mg/Kg	40	3.50	1457	64.7 - 162

**Sample: 35959 - Exc 6 N @ 1'**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 10298	Date Analyzed: 2004-06-08	Analyzed By: MT
Prep Batch: 9110	Date Prepared: 2004-06-08	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		100	mg/Kg	100	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)	2	0.735	mg/Kg	100	0.100	7	70 - 130
4-Bromofluorobenzene (4-BFB)	3	3.53	mg/Kg	100	0.100	35	70 - 130

**Sample: 35960 - Exc 6 M @ 3'**

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 10335	Date Analyzed: 2004-06-10	Analyzed By: JSW
Prep Batch: 9140	Date Prepared: 2004-06-09	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		41.9	mg/Kg	10	1.00

**Sample: 35960 - Exc 6 M @ 3'**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 10310	Date Analyzed: 2004-06-09	Analyzed By: BP
Prep Batch: 9118	Date Prepared: 2004-06-08	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

<sup>1</sup>Surrogate recovery out of range due to peak interference. QC show the process within control.

<sup>2</sup>Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.

<sup>3</sup>Low surrogate recovery due to matrix interference. ICV/CCV show the method to be in control.



Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.888	mg/Kg	10	0.100	89	70 - 130
4-Bromofluorobenzene (4-BFB)		0.891	mg/Kg	10	0.100	89	70 - 130

**Sample: 35962 - Exc 6 W @ 1'**

Analysis: Chloride (IC)                      Analytical Method: E 300.0                      Prep Method: N/A  
 QC Batch: 10335                              Date Analyzed: 2004-06-10                      Analyzed By: JSW  
 Prep Batch: 9140                              Date Prepared: 2004-06-09                      Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		50.6	mg/Kg	10	1.00

**Sample: 35962 - Exc 6 W @ 1'**

Analysis: TPH DRO                              Analytical Method: Mod. 8015B                      Prep Method: N/A  
 QC Batch: 10310                              Date Analyzed: 2004-06-09                      Analyzed By: BP  
 Prep Batch: 9118                              Date Prepared: 2004-06-08                      Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		160	mg/Kg	1	150	107	64.7 - 162

**Sample: 35962 - Exc 6 W @ 1'**

Analysis: TPH GRO                              Analytical Method: S 8015B                      Prep Method: S 5035  
 QC Batch: 10298                              Date Analyzed: 2004-06-08                      Analyzed By: MT  
 Prep Batch: 9110                              Date Prepared: 2004-06-08                      Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.819	mg/Kg	10	0.100	82	70 - 130
4-Bromofluorobenzene (4-BFB)		0.931	mg/Kg	10	0.100	93	70 - 130

**Sample: 35963 - Exc 6 W @ 6'**

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A  
 QC Batch: 10335 Date Analyzed: 2004-06-10 Analyzed By: JSW  
 Prep Batch: 9140 Date Prepared: 2004-06-09 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		71.1	mg/Kg	5	1.00

**Sample: 35963 - Exc 6 W @ 6'**

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A  
 QC Batch: 10310 Date Analyzed: 2004-06-09 Analyzed By: BP  
 Prep Batch: 9118 Date Prepared: 2004-06-08 Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		147	mg/Kg	1	150	98	64.7 - 162

**Sample: 35963 - Exc 6 W @ 6'**

Analysis: TPH GRO Analytical Method: S 8015B Prep Method: S 5035  
 QC Batch: 10298 Date Analyzed: 2004-06-08 Analyzed By: MT  
 Prep Batch: 9110 Date Prepared: 2004-06-08 Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.865	mg/Kg	10	0.100	86	70 - 130
4-Bromofluorobenzene (4-BFB)		0.876	mg/Kg	10	0.100	88	70 - 130

**Sample: 35964 - Exc 7 M @ 1'**

Analysis: Chloride (IC) Analytical Method: E 300.0 Prep Method: N/A  
 QC Batch: 10335 Date Analyzed: 2004-06-10 Analyzed By: JSW  
 Prep Batch: 9140 Date Prepared: 2004-06-09 Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		880	mg/Kg	50	1.00

**Sample: 35964 - Exc 7 M @ 1'**

Analysis: TPH DRO Analytical Method: Mod. 8015B Prep Method: N/A

QC Batch: 10310      Date Analyzed: 2004-06-09      Analyzed By: BP  
Prep Batch: 9118      Date Prepared: 2004-06-08      Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		92.4	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		171	mg/Kg	1	150	114	64.7 - 162

**Sample: 35964 - Exc 7 M @ 1'**

Analysis: TPH GRO      Analytical Method: S 8015B      Prep Method: S 5035  
QC Batch: 10298      Date Analyzed: 2004-06-08      Analyzed By: MT  
Prep Batch: 9110      Date Prepared: 2004-06-08      Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.804	mg/Kg	10	0.100	80	70 - 130
4-Bromofluorobenzene (4-BFB)		0.790	mg/Kg	10	0.100	79	70 - 130

**Sample: 35965 - Exc 7 M @ 3'**

Analysis: Chloride (IC)      Analytical Method: E 300.0      Prep Method: N/A  
QC Batch: 10335      Date Analyzed: 2004-06-10      Analyzed By: JSW  
Prep Batch: 9140      Date Prepared: 2004-06-09      Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		3250	mg/Kg	500	1.00

**Sample: 35965 - Exc 7 M @ 3'**

Analysis: TPH DRO      Analytical Method: Mod. 8015B      Prep Method: N/A  
QC Batch: 10310      Date Analyzed: 2004-06-09      Analyzed By: BP  
Prep Batch: 9118      Date Prepared: 2004-06-08      Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		147	mg/Kg	1	150	98	64.7 - 162

**Sample: 35965 - Exc 7 M @ 3'**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 10298	Date Analyzed: 2004-06-08	Analyzed By: MT
Prep Batch: 9110	Date Prepared: 2004-06-08	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
Trifluorotoluene (TFT)		0.860	mg/Kg	10	0.100	86	70 - 130
4-Bromofluorobenzene (4-BFB)		0.842	mg/Kg	10	0.100	84	70 - 130

**Sample: 35966 - Exc 7 M @ 6'**

Analysis: Chloride (IC)	Analytical Method: E 300.0	Prep Method: N/A
QC Batch: 10335	Date Analyzed: 2004-06-10	Analyzed By: JSW
Prep Batch: 9140	Date Prepared: 2004-06-09	Prepared By: JSW

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		100	mg/Kg	5	1.00

**Sample: 35966 - Exc 7 M @ 6'**

Analysis: TPH DRO	Analytical Method: Mod. 8015B	Prep Method: N/A
QC Batch: 10310	Date Analyzed: 2004-06-09	Analyzed By: BP
Prep Batch: 9118	Date Prepared: 2004-06-08	Prepared By: DS

Parameter	Flag	RL Result	Units	Dilution	RL
DRO		<50.0	mg/Kg	1	50.0

Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		150	mg/Kg	1	150	100	64.7 - 162

**Sample: 35966 - Exc 7 M @ 6'**

Analysis: TPH GRO	Analytical Method: S 8015B	Prep Method: S 5035
QC Batch: 10298	Date Analyzed: 2004-06-08	Analyzed By: MT
Prep Batch: 9110	Date Prepared: 2004-06-08	Prepared By: MT

Parameter	Flag	RL Result	Units	Dilution	RL
GRO		<1.00	mg/Kg	10	0.100





Surrogate	Flag	Result	Units	Dilution	Spike Amount	Percent Recovery	Recovery Limits
n-Triacontane		142	mg/Kg	1	150	94	64.7 - 162

**Matrix Blank (1)** QC Batch: 10332

Parameter	Flag	Result	Units	RL
Chloride		42.2	mg/Kg	1

**Matrix Blank (1)** QC Batch: 10335

Parameter	Flag	Result	Units	RL
Chloride		43.1	mg/Kg	1

**Laboratory Control Spike (LCS-1)** QC Batch: 10298

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	8.86	9.52	mg/Kg	10	1.00	<0.381	89	7	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.994	1.06	mg/Kg	10	0.100	99	106	70 - 130
4-Bromofluorobenzene (4-BFB)	0.933	0.940	mg/Kg	10	0.100	93	94	70 - 130

**Laboratory Control Spike (LCS-1)** QC Batch: 10310

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	234	232	mg/Kg	1	250	<12.0	94	1	64.2 - 138	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	LCS Result	LCSD Result	Units	Dil.	Spike Amount	LCS Rec.	LCSD Rec.	Rec. Limit
n-Triacontane	143	144	mg/Kg	1	150	96	96	64.7 - 162

**Laboratory Control Spike (LCS-1)** QC Batch: 10332

*continued...*

control spikes continued...

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride <sup>45</sup>	56.5	56.6	mg/Kg	1	12.5	42.2	114	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Laboratory Control Spike (LCS-1) QC Batch: 10335

Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Param	LCS Result	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride <sup>67</sup>	57.5	57.2	mg/Kg	1	12.5	43.1	115	0	90 - 110	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Matrix Spike (MS-1) QC Batch: 10298

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
GRO	8.37	8.18	mg/Kg	10	1.00	<0.381	84	2	70 - 130	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
Trifluorotoluene (TFT)	0.858	0.778	mg/Kg	10	0.1	86	78	70 - 130
4-Bromofluorobenzene (4-BFB)	0.917	0.910	mg/Kg	10	0.1	92	91	70 - 130

Matrix Spike (MS-1) QC Batch: 10310

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
DRO	237	235	mg/Kg	1	250	<12.0	95	1	62.4 - 128	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Surrogate	MS Result	MSD Result	Units	Dil.	Spike Amount	MS Rec.	MSD Rec.	Rec. Limit
n-Triacontane	150	148	mg/Kg	1	150	100	99	64.7 - 162

Matrix Spike (MS-1) QC Batch: 10332

continued...

<sup>4</sup>Outside control limits due to soil blank high in chloride. All other QC's are in control.  
<sup>5</sup>High percent EA for Chloride due to Soil blank being so high in chloride. All Other QC's are in control.  
<sup>6</sup>High percent EA for Chloride due to Soil blank being so high in chloride. All Other QC's are in control.  
<sup>7</sup>High percent EA for Chloride due to Soil blank being so high in chloride. All Other QC's are in control.

*matrix spikes continued...*

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	<sup>89</sup> 3040	3030	mg/Kg	100	12.5	1340	136	0	69.4 - 118	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Matrix Spike (MS-1)** QC Batch: 10335

Param	MS Result	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	RPD	Rec. Limit	RPD Limit
Chloride	<sup>1011</sup> 1560	1560	mg/Kg	50	12.5	752	129	0	69.4 - 118	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Standard (ICV-1)** QC Batch: 10298

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.929	93	85 - 115	2004-06-08

**Standard (CCV-1)** QC Batch: 10298

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.890	89	85 - 115	2004-06-08

**Standard (CCV-2)** QC Batch: 10298

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
GRO		mg/L	1.00	0.941	94	85 - 115	2004-06-08

**Standard (ICV-1)** QC Batch: 10310

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	232	93	64.2 - 138	2004-06-09

**Standard (CCV-1)** QC Batch: 10310

<sup>8</sup>matrix difficulties.  
<sup>9</sup>matrix difficulties.  
<sup>10</sup>matrix difficulties.  
<sup>11</sup>matrix difficulties.

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	252	101	64.2 - 138	2004-06-09

**Standard (CCV-2)** QC Batch: 10310

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
DRO		mg/Kg	250	252	101	64.2 - 138	2004-06-09

**Standard (ICV-1)** QC Batch: 10332

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.8	94	90 - 110	2004-06-10

**Standard (CCV-1)** QC Batch: 10332

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.7	94	90 - 110	2004-06-10

**Standard (ICV-1)** QC Batch: 10335

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.7	94	90 - 110	2004-06-10

**Standard (CCV-1)** QC Batch: 10335

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	12.5	11.8	94	90 - 110	2004-06-10



**TraceAnalysis, Inc.**  
**General Terms and Conditions**

**Article 1: General**

1.1 The words "we", "us", and "our" refer to TraceAnalysis. You will deliver samples to us for analysis, accompanied, or preceded by, a signed Chain of Custody/Analysis Request outlining the scope and timing of our work and stating either the testing criteria you require or identifying the agency to which the results will be submitted.

**Article 2: Our General Responsibilities**

2.1 We agree to provide the professional services described in this agreement. We will provide you with written reports containing analytical results. We will provide our services with the highest degree of care and skill ordinarily exercised under similar circumstances by reputable members of our profession practicing in the same locality.

2.2 Test and observations will be conducted using test procedures and laboratory protocols as specified in accepted Chain of Custody/Analysis Request. If you direct a member of making tests that varies standard or recommended procedures, you agree to hold us harmless from all claims, damages, and expenses arising out of your direction.

2.3 We will not release information regarding our services for you or any information that we receive from you, except for information that is in the public domain and except as we are required by law.

**Article 3: Your General Responsibilities**

3.1 On each Chain of Custody/Analysis Request you will designate a representative who has authority to transmit instructions, receive information, and make decisions relative to our work.

3.2 You will respond in a reasonable time to our request for decisions, authorization for changes, additional completion, or schedule extensions.

3.3 For each Chain of Custody/Analysis Request you will either provide us with the exact methods for analysis of each fraction or you will identify the regulations and agency under which or for which the analysis are to be prepared. If permits, consent orders, work plans, quality assurance plans, or correspondence with regulatory agencies address laboratory requirements, you will provide us with copies of the relevant provisions prior to our initiation of the analyses.

**Article 4: Reports and Records**

4.1 We will furnish copies of each report to you as specified in the Chain of Custody and Analysis Request. We will retain original data for seven years and financial records for three years, but only if a service purchaser, following transmittal of our final report.

4.2 If you do not pay for our services as agreed, you shall not be entitled to a refund of any amount paid and you shall be liable for the full amount of the fee plus interest on the unpaid amount.

**Article 5: Delivery and Acceptance of Samples**

5.1 Until we accept delivery of samples by notation on chain of custody documents or otherwise in writing accept the samples, you are responsible for loss of or damage to samples until so accepted. We have no responsibility as to samples.

5.2 As to any samples that are suspected of containing hazardous substance or radioactive material which would require special handling required, you will clearly label containers with such substance and type and type of radioactive activity. This information will be given to us in writing as a part of the Chain of Custody/Analysis Request and will precede or accompany samples suspected of being hazardous or radioactive.

5.3 Samples accepted by us remain your property while in our custody. We will retain samples for a period of 14 days following the date of submission of our report. We will extend our retention period if you so direct. Following the retention period we will dispose of non-hazardous samples. We may return highly hazardous, acutely toxic, or radioactive samples and samples containing and radioactive. You agree to accept them.

5.4 Regardless of a prior acceptance, we may refuse acceptance or revoke acceptance of samples if we determine that the samples present a risk to health, safety, or the environment and that we are not authorized to accept them. If we revoke acceptance of any sample, you will have it removed from our facilities promptly.

**Article 6: Changes to Task Orders**

6.1 No persons other than the designated representatives for each Chain of Custody/Analysis Request are authorized to act regarding changes to a Chain of Custody/Analysis Request. We will notify you promptly if we identify any activity that we regard as a change to the terms and conditions of a Chain of Custody/Analysis Request. Our notice will include the date, nature, circumstances and scope of the activity regarded as a change. We will specify the particular elements of project performance for which we may seek an equitable adjustment.

6.2 You will respond to the notice provided for in paragraph 6.1 promptly. Changes may be made to a Chain of Custody/Analysis Request through issuance of an amendment. The amendment will specify the reason for the change and, as appropriate, include any modified budgets, schedules, scope of work, and other necessary provisions.

6.3 Until agreement is reached concerning the proposed change, we may regard the situation as a suspension directed by you.

**Article 7: Compensation**

7.1 Our pricing for the work is predicated upon your acceptance of the conditions and allocations of risks and responsibilities described in this agreement. You agree to pay for services as stated in our proposal and accepted by you or according to our then current standard pricing documents if there is no other written agreement as to price. An estimate or statement of probable cost is not a firm figure unless stated as such.

7.2 Unless otherwise agreed to elsewhere, you agree to pay invoices within 30 days of receipt unless, within 15 days from receipt of the invoice, you notify us in writing of a particular item that is alleged to be incorrect. You agree to pay the uncontested portions of the invoices within 30 days of receipt. You agree to pay interest on unpaid balances beginning 60 days after receipt of invoice at the rate of 1.5% per month, but not to exceed the maximum rate allowed by law.

7.3 If you direct us to invoice another, we will do so, but you agree to be ultimately responsible for our compensation until you provide us with that third party's written acceptance of the terms of our agreement and until we agree to the substitution.

7.4 You agree to compensate us for our services and expenses if we are required to respond to legal process related to our services for you. Compensable services include third party charges for all personnel involved in the response and attorney fees reasonably incurred in obtaining advice concerning the response, the preparation of the testifier, and appearances related to the legal process.

7.5 If we are delayed by, or the period of performance is materially extended because of, factors beyond our control, or if project condition or the scope or amount of work change, or if the standards or methods of testing change, we will give you timely notice of the change and we will receive an equitable adjustment of our compensation.

**Article 8: Risk Allocation, Disputes, and Damages**

8.1 Neither we nor you will be liable to the other for special, incidental, consequential or punitive losses or damages, including but not limited to those arising from delay, loss of use, loss of profits or revenue, or the cost of capital.

8.2 We will not be liable to you for damages unless suit is commenced within two years of injury or loss or within two years of the date of the completion of our services, whichever is earlier. In no event will we be liable to you unless you have notified us of the discovery of the negligent act, error, omission or breach within 30 days of the date of its discovery and unless you have given us an opportunity to investigate and to recommend ways of mitigating your damages.

8.3 In the event you fail to pay us within 90 days following the invoice date, we may consider the default a total breach of our agreement and we may, at our option, terminate all of our duties without liability to you or to others.

8.4 If it is claimed by a third party that we did not complete an acceptable analysis, at your request we will seek further review and acceptance of the completed work by the third party and use your best efforts to obtain that acceptance. We will assist you as directed.

8.5 You and we agree that disputes will be submitted to "Alternative Dispute Resolution" (ADR) as a condition precedent to litigation and other remedies provided by law. Each of us agrees to exercise good faith efforts to resolve disputes through mediation unless we both agree upon another ADR procedure. All disputes will be governed by the law of the place where our services are rendered, or if our services are rendered in more than one state, you and we agree that the law of the place that services were first rendered will govern.

8.6 If either of us makes a claim against the other as to issues out of the performance of this agreement, the prevailing party will be entitled to recover its reasonable expenses of litigation, including reasonable attorney's fees. If we bring lawsuit against you to collect our invoiced fees and expenses, you agree to pay our reasonable collection expenses including attorney fees.

**Article 9: Indemnities**

9.1 We will indemnify and hold you harmless from and against demands, damages, and expenses caused by our negligent acts and omissions and breach of contract and by the negligent acts and omissions and breach of contract of persons for whom we are legally responsible. You will indemnify and hold us harmless from and against demands, damages, and expenses caused by your negligent act and omissions and breach of contract and by the negligent acts and omissions and breach of contract of persons for whom you are legally responsible. These indemnities are subject to specific limitations provided for in this agreement.

**Article 10: Miscellaneous Provisions**

10.1 This agreement constitutes the entire agreement between you and us, and it supersedes all prior agreements. Any term, condition, prior course of dealing, course of performance, usage of trade, understanding, purchase order conditions, or other agreement purporting to modify, vary, supplement, or explain any provision of this agreement is of no effect until placed in writing and signed by both parties subsequent to the date of this agreement. In no event will the printed terms or conditions stated in a purchase or work order, other than an agreed upon Chain of Custody/Analysis Request, be considered a part of this agreement, even if the document is signed by both of us.

10.2 Neither party will assign this agreement without the express written approval of the other, but we may subcontract laboratory procedures with your approval as we deem necessary to meet our obligations to you.

10.3 If any of the provisions of this agreement are held to be invalid or unenforceable in any respect, the remaining terms will be in full effect and the agreement will be construed as if the invalid or unenforceable matters were never included in it. No waiver of any default will be waiver of any future default.

10.4 Neither you or we will have any liability for nonperformance caused in whole or in part by causes beyond our reasonable control. Such causes include but are not limited to Acts of God, civil unrest and war, labor unrest and strikes, equipment failures, matrix interference, acts of authorities, and failures of subcontractors that could not be reasonably anticipated.

10.5 You may stop our work by giving a written suspension or termination directive, but once work has been suspended, we need not resume work until we agree to change in scope, schedule, and compensation. Upon suspension or termination, we will use reasonable care to preserve samples provided that you agree to compensate us for any additional effort, but we will have no responsibility for meeting holding time limitations after the effective time of a suspension or termination directive. We will be compensated for service rendered and expenses incurred prior to termination that cannot reasonably be avoided.

COVER LETTER

February 25, 2005

John Bunch  
Respec  
4775 Indian School Rd., NE Suite 300  
Albuquerque, NM 87110  
TEL: (505) 268-2661  
FAX (505) 268-0040

RE: Jamar

Order No.: 0502088

Dear John Bunch:

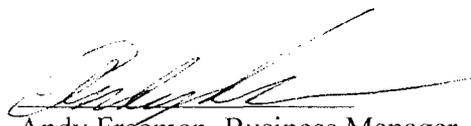
Hall Environmental Analysis Laboratory received 6 samples on 2/9/2005 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent.

Reporting limits are determined by EPA methodology. No determination of compounds below these (denoted by the ND or < sign) has been made.

Please don't hesitate to contact HEAL for any additional information or clarifications.

Sincerely,



Andy Freeman, Business Manager  
Nancy McDuffie, Laboratory Manager



CLIENT: Respec  
Project: Jamar  
Lab Order: 0502088

**CASE NARRATIVE**

"S" flags denote that the surrogate was not recoverable due to sample dilution or matrix interferences.

# Hall Environmental Analysis Laboratory

Date: 25-Feb-05

CLIENT: Respec  
 Lab Order: 0502088  
 Project: Jamar  
 Lab ID: 0502088-01

Client Sample ID: Exc 8 S @ 1'  
 Collection Date: 2/2/2005 9:00:00 AM  
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 9056A: ANIONS</b>						
Chloride	670	6.0		mg/Kg	20	2/15/2005
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						
Diesel Range Organics (DRO)	510	10		mg/Kg	1	2/15/2005 10:12:10 AM
Motor Oil Range Organics (MRO)	430	50		mg/Kg	1	2/15/2005 10:12:10 AM
Surr: DNOP	105	60-124		%REC	1	2/15/2005 10:12:10 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/14/2005 9:07:14 PM
Surr: BFB	104	78.3-120		%REC	1	2/14/2005 9:07:14 PM

Analyst: MAP

Analyst: SCC

Analyst: NSB

Qualifiers: ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

# Hall Environmental Analysis Laboratory

Date: 25-Feb-05

**CLIENT:** Respec  
**Lab Order:** 0502088  
**Project:** Jamar  
**Lab ID:** 0502088-02

**Client Sample ID:** Exc 8 M @ 2'  
**Collection Date:** 2/2/2005 9:30:00 AM  
**Matrix:** SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 9056A: ANIONS</b>						Analyst: <b>MAP</b>
Chloride	ND	1.5		mg/Kg	5	2/14/2005
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>SCC</b>
Diesel Range Organics (DRO)	52	10		mg/Kg	1	2/15/2005 10:41:44 AM
Motor Oil Range Organics (MRO)	94	50		mg/Kg	1	2/15/2005 10:41:44 AM
Surr: DNOP	101	60-124		%REC	1	2/15/2005 10:41:44 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/10/2005 8:39:14 PM
Surr: BFB	105	78.3-120		%REC	1	2/10/2005 8:39:14 PM

**Qualifiers:** ND - Not Detected at the Reporting Limit      S - Spike Recovery outside accepted recovery limits  
 J - Analyte detected below quantitation limits      R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank      E - Value above quantitation range  
 \* - Value exceeds Maximum Contaminant Level

# Hall Environmental Analysis Laboratory

Date: 25-Feb-05

CLIENT: Respec  
 Lab Order: 0502088  
 Project: Jamar  
 Lab ID: 0502088-03

Client Sample ID: Exc S @ 2'  
 Collection Date: 2/2/2005 10:00:00 AM  
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 9056A: ANIONS</b>						
Chloride	940	6.0		mg/Kg	20	2/15/2005
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						
Diesel Range Organics (DRO)	13	10		mg/Kg	1	2/14/2005 2:43:06 PM
Motor Oil Range Organics (MRO)	ND	50		mg/Kg	1	2/14/2005 2:43:06 PM
Surr: DNOP	95.3	60-124		%REC	1	2/14/2005 2:43:06 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/10/2005 9:38:39 PM
Surr: BFB	105	78.3-120		%REC	1	2/10/2005 9:38:39 PM

Qualifiers: ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

# Hall Environmental Analysis Laboratory

Date: 25-Feb-05

CLIENT: Respec  
 Lab Order: 0502088  
 Project: Jamar  
 Lab ID: 0502088-04

Client Sample ID: Exc 8 M @ 1'  
 Collection Date: 2/2/2005 10:30:00 AM  
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 9056A: ANIONS</b>						
Chloride	ND	1.5		mg/Kg	5	2/14/2005
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						
Diesel Range Organics (DRO)	5500	1000		mg/Kg	100	2/14/2005 3:12:59 PM
Motor Oil Range Organics (MRO)	ND	5000		mg/Kg	100	2/14/2005 3:12:59 PM
Surr: DNOP	0	60-124	S	%REC	100	2/14/2005 3:12:59 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/14/2005 9:37:04 PM
Surr: BFB	103	78.3-120		%REC	1	2/14/2005 9:37:04 PM

Analyst: MAP

Analyst: SCC

Analyst: NSB

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

# Hall Environmental Analysis Laboratory

Date: 25-Feb-05

CLIENT: Respec  
 Lab Order: 0502088  
 Project: Jamar  
 Lab ID: 0502088-05

Client Sample ID: T 13 @ 1'  
 Collection Date: 2/2/2005 11:00:00 AM  
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 9056A: ANIONS</b>						Analyst: <b>MAP</b>
Chloride	1400	6.0		mg/Kg	20	2/15/2005
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: <b>SCC</b>
Diesel Range Organics (DRO)	48000	1000		mg/Kg	100	2/14/2005 3:42:53 PM
Motor Oil Range Organics (MRO)	18000	5000		mg/Kg	100	2/14/2005 3:42:53 PM
Surr: DNOP	0	60-124	S	%REC	100	2/14/2005 3:42:53 PM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: <b>NSB</b>
Gasoline Range Organics (GRO)	ND	50		mg/Kg	10	2/10/2005 11:07:44 PM
Surr: BFB	108	78.3-120		%REC	10	2/10/2005 11:07:44 PM

**Qualifiers:**  
 ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank  
 \* - Value exceeds Maximum Contaminant Level

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

# Hall Environmental Analysis Laboratory

Date: 25-Feb-05

CLIENT: Respec  
 Lab Order: 0502088  
 Project: Jamar  
 Lab ID: 0502088-06

Client Sample ID: T 13 @ 2'  
 Collection Date: 2/2/2005 11:30:00 AM  
 Matrix: SOIL

Analyses	Result	PQL	Qual	Units	DF	Date Analyzed
<b>EPA METHOD 9056A: ANIONS</b>						Analyst: MAP
Chloride	8.7	1.5		mg/L	5	2/14/2005
<b>EPA METHOD 8015B: DIESEL RANGE ORGANICS</b>						Analyst: SCC
Diesel Range Organics (DRO)	120	10		mg/Kg	1	2/15/2005 11:11:35 AM
Motor Oil Range Organics (MRO)	230	50		mg/Kg	1	2/15/2005 11:11:35 AM
Surr: DNOP	104	60-124		%REC	1	2/15/2005 11:11:35 AM
<b>EPA METHOD 8015B: GASOLINE RANGE</b>						Analyst: NSB
Gasoline Range Organics (GRO)	ND	5.0		mg/Kg	1	2/14/2005 10:06:54 PM
Surr: BFB	102	78.3-120		%REC	1	2/14/2005 10:06:54 PM

Qualifiers: ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 E - Value above quantitation range

Hall Environmental Analysis Laboratory

Date: 25-Feb-05

QC SUMMARY REPORT

Method Blank

CLIENT: Respec  
 Work Order: 0502088  
 Project: Jamar

Sample ID MB-7414 Batch ID: 7414 Test Code: E300 Units: mg/L Prep Date 2/14/2005  
 Client ID: Run ID: LC\_050214A Analysis Date 2/14/2005 SeqNo: 339724  
 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual  
 Chloride ND 0.3

Sample ID MB-7412 Batch ID: 7412 Test Code: SW8015 Units: mg/Kg Prep Date 2/14/2005  
 Client ID: Run ID: FID(17A) 2\_050214A Analysis Date 2/14/2005 12:11:43 PM SeqNo: 339696  
 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual  
 Diesel Range Organics (DRO) ND 10  
 Motor Oil Range Organics (MRO) ND 50  
 Surr: DNOP 9.768 0 10 0 97.7 60 124 0

Sample ID MB-7400 Batch ID: 7400 Test Code: SW8015 Units: mg/Kg Prep Date 2/9/2005  
 Client ID: Run ID: PIDFID\_050210A Analysis Date 2/10/2005 5:11:07 PM SeqNo: 338993  
 Analyte Result PQL SPK value SPK Ref Val %REC LowLimit HighLimit RPD Ref Val %RPD RPDLimit Qual  
 Gasoline Range Organics (GRO) ND 5  
 Surr: BFB 1023 0 1000 0 102 78.3 120 0

Qualifiers: ND - Not Detected at the Reporting Limit S - Spike Recovery outside accepted recovery limits B - Analyte detected in the associated Method Blank  
 J - Analyte detected below quantitation limits R - RPD outside accepted recovery limits

Hall Environmental Analysis Laboratory

Date: 25-Feb-05

**QC SUMMARY REPORT**  
Sample Matrix Spike

CLIENT: Respec  
Work Order: 0502088  
Project: Jamar

Sample ID	0502088-03a ms	Batch ID: 7400	Test Code: SW8015	Units: mg/Kg	Analysis Date 2/11/2005 12:07:07 AM	Prep Date 2/9/2005				
Client ID:	Exc S @ 2'	Run ID: PIDFID_050210A	PQL	SPK value	SeqNo: 339011					
Analyte	Result	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	24.52	5	0	98.1	84	120	0			
Surr: BFB	1083	0	0	108	78.3	120	0			

Sample ID	0502088-03a msd	Batch ID: 7400	Test Code: SW8015	Units: mg/Kg	Analysis Date 2/11/2005 12:36:51 AM	Prep Date 2/9/2005				
Client ID:	Exc S @ 2'	Run ID: PIDFID_050210A	PQL	SPK value	SeqNo: 339016					
Analyte	Result	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26.85	5	0	107	84	120	24.52	9.07	11.6	
Surr: BFB	1105	0	0	111	78.3	120	1083	2.00	0	

Qualifiers: ND - Not Detected at the Reporting Limit  
 J - Analyte detected below quantitation limits  
 S - Spike Recovery outside accepted recovery limits  
 R - RPD outside accepted recovery limits  
 B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Date: 25-Feb-05

**QC SUMMARY REPORT**  
Laboratory Control Spike - generic

CLIENT: Respec  
Work Order: 0502088  
Project: Jamar

Sample ID	LCS-7414	Batch ID: 7414	Test Code: E300	Units: mg/L	Analysis Date 2/14/2005	Prep Date 2/14/2005					
Client ID:			Run ID: LC_050214A		SeqNo: 339726						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Chloride	14.51	0.3	15	0	96.8	90	110	0			

Sample ID	LCS-7412	Batch ID: 7412	Test Code: SW8015	Units: mg/Kg	Analysis Date 2/14/2005 12:42:24 PM	Prep Date 2/14/2005					
Client ID:			Run ID: FID(17A)_050214A		SeqNo: 339697						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	54.31	10	50	0	109	67.4	117	0			

Sample ID	LCS-7412	Batch ID: 7412	Test Code: SW8015	Units: mg/Kg	Analysis Date 2/14/2005 1:12:18 PM	Prep Date 2/14/2005					
Client ID:			Run ID: FID(17A)_050214A		SeqNo: 339699						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Diesel Range Organics (DRO)	45.33	10	50	0	90.7	67.4	117	54.31	18.0	20	

Sample ID	LCS-7400	Batch ID: 7400	Test Code: SW8015	Units: mg/Kg	Analysis Date 2/10/2005 5:40:54 PM	Prep Date 2/9/2005					
Client ID:			Run ID: PIDFID_050210A		SeqNo: 338994						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	26.63	5	25	0	107	84	120	0			

Sample ID	GRO std 2.5ug	Batch ID: 7400	Test Code: SW8015	Units: mg/Kg	Analysis Date 2/14/2005 11:06:45 PM	Prep Date					
Client ID:			Run ID: PIDFID_050214A		SeqNo: 339613						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual
Gasoline Range Organics (GRO)	25.75	5	25	0	103	84	120	0			

Qualifiers: ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
S - Spike Recovery outside accepted recovery limits  
R - RPD outside accepted recovery limits  
B - Analyte detected in the associated Method Blank

Hall Environmental Analysis Laboratory

Sample Receipt Checklist

Client Name RESPEC

Date and Time Received:

2/9/2005

Work Order Number 0502088

Received by AT

Checklist completed by

Signature

Date

2/9/05

Matrix

Carrier name Client drop-off

- Shipping container/cooler in good condition? Yes  No  Not Present
- Custody seals intact on shipping container/cooler? Yes  No  Not Present  Not Shipped
- Custody seals intact on sample bottles? Yes  No  N/A
- Chain of custody present? Yes  No
- Chain of custody signed when relinquished and received? Yes  No
- Chain of custody agrees with sample labels? Yes  No
- Samples in proper container/bottle? Yes  No
- Sample containers intact? Yes  No
- Sufficient sample volume for indicated test? Yes  No
- All samples received within holding time? Yes  No
- Water - VOA vials have zero headspace? No VOA vials submitted  Yes  No
- Water - pH acceptable upon receipt? Yes  No  N/A

Container/Temp Blank temperature? 1° 4° C ± 2 Acceptable  
If given sufficient time to cool.

COMMENTS:

-----

Client contacted \_\_\_\_\_ Date contacted: \_\_\_\_\_ Person contacted \_\_\_\_\_

Contacted by: \_\_\_\_\_ Regarding \_\_\_\_\_

Comments: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Corrective Action \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_

# CHAIN-OF-CUSTODY RECORD

Client: Rospec  
 Address: 4775 Indian School NE  
#307  
Albany, NM 87110  
 Phone #: 268-2661  
 Fax #: 268-0040

QA/QC Packa  Level 4   
 Std  Level 4   
 Other: \_\_\_\_\_

Project Name: JAMAR  
 Project #: \_\_\_\_\_  
 Project Manager: JOHN BUNCH  
 Sampler: G. GILFILLAN  
 Sample Temperature: 10

Date	Time	Matrix	Sample I.D. No.	Number/Volume	Preservative		HEAL No.
					HgCl <sub>2</sub>	HNO <sub>3</sub>	
2/2/05	9:00	soil	Exc 8 S @ 1'	1			0502088-1
"	9:30	"	Exc 8 M @ 2'	1			-2
"	10:00	"	Exc 5 @ 2'	1			-3
"	10:30	"	Exc 8 M @ 1'	1			-4
"	11:00	"	T13 @ 1'	1			-5
"	11:30	"	T13 @ 2'	1			-6

Date: 2/2/05 Time: 1:49 Relinquished By: (Signature) Gilfillan  
 Date: \_\_\_\_\_ Time: \_\_\_\_\_ Relinquished By: (Signature) \_\_\_\_\_  
 Received By: (Signature) [Signature] 2/19/05  
 Received By: (Signature) \_\_\_\_\_ 1349

**HALL ENVIRONMENTAL ANALYSIS LABORATORY**  
 4901 Hawkins NE, Suite D  
 Albuquerque, New Mexico 87109  
 Tel. 505.345.3975 Fax 505.345.4107  
 www.hallenvironmental.com

## ANALYSIS REQUEST

BTEX + MTBE + TMB's (8021)	BTEX + MTBE + TPH (Gasoline Only)	TPH Method 8015B (Gas/Diesel)	TPH (Method 418.1)	EDB (Method 504.1)	EDC (Method 8021)	8310 (PNA or PAH)	RCRA 8 Metals	Anions (Cl <sup>-</sup> , NO <sub>3</sub> <sup>-</sup> , NO <sub>2</sub> <sup>-</sup> , PO <sub>4</sub> <sup>3-</sup> , SO <sub>4</sub> <sup>2-</sup> )	8081 Pesticides / PCB's (8082)	8260B (VOA)	8270 (Semi-VOA)	Air Bubbles or Headspace (Y or N)
		X	X					X				
		X	X					X				
		X	X					X				
		X	X					X				
		X	X					X				
		X	X					X				

Remarks:

1. DEFINITIONS

1.1 "Acceptance of a sample" means the determination of HEAL to proceed with work following receipt and inspection of such sample.

1.2 "Customer" means the individual or entity who may request laboratory services and his or its heirs, successors, assigns, and representatives.

1.3 HEAL means Hall Environmental Analysis Laboratory, its employees, servants, agents, and representative.

1.4 "Price schedule" means HEAL'S standard price schedule, as such, document may be amended from time to time by HEAL.

1.5 "Results" mean data generated by HEAL from the analysis of one or more samples.

1.6 "Terms and Conditions" mean these Terms and Conditions of sale, including the Price Schedule, and any additions or amendments hereto which are agreed to in writing by HEAL, as provided in Section 7.1.

2. ORDERS

2.1 The customer may order services by submitting a written purchase order to HEAL, by placing a telephone order, which will be subsequently confirmed in writing, or by negotiated contract. Any such order constitutes a) an acceptance by the Customer of HEAL'S offer to do business with the Customer under these Terms and Conditions, and b) an agreement to be bound by these Terms and Conditions. The Customer's delivery of samples to HEAL constitutes the Customer's express assent to be governed by these Terms and Conditions. HEAL reserves the right to refuse to proceed with work at any time based upon an unfavorable customer credit report.

2.2 Any order placed by the Customer under Section 2.1 is subject to a minimum cancellation charge of \$250.

3. PAYMENT TERMS

3.1 Services performed by HEAL will be in accordance with prices quoted and later confirmed in writing or as stated on the Price Schedule, which prices are subject to change periodically without notice. The Customer should confirm with HEAL the current price prior to placing an order for work.

3.2 Payment terms are net 30 days from the date of invoice by HEAL. All overdue payments are subject to an additional interest and service charge of one and one-half percent (1.5%) per month or portion thereof from the date until the date of payment. All payments shall be made in United State currency.

3.3 The prices stated on the Price Schedule do not include any sales, use or other taxes unless specifically stated. Such taxes will be added to invoice prices when required.

4. RECEIPT OF SAMPLES AND DELIVERY OF SERVICES

4.1 Prior to HEAL'S Acceptance of any sample (or after any revocation of Acceptance), the entire risk of loss or damage to such sample will remain with the Customer. In no event will HEAL have any responsibility or liability for the reason or season of HEAL'S carrier shipping or delivering any sample to or from HEAL'S premises.

4.2 HEAL reserves the absolute right, exercisable at any time to refuse delivery of, refuse to accept, or revoke Acceptance of, any sample which in the sole judgment of HEAL a) is of unstable volume, b) unstable containers as required for the requested analysis, or c) may be or become unusable for, or may pose a risk in handling, transport or processing for any health, safety, environmental or other reason, whether or not due to the presence in the sample of any hazardous substance and whether or not such presence has been disclosed to HEAL by the Customer.

4.3 Where applicable, HEAL will use analytical methodologies which are in substantial conformity with U.S. Environmental Protection Agency (EPA), state agency, American Society for Testing and Materials (ASTM), Association of Official Analytical Chemists (AOAC), Standard Methods for the examination of Water and Wastewater, or other recognized methodologies. HEAL reserves the right to deviate from these

methodologies, if necessary or appropriate due to the nature of composition of the sample or otherwise based on the reasonable judgment of HEAL, which deviation, if any will be made on a basis consistent with recognized standards of industry and/or HEAL'S Standard Operating Procedures.

4.4 Upon timely delivery of samples, HEAL will use its best efforts to comply with storage, processing and analytical holding time limits as set forth in applicable EPA or state guidelines or otherwise requested by the Customer or set forth on the Price Schedule. However, unless specifically made part of a written agreement between HEAL and the Customer, such time limits cannot be guaranteed. Unless specifically indicated on the Price Schedule or expressly made part of a written agreement between HEAL and the Customer, analytical turnaround times are not guaranteed.

4.5 At HEAL'S sole discretion, verbal Results may be given in advance of the written report of Results. Such verbal Results are TENTATIVE RESULTS ONLY, subject to confirmation or change based on HEAL'S standard quality assurance review procedures.

5. WARRANTIES, LIABILITY AND INDEMNIFICATION

5.1 HEAL warrants only that its services will fulfill obligations set forth in Section 4.3 and 4.4 hereof. This warranty is the sole and exclusive warranty given by HEAL in connection with any such services, and HEAL gives and makes no other representation or warranty of any kind, express or implied. No representative of HEAL is authorized to give or make any other representation or warranty or modify the warranty in any way.

5.2 The liability and obligations of HEAL, and the remedies of the Customer in connection with any services performed by HEAL will be limited to replacing the services performed or, at the sole option of HEAL, refunding in full or in part fees paid by the Customer for such services. HEAL'S obligation to repeat any services with respect to any sample will be contingent on the Customer's providing, at the request of HEAL and at the Customer's expense, an additional sample if necessary. Any analysis generating Results consistent with the Original Results will be at the Customer's expense. Except as otherwise specifically provided herein, HEAL shall have no liability, obligation or responsibility of any kind for any losses, costs, expenses, or other damages (including but not limited to any special, indirect, incidental or consequential damages) for any representation or warranty of a kind with respect to HEAL'S Services or Results.

5.3 In no event shall HEAL have any responsibility or liability to the Customer for any failure or delay in performance by HEAL, which results, directly or indirectly, in whole or in part, from any cause or circumstance beyond the reasonable control of HEAL. Such cause and circumstance shall include, but not be limited to, acts of God, acts of Customers, acts of orders of any government authority, strikes or other labor disputes, natural disasters, accidents, wars, civil disputes, difficulties or delays in transportation, mail or delivery services, inability to obtain from HEAL usual sources sufficient services or supplies, or any other cause beyond HEAL'S reasonable control.

5.4 All results provided by HEAL are strictly for the use of its Customers, and HEAL is in no way responsible for the use of such results by Customers or third parties. All results should be considered in their entirety, and HEAL is in no way responsible for the separation, department, or other use of any portion of the results.

5.5 The customer represents and warrants that any sample delivered to HEAL will be preprocessed or accompanied by complete written disclosure of the presence of any hazardous substances known or suspected by the customer. The Customer further warrants that any sample containing any hazardous substance, which is to be delivered to HEAL'S premises will be packaged, labeled, transported and delivered properly and in accordance with applicable laws.

5.6 It is understood and agreed that all samples and outtings of materials containing hazardous contaminants are the property and the responsibility of the Customer. All contaminated samples and laboratory byproducts will be returned to the Customer for disposal. It is understood and agreed that HEAL is not, and has no responsibility as a generator, transporter, store, or disposer of hazardous or toxic substances found or identified at a site, and the Customer agrees to assume the responsibility for the foregoing.

5.7

The Customer shall indemnify and hold harmless HEAL, from and against any and all claims, suits, judgments, damages, losses, liabilities, expenses, payments, taxes, duties, fines and/or other costs (including but not limited to liability to a third party) arising out of (a) the presence of hazardous substances in any sample of the Customer regardless of the Customer's compliance with paragraph 5.5 hereof (b) accidents occurring during the transport of any sample of the Customer, (c) events control, or (d) negligence by the Customer in the use, evaluation, or application of Results provided by HEAL.

5.8 Should any Customer sample, due to its matrix or constituents of its matrix, cause the operations of any HEAL instrumentation to be reduced, stopped, or altered, HEAL is entitled to compensation by the Customer for any loss of revenue due to the instrument's downtime, and/or the parts and labor necessary to bring the instrument back to its normal operating condition. The amount of compensation is negotiable upon acceptance of these Terms and Conditions and the individual circumstances warranting the reimbursement.

6. ENTIRE AGREEMENT; SEVERABILITY

6.1 These Terms and Conditions, together with any additions or revisions which may be agreed to in writing by HEAL as provided in Section 7.1, embodied the whole agreement of the parties. There are no promises, terms, conditions, understandings, obligations or agreements other than those contained herein, unless made in accordance with Section 7.1, and these Terms and Conditions shall supersede all previous communications, representations, or agreements, either verbal or written, between the Customer and HEAL. HEAL specifically rejects all additional, inconsistent, or conflicting terms, whether printed or otherwise set forth in any purchase order or other communication from the Customer to HEAL.

6.2 The invalidity or unenforceability, in whole or in part of any provision, term or condition hereof shall not affect in any way the validity or enforceability of the remainder of the Terms and Conditions, the intent of the parties being that the provisions be severable.

7. AMENDMENTS AND WAIVERS

7.1 HEAL shall not be subject to or bound by any provision, term or condition which is in addition to or inconsistent or conflicting with these Terms and Conditions. HEAL shall not be deemed to have accepted or waived and, provision, term or condition, or have given any required consent or approval, or to have waived any breach by the Customer of any of these Terms and Conditions unless specifically set forth in writing and executed on behalf of HEAL by a duly authorized officer. No other employee, servant, agent or representative of HEAL has any authority whatsoever to add to, delete, alter or vary any of these Terms and Conditions in any manner, or to give any consent, approval or waiver, and HEAL shall not be bound by any such purported addition, deletion, alteration, variation, consent, approval or waiver.

7.2 No waiver by HEAL of any provision, term or condition hereof or of any breach by or obligation of the Customer hereunder shall constitute a waiver of such provision, term or condition on any other occasion or a waiver of any other breach by or obligation of the Customer.

8. SAMPLE STORAGE

8.1 Bulk samples will be retained for thirty (30) days after the analytical report has been issued unless alternate arrangements have been made in advance. Storage of samples or extracts for longer periods is by request only. Sample storage charges depend upon storage requirements and duration. Normally, a sample storage fee of \$3.00 per sample, per month will be billed monthly unless other arrangements are made. If requested, unused sample material may be returned to the client's expense. Materials, which are identified as hazardous, will be returned to the client or disposed of as hazardous waste and billed at the rate of \$25.00 per sample. HEAL reserves the right to return all dibenzodioxins/dibenzofurans to the client.

9. SECTION HEADING

9.1 The section headings of these Terms and Conditions are intended solely for convenient reference and shall not define, limit or affect in any way these Terms and Conditions or their interpretations.

10. GOVERNING LAW

10.1 These Terms and Conditions, and transaction or agreement, to which they apply, shall be governed both as to interpretation and performance by the laws of the State of New Mexico.

**APPENDIX G**  
**SOIL BORE LOGS**  
**WITH**  
**WELL COMPLETION DIAGRAMS**

**SOIL BORING LOG**

PROJECT NAME: Jamar		DATE: 5-25-004		Page 1 Of 6			
PROJECT NO.: 1494-1.0		LOGGED BY J.Bunch		DRILLING METHOD: HAS			
CLIENT NAME: OCD		SITE ELEV.: 1		GW DEPTH: ~28'			
Monitor Well/Boring No.: 1							
Depth	Blow count	PID (ppm)	Sample	Graphic	USCS	Geologic Description	Well Design
1							
2					SM		
3							
4							
5						Brown, silty loam with organics	
6							
7	7,4,8	0.0	X			Buff, f.g. silty sand	
8							
9							
10							
11							
12	3,5,10	0.0	X			Tan, f.g. sand, slight moisture	
13							
14					GM		
15							
16							
17	4,9,16	0.0	X			Tan f.g. sand to 16.5'. @ 16.5' buff sand w/ CaCO3	
18						Slightly cemented - moist	
19							
20							
21							
22	8,12,5	0.0	X			Tan/buff f.g. sand w/caliche nogules - moist	
23					SM		
24							
25							
26							
27	16,20,5	0.0	X			buff sand/caliche very moist	
28					CL	air/water interface	
29							
30							
31						Static Water Level ~28'	
32	12,8,8	0.0				saturated f.g. sand	
33						reddish/brown/gray	
34							
35							
36						Well Specifications -	
37						TD: 38.5'	
38						0.010 Screened Interval 38-23'	
39						Sand Interval 38-22.7'	
40						Bentonite Seal 22.7-19'	
						Grout 19' to surface	

**SOIL BORING LOG**

PROJECT NAME: Jamar	DATE: 5-25-004	Page 2 Of 6
PROJECT NO.: 1494-1.0	LOGGED BY: J.Bunch	
CLIENT NAME: OCD	SITE ELEV.:	DRILLING METHOD: HAS
	Monitor Well/Boring No.: 2	GW DEPTH: ~26.5'

Depth	Blow count	PID (ppm)	Sample	Graphic	USCS	Geologic Description	Well Design
1							
2							
3							
4					SM		
5						Brown, sandy loam	
6							
7	3*3*3	0.0	X			Tan, f.g. sand (slight moisture)	
8							
9							
10							
11							
12	9*20*20	0.0	X			Tan, f.g. sand to 11'	
13						at 11' hard caliche - dry	
14							
15					GM		
16							
17	6*11*13	0.0	X			Caliche (cemented sand, CaCO3)	
18						small gravels	
19							
20							
21							
22	18*17*11	0.0	X			Caliche to 21'	
23						at 21' tan sand/caliche nogules (moist)	
24							
25							
26						Air/Water Interface @ 26.5	
27	5*6*6		X			Brown, f.g. sand (saturated @ 27')	
28						Caliche layer @ 35'	
29							
30							
31					CL		
32							
33							
34							
35							
36							
37							
38							
39							
40							
41							

Well Specifications -  
 TD: 37.5'  
 0.010 Screened Interval 37-22"  
 Sand Interval 37-20'  
 Bentonite Seal 20-18'  
 Grout 18' to surface

Static Water Level  
 ~26.5'

**SOIL BORING LOG**

PROJECT NAME: Jamar		DATE: 5-25-004		Page 3 Of 6			
PROJECT NO.: 1494-1.0		LOGGED BY J.Bunch					
CLIENT NAME: OCD		SITE ELEV.:		DRILLING METHOD: HAS			
		Monitor Well/Boring No.: 3		GW DEPTH: ~27'			
Depth	Blow count	PID (ppm)	Sample	Graphic	USCS	Geologic Description	Well Design
1							
2					SM	at 2.5', brown loam	
3							
4							
5		70ppm					
6					GM		
7	5*7*9	0.0	X			Buff, f.g. sand (moist)	
8							
9							
10							
11							
12	8*14*22	0.0	X			Buff f.g. sand (hard)	
13							
14					GM		
15							
16							
17	9*18*28	0.0	X			Buff, f.g. sand/caliche (moist)	
18							
19							
20							
21							
22	22*22*30	0.0	X		GM	Caliche, hard, dry	
23							
24							
25							
26						Static Water Level ~27'	
27	5*7*9	0.0	X			Caliche to 26'	
28					CL	Reddish brown @ 26'	
29						f.g. sand (very moist)	
30					CL	air/water interface @ 27'	
31							
32							
33							
34							
35							
36							
37							
38							
39							
40							

Well Specifications -  
 TD: 37.5'  
 0.010 Screened Interval 37-22'  
 Sand Interval 37-20'  
 Bentonite Seal 20-18'  
 Grout 18' to surface

**SOIL BORING LOG**

PROJECT NAME: Jamar		DATE: 5-26-004		Page 4 Of 6			
PROJECT NO.: 1494-1.0		LOGGED BY: J.Bunch					
CLIENT NAME: OCD		SITE ELEV.: Monitor Well/Boring No.: 4		DRILLING METHOD: HAS			
		GW DEPTH: ~26.5'					
Depth	Blow count	PID (ppm)	Sample	Graphic	USCS	Geologic Description	Well Design
1							
2							
3							
4					SM		
5						Brown, sandy loamy silt w/organics	
6							
7	8*9*10	0.0	X			Buff f.g. sand (dry)	
8							
9					GM		
10							
11							
12	10*22*18	0.0	X			Light brown f.g. sand (dry)	
13						CaCO3 concentrations	
14							
15					GM		
16							
17	12*13*10	0.0	X			Buff, sandy silt, small gravel	
18					GC	Hard (caliche) dry	
19							
20							
21					CL		
22	10*20*28	0.0	X			Buff, caliche (hard) dry	
23							
24							
25						Light brown silty sand	
26						moist to saturated @ 25.5'	
27	4*8*7	0.0	X			Air/Water interface @ 26.5'	
28					CL		
29							
30							
31							
32							
33							
34							
35					GM		
36							
37							
38							
39							
40							
41							
42							

Static Water Level  
~26.5 ft

Well Specifications -  
TD: 37.5'  
0.010 Screened Interval 37-22'  
Sand Interval 37-20'  
Bentonite Seal 20-18'  
Grout 18' to surface

**SOIL BORING LOG**

PROJECT NAME: Jamar	DATE: 5-26-004	Page 5 Of 6
PROJECT NO.: 1494-1.0	LOGGED BY: J.Bunch	
CLIENT NAME: OCD	SITE ELEV.:	DRILLING METHOD: HAS
	Monitor Well/Boring No.: 5	GW DEPTH: ~28.5'

Depth	Blow count	PID (ppm)	Sample	Graphic	USCS	Geologic Description	Well Design
1							
2						Caliche	
3						Silty sand @ 2.5'	
4					SM		
5							
6							
7	5*6*7	0.0	X			Tan/buff sandy, silt (dry)	
8							
9					GM		
10							
11							
12	4*8*12	0.0	X			Tan f.g. sand, dry to moist	
13							
14							
15					GM		
16							
17	50*5.5	0.0	X			Buff/tan silty sand w/med-lrg	
18					GC	angular gravel	
19							
20					CL		
21							
22	10*10*14	0.0	X			Buff caliche - hard, dry	
23							
24							
25							
26							
27	50*5	0.0	X			5" recovery	
28					CL	Hard caliche - moist	
29	10*7*7	0.0	X			Reddish/brown @ 28.5'	
30						f.g. sand - moist	
31							
32							
33							
34							
35					GM		
36							
37							
38							
39							
40							
41							
42							

Static Water Level  
~28.5 ft

Well Specifications -  
 TD: 39.5'  
 0.010 Screened Interval 39-24'  
 Sand Interval 39-22'  
 Bentonite Seal 22-20'  
 Grout 20' to surface

**SOIL BORING LOG**

PROJECT NAME: Jamar	DATE: 5-26-004	Page 6 Of 6
PROJECT NO.: 1494-1.0	LOGGED BY: J.Bunch	
CLIENT NAME: OCD	SITE ELEV.:	DRILLING METHOD: HAS
	Monitor Well/Boring No.: 6	GW DEPTH: ~30'

Depth	Blow count	P/D (ppm)	Sample	Graphic	USCS	Geologic Description	Well Design
1							
2							
3							
4							
5					SM		
6							
7	6*4*5	0.0	X			Buff, sandy silt (moist)	
8							
9					GM		
10							
11							
12	5*7*9	0.0	X			Light brown, f.g. silty sand, moist	
13							
14							
15					GM		
16							
17	10*11*13	0.0	X			Tan/Buff sandy silt w/angular gravels (hard)	
18					GC		
19							
20					CL		
21							
22	18-50/5	0.0	X			Buff caliche - hard, dry	
23							
24							
25						Reddish brown f.g. silty sand	
26						Very moist	
27	7*18*16	0.0	X			Air/Water interface @ 27'	
28					CL		
29							
30							
31							
32							
33							
34							
35					GM		
36							
37							
38							
39							
40							
41							
42							

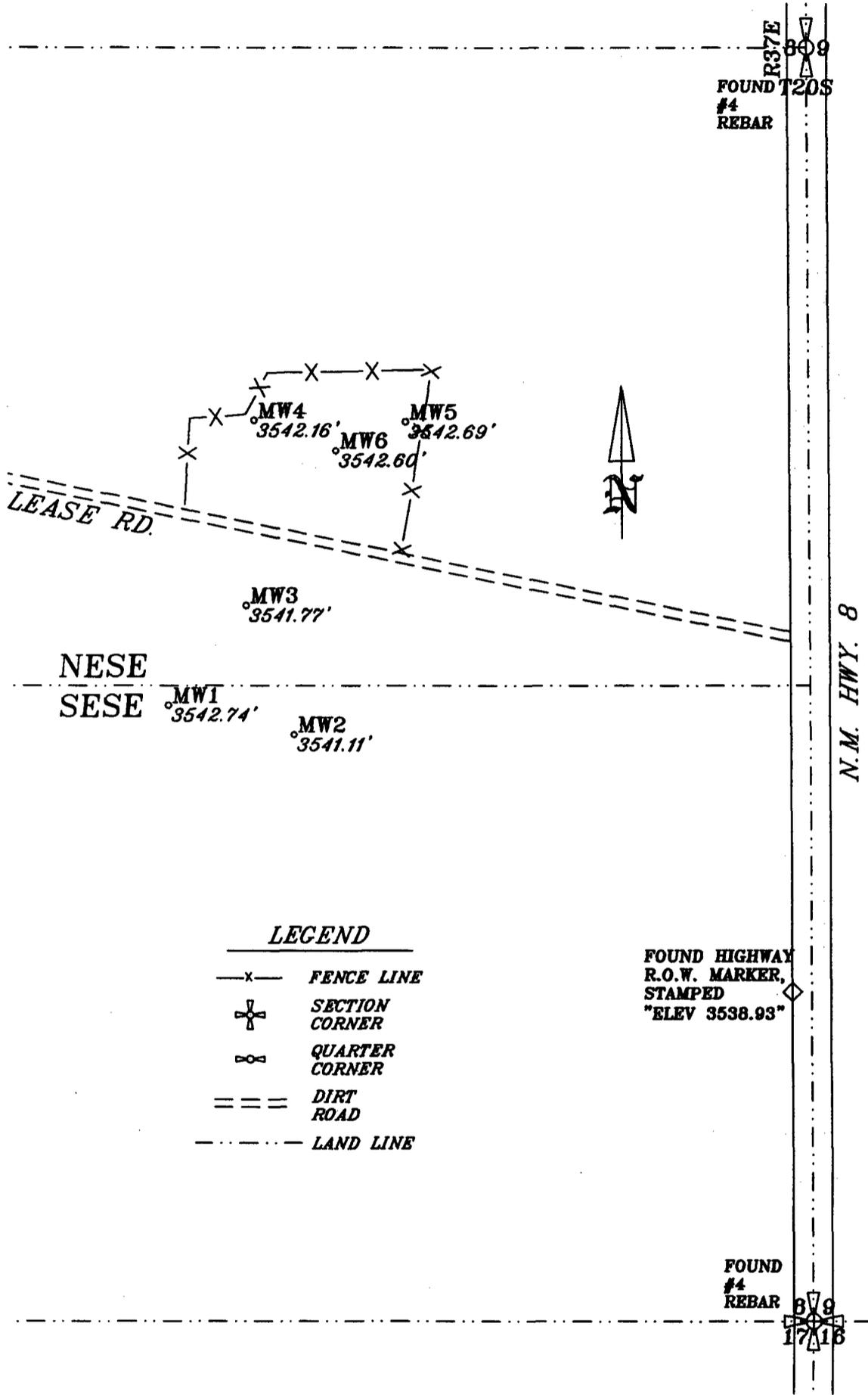
Static Water Level  
~27 ft

Well Specifications -  
TD: 37.5'  
0.010 Screened Interval 37-22'  
Sand Interval 37-20'  
Bentonite Seal 20-18'  
Grout ? to surface

**APPENDIX H**  
**SURVEY RESULTS**

# MONITOR WELL LOCATIONS

LOCATED IN THE NESE & SESE OF SEC 8, T20S,  
R37E, N.M.P.M., LEA COUNTY, NEW MEXICO.



### LEGEND

- x— FENCE LINE
- ⊕ SECTION CORNER
- ⊙ QUARTER CORNER
- === DIRT ROAD
- LAND LINE

FOUND HIGHWAY  
R.O.W. MARKER,  
STAMPED  
"ELEV 3538.93"

FOUND  
#4  
REBAR



Scale 1" = 300'



6/29/2004