Leking, Geoffrey R, EMNRD

From: Andy Price [andyprice@grandecom.net]
Sent: Tuesday, December 01, 2009 2:04 PM
To: Leking, Geoffrey R, EMNRD
Cc: Watne, Douglas E.; Elroy Ardoin
Subject: EnerVest Operating - Chalupa SWD - 11/18/08 saltwater spill - remediation - and final c141
Attachments: EnerVest-Chalupa SW Spill Sampling Report.pdf; Final c141- Chalupa #004 SWD-Spill.pdf; NMOCD-EnerVest- Ltr-Chalupa SWD#4 - 11-08 Spill Closure.pdf

Geoff,

Please find attached letter to confirm our phone conversation on 11/24, final c141, and the sampling investigation report which I submitted to Larry Johnson on 3/5/09. A a reminder - this is the site EnerVest had a 2008 spill - after the site was remediated and waiting for it to re-vegetate - another spill occured. I will be subitting the current sampling investigation today. If you have any questions please email or call.
Thank you for your help.

Andy Price
REM
432-352-6400
Baseline Solutions, LLC
511 W. Ohio St., Ste. 400
Midland, TX, 79701

BASELINE SOLUTIONS, LLC
P. O. BOX 8061
Midland, TX 79708

Phone 432-352-6400 **Fax 432-682-7722**

December 1st, 2009

Mr. Jeoffery R. Leking
New Mexico Oil Conservation Division
1625 N. French Drive
Hobbs, New Mexico 88240

RE: EnerVest Operating, LLC.
Environmental Remediation Project
Saltwater release 11/18/08
Chalupa SWD – IRP# 09.3.2140

Dear, Mr. Leking,

This memo is to confirm details of our phone conversation on 11/24/09. EnerVest Operating LLC, has contracted me (Andy Price), to act as project manager for the environmental remediation of the Chalupa SWD #4 – saltwater release.
Our conversation included the following details:

- A saltwater release occurred on 11/18/08. A c141 was submitted to OCD. The effected area was an average of 305ft X 20ft. Some vegetation showed signs of stress within approximately 50% of the contaminated area. The entire area had elevated levels of chlorides.
- A sampling investigation was conducted at the site. A report with the findings was submitted to OCD Hobbs office on March 5th, 2009.
- The remediation method was "dig & haul" operations with lab analysis. Contaminated soil was excavated and delivered to Gandy's Disposal. The area was then back filled with clean soil and properly reseeded. EnerVest Operating planned to submit a closing report upon re-vegetation of the site.
- Closure for the site had not been submitted to OCD due to waiting for re-vegetation to take place. Before re-vegetation appeared a second spill occurred in the same area. A separate c-141 was submitted to Hobbs OCD office on 9/30/09.
- I made a request to close the original spill (IRP#09.3.2140), since a second spill had occurred. You granted the request with the requirement to submit a final c141 and a formal letter explaining details.

Thank you for your help in this matter.

Andy B. Price
Andy B. Price
Registered Environmental Manager

Cc: Elroy Ardoin, Doug Watne (EnerVest Operating LLC)

PHASE II
ENVIRONMENTAL SAMPLING ASSESSMENT

EnerVest Operating, LLC

Chalupa #4 SWD Flow Line Leak

Section 13, T14S – R33E – API #30-025-29184
Lea County, NM
Coordinates:
Longitude -103.57570
Latitude 33.10041

December 1st, 2009

A Report For:
New Mexico Oil Conservation Division, Hobbs District
& EnerVest Operating LLC, Mr. Doug Watne

Prepared by:
Baseline Solutions LLC
Andy Price
511 West Ohio, Suite 400
Midland, Texas 79701

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EXECUTIVE SUMMARY

Baseline Solutions conducted a Phase II Environmental Sampling Assessment at the Chalupa #4 SWD saltwater spill site. The release occurred on October 30th, 2009 and was the result of a flowline connection leak located approximately 400yds north of the wellhead. Approximately 20 barrels of saltwater was released. The location of the release is described as:

Section 13, T14S – R33E, Lea County, NM
Coordinates: Longitude -103.57570 Latitude 33.10041

The flowline connection has been replaced and upgraded.
A summary of the lab analysis data, research and observations gathered during the sampling investigation is as follows:

Chalupa #4 SWD

Lab results for Chloride levels are listed below (please see app. B).

Sample field code	**Chloride PPM**		Sample field code	**TPH PPM**
AS - surface	35400		AS - surface	<50.0
BS - surface	24500		BS - surface	<50.0
CS - surface	28600		CS - surface	<50.0
DS - surface	14000		DS - surface	<50.0
ES - surface	22900		ES - surface	<50.0
A - 2.5'	733		A3' - 3ft depth	<50.0
B - 2'	666		B1' - 1ft. depth	<50.0
C - 2.5' depth	510		C1' - 1ft. depth	<50.0
D - 1' depth	548		D2' - 2ft. depth	<50.0
E - 1' depth	595		E2' - 2ft. depth	<50.0

NMOCD acceptable level for Chlorides is 250ppm and less.
NMOCD acceptable level for Total Petroleum Hydrocarbons is 5000ppm and less.

Contaminated Area Delineated: Soil borings with field and laboratory analysis indicate the saltwater spill to be an approximate averaged surface area of 345ft X 30ft. An estimated 383cuyds of soil will need to be removed and backfilled.

OCD Site Ranking: No Surface hydrology issues were identified for surface run-off due to topographical gradient and rain fall average. Subsurface hydrology data indicates groundwater for this area to be at an approximate average depth of 76.6ft. **The OCD site ranking is considered to be 10 or less (please see section 5 in the body of this report).**

Conclusion:
Chloride contamination for spill area is to an average depth of 1' to 2'. TPH levels were found to be unusually low.

Recommendation: Conduct "Dig & Haul" remediation for spill area to an average depth of 1ft to 2 ft. Estimated soil disposal and backfill is 383cuyds.

1.0 INTRODUCTION

Baseline Solutions, was retained by EnerVest Operating, LLC of Houston Texas, to conduct a Phase II Environmental Sampling Investigation at the Chalupa #4 SWD, Section 13, T14S – R33E, Lea County, NM, Coordinates: Longitude - 103.57570 Latitude 33.1004.

1.1 Site Description / Location

A. Spill Location
- Legal Description:
  Chalupa #004
  Flow Line Leak/Spill approximately 400yds north of wellhead
  330' FSL & 330' FSL Unit "M"
  Section 13, T14S – R33E
  Lea County, NM
  Coordinates: Longitude -103.57570 - Latitude 33.10041
  Lease #LG-2414 – API#30-025-29184
- Driving Directions: The location may be reach by heading west out of Lovington on Hwy 82 about 25 miles – come to Hwy 459 and turn north/right, go approximately 8 miles to Anderson Rd., turn east/right, immediately past S curve turn south, follow lease road south, arriving at the Chalupa #004, SWD injection well. The spill area is approximately 400yds north of well head.

2.0 Purpose

The purpose of this investigation was to quantify the level of Chlorides and Total Petroleum Hydrocarbons (TPH), and to delineate the area of contamination for spill site.

3.0 PROCEDURES AND METHODS

The procedures and methods for this project were conducted according to EPA protocol and conducted in a professional manner within parameters established by regulatory and industry standards.

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A. Sampling Methods and Procedures
- Visual site reconnaissance of entire property with photos
- Grab samples were taken and screened for Chlorides with an Electrical Conductivity Meter (Milwaukee Model SM802). This process is used to identify any elevated levels for chlorides for a specific depth and area.
- Grab samples were taken and screened for Total Petroleum Hydrocarbons (TPH), with a Photoionization Detector (Mini Rae Plus - model # PGM-76IS). This process is used to identify any elevated levels for TPH for a specific depth and area.
- The parameter of the spill area was delineated first by visual reconnaissance and screening surface samples and then with soil borings.

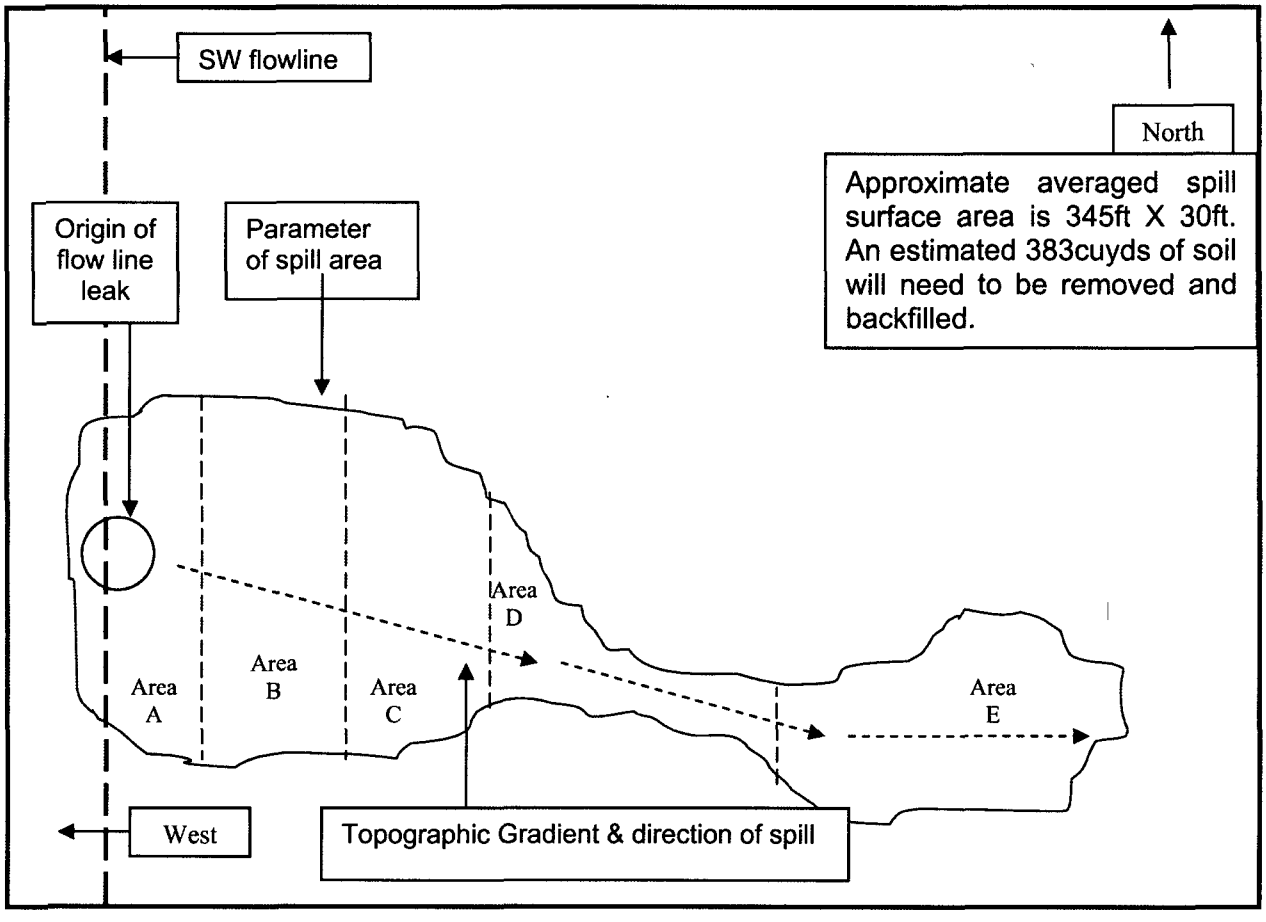
- A site grid was developed from data collected with grab sample screening.
- Grid samples were taken and combined within specific areas which made up the identified composite samples.
- Samples were systematically taken from soil borings at surface and 1ft intervals. Samples were screened with an EC meter and PID detector.
- Sampling Grid: Areas were identified as A, B, C, D.
  - **Chlorides:** Highest chloride levels were **35400ppm** at surface level in grid area "A". This was the source point where the actual leak occurred. Acceptable levels for chlorides were reached at a 2.5ft depth for grid area A. Grid areas D & E had acceptable levels at a 1ft depths. Areas B & C were at an acceptable level at a 1ft to 2ft depths.
  - **TPH:** All levels of TPH were determined to be at acceptable levels.
- Lab Samples: Samples were taken from grid areas A, B, C, D, E.
- Decontamination procedures were maintained
- All samples were kept on ice until delivered to lab
- A field log was maintained
- A formal chain of custody was maintained
- Composite samples were delivered to Trace Analysis in Midland, TX - an EPA approved lab.

4.0 INVESTIGATION RESULTS

Lab results are listed below (please see app. C).

Sample field code	**Chloride PPM**		Sample field code	**TPH PPM**
AS - surface	35400		AS - surface	<50.0
BS - surface	24500		BS - surface	<50.0
CS - surface	28600		CS - surface	<50.0
DS - surface	14000		DS - surface	<50.0
ES - surface	22900		ES - surface	<50.0
A - 2.5'	733		A3' - 3ft depth	<50.0
B - 2'	666		B1' - 1ft. depth	<50.0
C - 2.5' depth	510		C1' - 1ft. depth	<50.0
D - 1' depth	548		D2' - 2ft. depth	<50.0
E - 1' depth	595		E2' - 2ft. depth	<50.0

NMOCD acceptable level for Chlorides is 250ppm and less.
NMOCD acceptable level for Total Petroleum Hydrocarbons is 5000ppm and less.



5.0 NMOCD SITE RANKING (see app. F)

SITE RANKING – According to NMOCD "Spill Clean up Guidelines" for "Unsaturated Contaminated Soils"

The general site characteristics obtained during the site assessment were used to determine the appropriate soil remediation action level. A risk based approach was taken for the site evaluation. Site soils were contaminated by saltwater and petroleum constituents. The site was scored according to the ranking criteria below to determine the relative threat (if any), to public health, fresh waters and the environment.

Ranking Criteria

Depth To Ground Water	Ranking Score
<50 feet	20
50 - 99	**10**
>100	0

- **Depth to ground water is approximately 76'**, according to NM State Engineers Office and USGS information (please app. F). Measurements were taken from the nearest water wells (on record). Depth to groundwater is estimated to be approximately 76'.

- **The NMOCD rating is considered to be 10 or less.**
  Wellhead Protection Area

<1000 feet from a water source, or; <200 feet from private domestic water source	
Yes	20
No	**0**

Distance To Surface Water Body

<200 horizontal feet	20
200 - 1000 horizontal feet	10
>1000 horizontal feet	**0**

From NMOCD "Spill Clean up Guidelines"
Recommended remediation action level. The total ranking score determines the degree of remediation that may be required at any given site. The total ranking score is the sum of all four individual ranking criteria listed in Section IV.A.2.a.

Total Ranking Score for this spill site is considered to be 10.

Recommended remediation action is to conduct **"dig and haul"** operations with soil being disposed of at the nearest OCD approved disposal site.

6.0 REGULATORY REVIEW

A. The NMOCD form C141 was submitted on September 30th, 2009. This sampling investigation is intended to be in compliance with New Mexico Oil Conservation Division:

- Rule 116 RELEASE NOTIFICATION AND CORRECTIVE ACTION [1-1-50...2-1-96; A, 3-15-97]
  1. 116.D. CORRECTIVE ACTION: The responsible person must complete Division approved corrective action for releases which endanger public health or the environment. Releases will be addressed in accordance with a remediation plan submitted to and approved by the Division or with an

  abatement plan submitted in accordance with Rule 19 (19 NMAC 15.A. 19). [3-15-97]
- Rule 19 (19 NMAC 15.A. 19). [3-15-97].

7.0 CONCLUSIONS / RECOMMENDATIONS

Conclusion:
Chloride contamination for spill area is to an average depth of 1' to 2'. TPH were determined to be <50ppm.

Recommendation:

- **Conduct "Dig & Haul"** remediation for spill area to an estimated average depth of 1ft to 2 ft. Deliver excavated soil to the nearest approved OCD disposal site. Estimated soil for disposal is 338cuyds and the same amount for backfill.

- **Complete Closing Report** in compliance with OCD requirements.
  - Lab analysis insuring chloride contamination has been removed to less than 250ppm
  - Lab analysis insuring TPH removed to less than 5000ppm
  - List OCD approved disposal site where contaminated soil disposed of.
  - Grade site to match original topography and reseed according to listed BLM seed mix.
  - Submit formal closing report to NMOCD office in Hobbs, NM

8.0 Limitations

This report was prepared exclusively for use by EnerVest Operating. The contents of the report shall not be disseminated to, or used by any other party without EnerVest Operating written consent.
Baseline Solutions hereby gives notice that any statement or opinion in this report shall not be construed to create any warranty or representation that the real property on which the investigation was conducted is free of pollution or complies with any or all applicable regulatory or statutory requirements, or that the property is fit for any particular purpose.
Unless otherwise indicated in this report, no attempt was made to check on the compliance of present or past owners of the site with federal, state or local laws and regulations.
The conclusions presented in this report were based on the services described, and not on specific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by EnerVest Operating.
Person or entity considering use, acquisition, or other involvement or activity concerning the property shall be solely responsible for determining the adequacy of the property for any and all uses for which that person or entity shall use the property. Any person or entity considering the use, acquisition, or other involvement or activity concerning the property which is the subject of this report should enter into any use, occupation, acquisition, or the like on sole reliance of its own judgment and on its own personal investigation of such property, and not in reliance on any representation made by Baseline Solutions regarding such property, the character quality, or its value. Baseline Solutions performed environmental services in a professional manner using that degree of skill and care exercised for similar projects under similar conditions by reputable and competent environmental consultants. Baseline Solutions shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the environmental services were conducted.

QUALIFICATIONS AND SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

Prepared By:

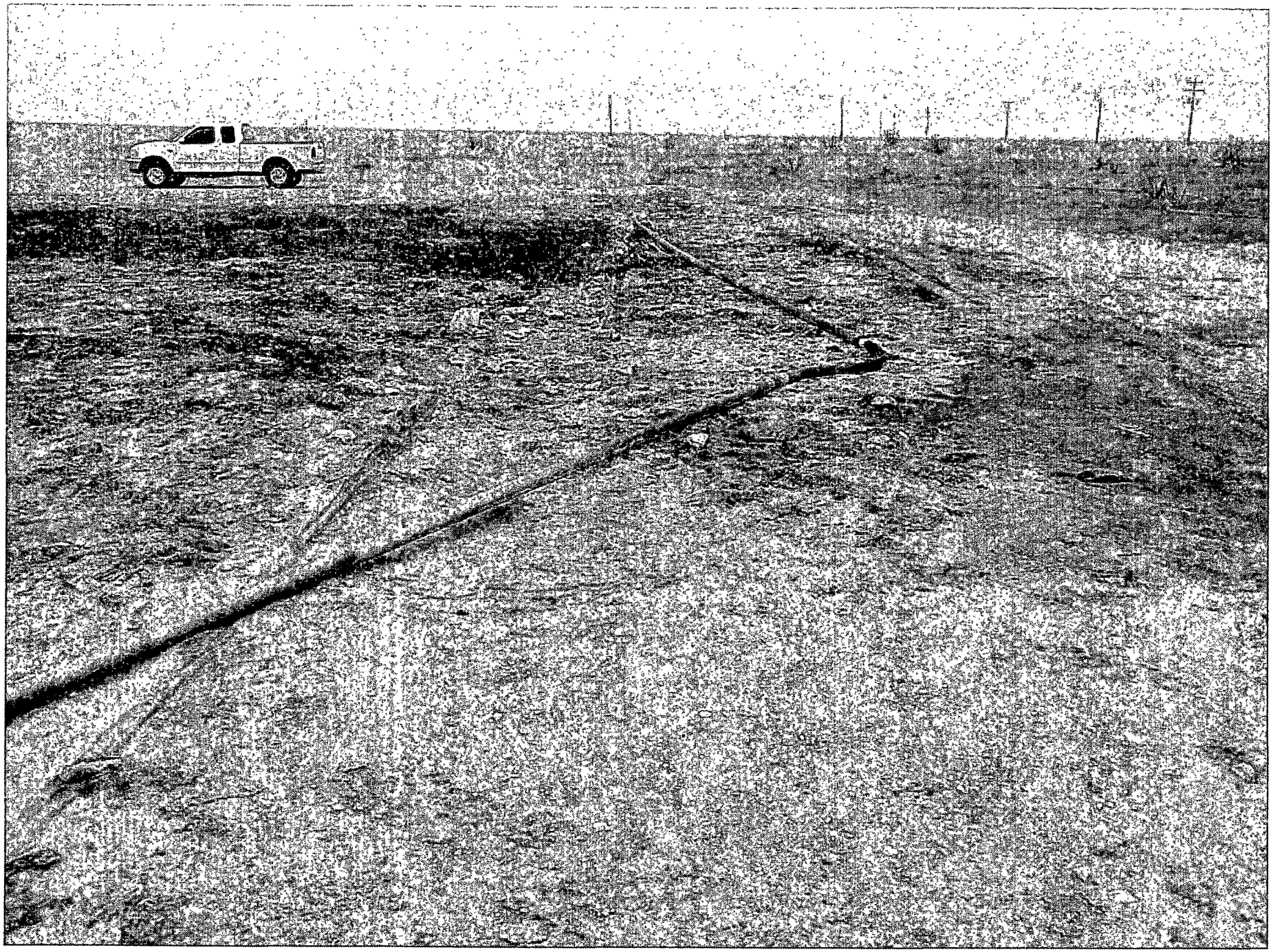
Andy B. Price

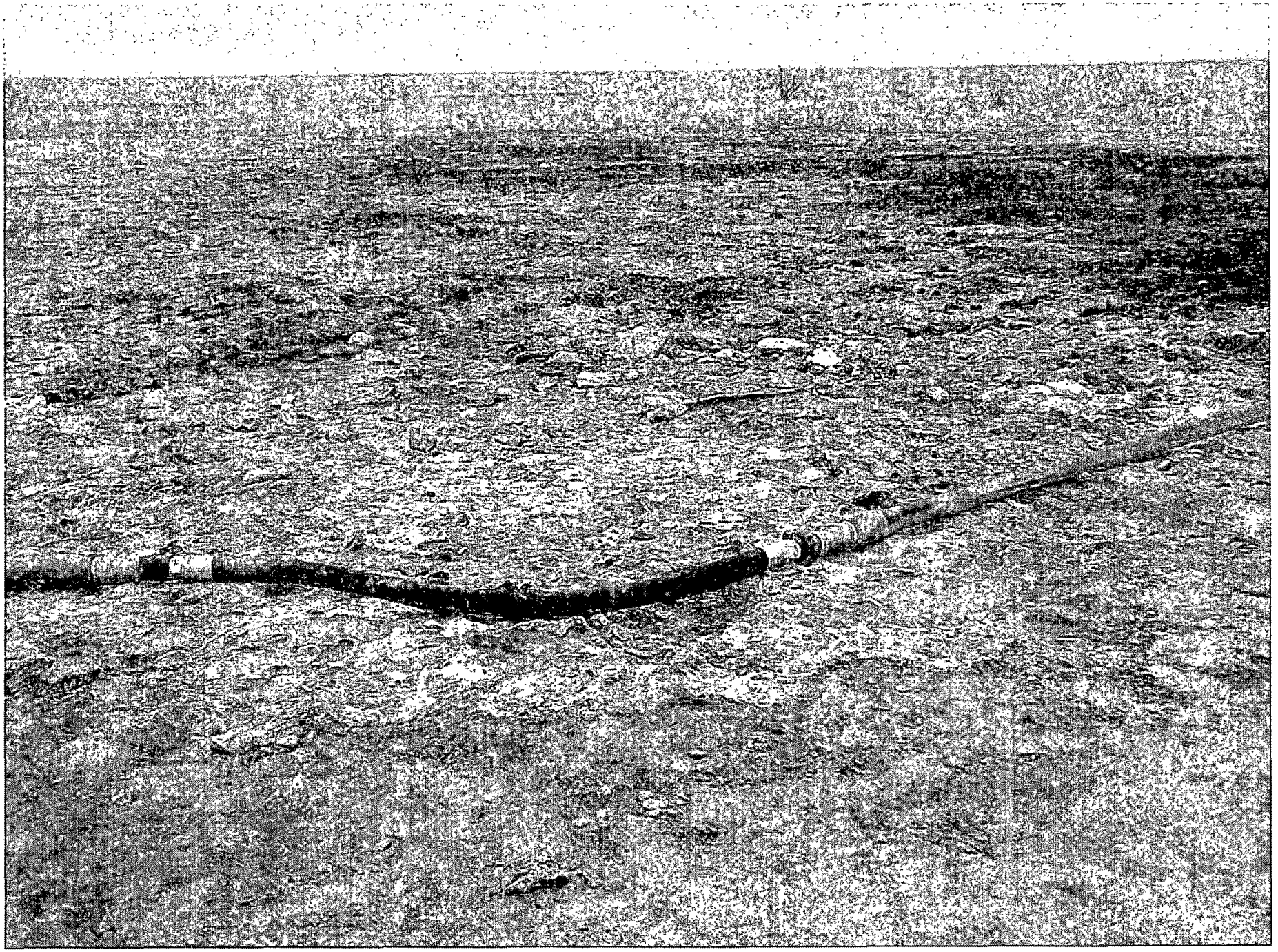
Andy B. Price

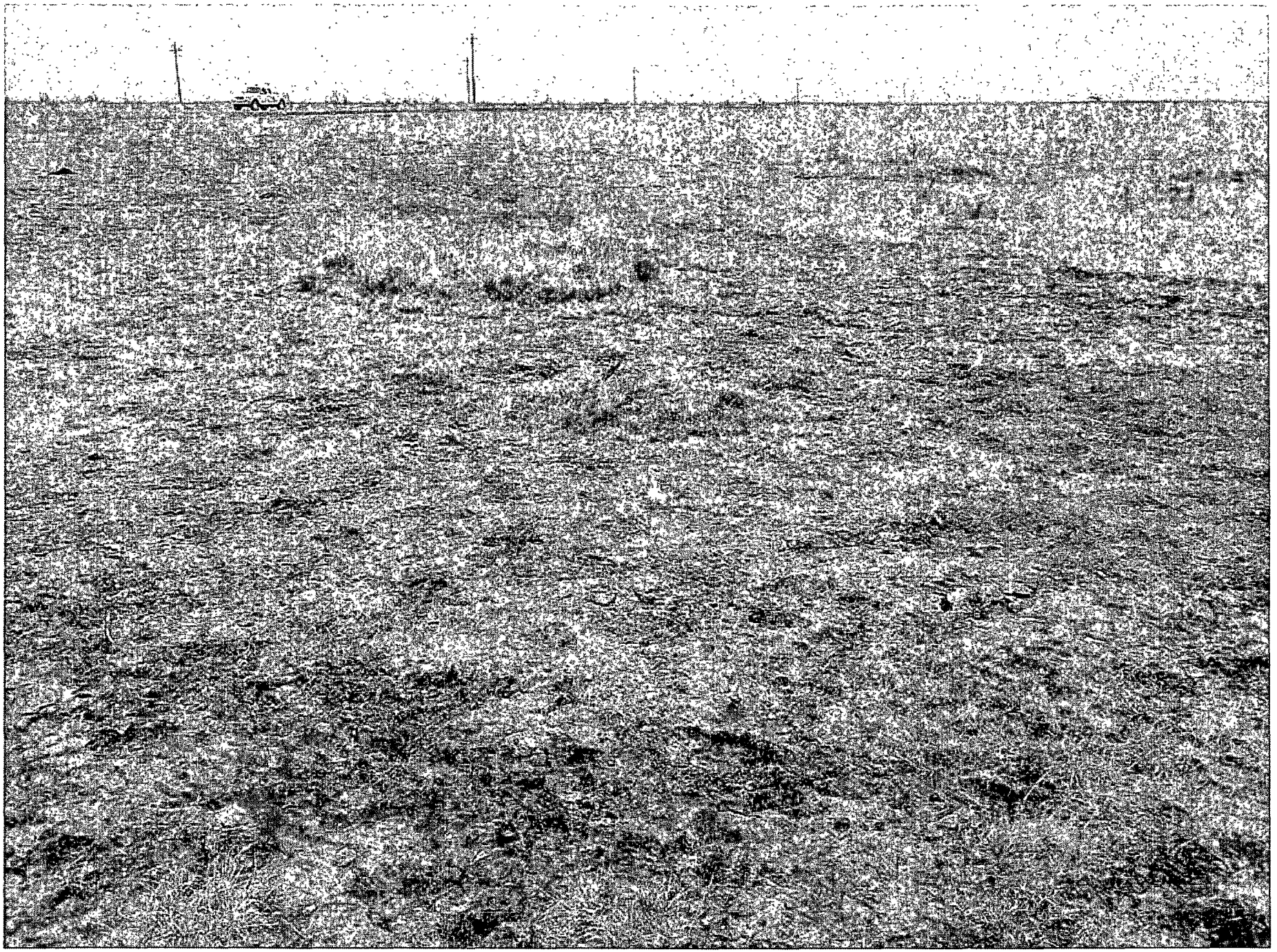
Registered Environmental Professional Registry #9116

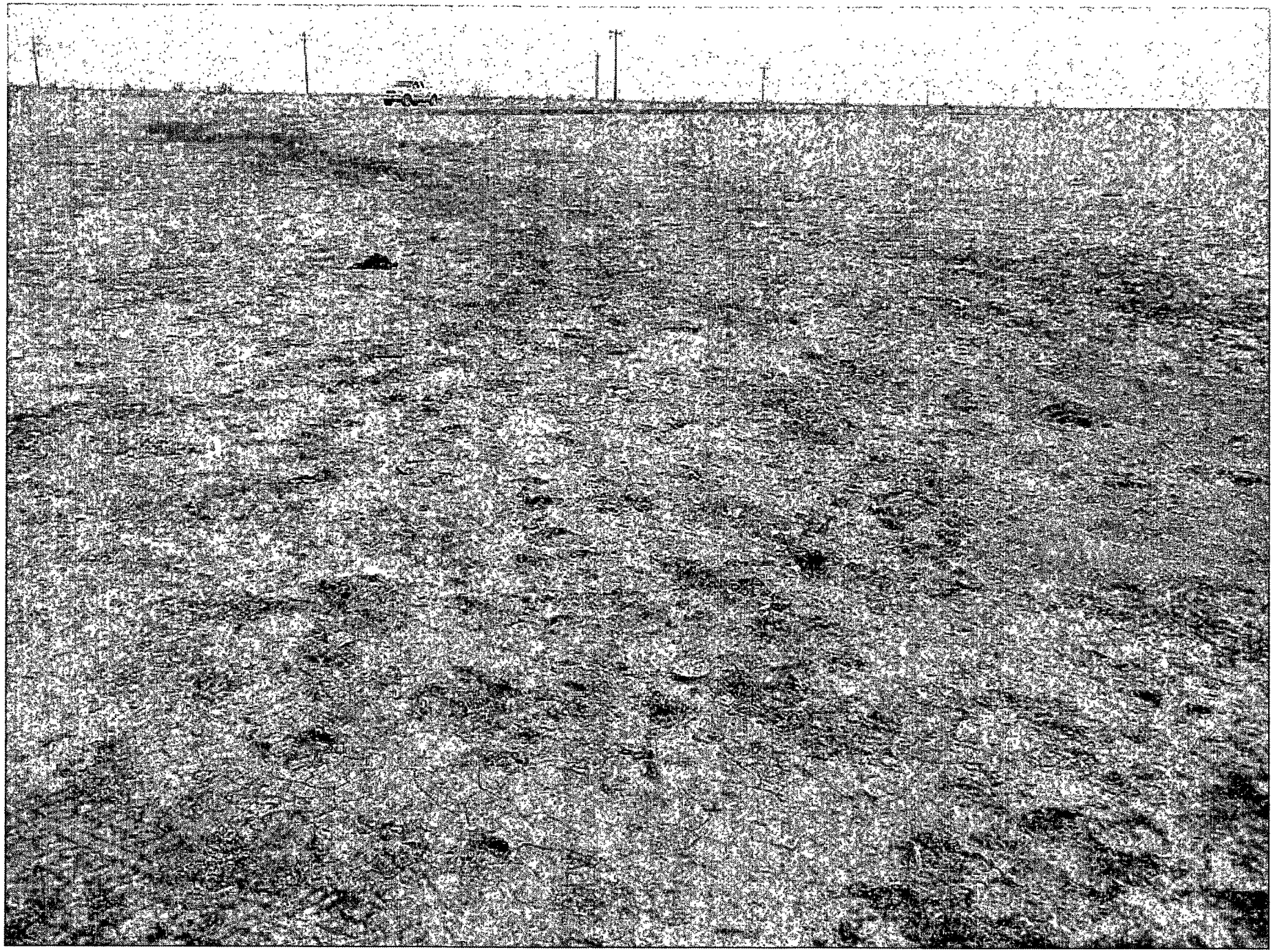
APPENDIXES

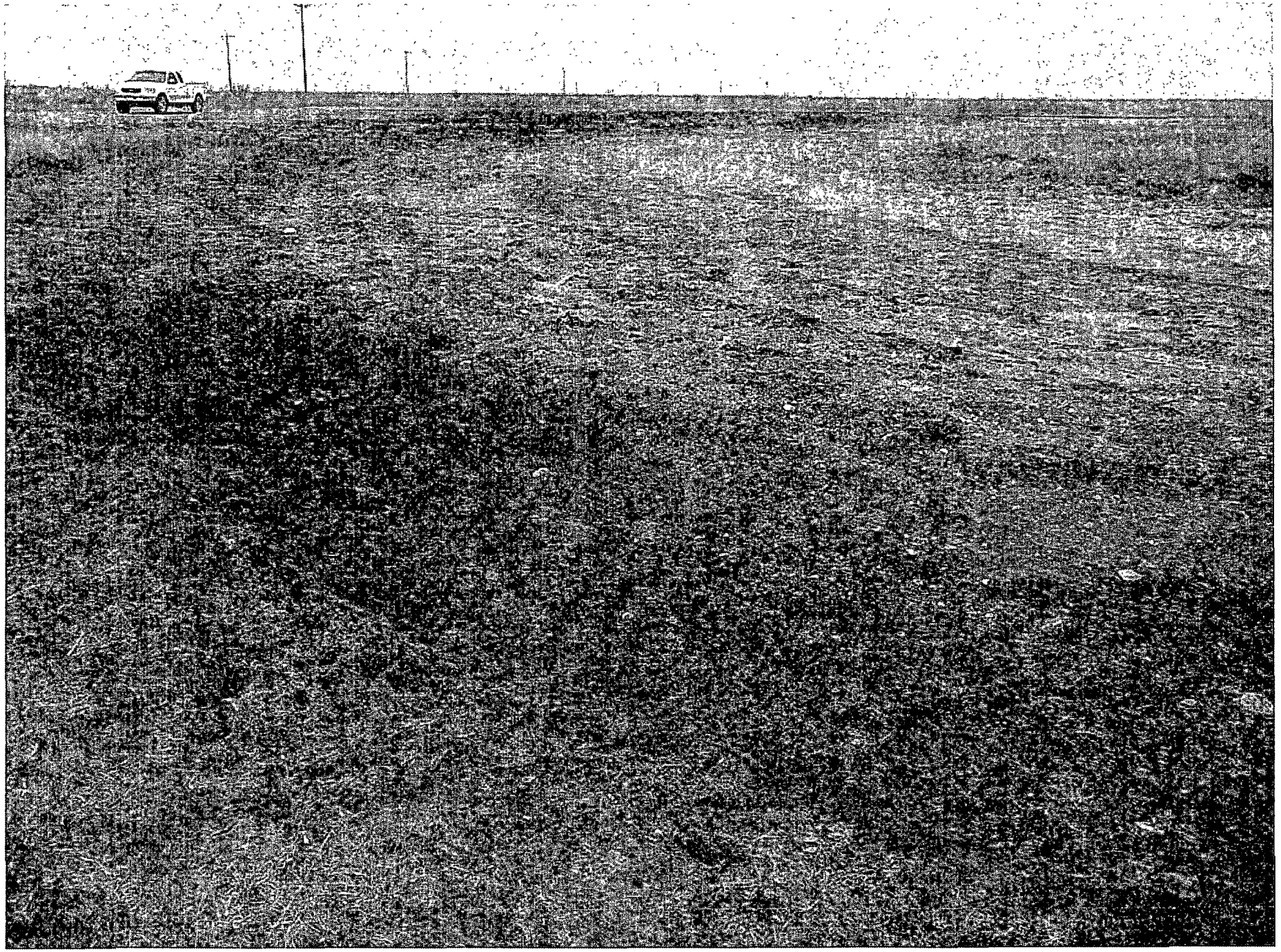
A. Site Photos
B. Lab Report
C. Chain of Custody
D. Hydrology
E. OCD Form C141

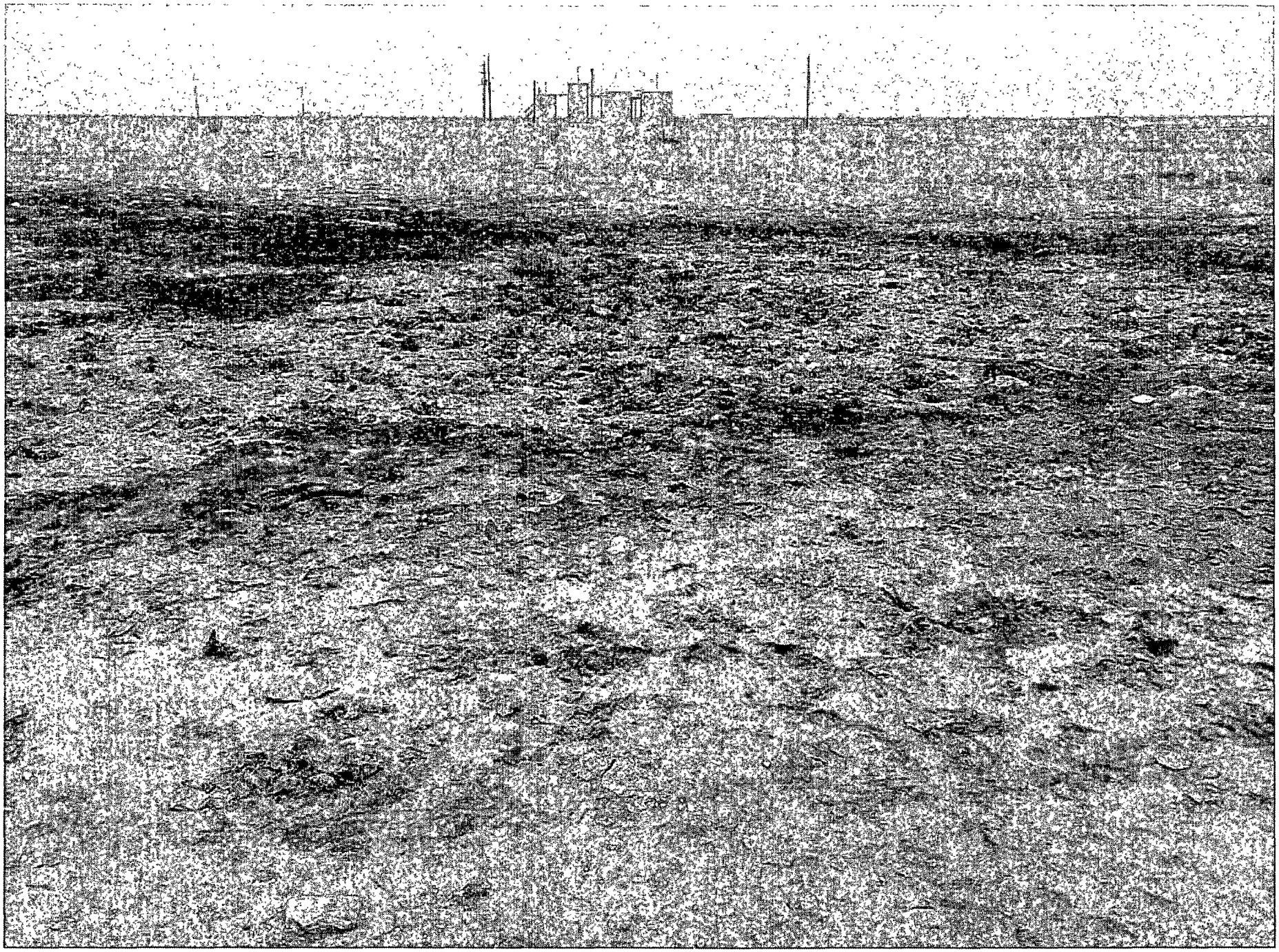


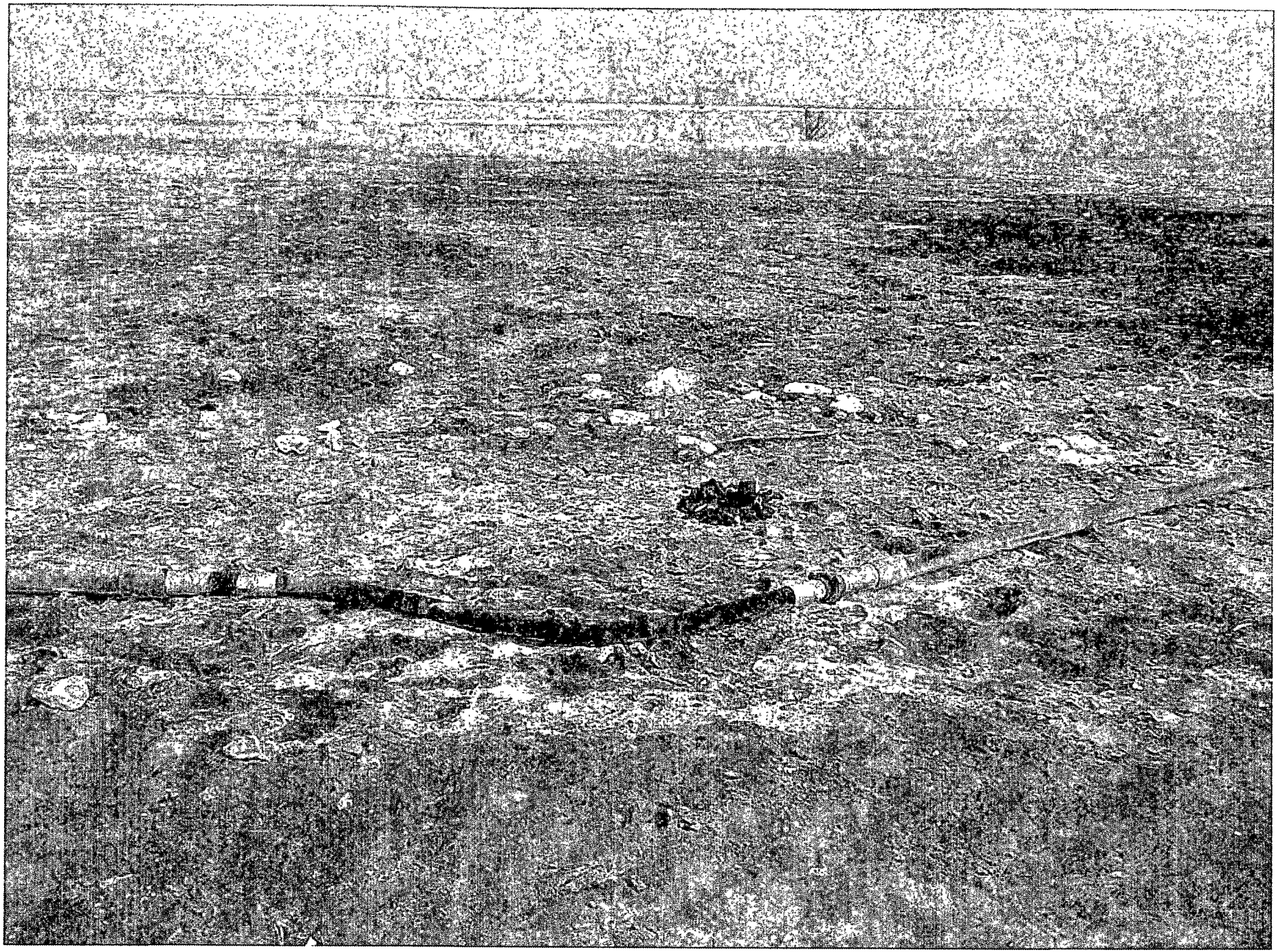


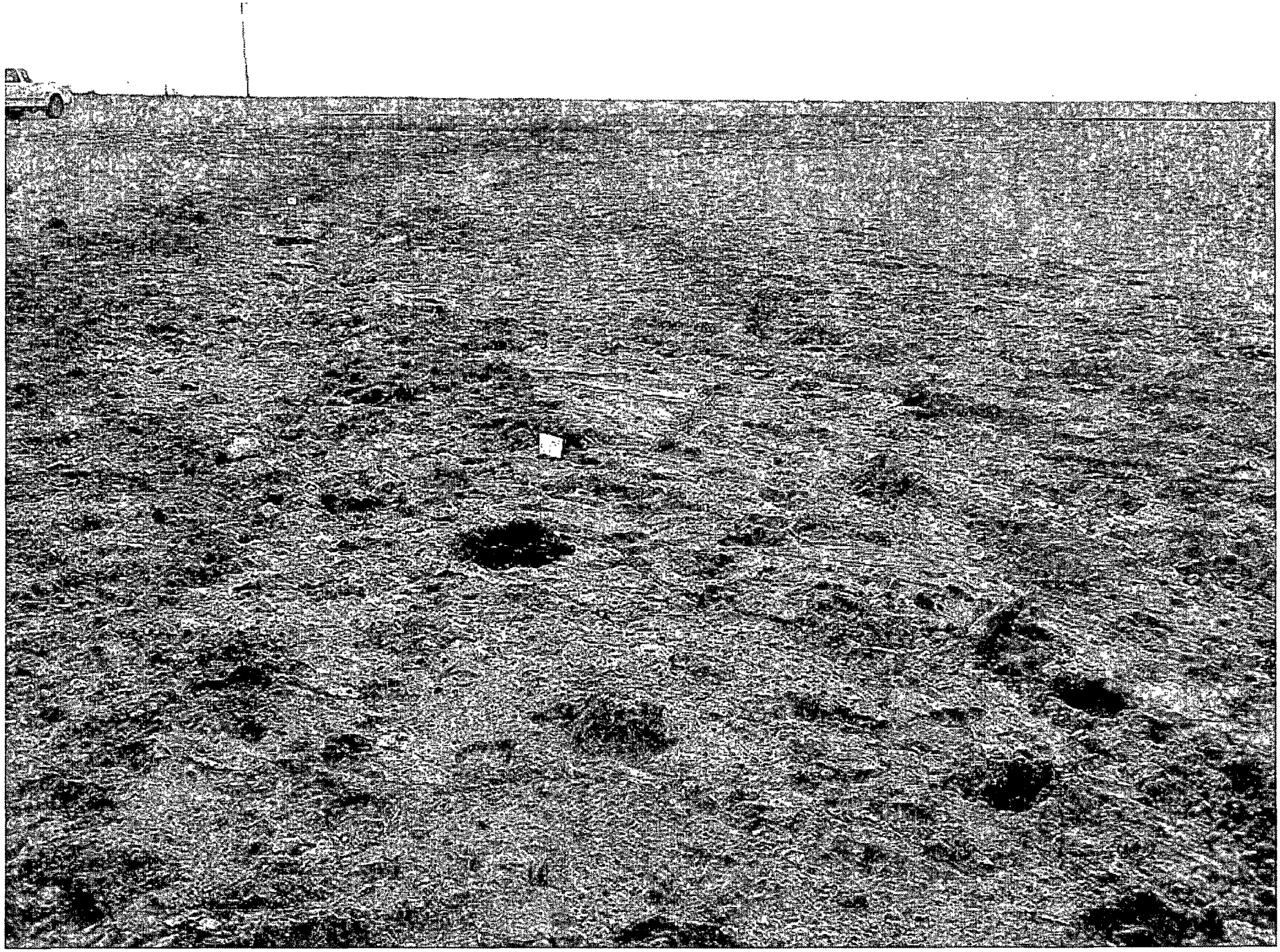


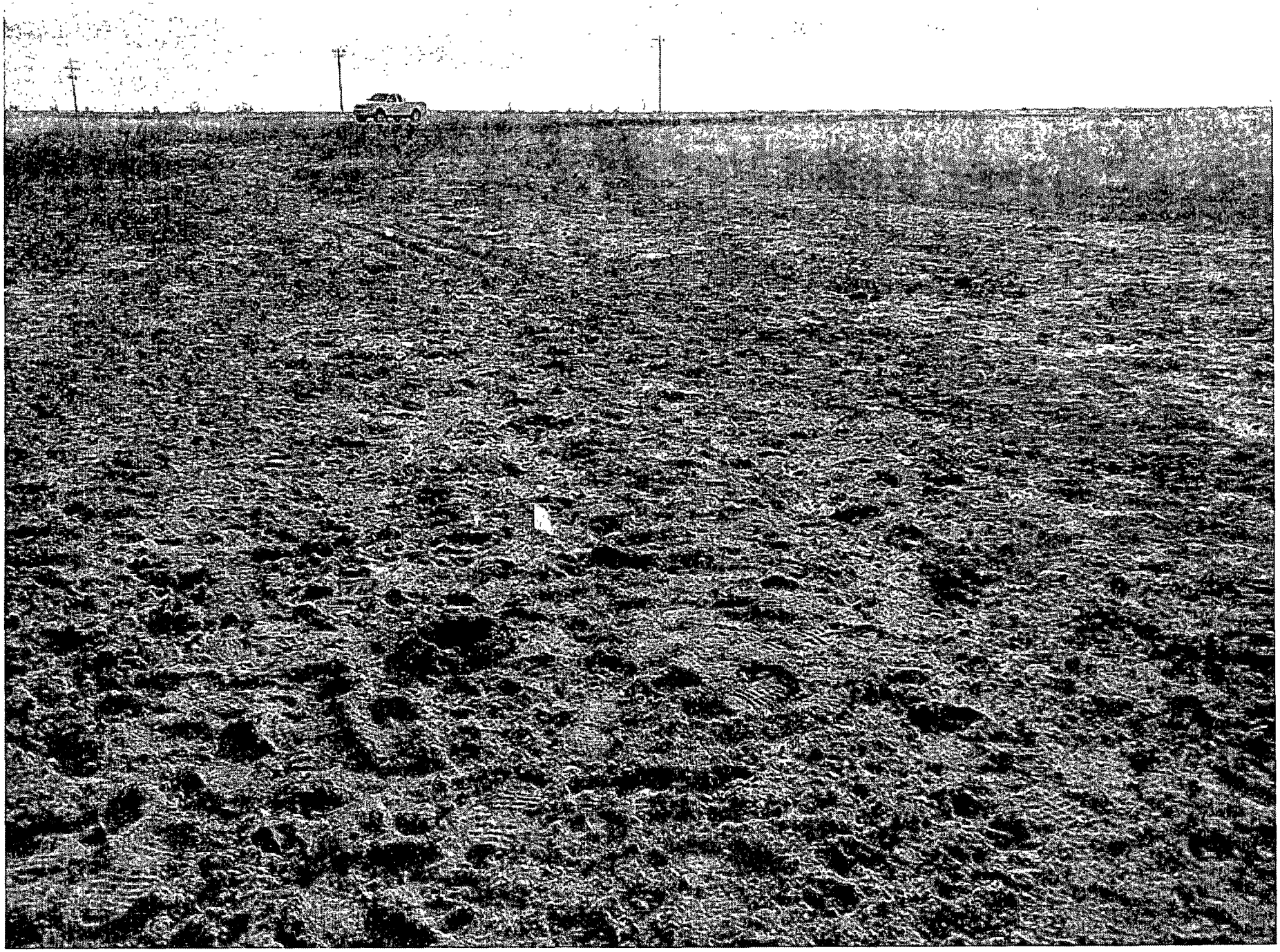


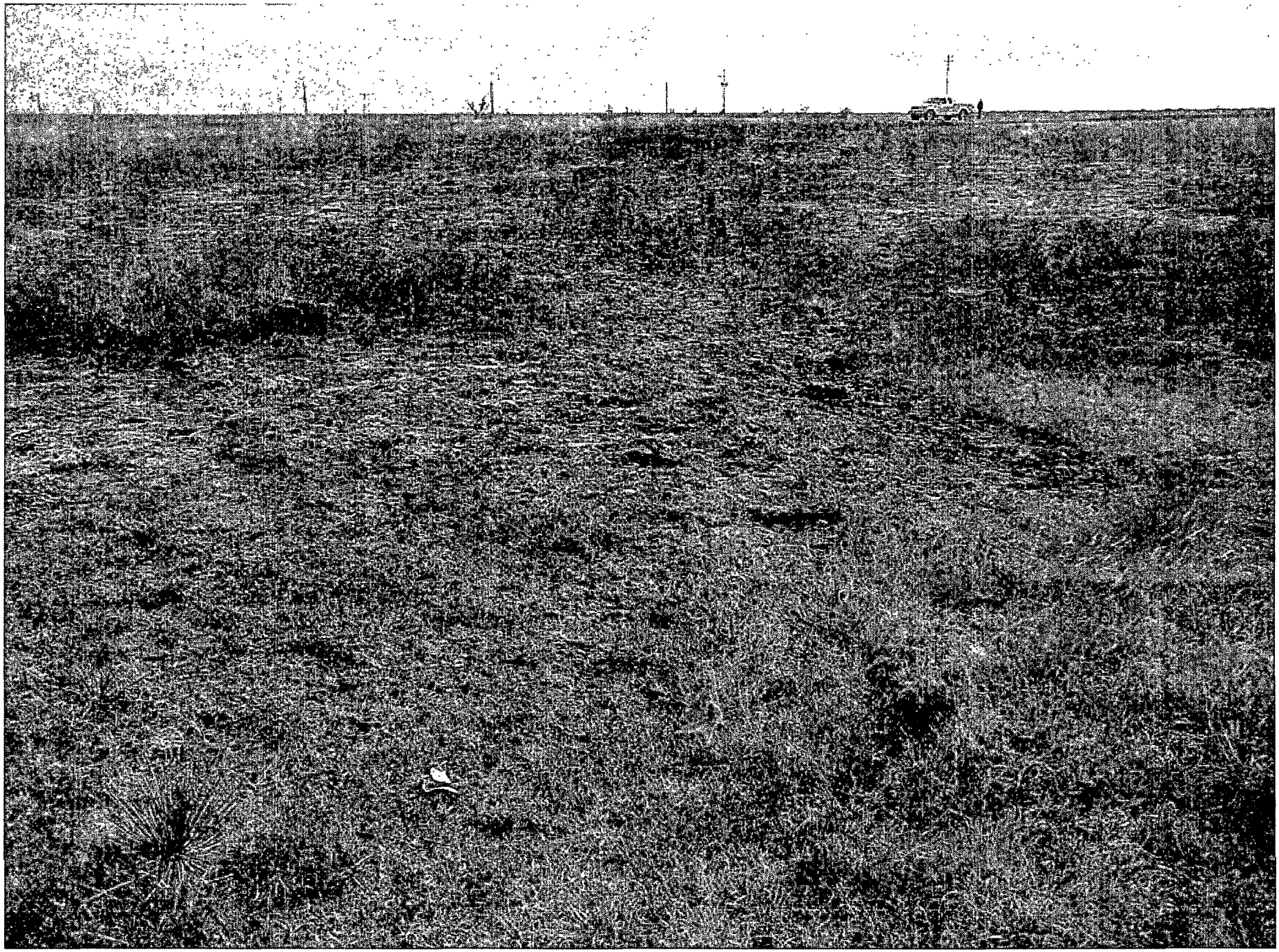


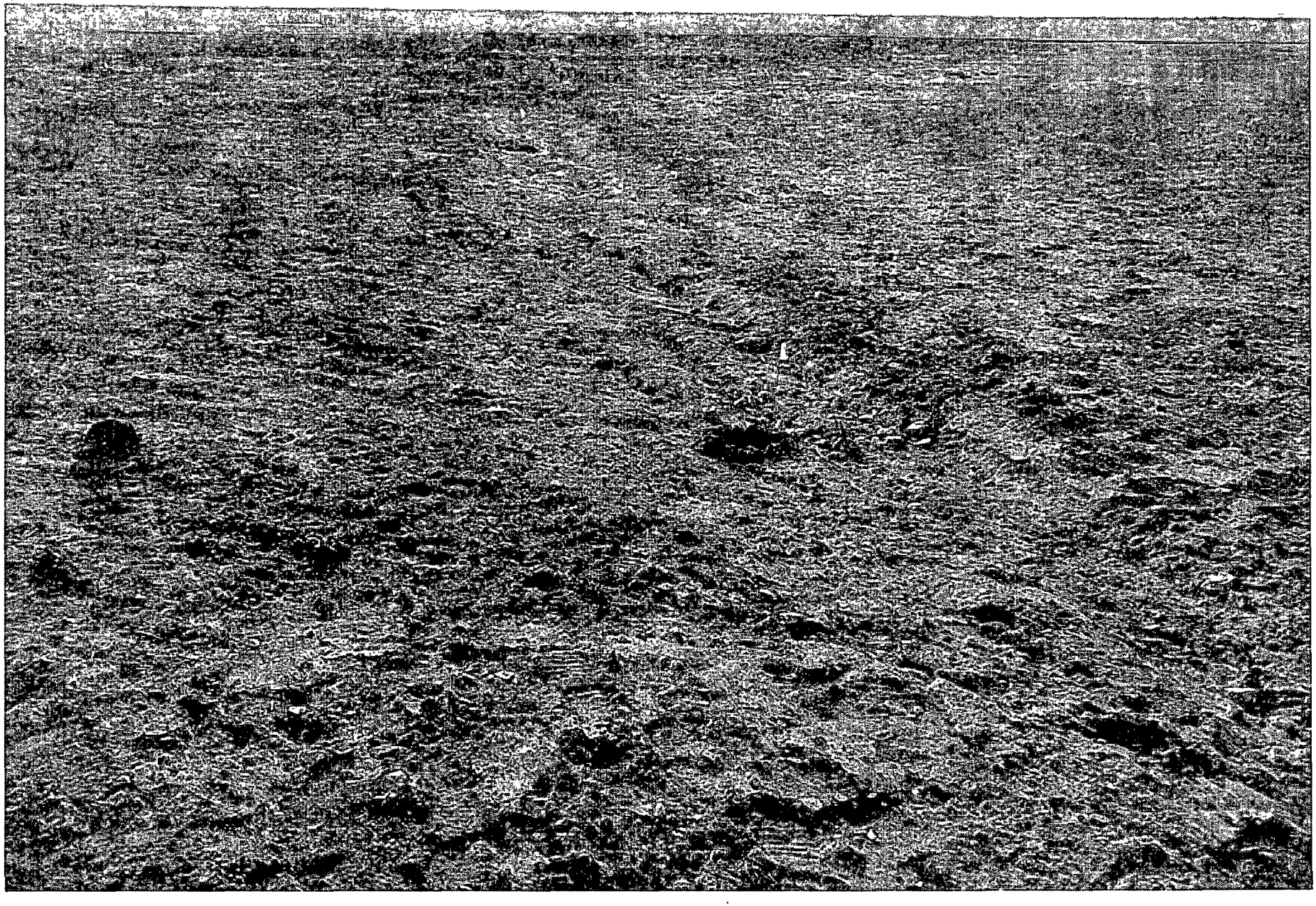


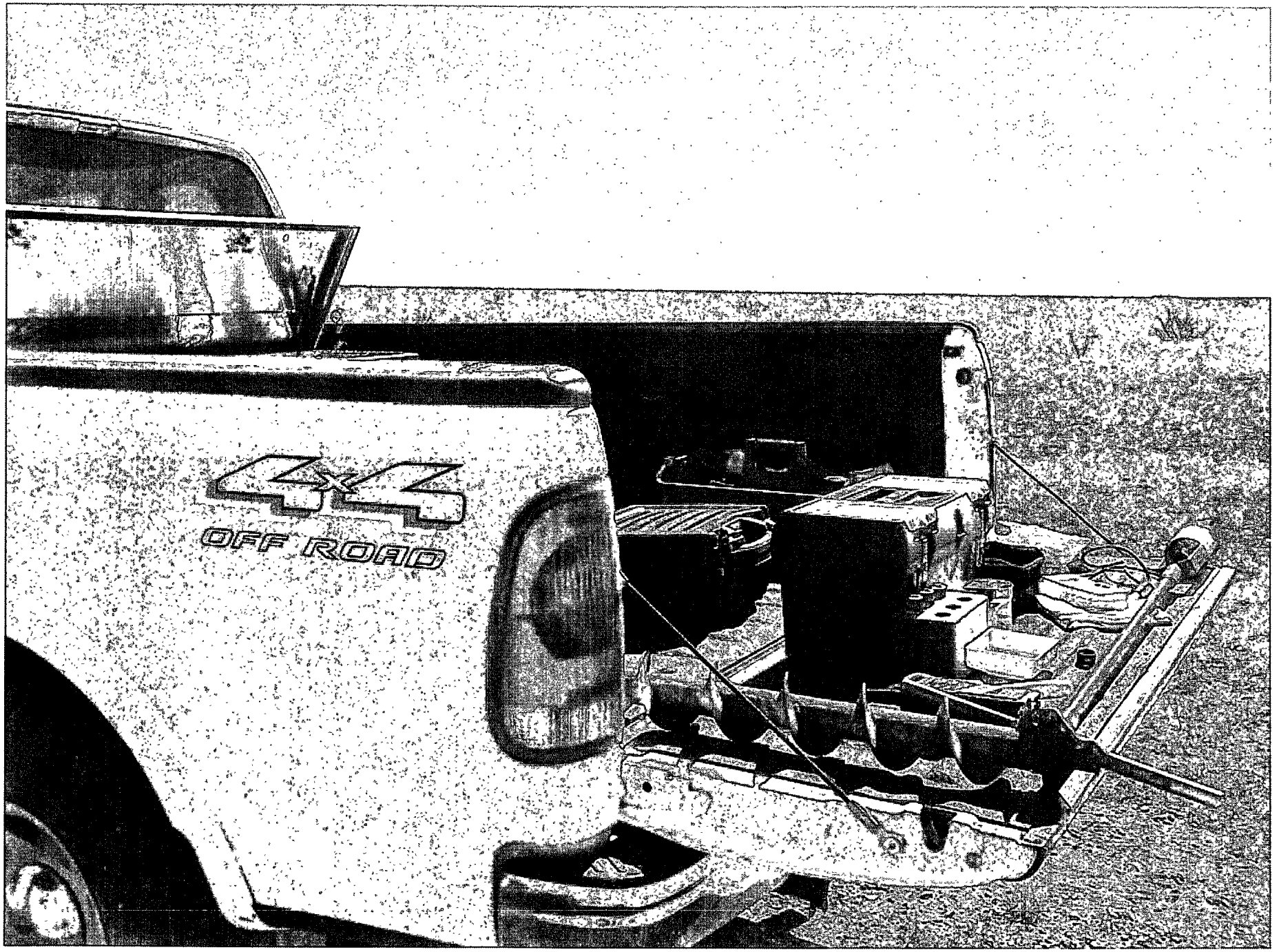











4x4
OFF ROAD

Summary Report

Andy Price
Baseline Solutions LLC
511 W. Ohio
P.O. Box 8061
Midland, TX 79708

Report Date: October 15, 2009

Work Order: 9101301

Project Location: Lea Co., NM
Project Name: Chalupa SWD #4

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
212175	AS	soil	2009-10-12	07:30	2009-10-12
212176	BS	soil	2009-10-12	07:41	2009-10-12
212177	CS	soil	2009-10-12	07:55	2009-10-12
212178	DS	soil	2009-10-12	08:10	2009-10-12
212179	ES	soil	2009-10-12	08:30	2009-10-12
212180	A-2.5	soil	2009-10-12	08:45	2009-10-12
212181	B-2	soil	2009-10-12	09:26	2009-10-12
212182	C-2.5	soil	2009-10-12	10:10	2009-10-12
212183	D-1	soil	2009-10-12	10:48	2009-10-12
212184	E-1	soil	2009-10-12	11:35	2009-10-12

Sample - Field Code		TPH DRO DRO (mg/Kg)		TPH GRO GRO (mg/Kg)
212175 - AS		<50.0		<1.00
212176 - BS		<50.0		**14.4**
212177 - CS		<50.0		**24.2**
212178 - DS		<50.0		<1.00
212179 - ES		<50.0		<1.00
212180 - A-2.5		<50.0		<1.00
212181 - B-2		<50.0		<1.00
212182 - C-2.5		<50.0		<1.00
212183 - D-1		<50.0		<1.00
212184 - E-1		<50.0		<1.00

Sample: 212175 - AS

continued ...

sample 212175 continued ...

Param	Flag	Result	Units	RL

Param	Flag	Result	Units	RL
Chloride		**35400**	mg/Kg	4.00

Sample: 212176 - BS

Param	Flag	Result	Units	RL
Chloride		**24500**	mg/Kg	4.00

Sample: 212177 - CS

Param	Flag	Result	Units	RL
Chloride		**28600**	mg/Kg	4.00

Sample: 212178 - DS

Param	Flag	Result	Units	RL
Chloride		**14000**	mg/Kg	4.00

Sample: 212179 - ES

Param	Flag	Result	Units	RL
Chloride		**22900**	mg/Kg	4.00

Sample: 212180 - A-2.5

Param	Flag	Result	Units	RL
Chloride		**733**	mg/Kg	4.00

Sample: 212181 - B-2

Param	Flag	Result	Units	RL
Chloride		**666**	mg/Kg	4.00

Sample: 212182 - C-2.5

Param	Flag	Result	Units	RL
Chloride		**510**	mg/Kg	4.00

Sample: 212183 - D-1

Param	Flag	Result	Units	RL
Chloride		**548**	mg/Kg	4.00

Sample: 212184 - E-1

Param	Flag	Result	Units	RL
Chloride		**595**	mg/Kg	4.00

LAB Order ID # 9101001 Page 1 of 1

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9
Lubbock, Texas 79424
Tel (806) 794-1296
Fax (806) 794-1298
1 (800) 378-1296

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200 East Sunset Rd., Suite E
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Tel (915) 585-3443
Fax (915) 585-4944
1 (888) 588-3443

8808 Camp Bowie Blvd. West, Suite 180
Ft. Worth, Texas 76116
Tel (817) 201-5260
Fax (817) 560-4336

Company Name: EnerVest Operating LLC Phone #: 432-352-6400

Address: (Street, City, Zip) 1001 Fannin Street, Ste. 800 Houston TX 77002 Fax #:

Contact Person: Andy Price E-mail: andyprice@grandecom.net

Invoice to: (if different from above) Ahn, Elroy Ardoin

Project #: Chalupa SWD #4 Project Name:

Project Location (including state): Sec. 13 T14S R33E Sampler Signature: Andy Price

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME
179	AS				✓							✓		10/12	7:30
176	BS				✓										7:41
177	CS				✓										7:55
178	DS				✓										8:10
179	ES				✓										8:30
180	A-2.5				✓										8:45
181	B-2				✓										9:26
182	C-2.5				✓										10:10
183	D-1				✓										10:48
184	E-1				✓							✓		10/12	11:35

ANALYSIS REQUEST (Circle or Specify Method No.)	
MTBE 8021B / 602 / 8260B / 624	
BTEX 8021B / 602 / 8260B / 624	
TPH 418.1 / TX1005 / TX1005 Ext(C35)	
TPH 8015 GRO / DRO / TVHC	✓
PAH 8270C / 625	
Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	
TCLP Metals Ag As Ba Cd Cr Pb Se Hg	
TCLP Volatiles	
TCLP Semi Volatiles	
TCLP Pesticides	
RCI	
GC/MS Vol. 8260B / 624	
GC/MS Semi. Vol. 8270C / 625	
PCB's 8082 / 608	
Pesticides 8081A / 608	
BOD, TSS, pH	
Moisture Content	✓
Chlorides	✓
Turn Around Time if different from standard	
Hold	

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp°C:
Andy Price		10/12/09	4:20		Trace	10/12/09	16:20	15.3°
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp°C:
Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp°C:

LAB USE ONLY
Intact Y / N
Headspace Y / N / NA
Log-in Review

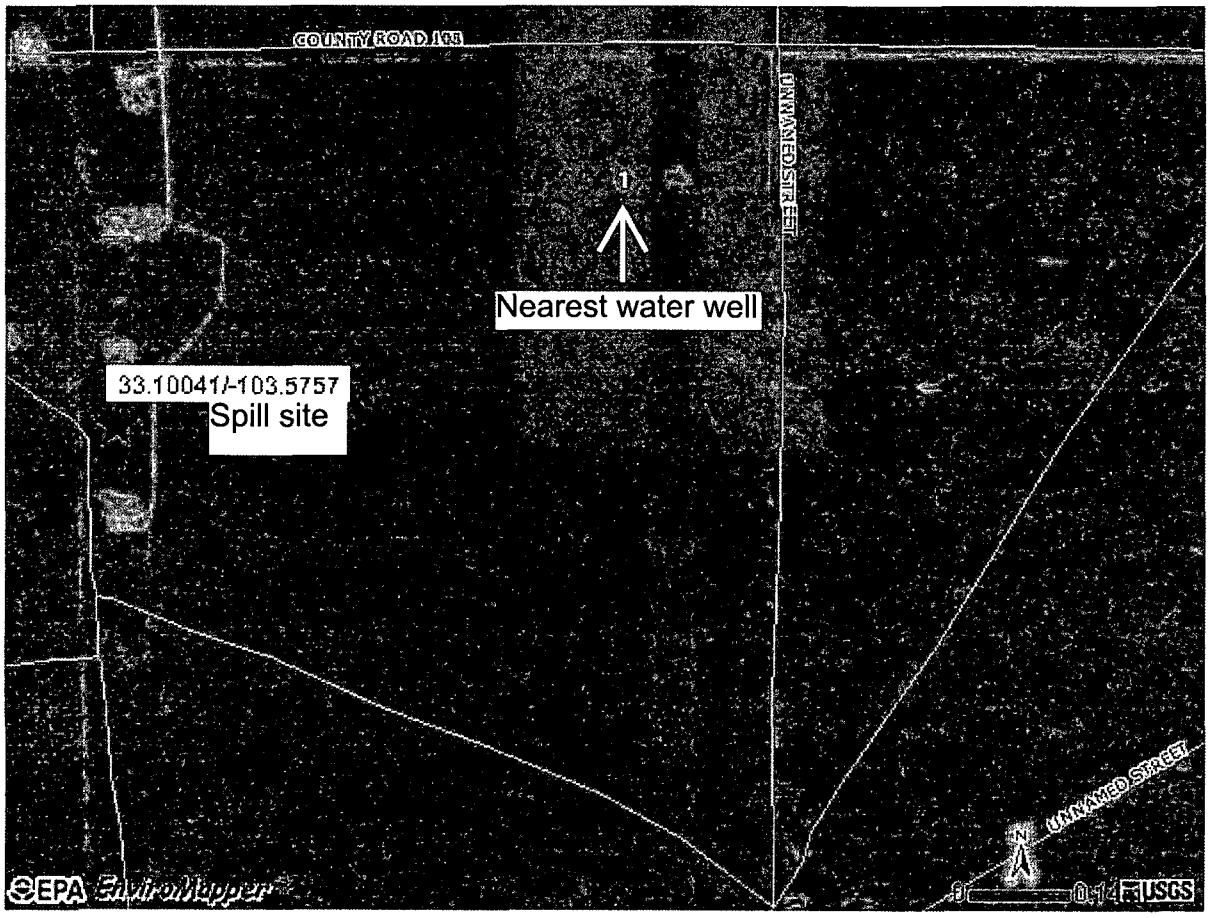
REMARKS: All tests-Midland

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # Carry-in

ORIGINAL COPY


COUNTY ROAD 175
UNNAMED STREET
1
Nearest water well
33.10041/-103.5757
Spill site
UNNAMED STREET
N
0
0.14
EPA EnviroMapper
USGS

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 14S Range: 33E Sections: 13

NAD27 X: Y: Zone: Search Radius:

County: LE Basin: Number: Suffix:

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

POD / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | iWATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 09/13/2007

								(Depth Water in Feet)		
Bsn	**Tws**	**Rng**	**Sec**	**Zone**	**X**	**Y**	**Wells**	**Min**	**Max**	**Avg**
L	14S	33E	13				1	80	80	80

Record Count: 1

New Mexico Office of the State Engineer
Point of Diversion Summary

Back

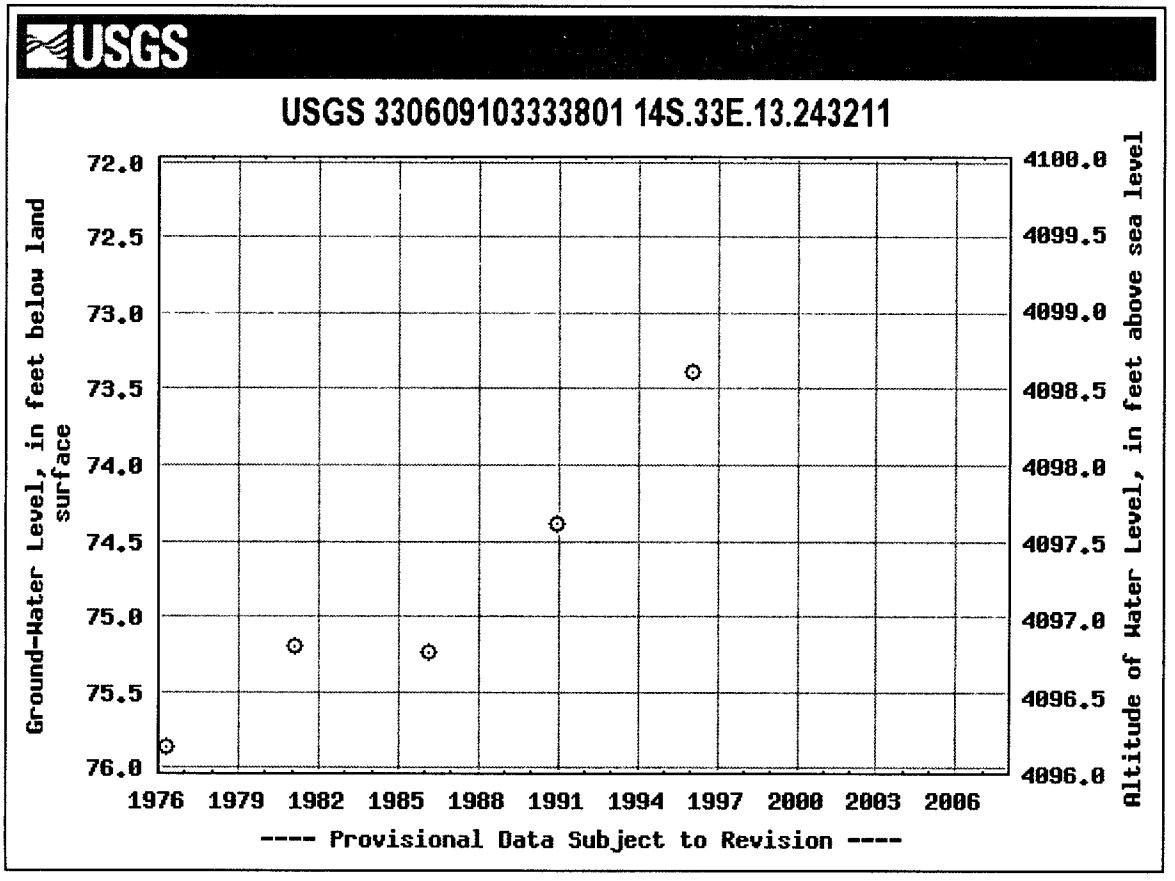
(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest)

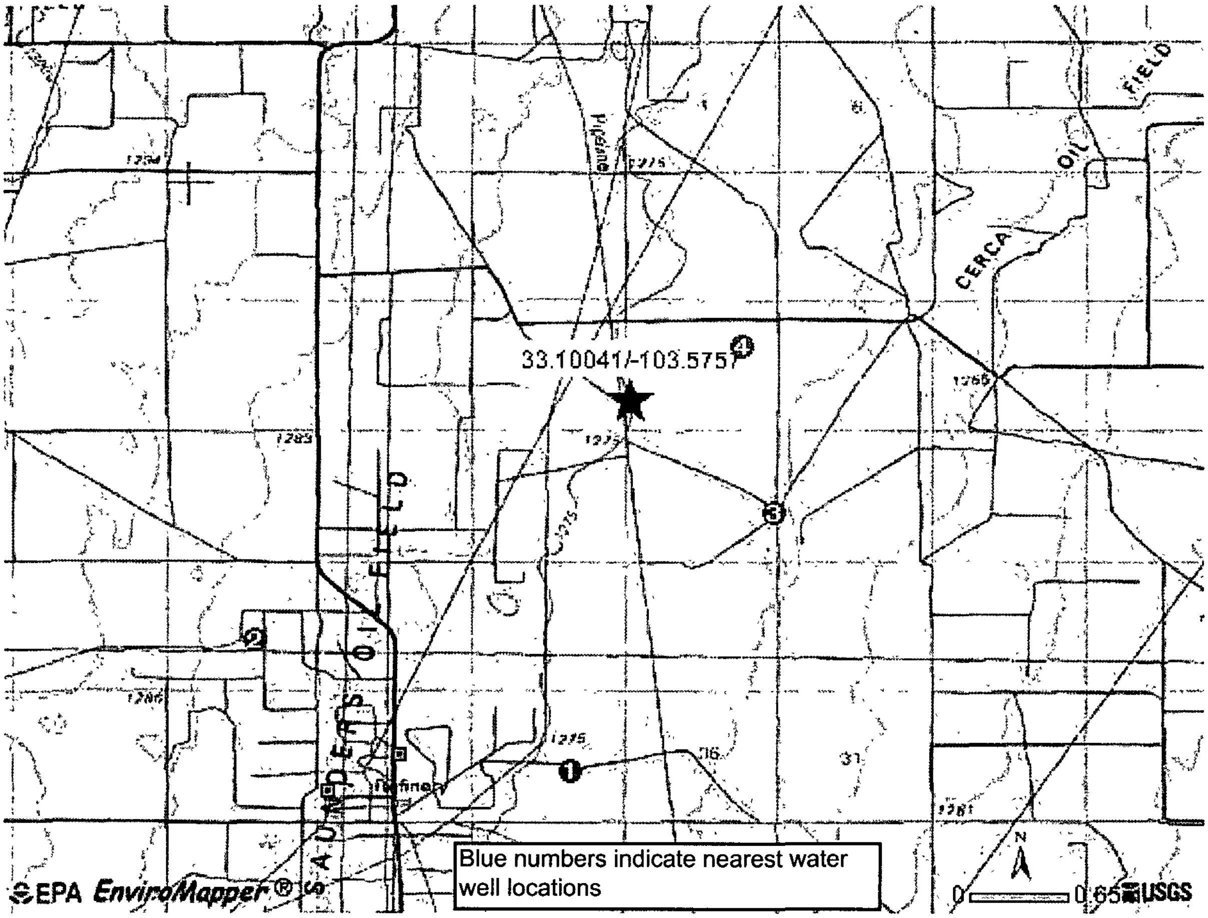
POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y
L 04866	14S	33E	13	2	4				

Driller Licence: 33 TATUM, CLAUDE E.
Driller Name: TATUM, CLAUDE E.
Source: Shallow
Drill Start Date: 04/09/1962
Drill Finish Date: 04/12/1962
Log File Date: 04/19/1962
PCW Received Date:
Pump Type:
Pipe Discharge Size:
Casing Size: 7
Estimated Yield:
Depth Well: 145
Depth Water: 80

Water Bearing Stratifications:	Top	Bottom	Description
	80	145	Other/Unknown

Casing Perforations:	Top	Bottom
	90	145


USGS
USGS 330609103333801 14S.33E.13.243211
Ground-Water Level, in feet below land surface
72.0
72.5
73.0
73.5
74.0
74.5
75.0
75.5
76.0
Altitude of Water Level, in feet above sea level
4100.0
4099.5
4099.0
4098.5
4098.0
4097.5
4097.0
4096.5
4096.0
1976 1979 1982 1985 1988 1991 1994 1997 2000 2003 2006
---- Provisional Data Subject to Revision ----



33.10041/-103.5757
CERCA
OIL
FIELD
Pipeline
Refinery
Blue numbers indicate nearest water well locations
EPA EnviroMapper®
0
0.65
USGS

ENERVEST

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 14-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
Yates Petroleum Corporation	Chalupa "AAD" State	4

Unit Letter	Section	Township	Range	County
M	13	14S	33E	Lea

Actual Footage Location of Well:
330' feet from the South line and 330' feet from the West line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
4180.9 GR	Bough "C"	Saunders Permo Upper Penn	40 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

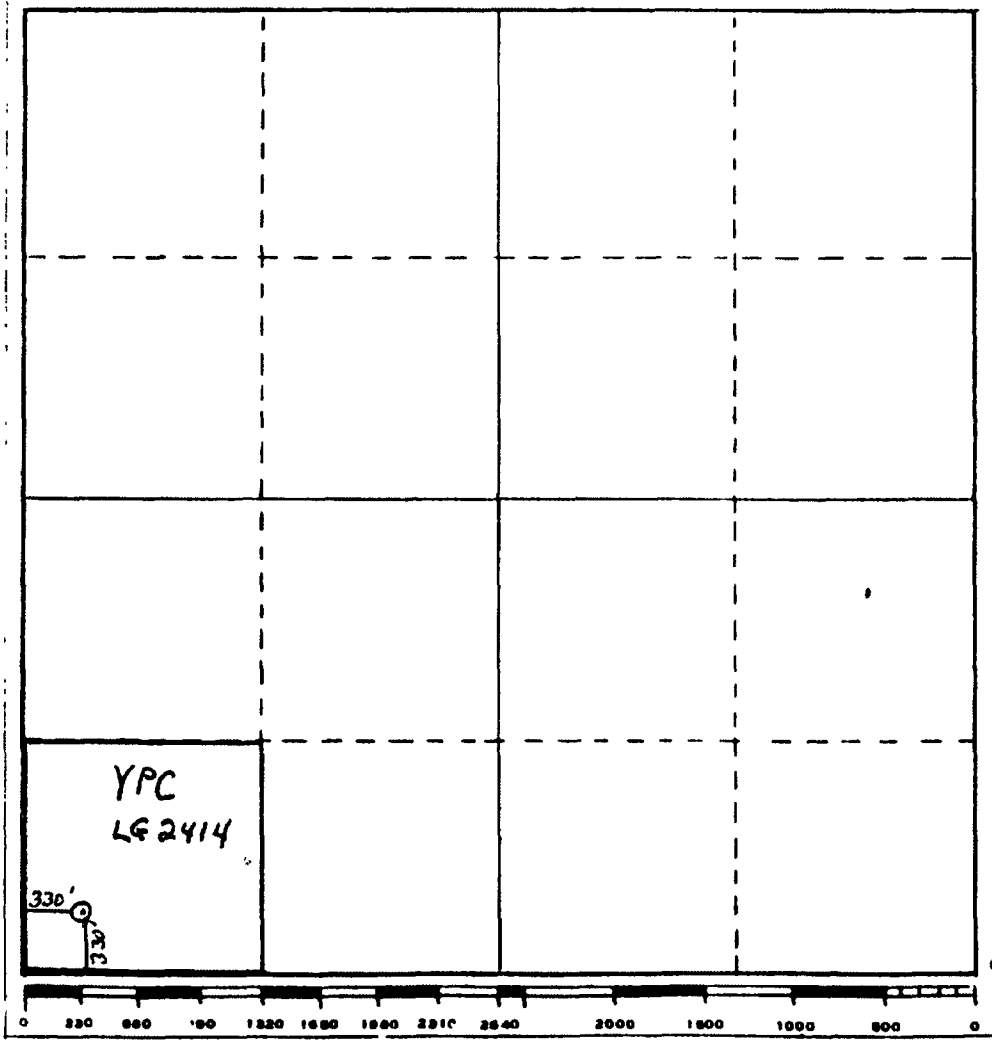
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

[ ] Yes [x] No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Clifton May

Name: Clifton May

Position: Regulatory Agent

Company: Yates Petroleum Corporation

Date: March 20, 1985

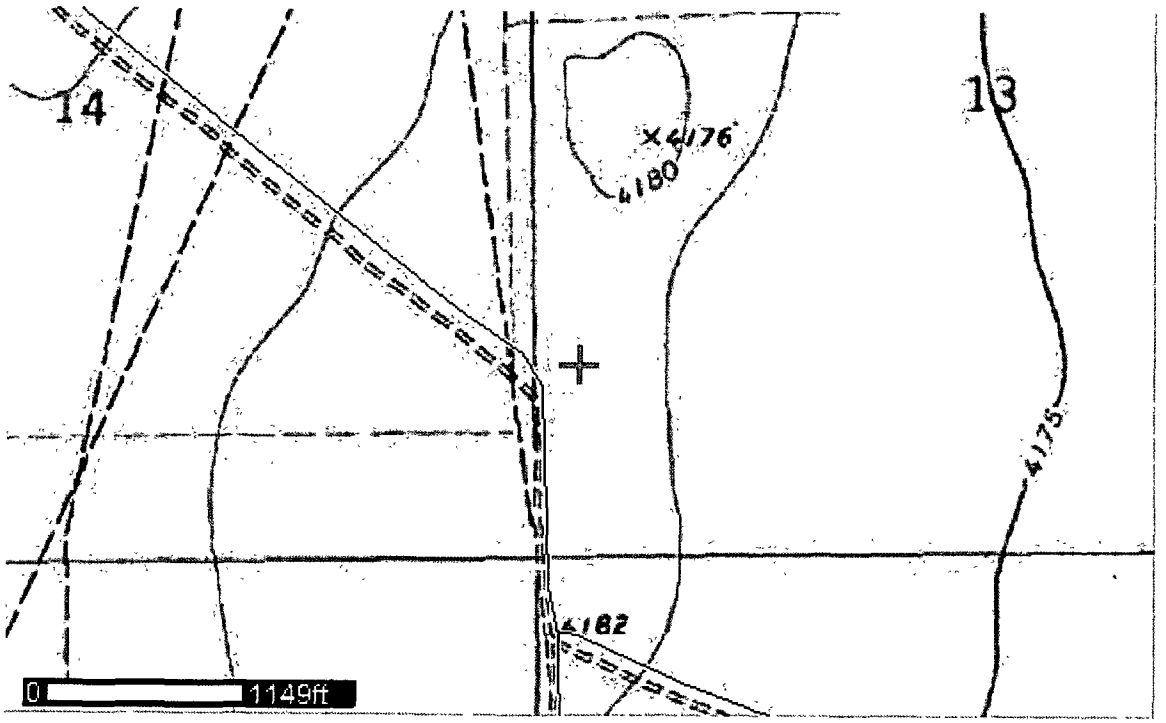
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

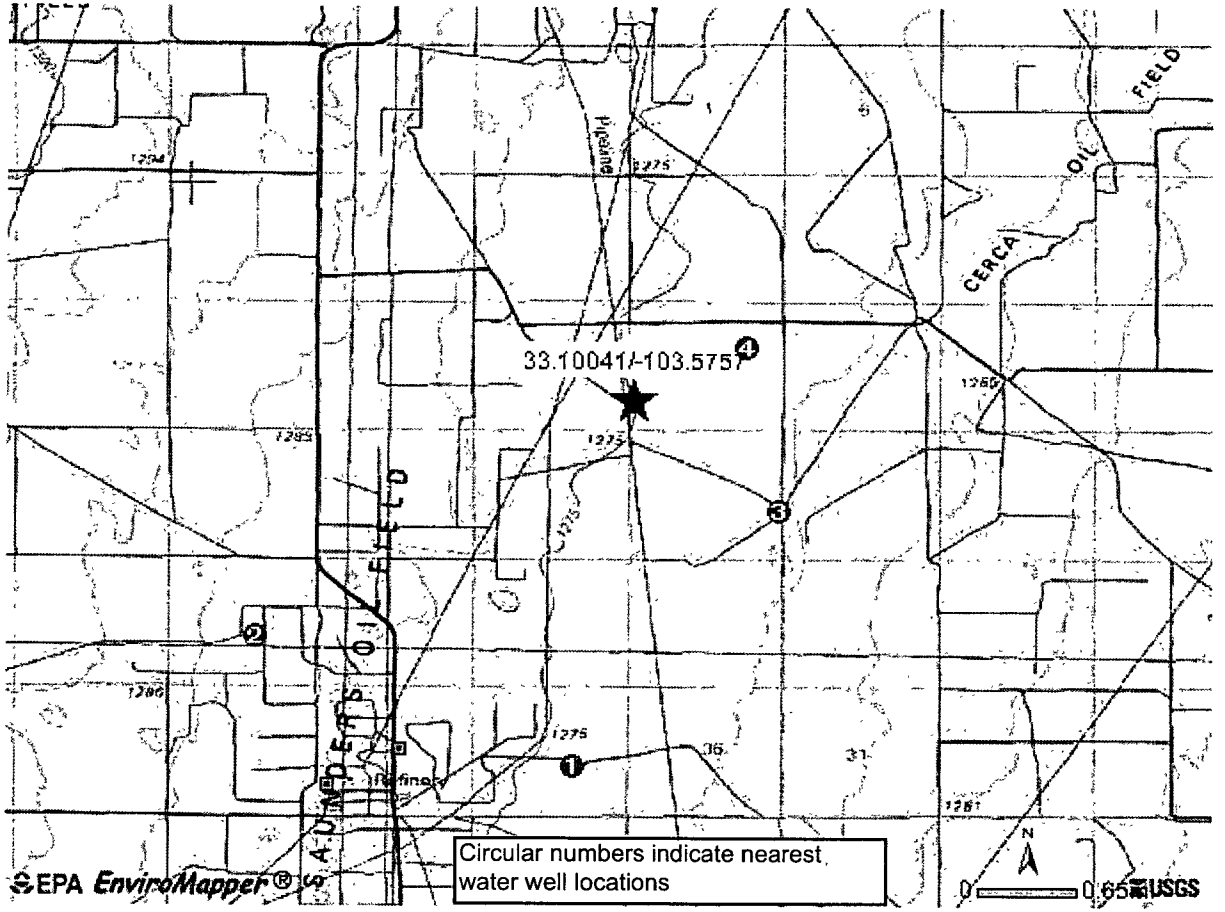
Date Surveyed: 3-18-85

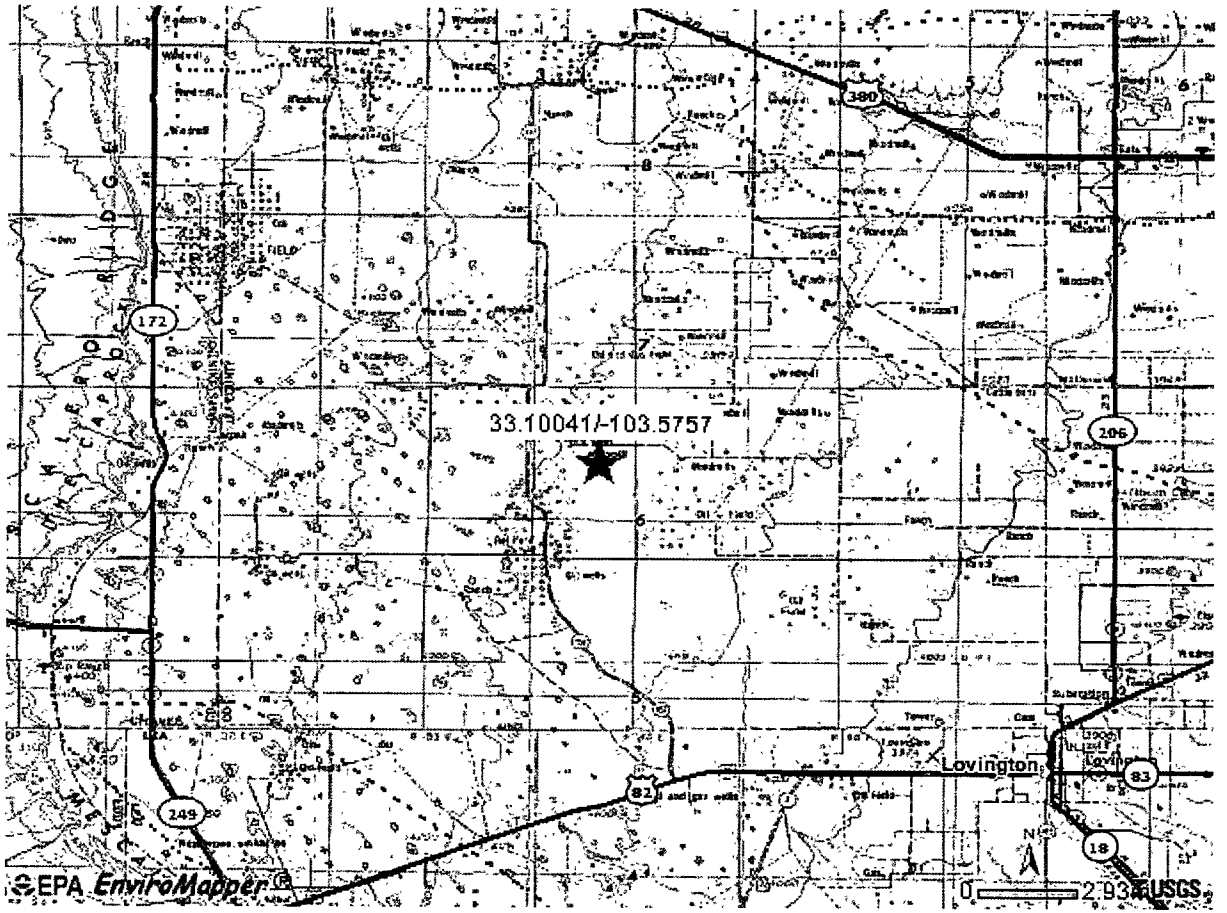
Registered Professional Engineer and/or Land Surveyor

NEW MEXICO — HERSCHEL L. JONES — 3640 — REGISTERED LAND SURVEYOR

Certificate No. 3640


14
13
4176
4180
4175
4182
0
1149ft


33.10041/-103.5757
Pipeline
CERCA OIL FIELD
Refinery
Circular numbers indicate nearest water well locations
N
0
0.65
EPA EnviroMapper®
USGS


33.10041/-103.5757
380
172
206
82
83
249
18
Lovington
EPA EnviroMapper
0
2.93
USGS

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company EnerVest Operating LLC	Contact Robert Griffin
Address P.O. Box 38 Loco Hills, New Mexico 88255	Telephone No. 1-575-365-8555
Facility Name Chalupa #4 SWD	Facility Type SWD

Surface Owner	Mineral Owner	Lease No. 306001

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
M	13	14S	33E		330		330	LEA

Latitude 103.575385153086 **Longitude** 33.0882452830192

NATURE OF RELEASE

Type of Release Produced Water	Volume of Release 20 bbls	Volume Recovered 3 bbls
Source of Release SW injection line	Date and Hour of Occurrence	Date and Hour of Discovery 9-30-09 9am
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Buddy Hill	
By Whom? Douglas Watne	Date and Hour 9-30-09 10am Mountain time	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*
Change over swedge on injection pipeline corroded. Replaced swedge, inspected line.

Describe Area Affected and Cleanup Action Taken.*
Vacuumed up free liquids. Samples to be taken into lab for analysis. Report will be forwarded to Geoffrey Leking

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Douglas Watne	OIL CONSERVATION DIVISION	
Printed Name: Douglas Watne	Approved by District Supervisor:	
Title: HSE Technician	Approval Date:	Expiration Date:
E-mail Address: dwatne@enervest.net	Conditions of Approval:	Attached ☐
Date: 9-30-09 Phone: 1-979-542-2607		

* Attach Additional Sheets If Necessary

PHASE II
ENVIRONMENTAL SAMPLING ASSESSMENT

EnerVest Operating, LLC

Chalupa #4 SWD
Environmental Sampling
Produced Water Flow Line Leak/Spill
Section 13, T14S – R33E – API #30-025-29184
Lea County, NM
Coordinates:
Longitude -103.57570
Latitude 33.10041

March 5th, 2009

A Report For:
New Mexico Oil Conservation Division, Hobbs District
EnerVest Operating LLC, Mr. Elroy Ardoin

Prepared by:
Baseline Solutions LLC
Andy Price
511 West Ohio, Suite 400
Midland, Texas 79701

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7.0 CONCLUSIONS / RECOMMENDATIONS

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B. Lab Report
C. Chain of Custody
D. Maps
E. Instrumentation
F. Hydrology
G. OCD Form C141

EXECUTIVE SUMMARY

Baseline Solutions conducted a Phase II Environmental Sampling Assessment at the Chalupa #4 SWD saltwater spill site. The discharge was the result of a flowline pipe connection leak located approximately 400yds north of the wellhead. Approximately 30 barrels of saltwater was released.

Section 13, T14S – R33E, Lea County, NM

Coordinates: Longitude -103.57570 Latitude 33.10041

A summary of the lab analysis data, research and observations gathered during the sampling investigation is as follows:

Chalupa #4 SWD

Lab results for Chloride levels are listed below (please see app. B).

Sample field code	**Chloride PPM**		Sample field code	**TPH PPM**
AS - surface	28600		AS - surface	1200
BS - surface	24100		BS - surface	<50.0
CS - surface	21000		CS - surface	<50.0
DS - surface	16300		DS - surface	<50.0
ES - surface	12700		ES - surface	<50.0
FS - surface	15400		FS - surface	104
GS - surface	19500		GS - surface	132
A3' - 3ft depth	176		A3' - 3ft depth	<50.0
B1' - 1ft. depth	<100		B1' - 1ft. depth	<50.0
C1' - 1ft. depth	<100		C1' - 1ft. depth	<50.0
D2' - 2ft. depth	<100		D2' - 2ft. depth	<50.0
E2' - 2ft. depth	<100		E2' - 2ft. depth	<50.0
F1' - 1ft. depth	<100		F1' - 1ft. depth	<50.0
G1' - 1ft. depth	<100		G1' - 1ft. depth	<50.0

NMOCD acceptable level for Chlorides is 250ppm and less.
NMOCD acceptable level for Total Petroleum Hydrocarbons is 5000ppm and less.

Contaminated Area Delineated: Soil borings with field and laboratory analysis indicate the saltwater spill to be an approximate averaged surface area of 305ft X 20ft. An estimated 338cuyds of soil will need to be removed and backfilled.

OCD Site Ranking: No Surface hydrology issues were identified for surface run-off due to topographical gradient and rain fall average. Subsurface hydrology data indicates groundwater for this area to be at an approximate average depth of 76.6ft. **The OCD site ranking is considered to be 10 or less (please see section 5 in the body of this report).**

Conclusion:
Chloride contamination for spill area is to an average depth of 1' to 1 ½ '. TPH contamination consists in most part within a 20' radius of the point source of flowline leak.

Recommendation: Conduct "Dig & Haul" remediation for spill area to an average depth of 1ft to 2 ft. Estimated soil disposal and backfill is 338cuyds.

1.0 INTRODUCTION

Baseline Solutions, (Andy Price) was retained by EnerVest Operating, LLC of Houston Texas, to conduct a Phase II Environmental Sampling Investigation at the Chalupa #4 SWD, Section 13, T14S – R33E, Lea County, NM, Coordinates: Longitude - 103.57570 Latitude 33.1004.

1.1 Site Description / Location

A. Spill Location
- Legal Description:
  Chalupa #004
  Flow Line Leak/Spill approximately 400yds north of wellhead
  330' FSL & 330' FSL Unit "M"
  Section 13, T14S – R33E
  Lea County, NM
  Coordinates: Longitude -103.57570 - Latitude 33.10041
  Lease #LG-2414 – API#30-025-29184
- Driving Directions: The location may be reach by heading west out of Lovington on Hwy 82 about 25 miles – come to Hwy 459 and turn north/right, go approximately 8 miles to Anderson Rd., turn east/right, immediately past S curve turn south, follow lease road south, arriving at the Chalupa #004, SWD injection well. The spill area is approximately 400yds north of well head.

2.0 Purpose

The purpose of this investigation was to quantify the level of Chlorides and Total Petroleum Hydrocarbons (TPH), and to delineate the area of contamination for spill site.

3.0 PROCEDURES AND METHODS

The procedures and methods for this project were conducted according to EPA protocol and conducted in a professional manner within parameters established by regulatory and industry standards.

A. Sampling Methods and Procedures
- Visual site reconnaissance of entire property with photos
- Grab samples were taken and screened for Chlorides with an Electrical Conductivity Meter (Milwaukee Model SM802). This process is used to identify any elevated levels for chlorides for a specific depth and area.
- Grab samples were taken and screened for Total Petroleum Hydrocarbons (TPH), with a Photoionization Detector (Mini Rae Plus - model # PGM-76IS). This process is used to identify any elevated levels for TPH for a specific depth and area.
- The parameter of the spill area was delineated first by visual reconnaissance and screening surface samples and then with soil borings.

- A site grid was developed from data collected with grab sample screening.
- Grid samples were taken and combined within specific areas which made up the identified composite samples.
- Samples were systematically taken from soil borings at surface and 1ft intervals. Samples were screened with an EC meter and PID detector.
- Sampling Grid: Areas were identified as A, B, C, D, E, F, G.
  - **Chlorides:** Highest chloride levels were **28600ppm** at surface level in grid area "A". This was the source point where the actual leak occurred. Acceptable levels for chlorides were reached at a 3ft depth for grid area A. Grid areas D & E had acceptable levels at a 1ft to 2ft depths. Areas B, C, F, & G were at an acceptable level at a 1ft depth.
  - **TPH:** Highest TPH levels were **1200ppm** at surface level in area A.
- Lab Samples: Samples were taken from grid areas A, B, C, D, E, F, & G.
- Decontamination procedures were maintained
- All samples were kept on ice until delivered to lab
- A field log was maintained
- A formal chain of custody was maintained
- Composite samples were delivered to Trace Analysis in Midland, TX - an EPA approved lab.

4.0 INVESTIGATION RESULTS

Lab results are listed below (please see app. C).

Sample field code	**Chloride PPM**		Sample field code	**TPH PPM**
AS - surface	28600		AS - surface	1200
BS - surface	24100		BS - surface	<50.0
CS - surface	21000		CS - surface	<50.0
DS - surface	16300		DS - surface	<50.0
ES - surface	12700		ES - surface	<50.0
FS - surface	15400		FS - surface	104
GS - surface	19500		GS - surface	132
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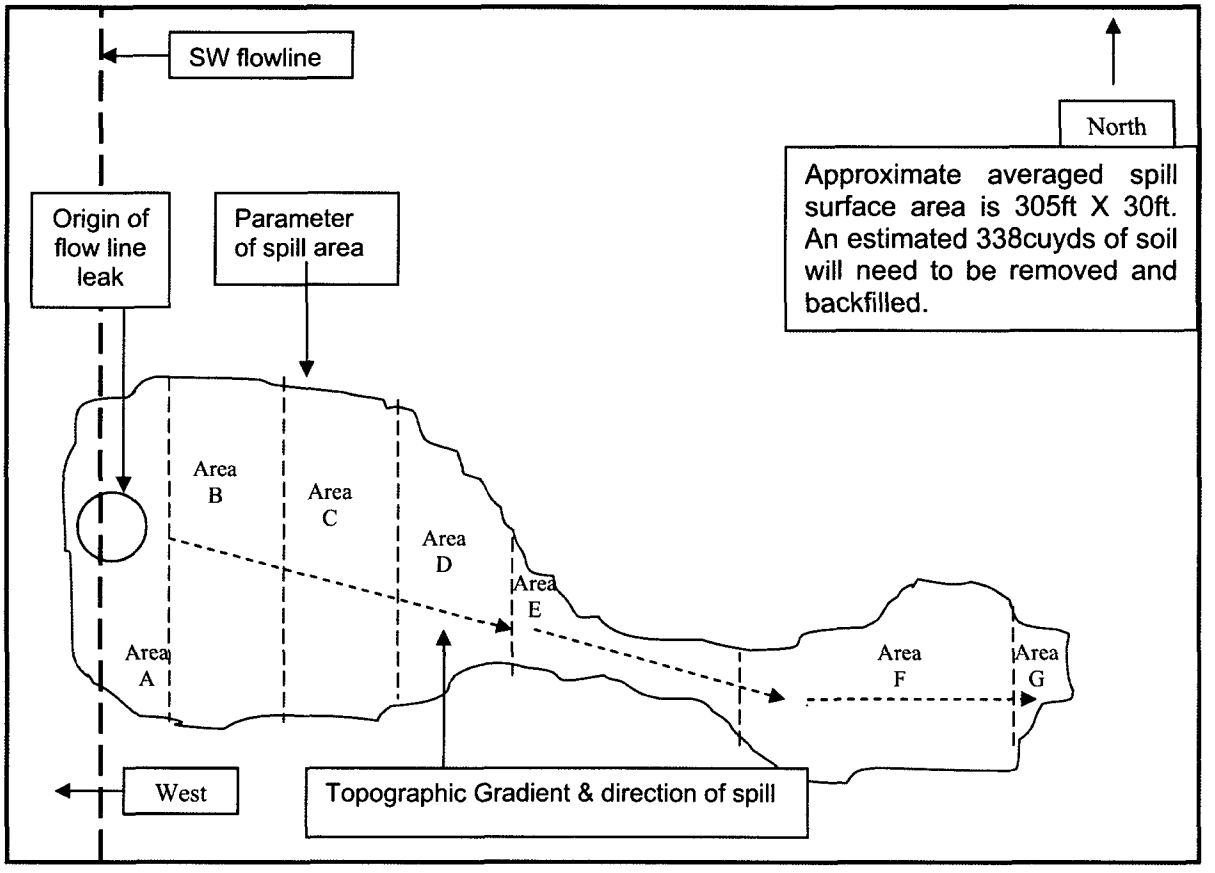
C1' - 1ft. depth	<100		C1' - 1ft. depth	<50.0
D2' - 2ft. depth	<100		D2' - 2ft. depth	<50.0
E2' - 2ft. depth	<100		E2' - 2ft. depth	<50.0
F1' - 1ft. depth	<100		F1' - 1ft. depth	<50.0
G1' - 1ft. depth	<100		G1' - 1ft. depth	<50.0

NMOCD acceptable level for Chlorides is 250ppm and less.
NMOCD acceptable level for Total Petroleum Hydrocarbons is 5000ppm and less.



5.0 NMOCD SITE RANKING (see app. F)

SITE RANKING – According to NMOCD "Spill Clean up Guidelines" for "Unsaturated Contaminated Soils"

The general site characteristics obtained during the site assessment were used to determine the appropriate soil remediation action level. A risk based approach was taken for the site evaluation. Site soils were contaminated by saltwater and petroleum constituents. The site was scored according to the ranking criteria below to determine the relative threat (if any), to public health, fresh waters and the environment.

Ranking Criteria

Depth To Ground Water	Ranking Score
<50 feet	20
50 - 99	**10**
>100	0

- **Depth to ground water is approximately 76'**, according to NM State Engineers Office and USGS information (please app. F). Measurements were taken from the nearest water wells (on record). Depth to groundwater is estimated to be approximately 76'.

- **The NMOCD rating is considered to be 10 or less.**
  Wellhead Protection Area

<1000 feet from a water source, or; <200 feet from private domestic water source	
Yes	20
No	**0**

Distance To Surface Water Body

<200 horizontal feet	20
200 - 1000 horizontal feet	10
>1000 horizontal feet	**0**

From NMOCD "Spill Clean up Guidelines"
Recommended remediation action level. The total ranking score determines the degree of remediation that may be required at any given site. The total ranking score is the sum of all four individual ranking criteria listed in Section IV.A.2.a.

Total Ranking Score for this spill site is considered to be 10.

Recommended remediation action is to conduct **"dig and haul"** operations with soil being disposed of at the nearest OCD approved disposal site.

6.0 REGULATORY REVIEW

A. The NMOCD form C141 was submitted and approved on October 23rd, 2007. The expiration date for remedation, listed by OCD on the C141 of the site is December 23rd, 2007. This sampling investigation is intended to be in compliance with New Mexico Oil Conservation Division:

- Rule 116 RELEASE NOTIFICATION AND CORRECTIVE ACTION [1-1-50...2-1-96; A, 3-15-97]
  1. 116.D. CORRECTIVE ACTION: The responsible person must complete Division approved corrective action for releases which endanger public health or the environment. Releases will be addressed in accordance with a remediation plan submitted to and approved by the Division or with an

  abatement plan submitted in accordance with Rule 19 (19 NMAC 15.A. 19). [3-15-97]
- Rule 19 (19 NMAC 15.A. 19). [3-15-97].

7.0 CONCLUSIONS / RECOMMENDATIONS

Conclusion:
Chloride contamination for spill area is to an average depth of 1' to 1 ½ '. TPH contamination consists in most part within a 20' radius of the point source of flowline leak.
Recommendation:

- **Conduct "Dig & Haul"** remediation for spill area to an estimated average depth of 1ft to 2 ft. Deliver excavated soil to the nearest approved OCD disposal site. Estimated soil for disposal is 338cuyds and the same amount for backfill.

- **Complete Closing Report** in compliance with OCD requirements.
  - Lab analysis insuring chloride contamination has been removed to less than 250ppm
  - Lab analysis insuring TPH removed to less than 5000ppm
  - List OCD approved disposal site where contaminated soil disposed of.
  - Grade site to match original topography and reseed according to listed BLM seed mix.
  - Submit formal closing report to NMOCD office in Hobbs, NM

8.0 Limitations

This report was prepared exclusively for use by EnerVest Operating. The contents of the report shall not be disseminated to, or used by any other party without EnerVest Operating written consent.
Baseline Solutions hereby gives notice that any statement or opinion in this report shall not be construed to create any warranty or representation that the real property on which the investigation was conducted is free of pollution or complies with any or all applicable regulatory or statutory requirements, or that the property is fit for any particular purpose.
Unless otherwise indicated in this report, no attempt was made to check on the compliance of present or past owners of the site with federal, state or local laws and regulations.
The conclusions presented in this report were based on the services described, and not on specific tasks or procedures beyond the scope of described services or the time and budgetary constraints imposed by EnerVest Operating.
Person or entity considering use, acquisition, or other involvement or activity concerning the property shall be solely responsible for determining the adequacy of the property for any and all uses for which that person or entity shall use the property. Any person or entity considering the use, acquisition, or other involvement or activity concerning the property which is the subject of this report should enter into any use, occupation, acquisition, or the like on sole reliance of its own judgment and on its own personal investigation of such property, and not in reliance on any representation made by Baseline Solutions regarding such property, the character quality, or its value. Baseline Solutions performed environmental services in a professional manner using that degree of skill and care exercised for similar projects under similar conditions by reputable and competent environmental consultants. Baseline Solutions shall not be responsible for conditions or consequences arising from relevant facts that were concealed, withheld, or not fully disclosed at the time the environmental services were conducted.

QUALIFICATIONS AND SIGNATURE OF ENVIRONMENTAL PROFESSIONAL

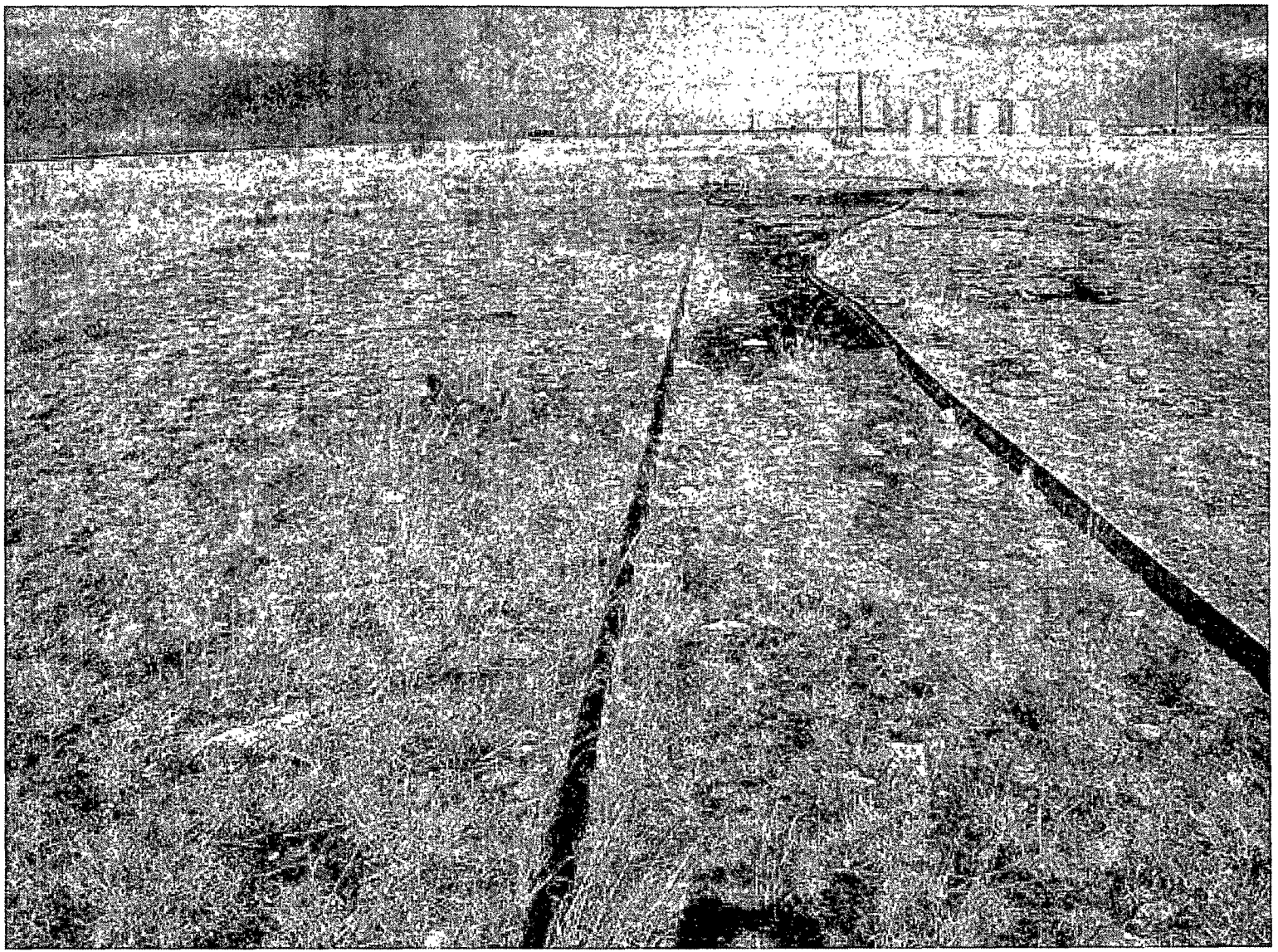
Prepared By:

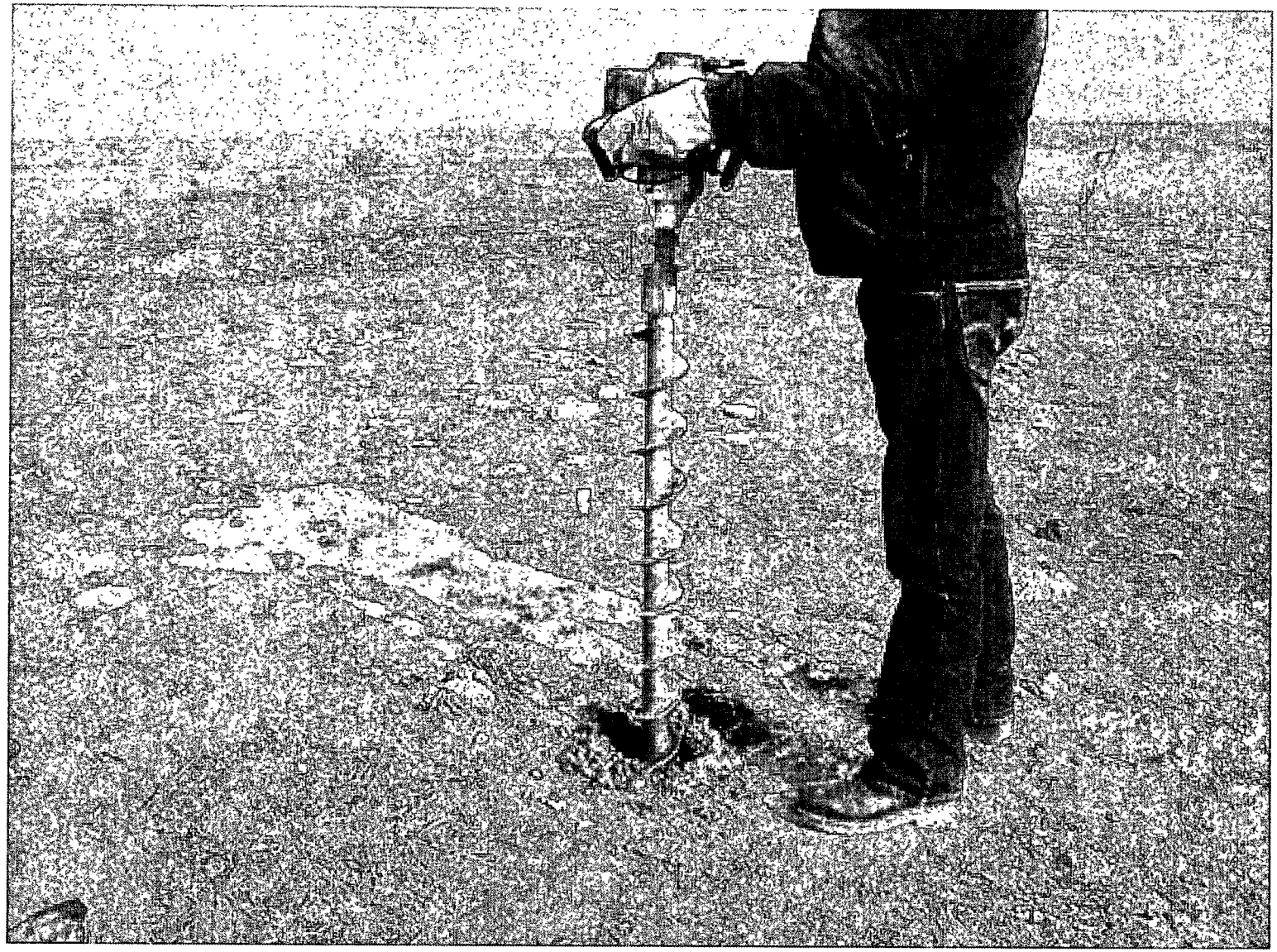
Andy B. Price

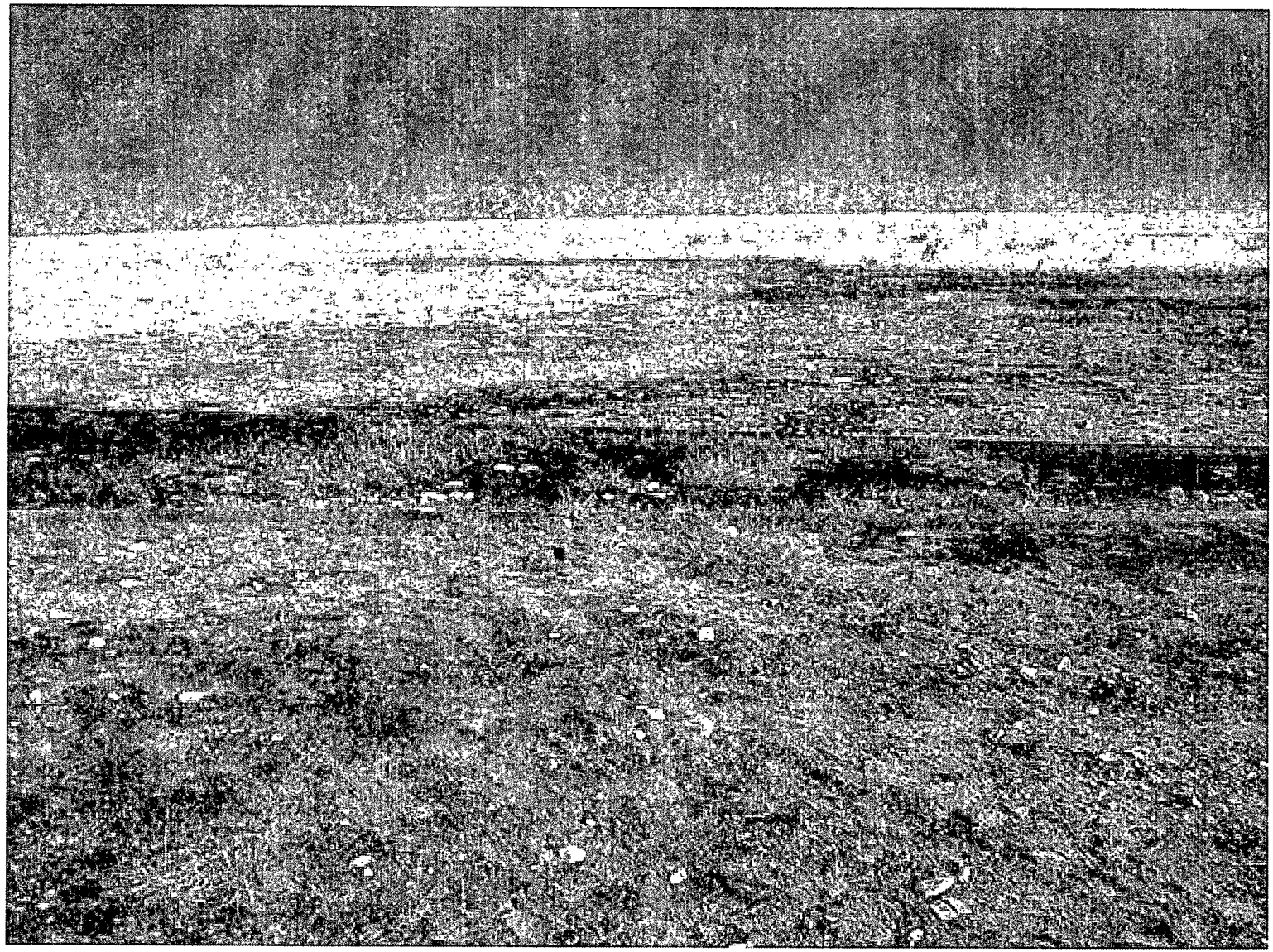
Registered Environmental Professional Registry #9116

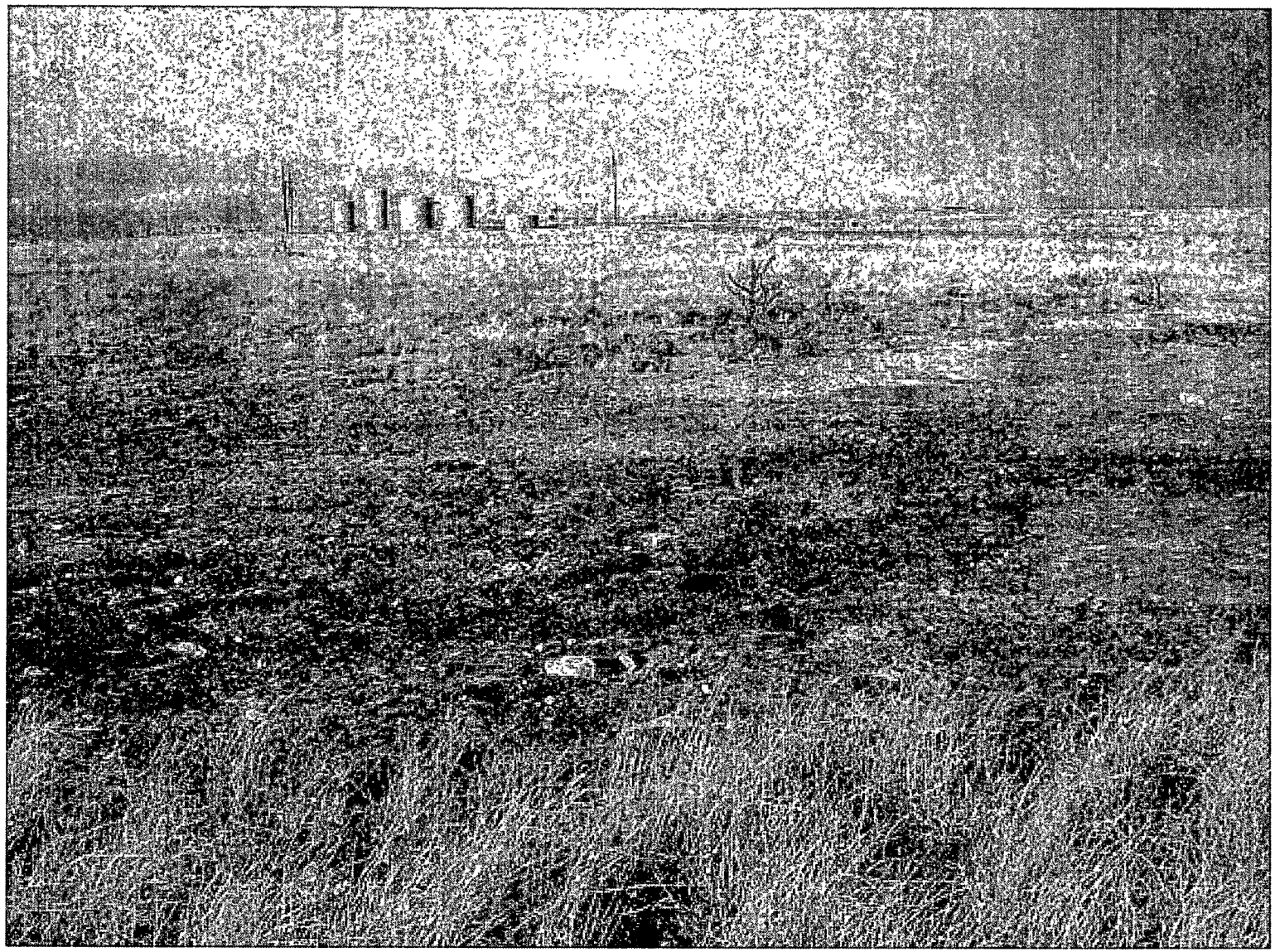
APPENDIXES

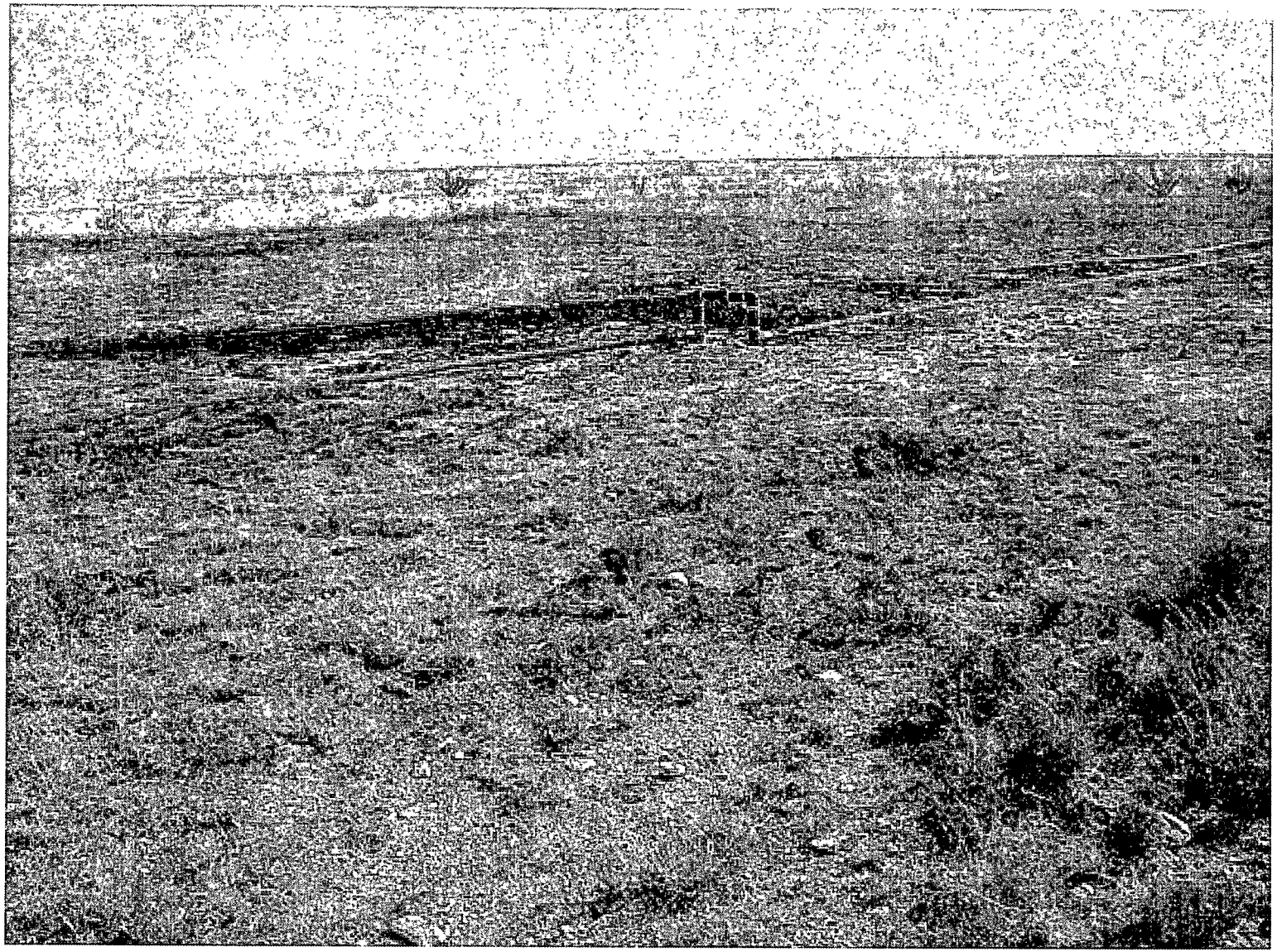
A. Site Photos
B. Lab Report
C. Chain of Custody
D. Maps
E. Instrumentation
F. Hydrology
G. OCD Form C141

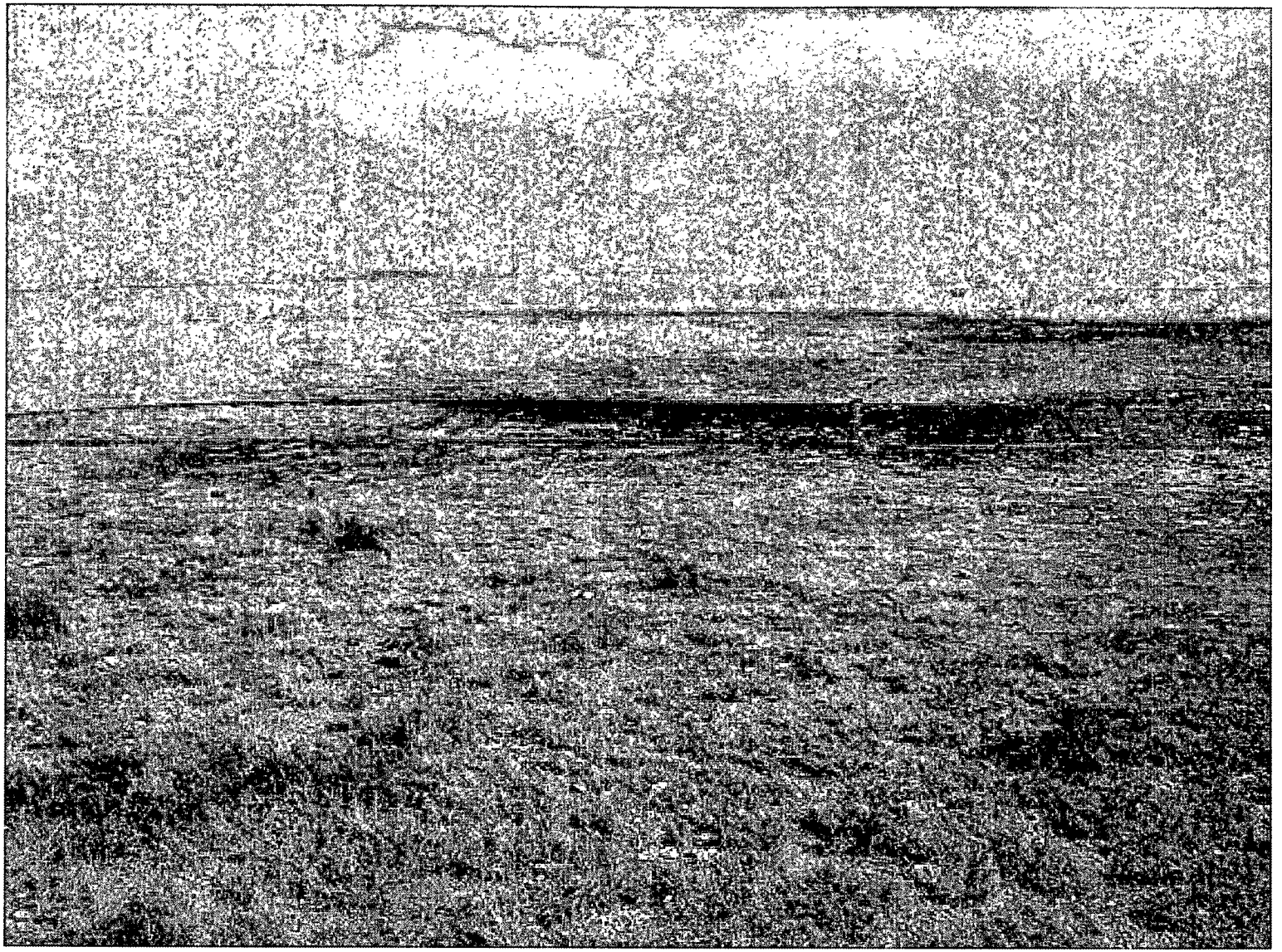


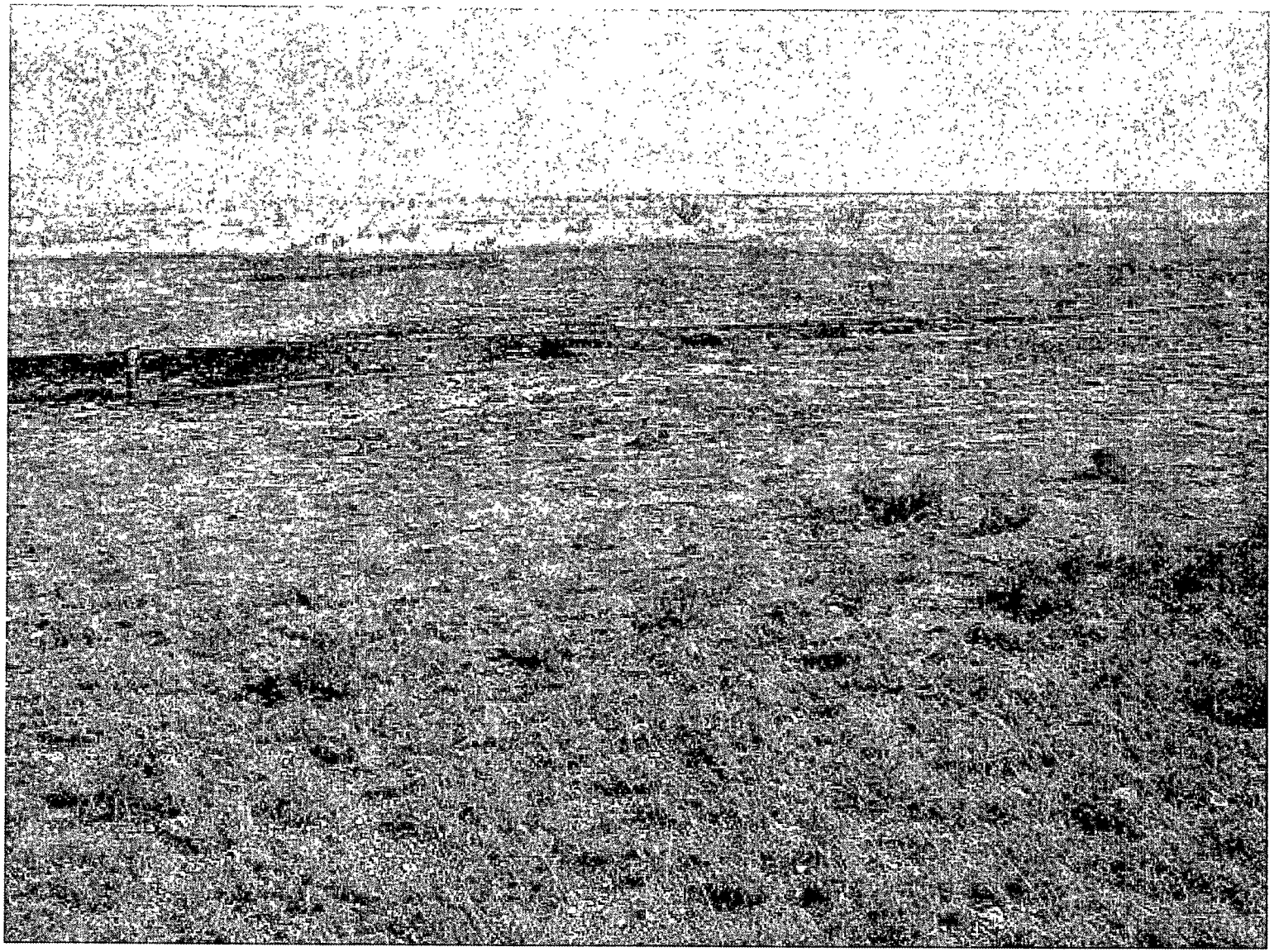


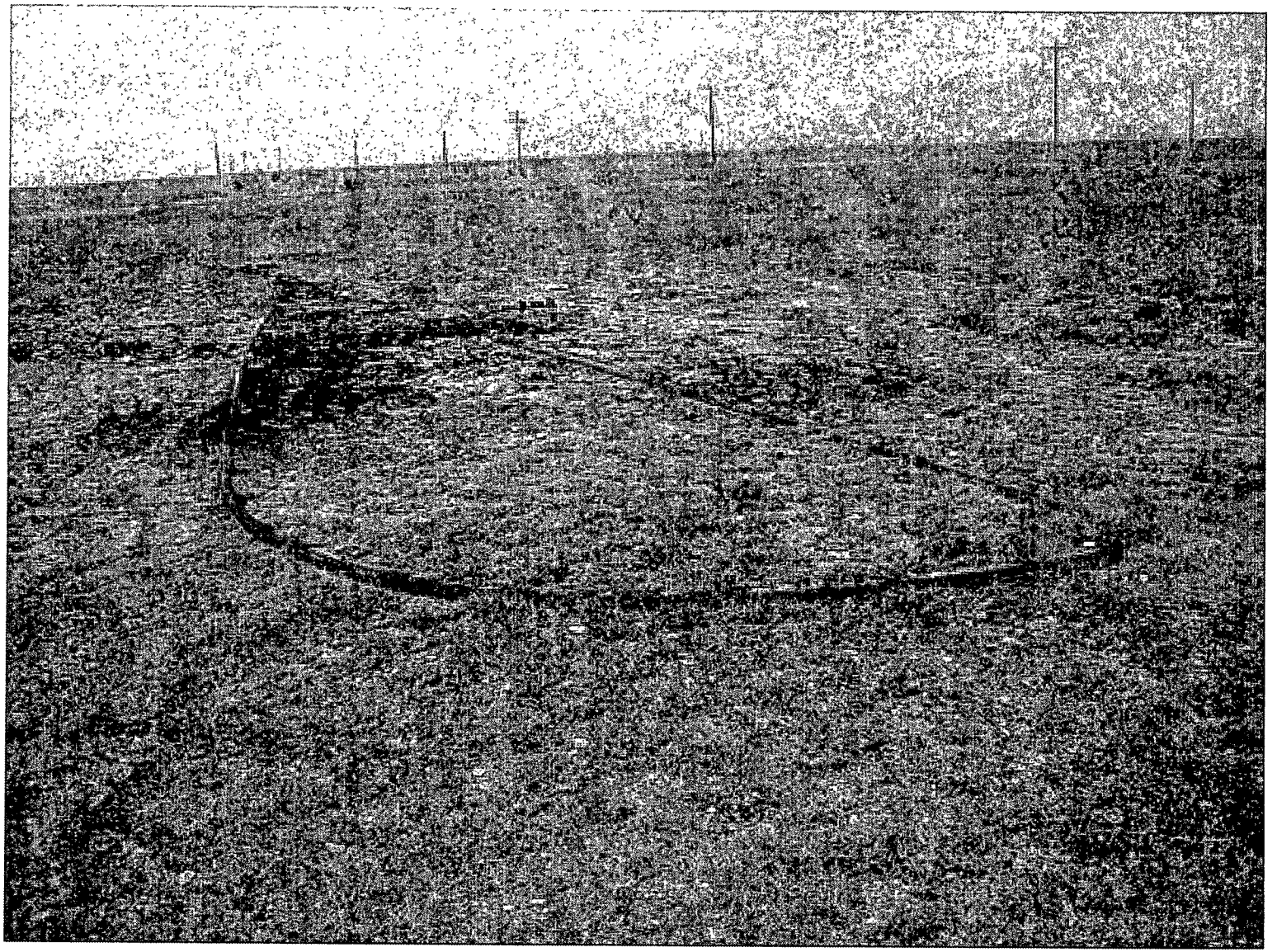


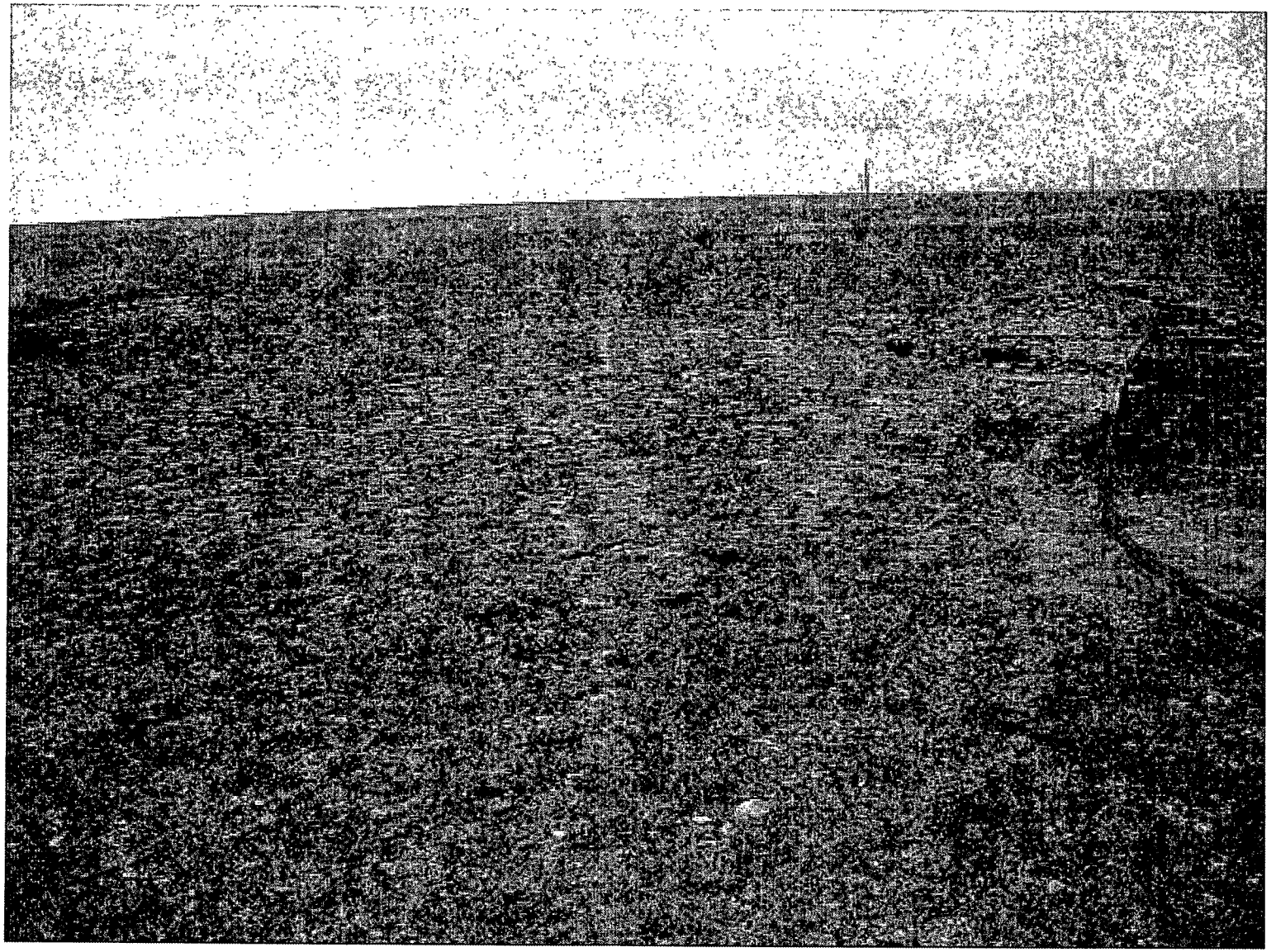


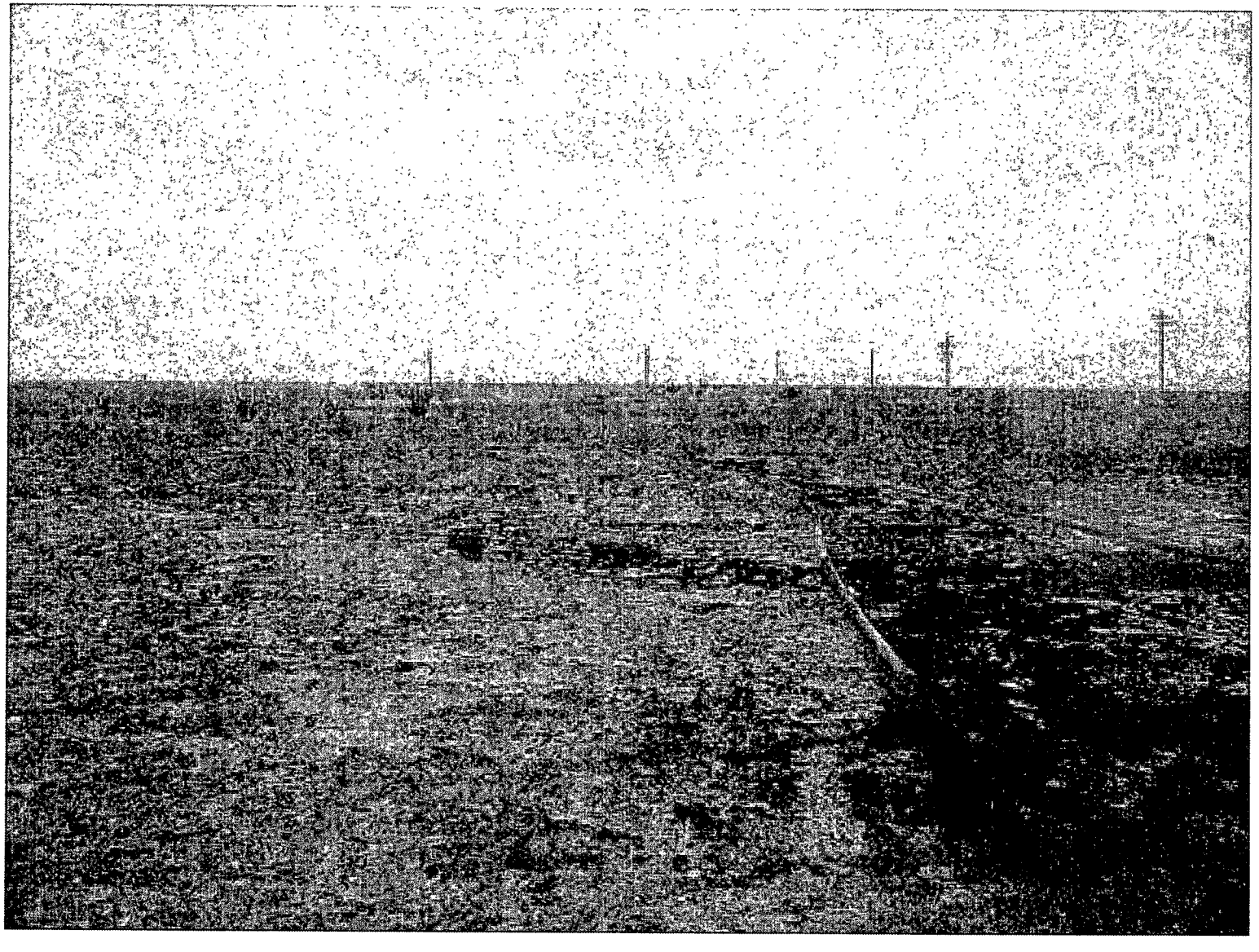


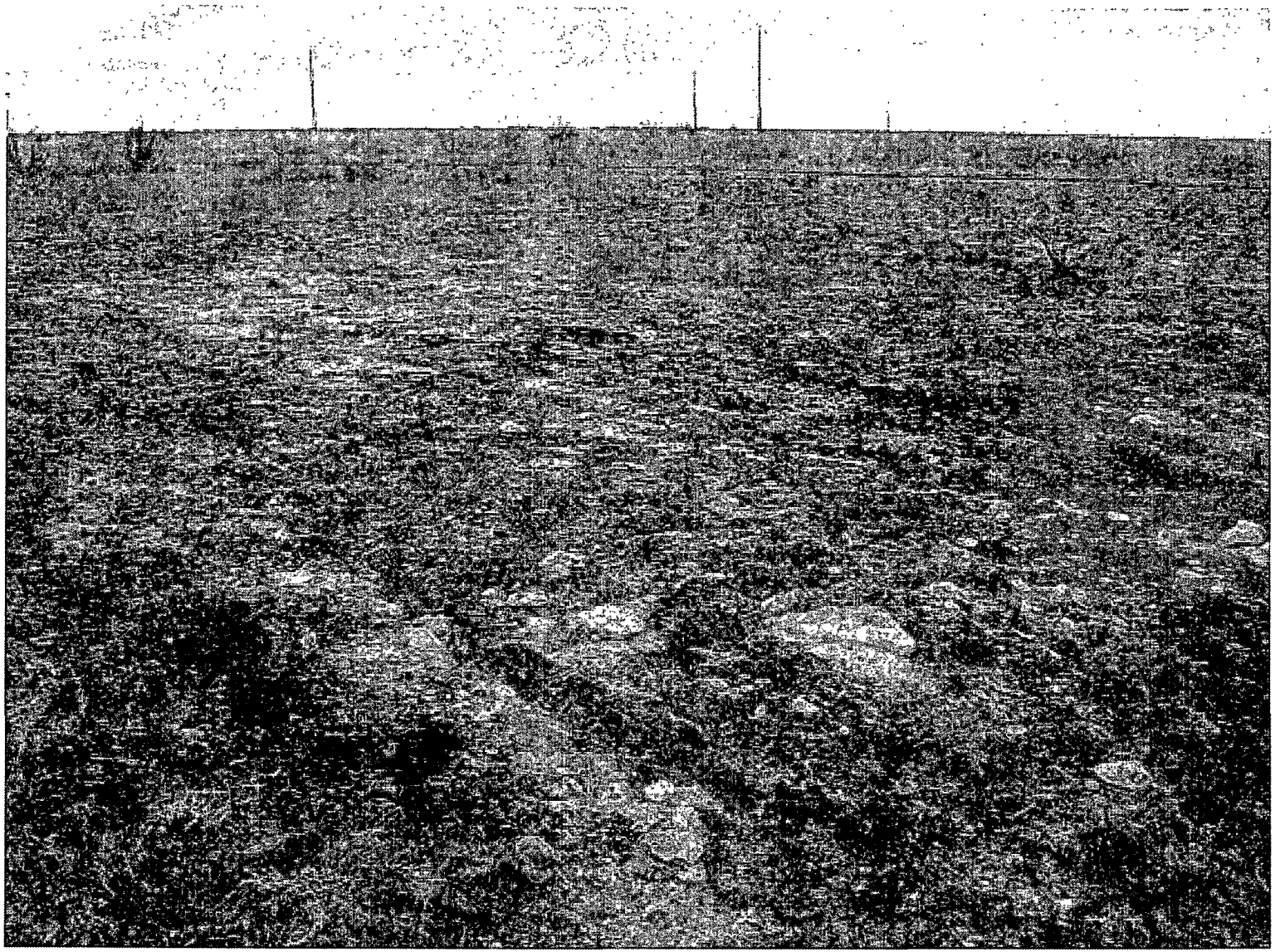


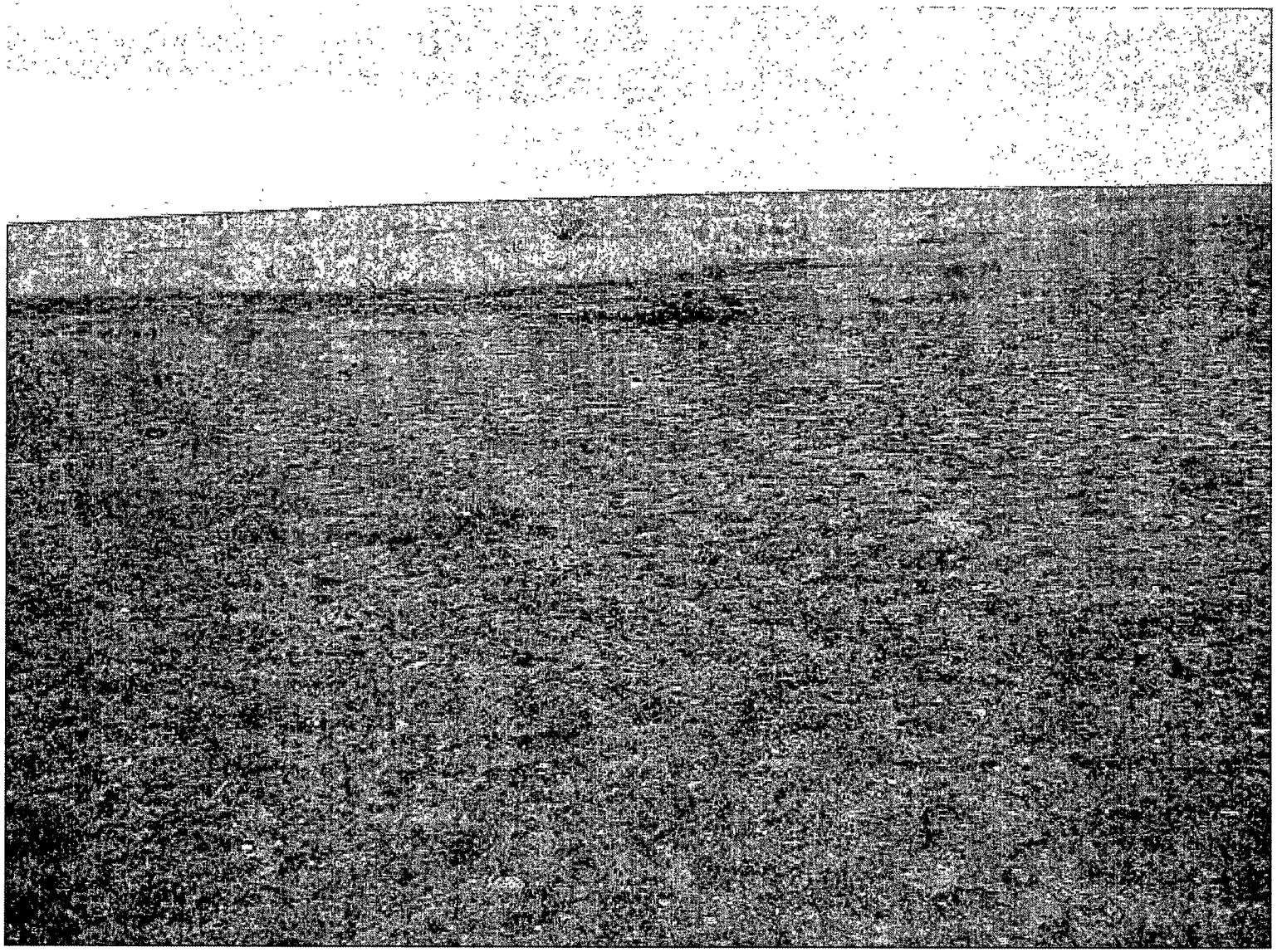


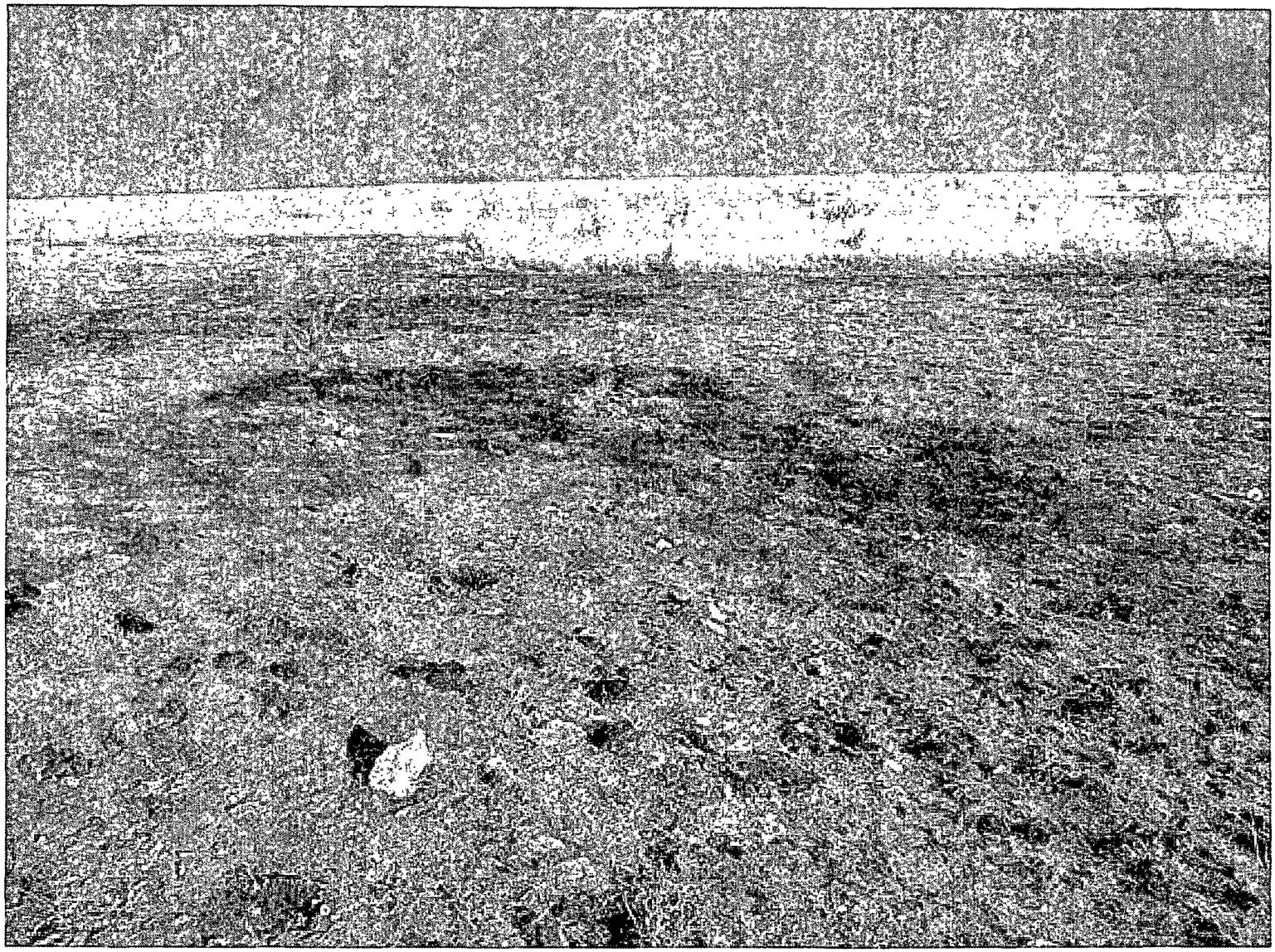


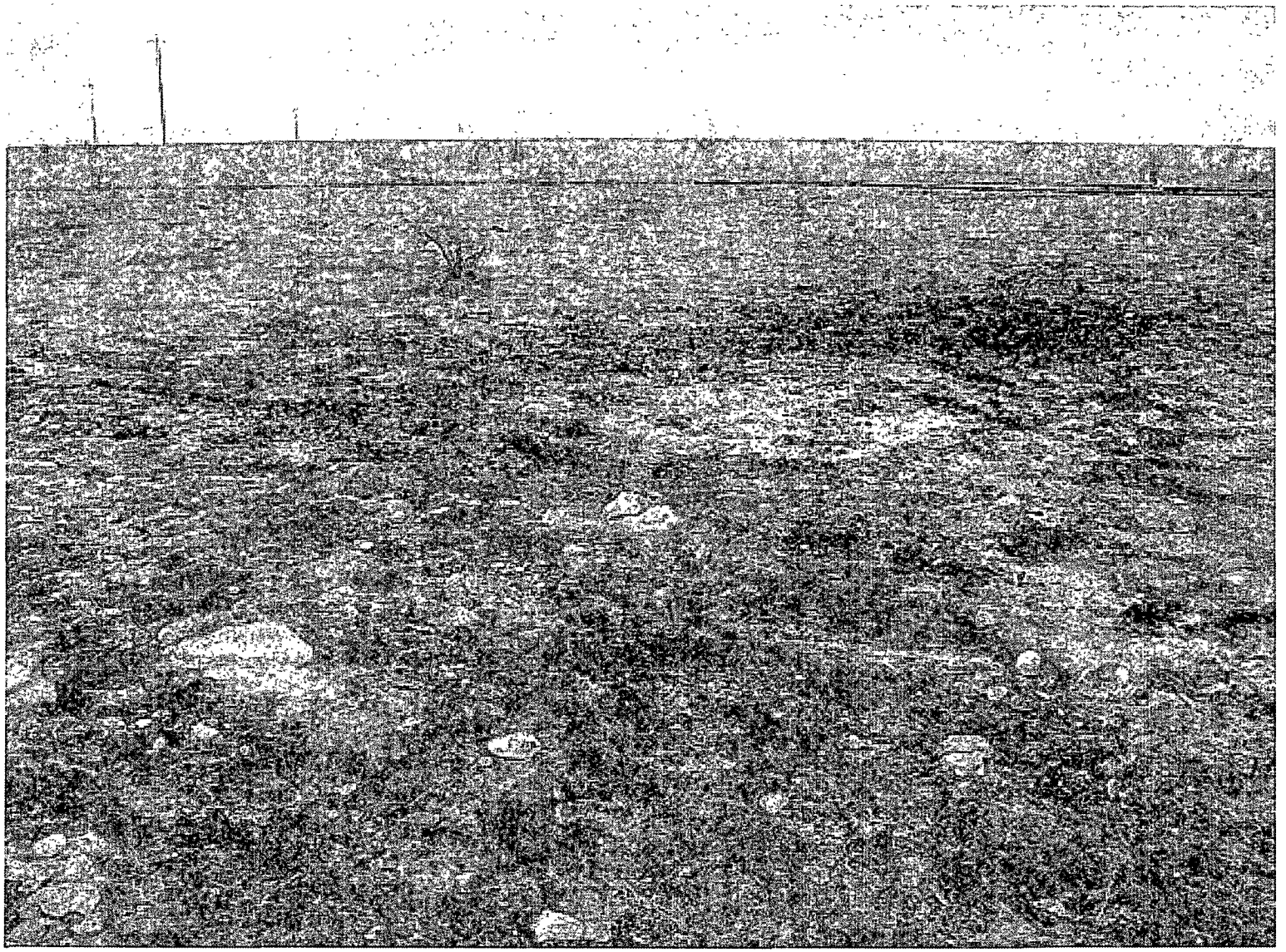


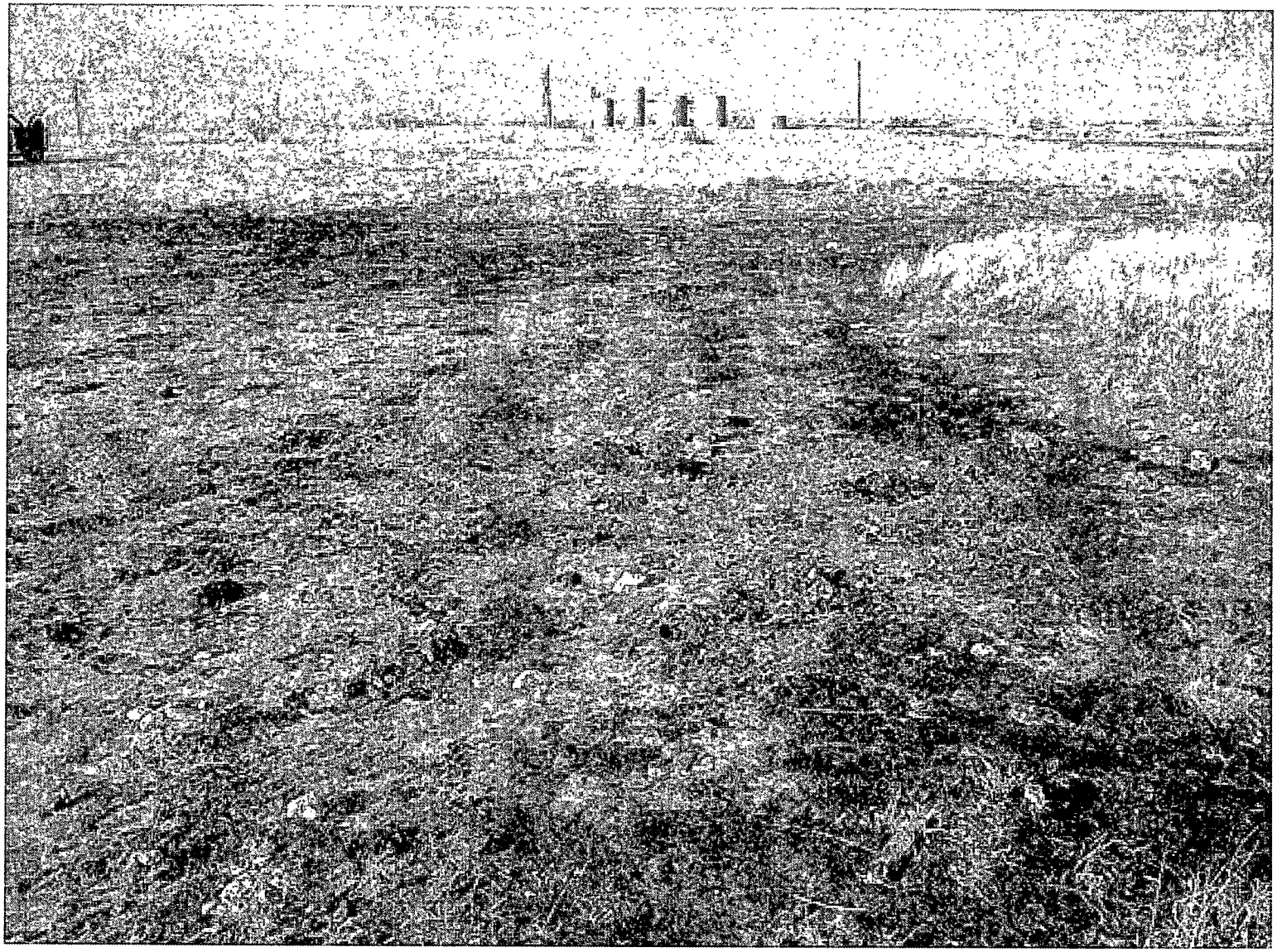


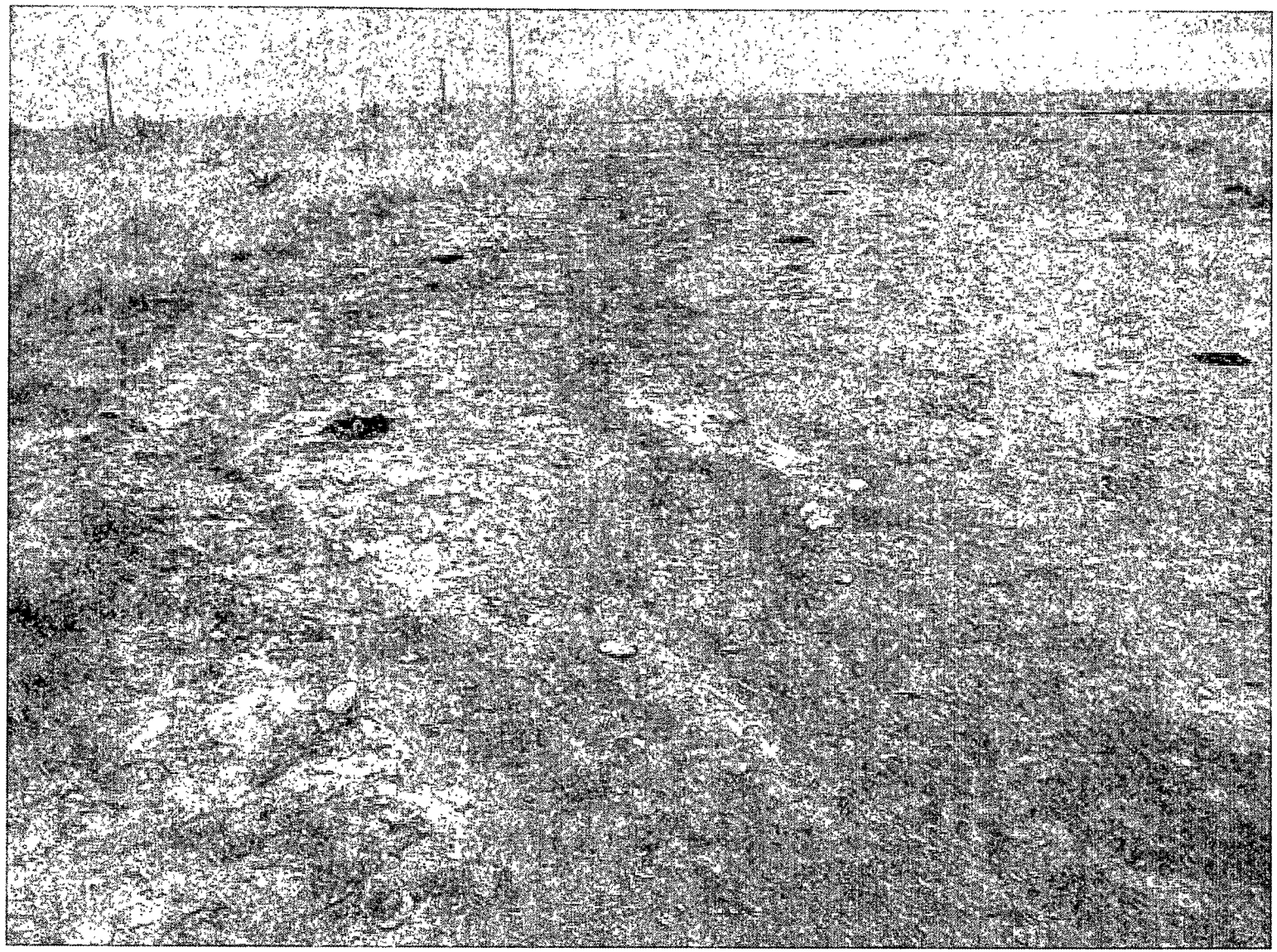


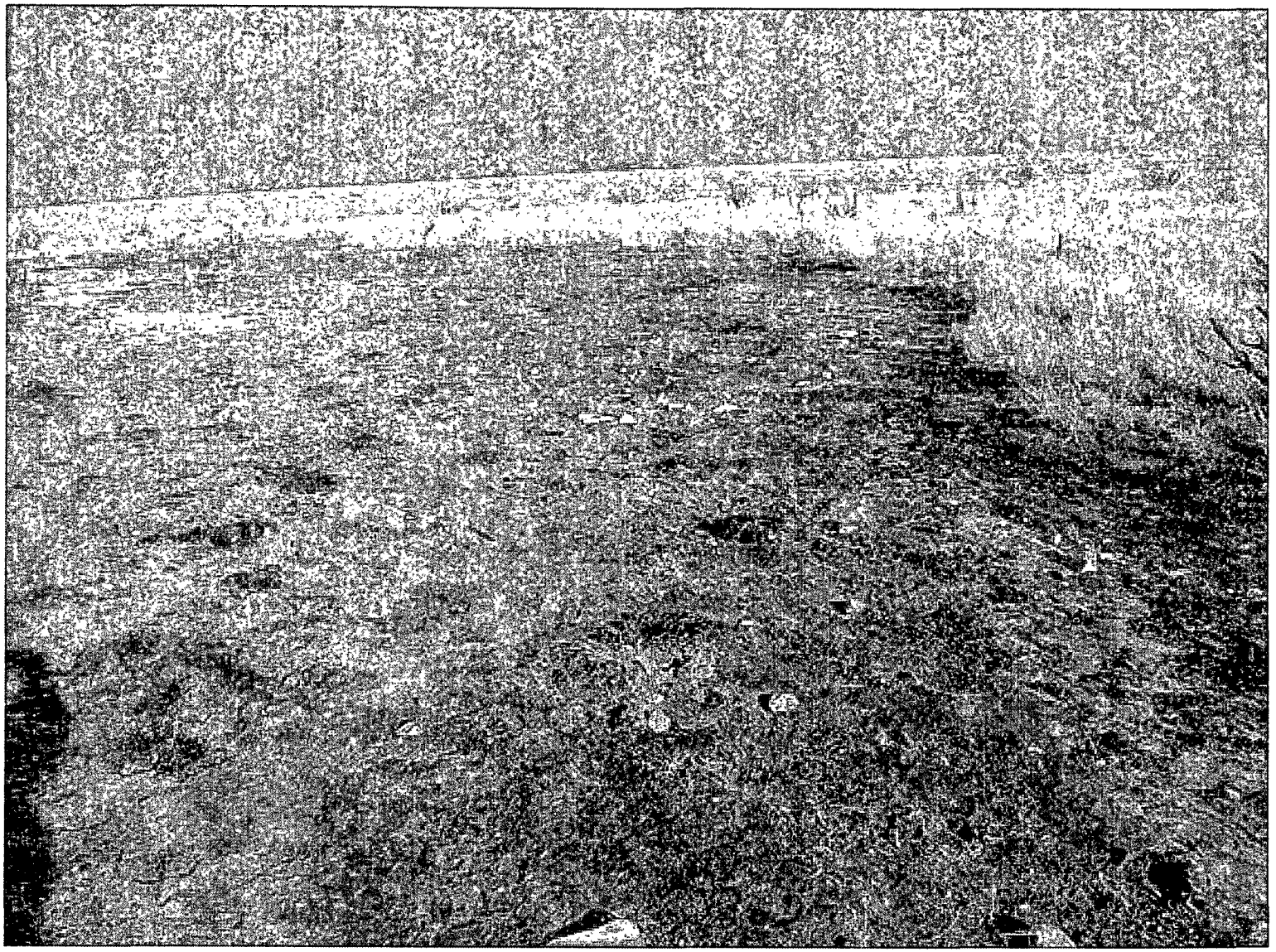


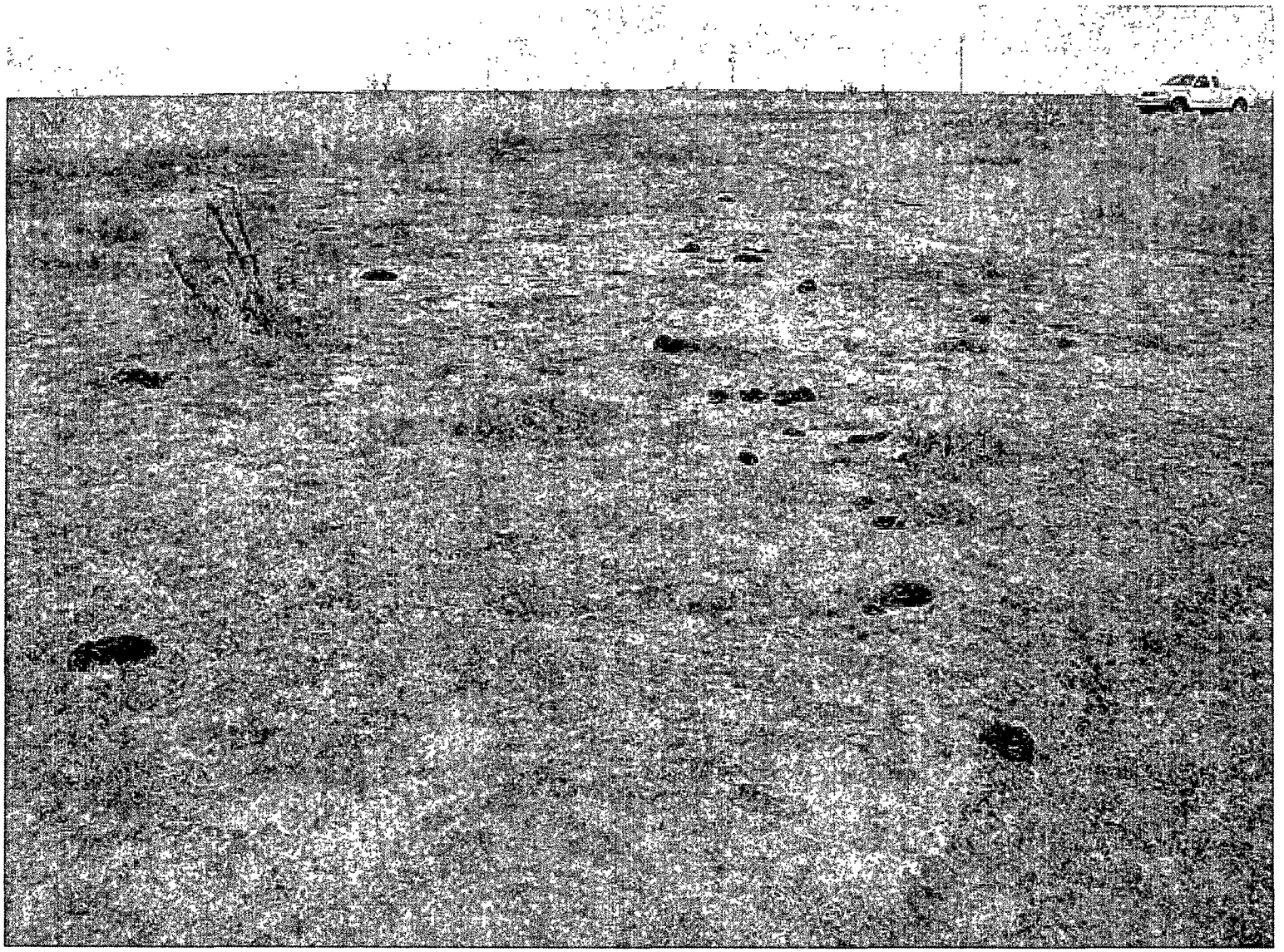


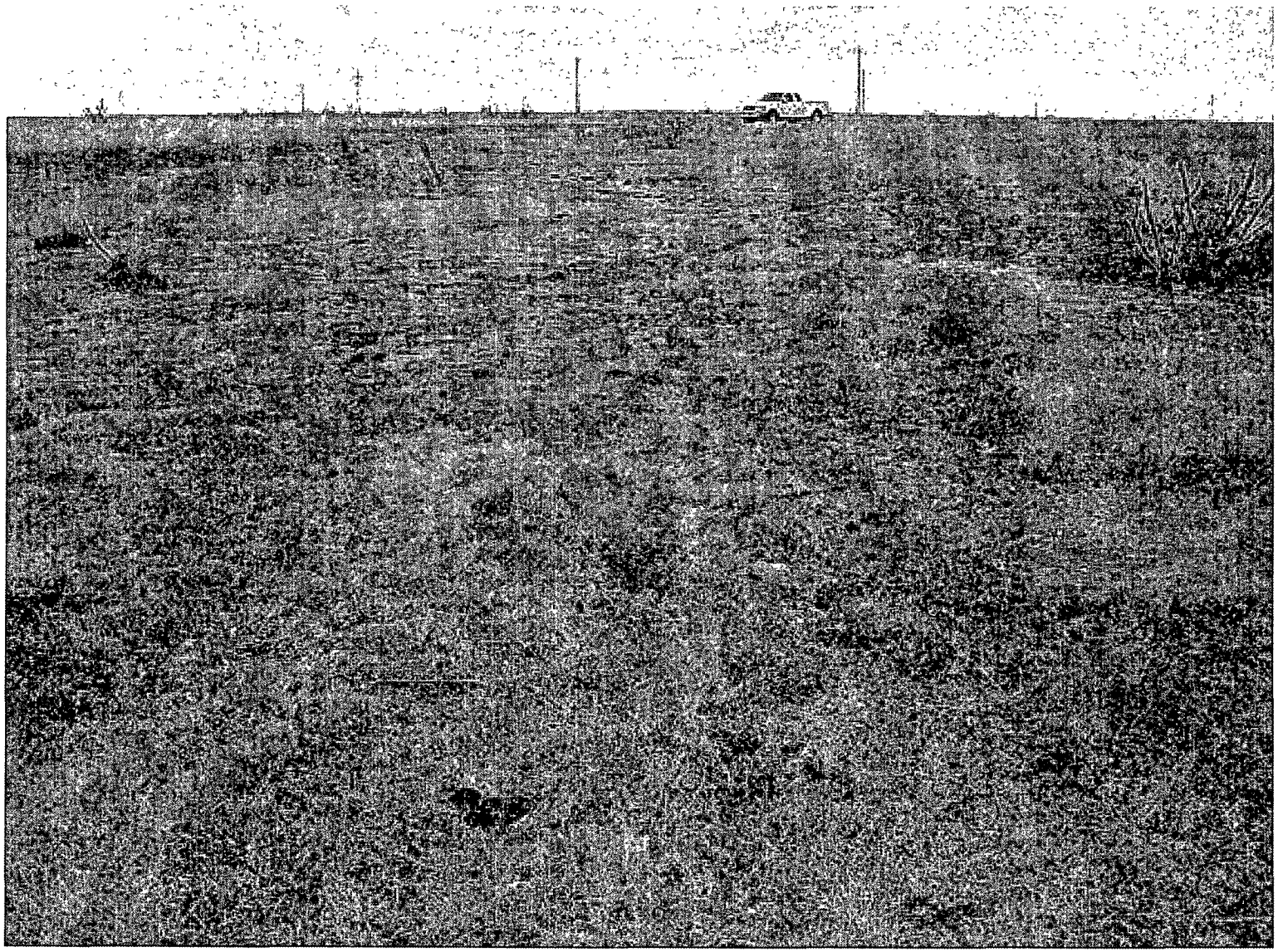


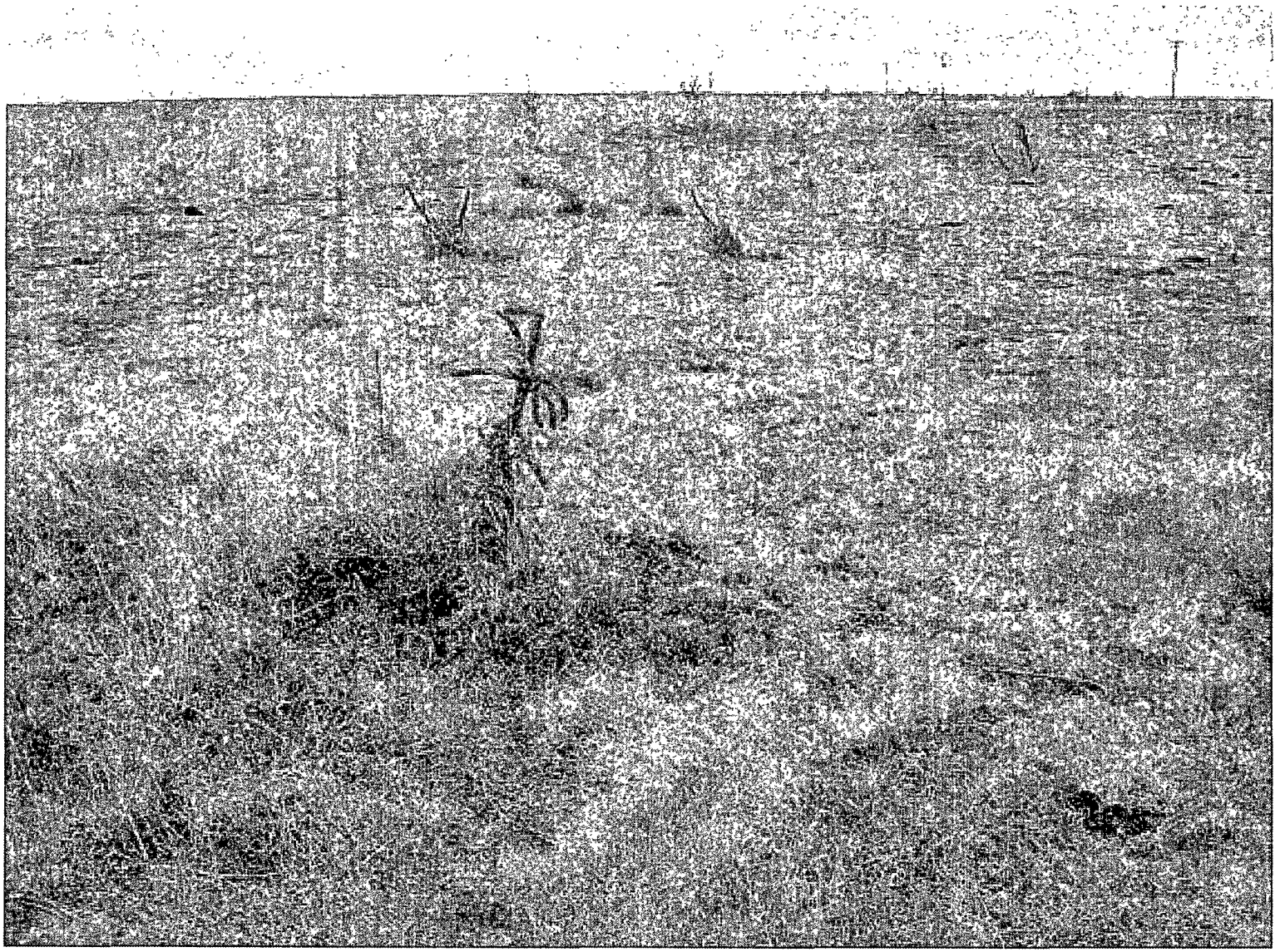


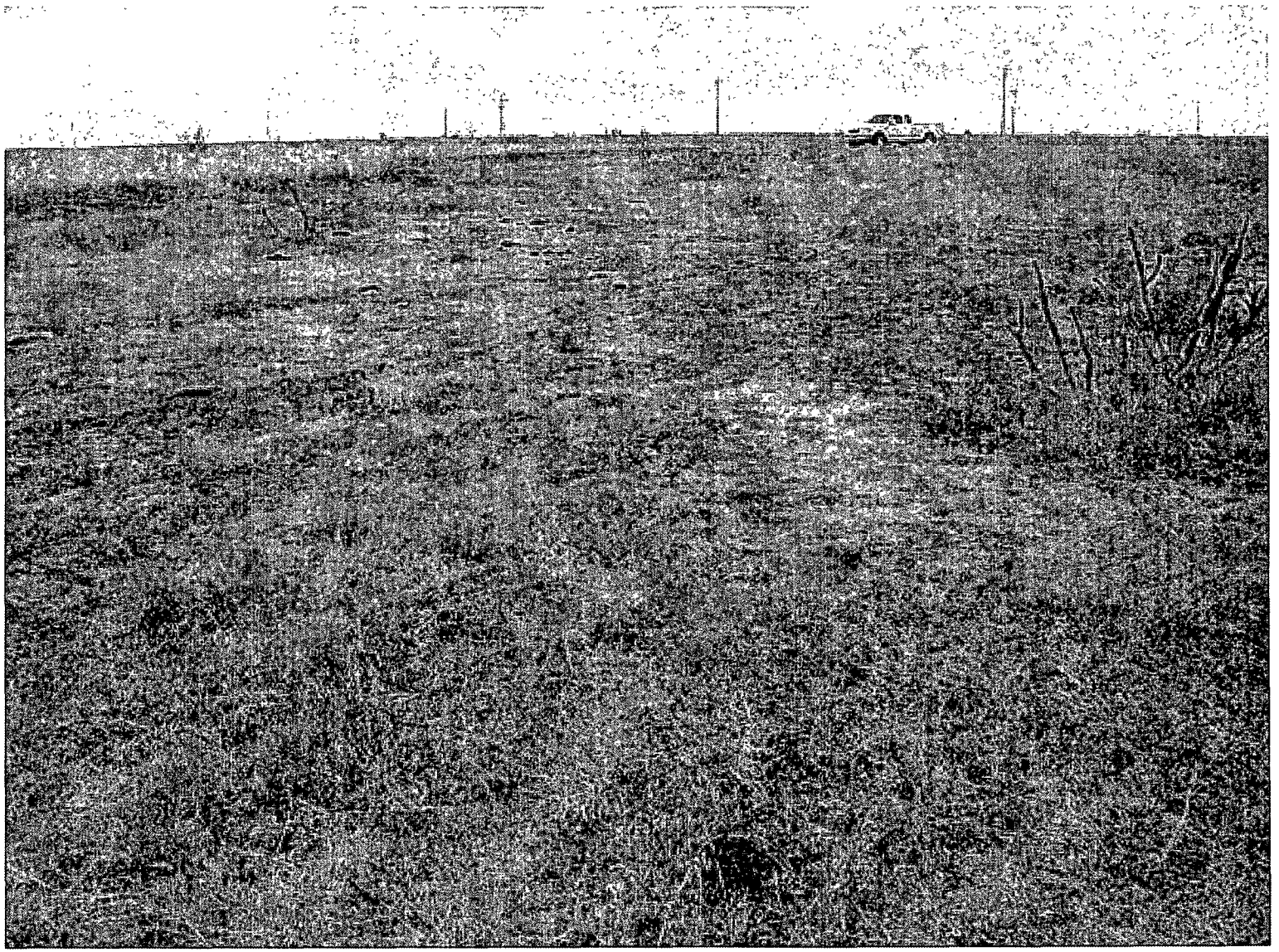












Summary Report

Andy Price
Baseline Solutions LLC
511 W. Ohio
P.O. Box 8061
Midland, TX 79708

Report Date: December 23, 2008

Work Order: 8121733

Project Location: Sec. 13, T14S-R33E, Lea Co., NM
Project Name: Chalupa
Project Number: Chalupa #4

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
182719	AS	soil	2008-12-16	15:00	2008-12-17
182720	BS	soil	2008-12-16	15:10	2008-12-17
182721	CS	soil	2008-12-16	15:20	2008-12-17
182722	DS	soil	2008-12-16	15:30	2008-12-17
182723	ES	soil	2008-12-16	15:46	2008-12-17
182724	FS	soil	2008-12-16	16:05	2008-12-17
182725	GS	soil	2008-12-16	16:21	2008-12-17
182726	A 3'	soil	2008-12-16	16:48	2008-12-17
182727	B 1'	soil	2008-12-16	17:15	2008-12-17
182728	C 1'	soil	2008-12-16	17:32	2008-12-17
182729	D 2'	soil	2008-12-16	17:49	2008-12-17
182730	E 2'	soil	2008-12-16	18:00	2008-12-17
182731	F 1'	soil	2008-12-16	18:20	2008-12-17
182732	G 1'	soil	2008-12-16	18:30	2008-12-17

Sample - Field Code	TPH DRO DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
182719 - AS	**1200**	**68.6**
182720 - BS	<50.0	**6.46**
182721 - CS	<50.0	**2.00**
182722 - DS	<50.0	**1.22**
182723 - ES	<50.0	<1.00
182724 - FS	**104**	<1.00
182725 - GS	**132**	<2.00
182726 - A 3'	<50.0	<1.00
182727 - B 1'	<50.0	<1.00
182728 - C 1'	<50.0	<1.00

continued ...

... continued

Sample - Field Code	TPH DRO DRO (mg/Kg)	TPH GRO GRO (mg/Kg)
182729 - D 2'	<50.0	<1.00
182730 - E 2'	<50.0	<1.00
182731 - F 1'	<50.0	<1.00
182732 - G 1'	<50.0	<1.00

Sample: 182719 - AS

Param	Flag	Result	Units	RL
Chloride		**28600**	mg/Kg	2.00

Sample: 182720 - BS

Param	Flag	Result	Units	RL
Chloride		**24100**	mg/Kg	2.00

Sample: 182721 - CS

Param	Flag	Result	Units	RL
Chloride		**21000**	mg/Kg	2.00

Sample: 182722 - DS

Param	Flag	Result	Units	RL
Chloride		**16300**	mg/Kg	2.00

Sample: 182723 - ES

Param	Flag	Result	Units	RL
Chloride		**12700**	mg/Kg	2.00

Sample: 182724 - FS

Param	Flag	Result	Units	RL
Chloride		**15400**	mg/Kg	2.00

Sample: 182725 - GS

Param	Flag	Result	Units	RL
Chloride		**19500**	mg/Kg	2.00

Sample: 182726 - A 3'

Param	Flag	Result	Units	RL
Chloride		**176**	mg/Kg	2.00

Sample: 182727 - B 1'

Param	Flag	Result	Units	RL
Chloride		<100	mg/Kg	2.00

Sample: 182728 - C 1'

Param	Flag	Result	Units	RL
Chloride		<100	mg/Kg	2.00

Sample: 182729 - D 2'

Param	Flag	Result	Units	RL
Chloride		<100	mg/Kg	2.00

Sample: 182730 - E 2'

Param	Flag	Result	Units	RL
Chloride		<100	mg/Kg	2.00

Sample: 182731 - F 1'

Param	Flag	Result	Units	RL
Chloride		<100	mg/Kg	2.00

Sample: 182732 - G 1'

Param	Flag	Result	Units	RL
Chloride		<100	mg/Kg	2.00

LAB Order ID # 8121733 Page 1 of 2

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9, Lubbock, Texas 79424, Tel (806) 794-1296, Fax (806) 794-1298, 1 (800) 378-1296
5002 Basin Street, Suite A1, Midland, Texas 79703, Tel (432) 689-6301, Fax (432) 689-6313
200 East Sunset Rd., Suite E, El Paso, Texas 79922, Tel (915) 585-3443, Fax (915) 585-4944, 1 (888) 588-3443
8808 Camp Bowie Blvd. West, Suite 180, Ft. Worth, Texas 76116, Tel (817) 201-5260, Fax (817) 560-4336

Company Name: EnerVest Operating LLC, Phone #: 432-352-6400
Address: (Street, City, Zip) 1001 Fannin Street, Suite 800, Houston TX 77002, Fax #:
Contact Person: Andy Price, E-mail: andyprice@grandecom.net
Invoice to: (If different from above) Attn. Elroy Ardoin
Project #: Chalupa SWD #4, Project Name:
Project Location (including state): Sec 13, T14S-R33E, Lea Co. NM, Sampler Signature: Andy Price

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B / 602 / 8260B / 624	BTEX 8021B / 602 / 8260B / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270C / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C / 625	PCB's 8082 / 608	Pesticides 8081A / 608	BOD, TSS, pH	Moisture Content			Chlorides	Turn Around Time if different from standard	Hold
8121719	A S				✓							✓		12/16	3:00				✓															✓		
720	B S				✓							✓			3:10				✓															✓		
721	C S				✓							✓			3:20				✓															✓		
722	D S				✓							✓			3:30				✓															✓		
723	E S				✓							✓			3:46				✓															✓		
724	F S				✓							✓			4:05				✓															✓		
725	G S				✓							✓			4:21				✓															✓		
726	A 3'				✓							✓			4:48				✓															✓		
727	B 1'				✓							✓			5:15				✓															✓		
728	C 1'				✓							✓			5:32				✓															✓		
729	D 2'				✓							✓			5:49				✓															✓		

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp°c:
Andy Price		12/17/08	2:55	Lindsey Wilson	Trac	12-17-08	14:55	3.2

LAB USE ONLY: Intact Y / N (NA), Headspace Y / N (NA), Log-in Review

REMARKS:

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # Carry-in

ORIGINAL COPY

LAB Order ID # 8121733 Page _____ of _____

TraceAnalysis, Inc.

email: lab@traceanalysis.com

6701 Aberdeen Avenue, Suite 9, Lubbock, Texas 79424, Tel (806) 794-1296, Fax (806) 794-1298, 1 (800) 378-1296
5002 Basin Street, Suite A1, Midland, Texas 79703, Tel (432) 689-6301, Fax (432) 689-6313
200 East Sunset Rd., Suite E, El Paso, Texas 79922, Tel (915) 585-3443, Fax (915) 585-4944, 1 (888) 588-3443
8808 Camp Bowie Blvd. West, Suite 180, Ft. Worth, Texas 76116, Tel (817) 201-5260, Fax (817) 560-4336

Company Name: Enervest Operating LLC. Phone #: 432-352-6400
Address: (Street, City, Zip) 1001 Fannin Street, Suite 800, Houston TX 77002 Fax #:
Contact Person: Andy Price E-mail:
Invoice to: (If different from above) Attn. El Roy Ardoin
Project #: Chalupa SWD #4 Project Name:
Project Location (including state): Sec 13, T14S-R33E, Lea Co, NM Sampler Signature:

ANALYSIS REQUEST (Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX: WATER	SOIL	AIR	SLUDGE	PRESERVATIVE METHOD: HCl	HNO_3	H_2SO_4	NaOH	ICE	NONE	SAMPLING: DATE	TIME	MTBE 8021B / 602 / 8260B / 624	BTEX 8021B / 602 / 8260B / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270C / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C / 625	PCB's 8082 / 608	Pesticides 8081A / 608	BOD, TSS, pH	Moisture Content	Chlorides	Turn Around Time if different from standard	Hold
182730	E 2'				✓							✓		12/16	6:00		✓		✓													✓		
731	E 1'				✓							✓		"	6:20		✓		✓													✓		
732	S 1'				✓							✓		"	6:30		✓		✓													✓		
																	HP																	

Relinquished by:	Company:	Date:	Time:	Received by:	Company:	Date:	Time:	Temp°c:
Andy Price		12/17/08	2:55	Lindsey Wilson	Trace	12-17-08	14:55	3

LAB USE ONLY: Intact Y N, Headspace Y N NA, T2, Log-In/Review

REMARKS:

- ☐ Dry Weight Basis Required
- ☐ TRRP Report Required
- ☐ Check If Special Reporting Limits Are Needed

Submittal of samples constitutes agreement to Terms and Conditions listed on reverse side of C. O. C.

Carrier # Carry-in

ORIGINAL COPY

District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Avenue, Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

Submit 2 Copies to appropriate District Office in accordance with Rule 116 on back side of form

Release Notification and Corrective Action

OPERATOR

☒ Initial Report ☐ Final Report

Name of Company – EnerVest Operating LLC	Contact - Elroy Ardoin
Address –1001 Fannin Street, Suite 800, Houston, TX 77002	Telephone No. (713) 495 6534
Facility Name – Chalupa SWD #004	Facility Type - Injection

Surface Owner – State of New Mexico	Mineral Owner	API No. 30-025-29184

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	South Line	Feet from the	East/West Line	County
M	13	14S	33E	330	South Line	330	West Line	Lea

Latitude 33.10041 **Longitude** -103.57570

NATURE OF RELEASE

Type of Release - Produced Water/Saltwater – approximately 30,400 PPM chloride content	Volume of Release – estimated 30bbls	Volume Recovered - 0bbls
Source of Release – Flow Line	Date and Hour of Occurrence ?	Date and Hour of Discovery 10/8/08
Was Immediate Notice Given? ☐ Yes ☒ No ☐ Not Required	If YES, To Whom?	
By Whom? Unknown Rancher	Date and Hour - 11/18/08 at 3:30 PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

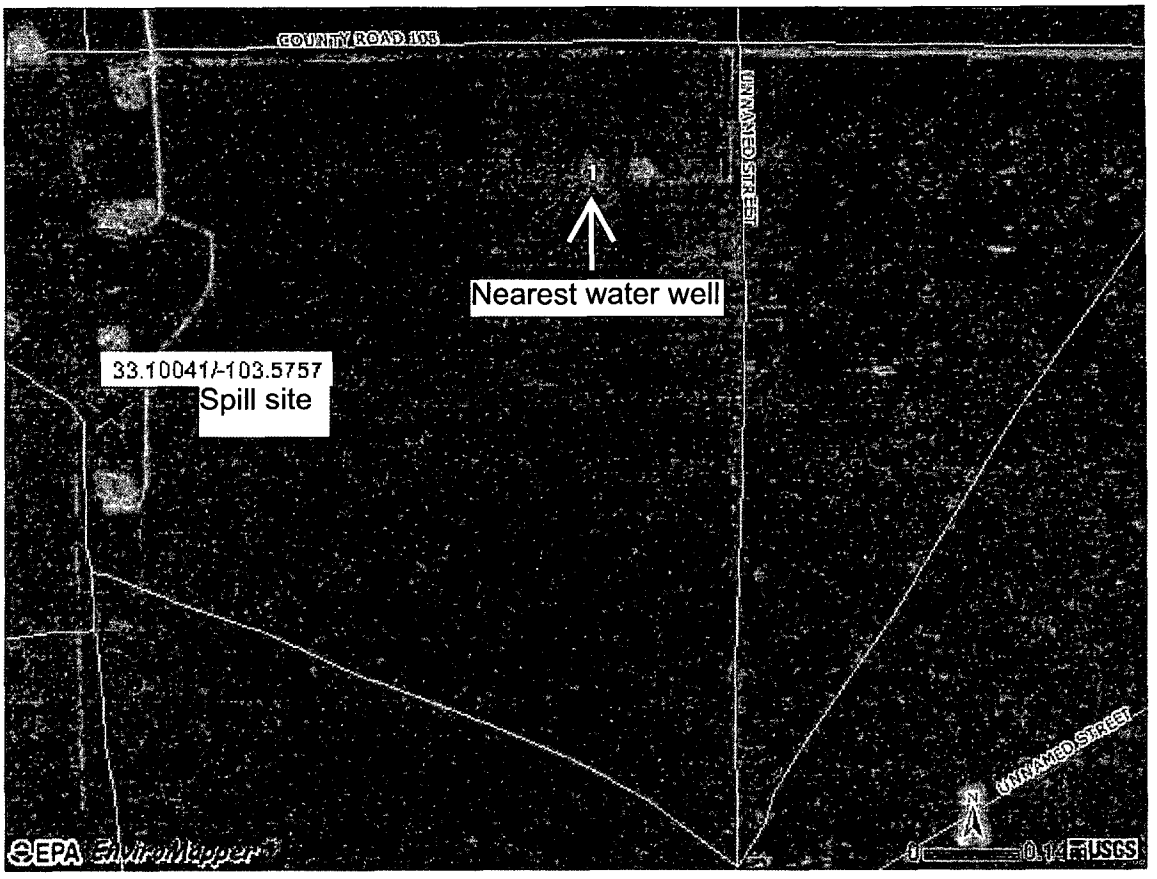
Describe Cause of Problem and Remedial Action Taken *
A flow line connection/swing developed a leak resulting in the brine water spill. The spill at this site is considered to be approximately 30bbls The line was shut in. A vacuum truck was used to pick up 20bbls of produced water. All connections The leak has been properly repaired. No remedial action has been taken yet. A remediation plan along with a sampling investigation and report will submitted and implemented upon NMOCD approval. Please see attached Sampling Investigation Report and recommended Remediation Action.

Describe Area Affected and Cleanup Action Taken.*
The approximate effected area is 305ft X 20ft. A minor amount of vegetation shows signs of stress within approximately 50% of the contaminated area. The entire area indicating elevated levels of chlorides will be remediated. Recommended remediation is to conduct "dig & haul" operation with lab analysis. Contaminated soil will be removed to a locally approved disposal site, back filled with clean soil and properly reseeded. A closing report will then be submitted to OCD.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Elroy Ardoin	OIL CONSERVATION DIVISION	
Printed Name: ELROY L. ARDOIN	Approved by District Supervisor:	
Title: HSE COORDINATOR	Approval Date:	Expiration Date:
E-mail Address: eardoin@enervest.net	Conditions of Approval:	Attached ☐
Date: 3-2-09 Phone: 713 495 6534		

* Attach Additional Sheets If Necessary


COUNTY ROAD 115
UNNAMED STREET
Nearest water well
33.10041/-103.5757
Spill site
UNNAMED STREET
N
0
0.1
EPA EnviroMapper
USGS

New Mexico Office of the State Engineer
POD Reports and Downloads

Township: 14S Range: 33E Sections: 13

NAD27 X: Y: Zone: Search Radius:

County: LE Basin: Number: Suffix:

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

POD / Surface Data Report | Avg Depth to Water Report | Water Column Report

Clear Form | iWATERS Menu | Help

AVERAGE DEPTH OF WATER REPORT 09/13/2007

								(Depth Water in Feet)		
Bsn	**Tws**	**Rng**	**Sec**	**Zone**	**X**	**Y**	**Wells**	**Min**	**Max**	**Avg**
L	14S	33E	13				1	80	80	80

Record Count: 1

New Mexico Office of the State Engineer
Point of Diversion Summary

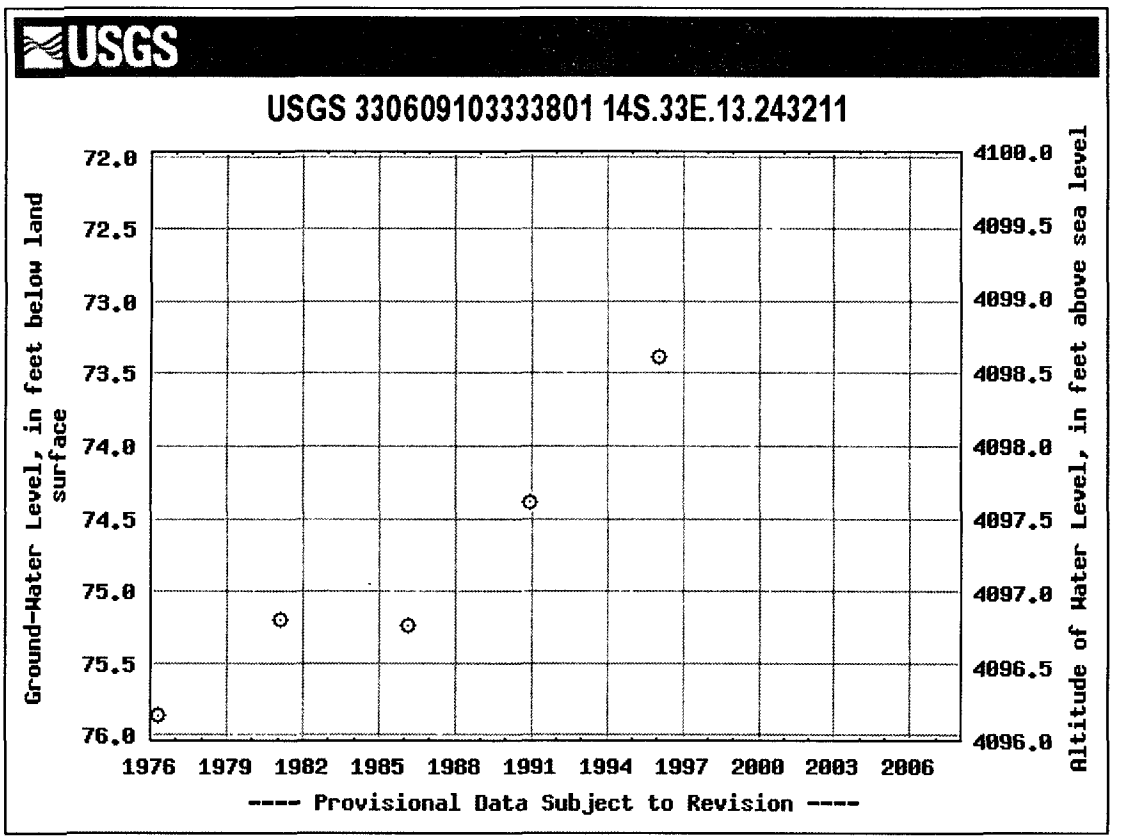
Back

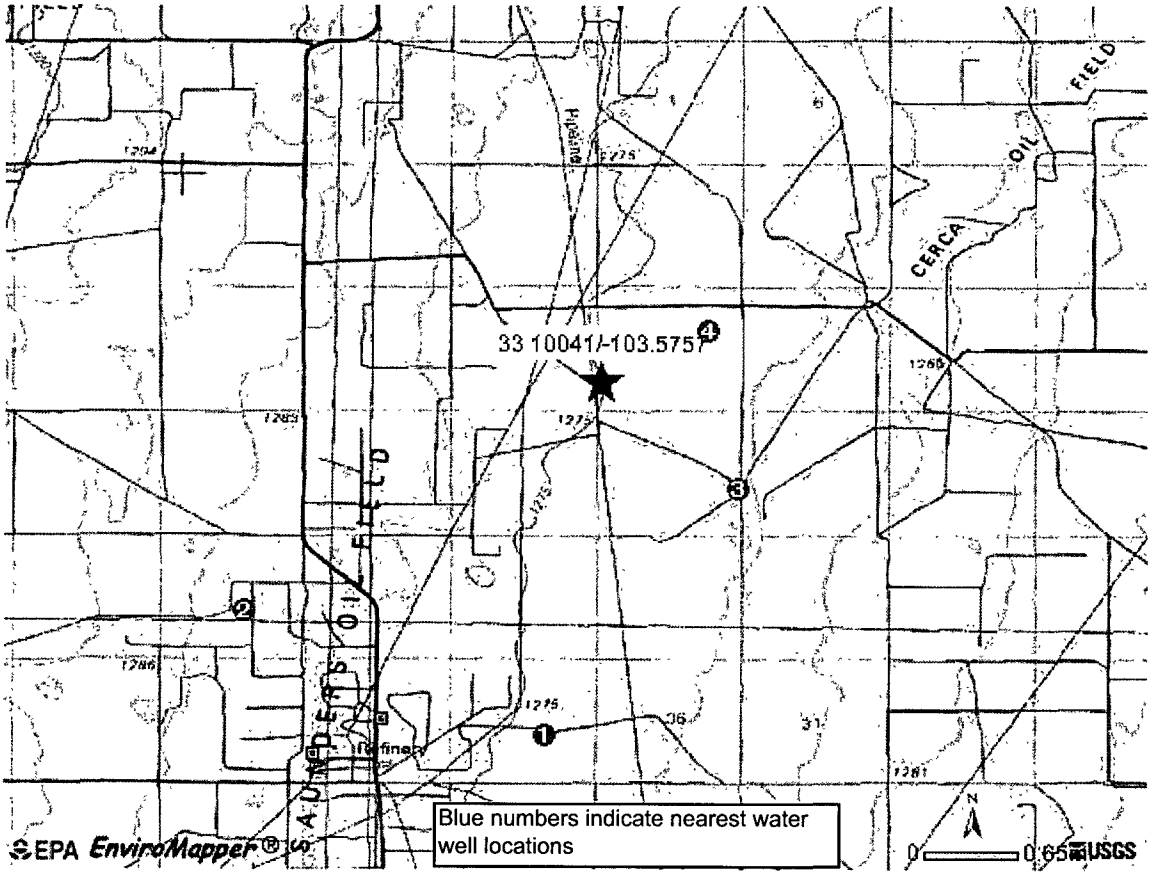
(quarters are 1=NW 2=NE 3=SW 4=SE)
(quarters are biggest to smallest)

POD Number	Tws	Rng	Sec	q	q	q	Zone	X	Y
L 04866	14S	33E	13	2	4				

Driller Licence: 33 TATUM, CLAUDE E.
Driller Name: TATUM, CLAUDE E. **Source:** Shallow
Drill Start Date: 04/09/1962 **Drill Finish Date:** 04/12/1962
Log File Date: 04/19/1962 **PCW Received Date:**
Pump Type: **Pipe Discharge Size:**
Casing Size: 7 **Estimated Yield:**
Depth Well: 145 **Depth Water:** 80

Water Bearing Stratifications:	Top	Bottom	Description
	80	145	Other/Unknown
Casing Perforations:	**Top**	**Bottom**	
	90	145	


USGS
USGS 330609103333801 14S.33E.13.243211
Ground-Water Level, in feet below land surface
72.0
72.5
73.0
73.5
74.0
74.5
75.0
75.5
76.0
Altitude of Water Level, in feet above sea level
4100.0
4099.5
4099.0
4098.5
4098.0
4097.5
4097.0
4096.5
4096.0
1976 1979 1982 1985 1988 1991 1994 1997 2000 2003 2006
---- Provisional Data Subject to Revision ----


33 10041/-103.5757
CERCA OIL FIELD
SAUNDERS OIL FIELD
Refinery
Blue numbers indicate nearest water well locations
EPA EnviroMapper®
0 0.65
USGS

District I
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State of New Mexico
Energy Minerals and Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-141
Revised October 10, 2003

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Release Notification and Corrective Action

OPERATOR

☐ Initial Report ☒ Final Report

Name of Company – EnerVest Operating LLC	Contact - Doug Watne
Address –1001 Fannin Street, Suite 800, Houston, TX 77002	Telephone No. 979-542-2607
Facility Name – Chalupa SWD #004	Facility Type - Injection

Surface Owner – State of New Mexico	Mineral Owner	API No. 30-025-29184

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	South Line	Feet from the	East/West Line	County
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By Whom? Unknown Rancher	Date and Hour - 11/18/08 at 3:30 PM	
Was a Watercourse Reached? ☐ Yes ☒ No	If YES, Volume Impacting the Watercourse.	

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Describe Cause of Problem and Remedial Action Taken.*
A flow line connection/swing developed a leak resulting in the brine water spill. The spill at this site is considered to be approximately 30bbls. The line was shut in. A vacuum truck was used to pick up 20bbls of produced water. All connections The leak has been properly repaired.

Describe Area Affected and Cleanup Action Taken.* The effected area was an average of 305ft X 20ft. Some vegetation showed signs of stress within approximately 50% of the contaminated area. The entire area had elevated levels of chlorides. A sampling investigation was conducted at the site. A report with the findings was submitted to OCD Hobbs office on March 5th, 2009. The remediation method was "dig & haul" operations with lab analysis. Contaminated soil was excavated and delivered to Gandy's Disposal. The area was then back filled with clean soil and properly reseeded. EnerVest Operating planned to submit a closing report upon re-vegetation of the site. Before re-vegetation occurred a second spill occurred in the same area. A separate c-141 was submitted to Hobbs OCD office on 9/30/09. A request was made to OCD to close the original spill (IRP#09.3.2140), since a second spill had occurred. The request was granted thus generating this final c141.

I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger public health or the environment. The acceptance of a C-141 report by the NMOCD marked as "Final Report" does not relieve the operator of liability should their operations have failed to adequately investigate and remediate contamination that pose a threat to ground water, surface water, human health or the environment. In addition, NMOCD acceptance of a C-141 report does not relieve the operator of responsibility for compliance with any other federal, state, or local laws and/or regulations.

Signature: Andy B. Price	OIL CONSERVATION DIVISION	
Printed Name: Andy Price	Approved by District Supervisor:	
Title: Consultant	Approval Date:	Expiration Date:
E-mail Address: andyprice@grandecom.net	Conditions of Approval:	Attached ☐
Date: 12/1/09 Phone: 432-352-6400		

* Attach Additional Sheets If Necessary

IRP# 09.3.2140