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FEB 5, 2003

**PROJECT PLAN (PJP)
&
SITE INVESTIGATION REPORT**

for the
Injection Fluid Release
associated with the

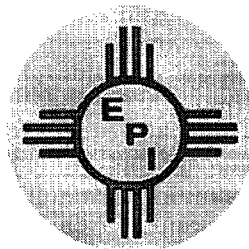
**LOVINGTON PADDOCK UNIT
WELL #21 INJECTION LINE**
API# 30025 03802 0000

~7 mile south of Lovington
Lea County, New Mexico
UL-G SW¼ of the NE¼ Sec 36, T16S, R36E
Latitude: 32°52'45.65"N Longitude: 103°18'22.77"W

February 2003

Prepared by

Environmental Plus, Inc.
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Eunice, New Mexico 88231
Tele 505•394•3481 FAX 505•394•2601



FRI 11.7.03

BILLY
PROTECH
399-3555

DANNY
WATSON
631-3482

W/WATSON
PURE

Pure - 150628
incident - NPAC 0603227273
application - pPAC 0603227555

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1 LOVINGTON PADDOCK UNIT WELL #21 PROJECT PLAN (PJP)

This plan investigated the vertical extents of secondary injection fluid contamination, i.e., saline produced water and residual crude oil, at the Pure Resources Lovington Paddock Unit Well #21 release site approximately 7 miles south of Lovington, New Mexico. Five soil borings were advanced and discretely sampled at 5 feet below ground surface ('bgs) intervals and analyzed to identify concentration gradients for the "Constituents of Concern" (CoC), i.e., Total Petroleum Hydrocarbon using EPA Method 8015M (TPH^{8015m}), Benzene, Toluene, Ethylbenzene, m,p,o-Xylenes, and Chloride. Acceptability of the delineation concentrations are based on thresholds and protocols provided by the New Mexico Oil Conservation Division (NMOCD) guidelines.

1.1 Site Description

The site is located ~~7 miles south of Lovington~~, New Mexico on land owned by the City of Lovington. Annotated aerial and topographical maps are included in Attachment I.

1.1.1 Historical Use

This land surface is used for livestock grazing and oil and gas production facilities access roads.

1.1.2 Photographic documentation

Photographs of the site are included in Attachment II.

1.1.3 Ecological Description

The area is typical of the northern most extent of the Upper Chihuahuan Desert Biome consisting primarily of Honey Mesquite (*Prosopis glandulosa*) and typical desert grasses and weeds. Mammals present, include Orrd's and Merriam's Kangaroo Rat, Deer Mouse, White Throated Wood Rat, Cottontail Rabbit, Black Tailed Jackrabbit (*Lepus californicus*), and the occasional Pronghorn Antelope. Reptiles, Amphibians, and Birds are numerous and typical of area. While a biotic survey was not conducted, Listed, Threatened, or Endangered species are not known to exist in this immediate area.

1.1.4 Environmental Media Characterization

Chemical parameters of the soil will be 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)
- Unlined Surface Impoundment Closure Guidelines (February 1993)

Site Ranking and acceptable "Site Specific" thresholds for contaminants of concern (CoCs), i.e., soil TPH^{8015m}, Benzene, BTEX (mass sum of Benzene, Toluene, Ethyl Benzene, and m, p, and o Xylenes), and soil Chloride, will be determined based on the following;

- Depth to Ground water, i.e., distance from the lower most acceptable concentration to the ground water.
- Wellhead Protection Area, i.e., distance from fresh water supply wells.
- Distance to Surface Water Body, i.e., horizontal distance to all down gradient surface water bodies.

1.1.4.1 Ground Water Level

The New Mexico State Engineer's Office (NMSEO) and the New Mexico Tech Geo-Information system ground water level on-line databases showed five wells in the southern half of Section 36 with an average water level of ~~51-14.5 bgs~~. The City of Lovington currently produce 2 wells approximately 0.5 miles northwest of the site and were drilled to a depth of 256 and 257' bgs. The water levels provided by the database are reported as the same and cannot be correct and are not used in the average calculation. A simple average of the ground water levels of the wells in Sections 36, 25, and 26 is 57.9' bgs.

Well Number	Source	Tws	Rng	Sec	Easting	Northing	Date	Well Depth	Water Level
L 01350 APPRO	Shallow	16S	36E	36	658945	3638695	1/11/1952	110	55
L 01371 APPRO	Shallow	16S	36E	36	658644	3638187	2/22/1952	115	45
L 01438 APPRO	Shallow	16S	36E	36	658545	3638288	5/8/1952	110	45
L 01557 APPRO	Shallow	16S	36E	36	657836	3638176	8/25/1952	110	40
L 04058 (EXPLORE)		16S	36E	36	657827	3639178		230	
L 04058 (EXPLORE)		16S	36E	36	657823	3639579		230	
L 04058 S-24	Shallow	16S	36E	36	657823	3639579	4/4/2000	257	257?
L 04058 S-25	Shallow	16S	36E	36	657827	3639178	4/10/2000	256	256?
8774		16S	36E	36			1961		72.69
8816		16S	36E	36			1961	150	70.94
L 02507 APPRO	Shallow	16S	36E	25	657705	3641089	3/8/1954	110	52
L 03031	Shallow	16S	36E	26	657415	3639772	11/23/1955	115	60
L 03627	Shallow	16S	36E	26	656609	3639757	7/30/1957	98	65
8896		16S	36E	25			1961	126	65.38
8945		16S	36E	25			1961		65.95
AVERAGE WATER LEVEL									57.905

1.1.4.2 Depth to Ground Water Calculation

According to the NMOCD Guidelines, depth to ground water (DtoGW) is defined as the “the vertical distance from the lowermost contaminants (LC) to the seasonal high water elevation of the ground water (WL).” TPH^{8015m} above 1000 mg/Kg was detected down to 2’bgs; therefore, the calculated depth to ground water is 55.9’bgs.

$$57.9 \text{ ft}^{WL} - 2 \text{ ft}^{LC} = 55.9 \text{ ft}^{DtoGW}$$

1.1.4.3 Ground Water Gradient

Based on available information, the gradient is to the east southeast.

1.1.4.4 Wellhead Protection Area

There are no public water supply wells located within 1,000 horizontal feet of the site. There are two City of Lovington municipal water supply wells located within 2,500 feet to the north and west of the site.

1.1.4.5 Distance to Nearest Surface Water Body

There are no naturally occurring surface water bodies located within a 1-mile radius of the site.

1.1.4.6 Soil Assessment

Soil samples were collected at 5 strategically located locations within the spill pooling areas. The sample locations are noted on the site map included in Attachment I.

1.1.4.7 Ground Water Assessment

The ground water level is conservatively estimated to occur at ~58’bgs. The soil investigation did not warrant ground water assessment.

1.1.5 NMOCD Site Rank and Remedial Goals

Based on the site information, the site has a ranking of 10 points and the respective remedial goals/thresholds for the Constituents of Concern (CoCs). The Chloride remedial goal cannot

exceed a soil concentration capable of impacting ground water above the New Mexico Water Quality Control Commission (WQCC) standard of 250 mg/Liter.

1. Ground Water		2. Wellhead Protection Area	3. Distance to Surface Water Body
If Depth to GW <50 feet: 20 points	If <1000' from water source, or; <200' from private domestic water source: 20 points	<200 horizontal feet: 20 points	
If Depth to GW 50 to 99 feet: 10 points		200-100 horizontal feet: 10 points	
If Depth to GW >100 feet: 0 points	If >1000' from water source, or; >200' from private domestic water source: 0 points	>1000 horizontal feet: 0 points	
Ground water Score = 10	Wellhead Protection Area Score= 0	Surface Water Score= 0	
Site Rank (1+2+3) = = 10 points			
Total Site Ranking Score and Acceptable Concentrations			
Parameter	>19 (Soil >8' bgs)	10-19 (Soil from 0 to 8' bgs)	0-9 (Not Applicable)
Benzene ¹	10 ppm	10 ppm	10 ppm
BTEX ¹	50 ppm	50 ppm	50 ppm
TPH	100 ppm	1000 ppm	5000 ppm
¹ 100 ppm field VOC headspace measurement may be substituted for lab analysis			

2 LOVINGTON Paddock UNIT WELL #21 INVESTIGATION REPORT

On November 11, 2002, Environmental Plus, Inc. (EPI) personnel, with the assistance and direction of Pure Resources, implemented the Project Plan and collected subsurface soil samples at the Lovington Paddock Unit Well #21. The Borehole Map and annotated topographical and aerial maps of the Lovington Paddock Unit Well #21 site are included in Attachment I, photographs in Attachment II, and the original analytical reports are included in Attachment III along with a data summary.

2.1 Analytical Results

The soil borings were advanced in areas considered to be the most contaminated, i.e., fluid pooling areas with the longest residence times. The results are discussed and illustrated below. The analytical reports are summarized and included in Attachment III.

2.1.1 Borehole #1 (BH1)

BH1 was advanced adjacent to the leak origin. TPH^{8015m} was monitored at 1,240 mg/Kg from 0-2' bgs and 91.6 mg/Kg from 5-7' bgs. Benzene and BTEX were detected but not above the NMOCD remedial goals. Chloride was monitored at 10,637 mg/Kg in the 0-2' bgs sample and 736 mg/Kg in the 5-7' bgs sample. The 10-12' bgs and 15-17' bgs samples were <100 mg/Kg.

2.1.2 Borehole #2 (BH2)

BH2 was advanced in a pooling area east of the leak origin between BH1 and BH3. TPH^{8015m} was monitored at 143 mg/Kg from 0-2' bgs and non-detectable at 5-7' bgs. Benzene and BTEX were detected but nominally. Chloride was monitored at 19,594 mg/Kg in the 0-2' bgs sample and <250 mg/Kg at the other intervals to 17' bgs.

2.1.3 Borehole #3 (BH3)

BH3 was advanced in a pooling area at the east extent of the spill area. TPH^{8015m}, Benzene, and BTEX were not detected above the instrument detection limits down to 15' bgs. The Chloride gradient was monitored at 9,917 mg/Kg in the 0-2' bgs sample, 592 mg/Kg at the 10-12' bgs interval, and at 96 mg/Kg from 15-17' bgs.

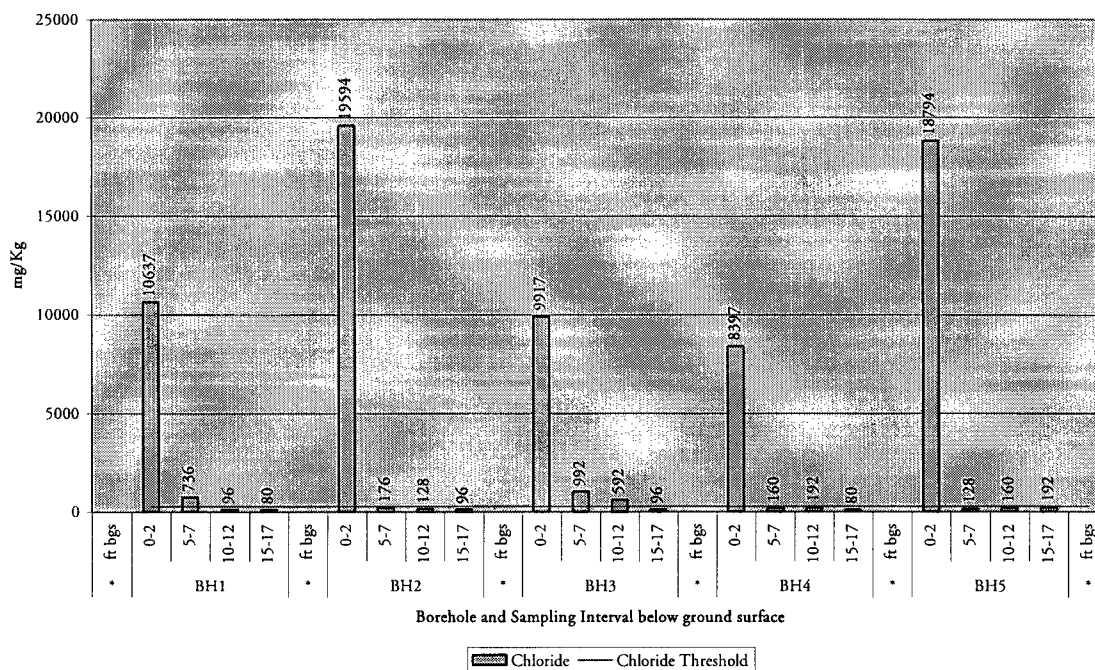
2.1.4 Borehole #4 (BH4)

BH4 was advanced midway between BH1 and BH5 in the west flowpath pooling area. Nominal detections of TPH^{8015m}, Benzene, and BTEX were monitored from 0-2' bgs and not detected at 5, 10, and 15' bgs. Chloride was monitored at 8,397 mg/Kg in the near surface, i.e., 0-2' bgs sample and <250 mg/Kg at 5, 10, and 15' bgs.

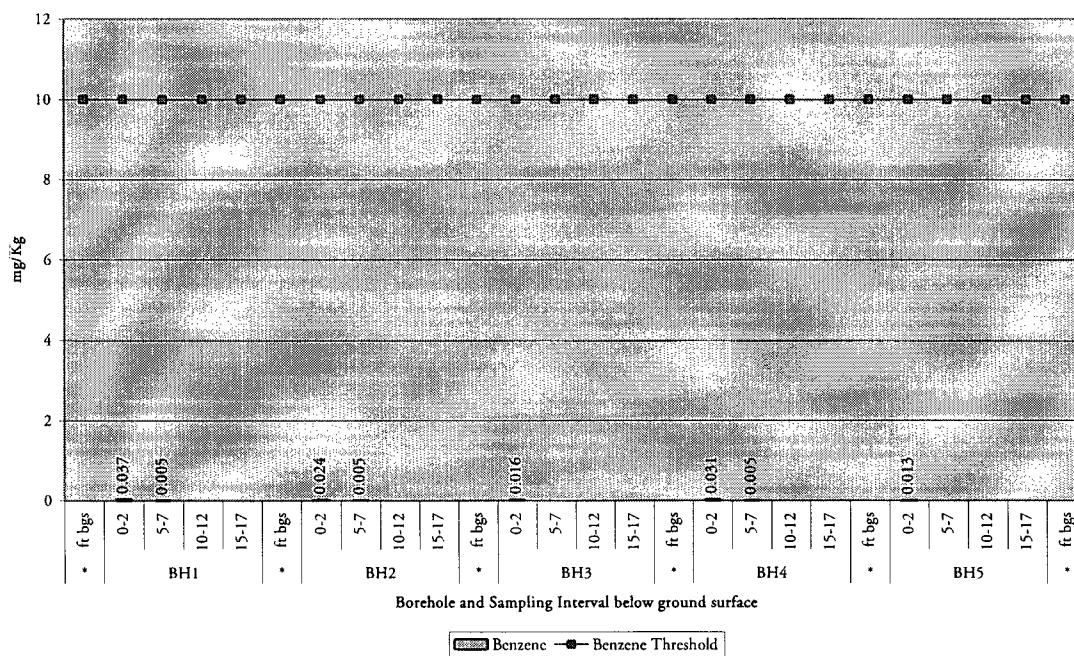
2.1.5 Borehole #5 (BH5)

BH5 was advanced in the west most pooling area of the west flow path. TPH^{8015m}, Benzene, and BTEX were not detected at the surface, 5, 10, or 15' bgs intervals. Chloride was monitored at 18,794 mg/Kg in the near surface, i.e., 0-2' bgs sample and <250 mg/Kg at 5, 10, and 15' bgs.

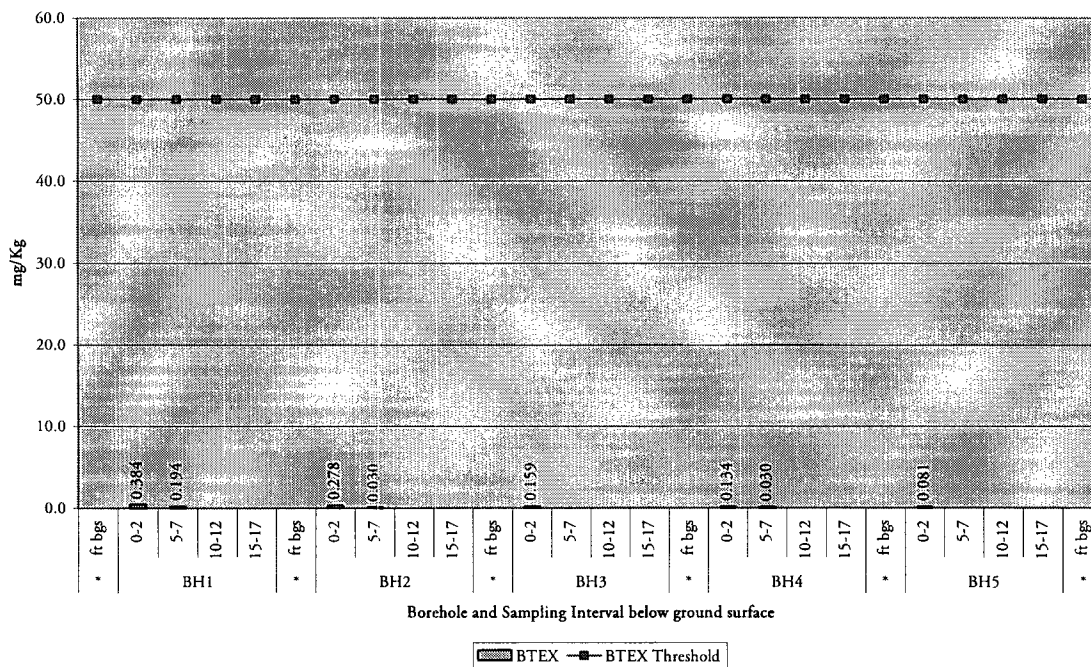
Pure Resources
Lovington Paddock Unit #21
Chloride Delineation



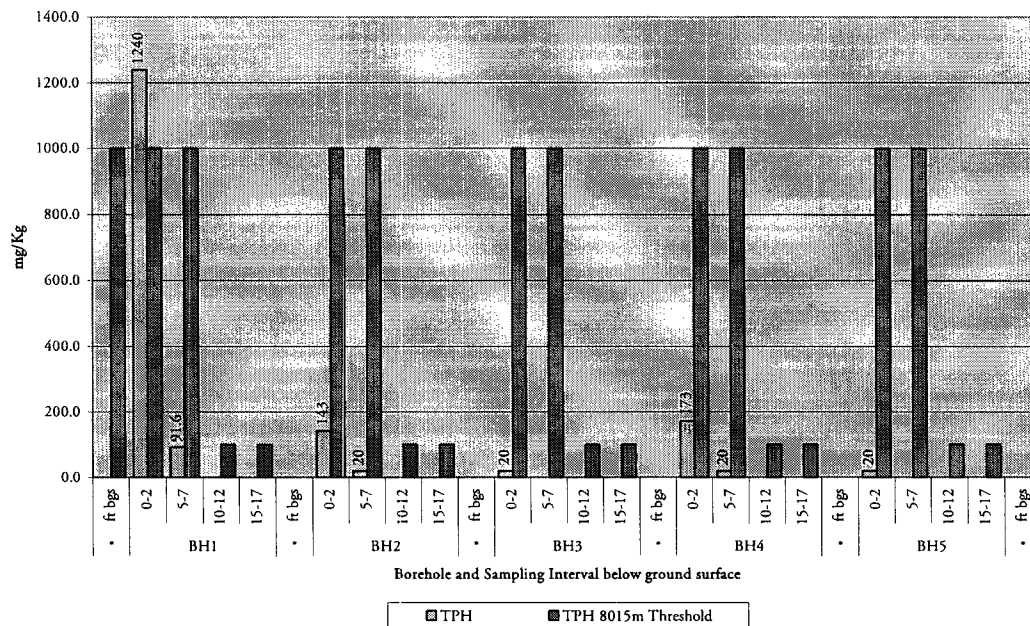
Pure Resources
Lovington Paddock Unit #21
Benzene Delineation



Pure Resources
Lovington Paddock Unit #21
BTEX Delineation



Pure Resources
Lovington Paddock Unit #21
TPH8015m Delineation



2.2 Discussion of Hydrocarbon Data

TPH^{8015m} in the area of the leak origin exceeds the 1,000 mg/Kg NMOCD remedial goal at the 0-2'bgs interval at BH1. Benzene and BTEX were not detected above the remedial goals, i.e., 10 mg/Kg and 50 mg/Kg, respectively.

2.3 Discussion of Chloride Data

Chloride contamination concentrations >250 mg/Kg were monitored as follows;

- BH1 - 5-7'bgs
- BH2 - 0-2'bgs
- BH3 - 10-12'bgs
- BH4 - 0-2'bgs
- BH5 - 0-2'bgs

2.4 Conclusions

Based on the information collected during this investigation it is concluded that;

- TPH^{8015m} contamination in excess of the NMOCD Guideline remedial goal of 1,000 mg/Kg occurs in BH1, the area of the leak origin, down to 2'bgs.
- Benzene and BTEX residuals at all locations are below the remedial goals of 10 and 50 mg/Kg, respectively.
- Chloride residual in excess of 250 mg/Kg occurs from the surface to 2'bgs through out the site, from the surface to 7'bgs in the area of BH1 near the leak origin, and from the surface to 12'bgs in the area of BH3.

2.5 Remediation Proposal

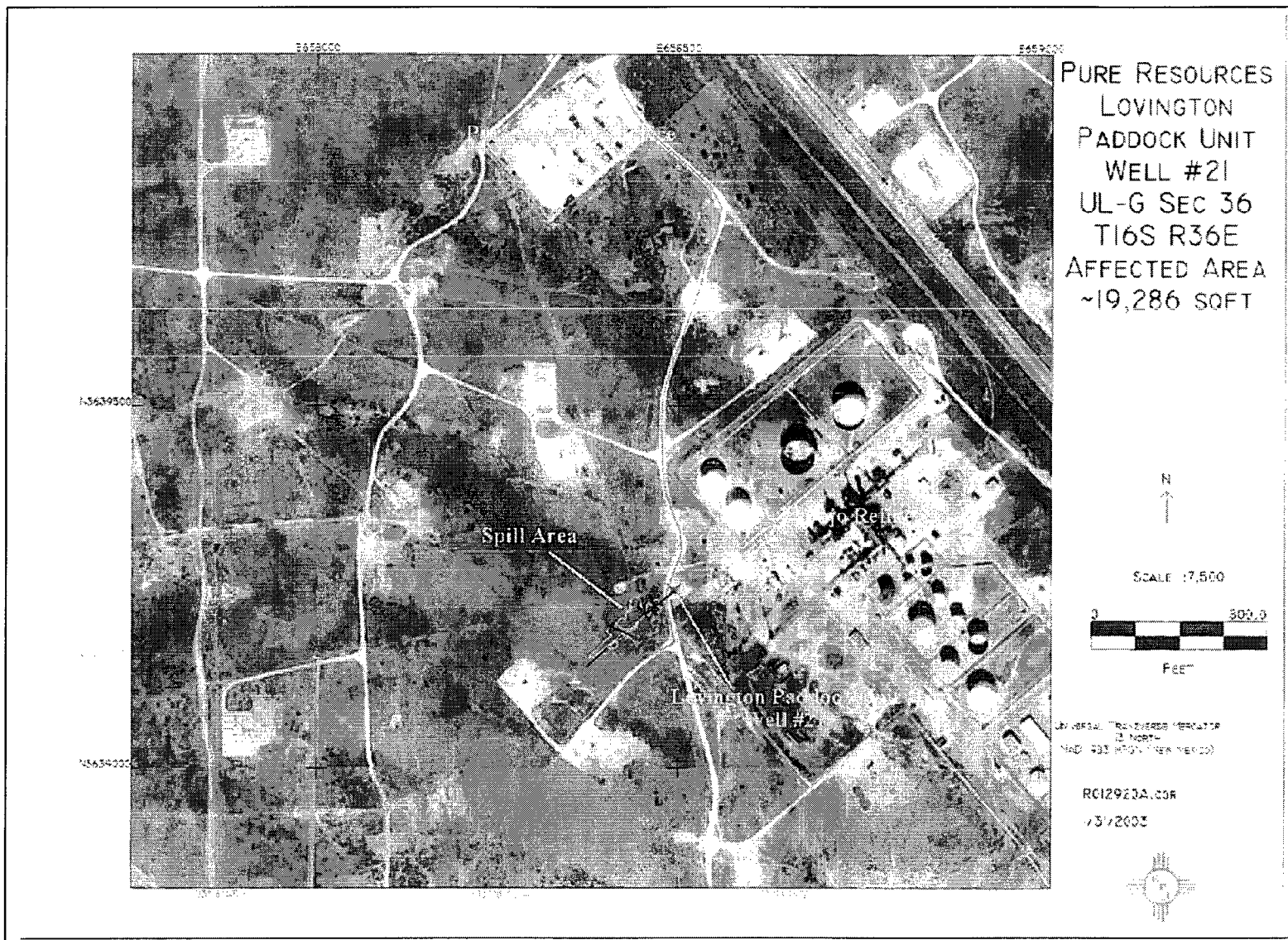
It is not feasible to blend the near surface soil with clean soil to achieve the remedial goals for the TPH^{8015m} and Chloride source terms because of the extremely high Chloride concentrations and, given that the site is located within the City of Lovington's water well field, leaching or rinsing the Chloride into the subsurface to restore the surface is not feasible because of the potential to impact the ground water above the New Mexico Water Quality Control Commission standard of 250 mg/L.

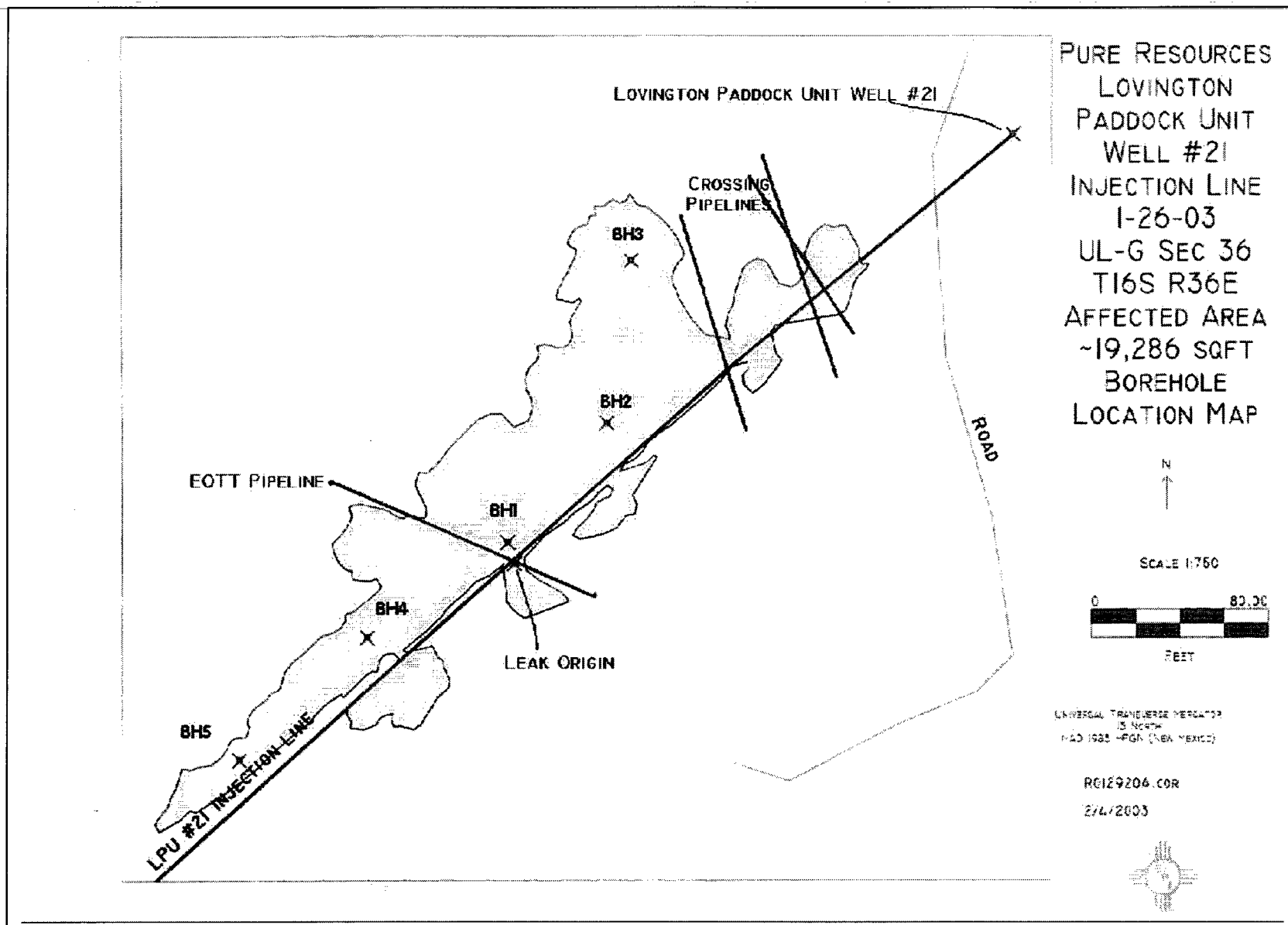
It is proposed to excavate and dispose of the impacted soil down to 2'bgs. The remaining soil contaminated above the NMOCD remedial guidelines in the areas of BH1 and BH3 will be excavated and blended with local clean soil to acceptable levels and placed back into the excavated areas. Clean soil will be used to replace the hauled soil and bring the excavation to grade. After contouring the site will be reseeded.

2.6 Lovington Paddock Unit Well #21 Site Information and Metrics Summary

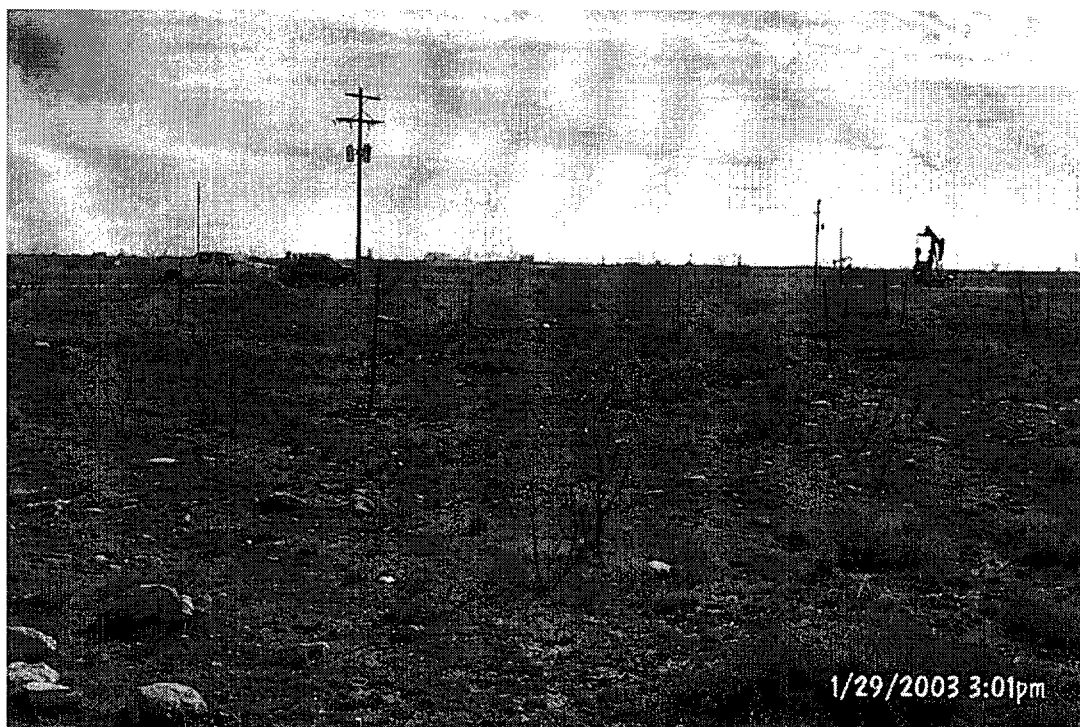
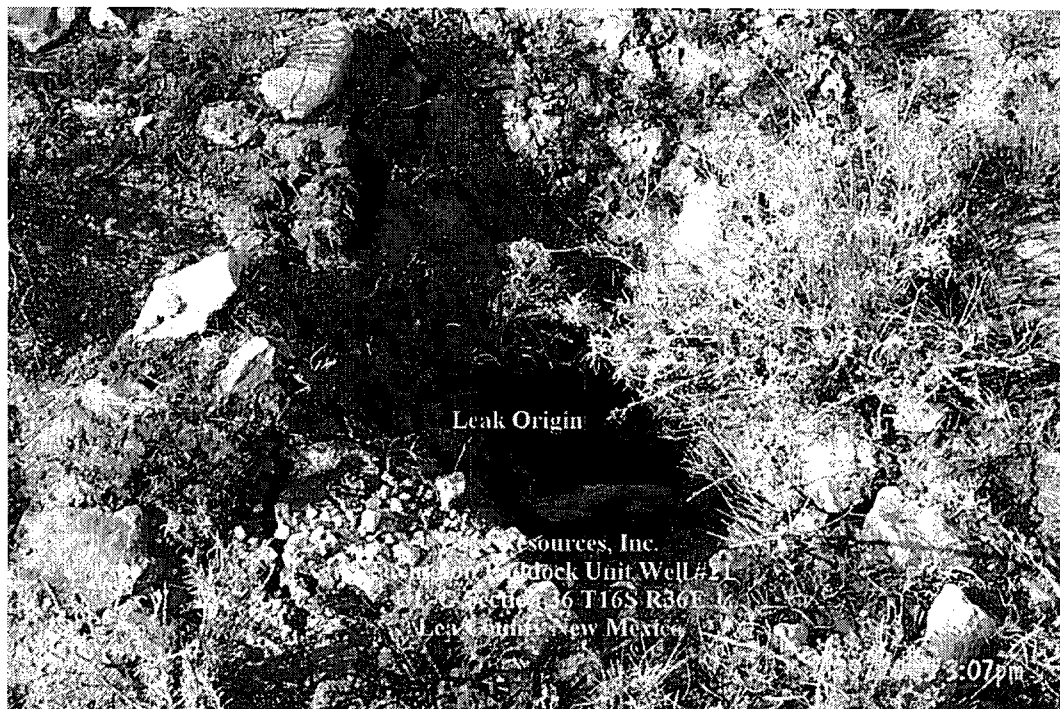
Pure Resources		Incident Date and NMOCD Notified?	
Site Information and Metrics		1-26-03	NMOCD notified immediately (on call pager)
SITE: Lovington Paddock Unit Well #21 Inj. Line		Assigned Site Reference #: 12603	
Company: Pure Resources, Inc.			
Street Address: Hobbs Highway south of Lovington, NM			
Mailing Address: P.O. Box 609			
City, State, Zip: Lovington, NM 88260			
Representative: Mike Northcutt			
Representative Telephone: 505.396.7503			
Telephone: 505.390.1090			
Fluid volume released (bbls): 230		Recovered (bbls): 130	
>25 bbls: Notify NMOCD verbally within 24 hrs and submit form C-141 within 15 days. (Also applies to unauthorized releases >500 mcf Natural Gas)			
5-25 bbls: Submit form C-141 within 15 days (Also applies to unauthorized releases of 50-500 mcf Natural Gas)			
Leak, Spill, or Pit (LSP) Name: Lovington Paddock Unit Well #21 Inj. Line			
Source of contamination: Steel Injection Water Line			
Land Owner, i.e., BLM, ST, Fee, Other: City of Lovington			
LSP Dimensions -70' x 410'			
LSP Area: 19,286 ft ²			
Location of Reference Point (RP)			
Location distance and direction from RP			
Latitude: 32° 52' 45.65" N			
Longitude: 103° 18' 22.77" W			
Elevation above mean sea level: 3,835' amsl			
Feet from South Section Line			
Feet from West Section Line			
Location- Unit or ¼¼: SW¼ of the NE¼		Unit Letter: G	
Location- Section: 36			
Location- Township: 16S			
Location- Range: 36E			
Surface water body 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:			
Depth from land surface to ground water (DG) -58' bgs			
Depth of contamination (DC) - 2' bgs			
Depth to ground water (DG - DC = DtGW) -56' bgs			
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 50 to 99 feet: 10 points		If >1000' from water source, or, >200' from private domestic water source: 0 points	
If Depth to GW >100 feet: 0 points		Wellhead Protection Area Score= 0	
Ground water Score = 10		Surface Water Score= 0	
Site Rank (1+2+3) = 10			
Total Site Ranking Score and Acceptable Concentrations			
Parameter	>19	10-19	0-9
Benzene ¹	10 ppm	10 ppm	10 ppm
BTEX ¹	50 ppm	50 ppm	50 ppm
TPH	100 ppm	1000 ppm	5000 ppm
¹ 100 ppm field VOC headspace measurement may be substituted for lab analysis			

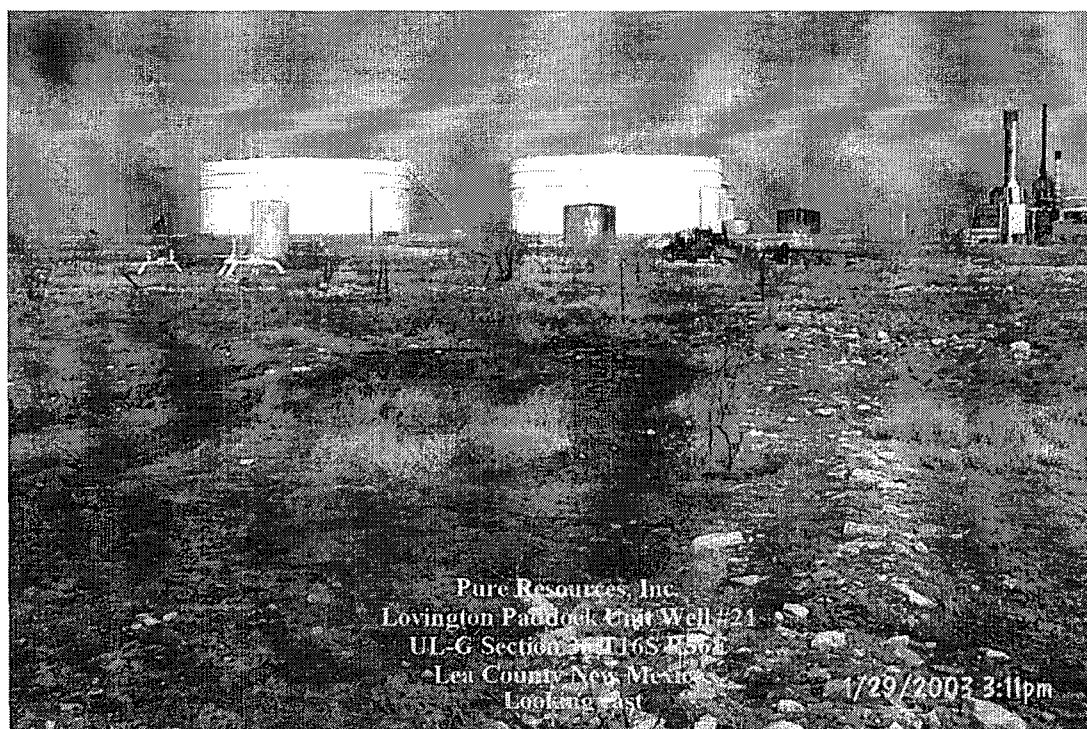
Attachment I: Site Maps





Attachment II: Photographs





Attachment III: Analytical Reports

PURE RESOURCES, INC.

Lovington Paddock Unit Well #21 Injection Line

Sample Area	Sampling Interval (Ft. BGS ¹)	SAMPLE ID#	Sample Date	Lithology	VOC Headspace ppm	GRO ³	DRO ⁴	TPH ⁵	BTEX	Benzene	Toluene	Ehtyl Benzene	m,p,o-Xylene	Chloride
						Instrument Detection Limits and Units								
						10.0 mg/Kg	10.0 mg/Kg	mg/Kg	mg/Kg	0.005 mg/Kg	0.005 mg/Kg	0.005 mg/Kg	0.025 mg/Kg	1.0 mg/Kg
BH1	0-2	SPRLP212703BH1-2'	2/7/2003	Tan sand/Indurated sandstone/Caliche	9.0	10	1230	1240	0.384	0.037	0.101	0.100	0.146	10637
	5-7	SPRLP212703BH1-5'	2/7/2003	Tan sand/Indurated sandstone/Caliche	1.1	10	10	91.6	0.194	0.005	0.011	0.056	0.122	736
	10-12	SPRLP212703BH1-10'	2/7/2003	Tan sand/Indurated sandstone/Caliche	2.2	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	96
	15-17	SPRLP212703BH1-15'	2/7/2003	Tan Sand Fine	3.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	80
BH2	0-2	SPRLP212703BH2-2'	2/7/2003	Dark Brown Clayey Loam	1.6	10	133	143	0.278	0.024	0.086	0.069	0.099	19594
	5-7	SPRLP212703BH2-5'	2/7/2003	Tan sand/Indurated sandstone/Caliche	1.4	10	10	20	0.030	0.005	0.005	0.005	0.015	176
	10-12	SPRLP212703BH2-10'	2/7/2003	Tan sand/Indurated sandstone/Caliche	0.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	128
	15-17	SPRLP212703BH2-15'	2/7/2003	Tan Sand Fine	1.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	96
BH3	0-2	SPRLP212703BH3-2'	2/7/2003	Tan sand/Indurated sandstone/Caliche	8.7	10	10	20	0.159	0.016	0.056	0.034	0.053	9917
	5-7	SPRLP212703BH3-5'	2/7/2003	Tan sand/Indurated sandstone/Caliche	2.0	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	992
	10-12	SPRLP212703BH3-10'	2/7/2003	Tan Sand Fine	1.8	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	592
	15-17	SPRLP212703BH3-15'	2/7/2003	Tan Sand Fine	0.9	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	96
BH4	0-2	SPRLP2121003BH4-2'	2/10/2003	Tan sand/Indurated sandstone/Caliche	6.5	10	163	173	0.134	0.031	0.053	0.021	0.029	8397
	5-7	SPRLP2121003BH4-5'	2/10/2003	Tan sand/Indurated sandstone/Caliche	2.0	10	10	20	0.030	0.005	0.005	0.005	0.015	160
	10-12	SPRLP2121003BH4-10'	2/10/2003	Fine Brown Sand	1.3	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	192
	15-17	SPRLP2121003BH4-15'	2/10/2003	Tan Sand Fine	0.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	80
BH5	0-2	SPRLP2121003BH5-2'	2/10/2003	Tan sand/Indurated sandstone/Caliche	6.3	10	10	20	0.081	0.013	0.026	0.015	0.027	18794
	5-7	SPRLP2121003BH5-5'	2/10/2003	Tan Sand Fine	3.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	128
	10-12	SPRLP2121003BH5-10'	2/10/2003	Fine Brown Sand	2.6	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	160
	15-17	SPRLP2121003BH5-15'	2/10/2003	Tan Sand Fine	1.7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	192

¹bgs - below ground surface

²VOC-Volatile Organic Contaminants/Constituents

³GRO-Gasoline Range Organics C₆-C₁₂

⁴DRO-Diesel Range Organics C₁₂-C₃₅

⁵TPH-Total Petroleum Hydrocarbon = GRO+DRO.

⁶Bolded values are in excess of the New Mexico Oil Conservation Division guideline threshold for the parameter

⁷ND- Indicates that the parameter was not detected above the instrument detection limit.

⁸N/A - Not Analyzed



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

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

ANALYTICAL RESULTS FOR
ENVIRONMENTAL PLUS, INC.
ATTN: PAT McCASLAND
P.O. BOX 1558
EUNICE, NM 88231
FAX TO: (505) 394-2601

Receiving Date: 02/11/03

Reporting Date: 02/12/03

Project Owner: PURE RESOURCES

Project Name: LOVINGTON PADDOCK WELL #21

Project Location: NOT GIVEN

Analysis Date: 02/12/03

Sampling Date: 02/07/03

Sample Type: SOIL

Sample Condition: COOL & INTACT

Sample Received By: AH

Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl ⁻ (mg/Kg)
H7469-1	SPRLP212703BH1-2	10637
H7469-2	SPRLP212703BH1-5	736
H7469-3	SPRLP212703BH1-10	96
H7469-4	SPRLP212703BH1-15	80
H7469-5	SPRLPW212703BH2-2	19594
H7469-6	SPRLPW212703BH2-5	176
H7469-7	SPRLPW212703BH2-10	128
H7469-8	SPRLPW212703BH2-15	96
H7469-9	SPRLPW212703BH3-2	9917
H7469-10	SPRLPW212703BH3-5	992
Quality Control		1030
True Value QC		1000
% Recovery		103
Relative Percent Difference		3.0

METHOD: Standard Methods 4500-ClB

Note: Analyses performed on 1:4 w:w aqueous extracts.

Amy Hill
Chemist

2-12-03
Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or third parties arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

H7469A



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

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

ANALYTICAL RESULTS FOR
ENVIRONMENTAL PLUS, INC.
ATTN: PAT McCASLAND
P.O. BOX 1558
EUNICE, NM 88231
FAX TO: (505) 394-2601

Receiving Date: 02/11/03

Reporting Date: 02/12/03

Project Owner: PURE RESOURCES

Project Name: LOVINGTON PADDOCK WELL #21

Project Location: NOT GIVEN

Analysis Date: 02/12/03

Sampling Date: 02/07-02/10/03

Sample Type: SOIL

Sample Condition: COOL & INTACT

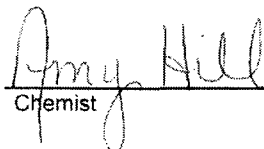
Sample Received By: AH

Analyzed By: AH

LAB NUMBER	SAMPLE ID	Cl ⁻ (mg/Kg)
H7469-11	SPRLPW2121003BH4-2	8397
H7469-12	SPRLPW2121003BH4-5	160
H7469-13	SPRLPW2121003BH4-10	192
H7469-14	SPRLPW2121003BH4-15	80
H7469-15	SPRLPW2121003BH5-2	18794
H7469-16	SPRLPW2121003BH5-5	128
H7469-17	SPRLPW2121003BH5-10	160
H7469-18	SPRLPW2121003BH5-15	192
H7469-19	SPRLPW212703BH3-10	592
H7469-20	SPRLPW212703BH3-15	96
Quality Control		1030
True Value QC		1000
% Recovery		103
Relative Percent Difference		3.0

METHOD: Standard Methods 4500-Cl⁻B

Note: Analyses performed on 1:4 w:v aqueous extracts.


Chemist


Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or licensors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

H7469B



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

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

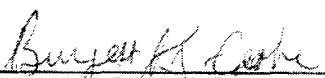
ANALYTICAL RESULTS FOR
ENVIRONMENTAL PLUS, INC.
ATTN: PAT McCASLAND
P.O. BOX 1558
EUNICE, NM 88231
FAX TO: (505) 394-2601

Receiving Date: 02/11/03
Reporting Date: 02/12/03
Project Owner: PURE RESOURCES
Project Name: LOVINGTON PADDOCK WELL #21
Project Location: NOT GIVEN

Sampling Date: 02/07 & 02/10/03
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC

LAB NO.	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/Kg)	DRO (C ₁₀ -C ₂₈) (mg/Kg)	BENZENE (mg/Kg)	TOLUENE (mg/Kg)	ETHYL BENZENE (mg/Kg)	TOTAL XYLENES (mg/Kg)
ANALYSIS DATE:		02/11/03	02/11/03	02/11/03	02/11/03	02/11/03	02/11/03
H7469-1	SPRLPW212703BH1-2'	<10.0	1230	0.037	0.101	0.100	0.146
H7469-2	SPRLPW212703BH1-5'	<10.0	91.6	<0.005	0.011	0.056	0.122
H7469-5	SPRLPW212703BH2-2'	<10.0	133	0.024	0.086	0.069	0.099
H7469-6	SPRLPW212703BH2-5'	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H7469-9	SPRLPW212703BH3-2'	<10.0	<10.0	0.016	0.056	0.034	0.053
H7469-11	SPRLPW212703BH4-2'	<10.0	163	0.031	0.053	0.021	0.029
H7469-12	SPRLPW212703BH4-5'	<10.0	<10.0	<0.005	<0.005	<0.005	<0.015
H7469-15	SPRLPW212703BH5-2'	<10.0	<10.0	0.013	0.026	0.015	0.027
Quality Control		834	801	0.107	0.104	0.107	0.306
True Value QC		800	800	0.100	0.100	0.100	0.300
% Recovery		104	100	107	104	107	102
Relative Percent Difference		4.4	2.2	2.2	3.3	2.9	3.3

METHODS: TPH GRO & DRO - EPA SW-846 8015 M; BTEX - SW-846 8260.


Burgess J. A. Cooke, Ph. D.

2/17/03
Date

H7469B.XLS

PLEASE NOTE: Liability and Damages: Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses of samples, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

2111 DE WOOD, KURENO, TX 75005 101 EAST MARIANO, HODGES, RM 00475
(915) 393-7001 Fax (915) 673-7020 (505) 393-2328 Fax (505) 393-2416 Page 1 of 1

Company Name: ENVIRONMENTAL PLUS **BILL T.**

Project Manager: RAY N. SCARFORD P.O. #:

Address: 2100 AVE D Company:

City: ENVI CO State: N.M. Zip: 87423 Attn:

Phone #: 505-394-3481 Fax #: 505-394-2601 Address:

Project #: Project Owner: Pure Resources City:

Project Name: LOVINGTON PADDOCK WELL #21 State: Zip:

Project Location: Phone #:

Sampler Name: Bridley Bl Fax #:

ALSO USE ONLY

Lab I.D.	Sample I.D.	DISCARD OR (COMP.)	MATRIX						PRESERV		SAMPLING		DATE	TIME	TAP	BTEX	CHLORIDE	
			CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER	ACID/BASE	ICE / COOL	OTHER						
4744-1	SPRLP012003BHL-2	G				X					X		2-7-03	8:30	X	X	X	
-2	SPRLP021203BHL-5	G				X					X		2-7-03	8:55	X	X	X	
-3	SPRLP021203BHL-10	G				X					X		2-7-03	9:30	X	X	X	
-4	SPRLP021203BHL-15	G				X					X		2-7-03	10:00	X	X	X	
-5	SPRLP021203BHL-2	G				X					X		2-7-03	10:15	X	X	X	
-6	SPRLP021203BHL-5	G				X					X		2-7-03	10:25	X	X	X	
-7	SPRLP021203BHL-10	G				X					X		2-7-03	11:00	X	X	X	
-8	SPRLP021203BHL-15	G				X					X		2-7-03	11:45	X	X	X	
-9	SPRLP021203BHL-2	G				X					X		2-7-03	12:40	X	X	X	
-10	SPRLP021203BHL-5	G				X					X		2-7-03	1:35	X	X	X	

Lab Note: Labeling and Storage. Cardiac Safety and other materials comply for any other safety hazards found to contain or test, shall be labeled in the manner used by the client for the purpose. All other labeling shall be maintained and any other means whatsoever shall be discarded unless otherwise noted in writing and retained by Cardinal until 30 days after completion of the analysis. In no event shall Cardinal be liable for hazardous or consequential damages, including without limitation, business interruption, loss of use, or loss of profits, caused by delay, in substitution, failure or non-performance arising out of or related to the performance of services furnished by Cardinal, regardless of whether such delay is caused by any of the above stated causes or otherwise.

Sampler Relinquished: Bridley Bl Date: 2/7/03 Time: 1:35 Received By: Bridley Bl

Relinquished By: Bridley Bl Date: 2/11/03 Time: 10:45 Received By: Jim W. Bell

Delivered By: (Circle One) UPS Sample Condition: Cool Intact: Yes No: No No: No

Sampler - UPS - Bus - Other: UPS CHECKED BY: Jim W. Bell (Initials)

Phone Result: Yes No Fax Result: Yes No Add'l Phone #: 394 2601

REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

21104 WOOD, ADDRESS, TX 75003 TELEPHONE, NUMBER, RM. 0000
(915) 670-0100 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

Company Name: ENVIRONMENTAL PLUS **BILL T.**
Project Manager: Pat McLaughlin P.O. #:
Address: 2100 Ave O Company:
City: EVANES State: IL Zip: 82231 Attn:
Phone #: 505-394-3481 Fax #: 505-394-2601 Address:
Project #: Project Owner: Pure Resources City:
Project Name: LOVINGTON Paddock 21 State: Zip:
Project Location: Phone #:
Sampler Name: Brooks, Dan Fax #:

ANALYSIS REQUEST

Lab I.D.	Sample I.D.	IDRAB OR COMP.	# CONTAINERS	MATRIX					PRESERV			SAMPLING		DATE	TIME	TIN	BRAX	CHLORIDE
				GROUNDWATER	WASTEWATER	SOIL	CRUDE OIL	SLUDGE	OTHER	ACID/BASE	ICE/COOL	OTHER						
47464-11	SPRLP023121003BH4-2	G	1			X					X			2-10-03	8:15	X	X	X
-12	SPRLP023121003BH4-5	G	1			X					X			2-10-03	8:30	X	X	X
-13	SPRLP023121003BH4-10	G	1			X					X			2-10-03	8:45	X	X	X
-14	SPRLP023121003BH4-15	G	1			X					X			2-10-03	9:15	X	X	X
-15	SPRLP023121003BH5-2	G	1			X					X			2-10-03	11:30	X	X	X
-16	SPRLP023121003BH5-5	G	1			X					X			2-10-03	12:00	X	X	X
-17	SPRLP023121003BH5-10	G	1			X					X			2-10-03	1:00	X	X	X
-18	SPRLP023121003BH5-15	G	1			X					X			2-10-03	2:00	X	X	X

LABORATORY NOTE: Cards and Damages, Cardinal's policy and client's insurance policy for any additional services listed in contract or work, shall be listed in the contract and by the client for the project. All clients including those for emergency and any other state information shall be provided within 24 hours of receipt of the results. For most and Cardinal to be held for liability or consequential damages, including without limitation, business interruption, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services rendered by Cardinal, regardless of whether claim shall be based upon any of the above stated services or otherwise.

Terms and Conditions: Payment will be charged on all samples upon 30 days past due at the rate of 30% per month from the original date of invoice, and all costs of collection, including attorney's fees.

Sampler Relinquished: Brooks, Dan Date: 2-10-03 Time: 2:00 Received By: Andy Mills
Relinquished By: Andy Mills Date: 2/11/03 Time: 10:45 Received By: Andy Mills
Delivered By: (Circle One) Sample Condition Cool Intact ☐ Yes ☐ No
Sampler - UPS - Bus - Other: ☐ Yes ☐ No

Phone Result: ☐ Yes ☐ No Add'l Phone #: 394-2601
Fax Result: ☐ Yes ☐ No Add'l Fax #: 394-2601
REMARKS:

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476

[illegible]

Attachment IV: New Mexico Office of the State Engineer Water Level Reports

New Mexico Office of the State Engineer
Well Reports and Downloads

Township: Range: Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

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

Well / Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

WATERS Menu

Help

AVERAGE DEPTH OF WATER REPORT 12/12/2002

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet)		
								Min	Max	Avg
L	16S	36E	35				5	10	55	41
L	16S	36E	36				6	40	257	116

Record Count: 11

http://seowaters.ose.state.nm.us/awdProd/awd.html?email_address=enviplus1@aol.com&... 12/12/2002

New Mexico Office of the State Engineer Well Reports and Downloads

Township: Range: Sections:

NAD27 X: Y: Zone: Search Radius:

County: Basin: Number: Suffix:

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

Well / Surface Data Report

Avg Depth to Water Report

Water Column Report

Clear Form

WATERS Menu

Help

AVERAGE DEPTH OF WATER REPORT 12/12/2002

Bsn	Tws	Rng	Sec	Zone	X	Y	Wells	(Depth Water in Feet)		
								Min	Max	Avg
L	17S	36E	01				4	48	48	48
L	17S	36E	02				6	48	90	69

Record Count: 10

AGENCY CODE	521	DOCUMENT NUMBER	04-199-003312
DATE	10/09/03	BUDGET FY	04
		DOCUMENT TOTAL	125.00

STATE OF NEW MEXICO
PAYMENT VOUCHER



EXPIRATION DATE	CONTRACT NUMBER
WARRANT NUMBER	

DO NOT STAPLE BAR CODES

VENDOR CODE	850293348
VENDOR NAME AND REMITTANCE ADDRESS	
CALLAWAY SAFETY EQUIPMENT INC 3229 INDRUSTRIAL DR	
HOBBS	NM88240

AGENCY NAME ENERGY, MINERALS & NAT RES

LN	REFERENCE DOCUMENT				FUND	AGCY	ORG/PRG	APPR UNIT	DIVISION	OBJECT	REVENUE SOURCE	REPT CATG	BALANCE SHEET ACCOUNT	DESCRIPTION	AMOUNT	P/F
	CD	AGCY	DOC NUMBER	ACCT LN												
01					199	521	P588	400	0700	4441				SUPPLIES-FIELD	125.00	
														TOTAL	125.00	

FOR AGENCY USE																
2	PD	521	04-199-051485	02	199	521	0712	403	0700	4441				SUPPLIES-FIELD	125.00	F

For Reimbursements								FOR BOTH TRAVEL AND PURCHASE															
Payee Sign Here: I certify that the above bill is correct and just and that payment therefore has not been received.								AGENCY APPROVAL:															
<input checked="" type="checkbox"/>								I certify that the goods or services were received or rendered, or the travel and related costs performed or incurred, in accordance with all contractual obligations and State (and if applicable Federal) legislation, rules and regulations.															
PREPARED BY:				DATE:				APPROVAL 1:				DATE:				AGENCY AUTHORIZED SIGNATURE:				DATE:			
																<input checked="" type="checkbox"/>							