### **REMEDIATION DOCUMENTATION** AND CLOSURE REPORT

FOR THE **PRODUCTION FLUID RELEASE** ASSOCIATED WITH THE

# **VACUUM UNIT WELL #103** API # 30035030910000

New Mexico Oil Conservation Division Case #

UL-F SE¼ OF THE NW¼ SECTION 6, T18S, R35E ~1.5 mile south of Buckeye Lea County, New Mexico Latitude 32°46'43.9"N Longitude 103°29'42.3"W loute

SEPTEMBER 2002

Prepared by

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Chev/Jer -216419 incident - n PACOGOS 441260 2polication - pPACOGOS 441347

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### **EXECUTIVE SUMMARY**

On June 17,2002, a production fluid leak consisting of an undetermined volume of crude oil, natural gas, and formation water occurred at the ChevronTexaco Vacuum Unit Well #103. The leak resulted from the failure of the polish rod stuffing box packing and oversprayed the caliche well pad and a vegetated area to the southwest encompassing approximately (16,612-ft<sup>2</sup>). The fluid impact was restricted to the compacted caliche well pad and flowed west and south from the well head. Only minor overspray impact was observed beyond the well pad. The ground water is estimated to occur at 89 feet below ground surface and is based on water level information obtained from the New Mexico Office of the State Engineer and the New Mexico Tech Internet Mapping System. Below are the acceptable remedial goals for the Constituents of Concern (CoCs), i.e., Total Petroleum Hydrocarbon EPA method 8015M (TPH<sup>8015m</sup>), Benzene, and BTEX (the sum of Benzene, Toluene, Ethyl Benzene, and Xylene). There are no surface water bodies within 1000 horizontal feet of the site.

· ···	Total Site Ranking Score	and Acceptable Concentra	tions
Parameter	>19 (surface to 89 <sup>a</sup> bgs)	10-19 (NA)	0-9 (NA)
Benzene	10 ppm	10 ррт	10 ppm
BTEX'	50 ppm	50 ppm	50 ppm
ТРН	100 ppm	1000 ppm	5000 ppm

A windmill and livestock watering tub are located ~203 feet west of the leak origin and approximately 130' from the affected area perimeter and was not observed to be impacted by the overspray but was nonetheless sampled and tested for Benzene, BTEX, Chloride, and Total Dissolved Solids (TDS). BTEX was not detected above the instrument detection limits for the specific parameter and the Chloride and TDS were within background levels, i.e., TDS = 343 mg/L and Chloride = 44 mg/L. On September 30, 2002, the windmill production flow stream was sampled for BTEX, Chloride, and TDS with no BTEX detected above the instrument detection limits and Chloride and TDS within background levels, i.e., 160 and 367 mg/L, respectively. The land is owned by the New Mexico State Land Office and leased for livestock grazing purposes to Giles Lee. At ChevronTexaco's request Environmental Plus, Inc. (EPI) of Eunice, New Mexico mitigated the spill. Mitigation activities involved treating the affected surface and vegetation with MicroBlaze Spill Control (a non-hazardous phosphate based detergent inoculated with petrophilic microbes to promote bio-attenuation) and spreading and blending clean soil into the affected near surface soil. Composite near surface (0-6"below ground surface (bgs)) samples were collected from each quadrant on June 18, 2002 and the Headspace Volatile Organic Constituent (VOC) surveyed using a calibrated Photoionization Detector (PID). Readings were all less than 50 ppm and were therefore sent to Cardinal Laboratories in Hobbs, New Mexico for analysis. Analytical results indicated the Total Petroleum Hydrocarbon EPA method 8015m (TPH<sup>8015m</sup>) in the north, west, and south quadrants to be in excess of the New Mexico Oil Conservation Division (NMOCD) guideline threshold of 100 mg/Kg, consequently, approximately 60 cubic yards (yd<sup>3</sup>) of impacted near surface soil was disposed of in the New Mexico Oil Conservation Division (NMOCD) approved and permitted "Texaco Land Farm" (TLF). On June 25, 2002, soil borings were advanced to 15'bgs and sampled at 5' intervals in the north, west, and south quadrants pooling areas to determine vertical extent of contamination. BTEX was not detected above the instrument detection limit in any of the boring samples and TPH<sup>4015m</sup> only nominally. Chloride levels in the south borehole (SBH) were < 250 mg/Kg for all but the 3'bgs and 15'bgs samples which were 300 and 480 mg/Kg, respectively. Chloride concentrations in all samples from the West Borehole (WBH) and the North Borehole (NBH) were less than 160 mg/Kg. Based on this information the excavated area was backfilled with clean soil and contoured. The information collected during the mitigation and remediation of the site indicate that the CoC remedial goals have been achieved and justifies the NMOCD requiring "no further action" at this site.

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### 1 VACUUM UNIT WELL #103 REMEDIATION WORK PLAN

This plan restored the impacted surface area to acceptable levels by removing soil contaminated above New Mexico Oil Conservation Division (NMOCD) guidelines. The Constituents of Concern (CoCs) were Total Petroleum Hydrocarbon using EPA method 8015M (TPH<sup>8015m</sup>), Benzene, BTEX, i.e., the sum of Benzene, Toluene, Ethyl Benzene, and m, p, & o Xylene, and soil Chloride.

### 1.1 Remediation Strategy and Objective

The site was delineated during excavation and by advancing vertical soil borings with soil disposal as the remediation strategy. The objectives of the plan were to;

- Document achievement of acceptable environmental thresholds established by the NMOCD and
- Restore the impacted surface area to pre-release status.

### 1.2 Occurrence

On June 17,2002, a production fluid leak consisting of an undetermined volume of crude oil, natural gas, and formation water occurred at the ChevronTexaco Vacuum Unit Well #103. The leak resulted from the failure of the polish rod stuffing box packing and oversprayed the caliche well pad and a vegetated area to the southwest encompassing approximately 16,612 ft<sup>2</sup>. The fluid impact was restricted to the compacted caliche well pad and flowed west and south from the well head. Only minor overspray impact was observed beyond the well pad.

### **1.3 Site Description**

The site is located -1.5 miles south of Buckeye, New Mexico at Latitude 32°46'43.9"N Longitude 103°29'42.3"W and -3,975 feet above mean sea level ('asml). A site map is included as Attachment I.

### 1.3.1 Historical Use

This land is owned by the State of New Mexico and leased to Giles Lee. The land is used for livestock grazing and oil and gas production facilities access.

### 1.3.2 Legal Description

The legal description is Unit Letter-F, in the SE¼ of the NW¼ of Section 6, Township 18 South, Range 35 East.

### 1.3.3 Photographic documentation

Photographs of the site are included as Attachment II.

### 1.3.4 Ecological Description

The area is an intergrade of the Lower Great Plains and the Upper Chihuahuan Desert Biomes consisting primarily of flat to hilly clay/loam/sand terrain dominated by typical desert grasses and weeds with interspersions of Harvard Shin Oak (Querqus harvardi) and Honey Mesquite (Prosopis glandulosa). Mammals present, include Orrd's and Merriam's Kangaroo Rat, Deer Mouse, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit, and the Mule Deer. Reptiles, Amphibians, and Birds are numerous and typical of area. A survey of Listed, Threatened, or Endangered species has not been conducted.

### 1.3.5 Environmental Media Characterization

Chemical parameters of the soil were characterized consistent with the New Mexico Oil Conservation Division (NMOCD) guidelines published in the following documents;

• Guidelines for Remediation of Leaks, Spills and Releases (August 13, 1993)

- 4. Locate, hand spot, and mark buried lines or other structures
- 5. Overhead powerlines are not present and will not be a hazard.
- 6. Lockout/Tagout: Verify pumping unit is locked out and tagged and forms completed. Pipeline companies notified of activity but LO/TO unnecessary
- 7. Procedure: Equipment required will be: Backhoe, Excavator, Dump Trucks
  - Daily Tail gate safety meetings and PPE check
  - Excavation Safety Checklist Form
  - Excavate visibly contaminated soil and stockpile
  - Haul stockpiled soil to NMOCD approved facility
  - Conduct field VOC headspace analyses on selected samples
  - Collect Composite Samples of the selected areas for laboratory analysis
  - Review data and calculate "Depth to Ground Water"
  - Backfill excavations with volume consistent with disposal volume
  - Photograph
  - Develop and issue site specific report
  - Contour and/or Reseed surface

### 2 WORK PLAN IMPLEMENTATION AND CLOSURE

The process of excavating and disposing of contaminated soil and field surveying began on June 17, 2002 with the disposal and backfilling phase completed on June 28, 2002.

### 2.1 Excavation and Composite Sampling

Composite near surface (0-6" below ground surface (bgs)) samples were collected from each quadrant on June 18, 2002 and the Headspace Volatile Organic Constituent (VOC) surveyed using a calibrated Photoionization Detector (PID). Readings were all less than 50 ppm and were therefore sent to Cardinal Laboratories in Hobbs, New Mexico for analysis. Analytical results indicated the TPH<sup>\$015m</sup> in the north, west, and south quadrants to be in excess of the New Mexico Oil Conservation Division (NMOCD) guideline threshold of 100 mg/Kg, consequently, approximately 60 cubic yards (yd<sup>3</sup>) of impacted near surface soil was disposed of in the New Mexico Oil Conservation Division (NMOCD) approved and permitted "Texaco Land Farm" (TLF). On June 25, 2002, soil borings were advanced to 15'bgs and sampled at 5' intervals in the north, west, and south quadrants pooling areas to determine vertical extent of contamination. BTEX was not detected above the instrument detection limit in any of the boring samples and TPH<sup>\$015m</sup> only nominally. Chloride levels in the south borehole (SBH) were < 250 mg/Kg for all but the 3'bgs and 15'bgs samples which were 300 and 480 mg/Kg, respectively. Chloride concentrations in all samples from the West Borehole (WBH) and the North Borehole (NBH) were less than 160 mg/Kg.

### 2.2 Discussion of Data

The NMOCD remedial goals have been achieved at this site. The Chloride concentrations in the South Borehole should not pose a threat to local ground water given that the surface is now covered with approximately 12" of compacted caliche. Application/treatment of the vegetated overspray area with MicroBlaze Spill Control will accelerate bio-attenuation and fertilize the area. ChevronTexaco personnel will monitor the status of the vegetation. The original laboratory analytical reports and data summary are included as Attachment III and the data is illustrated below.





BENZENE MG/KG

CHEVRONTEXACO VACUUM UNIT WELL #103 CHLORIDE DELINEATION



### 2.3 Soil Disposal and Backfilling

Under chain of custody, 60 yd<sup>3</sup> was disposed of in the NMOCD approved and permitted Texaco Land Farm (TLF). A sufficient volume of clean backfill soil, i.e.60 yd<sup>3</sup>, was obtained from the TLF and used to bring the excavation to grade.

### 2.4 Conclusion

Production fluid contamination at this site resulted in soil contamination above the NMOCD remedial guidelines. The data support the conclusion that the site has been remediated to acceptable levels for the CoCs and as such justifies the NMOCD requiring "no further action" at this site.

### 2.5 Follow Up

The vegetated overspray area will be visually monitored by ChevronTexaco personnel.

STTE:       Vacuum Unit: Well #103       [Assigned Sire Reference #:         Company:       Chevron Texaco         Street: Address:       15 Smith Road 79705         Mailing Address:       P.O. Box 1150         City, State, Zjr:       Midland, Texas 79702         Representative:       Rodiand, Texas 79702         Representative:       Rodiand, Texas 79702         Representative:       Rodiand, Texas 79702         Pluid volume released (bbls):       ?         252MbRodD:       MRCD: welly with 24h nad nemic for (14) whith 76 (Jaco Papellon sumbolind releases 790 mf Numil Ga)         252MbRodD:       Statkshift 55 (Jaco Papellon sumbolind releases 790 mf Numil Ga)         252MbRodD:       Vacuum Unit Well #103         Source of contamination:       Well scatul State Land (leased by Giles Lee)         LSP Dimensions       -180.7 x 120'         LSP Arce:       16,612 ft         Location of Reference Point (RP)       Location of Suth Section Line         Location advace mean sca level:       3975'amsl         Peet from South Section Line       Location - South Section Line         Location - Suth Section Line       Location - South Section Line         Location - Suth Section Line       Location - South Section Line         Location - Suth Section Line       Location - South Section			Incider June 17	nt Date and NMOCD Noti , 2002	ficd?
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Mailing Address:       P.O. Box 1150         City, State, Zip:       Midland, Texas 79702         Representative:       Rodney Bailey         Representative:       Rodney Bailey         Representative:       Office 915.687.72110         Telephone:       915.238.4274         FAX: 915.687.7110       Telephone:         Telephone:       Office 915.687.7211         Fluid volume released (bbls):       ?         > 250 MkSchmit 6m C:141 withs 154m, (do soppler to mamboind elsees 300 mcf Namal Ga)         Source of contamination:       Well head stuffing box leak         Land Owner, i.e., BLM, ST, Fee, Other: New Mexico State Land (leased by Giles Lee)         LSP Dimensions       -180° x 120°         Location of Reference Point (RP)       Location distance and direction from RP         Latitude:       32°46'43.967'N         Logation - Section Line       Feet from South Section Line         Feet from South Section Line       Feet from South Section Line         Location - Township: 18S       Location - State:         Location - Township: 18S       Location - State:         Location - Township: 18S       Surface water body within 1000' radius of site:         Domestic water wells within 1000' radius of site:       None         Surface water body within 1000' radius of site: <t< td=""><td></td><td></td><td>d 79705</td><td>······································</td><td></td></t<>			d 79705	······································	
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LSP Dimensions       -180° r 120°         LSP Area:       16,612 ft'         Location of Reference Point (RP)       Location distance and direction from RP         Latitude:       32°46'43.967"N         Longitude:       103°29'42.268"W         Elevation above mean sea level:       3975'amsl         Feet from West Section Line					
LSP Area:       16,612 ft <sup>2</sup> Location of Reference Point (RP)         Location distance and direction from RP         Latitude:       32*46'43.967"N         Longitude:       103*29'42.268"W         Elevation above mean sca level:       3975'amsl         Feet from South Section Line       Feet from West Section Line         Feet from West Section Line       Feet from West Section Line         Feet from West Section Line       Feet from West Section Line         Suctation - Section:       6         Location - Section:       6         Location- Section:       6         Surface water body within 1000' radius of site:       None         Domestic water wells within 1000' radius of site:       None         Domestic water wells within 1000' radius of site:       None         Public water supply wells within 1000' radius of site:       None         Public water supply wells within 1000' radius of site:       None         Public water supply wells within 1000' radius of site:       None         Depth of contamination (DC) -       -       89'bgs         Depth to ground water (DG - DC = DtGW) -       -       200 horizontal fee: 20 points         flDepth to GW 50 to 99 fee: 10 points       ff 51000' from water source: 07 points       2000-100 horizontal fee: 0 points				: New Mexico State Land (l	eased by Giles Lee)
Location of Reference Point (RP)         Location distance and direction from RP         Latitude:       32°46'43.96'7'N         Longitude:       103°29'42.268"W         Elevation above mean sea level:       3975'amsl         Feet from South Section Line       Feet from West Section Line         Location- Unit or 14'A:       SE'A of the NW ¼       Unit Letter: F         Location- Township:       18S         Location- Range:       35E         Surface water body within 1000 ' radius of site:       None         Domestic water wells within 1000' radius of site:       None         Domestic water wells within 1000' radius of site:       Minmill 203' west         Agricultural water wells within 1000' radius of site:       Public water supply wells within 1000' radius of site:         Public water supply wells within 1000' radius of site:       Section:         Depth from land surface to ground water (DG) - 89'bgs       Section Line         Depth to Ground Water       2. Wellhead Protection Area       3. Distance to Surface Water Bedy         IfDepth to GW 50 to 9f feet: 10 points       If ol00' from water source, or; 200' from private domestic water source: 20 points       1000 horizontal feet: 0 points         IfDepth to GW 50 to 9f feet: 10 points       If ol00' from water source: 20 points       200 horizontal feet: 0 points         IfDepth to GW 50					
Location distance and direction from RP         Langitude:       32*46'43.967"N         Longitude:       103*29'42.268"W         Elevation above mean sea level:       3975'amsl         Peet from West Section Line       Ine         Location- Unit or W4:       SEM of the NW M         Location- Section Line       Unit Letter: F         Location- Township: 185       Location- Township: 185         Location- Range: 35E       Surface water body within 1000 ' radius of site: None         Surface water body within 1000' radius of site: None       Domestic water wells within 1000' radius of site: None         Domestic water wells within 1000' radius of site: None       Domestic water wells within 1000' radius of site: Mindmill 203' west         Agricultural water wells within 1000' radius of site: None       Public water supply wells within 1000' radius of site: Done         Public water supply wells within 1000' radius of site: Depth from land surface to ground water (DG) - & 89'bgs       Depth of contamination (DC) -         Depth to ground water (DG - DC = DtGW) -       1. Ground Water       2. Wellhead Protection Area       3. Distance to Surface Water Body         IfDepth to GW 500 feet: Dopins       If<1000' from water source, or, >200' from       200 horizonal feet: Opins       1000 horizonal feet: Opins         IfDepth to GW 500 feet: Dopins       If 51000' from water source, or, >200' from       200-100 borizonal feet: Op					
Latitude:       32*46'43.967"N         Longitude:       103*29'42.268"W         Elevation above mean sea level:       3975'amsl         Feet from West Section Line       Feet from West Section Line         Feet from West Section Line       Unit Letter: F         Location- Unit or ¼¼:       SE¼ of the NW ¼       Unit Letter: F         Location- Section: 6       Location- Township: 18S         Location- Range: 35E       Surface water body within 1000 ' radius of site:       Done         Surface water body within 1000 ' radius of site:       Done       Domestic water wells within 1000' radius of site:         Domestic water wells within 1000' radius of site:       Mininil 203' west       Agricultural water wells within 1000' radius of site:         Public water supply wells within 1000' radius of site:       Done       Public water supply wells within 1000' radius of site:         Public water supply wells within 1000' radius of site:       Depth from land surface to ground water (DG) - 89'bgs       Pepth to ground water (DG - DC = DtGW) -         1.       Ground Water       2. Wellhead Protection Area       3. Distance to Surface Water Body         IfDepth to GW >50 fors: 0 poins       If >1000' from water source, or, >200' from       >200 horizontal fee: 0 poins         IfDepth to GW >50 fors: 0 poins       If >1000' from water source; 0 poins       >1000 horizontal fee: 0 poins					
Longitude:       103°29'42.268"W         Elevation above mean sea level:       3975'amsl         Feet from South Section Line				P	
Elevation above mean sea level:       3975'amsl         Feet from South Section Line         Location- Unit or ¼¼:       SE¼ of the NW ¼         Location- Section:       6         Location- Section:       6         Location- Range:       35E         Surface water body within 1000 ' radius of site:       None         Surface water body within 1000 ' radius of site:       None         Domestic water wells within 1000' radius of site:       None         Domestic water wells within 1000' radius of site:       None         Agricultural water wells within 1000' radius of site:       Windmill 203' west         Agricultural water wells within 1000' radius of site:       None         Public water supply wells within 1000' radius of site:       None         Public water supply wells within 1000' radius of site:       Depth from land surface to ground water (DG) - 89'bgs         Depth for ontamination (DC) -       -       Elevand water water source 20 points         If Depth to GW <50 for: 20 points					
Feet from South Section Line         Peet from West Section Line         Location-Unit or ¼¼: SE¼ of the NW ¼       Unit Letter: F         Location-Section: 6         Location-Range: 35E         Surface water body within 1000 ' radius of site: None         Surface water body within 1000 ' radius of site:         Domestic water wells within 1000' radius of site:         Domestic water wells within 1000' radius of site:         Marrieultural water wells within 1000' radius of site:         Agricultural water wells within 1000' radius of site:         Public water supply wells within 1000' radius of site:         Depth form land surface to ground water (DG) - 89'bgs         Depth for contamination (DC) -         Location Gw         If Depth to GW <50 feet: 20 points	Longitude:	103°29'42.268"W	7		
Feet from West Section Line         Location- Unit or VM2:       SE4 of the NW 4         Location- Section: 6         Location- Township: 18S         Location- Range: 35E         Surface water body within 1000 ' radius of site: None         Surface water body within 1000 ' radius of site:         Domestic water wells within 1000 ' radius of site:         Domestic water wells within 1000 ' radius of site:         Marce water wells within 1000 ' radius of site:         Agricultural water wells within 1000' radius of site:         Public water supply wells within 1000' radius of site:         Depth form land surface to ground water (DG) - A89'bgs         Depth to ground water (DG - DC = DtGW) -         1. Ground Water       2. Wellhead Protection Area         If Depth to GW 50 60: 20 points       If <1000' from water source, or<200 from private domestic water source: 20 points         If Depth to GW >100 fee: 0 points       If <1000' from water source: 20 points	Elevation ab	ove mean sea level:	39:	75'amsl	
Location - Unit or 14.4:       SEM of the NW 14       Unit Letter: F         Location - Section: 6       Iocation - Section: 6       Iocation - Section: 6         Location - Township: 18S       Iocation - Range: 35E       Iocation - Range: 35E         Surface water body within 1000 ' radius of site:       None         Domestic water wells within 1000' radius of site:       None         Domestic water wells within 1000' radius of site:       None         Agricultural water wells within 1000' radius of site:       None         Public water supply wells within 1000' radius of site:       None         Public water supply wells within 1000' radius of site:       None         Public water supply wells within 1000' radius of site:       None         Public water supply wells within 1000' radius of site:       None         Public water supply wells within 1000' radius of site:       None         Public water supply wells within 1000' radius of site:       None         Public water supply wells within 1000' radius of site:       None         Public water supply wells within 1000' radius of site:       None         Public water supply wells within 1000' radius of site:       None         Public water supply mells within 1000' radius of site:       None         Public water supply mells within 1000' radius of site:       None         Public bo con	Feet from Se	outh Section Line			
Location - Section: 6         Location - Township: 18S         Location - Range: 35E         Surface water body within 1000 ' radius of site: None         Surface water wells within 1000 ' radius of site: None         Domestic water wells within 1000 ' radius of site: None         Domestic water wells within 1000' radius of site: None         Pomestic water wells within 1000' radius of site: Windmill 203' west         Agricultural water wells within 1000' radius of site: None         Public water supply wells within 1000' radius of site: None         Public water supply wells within 1000' radius of site: None         Public water supply wells within 1000' radius of site:         Depth from land surface to ground water (DG) - 89'bgs         Depth of contamination (DC) -         1. Ground Water       2. Wellhead Protection Area         If Depth o GW 50 609 99 feet: 10 points         If Depth to GW 50 609 99 feet: 10 points         If Depth to GW >100 feet: 0 points	Feet from W	est Section Line		······································	
Location - Township: 18S         Location - Range: 35E         Surface water body within 1000 ' radius of site: None         Surface water wells within 1000 ' radius of site: None         Domestic water wells within 1000' radius of site: None         Domestic water wells within 1000' radius of site: None         Agricultural water wells within 1000' radius of site: Windmill 203' west         Agricultural water wells within 1000' radius of site: None         Public water supply wells within 1000' radius of site: None         Public water supply wells within 1000' radius of site: Depth from land surface to ground water (DG) - 89'bgs         Depth for contamination (DC) -         Depth to ground water (DG - DC = DtGW) -         1. Ground Water       2. Wellhead Protection Area         If Depth to GW <50 feet: 20 points	Location- U	nit or 1414: SE14	of the N	W 14	Unit Letter: F
Location- Range: 35E         Surface water body within 1000 ' radius of site: None         Domestic water body within 1000 ' radius of site:         Domestic water wells within 1000' radius of site:         Marcial water wells within 1000' radius of site:         Agricultural water wells within 1000' radius of site:         Agricultural water wells within 1000' radius of site:         Public water supply wells within 1000' radius of site:         Public water supply wells within 1000' radius of site:         Depth from land surface to ground water (DG)         - 89'bgs         Depth of contamination (DC) -         Depth to ground water (DG - DC = DtGW) -         1. Ground Water         2. Wellhead Protection Area         If Depth to GW 50 feet: 20 points         If >1000' from water source, or, >200' from         private domestic water source: 20 points         If Depth to GW >100 feet: 0 points         If >1000' from water source: 0 points         If Depth to GW >100 feet: 0 points         If >1000' from water source: 0 points         If >1000' from water source: 0 points         If Depth to GW >20 feet: 10 points         If >1000' from water source: 0 points         If Depth to GW >100 feet: 0 points         If >1000' from water source: 0 points         Stier Rank (1+2+3) = 30 <td>Location- Se</td> <td>ection: 6</td> <td></td> <td></td> <td></td>	Location- Se	ection: 6			
Surface water body within 1000 ' radius of site: NoneSurface water body within 1000 ' radius of site:Domestic water wells within 1000' radius of site:Domestic water wells within 1000' radius of site:Agricultural water wells within 1000' radius of site:Agricultural water wells within 1000' radius of site:Public water supply wells within 1000' radius of site:Depth form land surface to ground water (DG) -Depth of contamination (DC) -Depth to ground water (DG - DC = DtGW) -1. Ground Water2. Wellhead Protection AreaIf Depth to GW 50 feet: 20 pointsIf 2000' from water source, or; 200' from private domestic water source; 20 points200-100 borizontal feet: 10 pointsIf Depth to GW >100 feet: 0 pointsIf Depth to GW >100 feet: 0 pointsIf Depth to GW >100 feet: 0 pointsIf Sl000' from water source; 0 pointsIf Depth to GW >100 feet: 0 pointsIf Sl000' from water source; 20 pointsSite Rank (1+2+3) = 30Total Site Ranking Score and Acceptable ConcentrationsParameterParameter>19 (surface to 89*bgs)10 ppm10 ppm	Location- T	ownship: 18S		· · · · · · · · · · · · · · · · · · ·	
Surface water body within 1000 ' radius of site:Domestic water wells within 1000' radius of site:Domestic water wells within 1000' radius of site:Agricultural water wells within 1000' radius of site:Agricultural water wells within 1000' radius of site:Public water supply wells within 1000' radius of site:Public water supply wells within 1000' radius of site:Depth from land surface to ground water (DG) - 89'bgsDepth from land surface to ground water (DG) -Depth to ground water (DG - DC = DtGW) -1. Ground Water2. Wellhead Protection AreaIf Depth to GW <50 feet: 20 points	Location- R	ange: 35E			
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Domestic water wells within 1000' radius of site: NoneDomestic water wells within 1000' radius of site:Agricultural water wells within 1000' radius of site:Public water supply wells within 1000' radius of site:Public water supply wells within 1000' radius of site:Public water supply wells within 1000' radius of site:Depth from land surface to ground water (DG) - 89'bgsDepth of contamination (DC) -Depth to ground water (DG - DC = DtGW) -1. Ground Water2. Wellhead Protection AreaIf Depth to GW 50 feet: 20 pointsIf Depth to GW 50 feet: 20 pointsIf Depth to GW 50 feet: 0 points <td>Surface wate</td> <td>er body within 1000</td> <td>) ' radiu</td> <td>s of site:</td> <td></td>	Surface wate	er body within 1000	) ' radiu	s of site:	
Agricultural water wells within 1000' radius of site: Windmill 203' westAgricultural water wells within 1000' radius of site:Public water supply wells within 1000' radius of site:Public water supply wells within 1000' radius of site:Depth from land surface to ground water (DG) - 89'bgsDepth of contamination (DC) -Depth to ground water (DG - DC = DtGW) -1. Ground Water2. Wellhead Protection AreaBodyIf Depth to GW <50 fee: 20 points					
Agricultural water wells within 1000' radius of site:Public water supply wells within 1000' radius of site:Public water supply wells within 1000' radius of site:Depth from land surface to ground water (DG) - 89'bgsDepth of contamination (DC) -Depth to ground water (DG - DC = DtGW) -1. Ground Water2. Wellhead Protection Area1. Ground Water2. Wellhead Protection Area1. Ground Water1f1. Ground Water1f1. Ground Water2. Wellhead Protection Area1. Ground Water1f1. Ground Water1000' from water source, or;<200' from private domestic water source, or; >200' from private domestic water source, or; >200' from private domestic water source, or; >200' from private domestic water source1. Ground water Score = 1010 </td <td>Domestic wa</td> <td>ater wells within 10</td> <td>00' radi</td> <td>us of site:</td> <td></td>	Domestic wa	ater wells within 10	00' radi	us of site:	
Agricultural water wells within 1000' radius of site:Public water supply wells within 1000' radius of site:Public water supply wells within 1000' radius of site:Depth from land surface to ground water (DG) - 89'bgsDepth of contamination (DC) -Depth to ground water (DG - DC = DtGW) -1. Ground Water2. Wellhead Protection Area1. Ground Water2. Wellhead Protection Area1. Ground Water1f1. Ground Water1f1. Ground Water2. Wellhead Protection Area1. Ground Water1f1. Ground Water1000' from water source, or;<200' from private domestic water source, or; >200' from private domestic water source, or; >200' from private domestic water source, or; >200' from private domestic water source1. Ground water Score = 1010 </td <td>Agricultural</td> <td>water wells within</td> <td>1000' ra</td> <td>dius of site: Windmill 203</td> <td>B' west</td>	Agricultural	water wells within	1000' ra	dius of site: Windmill 203	B' west
Public water supply wells within 1000' radius of site: NonePublic water supply wells within 1000' radius of site:Depth from land surface to ground water (DG) - 89'bgsDepth of contamination (DC) -Depth to ground water (DG - DC = DtGW) -1. Ground Water2. Wellhead Protection AreaIf Depth to GW <50 feet: 20 points					
Public water supply wells within 1000' radius of site:Depth from land surface to ground water (DG) - 89'bgsDepth of contamination (DC) -Depth to ground water (DG - DC = DtGW) -1. Ground Water2. Wellhead Protection AreaIf Depth to GW <50 feet: 20 points					
Depth from land surface to ground water (DG) -89'bgsDepth of contamination (DC) -Depth to ground water (DG - DC = DtGW) -1. Ground Water2. Wellhead Protection AreaIf Depth to GW <50 feet: 20 points	Public wate:	r supply wells withi	n 1000'	radius of site:	
Depth of contamination (DC) -Depth to ground water (DG - DC = DtGW) -1. Ground Water2. Wellhead Protection AreaIf Depth to GW <50 feet: 20 points					
Depth to ground water (DG - DC = DtGW) -1. Ground Water2. Wellhead Protection Area3. Distance to Surface Water BodyIf Depth to GW <50 feet: 20 points					
1. Ground Water2. Wellhead Protection Area3. Distance to Surface Water BodyIf Depth to GW <50 feet: 20 points				GW) -	
If Depth to GW 50 to 99 feet: 10 pointsprivate domestic water source; 20 points200-100 horizontal feet: 10 pointsIf Depth to GW >100 feet: 0 pointsIf >1000' from water source; or; >200' from private domestic water source; 0 points>1000 horizontal feet: 0 pointsGround water Score = 10Wellhead Protection Area Score= 20Surface Water Score= 0Site Rank (1+2+3) = 30Total Site Ranking Score and Acceptable ConcentrationsParameter>19 (surface to 89'bgs)10-19 (NA)Benzene'10 ppm10 ppmBTEX'50 ppm50 ppmTPH100 ppm50 ppm	1. Gi	round Water	2. ₩	ellhead Protection Area	
If Depth to GW 50 to 99 feet: 10 pointsprivate domestic water source: 20 points200-100 horizontal feet: 10 pointsIf Depth to GW >100 feet: 0 pointsIf >1000' from water source, or; >200' from private domestic water source: 0 points>1000 horizontal feet: 0 pointsGround water Score = 10Wellhead Protection Area Score= 20Surface Water Score= 0Site Rank (1+2+3) = 30Total Site Ranking Score and Acceptable Concentrations0-9Parameter>19 (surface to 89'bgs)10-19 (NA)0-9Benzene'10 ppm10 ppm10 ppmBTEX'50 ppm50 ppm50 ppmTPH100 ppm1000 ppm5000 ppm					
In Depth to GeW >100 rect: 0 points       private domestic water source: 0 points       >1000 horizontal rect: 0 points         Ground water Score = 10       Wellhead Protection Area Score= 20       Surface Water Score= 0         Site Rank (1+2+3) = 30       Total Site Ranking Score and Acceptable Concentrations       0-9         Parameter       >19 (surface to 89"bgs)       10-19 (NA)       0-9         Benzene'       10 ppm       10 ppm       10 ppm         BTEX'       50 ppm       50 ppm       50 ppm         TPH       100 ppm       50 ppm       5000 ppm	If Depth to GW	50 to 99 feet: 10 points	private do	mestic water source: 20 points	200-100 horizontal feet: 10 points
Ground water Score = 10Wellhead Protection Area Score= 20Surface Water Score= 0Site Rank (1+2+3) = 30Total Site Ranking Score and Acceptable ConcentrationsParameter>19 (surface to 89'bgs)10-19 (NA)0-9Benzene'10 ppm10 ppm10 ppmBTEX'50 ppm50 ppm50 ppmTPH100 ppm1000 ppm5000 ppm					>1000 horizontal feet: 0 points
Site Rank (1+2+3) = 30Total Site Ranking Score and Acceptable ConcentrationsParameter>19 (surface to 89'bgs)10-19 (NA)0-9Benzene'10 ppm10 ppm10 ppmBTEX'50 ppm50 ppm50 ppmTPH100 ppm1000 ppm5000 ppm	Ground water Sa	ne = 10			Surface Water Score= 0
Total Site Ranking Score and Acceptable ConcentrationsParameter>19 (surface to 89"bgs)10-19 (NA)0-9Benzene'10 ppm10 ppm10 ppmBTEX'50 ppm50 ppm50 ppmTPH100 ppm1000 ppm5000 ppm	Site Rank (1	(+2+3) = 30			
Parameter         >19 (surface to 89"bgs)         10-19 (NA)         0-9           Benzene <sup>1</sup> 10 ppm         10 ppm         10 ppm           BTEX <sup>1</sup> 50 ppm         50 ppm         50 ppm           TPH         100 ppm         1000 ppm         5000 ppm			cceptabl	e Concentrations	
Benzene'         10 ppm         10 ppm         10 ppm           BTEX'         50 ppm         50 ppm         50 ppm           TPH         100 ppm         1000 ppm         5000 ppm					0-9
BTEX         50 ppm         50 ppm           TPH         100 ppm         1000 ppm         5000 ppm	Benzene				
TPH         100 ppm         1000 ppm         5000 ppm	BTEX'				
A Press and			nay be subst		

# Attachment I: Site Maps



VACUUM UNIT WELL #103

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VACUUM UNIT WELL #103



VACUUM UNIT WELL #103

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# Attachment II: Photographs









# Attachment III: Analyses

					Chevron-Texaco Vacuum Unit Well #103	kaco Vacu	um U	Init We	ell #10								
Sample Area	Sample Type	Sampling Interval (rr. BCS <sup>1</sup> )	SAMPLE ID#	Date	Lithology	HEADSPACE V()C <sup>2</sup> (ppm)	GRO <sup>3</sup> mg/Kg	GRO <sup>3</sup> DRO <sup>4</sup> TPH <sup>5</sup> BTEX Benzene Toluene mg/Kg mg/Kg mg/Kg mg/Kg mg/Kg	TPH <sup>5</sup> mg/Kg	BTEX Benzene Toluene mg/Kg mg/Kg mg/Kg	Benzene mg/Kg	Toluene mg/Kg	Ehtyl Benzene mg/Kg	m,p-o Xylene mg/Kg	Chloride mg/Kg	Chloride Dissolved mg/Kg Solids mg/Liter	Chloride mg/Liter
Windmill Drinking Tub	Grab	na	CTVUW10361702ST	6/17/2002	Ground Water	na	na	na	D8	na	<0.010	<0.010	<0.010	<0.030	4	343	4
Puddle (hoof print) adjacent to the Drinking Tub	Grab	na	CTVUW10361702HP	6/17/2002	6/17/2002 Ground Water	ua	ងព	na	na	an B	<0.002	<0.002	1	900.0>	đ	BII	вц
Windmill	Grab	BC	WCTVU10393002	9/30/2002	Ground Water	na	BU	пa	na	na	<0.002	<0.002	<0.002	<0.006	na	367	160
North Quadrant	Comp	Ľ	CTVUW10361802N	6/18/2002	Caliche	38.2	366	2930	3296	4,304	0.031	0.223	1.010	3.040	1340	8U	ця
		.9-0	CTVUW10361802W	6/18/2002	Sand/Caliche	10.1	47.3	1460	1507.3	4.794	0.006	0.458	1.510	2.820	4960	80	ŊŔ
+		.9-0	CTVUW10361802S	6/18/2002	Sand/Caliche	17.9	59.1	2680	2739.1	2.719	0.005	0.401	0.903	1.410	1870	υa	na
		.9-0	CTVUW10361802E	6/18/2002	Sand/Caliche	8.2	10	38.5	48.5	0.062	0.005	0.006	0.022	0.029	609	вu	na
,	Grab	1	SCTV10362502SBH-3'	6/25/2002	Caliche	4.1	10	10	20	0.030	0.005	0.005	0.005	0.015	300	<b>D</b> 8	Ug
- - -	Grab	ĩc	SCTV10362502SBH-5'	6/25/2002	Sand/Caliche	2.7	10	01	20	0.030	0.005	0.005	0.005	0.015	8	U.S	Пâ
South Borehole	Grab	10'	SCTV10362502SBH-10'	6/25/2002	Sand/Caliche	1.4	10	10	20	0:030	0.005	0.005	0.005	0.015	240	na	ВЯ
	Grab	15'	SCTV10362502SBH-15'	6/25/2002	Sand/Caliche	0'0	10	10	20	0.030	0.005	0.005	0.005	0.015	480	na	na
	Grab	3	SCTV10362502WBH-3'	6/25/2002	Caliche	3.7	10	01	20	0.030	0.005	0.005	0.005	0.015	96	18	na
- - -	Grab	5	SCTV10362502WBH-5'	6/25/2002	Sand/Caliche	0.9	10	01	8	0:030	0.005	0.005	0.005	0.015	96	118	80
West Borehole	Grab	10'	SCTV10362502WBH-10'	6/25/2002	Sand/Caliche	0.4	10	10	20	0.030	0.005	0.005	0.005	0.015	120	na	na
	Grab	15'	SCTV10362502WBH-15'	6/25/2002	Sand/Caliche	0.0	10	10	20	0:030	0.005	0.005	0.005	0.015	8	na	ц
	Grab	3	SCTV10362502NBH-3'	6/25/2002	Caliche	9.5	10	11.6	21.6	0:030	0.005	0.005	0.005	0.015	160	na	ПA
		5	SCTV10362502NBH-5'	6/25/2002	Sand/Caliche	0.4	10	10	20	0.030	0.005	0.005	0.005	0.015	8	na	Ъâ
North Borenole	Grab	10'	SCTV10362502NBH-10'	6/25/2002	Sand/Caliche	0.2	10	10	20	0.030	0.005	0.005	0.005	0.015	8	80	B
	Grab	15'	SCTV10362502NBH-15'	6/25/2002	Brown Sand	0.0	10	10	8	0.030	0.005	0.005	0.005	0.015	112	na	BL
<sup>1</sup> hgs - helow ground surface	g																
<sup>4</sup> VOC-Volatic Organic Contaminanto/Constituents	Agaminano/	Constauces															
<sup>3</sup> GRO-Casoline Range Organics Cs-Cio	panics CCin																T
DRO-Direci Renge Organica Co-Ca																	T
*I'PH-I'otal Pettheum Hydmeathon = GRO+DRO	dmoarhon = (	GRO+DRO.															T
"Bolded values are in crees	of the New A	Meeteo Oil Conte	"Bolded values are in creess of the New Mercleo Oil Constervation Division guideline threshold for the para	: parameter													
l'italicized values are « the instrument detection limit.	nstrumcot do	cocciona limite.															
"N/A Not Analyzed																	T
Reported detection limits at	re considered	"de minimur" ve	Reported detection limits are considered "do minimur" values and are included in the GROVDRO and BT	d BTEX summations.													]

VACUUM UNIT WELL #103

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PHONE (815) 673-7001 . 2111 BEECHWOOD . ABILENE, TX.79603 PHONE (805) 383-2326 . 101 E. MARLAND: . HOBBS: NM 88240

ANALYTICAL RESULTS FOR CHEVRON TEXACO ATTN: RODNEY BAILEY P.O. BOX 3109 MIDLAND, TX 79702 FAX TO:

Receiving Date: 08/18/02 Reporting Date: 06/20/02 Project Owner: TEXACO Project Name: TEXACO Project Location: VACUUM UNIT WELL 103 Sampling Date: 06/17/02 Sample Type: GROUNDWATER Sample Condition: COOL & INTACT Sample Received By: AH Analyzed By: AH

		TDS	CI
LAB NUMBER	SAMPLE ID	(mg/L)	(mg/L)

ANALYSIS DATE:	06/19/02	06/18/02
H6812-2 CTVUW10361702ST	343	44
······································		
Quality Control	NR	1020
True Value QC	NR	1000
% Recovery	NR	102
Relative Percent Difference	8.8	4.0
METHODS: EPA 600/4-79-02	160.1	4500-CIB*

\*Std. Methods

H6812

0-02

PLEASE NOTE: Liability and Demogue. Candidat's initiality and clerifit exclusive remedy for any data parting, whether based in contract or tort, shall be thilted to the amount peld by clerifit exclusive remedy for any data particles making in contract or tort, shall be thilted to the amount peld by clerific exclusive remedy tor any data particles making in contract or tort. The shall be thilted to the amount peld by clerific exclusive remedy tor any data particles making in the applicable. Service, in an over effect of users the constraints in the applicable service. In an over effect of users the constraints of the applicable services making with the interest of the applicable services and the contract or tort, service and the contract or tort, service and the contract or tort applicable services arising out of or related to the performance of zervices herminder by Candinat, without historia interest performance of zervices herminder by Candinat, segurities of whether such chain is based upon any of the above stated reasons or otherwise.



PHONE (815) 673-7001 . 2111 BEECHWOOD . ABILENE, TX 79803

PHONE (508) 393-2326 . 101 E. MARLAND . HOBBS. NM 88240

ANALYTICAL RESULTS FOR CHEVRON TEXACO ATTN: RODNEY BAILEY P.O. BOX 3109 **MIDLAND, TX 79702** FAX TO:

Receiving Date: 08/18/02 Reporting Date: 06/20/02 Project Owner: TEXACO Project Name: TEXACO Project Location: VACUUM UNIT WELL 103 Sampling Date: 06/17/02 Sample Type: GROUNDWATER Sample Condition: COOL & INTACT Sample Received By: AH Analyzed By: BC

Lab Numbe	R SAMPLE ID	BENZENE (mg/L)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	TOTAL XYLENES (mg/L)
ANALYSIS I	DATE	06/18/02	06/18/02	06/18/02	06/18/02
H6812-1*	CTVUW10381702 HP	<0.010	<0.010	<0.010	<0.030
H6812-2	CTVUW10361702 ST	<0,002	<0.002	<0.002	<0.008
		· · · · · · · · · · · · · · · · · · ·		i	
Quality Cont	rol	0.102	0.108	0.107	0.316
True Value (	20	0.100	0.100	0.100	0.300
% Recovery		102	108	107	105
<b>Relative Per</b>	cent Difference	4.1	6.7	2.9	4.8

#### METHOD: EPA SW-846 8260

\*Dilution required due to pronounced odor and foaming during purge/trap.

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20 12 Date

PLEASE NOTE: whether based in contract or ton, enall be invited to the empiric paid by stent for analyses in writing and received by Cardinal within thiny (3D) days after completion of the applicable in, buildness internuptions, had of use, of tens of prafts insurad by client, its subsidiaries of withinker such claim is based upon any of the above-suited reasons or onewrise. noty for any cla m anteing, martin - HOB 128 XIS ad be d d unions m e includin netion, ntal or co ng. wit

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Sampler Relinquished:	Received By	à f	e					Fax R REM/	Fax Results REMARKS:	Fax Results To Pat McCasland 505-394-2601 REMARKS:	<b>f</b> cCastar	905 P	394-2	-55					
Material 12.05		HTTL		17															



PHONE (915) 673-7001 0 2111 BEECHWOOD 0 ABILENE, TX 79603 PHONE (805) 383-2325 0 101 E. MARLAND 0 HOBBS, NM 88240

ANALYTICAL RESULTS FOR CHEVRON TEXACO ATTN: RODNEY BAILEY P.O. BOX 3109 MIDLAND, TX 79702 FAX TO;

Receiving Date: 06/19/02 Reporting Date: 06/21/02 Project Number: NOT GIVEN Project Name: CHEVRON TEXACO Project Location: VACUUM UNIT WELL 103

Sampling Date: 06/18/02 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: BC Analyzed By: BC

LAB NUMBI	ER SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS	DATE	08/19/02	06/19/02	06/19/02	08/19/02
H6814-1	CTVUW10361802N	0.031	0.223	1.01	3.04
H8814-2	CTVUW10361802W	0.006	0.458	1.51	2.82
H6814-3	CTVUW10361802S	<0.005	0,401	0.903	1.41
H6814-4	CTVUW10351802E	<0.005	0.008	0.022	0.029
					-
Quality Con		0.107	0.102	0.101	0.290
True Value		0.100	0.100	0.100	0.300
% Recovery		107	102	101	97.6
Relative Per	cant Difference	5.0	6.1	5.7	8.9

METHOD: EPA SW-846 8260

miss perf A. Cooke

6/21/02 Date

PLEASE NOTE: Liability and Damages. Cantibian's includy and clarin's avokative samady for any claim antiging, whether based in contract or lost, whether based to the aminut paid by Sent to antigines. All others, including Boog for heptogenics and any other scale whethere we shall be downed without antigens in wetting and eccelerate by Cardinal within their (30) days shall completely of the applicable services of the Antibian has Cardinal be labeled for including and antigens in wetting and eccelerate by Cardinal within their (30) days shall completely of the applicable services of the Antibian has Cardinal be labeled to reason of another based by Cardinal, instance interruptions, based on any of the Store estated books to applicable efficience or excessors afford out of or related to the performance of genetices because by Cardinal, negatives of whether such other is based on any of the Store estated resonance of another based by Cardinal, instance of the store estated resonance of the store table.



PHONE (915) 673-7001 . 2111 BEECHWOOD . ABILENE, TX 78803

PHONE (505) 393-2328 . 101 E. MARLAND . HOBBS, NM 88240

ANALYTICAL RESULTS FOR CHEVRON TEXACO ATTN: RODNEY BAILEY P.O. BOX 3109 MIDLAND, TX 79702 FAX TO:

Receiving Date: 06/19/02 Reporting Date: 06/20/02 Project Number: NOT GIVEN Project Name: CHEVRON TEXACO Project Location: VACULM UNIT WELL 103 Sampling Date: 08/18/02 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: BC Analyzed By: BC/AH

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800

102

2.3

800

95.4

7.3

1000

102

4.0

LAB NUMB	ER SAMPLE ID	GRO (C <sub>6</sub> -C <sub>10</sub> ) (mg/Kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/Kg)	CI* (mg/Kg)
ANALYSIS	DATE	08/19/02	08/19/02	06/20/02
H6814-1	CTVUW10361802N	368	2930	1340
H8814-2	CTVUW10381802W	47.3	1460	4960
H6814-3	CTVUW103818028	59.1	2680	1870
H6814-4	CTVUW10381802E	<10.0	38.5	600
Quality Con	loni	784	818	1020
		and the second data was a second data w	the second design of the secon	

METHODS: TPH GRO & DRO: EPA SW-848 8015 M; CF: Std. Methods 4500-CI B \*Analysis performed on 1:4 w:v aqueous extracts.

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**Relative Percent Difference** 

True Value QC

% Recovery

6/20/02 Date

H6814A.XLS

PLEASE NOTE: Lipbling and Damages, Cantinua's lipbling and cliente exclusive ramady for any claim analysis. All optims, instruction libers for additional any other cause wholesower shall be identifyed without unless instal in withing and inscribed by Candinal within thing (30) days lifter completion of the applicable source. In no cirent that, Candinal be libers of a subscription of the subscription of the applicable source. In no cirent that, Candinal be libers of a subscription of the subscription o



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PHONE (915) 873-7001 . 2111 BEECHWOOD . ABILENE, TX 79803

PHONE (505) 393-2328 . 101 E. MARLAND . HOBBS. NM 88240

ANALYTICAL RESULTS FOR CHEVRON TEXACO ATTN: RODNEY BAILEY P.O. BOX 3109 MIDLAND, TX 79702 FAX TO:

Receiving Date: 06/26/02 Reporting Date: 06/26/02 Project Owner: CHEVRON TEXACO Project Name: VACUUM UNIT WELL 103 Project Location: NOT GIVEN Sampling Date: 06/25/02 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: AH Analyzed By: BC/AH

LAB NUMB	ER SAMPLE ID	GRO (Ce <sup></sup> C10) (mg/Kg)	DRO (>C <sub>10</sub> -C <sub>28</sub> ) (mg/Kg)	CI* (mg/Kg)
ANALYSIS	DATE	08/27/02	06/27/02	06/28/02
H6845-1	SCTV10362502SBH-3'	<10.0	<10.0	300
H6845-2	SCTV103625028BH-5'	<10.0	<10.0	96

H0845-1	SC I V10302502SBH-3	<10.0	<10.0	.300
H6845-2	SCTV103625028BH-5'	<10.0	<10.0	96
H6845-3	SCTV103625028BH-10'	<10.0	<10.0	240
H8845-4	SCTV10382502SBH-15'	<10.0	<10.0	480
H8845-5	SCTV10362502WBH-3'	<10.0	<10.0	96
H6845-6	SCTV10362502WBH-6'	<10.0	<10.0	96
H8845-7	SCTV10362502WBH-10"	<10.0	<10.0	120
H6845-8	SCTV10362502WBH-15'	<10.0	<10.0	-80
H8845-9	SCTV10382502NBH-3'	<10.0	11.6	160
H6845-10	SCTV10382502NBH-5	<10.0	<10.0	80
H0845-11	SCTV10382502NBH-10'	<10.0	<10.0	80
H8845-12	SCTV10362502NBH-15	<10.0	<10.0	112
Quality Conf	Irol	718	766	1040
True Value	QC	800	800	1000
% Recovery	k	89.7	95.8	104
<b>Relative</b> Per	cent Difference	2.2	6.4	2.0

METHODS: TPH GRO & DRO: EPA SW-846 8015 M; CI: Std. Methods 4500-CIB \*Analyses performed on 1:4 w:v aqueous extracts:

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H6845A\_XLS

PLEASE NOTE: Lisbility and Demogra. Cardinar's lability and client's exclusive remody to any data adving, whether based in contract or ton, shall be limited to the security paid by client for analysise. All cleane, including more to nephysics and any other eaces what be deemed what we dread waived unters much in willing and received by Cardiner within pairs (30) days after completion of the applicable service. In mo arean that Cardinaria be lable for inclusivel or concernmental damages. Including, without imitation, business having these of use, or loss of profile inclusion or other weat.

RDINAL LABORATORIES

PHONE (915) 673-7001 . 2111 BEECHWOOD . ABILENE, TX 79803 PHONE (505) 393-2328 . 101 E: MARLAND . HOBBS. NM 88240

ANALYTICAL RESULTS FOR CHEVRON TEXACO ATTN: RODNEY BAILEY P.O. BOX 3109 MIDLAND, TX 79702 FAX TO:

Receiving Date: 06/26/02 Reporting Date: 06/28/02 Project Owner: CHEVRON TEXACO Project Name: VACUUM UNIT WELL 103 **Project Location: NOT GIVEN** 

Sampling Date: 06/25/02 Sample Type: SOIL Sample Condition: COOL & INTACT Sample Received By: AH Analyzed By: BC

lab no.	SAMPLE ID	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS	DATE	08/27/02	06/27/02	08/27/02	08/27/02
H8845-1	SCTV10362502SBH-3'	<0.005	<0.005	<0.005	< 0.015
H8845-2	SCTV10382502SBH-5'	<0.005	< 0.005	<0.005	<0.015
H8845-3	SCTV10362502SBH-10'	<0.005	0.008	<0.005	<0.015
118845-4	SCTV1036250258H-15	<0.005	<0.005	<0.005	<0.015
H8845-5	SCTV10362502WBH-3'	<0.005	<0.005	<0.005	<0.015
H8845-6	SCTV10362502WBH-5	<0.005	<0.005	<0.005	<0.015
H6845-7	SCTV10362502WBH-10'	<0.005	<0.005	<0.005	< 0.015
H6845-8	SCTV10382502WBH-15'	< 0.005	< 0.005	< 0.005	<0.015
H6845-9	SCTV10362502NBH-3*	<0.005	<0.005	<0.005	<0.015
H6845-10	SCTV10362502NBH-5	<0.005	<0.005	< 0.005	<0.015
H6845-11	SCTV10362502NBH-10'	<0.005	<0.005	< 0.005	<0.015
H6845-12	SCTV10362502NBH-15'	<0.005	<0.005	<0.005	<0.015
Quality Cor	tro)	0.102	0.097	0.100	0.288
True Value	QC	0.100	0.100	0.100	0.300
% Recover	Y	102	97.0	99.7	95.9
<b>Relative</b> Pe	rcent Difference	0.3	5.1	4.3	3.9

METHOD: EPA SW-846 8260

tfh Cooke

24/02

PLEASE NOTE: Lisbidity and Demages. Candhai's lisbidy and clearch another among for any clear arising, whether based in contract or tort, shell be limited to the emount paid by cleart for on-All object, Apply any provide the register of the second strain and the demand whether have a new strain sing to contract or tort, shell be limited to the emount paid by cleart for on-subset in the second strain and the second strain and the demand whether have a new strain sing to receive the Candhai within thing (30) days after complete in the apply second strain thermatical transformed for enclose and provide instance, it as subset afflicted or successors and upon instant to provide an another and the second upon instance in the second upon instance. It is subset afflicted or successors and upon any of the above-matted to the performance of performance of provide the second

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VACUUM UNIT WELL #103



VACUUM UNIT WELL #103

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PHONE (915) 673-7001 . 2111 BEECHWOOD . ABILENE, TX 79803

PHONE (505) 393-2326 . 101 E. MARLAND & HOBBS. NM 88240

ANALYTICAL RESULTS FOR CHEVRON TEXACO ATTN: RODNEY BAILEY P.O. BOX 3109 MIDLAND, TX 79702 FAX TO:

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Receiving Date: 09/30/02 Reporting Date: 10/03/02 Project Number: NOT GIVEN Project Name: VACUUM UNIT #103 Project Location: BUCKEYE, NM

Sampling Date: 09/30/02 Sample Type: GROUNDWATER Sample Condition: COOL & INTACT Sample Received By: BC Analyzed By: AH

CI

LAB NUMBER SAMPLE ID

TDS (mg/L) (mg/L)

ANALYSIS D	ATE:	10/02/02	10/01/02
H7089-1	WCTVU103B3002WM	367	160
Quality Cont		NR	940
True Value (		NR	1000
% Recovery		NR	94.0
Relative Pen	cent Difference	8.8	6.0
METHODS	EPA 600/4-79-02	160.1	4500-CIB*

\*Std. Methods

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PLEAGE NOTE: Unbility and Derongme. Cardina're lability and clants exclusin Al coims, including thuss for negligence and any other cause whetheoset shall b service, in no event shall Cardinal be fields for inclutinel or consequential dans adiatas or successors adulty out of or related to the performance of services has be demand walved unknowned, warverer usseer in contract or lock, shall be limited to the amount peld by chers to analy ingress walves walves made in walling and excellent by Cardinal within thiny (30) doys after completion of the apple lights, including, without Amblin, builtenies interruptions, loos of uses, or loos of provide incurred by down, its subside neuroder by Candinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise. IO IN THE AMOUNT PAID by client for analyses al be

PHONE (915) 673-7001 . 2111 BEECHWOOD . ABILENE, TX 79603

PHONE (505) 393-2328 . 101 E. MARLAND . HOBBS. NM 88240

ANALYTICAL RESULTS FOR CHEVRON TEXACO ATTN: RODNEY BAILEY P.O. BOX 3109 MIDLAND, TX 79702 FAX TO:

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Receiving Date: 09/30/02 Reporting Date: 10/03/02 Project Number: NOT GIVEN Project Name: VACUUM UNIT #103 Project Location: BUCKEYE Sampling Date: 09/30/02 Sample Type: GROUNDWATER Sample Condition: COOL & INTACT Sample Received By: BC Analyzed By: BC

LAB NUMBE	R SAMPLE ID	BENZENE (mg/Ĺ)	TOLUENE (mg/L)	ETHYL BENZENE (mg/L)	Total Xylenes (mg/l)
ANALYSIS	DATE	09/30/02	09/30/02	09/30/02	09/30/02
H7089-1	WCTVU10393002WM	<0.002	<0.002	<0.002	<0.008
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Quality Cont	lot	0.103	0.103	0.108	0.310
True Value 0	20	0.100	0.100	0.100	0.300
% Recovery	· · · · · · · · · · · · · · · · · · ·	103	103	108	103
Relative Per	cent Difference	0.3	0.2	0.7	0.8

METHOD: EPA SW-846 8260

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10/3/m

PLEASE NOTE: Lisbility and Damages, Candhard's labelity and client's exclusive camedy for any older straing, without based in contract or tort, shall be limbad to the annual paid by client for analyses. All clients, including fitting forms for marginations and any other cause which washed unknown and exceeding of and the probability of the probability o

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									-	•		WCTVU10393002WM	SAMPLE LD.		e Roger Boone	on Buckeye	Vacuum Unit #	ner		p		per Rodney Bailey	me Chevron Texaco	2111 Beechwood, Abilene, TX 79603 915-673-7001 Fax 915-673-7020	Cardinal Laboratories Inc.
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VACUUM UNIT WELL #103

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# Attachment IV: New Mexico Office of the State Engineer Well Reports

New Mexico Office of the State Engineer

Page 1 of 1

		<i>ffice of the State En</i> orts and Download	
Township: 175	Range: 34E	Sections: 36	
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Well / Si	nface Data Report	Avg Dep	th to Water Report
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AVERAGE DEPTH OF WATER REPORT 09/28/2002

### http://seowaters.ose.state.nm.us/awdProd/awd.html?email\_address=envipius1(@aoi.com&t... 9/28/2002

### New Mexico Office of the State Engineer

Page 1 of 1

	New Mexico Of Well Rep	<i>fice of the State En</i> orts and Download	igincer is
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Well / Sur	face Data Report	Avg Dep	th to Water Report
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	Y X: E (First)	Well Rep Iship: 18S Range: 35E X: Y: Basin: (First) (La: Well / Surface Data Report Wate	X: Y: Zone:  Basin:  Nurr (First) (Last) (Last) (All Well / Surface Data Report Avg Dep Water Column Report

AVERAGE DEPTH OF WATER REPORT 09/28/2002

ter in Feet)
Max Avg
75 69
110 89
95 85

Record Count: 20

http://seowaters.ose.state.nm.us/awdProd/awd.html?email\_address=enviplus1@aol.com&t... 9/28/2002

## Attachment V: Site Metrics and Information Form

# Attachment VI: Chevron Digging Permit

#### CHEVRON U.S.A. INC. WEST ASSET TEAM / DIGGING PERMIT PERMIT FOR DIGGING, TRENCHING, OR EXCAVATING WITH ANY TYPE OF POWERED TOOL OR MECHANIZED EQUIPMENT

Supervisor.	Radia	Baitey Edd	la starr	_ Date Authorized:_	6-17-02	
Field Location:	Vacdue	want w	211 103			
Type Work:	Rock d	Casa 129	+ Excaval	No CONTRAIN	of el soil	
Emsi	COLDCY	Look	Kupit	ing ConTRANC		
Specific Restri	ctions: /					
Other:			· · ·			

Mechanical digging equipment should not be used within 12" of an underground line.

#### PERMIT REQUIREMENTS:

E	asic Precautions:	Yes	No	N/A
1	. Has an underground line map been reviewed? Piping plan must be used when work is performed within a facility.	i		······································
2	Has the person operating the digging equipment isolated the energy source and performed LOTO? If electrical energy source cannot be accurately located, utilize electrical contractor with electric line locating equipment.	V		
3	Have digging operations been discussed w/ an employee familiar with the area?	~	<u> </u>	
4	Has a metal detecting line finder been used in the area to be excavated?			
5	Are there any line markers near the excavation area?	L	~	
:6	. Is there a visible right-of-way where the digging will be done?		~~ 	
7	Are there special concerns with any equipment, i.e., tank batteries, satellites, wells, buildings, power poles, etc., within 150' of the excavation area?		·	
.8	Are there special concerns with overhead power lines within 100' of the excavation?			
9	. Will digging exceed 16" in depth? If yes, see Special Precaution below:	 		
ł	0. Have you discussed the importance of not creating a spill and what to do if one occurs?	~		,

If contact with a line results in a release of oil and or produced water contact Chevron Representative at Emergency Phone # listed below immediately.

#### **Special Precaution:**

If work is to be performed within a 3<sup>rd</sup> party right-of-way, location near a populated area, designated area, or if underground utilities are in the vicinity then 1-800-545-6005 (TX) or 1-800 321-2537 (NM) (One-Call Notification) MUST be made 48 hours in advance of any excavation work.

1.	Has One-Call Notification been called	?	Date of call: 6-17-0	2 Time of call: 1/. 457	m

2.	Permitted start date and t	ime:	6-	19-02	21:45 pr	Estimated duration of job	6-19-02
	and the second of the			_	1		

3.	One-Call Notification confirmation #	2002	2 Robel	250.	565
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### THIS PERMIT MUST BE COMPLETED PRIOR TO MECHANICAL DIGGING AND AVAILABLE FOR REVIEW AT THE WORKSITE.

If contact is made with an underground line or cable, this permit will be attached to the accident report, otherwise, it should be attached to the work ticket.

Rodp's Baller Chevron Representative / Emergency Phone #

ET Contractor

672-02 Date

REVISED 02/05/01

CHEVRON U.S.A. INC. WEST ASSET TEAM / DIGGING PERMIT PERMIT FOR DIGGING, TRENCHING, OR EXCAVATING WITH TOOL OR MECHANIZED EQUIPMEN	•
Field Location: Vacuum unif well 103 Type Work: Back dragging + Excavating Contract	matel soil
Specific Restrictions:	
Mechanical digging equipment should not be used within 12" of an undergro	ound line.
PERMIT REQUIREMENTS: Basic Precautions: 1. Has an underground line map been reviewed? Piping plan must be used when work is performed within a facility.	Yes No N/A
2. Has the person operating the digging equipment isolated the energy source and performed LOTO? If electrical energy source cannot be accurately locatedutilize electrical contractor with electric line locating	g equipment.
3. Have digging operations been discussed w/ an employee familiar with the area?	<u> </u>
4. Has a metal detecting line finder been used in the area to be excavated?	
5. Are there any line markers near the excavation area?	<u> </u>
6. Is there a visible right-of-way where the digging will be done?	

 Are there special concerns with any equipment, i.e., tank batteries, satellites, wells, buildings, power poles, etc., within 150° of the excavation area?......

8. Are there special concerns with overhead power lines within 100' of the excavation? ......

9. Will digging exceed 16" in depth? If ves. see Special Precauton below.

10. Have you discussed the importance of not creating a spill and what to do if one occurs?

If contact with a line results in a release of oil and or produced water contact Chevron Representative at Emergency Phone # listed below immediately,

#### Special Precaution:

If work is to be performed within a 3<sup>rd</sup> party right-of-way, location near a populated area, designated area, or if underground utilities are in the vicinity then 1-800-545-6005 (TX) or 1-800 321-2537 (NM) (One-Call Notification) MUST be made 48 hours in advance of any excevation work.

1. Has One-Call Notification been called? YES Date of call: 6-17-02 Time of call: 11.45 An

2. Permitted start date and times 6-19-02 11:45 en Estimated duration of	job:
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3. One-Call Notification confirmation # 2002 250 416

### THIS PERMIT MUST BE COMPLETED PRIOR TO MECHANICAL DIGGING AND AVAILABLE FOR REVIEW AT THE WORKSITE.

If contact is made with an underground line or cable, this permit will be attached to the accident report, otherwise, it should be attached to the work ticket.

Rody y Balley Chevron Representative / Emergency Phone #

<u>EPT</u> Contractor

Date

REVISED	
02:05:01	

		Ø	
		(Lockout/Tagout) Procedures	SOP
	EFFECTIVE	REVISED	
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### **APPENDIX 7.A, Annual Inspection Certification Form**

### Sequence of Applying Energy Controls:

Indicate if the sequence of applying energy controls was followed by checking/the appropriate line.





All affected employees were notified.



Equipment was prepared for shut down (types and level/quantity of energy and hazards involved).





Equipment was isolated (operate all energy devices to assure that the equipment is isolated from the energy source).



Lockout and tagout devices were applied.



Provision was made for control of stored energy (stop all moving

parts, install ground wires, relieve trapped pressure, release tension springs, block hydraulic parts, bleed lines down, blind or blank flanges, watch for stored energy to reaccumulate).



Isolation of equipment was verified (clear of personnel, unnecessary tools and equipment).



7

Work was performed while watching for any work operations that could reactivate the equipment.



10. When work was finished, lockout/tagout device was removed,

	n place for	Signature of Inspector	1. Lilde Ara
Ŭ	rgy control procedures i itons.	Camments	Lockoul Taxoul Tak
APPENDIX 7.B (cont.) Annual Inspection Log Book Example.	I Performance of the end in lockou/tagout operat	Name of Inspector	Kellin 5 Harley
APE Annual Inspec	The following is a record of the Annual Inspection Performance of the energy control procedures in place for the authorized employees and equipment involved in lockou/tagout operations.	Equipment on which Energy Control Applied	Helve vie un
	The following is a reco the authorized employe	Authonized Employee(s) Inspected	Cluck Michael Jahm Rylineur
		Date of Inspection	

45

VACUUM UNIT WELL #103