

AP - 023

STAGE 1 & 2 REPORTS

DATE:

Nov. 2000

AP-23

PRELIMINARY SITE INVESTIGATION REPORT

**LATTION PIT SITE
Eddy County, New Mexico**

RECEIVED

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Prepared For:

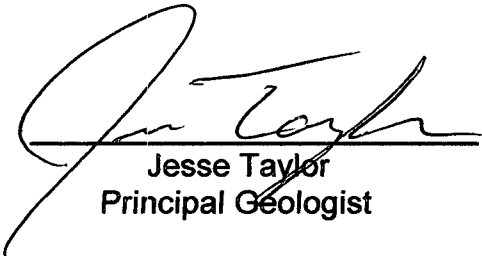
ENVIRONMENTAL BUREAU
OIL CONSERVATION DIVISION

Yates Petroleum Corporation
105 South Fourth Street
Artesia, New Mexico 88210

ETGI Project # YPC 2200D

Prepared By:
Environmental Technology Group, Inc.
2540 W. Marland
Hobbs, New Mexico 88240

November 2000


Jesse Taylor
Principal Geologist


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Project Manager

TABLE OF CONTENTS

1.0	INTRODUCTION	1
2.0	SUMMARY OF FIELD ACTIVITIES	1
3.0	SITE DESCRIPTION	2
	3.1 Regional Geology/Hydrogeology	2
	3.2 Site Geology/Hydrogeology	2
	3.3 New Mexico Oil Conservation Division (NMOCD) Soil Classification	3
	3.4 Distribution of Hydrocarbons in the Unsaturated Zone	3
	3.5 Distribution of Hydrocarbons in the Saturated Zone	4
	3.6 Distribution of Chlorides in the Unsaturated Zone	4
	3.7 Distribution of Chlorides in the Saturated Zone	4
4.0	RECOMMENDATIONS	4
5.0	QA/QC PROCEDURES	5
	5.1 Soil Sampling	5
	5.2 Ground Water Sampling	5
	5.3 Decontamination of Equipment	6
	5.4 Laboratory Protocol	6
6.0	LIMITATIONS	7

Tables

TABLE 1:	Soil Chemistry
TABLE 2:	Groundwater Chemistry

Figures

FIGURE 1:	Site Location Map
FIGURE 2:	Site Map
FIGURE 3:	Water Well Location Map

APPENDICES

APPENDIX A:	Soil Boring Logs
APPENDIX B:	Laboratory Reports
APPENDIX C:	Water Well Reports
APPENDIX D:	Water Well Chlorides Data

1.0 INTRODUCTION

Environmental Technology Group, Inc. (ETGI) conducted a subsurface investigation of this former pit location on behalf of Yates Petroleum Corporation (Yates). The investigation was conducted in order to document subsurface conditions resulting from operations at the former pit.

The site is located in the NE1/4 of the SW1/4 of Section 23, Township 18S, Range 26 East in Eddy County, New Mexico as depicted on Figure 1, the Site Location Map. The older pit (east pit) measures approximately 100 feet by 115 feet and the more recently utilized pit (west pit) measures 45 feet by 50 feet. The boring locations are depicted on Figure 2, the site map.

2.0 SUMMARY OF FIELD ACTIVITIES

ETGI mobilized a rotary drilling rig to the site on October 20, 2000. Mr. Ken Dutton, Field Operations Manager and Camille Reynolds supervised the field activities. Atkins Engineering, of Roswell, New Mexico, performed the drilling with Mort Bates, Senior Driller, in charge of the drilling rig. A total of six soil borings were advanced at the site including two in the west pit (SB-1 and SB-2) and four in the east pit (SB-3 through SB-6).

Soil samples were collected from SB-1 at depths of 8-9 and 14-16 feet bgs. Three samples were collected from soil boring SB-2 at 8-9, 13-15 and 20-21 feet bgs. Soil borings SB-3, SB-4, SB-5 and SB-6 had one soil sample collected within two feet of total depth of the borings as depicted on the boring logs in Appendix A. A background soil sample was collected at a point beyond any apparent impact from the site operations.

A ground water sample was collected from boring SB-2. The total depth and depth to water in this boring were both approximately 47 feet bgs. Immediately after the soil and ground water samples were collected, the borings were backfilled with bentonite in order to prevent the potential for vertical migration of hydrocarbons or chlorides.

A chloride field test was conducted on each sample and a Photoionization Detector (PID) was utilized to screen Volatile Organic Compounds (VOCs). Proper QA/QC procedures were followed during all sampling procedures as described below. Each soil; and ground water sample was submitted to Environmental Lab of Texas to be tested for Benzene, Toluene, Ethyl Benzene and Xylenes (BTEX, EPA Method 8021B), Total Petroleum Hydrocarbons (TPH, EPA Method 8015 Modified GRO/DRO) as well as Chlorides (EPA Method 9253).

3.0 SITE DESCRIPTION

3.1 Regional Geology/Hydrogeology

The site is located approximately one and one half miles west of the west channel of the Pecos River and one mile south of the intermittent stream, Rio Penasco. This places it in the geographic feature known as Orchard Park Terrace, which is only slightly dissected and slopes at about five degrees to the east. Surface drainage is to the east toward the west channel of the Pecos River.

The site is located on Quaternary alluvium associated with the Pecos River flood plain and drainages originating in the Sacramento Mountains to the west. The alluvium is underlain by the Triassic age Dockum Group which consists primarily of red silts and sands which are slightly to moderately indurated. The Dockum Group is approximately 1,000 feet thick in the site area and is divided into the Pierce Canyon redbeds and Santa Rosa sandstone in the site vicinity. These formations are unconformably underlain by the upper Permian Rustler Formation (gypsum, redbeds and dolomites) which is unconformably underlain by the middle Permian Chalk Bluff Formation (back reef deposits of dolomite, evaporites, redbeds and sandstone).

This area is located near the eastern margin of the Roswell Basin physiographic province, a north-south trending feature located between the Sacramento Mountains to the west and the Permian Basin to the east. Within this feature, ground water commonly occurs in the alluvium near the Pecos River and in the Permian formations throughout the feature. Aquifers within the Triassic Dockum group are usually thin and discontinuous resulting in poor quality and low volumes.

In the site vicinity, ground water generally flows to the southeast toward the downgradient direction of the west channel of the Pecos River, which joins the main channel at the confluence of Brantley Reservoir. The east-west trending intermittent streams appear to have little influence on the regional gradient, however local variations may occur in the vicinity of these drainages during precipitation events.

Data collected by the United States Weather Bureau indicate that the average annual precipitation in the site vicinity is approximately 12.4 inches. This amount occurs primarily as storm events during the period between June and October. Infiltration from these events are commonly minimal given the high rates of surface runoff and evaporation.

3.2 Site Geology/Hydrology

The soil borings indicate that the east pit was excavated to a depth of approximately 8 feet bgs in the northeastern quadrant and to a depth of approximately 11 feet bgs in the remaining portions. The west pit was excavated to a depth of approximately 12 feet in the western portion and 8 feet bgs in the eastern portion.

The backfill material was generally underlain by a one to three foot caliche layer, which was underlain by a red-brown, very fine-grained sand. In places, the sand was interbedded with thin stringers of clay.

The sand was dry to a depth of approximately 45 feet bgs where the capillary fringe was detected. Measurements taken in the uncompleted borehole indicate that the water table is located at approximately 47 feet bgs in the unconsolidated alluvial sand.

3.3 New Mexico Oil Conservation Division (NMOCD) Soil Classification

During the site investigation, soils that may be characterized by OCD guidelines as Highly Contaminated/Saturated Soils were limited to the back fill material at a depth of less than 10 feet bgs. No other Highly Contaminated/Saturated Soils were observed in any host soil samples.

The depth to groundwater, as measured from the lowermost zone of Highly Contaminated/Saturated Soils is approximately 37 feet. This interval is less than the 51 foot interval required for an OCD Ranking of less than 20 points.

The water well database, maintained by the state engineer's office, was accessed in order to determine the location and type of nearby water wells in the area. The data indicate that there are no water wells located within 1,000 feet of the site. This radius and the location of water wells in the vicinity are provided as Figure 3.

As depicted on Figures 1 and 2, there are no bodies of surface water located within 1,000 feet of the site. These site conditions result in an OCD Ranking of greater than 19 points. The action levels for a site with a Ranking Score of greater than 19 are as follows:

- Benzene - 10 ppm
- BTEX - 50 ppm
- TPH - 100 ppm

3.4 Distribution of Hydrocarbons in the Unsaturated Zone

Soils that may be characterized by OCD guidelines as Highly Contaminated/Saturated Soils were observed in a small portion of the backfill material only. Host soils below the backfill material were generally clean and the soil sample collected from this zone was below the appropriate ranking cleanup guidelines as described below. The caliche layer at this site appears to be fairly continuous and there is no evidence of impacted materials below the caliche layer.

3.5 Distribution of Hydrocarbons in the Saturated Zone

The ground water sample collected from SB-2 was below OCD regulatory standards for benzene and below the method detection limits for toluene, ethylbenzene, xylenes and TPH.

3.6 Distribution of Chlorides in the Unsaturated Zone

Elevated levels of chlorides were detected in the unsaturated zone throughout the site with slightly lower concentrations present in the western portion of the western pit. The chlorides concentrations did not appear to vary greatly with depth. The maximum soil chlorides level of 7,445 mg/Kg was detected in the sample from soil boring SB-5 at a depth of 13 to 15 feet bgs.

3.7 Distribution of Chlorides in the Saturated Zone

The ground water sample collected from soil boring SB-2 was found to have 81,535 mg/L chlorides concentration. Background data for chlorides concentrations in the area, as determined from the state engineers database (Appendix C), are in the range of 400 to 600 mg/L.

4.0 SUMMARY AND CONCLUSIONS

The site has an OCD Ranking Score of 20 points. The soil action levels for a site with this score are as follows:

- Benzene - 10 ppm
- BTEX - 50 ppm
- TPH - 100 ppm

None of the soils observed in the host soil appear to exceed these criteria. A limited volume of impacted soil is present in the backfill material.

The ground water sample collected from SB-2 was below OCD regulatory standards for benzene and below the method detection limits for toluene, ethylbenzene, xylenes and TPH.

Elevated levels of chlorides were detected in the unsaturated zone throughout the site with slightly lower concentrations present in the western portion of the western pit. The chlorides concentrations did not appear to vary greatly with depth. The maximum soil chlorides level of 7,445 mg/Kg was detected in the sample from soil boring SB-5 at a depth of 13 to 15 feet bgs.

A search of the state engineer's database indicates that there are no domestic water wells within 1,000 feet of the site. The only listed water well in the assumed downgradient direction is a production well operated by Yates. The well is located approximately 2,500 feet southeast of the site and appears to be completed in the shallow aquifer.

5.0 QA/QC PROCEDURES

5.1 Soil Sampling

Samples of subsurface soils were obtained utilizing either a split spoon sampler (air rotary drilling rig) or a two-inch, continuous sampling tube with a clean polybuterate liner (Geo-Probe⁷). Representative soil samples were divided into two separate portions using clean, disposable gloves and clean sampling tools. One portion of the soil sample was placed in a disposable sample bag. The bag was labeled and sealed for headspace analysis using a photoionization detector (PID) calibrated to a 100 ppm isobutylene standard. Each sample was allowed to volatilize for approximately thirty minutes at ambient temperature prior to conducting the analysis.

The other portion of the soil sample was placed in a sterile glass container equipped with a Teflon-lined lid furnished by the analytical laboratory. The container was filled to capacity to limit the amount of headspace present. Each container was labeled and placed on ice in an insulated cooler. Upon selection of samples for analysis, the cooler was sealed for shipment to the laboratory. Proper chain-of-custody documentation was maintained throughout the sampling process.

Soil samples were delivered to Environmental Lab of Texas, Inc. in Midland, Texas for BTEX and TPH analyses using the methods described below. Soil samples were analyzed for BTEX and TPH-GRO/DRO within fourteen days following the collection date.

The soil samples were analyzed as follows:

- BTEX concentrations in accordance with EPA Method 8021B, 5030
- TPH concentrations in accordance with modified EPA Method 8015M GRO/DRO

5.2 Ground Water Sampling

Monitoring wells were developed and purged with a clean PVC bailer. The bailer was cleaned prior to each use with Liqui-Nox⁷ detergent and rinsed with distilled water. Monitoring wells with sufficient recharge were purged by removing a minimum of three well volumes. Monitoring wells that do not recharge sufficiently were purged until no

additional ground water can be obtained.

After purging the wells, ground water samples were collected with a disposable Teflon sampler and polyethylene line by personnel wearing clean, disposable gloves. Ground water sample containers were filled in the order of decreasing volatilization sensitivity (i.e., BTEX containers will be filled first and polynuclear aromatic hydrocarbons (PAH) containers second).

Ground water samples collected for BTEX analysis were placed in 40 ml glass VOA vials equipped with Teflon lined caps. The containers were provided by the analytical laboratory. The vials were filled to a positive meniscus, sealed, and visually checked to ensure the absence of air bubbles.

Ground water samples collected for PAH analysis were filled to capacity in sterile, one liter glass containers equipped with Teflon lined caps. Ground water samples collected for metals analysis were filled to capacity in sterile, one liter plastic containers equipped with Teflon lined caps. The containers were provided by the analytical laboratory.

The filled containers were labeled and placed on ice in an insulated cooler. The cooler was sealed for transportation to the analytical laboratory. Proper chain-of-custody documentation was maintained throughout the sampling process.

The ground water samples were analyzed as follows:

- BTEX concentrations in accordance with EPA Method 8021B, 5030
- TPH concentrations in accordance with modified EPA Method 8015-GRO/DRO

5.3 Decontamination Of Equipment

Cleaning of drilling equipment was the responsibility of the drilling company. In general, the cleaning procedures consisted of using high pressure steam to wash the drilling and sampling equipment prior to drilling and prior to starting each hole. Prior to use, the sampling equipment was cleaned with Liqui-Nox⁷ detergent and rinsed with distilled water.

5.4 Laboratory Protocol

The laboratory was responsible for proper QA/QC procedures after signing the chain-of-custody form. These procedures were either transmitted with the laboratory reports or are on file at the laboratory.

6.0 LIMITATIONS

Environmental Technology Group, Inc. has prepared this Preliminary Investigation Report to the best of its ability. No other warranty, expressed or implied, is made or intended.

Environmental Technology Group, Inc. has examined and relied upon documents referenced in the report and has relied on oral statements made by certain individuals. Environmental Technology Group, Inc. has not conducted an independent examination of the facts contained in referenced materials and statements. We have presumed the genuineness of the documents and that the information provided in documents or statements is true and accurate. Environmental Technology Group, Inc. has prepared this report in a professional manner, using the degree of skill and care exercised by similar environmental consultants. Environmental Technology Group, Inc. also notes that the facts and conditions referenced in this report may change over time and the conclusions and recommendations set forth herein are applicable only to the facts and conditions as described at the time of this report.

This report has been prepared for the benefit of Yates Petroleum Corp. The information contained in this report including all exhibits and attachments, may not be used by any other party without the express consent of Environmental Technology Group, Inc. and/or Yates Petroleum Corp.

TABLES

Table 1

SOIL CHEMISTRY

YATES PETROLEUM CORPORATION

LATTION PIT SITE

ARTESIA, NEW MEXICO

ETGI Project # YPC 2200D

All concentrations are in mg/L

SAMPLE NAME	SAMPLE DATE	SAMPLE DEPTH	SW 846-8021B, 5030					TPH 8015M			SW 846-9253
			BENZENE	TOLUENE	ETHYL-BENZENE	M,P-XYLENES	O-XYLENES	GRO C6-C10	DRO >C10-C28	TOTAL TPH	CHLORIDES
SB-1	10/20/00	8-9'									886
SB-1	10/20/00	14-16'									886
SB-2	10/20/00	8-9'									6736
SB-2	10/20/00	13-15'	<0.025	0.058	0.056	0.122	0.040	<10	<10	<20	6381
SB-2	10/20/00	20-21'									7267
SB-3	10/20/00	12.5-14.5'									3722
SB-4	10/20/00	13-15'									2304
SB-5	10/20/00	13-15'									7445
SB-6	10/20/00	14-16'									4538
Background	10/20/00	0-2'									18

TABLE 2

GROUND WATER CHEMISTRY

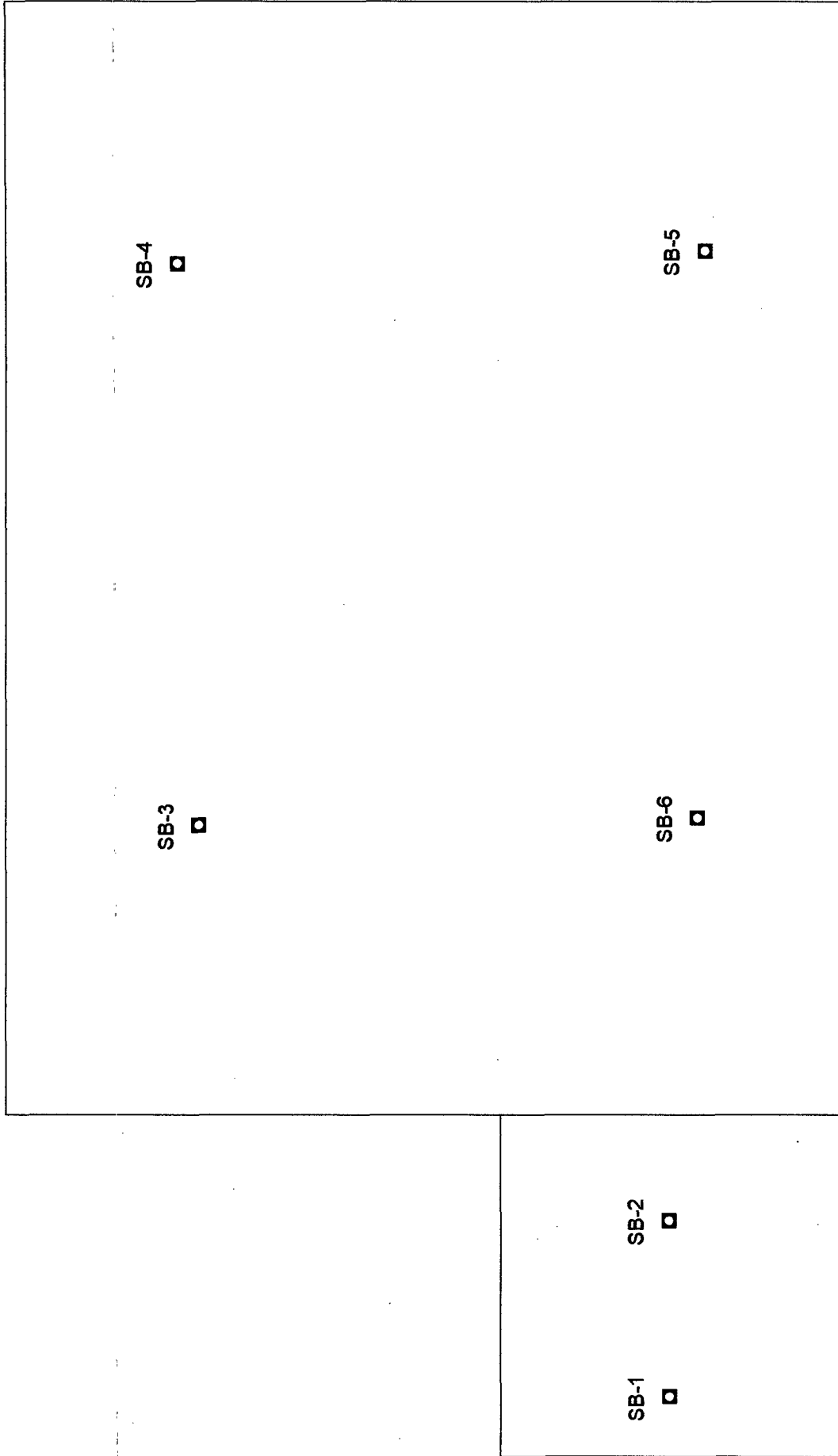
YATES PETROLEUM CORPORATION
LATTION PIT SITE
ARTESIA, NEW MEXICO
ETGI Project # YPC 2200D

All concentrations are in mg/L

SAMPLE NAME	SAMPLE DATE	SW 846-8021B, 5030				TPH 8015M			SW 846-9253
		BENZENE	TOLUENE	ETHYL- BENZENE	M,P- XYLENES	O- XYLENES	GRO C6-C-10	DRO >C10-C28	
SB-2	10/20/00	0.004	<0.001	<0.001	<0.001	<0.001	<0.50	<0.50	81535
								TOTAL TPH	
								<1.00	
									CHLORIDES
									81535

Ground Water Chemistry

FIGURES



LEGEND:

□ Soil Boring Location



**Figure 2
Site Map**

Yates Petroleum Corp.
Lettion Pit
Artesia, NM

**Environmental Technology
Group, Inc.**

Scale: 1" = 20'	Prep By: DJ	Checked By: JT
November 14, 2000	ETGI Project # YPC 2200D	

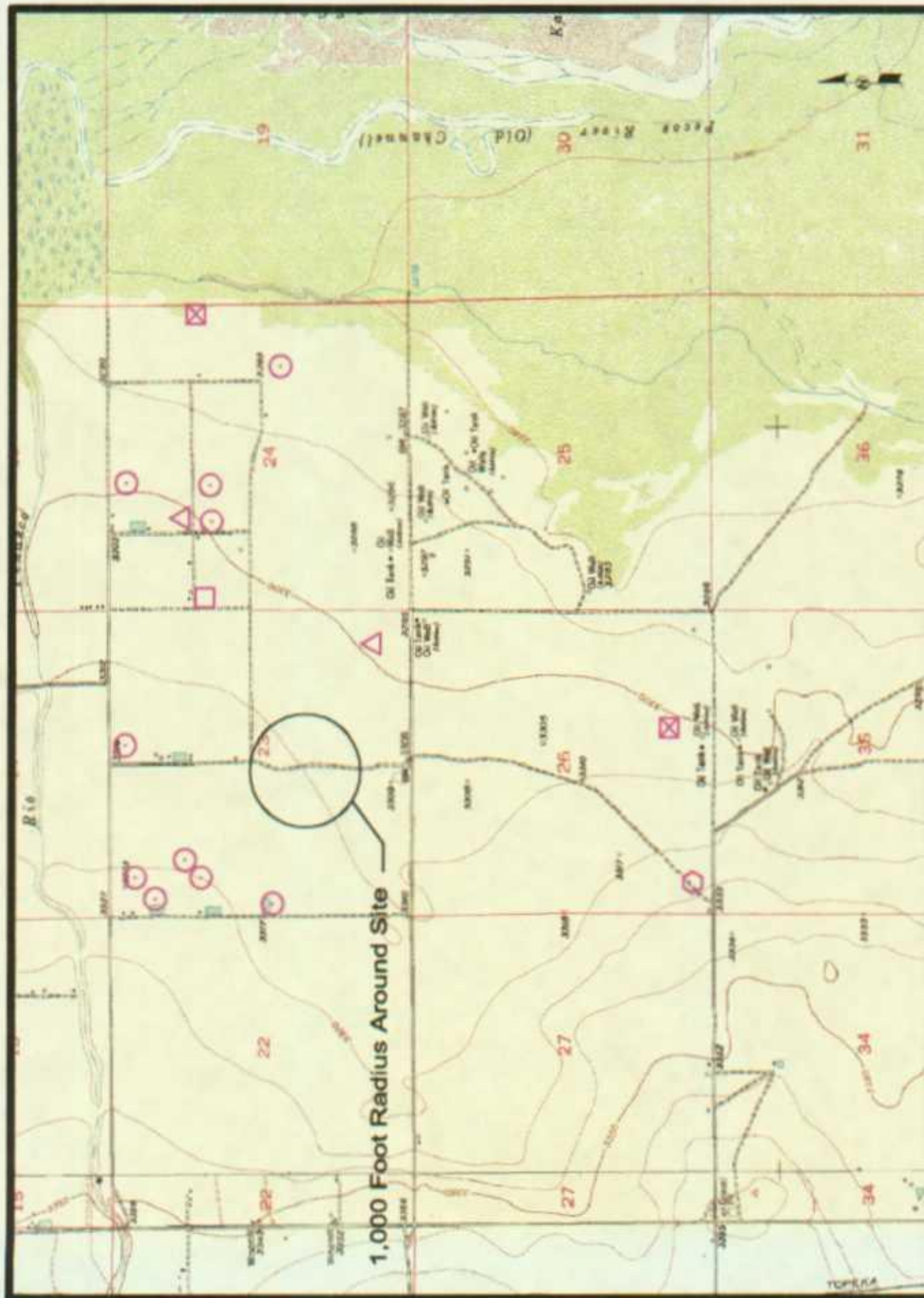


Figure 3

Water Well Location Map

Environmental Technology Group, Inc.

Yates Petroleum Corp.
Lubbock, TX
Artesia, NM



Scale: 1:25,000
Map No. 251
October 20, 2000
ETGI Project # YOC 2000

APPENDICES

APPENDIX A

Soil Boring SB-1

Legend
 PID Head-space reading in ppm obtained with a photo-ionization detector.
 Indicates samples selected for laboratory analysis.

Soil Description

Petroleum Stain

Petroleum Odor

PID Reading

Soil Columns

Depth (feet)



Backfill - Mixed, Sandy Loam/Sand.

Clay with heavy plasticity Interbedded with hydrocarbons

Backfill - Mixed, Sandy Loam/Sand.

Caliche layer

Sand - (SP) - Red-Brown, very fine grained, well sorted, interbedded with clay.

Soil Boring Details

Date Drilled 10 / 20 / 00
 Plugged - Surface to TD with Bentonite and hydrated with deionized water.

Soil Boring Log Details

Soil Boring SB-1

Yates Pet Corp. Lattion Pit Eddy, NM



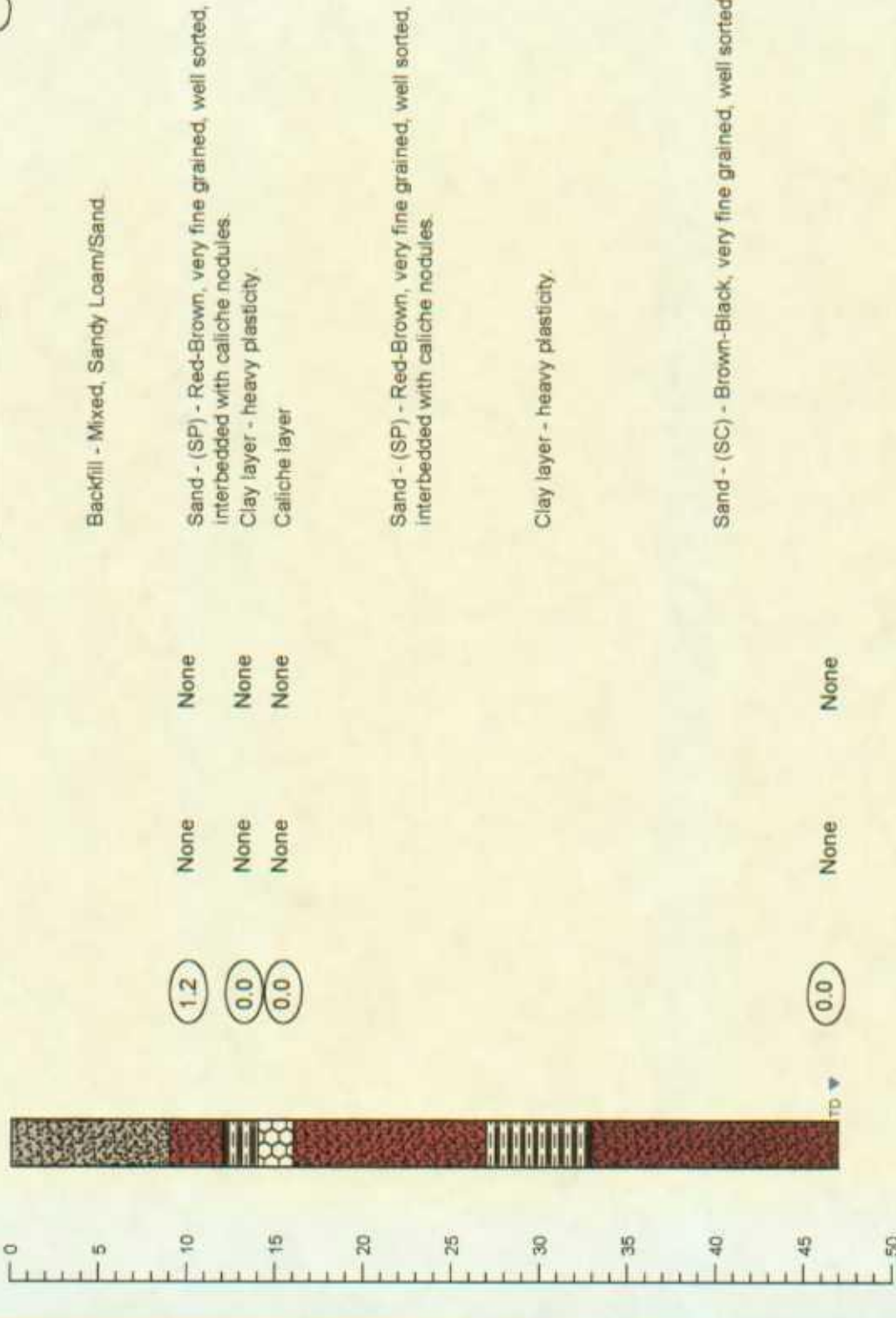
Environmental Technology Group, Inc.

Scale: NTS
 November 2, 2000
 Prep By: JIS
 Checked By: JIS
 ETOI Project # YPC 20000

Soil Boring SB-2

Legend
 PID Head-space reading in ppm obtained with a photo-ionization detector.
 ○ Indicates samples selected for laboratory analysis.

Depth (feet) Soil Columns PID Reading Petroleum Odor Petroleum Stain Soil Description



Soil Boring Details

Date Drilled 10/20/00
 Plugged - Surface to TD with Bentonite and hydrated with deionized water.

Soil Boring Log Details

Soil Boring SB-2

Yates Pet Corp. Lattion Pit Eddy, NM



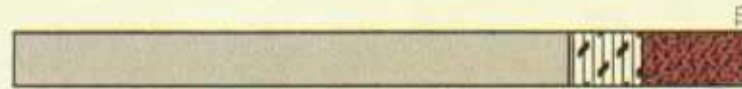
Environmental Technology Group, Inc.

Scale: NTS Prep By: RS Checked By: KD
 November 2, 2000 ETGI Project # YPC 22000

Soil Boring SB-3

Depth (feet) Soil Columns PID Reading Petroleum Odor Petroleum Stain Soil Description

Legend
 PID Head-space reading in ppm obtained with a photo-ionization detector.
 ○ Indicates samples selected for laboratory analysis.



Backfill - mixed, Sandy Loam/Sand.

Gravel pack

Sand - (SP) - Red-Brown, very fine grained, well sorted, interbedded with caliche nodules.

6.8

None

Slight

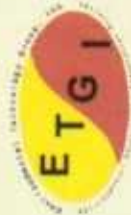
Soil Boring Details

Date Drilled 10/20/00
 Plugged - Surface to TD with Bentonite and hydrated with deionized water.

Soil Boring Log Details

Soil Boring SB-3

Yates Pet Corp. Lattion Pit Eddy, NM



Environmental Technology Group, Inc.

Scale: NTS
 November 2, 2000
 Prep By: RS
 Checked By: HQ
 ETGI Project # YPC 2000

Soil Boring SB-4

Legend
 PID Head-space reading in ppm obtained with a photo-ionization detector.
 Indicates samples selected for laboratory analysis.

Soil Description

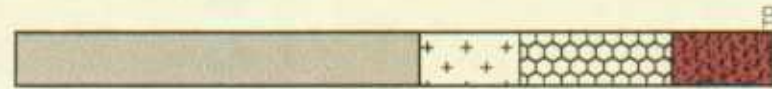
Petroleum Stain

Petroleum Odor

PID Reading

Soil Columns

Depth (feet)



Backfill - Mixed, Sandy Loam/Sand

Concrete slab

Caliche layer

Sand - (SP) - Red-Brown, very fine grained, well sorted, interbedded with clay.

Soil Boring Details

Date Drilled 10/20/00

Plugged - Surface to TD with Bentonite and hydrated with deionized water.

Soil Boring Log Details

Soil Boring SB-4

Yates Pet Corp. Lattion Pit Eddy, NM



Environmental Technology Group, Inc.

Scale: NTS
 November 2, 2000
 Prep By: RS
 Checked By: KD
 ETGI Project # YPC 22000

Soil Boring SB-5

Legend
 PID Head-space reading in ppm obtained with a photo-ionization detector.
 Indicates samples selected for laboratory analysis.

Soil Description

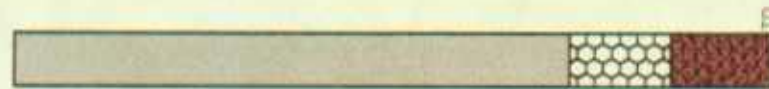
Petroleum Stain

Petroleum Odor

PID Reading

Soil Columns

Depth (feet)



Backfill - Mixed, Sandy Loam/Sand

Caliche layer

None

None

3.7

Sand - (SP) - Red-Brown, very fine grained, well sorted, interbedded with caliche nodules.

Soil Boring Details

Date Drilled 10/20/00

Plugged - Surface to TD with Bentonite and hydrated with deionized water.

Soil Boring Log Details

Soil Boring SB-5

Yates Pet Corp. Lattion Pit Eddy, NM

Environmental Technology Group, Inc.

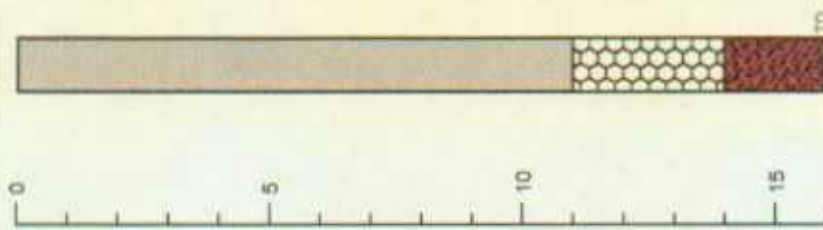


Scale: NTG Prep By: RG Checked By: KD

November 2, 2000 ETGI Project # YPC 2000

Soil Boring SB-6

Depth (feet) Soil Columns PID Reading Petroleum Odor Petroleum Stain Soil Description



Backfill - Mixed, Sandy Loam/Sand.

Caliche layer

0.2 None None

Sand - (SP) - Red-Brown, very fine grained, well sorted, interbedded with caliche nodules.

Legend

- PID Head-space reading in ppm obtained with a photo-ionization detector.
- Indicates samples selected for laboratory analysis.

Soil Boring Details

Date Drilled 10/20/00
Plugged - Surface to TD with Bentonite and hydrated with deionized water.

Soil Boring Log Details

Soil Boring SB-6

Yates Pet Corp. Lattion Pit Eddy, NM



Environmental Technology Group, Inc.

Soil: NTB Prep By: RB Checked By: KD
November 2, 2000 ETGI Project # YPC 22000

APPENDIX B

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.
ATTN: MR. JESSE TAYLOR
2540 W. MARLAND
HOBBSS, N.M. 86240
FAX: 505-397-4701
FAX: 915-520-4310

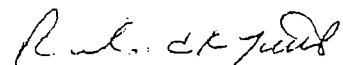
Sample Type: Soil
Sample Condition: Intact/ Iced/ 1 deg. C
Project #: YPC 2200D
Project Name: Yates Petroleum
Project Location: Artesia, N.M.

Sampling Date: See Below
Receiving Date: 10/23/00
Analysis Date: 10/29/00

ELT#	FIELD CODE	BENZENE mg/kg	TOLUENE mg/kg	ETHYLBENZENE mg/kg	m,p-XYLENE mg/kg	o-XYLENE mg/kg	SAMPLE DATE
32918	Inez SB-1 15-16.5'	3.06	1.18	11.5	12.0	4.39	10/19/00
32929	Lattion SB-2 13-15'	<0.025	0.058	0.056	0.122	0.040	10/20/00
32941	Williams SB-5 10-12'	<0.025	<0.025	<0.025	<0.025	<0.025	10/21/00
32947	Scripp SB-2 30-33'	<0.025	<0.025	<0.025	<0.025	<0.025	10/21/00

%IA	104	105	105	105	100
%EA	93	95	96	96	92
BLANK	<0.025	<0.025	<0.025	<0.025	<0.025

METHODS: EPA SW 846-8021B, 5030


Randall K. Tuttle

11-2-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.
ATTN: MR. JESSE TAYLOR
2540 W. MARLAND
HOSBS, N.M. 88240
FAX: 505-397-4701
FAX: 915-520-4310

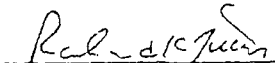
Sample Type: Soil
Sample Condition: Intact/ Iced/ 1 deg. C
Project #: YPC 22C0D
Project Name: Yates Petroleum
Project Location: Artesia, N.M.

Sampling Date: See Below
Receiving Date: 10/23/00
Analysis Date: 10/24/00

ELT#	FIELD CODE	GRO	ORO	SAMPLE DATE
		C6-C10 mg/kg	>C10-C28 mg/kg	
32918	Inez SB-1 15-16.5'	214	790	10/19/00
32929	Lattion SB-2 13-15'	<10	<10	10/20/00
32941	Williams SB-5 17-19'	<10	<10	10/21/00
32947	Scripp SB-2 30-33'	<10	<10	10/21/00

% INSTRUMENT ACCURACY	78	84
% EXTRACTION ACCURACY	78	68
BLANK	<10	<10

Methods: SW 846-8015M


Roland K. Tuttle

11-2-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.
ATTN: MR. JESSE TAYLOR
2540 W. MARLAND
HOBBES, N.M. 88240
FAX: 505-397-4701
FAX: 915-520-4310

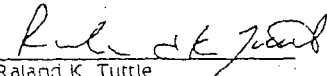
Sample Type: Water
Sample Condition: Intact/ Iced/ HCl/ 1 deg. C
Project #: YPC 2200D
Project Name: Yates Petroleum
Project Location: Artesia, N.M.

Sampling Date: See Below
Receiving Date: 10/23/00
Analysis Date: 10/31/00

ELT#	FIELD CODE	GRO	DRO	SAMPLE DATE
		C6-C10 mg/L	>C10-C28 mg/L	
32922	Inez SB-1 67'	<0.50	<0.50	10/19/00
32935	Lattion SB-2 47'	<0.50	<0.50	10/20/00
32944	Williams SB-5 30'	<0.50	<0.50	10/21/00
32950	Scripp SB-2 40'	<0.50	<0.50	10/21/00

% INSTRUMENT ACCURACY	103	123
% EXTRACTION ACCURACY	115	147
BLANK	<0.50	<0.50

Methods: SW 846-8015M


Roland K. Tuttle

11-2-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.

ATTN: MR. JESSE TAYLOR

2540 W. MARLAND

HOBBS, N.M. 88240

FAX: 505-397-4701

FAX: 915-520-4310

Sample Type: Soil

Sample Condition: Intact/ Iced/ 1 deg. C

Project #: YPC 2200D

Project Name: Yates Petroleum

Project Location: Artesia, N.M.

Sampling Date: See Below

Receiving Date: 10/23/00

Analysis Date: 10/25/00

ELT#	FIELD CODE	Chloride mg/kg	SAMPLE DATE
32918	Inez SB-1 15-16.5'	12230	10/19/00
32919	Inez SB-1 19-21'	4372	10/19/00
32920	Inez SB-1 24-26'	2623	10/19/00
32921	Inez SB-1 36-38'	3978	10/19/00
32923	Inez SB-2 17.5-19.5'	1240	10/19/00
32924	Inez SB-3 17-19'	13471	10/19/00
32925	Inez Background	44	10/19/00
32926	Lattion SB-1 8-9'	886	10/20/00
32927	Lattion SB-1 14-16'	886	10/20/00
32928	Lattion SB-2 8-9'	6736	10/20/00
32929	Lattion SB-2 13-15'	6381	10/20/00
32930	Lattion SB-2 20-21'	7267	10/20/00
32931	Lattion SB-3 12.5-14.5'	3722	10/20/00
32932	Lattion SB-4 13-15'	2304	10/20/00
32933	Lattion SB-5 13-15'	7445	10/20/00
32934	Lattion SB-6 14-16'	4538	10/20/00
32936	Lattion Background	18	10/20/00
32937	Williams SB-1 10-12'	7385	10/21/00
32938	Williams SB-2 10-12'	10706	10/21/00
32939	Williams SB-3 10-12'	10147	10/21/00
32940	Williams SB-4 17-19'	5406	10/21/00
32941	Williams SB-5 10-12'	3729	10/21/00
32942	Williams SB-5 17-19'	9040	10/21/00
32943	Williams SB-5 24-26'	11108	10/21/00
32945	Scripp SB-1 18.5-20.5'	8863	10/21/00
32946	Scripp SB-2 9-10'	886	10/21/00
32947	Scripp SB-2 30-33'	7550	10/21/00
32948	Scripp SB-2 35-37'	301	10/21/00
32949	Scripp SB-2 39-41'	1560	10/21/00
32951	Williams Background	142	10/21/00
32952	Scripp Background	35	10/21/00
QUALITY CONTROL		5140	
TRUE VALUE		5000	
% INSTRUMENT ACCURACY		103	
BLANK		<10	

Methods: SW 846-9253


Roland K. Tuttle

11-2-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.

ATTN: MR. JESSE TAYLOR

2540 W. MARLAND

HOBBS, N.M. 88240

FAX: 505-397-4701

FAX: 915-520-4310

Sample Type: Water

Sample Condition: Intact/ Iced/ HCl/ 1 deg. C

Project #: YPC 2200D

Project Name: Yates Petroleum

Project Location: Artesia, N.M.

Sampling Date: See Below

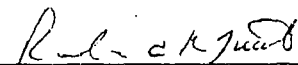
Receiving Date: 10/23/00

Analysis Date: 10/24/00

ELT#	FIELD CODE	BENZENE mg/L	TOLUENE mg/L	ETHYLBENZENE mg/L	m,p-XYLENE mg/L	o-XYLENE mg/L	SAMPLE DATE
32922	Inez SB-1 67'	0.088	0.007	0.056	0.056	0.026	10/19/00
32935	Lattion SB-2 47'	0.004	<0.001	<0.001	<0.001	<0.001	10/20/00
32944	Williams SB-5 30'	0.535	0.012	0.020	0.021	0.013	10/21/00
32950	Scripp SB-2 40'	0.015	<0.001	0.001	0.002	0.001	10/21/00

%IA	96	96	99	101	96
%EA	106	89	95	86	90
BLANK	<0.001	<0.001	<0.001	<0.001	<0.001

METHODS: EPA SW 846-8021B ,5030


Raiaud K. Tuttle

11-2-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

ENVIRONMENTAL TECHNOLOGY GROUP, INC.

ATTN: MR. JESSE TAYLOR

2540 W. MARLAND

HOBBS, N.M. 88240

FAX: 505-397-4701

FAX: 915-520-4310

Sample Type: Water

Sample Condition: Intact/ Iced/ 1 deg. C

Project #: YPC 2200D

Project Name: Yates Petroleum

Project Location: Artesia, N.M.

Sampling Date: See Below

Receiving Date: 10/23/00

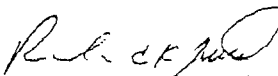
Analysis Date: 11/02/00

ELT#	FIELD CODE	Chloride mg/L	SAMPLE DATE
32922	Inez SB-1 67'	17725	10/19/00
32935	Lattion SB-2 47'	81535	10/20/00
32944	Williams SB-5 30'	30842	10/21/00
32950	Scripp SB-2 40'	25170	10/21/00

QUALITY CONTROL
TRUE VALUE
% INSTRUMENT ACCURACY
BLANK

5140
5000
103
<10

Methods: SW 846-9253


Roland K. Tuttle

11-2-00
Date

1

1565

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

COE: 264

Rec 100

Environmental Lab of Texas, Inc. 12600 West 1-20 East Odessa, Texas 79763
(915) 563-1800 FAX (915) 563-1713

Project Manager:

Jesse Taylor

Phone #: 397-4882

FAX #: 397-4701

Company Name & Address:

ETGI 2540 West Marland Hobbs, NM

Project #:

YPC 2200 N

Project Name:

Yates Pet

Project Location:

Artesia, NM

Sampler Signature:

[Signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX						PRESERVATIVE METHOD				DATE	TIME
				WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HNO3	ICE	NONE	OTHER		
32929	Lattion SB-2 13-15'	1	462	X							X			10/25	1345
32930	Lattion SB-2 20-21'	1	1	X											1402
32931	Lattion SB-3 12.5-14.5'	1	1	X											1002
32932	Lattion SB-4 13-15'	1	1	X											1037
32933	Lattion SB-5 13-15'	1	1	X											1120
32934	Lattion SB-6 14-16'	1	1	X											1215
32935	Lattion SB-2 47'	4	462	X						X					1530
32936	Lattion Background	1	462	X											0940
32937	Williams SB-1 10-12'	1	1	X										10/21	0740
32938	Williams SB-2 10-12'	1	1	X											0804
32939	Williams SB-3 10-12'	1	1	X											0830

Relinquished by:

[Signature]

Date:

23 Oct 00

Time:

1405

Received by:

[Signature]

REMARKS

Rec 100

Relinquished by:

Date:

Time:

Received by:

Received by Laboratory:

Time:

Date:

Time:

Date:

Time:

CHAIN OF CUSTODY RECORD AND ANALYSIS REQUEST

POC: 264

ANALYSIS REQUEST

TPH 488 8015 600/6.100
TCLP Metals Ag As Ba Cd Cr Pb Hg Se
TCLP Volatiles
TCLP Semi Volatiles
TDS
RCI

BTEX 81120/5030

X

X

X

X

X

X

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2 of 4

Nov 02 00 05:10p

P. 8

Environmental Lab of Texas, Inc. 12600 West I-20 East Odessa, Texas 79763 (915) 563-1800 FAX (915) 563-1713

Project Manager: **JESSE TAYLOR**

Phone #: 397-4882
FAX #: 397-4701

Company Name & Address:

RTGT 2540 W. MARLAND ROSS AM 88990

Project #:

VPC 2200A

Project Name:

VATES PET

Project Location:

ARTESIA NM

Sampler Signature:

Don Patton

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX					PRESERVATIVE METHOD					SAMPLING	
				WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HNO3	ICE	NONE	OTHER	DATE	TIME
32940	Williams SB-4 17-19'	1		X							X			10/21/09	11
32941	Williams SB-5 10-12'	1		X										0935	X
32942	Williams SB-5 17-19'	1		X										0950	
32943	Williams SB-5 24-26'	1		X										1025	
32944	Williams SB-5 30'	4		X					X					1052	X
32945	Scripp SB-1 18.5-20.5'	1		X										1240	
32946	Scripp SB-2 9-10'	1		X										1357	
32947	Scripp SB-2 30-33'	1		X										1430	X
32948	Scripp SB-2 35-37'	1		X										1450	
32949	Scripp SB-2 39-41'	1		X										1530	
32950	Scripp SB-2 40'	4		X					X					1615	X

REMARKS

Rec 10C

Received by:

Don Patton

Time:

1405

Date:

23 Oct 00

Relinquished by:

Don Patton

Relinquished by:

Date:

Relinquished by:

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

COC #264

ANALYSIS REQUEST

3014

TPH	8015	CEO/CEO
TCLP Metals Ag As Ba Cd Cr Pb Hg Se		
Total Metals Ag As Ba Cd Cr Pb Hg Se		
TCLP Volatiles		
TCLP Semi Volatiles		
TOS		
RCI		
CHLORIDES		

Environmental Lab of Texas, Inc. 12600 West I-20 East Odessa, Texas 79763
(915) 563-1800 FAX (915) 563-1713

Project Manager: Jesse Taylor Phone #: 397-41852
FAX #: 397-4701
Company Name & Address: ETGI 2540 West Markland, Hobbs, NM
Project #: YPC-2200 D Project Name: Yates Pet.
Project Location: Artesia, NM Sampler Signature: [Signature]

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX						PRESERVATIVE METHOD				SAMPLING	
				WATER	SOIL	AIR	SLUDGE	OTHER	HCL	HNO3	ICE	NONE	OTHER	DATE	TIME
32961	Williams Background	1	4oz	X						X				10/21/07	1645
32962	Scripp Background	1	4oz	X						X				10/21/07	1250

Relinquished by: <u>[Signature]</u>	Date: <u>23 Oct 00</u>	Time: <u>1405</u>	Received by: <u>[Signature]</u>	Time: <u>1405</u>	Relinquished by: <u>[Signature]</u>	Date: <u>23 Oct 00</u>	Time: <u>1405</u>	Received by: <u>[Signature]</u>	Time: <u>1405</u>
-------------------------------------	------------------------	-------------------	---------------------------------	-------------------	-------------------------------------	------------------------	-------------------	---------------------------------	-------------------

ANALYSIS REQUEST														
TPH 418.1	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	TCI	X chlorides							

REMARKS: Rec 1°C

APPENDIX C

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 18S Range: 26E Sections: 23

NAD27 X: Y: Zone: Search Radius:

County: ED Basin: Number: Suffix:

Owner Name: (First) (Last) Non-Domestic Domestic All

Well Data Report Avg Depth to Water Report Water Column Report

Clear Form WATERS Menu Help

WELL DATA REPORT 11/15/2000

(acre ft per annum)		(quarters are biggest to smallest)		X Y are	
DB File Nbr	Use	Diversion	Owner	Well Number	Zone
RA 01296	IRR	9666	CHARLES R. MARTIN	RA 01296	
				RA 01296 CLW	
				RA 01296 COR	
				RA 01296 DRY 2	
				RA 01296 SUP	
				RA 01296 SUP 2	
				RA 02132 CLW-2	
				RA 05344 (1C)	
RA 02132 CLW-2	IRR	3	JONNIE GOODEN & PAUL E ROGERS	RA 01296	
RA 05344	PRO	60	YATES PETROLEUM CORP	RA 02132	

Record Count: 8

New Mexico Office of the State Engineer
Water Right Summary

Back

DB File Mbr: RA 01296
Primary Purpose: IRR IRRIGATION
Primary Status: PMT Permit
Total Acres: 644.4
Total Diversion: 9666
Owner: CHARLES R. MARTIN

Documents on File

Doc	File/Act	Status	1 2 3	Trans Desc	From/To	Acres	Diversion	Consumptive
CPPU	10/29/1969	PMT APR CNV	CONVERSION	RA	012 T	644.4	9666	9666

Point of Diversion		(qtr are biggest to smallest				X Y are in Feet		UTM are in Meters)		I		
POD Number	Source	Tws	Rng	Sec	q q q	Zone	X	Y	UTM Zone		Eastings	Northing
RA 01296	Shallow	18S	26E	23	1 3 0				13	560098	3621901	32 4
RA 01296 CLW	Shallow	18S	26E	23	1 3 2				13	560197	3622000	32 4
RA 01296 COR	Shallow	18S	26E	23	3 1 1				13	559998	3621596	32 4
RA 01296 DRY		18S	26E	23	1 1 0				13	560097	3622305	32 4
RA 01296 DRY 2		18S	26E	23	1 1 0				13	560097	3622305	32 4
RA 01296 SUP	Shallow	18S	26E	23	3 1 1				13	559998	3621596	32 4
RA 01296 SUP 2	Shallow	18S	26E	23	1 1 3				13	559996	3622204	32 4

Place of Use (quarters are biggest to smallest

Tws	Rng	Sec	q q q	Acres	Diversion	Consumptive	Use	Priority	Status	Other Location Description
18S	26E	14		106	318					
18S	26E	15		233.5	700.5					
18S	26E	23		304.9	914.7			01/01/1935		

New Mexico Office of the State Engineer
Transaction Summary

[Back](#)

CPPU Change Place & Purpose of Use (Ground)

Trn_nbr: 106247 Trn_desc: CONVERSION RA 01296 File Date: 09/25/1969

Primary status: PMT Permit
Secondary status: APR Approved
Person assigned:
Applicant: CHARLES R. MARTIN

Events
Date 09/25/1969 Type CNV Description Converted from Main Frame Comment
Processed By informix Ortega, Mercedes

DB_File_Nbr RA 01296 Acres Diversion Consumptive Purpose of Use
644.4 9666 IRR IRRIGATION

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number RA 01296 Tws 18S Rng 26E Sec 23 q 1 q 3 q 0 Zone Y

Driller Licence:

Driller Name: R. L. WILLSON

Drill Start Date: 11/01/1938

Log File Date:

Pump Type:

Casing Size:

Depth Well: 158

Source: Shallow

Drill Finish Date: 01/26/1939

PCW Received Date: 12/16/1939

Pipe Discharge Size:

Estimated Yield:

Depth Water:

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number
RA 01296 CLW

TwS Rng Sec q q q Zone X Y
18S 26E 23 1 3 2

Driller Licence: 28 SMITH, A.F.

Driller Name:

Drill Start Date: 03/16/1954

Log File Date: 04/12/1954

Pump Type: TURBIN

Casing Size:

Depth Well: 150

Source: Shallow

Drill Finish Date: 03/18/1954

PCW Received Date: 10/05/1955

Pipe Discharge Size:

Estimated Yield:

Depth Water: 35

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number
RA 01296 COR

Tws Rng Sec q q q Zone X Y
18S 26E 23 3 1 1

Driller Licence:

Driller Name: D. N. GRAY

Drill Start Date:

Log File Date:

Pump Type: TURBIN

Casing Size:

Depth Well: 150

Source: Shallow

Drill Finish Date: 04/01/1943

PCW Received Date: 08/28/1944

Pipe Discharge Size:

Estimated Yield:

Depth Water: 70

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number
RA 01296 DRY

Tws Rng Sec q q q Zone X Y
18S 26E 23 1 1 0

Driller Licence:

Driller Name: R. L. WILLSON

Drill Start Date: 09/24/1935

Log File Date: 02/10/1959

Pump Type:

Casing Size:

Depth Well: 212

Source:

Drill Finish Date: 10/01/1935

PCW Received Date:

Pipe Discharge Size:

Estimated Yield:

Depth Water:

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number
RA 01296 DRY 2 TwS Rng Sec q q q Zone Y

Y

X

Zone

q

q

q

1

1

1

0

Driller Licence:

Driller Name: R. L. WILLSON

Drill Start Date: 03/01/1939

Log File Date: 02/10/1959

Pump Type:

Casing Size:

Depth Well:

Source:

Drill Finish Date: 03/30/1939

PCW Received Date:

Pipe Discharge Size:

Estimated Yield:

Depth Water:

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number Tws Rng Sec q q q Zone X Y
RA 01296 SUP 18S 26E 23 3 1 1

Driller Licence:

Driller Name: D. N. GRAY

Drill Start Date:

Log File Date:

Pump Type: TURBIN

Casing Size:

Depth Well: 154

Source: Shallow

Drill Finish Date: 04/01/1943

PCW Received Date: 08/21/1943

Pipe Discharge Size:

Estimated Yield:

Depth Water: 110

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number RA 01296 SUP 2 TwS 18S Rng 26E Sec 23 q 1 q 1 q 3 Zone X Y

Driller Licence:

Driller Name: DAVE GRAY

Drill Start Date:

Log File Date:

Pump Type: ROTARY

Casing Size:

Depth Well: 135

Source: Shallow

Drill Finish Date: 02/01/1948

PCW Received Date: 08/12/1948

Pipe Discharge Size:

Estimated Yield:

Depth Water: 100

New Mexico Office of the State Engineer
Water Right Summary

Back

DB File Nbr: RA 02132 CLW-2
Primary Purpose: IRR IRRIGATION
Primary Status: ADJ Adjudicated
Total Acres: 254.9
Total Diversion: .3
Owner: JONNIE GOODEN & PAUL E ROGERS

Documents on File

Doc	File/Act	Status	1	2	3	Trans_Desc	From/To	Acres	Diversion	Consumptive
APPRO	03/21/1959	ADJ ADJ CNV	CONVERSION	RA	021 T			254.9		3

Point of Diversion	(qtr are biggest to smallest	X	Y	are in Feet	UTM are in Meters)									
POD Number	Source	Tws	Rng	Sec	q	q	q	Zone	X	Y	UTM_Zone	Easting	Northing	I
RA 02132 CLW-2	Shallow	18S	26E	23	2	1	1				13	560798	3622405	32 4

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number TwS Rng Sec q q q Zone X Y
RA 02132 CLW-2 18S 26E 23 2 1 1

Driller Licence:

Driller Name: A.F. SMITH

Drill Start Date:

Log File Date:

Pump Type: TURBIN

Casing Size:

Depth Well: 200

Source: Shallow

Drill Finish Date: 01/08/1955

PCW Received Date: 08/15/1955

Pipe Discharge Size:

Estimated Yield:

Depth Water:

New Mexico Office of the State Engineer
Water Right Summary

Back

DB File Nbr: RA 05344

Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE

Primary Status: PMT Permit

Total Acres:

Total Diversion: 60

Owner: YATES PETROLEUM CORP

Documents on File

Doc	File/Act	Status	1	2	3	Trans_Desc	From/To	Acres	Diversion	Consumptive
CLWPU	01/31/1989	PMT APR CNV	CONVERSION	RA	053 T					60

Point of Diversion

POD Number	Source	Tws	Rng	Sec	q	q	q	X	Y	UTM Zone	Easting	Northing	I
RA 05344	Shallow	18S	25E	26	4	4	0			13	551687	3619460	32 4
RA 05344 (1A)		18S	25E	35	0	0	0			13	551065	3618474	32 4
RA 05344 (1)		18S	25E	26	3	4	3			13	550782	3619349	32 4
RA 05344 (1B)		18S	26E	27	3	0	0			13	558699	3619680	32 4
RA 05344 (1C)		18S	26E	23	4	4	0			13	560501	3620690	32 4
RA 05344 (1D)		18S	25E	35	0	0	0			13	551065	3618474	32 4
RA 05344 (2)		18S	25E	35	0	0	0			13	551065	3618474	32 4
RA 05344 (2A)		18S	26E	31	3	0	0			13	553894	3618066	32 4
RA 05344 (2B)		18S	25E	34	0	0	0			13	549450	3618477	32 4
RA 05344 (2C)		18S	25E	34	0	0	0			13	549450	3618477	32 4
RA 05344 (3)		18S	25E	23	0	0	0			13	551075	3621665	32 4

Place of Use

(quarters are biggest to smallest)

Tws	Rng	Sec	q	q	q	q	q	Acres	Diversion	Consumptive	Use	Priority	Status	Other Location Description
												05/22/1967		

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number Tws Rng Sec q q q Zone X Y
RA 05344 (1C) 18S 26E 23 4 4 0

Driller Licence:
Driller Name:
Drill Start Date:
Log File Date:
Pump Type:
Casing Size:
Depth Well:

Source:
Drill Finish Date:
PCW Received Date:
Pipe Discharge Size:
Estimated Yield:
Depth Water:

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 18S Range: 26E Sections: 24
NAD27 X: Y: Zone: Search Radius:
County: ED Basin: Number: Suffix:
Owner Name: (First) (Last) Non-Domestic Domestic All

Well Data Report Avg Depth to Water Report Water Column Report
Clear Form WATERS Menu Help

WELL DATA REPORT 11/15/2000

DB File Nbr	Use	Diversion	Owner	(acre ft per annum)	Well Number	(quarters are biggest to smallest)	X Y are
						Tws Rng Sec q q q	Zone
RA 02132	IRR	3	TERRY & JAMIE MARIE SANDERS		RA 02132	18S 26E 24 2 4 1	
					RA 02132 B	18S 26E 24 1 4 2	
					RA 02132 B REPAR	18S 26E 24 1 2 3	
					RA 02132 BS	18S 26E 24 1 2 2	
					RA 02132 CLW	18S 26E 24 1 4 1	
					RA 02132 REPAR	18S 26E 24 2 4 1	
					RA 02132 B-2 REPAR	18S 26E 24 1 2 3	
					RA 03409 REPAR	18S 26E 24 2 4 2	
					RA 03900	18S 26E 24 1 3 1	

ANOCO PROD. CO.
SANDERS TERRY
PAUL & JOHNNIE ROGERS

Record Count: 9

New Mexico Office of the State Engineer
Water Right Summary

Back

DB File Nbr: RA 02132
 Primary Purpose: IRR IRRIGATION
 Primary Status: ADJ Adjudicated
 Total Acres: 4.7
 Total Diversion: 3
 Owner: R.G. GOODEN
 Owner: TERRY & JAMIE MARIE SANDERS

Documents on File

Doc	File/Act	Status	1	2	3	Trans_Desc	From/To	Acres	Diversion	Consumptive
APPRO	05/05/1958	ADJ ADJ CNV	CONVERSION	RA	021	T		4.7	3	

Point of Diversion

POD Number	Source	Tws	Rng	Sec	q	q	q	X	Y	UTM Zone	Eastings	Northings	I
RA 02132	Shallow	18S	26E	24	2	4	1			13	562804	3622005	32 4
RA 02132 B	Shallow	18S	26E	24	1	4	2			13	562201	3622003	32 4
RA 02132 B REPAR	Shallow	18S	26E	24	1	2	3			13	562000	3622207	32 4
RA 02132 BS	Shallow	18S	26E	24	1	2	2			13	562200	3622407	32 4
RA 02132 CLW	Shallow	18S	26E	24	1	4	1			13	562001	3622003	32 4
RA 02132 REPAR	Shallow	18S	26E	24	2	4	1			13	562804	3622005	32 4

UTM are in Meters)

Place of Use

Tws	Rng	Sec	q	q	q	Acres	Diversion	Consumptive	Use	Priority	Status	Other Location Description
18S	26E	23				146.5	439.5			01/01/1908		
18S	26E	23				39.75	119.25			01/01/1908		
18S	26E	24				63.8	191.4			01/01/1925		
18S	26E	24				3.5	10.5			01/01/1925		

(quarters are biggest to smallest)

New Mexico Office of the State Engineer
Transaction Summary

[Back](#)

APPRO Application to Appropriate

Trn_nbr: 107254 Trn_desc: CONVERSION RA 02132 File Date: 05/05/1958

Primary status: ADJ Adjudicated

Secondary status: ADJ

Person assigned:

Applicant: R.G. GOODEN

Applicant: TERRY & JAMIE MARIE SANDERS

Events

Date	Type	Description	Comment	Processed By
05/05/1958	CNV	Converted from Main Frame		informix Ortega, Mercedes
DB File Nbr	Acres	Diversion	Consumptive	Purpose of Use
RA 02132	4.7	3	IRR	IRRIGATION

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number
RA 02132

Tws Rng Sec q q q
18S 26E 24 2 4 1

X Y

Zone

Driller Licence:
Driller Name:
Drill Start Date:
Log File Date:
Pump Type:
Casing Size:
Depth Well:

Source: Shallow
Drill Finish Date: 01/01/1912
PCW Received Date:
Pipe Discharge Size:
Estimated Yield:
Depth Water:

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number Tws Rng Sec q q q Zone X Y
RA 02132 B 18S 26E 24 1 4 2

Driller Licence:

Driller Name: D.N. GRAY

Drill Start Date: 12/06/1952

Log File Date: 01/06/1953

Pump Type: TURBIN

Casing Size:

Depth Well: 166

Source: Shallow

Drill Finish Date: 12/17/1952

PCW Received Date: 02/08/1955

Pipe Discharge Size:

Estimated Yield:

Depth Water:

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number	Tws	Rng	Sec	q	q	q	q	Zone	X	Y
RA 02132 B REPAR	18S	26E	24	1	2	3				
Driller Licence: 28 SMITH, A.F.										
Driller Name: A.F. SMITH										
Drill Start Date: 12/03/1953										
Log File Date: 12/23/1953										
Pump Type:										
Casing Size:										
Depth Well: 140										
Source: Shallow										
Drill Finish Date: 12/04/1953										
PCW Received Date: 02/08/1955										
Pipe Discharge Size:										
Estimated Yield:										
Depth Water: 27										

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number Tws Rng Sec q q q Zone Y
RA 02132 BS 18S 26E 24 1 2 2

Driller Licence:

Driller Name:

Drill Start Date:

Log File Date:

Pump Type: TURBIN

Casing Size:

Depth Well: 105

Source: Shallow

Drill Finish Date: 01/01/1938

PCW Received Date: 02/08/1955

Pipe Discharge Size:

Estimated Yield:

Depth Water:

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number Tws Rng Sec q q q Zone X Y
RA 02132 CLW 18S 26E 24 1 4 1

Driller Licence:

Driller Name: D.N. GRAY

Drill Start Date: 12/06/1952

Log File Date: 01/06/1953

Pump Type:

Casing Size:

Depth Well: 166

Source: Shallow

Drill Finish Date: 12/17/1952

PCW Received Date:

Pipe Discharge Size:

Estimated Yield:

Depth Water:

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number Tws Rng Sec q q q q q Y
RA 02132 REPAR 18S 26E 24 2 4 1 X Y

Driller Licence:

Driller Name: R.I. WILLSON

Drill Start Date:

Log File Date: 01/06/1953

Pump Type: TURBIN

Casing Size:

Depth Well: 60

Source:

Drill Finish Date: 03/01/1936

PCW Received Date:

Pipe Discharge Size:

Estimated Yield:

Depth Water:

New Mexico Office of the State Engineer
Water Right Summary

Back

DB File Nbr: RA 02132 B-2
Primary Purpose: PRO 72-12-1 PROSPECTING OR DEVELOPMENT OF NATURAL RESOURCE
Primary Status: EXP Expired
Total Acres:
Total Diversion:
Owner: ANOCO PROD. CO.

Documents on File

Doc	File/Act	Status	1	2	3	Trans_Desc	From/To	Acres	Diversion	Consumptive
APPRO	07/24/1980	EXP	EXP	CNV	CONVERSION	RA 021 T				

Point of Diversion	(qtr are biggest to smallest	X	Y	are in Feet	UTM are in Meters)									
POD Number	Source	Tws	Rng	Sec	q	q	q	Zone	X	Y	UTM_Zone	Easting	Northing	I
RA 02132 B-2 REPAR	Shallow	18S	26E	24	1	2	3				13	562000	3622207	32 4

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number Tws Rng Sec q q q Zone Y
RA 02132 B-2 REPAR 18S 26E 24 1 2 3

Driller Licence: 28 SMITH, A.F.

Driller Name: A.F. SMITH

Drill Start Date: 12/08/1953

Log File Date: 01/11/1954

Pump Type: TURBIN

Casing Size:

Depth Well: 105

Source: Shallow

Drill Finish Date: 12/10/1953

PCW Received Date: 02/08/1955

Pipe Discharge Size:

Estimated Yield:

Depth Water: 27

New Mexico Office of the State Engineer
Water Right Summary

Back

DB File Nbr: RA 03409 REPAR

Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD

Primary Status: PMT Permit

Total Acres:

Total Diversion: 3

Owner: SANDERS TERRY

Documents on File

Doc	File/Act	Status	1	2	3	Trans Desc	From/To	Acres	Diversion	Consumptive
72121	01/31/1956	PMT APR CNV	CONVERSION	RA	034	T				3

Point of Diversion

POD Number	Source	Tws	Rng	Sec	q	q	q	q	q	X	Y	are in Feet	UTM are in Meters)	UTM Zone	Easting	Northing	I
RA 03409 REPAR	Shallow	18S	26E	24	2	4	2							13	563004	3622005	32 4

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number	TwS	Rng	Sec	q	q	q	Zone	X	Y
RA 03409 REPAR	18S	26E	24	2	4	2			
Driller Licence: 28 SMITH, A.F.									
Driller Name:									
Drill Start Date: 02/13/1956									
Log File Date: 02/27/1956									
Pump Type:									
Casing Size:									
Depth Well: 175									
Source: Shallow									
Drill Finish Date: 02/21/1956									
PCW Received Date:									
Pipe Discharge Size:									
Estimated Yield:									
Depth Water: 18									

Back

Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD

Total Acres:

Owner: PAUL & JOHNNIE ROGERS

Doc	File/Act	Status	1	2	3	Trans_Desc	From/To	Acres	Division	Consumptive
72121	07/17/1958	PMT	APR	CNV	CONVERSION	RA	039 T		3	

POD Number	Source	TwS	Rng	Sec	q	q
RA 03900	Artesian	18S	26E	24	1	3

Zone

Nothing

UTM are in Meters)		
UTM_Zone	Easting	Northing
13	561600	3622003
		32 4

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number RA 03900 TwS 18S Rng 26E Sec 24 q 1 q 3 q 1 Zone X Y

Driller Licence: 28 SMITH, A.F.

Driller Name:

Drill Start Date: 07/17/1958

Log File Date: 08/11/1958

Pump Type:

Casing Size:

Depth Well: 845

Source: Artesian

Drill Finish Date: 08/08/1958

PCW Received Date:

Pipe Discharge Size:

Estimated Yield:

Depth Water: 90

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 18S Range: 26E Sections: 25
NAD27 X: Y: Zone: Search Radius:
County: ED Basin: Number: Suffix:
Owner Name: (First) (Last) Non-Domestic Domestic All

Well Data Report	Avg Depth to Water Report	Water Column Report
Clear Form	WATERS Menu	Help

WELL DATA REPORT 11/15/2000

(acre ft per annum)

DB File Nbr Use Diversion Owner

No Records found, try again

(quarters are biggest to smallest X Y are
Well Number TwS Rng Sec q q q Zone

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: 18S Range: 26E Sections: 26
NAD27 X: Y: Zone: Search Radius:
County: ED Basin: Number: Suffix:
Owner Name: (First) (Last) Non-Domestic Domestic All

Well Data Report Avg Depth to Water Report Water Column Report
Clear Form WATERS Menu Help

WELL DATA REPORT 11/15/2000

(acre ft per annum)				(quarters are biggest to smallest)				X Y are	
DB File Nbr	Use	Diversion	Owner	Well Number	Tws	Rng	Sec	q	Zone
RA 01881	OBS		BASSETT & BIRNEY ET AL	RA 01881	18S	26E	26	3 3 0	
RA 07242 -EXPL	DOM	3	HUBERT C. GREEN	RA 07242 -EXPL	18S	26E	26	4 3	
RA 07242 EXPL	OBS		HUBERT C. GREEN	RA 07242 EXPL	18S	26E	26	4 3	
RA 07243 -EXPL	DOM	3	HUBERT C. GREEN	RA 07243 -EXPL	18S	26E	26	4 3	
RA 07243 EXPL	DOM	3	HUBERT C. GREEN	RA 07243 EXPL	18S	26E	26	4 3	

Record Count: 5

New Mexico Office of the State Engineer
Water Right Summary

[Back](#)

DB File Nbr: RA 01881

Primary Purpose: OBS OBSERVATION

Primary Status: EXP Expired

Total Acres:

Total Diversion:

Owner: BASSETT & BIRNEY ET AL

Documents on File

Doc	File/Act	Status	1 2 3	Trans_Desc	From/To	Acres	Diversion	Consumptive
72121	01/27/1942	EXP	EXP	CNV CONVERSION	RA 018 T			

Point of Diversion	Source	(qtr are biggest to smallest	X Y are in Feet	Y	UTM are in Meters)
POD Number	Tws	Rng	Sec	q q q	Zone
RA 01881	18S	26E	26	3 3 0	13
					UTM_Zone Easting Northing
					13 560105 3619478
					32 4

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y
RA 01881	18S	26E	26	3	3	0			

Driller Licence:
Driller Name:
Drill Start Date:
Log File Date:
Pump Type:
Casing Size:
Depth Well:

Source:
Drill Finish Date:
PCW Received Date:
Pipe Discharge Size:
Estimated Yield:
Depth Water:

Back

Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD

Total Acres:

Owner: HUBERT C. GREEN

Doc	File/Act	Status	1	2	3	Trans_Desc	From/To	Acres	Diversion	Consumptive
72121	09/15/1983	PMT	APR	CONV	CONVERSION	RA	072 T	3	3	

(qtr are biggest to smallest X Y are in Feet

Source	TwS	Rng	Sec	q	q	Zone
Source	TwS	Rng	Sec	q	q	Zone

Shallow	18S	26E	26	4	3
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UTM Zone	Easting	Northing
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UTM Zone	Easting	Northing	I
13	560908	3619479	32 4

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y
RA 07242 -EXPL	18S	26E	26	4	3				
Driller Licence: 749 HUGHES, SAMUEL DALE									
Driller Name: KUGHES DRILLING COMPANY									
Source: Shallow									
Drill Start Date: 09/20/1983									
Drill Finish Date: 10/30/1983									
Log File Date: 11/08/1983									
PCW Received Date:									
Pipe Discharge Size:									
Pump Type:									
Estimated Yield:									
Casing Size:									
Depth Well: 102									
Depth Water: 55									

New Mexico Office of the State Engineer
Water Right Summary

Back

DB File Nbr: RA 07242 EXPL
Primary Purpose: OBS OBSERVATION
Primary Status: PMT Permit
Total Acres:
Total Diversion:
Owner: HUBERT C. GREEN

Documents on File

Doc	File/Act	Status	1	2	3	Trans_Desc	From/To	Acres	Diversion	Consumptive
EXPL	09/15/1983	PMT	APR	CONV	CONVERSION	RA	072 T			

Point of Diversion	(qtr are biggest to smallest	X	Y	are in Feet	UTM are in Meters)									
POD Number	Source	Tws	Rng	Sec	q	q	q	Zone	X	Y	UTM Zone	Easting	Northing	I
RA 07242 EXPL	Shallow	18S	26E	26	4	3					13	560908	3619479	32 4

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y
RA 07242 EXPL	18S	26E	26	4	3				
Driller Licence: 749 HUGHES, SAMUEL DALE									
Driller Name: Source: Shallow									
Drill Start Date: 09/20/1983 Drill Finish Date: 10/30/1983									
Log File Date: 11/08/1983 PCW Received Date:									
Pump Type: Pipe Discharge Size:									
Casing Size: Estimated Yield:									
Depth Well: 102 Depth Water: 55									

New Mexico Office of the State Engineer
Water Right Summary

Back

DB File Nbr: RA 07243 -EXPL

Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD

Primary Status: PMT Permit

Total Acres:

Total Diversion: 3

Owner: HUBERT C. GREEN

Documents on File

Doc	File/Act	Status	1	2	3	Trans Desc	From/To	Acres	Diversion	Consumptive
72121	09/15/1983	PMT APR CNV				CONVERSION	RA 072 T			3

Point of Diversion

POD Number	Source	Tw	Rng	Sec	q	q	q	q	X	Y	UTM Zone	Easting	Northing	I
RA 07243 -EXPL	Shallow	18S	26E	26	4	3					13	560908	3619479	32 4

UTM are in Meters)

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number
RA 07243 -EXPL

Tws	Rng	Sec	q	q	q	Zone	X	Y
18S	26E	26	4	3				

Driller Licence: 749 HUGHES, SAMUEL DALE
Driller Name: HUGHES DRILLING COMPANY
Drill Start Date: 07/01/1984
Log File Date: 07/27/1984
Pump Type:
Casing Size:
Depth Well: 110

Source: Shallow
Drill Finish Date: 07/25/1984
PCW Received Date:
Pipe Discharge Size:
Estimated Yield:
Depth Water: 50

New Mexico Office of the State Engineer
Water Right Summary

Back

DB File Nbr: RA 07243 EXPL

Primary Purpose: DOM 72-12-1 DOMESTIC ONE HOUSEHOLD

Primary Status: PMT Permit

Total Acres:

Total Diversion: 3

Owner: HUBERT C. GREEN

Documents on File

Doc	File/Act	Status	1	2	3	Trans_Desc	From/To	Acres	Diversion	Consumptive
72121	09/15/1983	.PMT APR CNV	CONVERSION	RA	072	T			3	

Point of Diversion	(qtr are biggest to smallest	X	Y	are in Feet	UTM are in Meters)								
POD Number	Source	Tws	Rng	Sec	q	q	q	q	UTM_Zone	Easting	Northing	I	
RA 07243 EXPL	Shallow	18S	26E	26	4	3			13	560908	3619479	32	4

New Mexico Office of the State Engineer
Point of Diversion Summary

[Back](#)

POD Number RA 07243 EXPL Tws 18S Rng 26E Sec 26 q 4 q 3 Zone X Y

Driller Licence: 749 HUGHES, SAMUEL DALE

Driller Name:

Source: Shallow

Drill Start Date: 07/01/1984

Drill Finish Date: 07/25/1984

Log File Date: 07/27/1984

PCW Received Date:

Pump Type:

Pipe Discharge Size:

Casing Size:

Estimated Yield:

Depth Well: 110

Depth Water: 50

APPENDIX D

✓ IS REF NO REF SUP OWNERSHIP

TESTING DETECTED CILTA USE LOCATION

301 LINDBERG ROAD MI 48170-1437

[illegible]

24

[illegible]