REMEDIATION PLAN C-103

Safety & Environmental Solutions, Inc.

Remediation Final Report

Texas-New Mexico Pipeline Co.
Cross Timbers
TNM - 49 - 95

JUL 27 1996
HOBBS OFFICE

RECEIVED
JUL 18 1996
Environmental Bureau
Oil Conservation Division

703 E. Clinton Suite 103 Hobbs, NM 88240 (505) 397-0510

Submit 3 Copies to Appropriate District Office

DISTRICT I
P.O. Box 1980, Hobbs, NM 88240

DISTRICT II
P.O. Drawer DD, Artesia, NM 88210

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

310 Old Santa Fe Trail, Room 206
Santa Fe, New Mexico 87503

Form C-103
Revised 1-1-89

WELL API NO.

5. Indicate Type of Lease STATE ☐ FEE ☐

6. State Oil & Gas Lease No.

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

7. Lease Name or Unit Agreement Name

1. Type of Well:
OIL WELL ☐ GAS WELL ☐ OTHER Oil Transmission Pipeline

2. Name of Operator
Texas-New Mexico Pipeline Co.

8. Well No.

3. Address of Operator
P.O. Box 1027, Lovington, NM 88260

9. Pool name or Wildcat

4. Well Location
Unit Letter _____ : _____ Feet From The _____ Line and _____ Feet From The _____ Line

NW/4 NW/4 Section 33 Township 17S Range 33E NMPM Lea County

10. Elevation (Show whether DF, RKB, RT, GR, etc.)

11. Check Appropriate Box to Indicate Nature of Notice, Report, or Other Data

NOTICE OF INTENTION TO:				SUBSEQUENT REPORT OF:			
PERFORM REMEDIAL WORK	☐	PLUG AND ABANDON	☐	REMEDIAL WORK	☒	ALTERING CASING	☐
TEMPORARILY ABANDON	☐	CHANGE PLANS	☐	COMMENCE DRILLING OPNS.	☐	PLUG AND ABANDONMENT	☐
PULL OR ALTER CASING	☐			CASING TEST AND CEMENT JOB	☐		
OTHER:	☐			OTHER:			☐

12. Describe Proposed or Completed Operations (*Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work*) SEE RULE 1103.

Addendum to Closure report

Re: TNM-49-95

JUN 27 1996
OCD HOBBS OFFICE

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE Ernest J Richarte TITLE Mech/Elec Tech. II DATE 6-27-96

TYPE OR PRINT NAME Ernest J. Richarte TELEPHONE NO. (505) 396-3341

(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

Safety & Environmental Solutions, Inc.

June 25, 1996

Closure Request
Texas-New Mexico Pipeline Company
Cross Timbers 4" Pipeline Leak - Below the Caprock
(Company Reference # TNM - 49-95)

Purpose

The purpose of this document is to request closure on the remediation resulting from the liquid spill located at the nw/4 of the nw/4 sec 33-Ts17s-R33e in Lea County, New Mexico.

Background

Produced fluids were released from the storage tank connected to the Cross-Timbers 4" pipeline due to a failed check valve, which caused overflow of the storage tank onto the surrounding area.

Action Plan

The heavily affected soil was excavated and placed on the side on plastic. The area of the spill was composite tested and the TPH (Total Petroleum Hydrocarbons) level was 20,000 ppm. The surrounding area of old contamination was composite tested and the the TPH level was 7500 ppm. The spoils piles were composite tested and had a TPH level of 12,500 ppm. The spoils piles were remediated with affected soil onsite, and blended to within New Mexico Oil Conservation guidelines for remediation of leaks, spills, and releases. The excavation was backfilled and the site restored to original grade. This blending of the residual affected soil::

1. Aided in the aeration of the residual affected soil.

2. Reduced the TPH to a level unlikely to move downward and contaminate additional soils.

3. Added indigenous microbes to the residual affected soil in order to biodegrade the residual hydrocarbons in a shorter length of time.

The excavation to obtain additional media was performed with a bulldozer, backhoe, and a grader, with a minimum of disturbance to the existing location. Safety & Environmental Solutions, Inc. has verified that the extent of contamination from the leak location has been determined by performing THP field tests using the Hanby soil extraction method conducted on soil samples from the area.

Soil samples were obtained from the bottom and sides of the excavation as the remediation was performed. Once acceptable levels were achieved, the soil was be folded back into the excavation, blending it to assure replacement is wihin New Mexico Oil Conservation Division guidelines for leaks, spills, and releases. TPH field tests were conducted on the blended soil. These tests results will verify that the soil was minimally affected (New Mexico Oil Conservation Divisions guidelines for leaks, spills, and release), and this document requests closure of the site.

Site Safety

There are a number of health and safety concerns associated with the excavation of trenches at these types of sites. Compliance with the following OSHA standards were required as necessary at the site:

- Trenching and Shoring - 29 CFR 1926.650 - 653
- Hazwoper/Atmospheric Testing - 29 CFR 1910.120
- Respiratory Protection - 29 CFR 1910.134
- Personal Protective Equipment - 29 CFR 1910.132 - 140

This general type of plan has been verbally approved by the Bureau of Land Management and the Oil Conservation Division in Lea County.

Standard Operating Procedures for Auger Sampling (if necessary)

Standard operating procedures (SOPs) were obtained from the Environmental Protection Agency, 1984, Characterization of Hazardous Waste Sites - A Methods Manual:Vol II. Available sampling methods. EPA/600/4-84-076.

This system consists of an auger bit, a series of drill rods, and a "T" handle. The auger bit is used to bore a hole to the desired sampling depth. Since this soil is expected to be of various types, the samples will be taken directly from the auger itself at the specified depths.

Procedure for Use

1. Clear the area to be sampled of any surface debris.

2. Begin drilling, periodically removing accumulated soils. This prevents accidentally brushing loose material back down the borehole when removing the auger or adding drill rods.
3. After reaching desired depth, slowly and carefully remove the auger, and collect sample from the auger.

4. Place sample in sample container. Check that a Teflon liner is present in the cap if required. Secure the cap tightly.

5. Label the sample container with appropriate sample tag. Complete all chain-of-custody forms and record in the field log book.

6. Perform field test or alternatively refrigerate and transport to laboratory.

7. Decontaminate equipment after use and between samples.

Standard Operating Procedures for Excavation Sampling

1. Collect undisturbed sample from the side or bottom of the excavation at the desired depth.

2. Follow steps 4-7 in the preceding instructions.

Standard Operating Procedures for Spill Cleanup

Standard Operating Procedures (SOP's) were obtained from the New Mexico Oil Conservation Division **"Guidelines for Remediation of Leaks, Spills and Releases"** *New Mexico Oil Conservation Division* - August 13, 1993.

The source of the leak was stopped by repairing the failed check valve which caused the storage tank at the tank battery to overflow. Containment was performed by utilizing a vacuum truck to recover all free liquids.

The saturated soils present at the leak site were excavated, and placed on plastic beside the spill location. These soils were remediated along with any residual affected soils onsite.

Risk Assessment

The depth to ground water at this location is approximately 90 feet. This approximation is based on the drill log of the pumping well on location (U.S. Minerals Well No. 2 Section 33, Township 17 South Range 33 East, drilled on July 22, 1953). The water wells drilled in this range and township vary in depth from 150 to 245 feet. (Ground-Water Report #6 - **Geology and Ground-Water Conditions in Southern Lea County, New Mexico** - *United States Geological Survey*) The nearest water well is located well over two miles away. Containment was accomplished within 310 feet of the original leak site, and there is no appreciable risk of contamination of the aquifer from ingress through the bore of the nearest water well.The nearest surface water is located greater than 10 miles away. There is no risk of affecting this surface water as a result of this leak.

The soil type beneath the leak area is Maljamar fine sands with some Pyote fine sands, soil profile PU in the *USDA Soil Survey for Lea County, New Mexico*. At 0-30 inches, this is light brown fine sand, brown when moist; single grain; loose when dry or moist, nonsticky and nonplastic when wet; many fine roots; neutral (pH 6.7), noncalcareous; clear boundary. At 30-40 inches this soil is fine sandy loam, strong brown when moist; weak, medium, prismatic structure; soft, very friable when moist, slightly sticky and slightly plastic when wet; many fine roots; clay coatings on sand grains; common organic stains; neutral (pH 6.9), noncalcareous; clear boundary. At 40-48 inches this soil is light brown fine sandy loam, brown when moist, moderate, medium, prismatic and weak, medium, subangular blocky structure. Soft, very friable when moist, slightly sticky and slightly plastic when wet; many fine roots; clay coatings on sand grains; common organic stains; neutral (pH 7.2), noncalcareous; clear boundary. At 48-60 inches, pink fine sandy loam, light brown when moist; weak, fine granular structure; slightly hard, friable when moist, slightly sticky and slightly plastic when wet; common fine roots; neutral (pH 7.3), noncalcareous.

This leak occurred on a tank battery location which was already highly contaminated. The plume of this release will be affected by this prior contamination, and background TPH and BTEX levels in the area may be extremely high.

Determination of whether this leak site involves RCRA hazardous waste was accomplished in the following manner. Texas-New Mexico Pipeline Co., collected a composite sample of the original excavations (that is, the excavations made to repair the check valve and collect the free liquid) spoils piles and submitted them to a third party laboratory for TCLP metals testing. (See Figure 7). Results indicate that the waste is not hazardous per TCLP metals. In addition,

SES Inc. collected a composite sample from the same spoils piles and submitted them to a third party laboratory to determine if the sample was hazardous per ~~characteristic of~~ ignitability. (See Figure 6 and attached chain of custody) The results determined that the waste was non-hazardous per characteristic of ignitability.

In summary, the risk posed to domestic or private groundwater supplies, surface water, and the environment is minimal when following the work plan outlined. The remediation of the affected soil to within New Mexico Oil Conservation Divisions guidelines for leaks, spills, and releases should insure that detrimental environmental effects are minimized.

Work Performed

Prior to March 8, 1996, pictures were taken of the location. (See Figures A, B, &C for appearance of the site before work was begun.)

On March 8, 1996, work was begun on the remediation. One-call was notified to alert potentially affected parties of excavation work in their area. One-call reference number was 96030808010030. Excavation was begun on the west end of the site. At 10:00 am, west side of the affected soil was fully excavated. Field tests to verify the extent of the contamination were performed. The TPH level was 50 ppm by Hanby soil extraction. A sample was collected for submission to a third party laboratory to verify that all affected soil had been excavated. (See Figure 1 with attached chain of custody). Laboratory results showed 343 ppm TPH. Excavation was begun near the tank battery, on the south side. Suspected historical contamination was discovered, and operations were suspended. (See Figures D & E).

On March 11, 1996, excavation was continued on the east side of the affected area, near the battery. Meanwhile soil was being blended and replaced in the excavation on the west side. Three lifts were replaced in the west side excavation, showing field test TPH results of 750 ppm, 250 ppm, and 250 ppm respectively. Historical contamination was confirmed on the east side of the affected area, south of the tank battery. Texas-New Mexico Pipeline Company supervisory personnel (Mr. Bill Chapman) and Oil Conservation Division personnel (Mr. Wayne Price) were consulted to determine the proper course of action for dealing with the historical contamination. It was decided that Photo-Ionization Detection (PID) readings would be taken to determine the extent of new affected soil. (See Figures 2 & 3).

Photo-ionization detector (PID) tests were run as the work progressed to differentiate historical contamination from "new" contamination as a result of the recent leak. (See Figure F) All soil blended as a result of the "new" leak was tested with the PID, and remediated down to below 100 ppm volatiles. ~~As noted in the field~~ notes, the first PID reading taken on 3/11/96 on the east side of the excavation was 175 ppm. Excavation was continued until new

BTEX - OK N

contamination was removed and the next PID reading was 12.2 ppm. The south end slope of the excavation was tested with the PID and showed a result of 8 ppm when excavation was complete. The bottom of the excavation nearest the "old pit" area was tested and showed a PID test result of 42.5 ppm. The area just south of the tank battery was carefully excavated with a backhoe to completely remove any soil affected by the leak. (See Figure G) As the excavating progressed, several pictures were taken to illustrate the presence of historical contamination. (See Figures H & I).

Excavation and blending continued on March 12th and 13th. Pictorial documentation of progress is included in this report. (See Figure J) A composite sample of the east end was collected for third party laboratory verification of completion of removal of affected soil. Laboratory test results were 957 TPH. (See Figure 4). On March 14th, replacement of the blended soil was begun. Three lifts were separately composite tested before being re-introduced into the east side excavation. Field TPH test results were 750 ppm, 250 ppm, and 750 ppm respectively.

On March 15th, final blending was completed. Composite field tests yielded a result of 500 ppm TPH. Soil was replaced, and composite testing of the entire location was done. The field test results on final composite were 500 ppm TPH. A composite sample was collected for third party laboratory verification of completion. Laboratory results were 1440 ppm TPH. (See Figure 5). The location was contoured to original grade, completion pictures taken, and work was completed on March 15, 1996. (See Figures K, L, & M).

To verify that in situ remediation is having the desired affect, a new composite sample was taken on 6/14/96 and submitted for third party analysis. The results showed 875 ppm TPH, well below the 1000 ppm TPH specified in the OCD guidelines. (See Figure 10 and accompanying chain of custody).

OK JS

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240
PHONE (505) 326-4669 • 118 S. COMMERCIAL AVE. • FARMINGTON, NM 87401

TOTAL PETROLEUM HYDROCARBONS

Company	:	Safety Environmental Solution, Inc.		Date	: 03/13/96
Address	:	PO Box 1613		Lab #	: H2450
City, State	:	Hobbs, NM 88240			
Project Name	:	TNMP Cross Timbers			
Location	:	West Side Bottom & Sides			
Sampled by	:	DW	Date:	03/08/96	
Analyzed by	:	MG	Date:	03/08/96	Time: 13:48
Sample Type	:	soil	Sample Condition:	intact	Units: mg/kg

****

Sample#	FIELD CODE	TRPHC
1	West Side Bottom & Side	343
	QC Recovery	147.0
	QC Spike	160.0
	Accuracy	91.0%

Methods - INFRARED SPECTROSCOPY
- EPA SW-846, 418.1) 3510, 3540 or 8015 M

Mitch Irvin

3/12/96
Date

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Figure 1

H2450

ARDINAL LABORATORIES
PHONE: (505) 393-2326 • 101 E. MARLAND • HOBBS, NEW MEXICO 88240

Chain of Custody Record

Project I.D. INMP Cross Timbers
Project Location West Side Bottom + Sides
Sampled By Dee Whitley
Client Name Safety + Environmental Sol.
Address 203 E. Clinton St 103
Telephone (505) 397-0510

Sample Number	Date	Time	Composite	Grab	Sample Location	Number of Containers	Analysis Required: TPH							Remarks (Type sample, preservation, etc.)
1	3/8	1:30	X		soil	1	✓							soil - sealed in jar + iced

Released by: (Signature)	Date	Time	Received by: (Signature)	Remarks:	Shipped/Delivered
Dee Whitley	3-8-16	1:30pm			
Released by: (Signature)	Date	Time	Received by: (Signature)		

SAFETY & ENVR SOL. Inc
P.O. Box 1613
Hobbs NM 88241

NMOCD INTER-OFFICE CORRESPONDENCE

TO: File of TNMPL TNM 49-95

From: Wayne Price-Environmental Engineer

Date: March 11, 1996 10:00 am

Reference: Texas-New Mexico Pipeline Co.(TNMPL)
TNM-49-95 Cross Timbers Leak site.
nw/4 nw/4 sec 33-Ts 17s-R33e

Subject: Field Inspection requested by TNMPL
On-site personnel: Billy Chapman- (TNMPL), Dyke Browning-(S&ESI),Wayne Price & Buddy Hill-(NMOCD).

Comments:

TNMPL is in the process of remediating a recent crude oil spill at the above referenced location. Due to the fact that there is evidence of older historical waste left on site, they requested permission to use an on site field PID instrument (screening for BTEX Volitles) to differentiate between the older material and the more recent crude oil.

They are going to remediated the more recent material to our NMOCD guideline spec's. per the submitted work plan.

The older material is spread out over an area approx. 100'x50' just south of the Cross Timbers Tank Battery (see attached sketch). The material appears to be old oily sludge i.e. BS&W from crude oil operations.

It presently is exposed from the surface down to 2-3 ft deep in one location. The vertical or horizontal extent is not totally known at this time or the levels of concentration of the contamination. The original source of the contamination is also not known at this time.

TNMPL consultant will take field pictures and submit to NMOCD.

cc: Jerry Sexton-NMOCD District I Supervisor
Gary Wink-NMOCD District I Field Rep. II
Buddy Hill-NMOCD Field Insp. I
Ernest J. Richarte-TNMPL P.O. box 1027
Lovington, NM 88260-1027

attachments-1 sketch

Figure 2

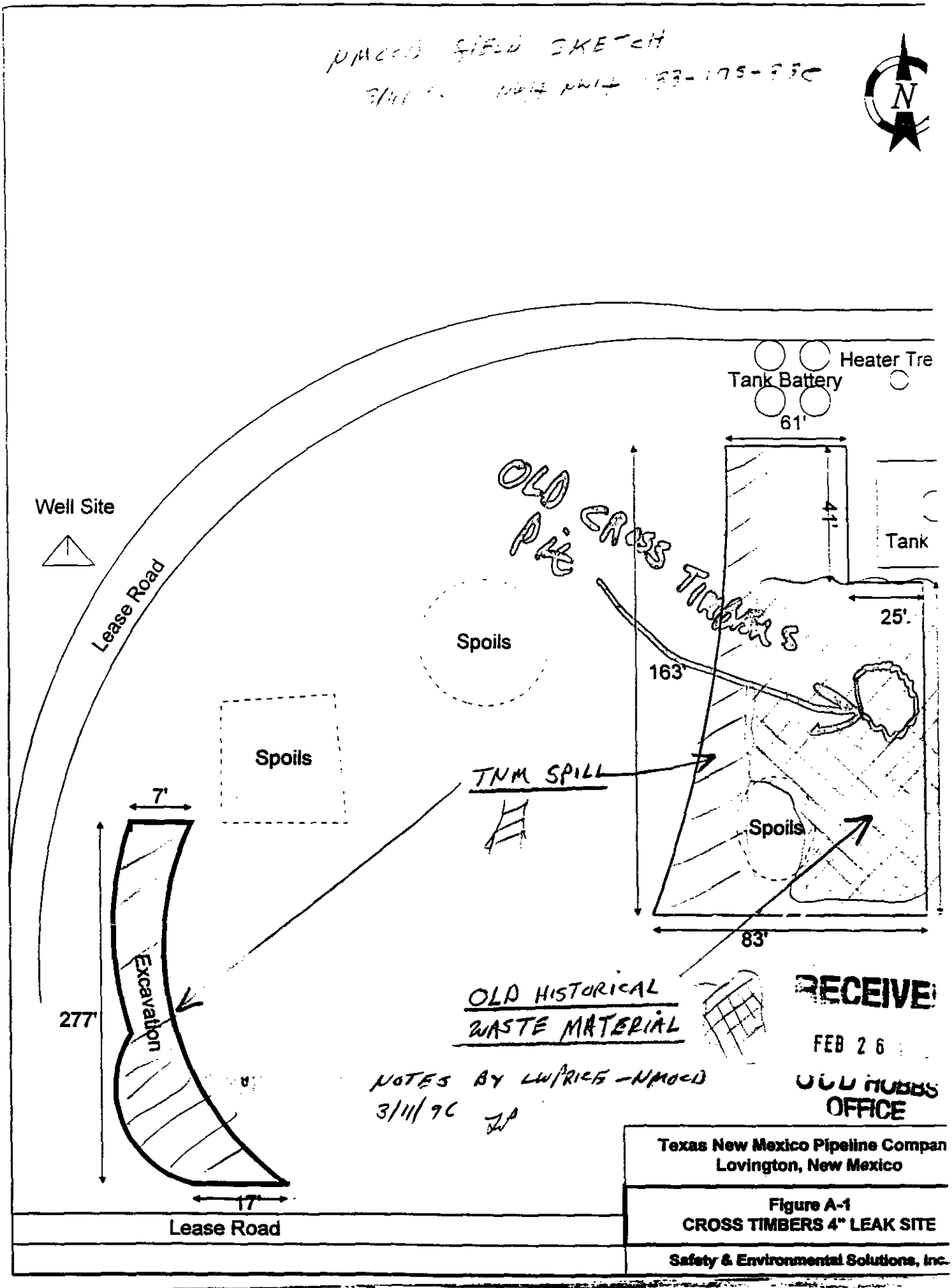
UNOCAL FIELD SKETCH
N
Heater Tre
Tank Battery
61'
OLD PIPE CROSS TIMBERS
41'
Tank
Well Site
Lease Road
Spoils
25'
163'
Spoils
TNM SPILL
7'
Spoils
277'
Excavation
17'
OLD HISTORICAL WASTE MATERIAL
83'
NOTES BY LW/RICE - NMOCD
3/11/96
RECEIVE
FEB 2 6
OFFICE
Lease Road
Texas New Mexico Pipeline Compan
Lovington, New Mexico
Figure A-1
CROSS TIMBERS 4" LEAK SITE
Safety & Environmental Solutions, Inc.

Figure 3

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240
PHONE (505) 326-4669 • 118 S. COMMERCIAL AVE. • FARMINGTON, NM 87401

TOTAL PETROLEUM HYDROCARBONS

Company	:	Safety Environmental Solutions		Date	: 03/14/96
Address	:	PO Box 1613		Lab #	: H2452
City, State	:	Hobbs, New Mexico 88240			
Project Name	:	TNMP Cross Timbers			
Location	:	East Excavation			
Sampled by	:	DW	Date:	03/13/96	
Analyzed by	:	MG	Date:	03/14/96	
Sample Type	:	soil	Sample Condition:	intact	Units: mg/kg

****

Sample#	FIELD CODE	TRPHC
1	East Excavation Bottom -West and South	957
	QC Recovery	145.0
	QC Spike	160.0
	Accuracy	91.0%

Methods - INFRARED SPECTROSCOPY
- EPA SW-846; (418.1) 3510, 3540 or 8015 M

Manuel Garbalena

3/15/96
Date

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Figure 4

H2452

ARDINAL LABORATORIES
PHONE: (505) 393-2326 • 101 E. MARLAND • HOBBS, NEW MEXICO 88240

Chain of Custody Record

Project I.D. INMP Cross Timbers
Project Location East Excavation
Sampled By Dee Whatley
Client Name SESI
Address 703 E Clinton St 103
Telephone (505) 397-0510

Sample Number	Date	Time	Composite	Grab	Sample Location	Number of Containers	Analysis Required: TPH	Remarks (Type sample, preservation, etc.)
					EAST EXCAVATION			
1	3/13	14.00	X		Bottom - West + South	1	X	Sealed in jar & iced FAX + Bill

Released by: (Signature)	Date	Time	Received by: (Signature)	Remarks:	Shipped/Delivered
Dee Whatley	3-13	2:40pm	Kay Maddox		
Released by: (Signature)	Date	Time	Received by: (Signature)		

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240
PHONE (505) 326-4669 • 118 S. COMMERCIAL AVE. • FARMINGTON, NM 87401

ANALYTICAL RESULTS FOR
SESI
ATTN: DEE WHATLEY
703 E. CLINTON , STE 103
HOBBS, NM 88240
FAX TO: 505-397-0510

Receiving Date: 03/15/96
Reporting Date: e:03/21/96
Project Number: NOT GIVEN
Project Name: TNPL
Project Location: CROSS TIMBERS

Analysis Date: 3/21/96
Sampling Date: 03/15/96
Sample Type: SOIL
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

LAB NUMBER	SAMPLE ID	TPH (ppm)
H2457-1		1440.0
Quality Control		401.0
True Value QC		428.0
% Accuracy		93.7
Relative Percent Difference		0.9

METHOD: EPA (418.1,) 3510, 3540, or 3550; Infared Spectroscopy

Burgess J. A. Cooke, Ph. D.

3/22/96
Date

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H2457-XLS

Figure 5

2457

ARDINAL LABORATORIES
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Chain of Custody Record

Project I.D. INPL
Project Location Cross Timbers
Sampled By Joe Whatley
Client Name SESI
Address 703 E Clinton St 103
Telephone (505) 397-0510

Sample Number	Date	Time	Composite	Grab	Sample Location	Number of Containers	Analysis Required: TPH (Soil)	Remarks (Type sample, preservation, etc.)
1	3/15		X		Entire Location Final (Top)		X	Sealed & Iced

Released by: (Signature)	Date	Time	Received by: (Signature)	Remarks:	Shipped/Delivered
Joe Whatley	3/15	12:00	Kay Mead		
Released by: (Signature)	Date	Time	Received by: (Signature)		

CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603
PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240
PHONE (505) 326-4669 • 118 S. COMMERCIAL AVE. • FARMINGTON, NM 87401

FINAL ANALYSIS REPORT

Company:	Safety Environmental Solutions	Date:	03/05/96
Address:	703 E. Clinton St. 103	Lab #:	H2441
City/St:	Hobbs, New Mexico 88240		
Project ID:	Texas New Mexico Pipeline Co.		
Location:	Cross Timbers		
Sampled by:	DW	Date:	03/04/96
Sample Type:	soil	Sample Condition:	intact

Sample ID #1: Cross Timbers

HAZARDOUS WASTE CHARACTERIZATION

PARAMETER	RESULT 1	UNITS
Ignitability (Pensky-Martens Closed Cup)	>140	F

Quality Control	77.78
True Value QC	77.7--81.3
% Accuracy	n/r
Relative % Difference	n/r

2 HERE IS BENZENE ?
2/26/96 Lwp
work plan

METHODS: HWC - EPA SW 846-7.3, 7.2, 1010

Manuel Garbalena

3/5/96
Date

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Figure 6

H2447

ARDINAL LABORATORIES
PHONE: (505) 393-2326 • 101 E. MARLAND • HOBBS, NEW MEXICO 88240

Chain of Custody Record

Project I.D. Texas New Mexico Pipeline Co
Project Location Cross Timbers
Sampled By Dee Wheeler
Client Name S.E.S.I. PO Box 1613
Address 703 E. Clinton St. 103
Telephone (505) 397-0510

Sample Number	Date	Time	Composite	Grab	Sample Location	Number of Containers	Analysis Required: Hydrocarbon only						Remarks (Type sample, preservation, etc.)
1	3/4		X		Cross Timber	1	X						Sealed & iced for transport Fax to Bill Report SES

Released by: (Signature)	Date	Time	Received by: (Signature)
Dee Wheeler	3/4	9:10	Kay Bond
Released by: (Signature)	Date	Time	Received by: (Signature)

Remarks:

Shipped/Delivered

Order # MS-11-070
12/08/95 15:55
Client: Texas New Mexico Pipe Line Co

TEST RESULTS BY SAMPLE

Sample Description: Cross Timbers 4",TNM 49-95 Lab No: 01A
Test Description: TCLP METALS Category: SW-846 Test Code: TCLP_M

Element	Result	Regulatory Limit	Units	Date Started	Analyst	Method
TCLP METALS						
ARSENIC	< 0.1	5.0	mg/L	11/27/95	MLC	SW-846, 7061
BARIUM	< 5.0	100	mg/L	11/27/95	MLC	SW-846, 7080
CADMIUM	< 0.1	1.0	mg/L	11/27/95	MLC	SW-846, 7130
CHROMIUM	< 0.2	5.0	mg/L	11/27/95	MLC	SW-846, 7190
LEAD	< 0.5	5.0	mg/L	11/27/95	MLC	SW-846, 7420
MERCURY	< 0.01	0.2	mg/L	11/28/95	MLC	SW-846, 7470
SELENIUM	< 0.1	1.0	mg/L	12/06/95	MLC	SW-846, 7741
SILVER	< 0.2	5.0	mg/L	11/27/95	MLC	SW-846, 7760

Figure 7

Analytical Request Record

MAXIM

ECHNOLOGIES, INC

facts', 505-396-3341

1703 West Industrial Avenue, Midland, Texas 79701 (915)683-3349

eport Information		Invoice Information	
Company	Texas New Mexico Pl Lovington Attn: Ernest Richarte	Company	TXNMPL Attn: Eddie Grijalva
Address		Address	
City	State Zip Code	City	San Angelo State Zip Code
Phone No.	( ) Fax No. ( )	Phone No.	( ) Fax No. ( )

Sample Identification	Analysis Requested
Cross Timbers 4", TNM 49-95	Metals
Ceder Lake 6", TNM 64-95	
8" Mainline	

Delivered by: (Printed Name)	Date	Received by (Signature)	Date	Laboratory No.
(Signature)	Time		11.17.96 Time	

3-8-96
TNMP Cross Timbers
8:00AM One Call its Cold
1-800-321-ALERT
Ref. # 960308080100 30
Started diggins on Far west end
of site To Find Bottom
10:00 AM 100K composite sample
of sides & Bottom on west end
Field Test results were as Follows
50 ppm TPH done with Hanby
Field Test Kit
10:20AM Moved Dozer To East
Side
12:45 Shut Down

West End Dept 3'-4'
For Entire Excavation

Figure 8

2-38RTM

3-11-96

9:00 AM Met w/ TRM & OCD
To Determine Contamination
10:00 AM Blending contamination
on West end
10:30 AM Composite of 1st
Blend Read 750 ppm TPH
Composite of 2nd Blend
Read 250 ppm TPH
Composit of 3rd Blend Read
250 ppm TPH
11:00 AM Going Back in The
Hole on West end.

1:27 pm Pictures Taken
on East Side of Site
By Tank Battery
1 N-S w Path of Spill
2 N-S Contact w/old contamination
3 N-S Old Pit
4 N-S Old Pit
5 Look N Toward Battery
Before Remidiation
1:39pm PID Reading @ area of
Spill @ East side 125 ppm — side
Pit PID Reading 8 ppm South end slope

2:13 PM Pic.#6 Bottom where PID Test was Run (42.5 PPM) Bottom

Pic.#7 PID Test Run on Side (12.2) PPM side

3:30 Shut Down

7-12-96

8:00 AM Start of a wonderful day

Grader w/ Isabel Blending

Dozer w/ Johnny moving Dirt

Backhoe w/ Isreal digging out contamination on South side of Battery

Pic.#8 where Backhoe is digging around Battery Looking E-W

Pic.#9 where Backhoe is digging Looking S-N

Pic.#10 North West Corner of East end

Pic.#11 Middle of Excavation on East End (N)

Pic.#12 North East Corner of Excavation @ East End

1:15 Pi
West-
End
PI
PID
3:00 P

8:00 A.
Both
Comp
From
Spoil
Test
Pic. #13
West
8:30 AM
of Ex
Locatio
and
Test
Pic. #14
P.C. #15
P.C. #16
P.C. #17
P.C. #18

1-38 RTM

1:15pm Composite Sample of West-N-S Sides & Bottom of East End 750ppm TPH 2 Tests
PID on East Side 42.5ppm
PID on Bottom 122ppm
3:00pm Shut down

3-13-96
8:00Am Grader & Dozer Both Blending
Composite Sample Taken From Area where Far West Spoils Pile was Bladed
Test results were 500 ppm TPH
Pic. #13 From N to S where west Spoils Pile was Bladed
8:30Am Composite Sample of Excavation @ East end of Location Taken From The Bottom and West Wall & South Wall
Test Results were 250 ppm TPH
Pic. #14 North wall
Pic. #15 East Wall
Pic. #16 South Wall
Pic. #17 West wall
Pic. #18 Bottom
Depth 10'-12'
East Excavation

9:00AM Blending
Total Test So far
TPH 11
PID 6
10:00AM Blending
11:00AM Blending
12:00PM Lunch
12:30PM Blending

3:00PM Shut down

3-14-96
8:00 AM Blending

8:30 AM Composite Sample Taken from Batch #1 of Blended Soil Test results were 250 ppm TPH 2 Test

8:45 AM Composite Sample Taken from Batch #2 of Blended Soil Test results were 250 ppm TPH 2 Test

9:00 AM
Taken
Blended
were

10:00 AM
Excavat
3 Blen

1:00 pm
Now Bl
of Co

3:00 pm

3

8:00 AM
Batch
9:00 AM
Taken F
Test Resu
10:00 AM
on Loca

9:00 AM Composite Sample Taken from Batch #3 of Blended Soil, Test results were 750 ppm TPH

10:00 AM start Filling in East Excavation w/ Soil From Those 3 Blend Batches

1:00 pm Excavation Filled Now Blending Final Batch of Contaminated Soil

3:00 pm Shut Down

3-15-96

8:00 AM Still Blending on Final Batch

9:00 AM Composite sample Taken From Blend Batch #4 Test Results were 500 ppm TPH

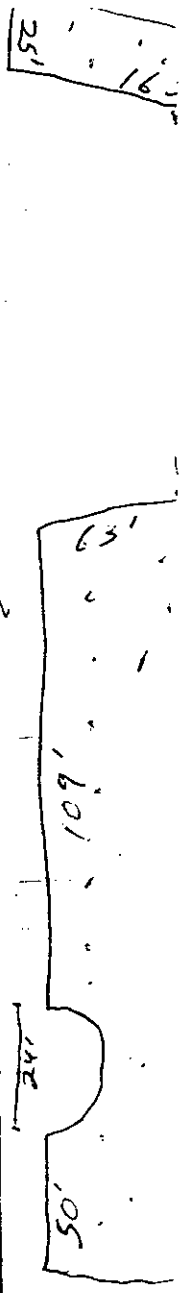
10:00 AM Putting Finishing Touches on Location Smoothing

Sample #1 of Blended ts were Test

Sample #2 of Blended were 2 Test

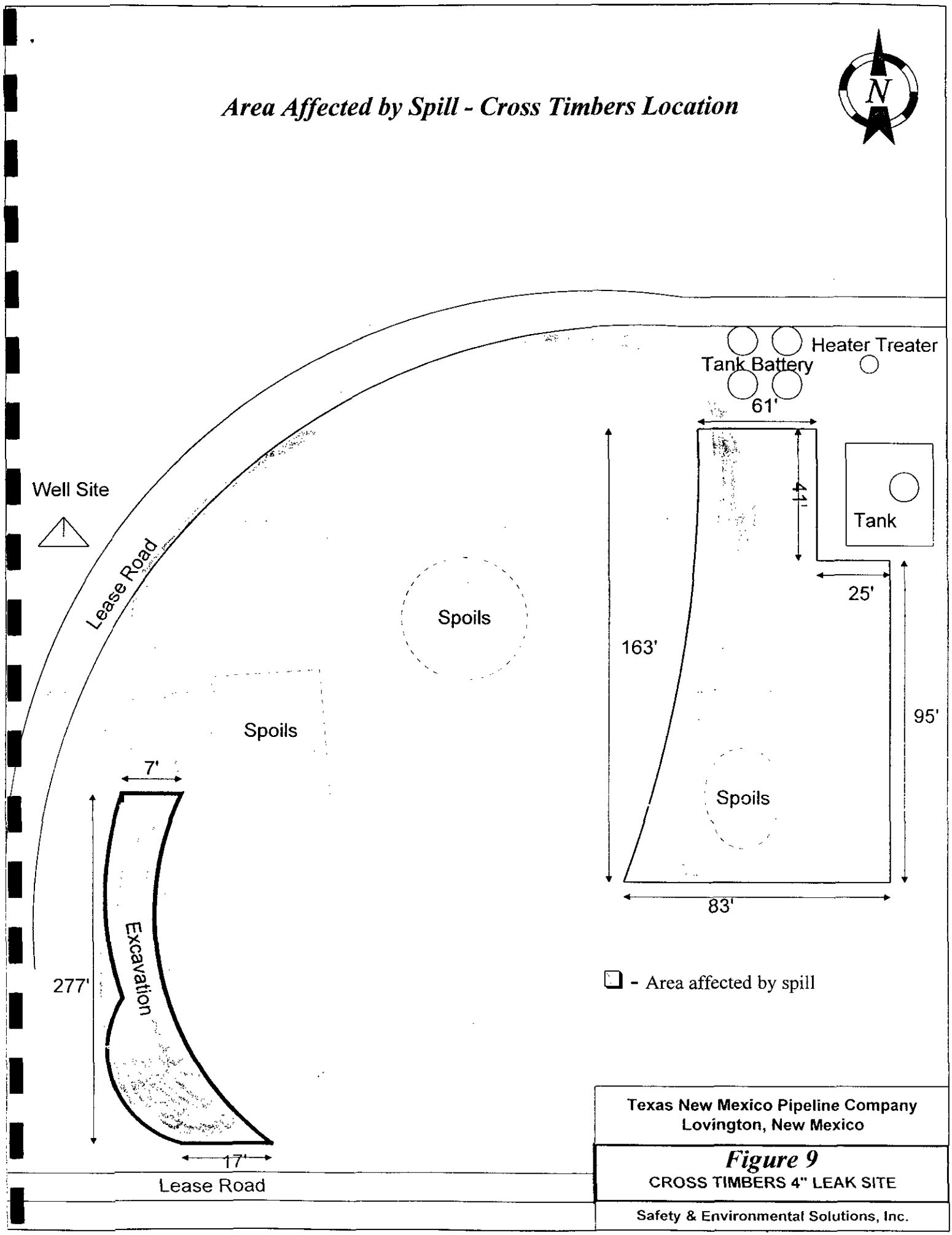
Pic. #19 South end of W sec.
Looking N-S
Pic. #20 North end of W sec.
Looking S-N
Pic. #21 Middle Sec.
Looking W-E
Pic. #22 West Middle Sec.
Looking N-S
Pic. #23 ~~Middle~~ Middle Sec.
Looking N-S
Pic. #24 East Middle Sec.
Looking N-S
Pic. #25 South end of E Sec.
Looking N-S
Pic. #26 Middle of E Sec.
Looking E-W
Pic. #27 North end of E. Sec.
Looking S-N

Picture of existing Contamination
11:00 AM Final Composite Taken
From Dots on Next page
Test results were 500 ppm TPH
also soil Sample was taken
To Cardinal labs




Cross Timbers
Finished Product
270'
25'
165'
65'
119'
188'
63'
109'
289'
24'
50'
N
W Sec.
N Sec.
Sec.
Sec.
Sec.
E Sec.
Sec.
Sec.
Contamination
Taken
PPM TPH
Taken

Area Affected by Spill - Cross Timbers Location



Texas New Mexico Pipeline Company
Lovington, New Mexico

Figure 9
CROSS TIMBERS 4" LEAK SITE

Safety & Environmental Solutions, Inc.

WESTERN ENVIRONMENTAL CONSULTANTS
131 N. Main
Denver City, Texas 79323
(806) 592-2525

SOIL ANALYSIS REPORT

DATE: 6\24\96
CLIENT: Tex-Mex Pipline
SUPERVISOR: A. HODGE
Sample Matrix: Soil

FACILITY: Cross-Timbers
Test Method: EPA 418.1
Order No.: TNM-49-95

	TPH		DEPTH	LOCATION
SAMPLE NO. 1:	885	PPM	0-6"	Bottom of site
SAMPLE NO. 2:		PPM		
SAMPLE NO. 3:		PPM		
SAMPLE NO. 4:		PPM		
SAMPLE NO. 5:		PPM		
SAMPLE NO. 6:		PPM		
SAMPLE NO. 7:		PPM		
SAMPLE NO. 8:		PPM		
SAMPLE NO. 9:		PPM		
SAMPLE NO. 10:		PPM		

COMMENTS: This sample was a composite sample taken from the bottom of the site.

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Phone #: (505) 397-0510

FAX #: (505) 393-4388

Company Name & Address:
Safety & Environmental Solutions, Inc.

Project #: TNM-49-95

Project Name: Cross Timbers

Project Location: Maljamar

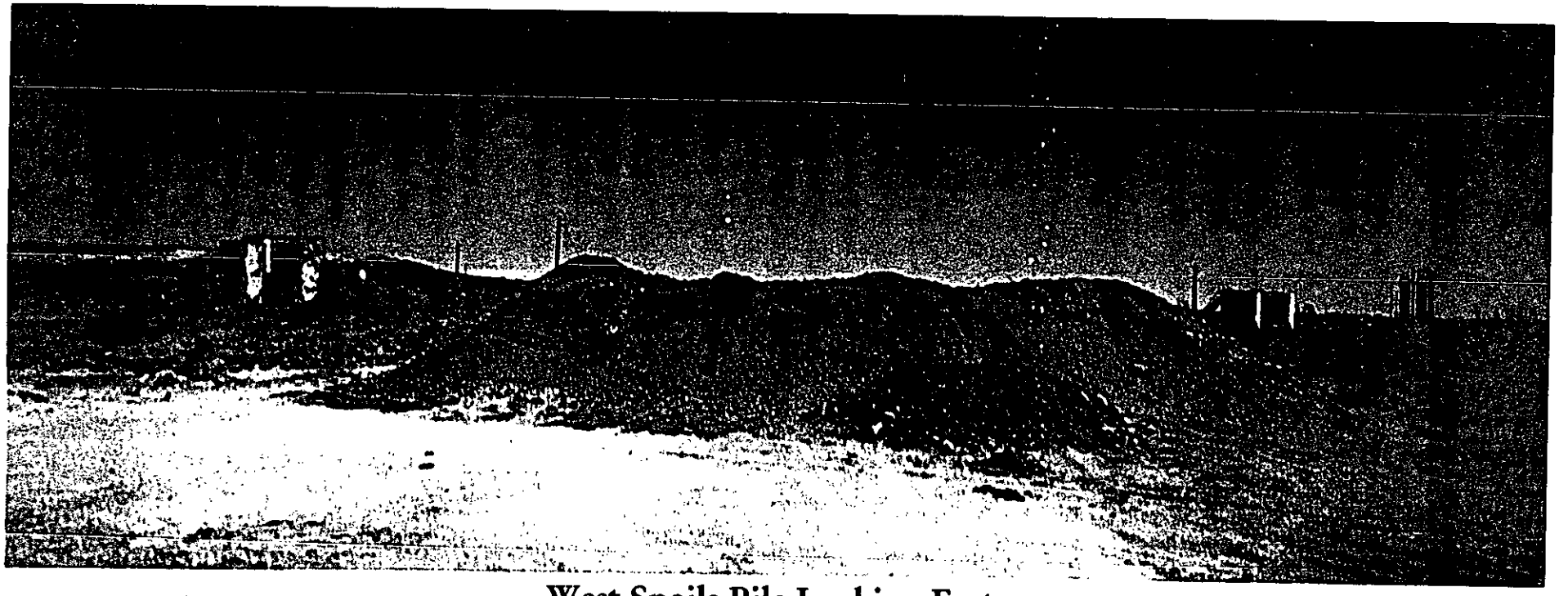
Sampler Signature:

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume/Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	OTHER	PRESERVATIVE METHOD: HCL	HNO3	ICE	NONE	OTHER	SAMPLING: DATE	TIME	ANALYSIS REQUEST: BTEX 8120/5030	TPH 418.1	TCLP Metals Ag As Ba Cd Cr Pb Hg Se	Total Metals Ag As Ba Cd Cr Pb Hg Se	TCLP Volatiles	TCLP Semi Volatiles	TDS	RCI
	Composite Soil				X						X			6/24	12:00		X						

Relinquished by:	Date:	Times:	Received by:
	6/24/96	2:15 pm	
Relinquished by:	Date:	Times:	Received by:
Relinquished by:	Date:	Times:	Received by Laboratory:

REMARKS

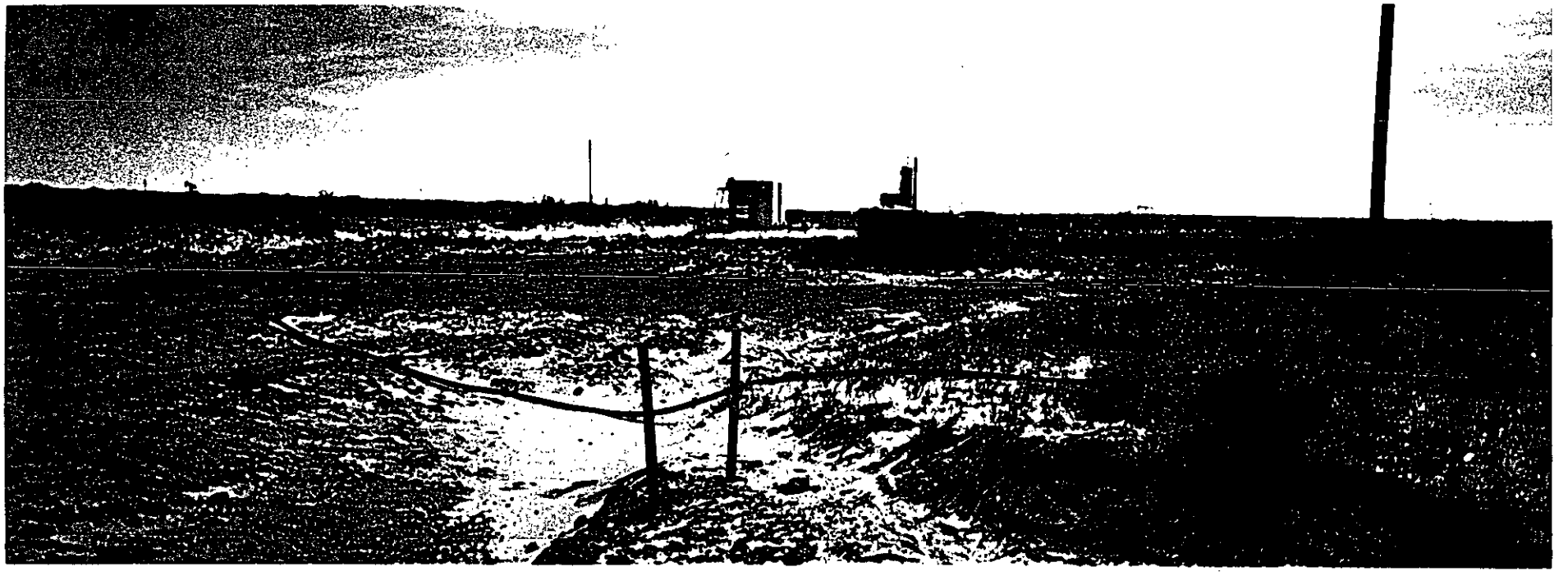
Sample composited from entire location & preserved on ice for transport.



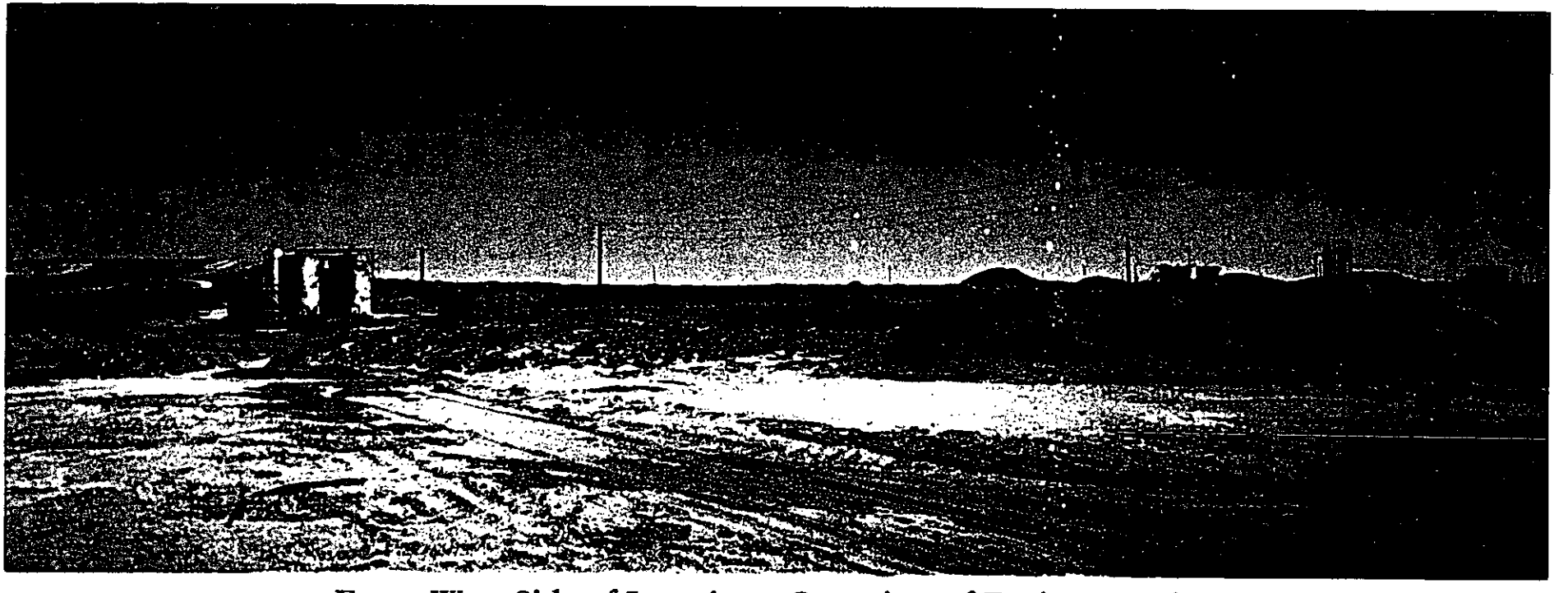
West Spoils Pile Looking East

West Side of Location Looking South at Oil Spill Path

Figure A

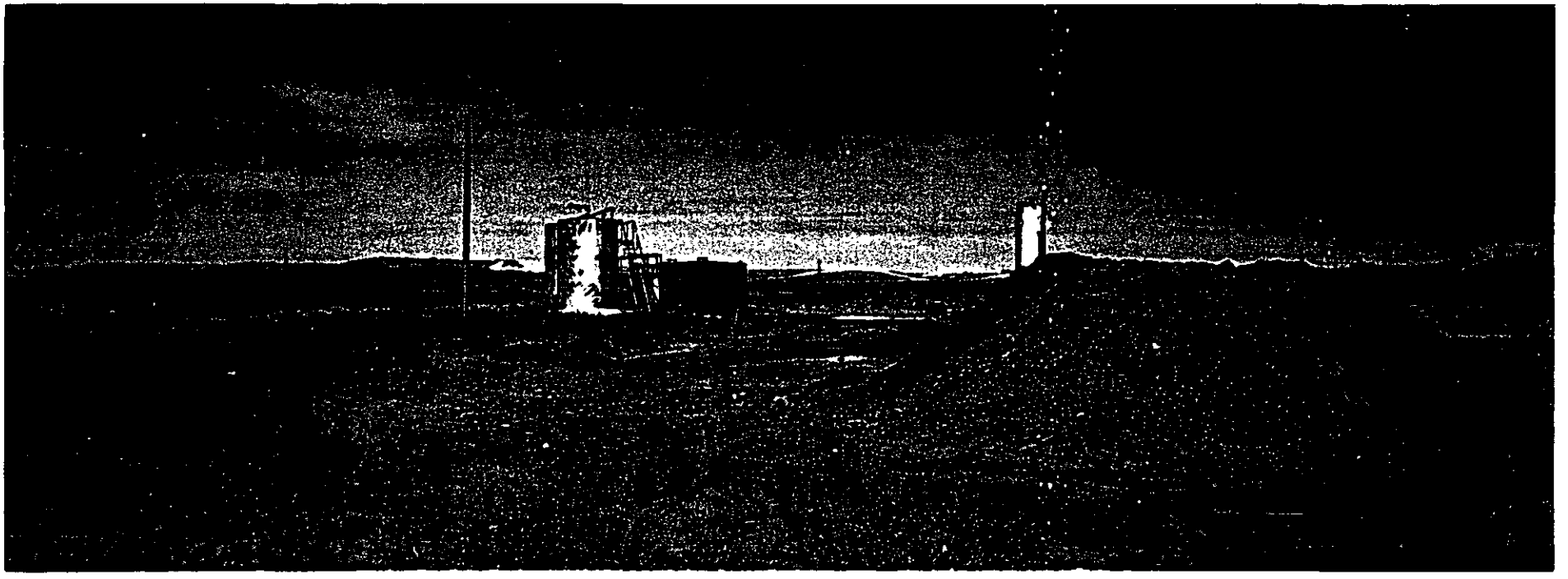


From Battery Looking South at East Spoils Pile (Old Contamination)



From West Side of Location - Overview of Entire Location

Figure B

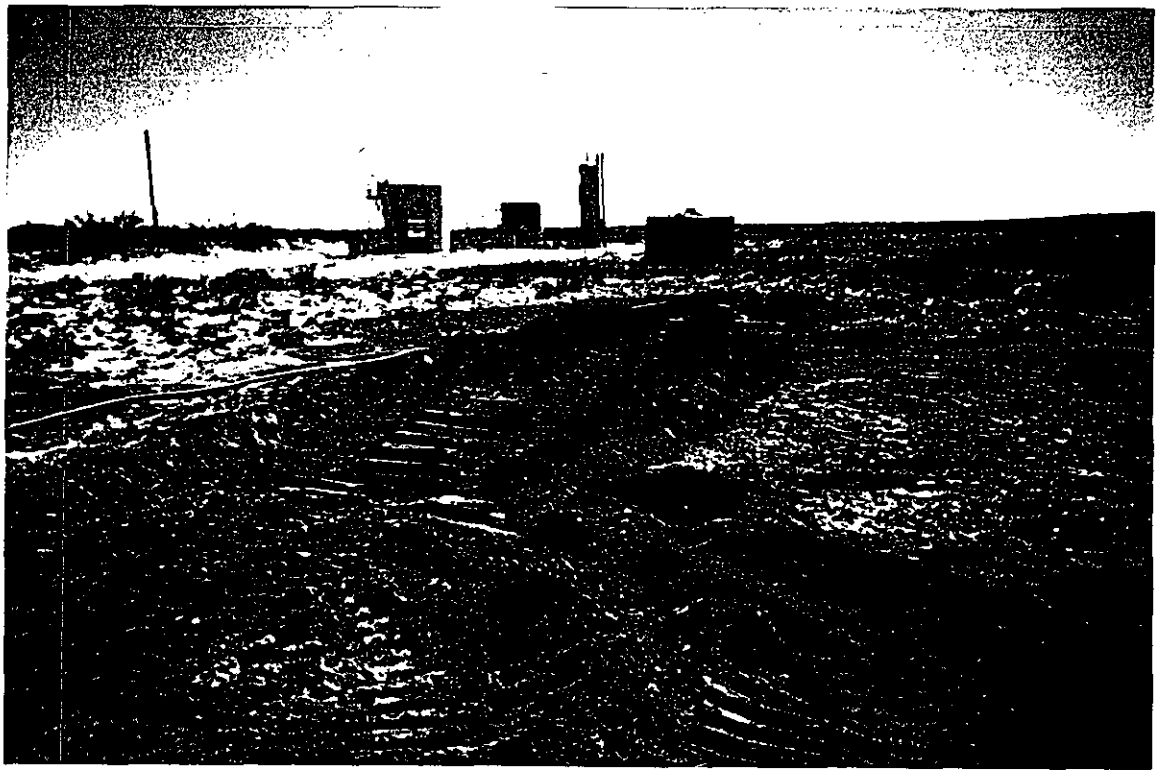


East Side of Location Looking North

Middle Spoils Pile

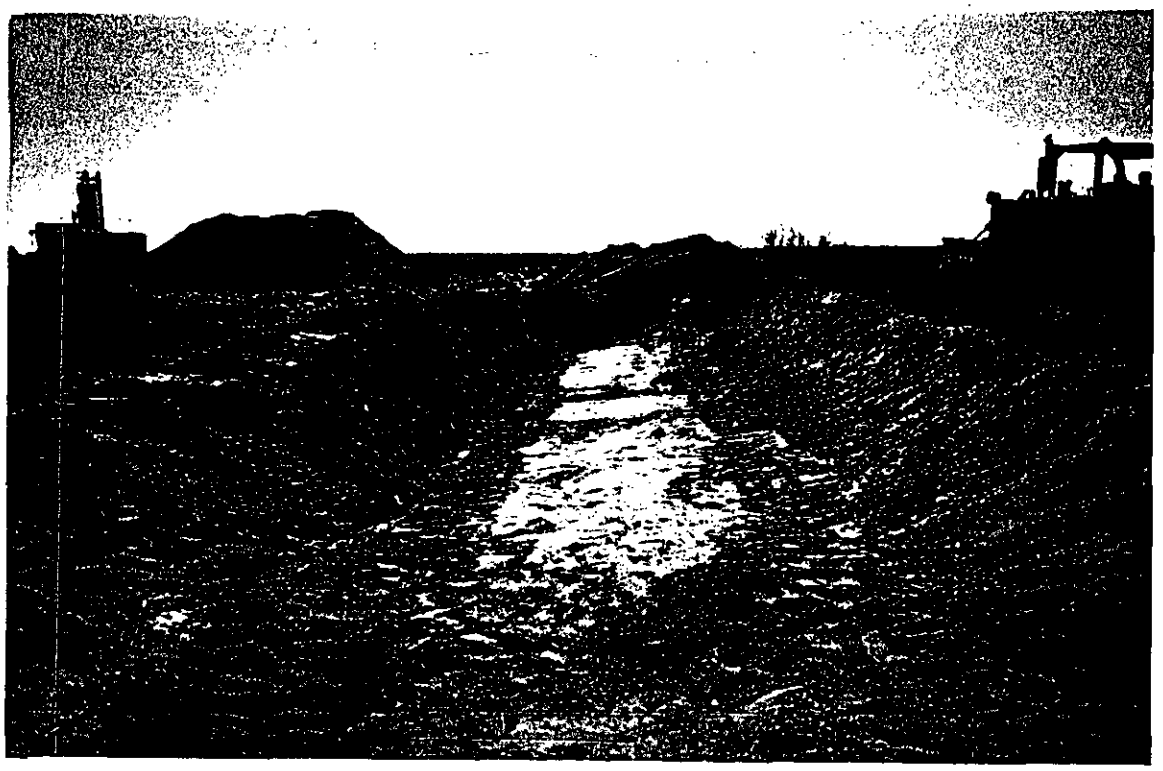
Figure C

Historical Contamination - From Battery Looking South



East Edge of Historical Contamination
From Battery Looking South

Figure D

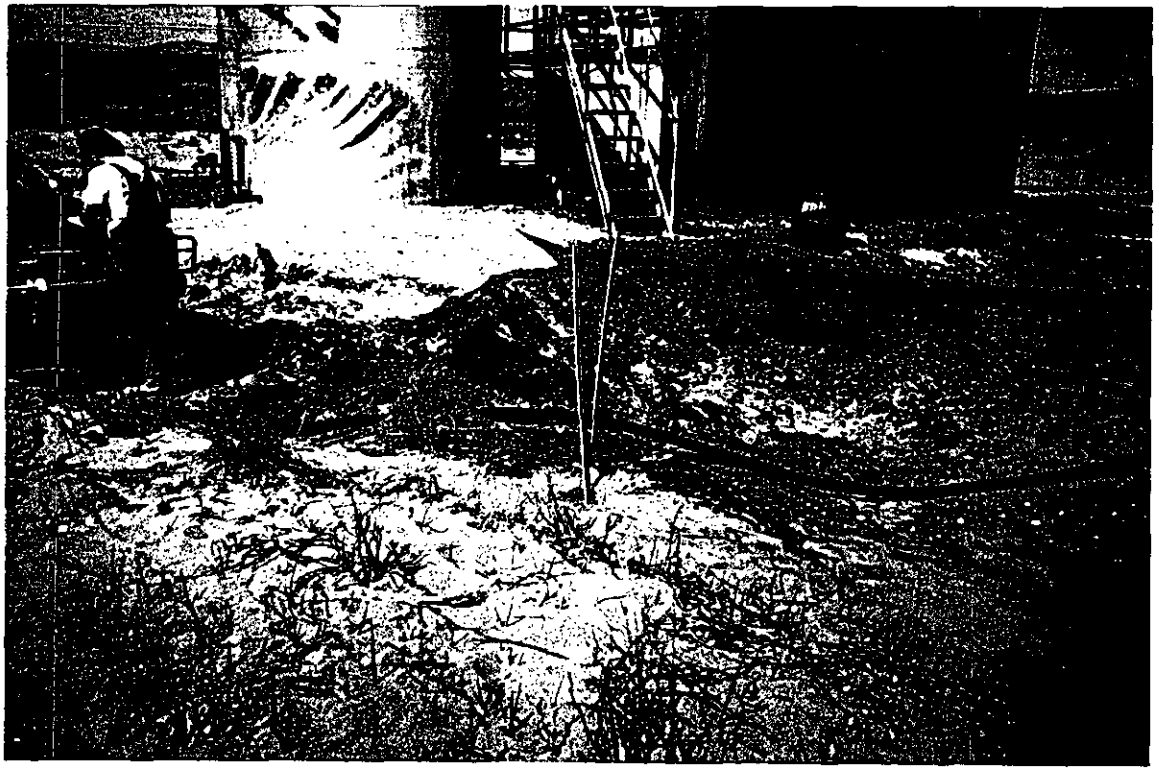


Path of New Leak - From Battery Looking South

Historical Contamination - From Battery Looking South

Figure E

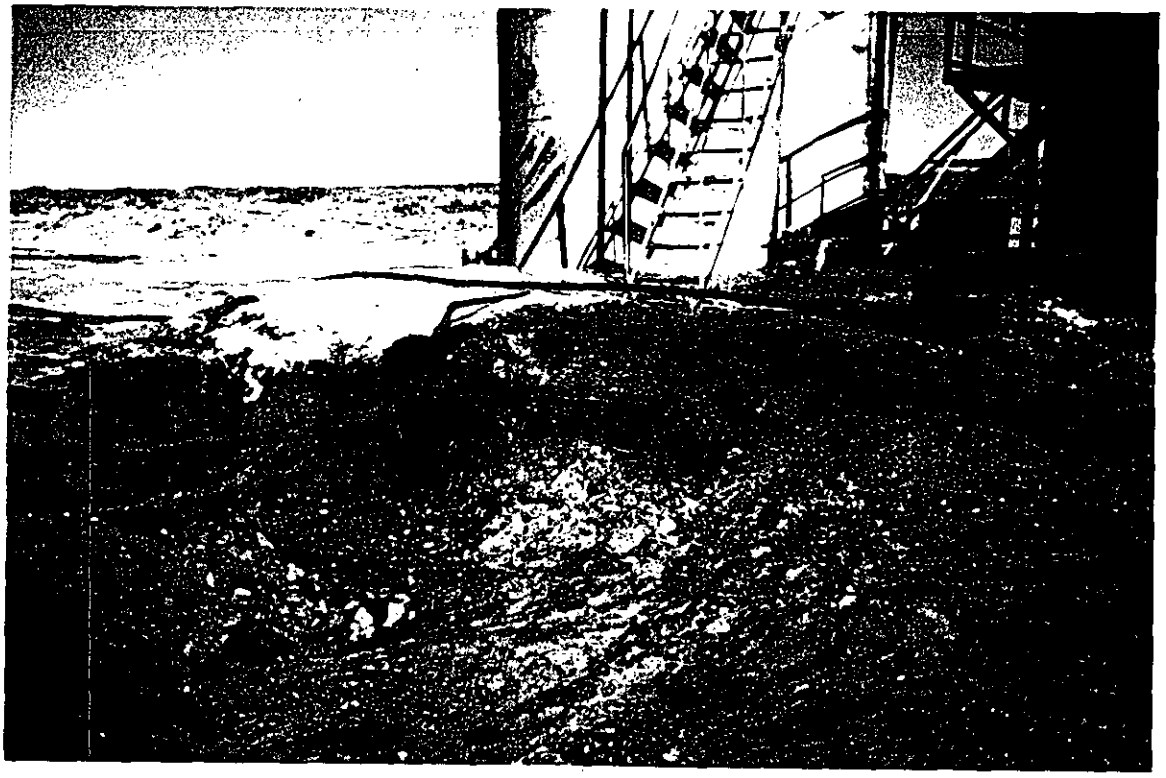
PID Testing on East End of Location



Historical Contamination

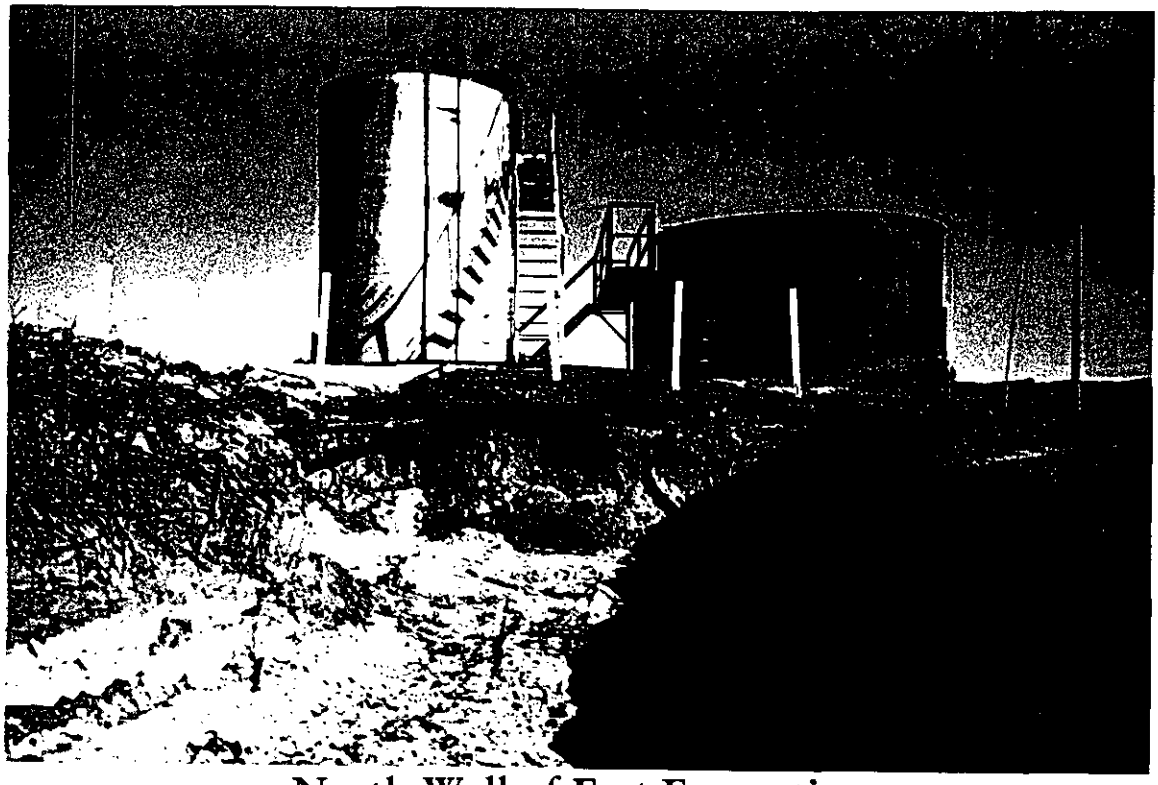
Figure F

Backhoe Excavation Near Battery Facing West



Backhoe Excavation Facing Northwest

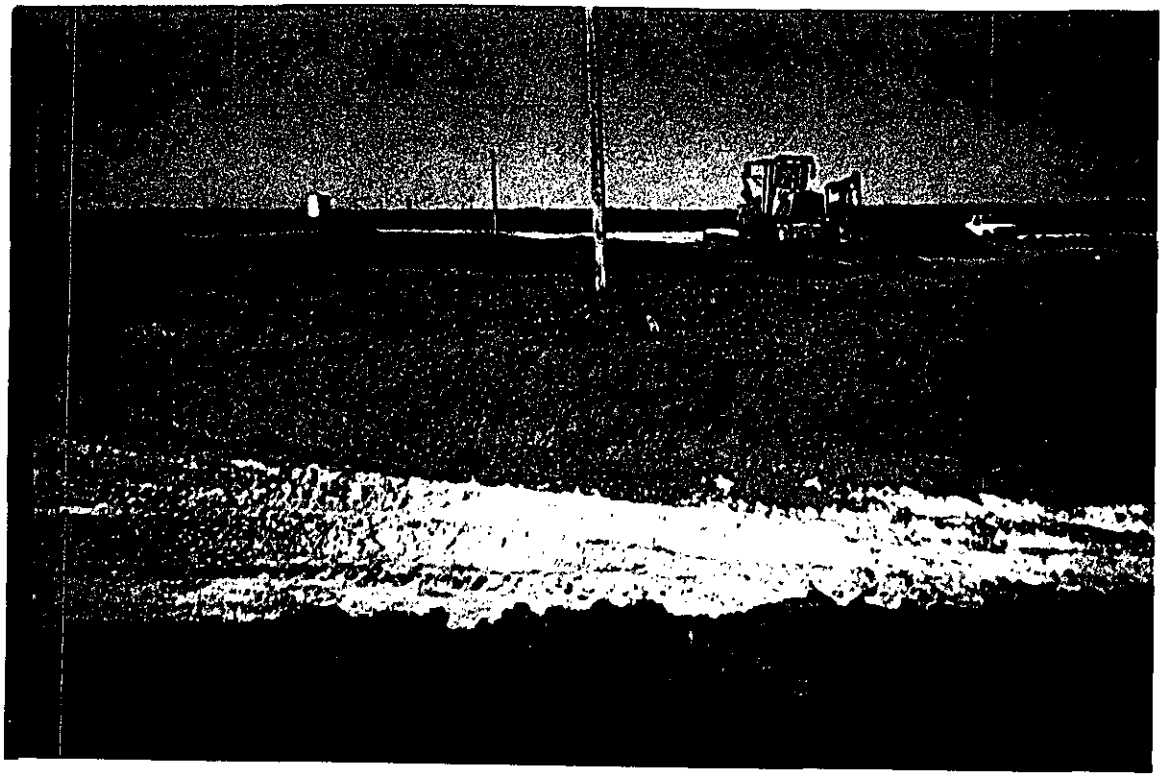
Figure G



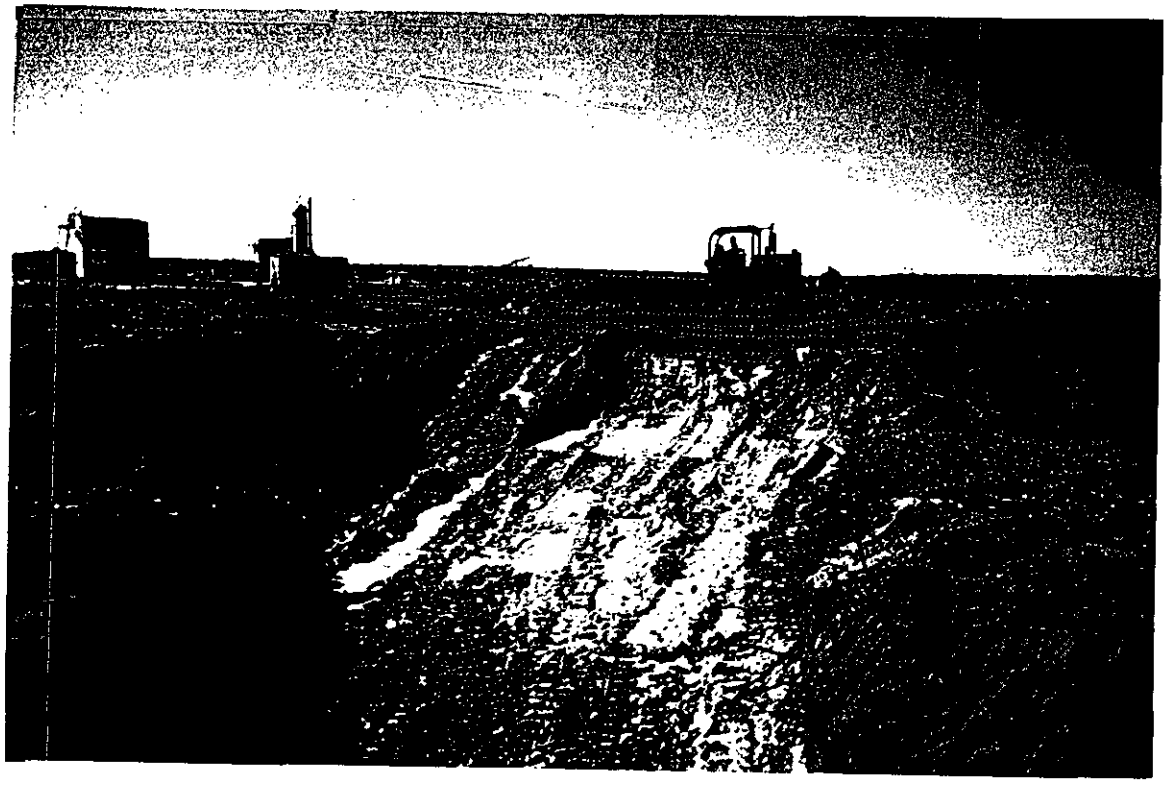
North Wall of East Excavation

East Wall of East Excavation

Figure H

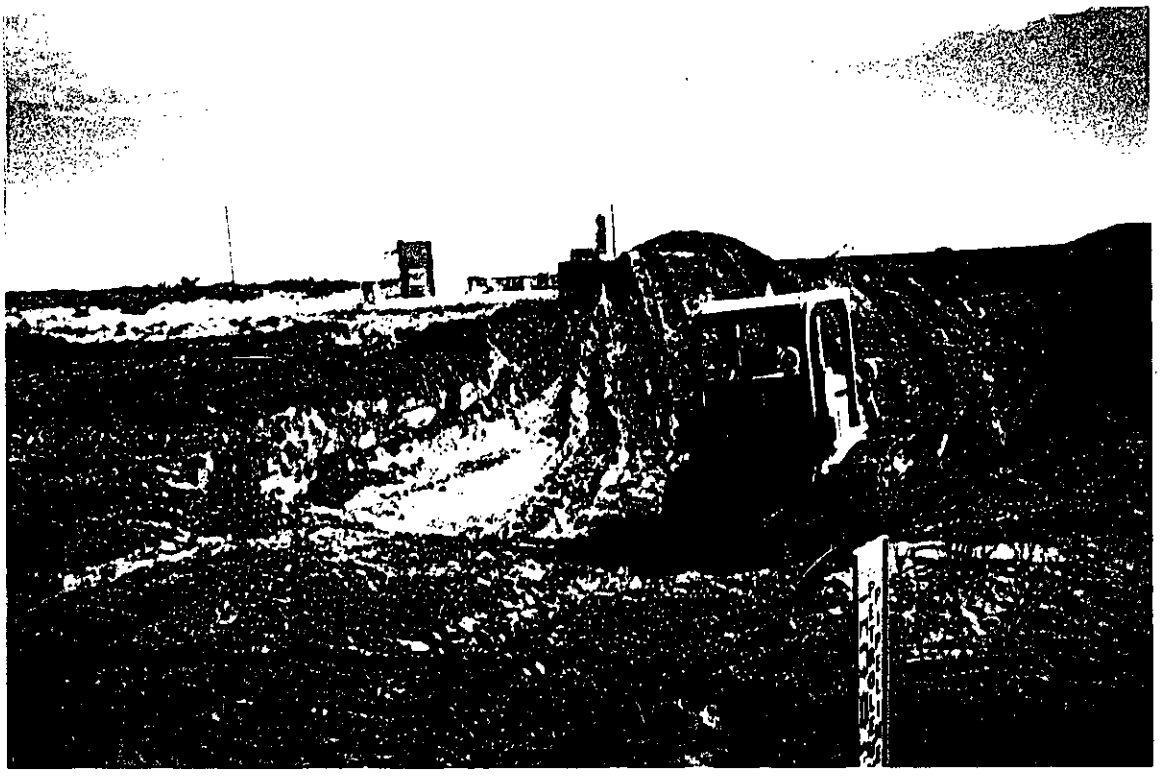


West Wall of East Excavation



South Slope of East Excavation

Figure I



Work in Progress

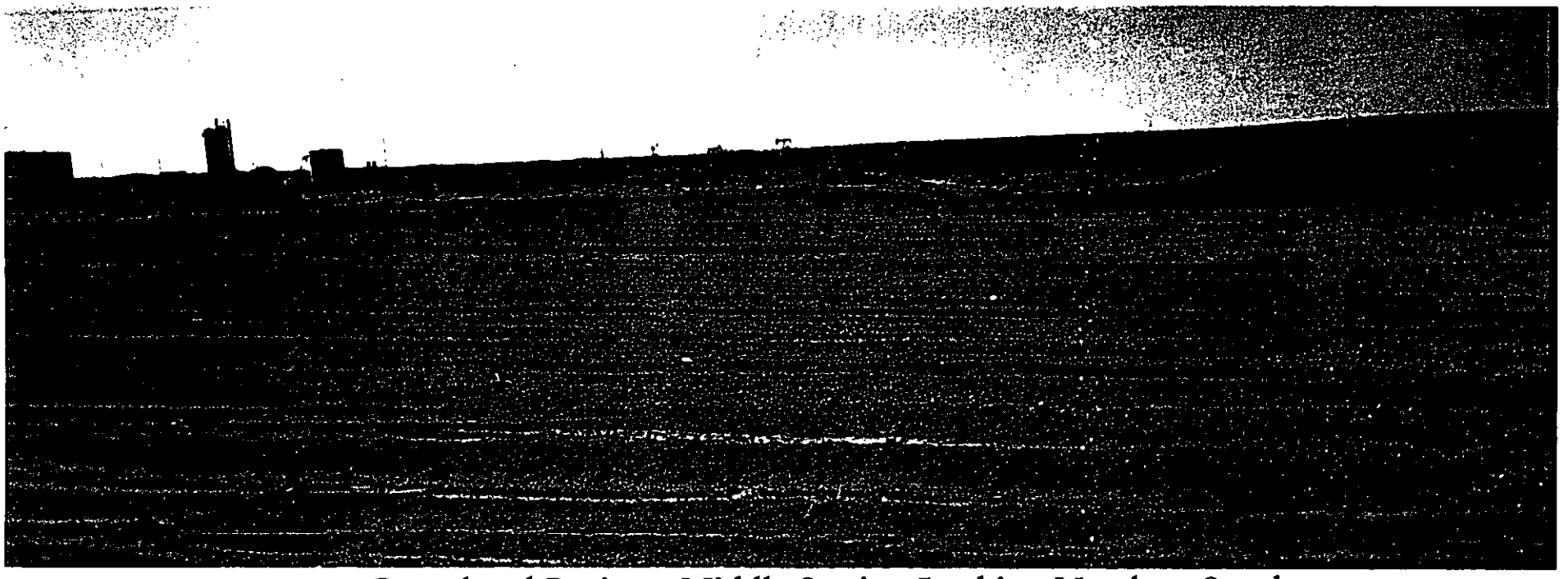
Work in Progress

Figure J

Completed Project - West End Looking North to South

Completed Project - Middle Section Looking West to East

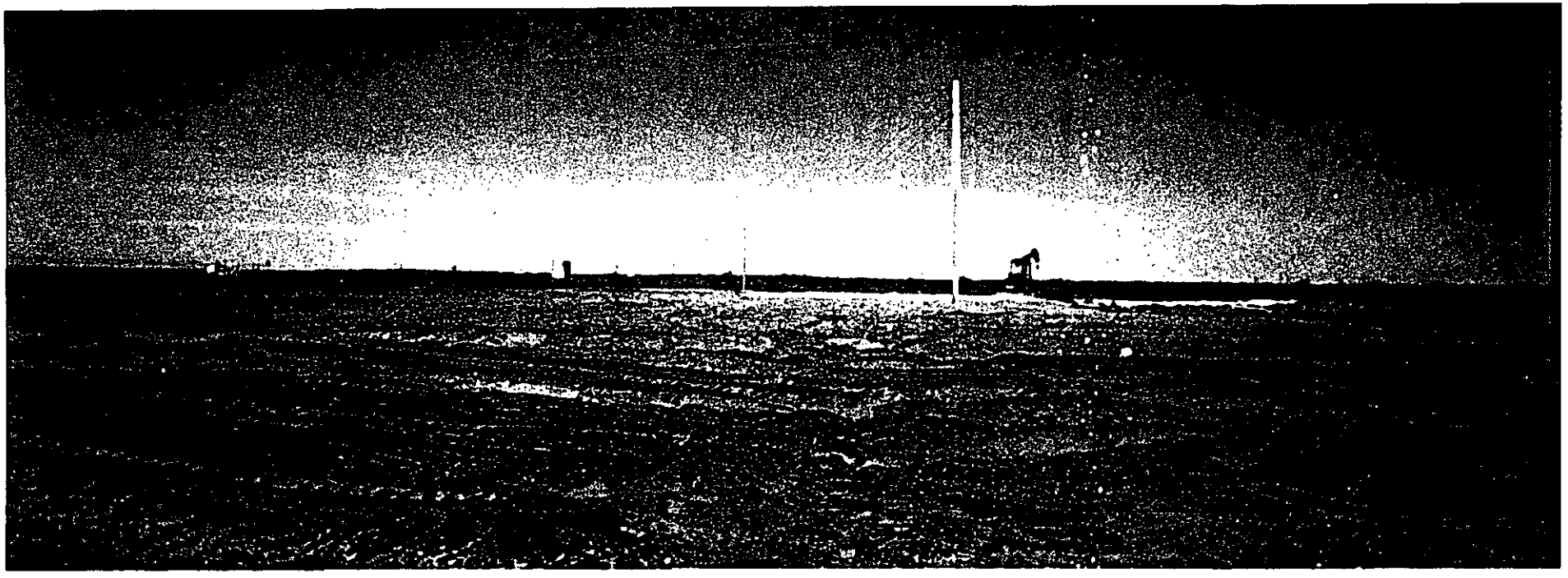
Figure K



Completed Project - Middle Section Looking North to South

Completed Project - East End Looking North To South

Figure L



Completed Project - Overview of Location Looking East to West

Figure M