Whole Earth Environmental, Inc.
2103 Arbor Cove
Katy, Tx. 77494
281.394.2050
whearth@msn.com

September 21, 2010

NMOCD
1301 West Grand Ave.
Artesia, NM 88210

Reference: 2RP 356

Attn: Mike Bratcher

Dear Mr. Bratcher:

Enclosed, please find a copy of the final closure report for the Melrose State 647 remediation project.

Thank you again for the opportunity of working with you on this project.

Warmest personal regards,

Mike Griffin
President
Whole Earth Environmental, Inc.

Executive Summary

Melrose Energy
State 647 AC 711 #89
Remediation Plan

Location
The site is located approximately fifteen miles southeast of the City of Artesia, Eddy County, New Mexico on state lands. The primary land use is grazing of cattle however extensive oil and gas operations are prevalent in the area. The area is semi-arid with a net precipitation / evaporation amount of -73" per year. The legal description of the site is **Unit K, Sec. 27, T-18S, R-27E.**

Site History
On September 29, 2009 an injection line break of approximately 40bbls. was discovered and immediate recovery of spill fluids was initiated. The spill ran a distance of approximately 600' to the south west eventually pooling at the site of several historic leaks adjacent to an OXY well. The affected area was immediately excavated to an approximate depth of 6" below ground surface and sent to commercial disposal. The puddle area was treated with a calcium nitrate to ameliorate the surface impact. According to the subsequent borings, this treatment was successful in significantly reducing surface chloride concentrations.

Remediation
The affected area (east of the pipeline) was excavated to the depth of 18" below ground surface. All excavated materials from the impacted area were sent to commercial disposal. The unaffected area (west of the pipeline) was also excavated

to a depth of 18" below ground surface. All of this material was saved on site for backfill. The final dimensions of the entire excavation are 32'W (east & west pipeline being center) x 650'L (with 20' extending north beyond the valve setting). A GSL Liner (bentonite matting) was placed within the excavation and underneath the pipeline extending 15' to each side of the pipeline. Prior to and during the remediation work the pipeline was tested and new brass valves and fittings were installed at the initial leak site. Wooden junction boxes were built and installed at the valve settings. After the GSL liner was installed the liner was backfilled with clean caliche like material, and then backfilled with the saved excavated material. The entire excavated site was overlain with clean topsoil, and seeded using a mixture of BLM seeds #2 & #4 per Mike Bratcher OCD.

PR-137

Remediation Protocol
Melrose Energy Co.
State 647 AC 711 #89 Pipeline Leak

1.0 Purpose

This protocol is to provide a detailed outline of the steps to be employed in the remediation and closure of the Melrose State 647 AC 711 #89 leak location in Eddy County, New Mexico.

2.0 Scope

This protocol is site specific for the Melrose State 647 AC 711 #89 leak remediation project.

3.0 Preliminary

Prior to any field operations, Whole Earth Environmental shall conduct the following activities:

3.1 Client Review

3.1.1 Whole Earth Environmental shall meet with cognizant personnel within Melrose Energy Co. and the NMOCD to review and approve this protocol.

3.1.2 Changes to this protocol will be documented and submitted for final review by all parties prior to the initiation of actual field work.

4.0 Safety

4.1 Prior to work on the, Whole Earth Environmental shall obtain the location and phone numbers of the nearest emergency medical treatment

facility. We will review all safety related issues with the appropriate Client personnel, sub-contractors and exchange phone numbers.

4.2 A tailgate safety meeting shall be held and documented each day. All sub-contractors must attend and sign the daily log-in sheet.

4.3 Anyone allowed on to location must be wearing sleeved shirts, steel toed boots, and long pants. Each vehicle must be equipped with two way communication capabilities.

4.4 Prior to any excavation, New Mexico One Call will be notified. If lines are discovered within the area to be excavated they shall be marked with pin flags on either side of the line at maximum five-foot intervals.

5.0 Remediation

5.1 The affected area (east side of pipeline) shall be excavated to the depth of 18" below ground surface. This excavated material will be sent to commercial disposal. The area not affected by the leak (west side of pipeline) shall be excavated the same as the east side, but all material will be saved for backfill. A GSL Liner (bentonite matting) will be placed extending 15' to both sides of the pipeline.

5.2 The excavated area will be backfilled using a caliche like material for liner padding. The entire excavation will then be backfilled, with the remaining needed material being topsoil and caliche mix to minimize erosion.

5.3 The site will then be seeded using a seed mixture of BLM #2 & #4 per Mike Bratcher OCD

6.0 Closure Report

6.1 At conclusion of the project, Whole Earth Environmental shall prepare a closure report that contains the following minimum information:

- Photographs of the location prior to remediation
- Photographs of the site at the point of maximum excavation
- Photographs of the bentonite matting being laid under the flowline
- Photographs of the site at final restoration
- Satellite photographs of the location
- Copies of this protocol

- Disposal manifests of all soils sent to commercial disposal
- Laboratory analytical reports
- Boring logs

Laboratory & Field Analysis

A. Superficial Lab. Analytical Summary
B. Deep Boring Field & Lab Analytical Summary
C. H19841 WEE Bore 5 Chlorides @ 70'
D. H19878 WEE Bores 2-4 & Background Bore Lab Analyticals

MELROSE OPERATING STATE 647-711 #89 LEAK
SUPERFICIAL LAB RESULTS

CARDINAL LABS 10/6/2009							
SAMPLE PT	GRO	DRO	B	T	E	X	CL-
1 SURFACE			<0.050	0.381	<0.050	15.3	
11"bgs							2,520
2 SURFACE	320	1760	<0.050	<0.050	<0.050	<0.300	13,800
16"							4,480
3 SURFACE	<10.0	<10.0	<0.050	<0.050	<0.050	<0.301	6,960
14"							1,120
4 SURFACE	<10.0	16.5	<0.050	<0.050	<0.050	<0.302	1,570
13"							9,000
5 SURFACE	<10.0	375	<0.050	<0.050	<0.050	<0.303	12,000
16"							6,240
6 SURFACE	<10.0	608	<0.050	<0.050	<0.050	<0.304	31,600
16"							12,200
7 SURFACE	<10.0	13.1	<0.050	<0.050	<0.050	<0.305	15,200
12"							8,600
8 SURFACE	<10.0	85.4	<0.050	<0.050	<0.050	<0.306	7,800
17"							5,200
9 SURFACE	<10.0	<10.0	<0.050	0.062	0.066	<0.307	<16
14"							144
10 SURFACE	<10.0	<10.0	<0.050	0.057	<0.050	<0.308	416
11"							2,040

Summary of Boring Soil Sample Field/ Analytical Results
Melrose State 647-711 #89

Soil Sample ID.	Depth (Feet)	Sample Date	Sample method	PID Reading (ppm)	Field Chloride Analysis (ppm)	Lab Sample Identification	Chloride (mg/Kg)
Background	1"	5/11/2010	Bored Split Spoon	N/A	82		
	2'				108		
	3'				108		
	4'				100		
	5'				69		
	10'				93		
	15'				68	H19878-1	64
	20'				98	H19878-2	96
Whole Earth Bore (Source)	6"	3/16/2010	Returns	1	4,798		
	1"			0.8	8,629		
	2'			5.9	8,648		
	5'			0.7	7,439		
	10'			4	7,781		
	15'			3.5	8,269		
	17'			3.2	7,010		
	20'			-	-	Boring stopped due to	
Bore No. 1	5'	5/6/10	Bored Split Spoon	N/A	6,363		
	10'				9,495		
	15'				6,281		
	20'				5,311		
	25'				3,836		
	30'				2,593		
	35'				3,689		
	40'				2,570		
	45'				4,144		
	50	5/7/10	Bored Split Spoon	0.2	4,784		
	55			0.8	4,001		
	60			0.2	2,773		
	65			0	3,495		
	70			1.5	3,359		
	75			1.4	8,425		
	80			1.2	4,345		
	85			1.8	2,729		
	90			0.8	4,160		
	95			n/a	n/a	bit refusal	

Bore No. 2	1'	5/10/2010	Bored Split Spoon	N/A	4,751		
	2'				6,175		
	3'				9,386		
	4'				8,193		
	5'				9,760		
	10'				9,950		
	15'				5,540		
	20'				4,116		
	25'				3,369		
	30'				3,002		
	35'				3,613		
	40'				3,860		
	42'				6,700		
	45'				1,440		
	50'				1,946		
	55'				5,715		
	60'				423		
	65'				293	H19878-3	**48**
	67'				206	H19878-4	**128**
Bore No. 3	1'	5/10/2010	Bored Split Spoon	N/A	10,391		
	2'				8,023		
	3'		Returns		7,421		
	4'		Bored Split Spoon		9,755		
	5'				6,378		
	10'				1,386		
	15'				251	H19878-5	**224**
	20'				186	H19878-6	**160**
Bore No. 4	1'	5/11/2010	Bored Split Spoon	N/A	7,100		
	2'				7,125		
	3'				3,678		
	4'				8,252		
	5'				10,194		
	10'				7,947		
	15'				7,468		
	20'				4,894		
	25'				3,149		
	30'				3,794		
	35'				2,573		
	40'				2,209		
	45'				5,128		
	50'				5,000		
	55'				4,918		
	60'				2,735		
	65'				2,292		
	70'				351		
	75'				100	H19878-7	**65**
	77'				96	H19878-8	**72**

Bore No 5	5'	5/6/2010	Bored Split Spoon	N/A	171		
	15'				2069		
	25'				491		
	35'				873		
	45'				1638		
	50'				1500		
	55'				1237		
	60'				350		
	65'				383		
	70'				188		**80**
	72'				137		**48**

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

May 10, 2010

Michael Griffin
Whole Earth Environmental, Inc.
2103 Arbor Cove
Katy, TX 77494

Re: Melrose St. 647-711 #89

Enclosed are the results of analyses for sample number H19841, received by the laboratory on 05/07/10 at 8:15 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accredited though the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 3 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
WHOLE EARTH ENVIRONMENTAL, INC.
ATTN: MICHAEL GRIFFIN
2103 ARBOR COVE
KATY, TX 77494
FAX TO: (281) 394-2051

Receiving Date: 05/07/10
Reporting Date: 05/07/10
Project Owner: NOT GIVEN
Project Name: MELROSE ST. 647-711 #89
Project Location: NOT GIVEN

Analysis Date: 05/07/10
Sampling Date: 05/06/10
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 6°C
Sample Received By: JH
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl^- (mg/kg)
H19841-1	(B5) 70'	80
H19841-2	(B5) 72'	48
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-ClB

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

Chemist

05/10/10
Date

H19841 WEE

CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

Company Name: Whole Earth Environmental	**BILL TO**
Project Manager: Michael Griffin	P.O. #:
Address:	Company:
City: Ickory State: TX Zip:	Attn:
Phone #: Fax #:	Address:
Project #: Project Owner:	City:
Project Name: Melrose St. 647-711 #89	State: Zip:
Project Location:	Phone #:
Sampler Name:	Fax #:

FOR LAB USE ONLY				MATRIX						PRESERV.			SAMPLING		ANALYSIS REQUEST
Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	ACID/BASE:	ICE / COOL	OTHER:	DATE	TIME	Chlorides
H19841-1	(B5) 70'	G	1			✓					✓		5/6/10	11:25	✓
2	(B5) 72'	G	1			✓					✓		"	11:37	✓

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

Relinquished By:	Date: 5/7/10 Time: 8:15	Received By:	Phone Result: ☐ Yes ☐ No Add'l Phone #: Fax Result: ☐ Yes ☐ No Add'l Fax #: REMARKS: email to Mikag@vadose.us
Relinquished By:	Date: Time:	Received By: Jodi Henson	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:		Sample Condition: Cool ☐ Yes ☐ No / Intact ☑ Yes ☐ No — 6°C	CHECKED BY: (Initials) AW

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

#26

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

May 13, 2010

Michael Griffin
Whole Earth Environmental, Inc.
2103 Arbor Cove
Katy, TX 77494

Re: Melrose St. 647-711 #89

Enclosed are the results of analyses for sample number H19878, received by the laboratory on 05/12/10 at 2:30 pm.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accredited though the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 3 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director

This report conforms with NELAP requirements.

CARDINAL LABORATORIES

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
WHOLE EARTH ENVIRONMENTAL, INC.
ATTN: MICHAEL GRIFFIN
2103 ARBOR COVE
KATY, TX 77494
FAX TO: (281) 394-2051

Receiving Date: 05/12/10
Reporting Date: 05/13/10
Project Owner: NOT GIVEN
Project Name: MELROSE ST. 647-711 #89
Project Location: NOT GIVEN

Analysis Date: 05/13/10
Sampling Date: 05/10/10 & 05/11/10
Sample Type: SOIL
Sample Condition: INTACT @ 24°C
Sample Received By: JH
Analyzed By: HM

LAB NO.	SAMPLE ID	Cl⁻ (mg/kg)
H19878-1	BACK GRD BORE @ 15'	64
H19878-2	BACK GRD BORE @ 20'	96
H19878-3	BORE 2 @ 65'	48
H19878-4	BORE 2 @ 67'	128
H19878-5	BORE 3 @ 15'	224
H19878-6	BORE 3 @ 20'	160
H19878-7	BORE 4 @ 75'	64
H19878-8	BORE 4 @ 77'	32
Quality Control		500
True Value QC		500
% Recovery		100
Relative Percent Difference		< 0.1

METHOD: Standard Methods	4500-ClB

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

Chemist

05/13/10
Date

H19878 WEE

CARDINAL LABORATORIES

101 East Marland, Hobbs, NM 88240 2111 Beechwood, Abilene, TX 79603
(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325)673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: WEE Inc.	**BILL TO**
Project Manager: Michael Griffin	P.O. #:
Address:	Company:
City: State: Zip:	Attn:
Phone #: Fax #:	Address:
Project #: Project Owner:	City:
Project Name: Melrose St. 647-711 #89	State: Zip:
Project Location:	Phone #:
Sampler Name: Michael Griffin	Fax #:

ANALYSIS REQUEST

FOR LAB USE ONLY Lab I.D.	Sample I.D.	(G)RAB OR (C)OMP.	# CONTAINERS	MATRIX: GROUNDWATER	WASTEWATER	SOIL	OIL	SLUDGE	OTHER:	PRESERV.: ACID/BASE	ICE / COOL	OTHER:	SAMPLING: DATE	TIME	Cl-
H19878-1	Back Grd Bore @ 15'	G	1			X						X	5-11-10	210	X
2	↓ @ 20'	G											5-11-10	215	
3	Bore 2 @ 65'												5-10-10	320	
4	↓ 67'												5-10-10	335	
5	Bore 3 @ 15'												5-10-10	445	
6	20'												5-10-10	500	
7	Bore 4 @ 75'												5-11-10	1200	
8	77'	↓	↓			↓						↓	5-11-10	1215	↓

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

Relinquished By: Michael Griffin	Date: 5-12-10 Time: 0630	Received By: Ray R. Rasco	
Relinquished By: Ray R. Rasco	Date: 5-12-10 Time: 230	Received By: Jodi Henson	
Delivered By: (Circle One) Sampler - UPS - Bus - Other:	Sample Condition: Cool Yes / No; Intact Yes / No	CHECKED BY: (Initials)	

Phone Result:	☐ Yes	☐ No	Add'l Phone #:
Fax Result:	☐ Yes	☐ No	Add'l Fax #:

REMARKS: PLEASE Email to All

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

#26

Exhibit Index

A. C-141 (initial)
B. C-141 (final)
C. NMOCD Ranking Worksheet
D. Driving Instructions
E. Satellite View of Location-Close up
F. OCD Letter of 3-17-10
G. Electromagnetic Survey Data
H. Boring Logs
I. Initial Photos
J. Work in Progress Photos
K. Final Photos

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

OCT 05 2009

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 Melrose Operating Company 18948	Contact Michael J. Corjay
Address 1000 W. Wilshire Blvd., Suite 223	Telephone No. 405-848-4012
Facility Name State 647 AC711 #89	Facility Type

Surface Owner	Mineral Owner	Lease No.

30-015-02055

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	27	18S	28E	2310	S	1650	W	EDDY

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release Injection Water	Volume of Release 40 bbls	Volume Recovered 40 bbls
Source of Release Injection Line on well #89	Date and Hour of Occurrence 9/29/09 @ 11:30 a.m.	Date and Hour of Discovery 9/29/09
Was Immediate Notice Given? ☒ Yes ☐ No ☐ Not Required	If YES, To Whom? Sherry Bonham	
By Whom? Gary Newton	Date and Hour 9/29/2009	
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.*

Injection line break. Break was repaired.

Describe Area Affected and Cleanup Action Taken.*
100 ft of line right of way that ended at Oxy's Crocket #27 on a 50'x50' area.
Cleanup consisted of using vac truck and a backhoe to spread dirt to absorb material.

Plan is to treat soil with chemical product from Reef Chemical. Will apply chemical until desired levels are achieved. Should chemical application not be successful, soil will be removed and continue to test until OCD is satisfied with results. OCD will be notified 48 hours prior to taking of soil samples.

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: Linda Terry	OIL CONSERVATION DIVISION
Printed Name: Linda Terry	Approved by District Supervisor: Robert Hamlet
Title: Regulatory Agent	Approval Date: 10-7-2009 Expiration Date: 12-31-09
E-mail Address: lterry@melroseenergy.com	Conditions of Approval: Attached ☑

Remediation Actions to be completed and Final C-141 submitted with confirmation analyses/documentation on or before the Expiration Date.

Date: 10/2/2009	Phone: 405-848-4012	SEE ATTACHED STIPULATIONS	2RP - 356

* Attach Additional Sheets If Necessary

SEB0930092435
AFB0930032501
SEB0930033144

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

RECEIVED
SEP 29 2010
NMOCD ARTESIA

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 X Final Report

Name of Company: Melrose Operating (184860)	Contact: Barry Archer
Address: 20333 St. Hwy. 249 Suite 310 Houston, Tx. 77070	Telephone No.: (832) 698-7000
Facility Name: State 647 ACT 711 #89	Facility Type

Surface Owner	Mineral Owner: 30-015-02055	Lease No.

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
K	27	18S	28E	2,310	S	1,650	W	Eddy

Latitude _____ Longitude _____

NATURE OF RELEASE

Type of Release: Injection Water	Volume of Release: 40 Bbls	Volume Recovered: <40Bbls
Source of Release: Injection Line on Well # 89	Date and Hour of Occurrence: 9/29/09 @ 11:30 AM	Date and Hour of Discovery: 9/29/09
Was Immediate Notice Given? X Yes ☐ No ☐ Not Required	If YES, To Whom? Sherry Bonham	
By Whom? Gary Newton	Date and Hour: 9/29/09	
Was a Watercourse Reached? ☐ Yes X No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

Injection Line Break. Line was repaired

Describe Area Affected and Cleanup Action Taken.*

Impacted soils were excavated and sent to commercial disposal. A geo-textile (bentonite) mat was installed at a 4' depth and covered with clean topsoils in accordance with NMOCD approved Whole Earth Environmental protocol PR-137.

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 operations 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:	OIL CONSERVATION DIVISION
Printed Name: Barry Archer	Approved by District Supervison:
Title: production Manager	Approval Date: / Expiration Date:
E-mail Address: barry.archer@melroseresources.com	Conditions of Approval: / Attached ☐
Date: 8-25-10 Phone: (832) 698-7000	

* Attach Additional Sheets If Necessary

SITE ASSESMENT CRITERIA (NMOCD)

Melrose Energy State 647 AC 711 # 89
Unit K, S-27, T-18S, R-28E
Eddy County, NM

Depth to Groundwater: Approx. 239' bgs

DEPTH TO GROUND WATER

(Vertical distance from contaminants to seasonal high water elevation of ground water.)

Less than 50' BGS	(20 points)	
50' to 99' BGS	(10 points)	
Greater than 100' BGS	(0 points)	0

WELLHEAD PROTECTION AREA

(Less than 200' from a private domestic water source, or; less than 1000' from all other water sources)

YES	(20 points)	
NO	(0 points)	0

DISTANCE TO SURFACE WATER BODY

(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals, and ditches)

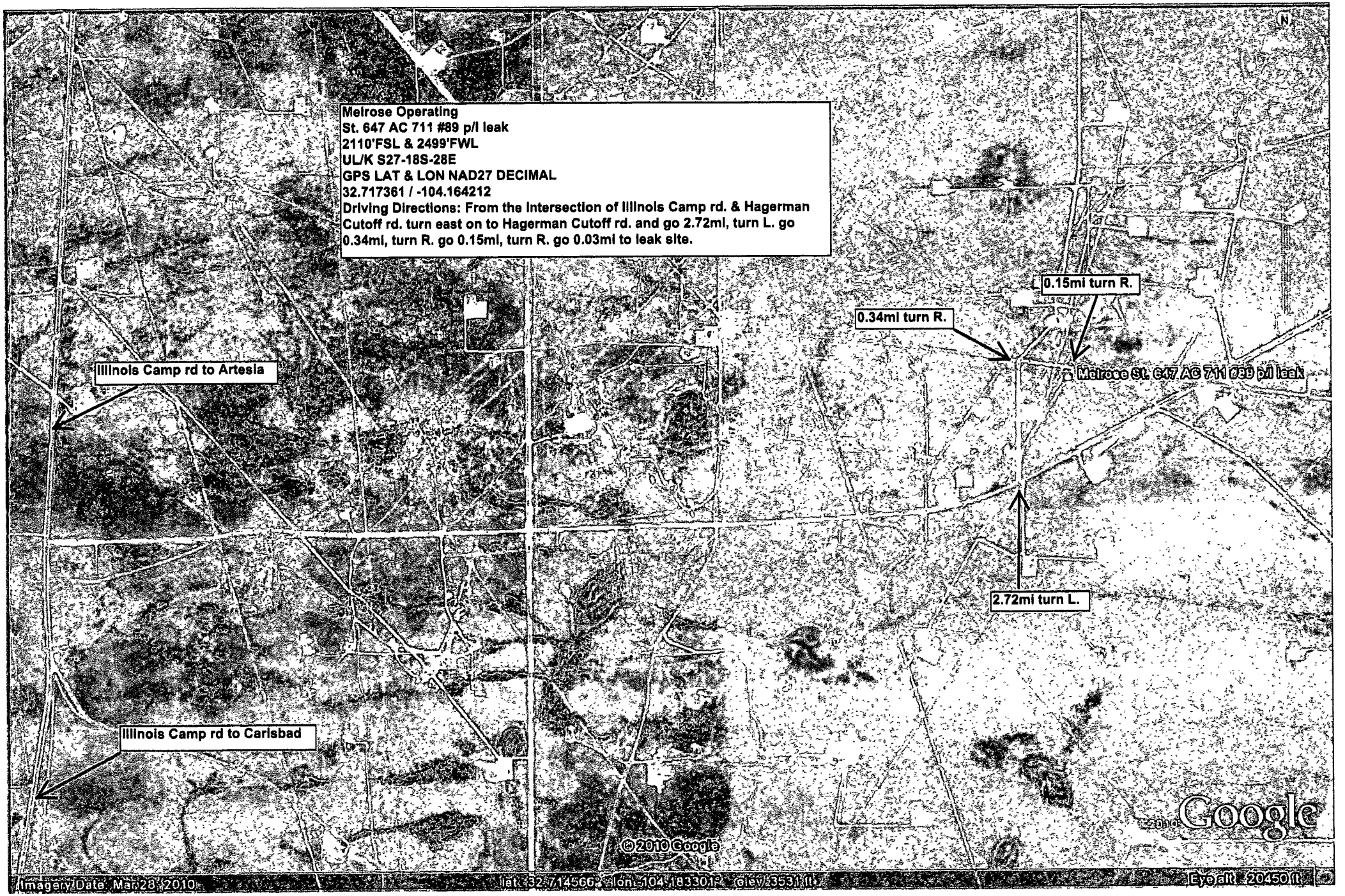
Less than 200'	(20 points)	
200' to 1000'	(10 points)	
Greater than 1000'	(0 points)	0

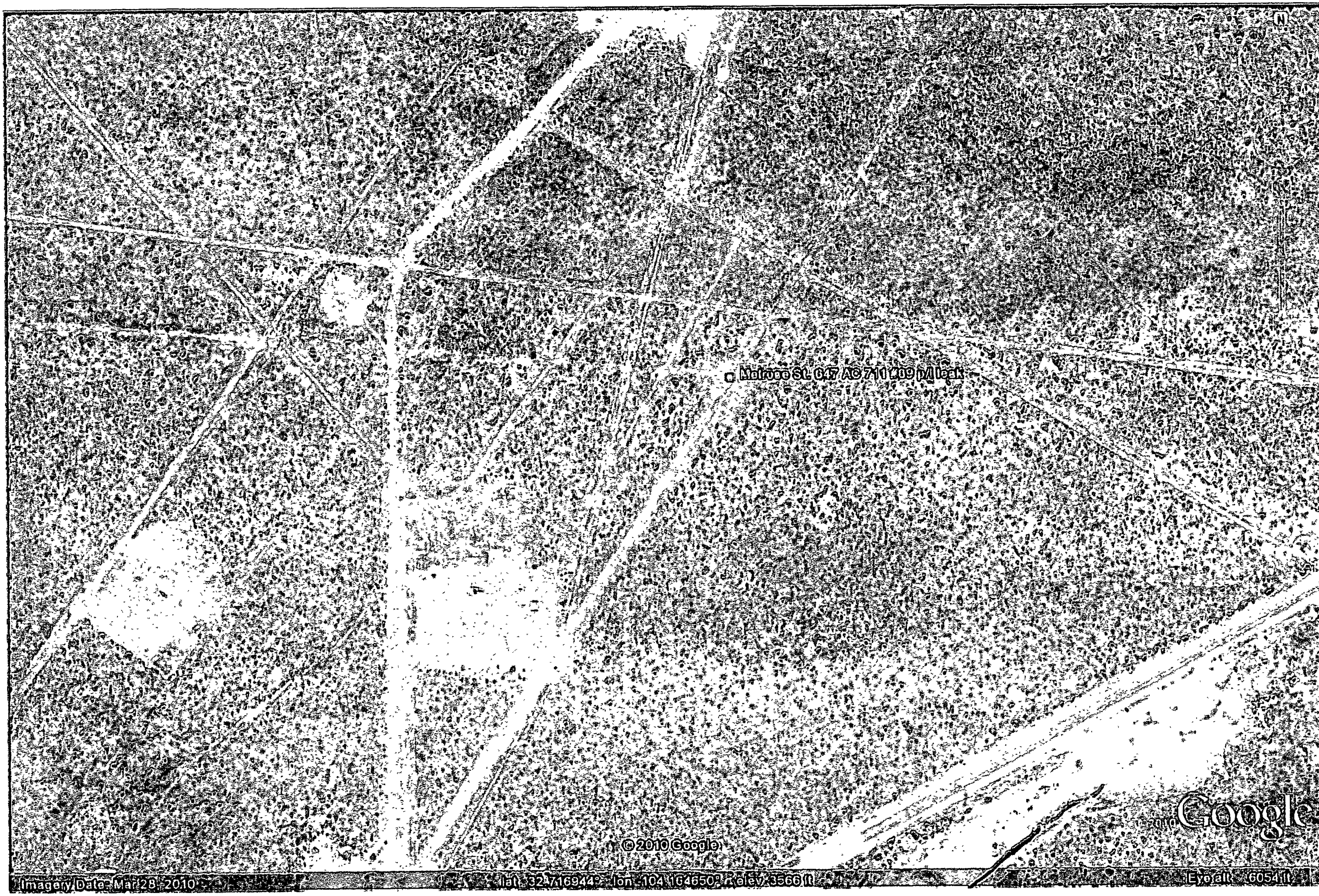
RANKING SCORE TOTAL POINTS 0

CLEAN - UP TARGET CONCENTRATIONS FOR "SITE CLOSURE"

IF RANKING SCORE IS:	> 19	10 - 19	0 - 9
BENZENE (ppm)*	10	10	10
BTEX (ppm)*	50	50	50
TPH (ppm)**	100	1000	5000

*A field vapor headspace measurement of 100 ppm may be substituted for a laboratory analysis.
** The contaminant concentration for TPH is the concentration above background levels.


Melrose Operating
St. 647 AC 711 #89 p/l leak
2110'FSL & 2499'FWL
UL/K S27-18S-28E
GPS LAT & LON NAD27 DECIMAL
32.717361 / -104.164212
Driving Directions: From the Intersection of Illinois Camp rd. & Hagerman Cutoff rd. turn east on to Hagerman Cutoff rd. and go 2.72ml, turn L. go 0.34ml, turn R. go 0.15ml, turn R. go 0.03ml to leak site.
0.15mi turn R.
0.34mi turn R.
Illinois Camp rd to Artesia
Melrose St. 647 AC 711 #89 p/l leak
2.72mi turn L.
Illinois Camp rd to Carlsbad
© 2010 Google
Google
Imagery Date: Mar 28, 2010
lat 32.714566° lon -104.183301° elev 3531 ft
Eye alt 20450 ft


N
Melrose St. 647 AC 711 #09 p/l leak
© 2010 Google
Google
Imagery Date: Mar 28, 2010
lat 32.716944° lon -104.164650° elev 3566 ft
Eye alt 6054 ft

New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Jon Goldstein
Cabinet Secretary

Jim Noel
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division

March 17, 2010

Melrose Operating Company
Michael J Corjay
20333 State Highway 249, Suite 310
Houston, TX 77070

RE: State 647 AC 711 #89 K-27-18S-28E
30-015-02055 Eddy County, New Mexico

Dear Mr. Corjay,

On October 5, 2009, the New Mexico Oil Conservation Division (NMOCD) Artesia District 2 Office received from Melrose Operating Company (Melrose) a Release Notification and Corrective Action Form C-141. The C-141 indicated that there had been a release of injection water. Included on the C-141 was a plan to "...treat soil with chemical product...until desired levels are achieved."

October 6, 2009, operator conducted sample event. On December 28, 2009, NMOCD District 2 received the preliminary analyses of the October 6, 2009 sample date.

On October 27, 2009, NMOCD District 2 accepted the Initial C-141 and outlined stipulations in a letter dated October 27, 2009. Final remediation actions were to be completed with final reports and supporting documentation to be submitted to the OCD on or before December 31, 2009.

Melrose procured the services of TNT Backhoe Services to obtain soil samples on December 18, 2009. On December 28, 2009, NMOCD District 2 received the analyses of the December 18, 2009 sample date.

19.15.29 NMAC governs releases. Part 29.11 requires the responsible person to complete division-approved corrective action for releases that endanger public health or the environment, in accordance with a remediation plan or an abatement plan.

Based on the analytical of the sample event (December 18, 2009) and rule 19.15.29 NMAC, the operator must submit a remediation proposal (plan). The remediation plan must include a site investigation plan including the horizontal and vertical delineation of the contamination. Within 30 days, on or before April 17, 2010 completion of a remediation plan should be finalized and a report summarizing

all actions taken to mitigate environmental damage related to the leak, spill or release shall be provided to the OCD for approval.

Please be advised that NMOCD acceptance and/or approval of documents or work plans 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 and/or approval of documents or work plans do not relieve the operator of responsibility for compliance with any other federal, state, local laws and/or regulations.

If I may be of further assistance regarding this matter or if you have any questions, please feel free to contact me.

Respectfully,

Sherry Bonham
NMOCD district 2
1301 West Grand Avenue
Artesia, NM 88210
575.748.1283 ext 109
sherry.bonham@state.nm.us

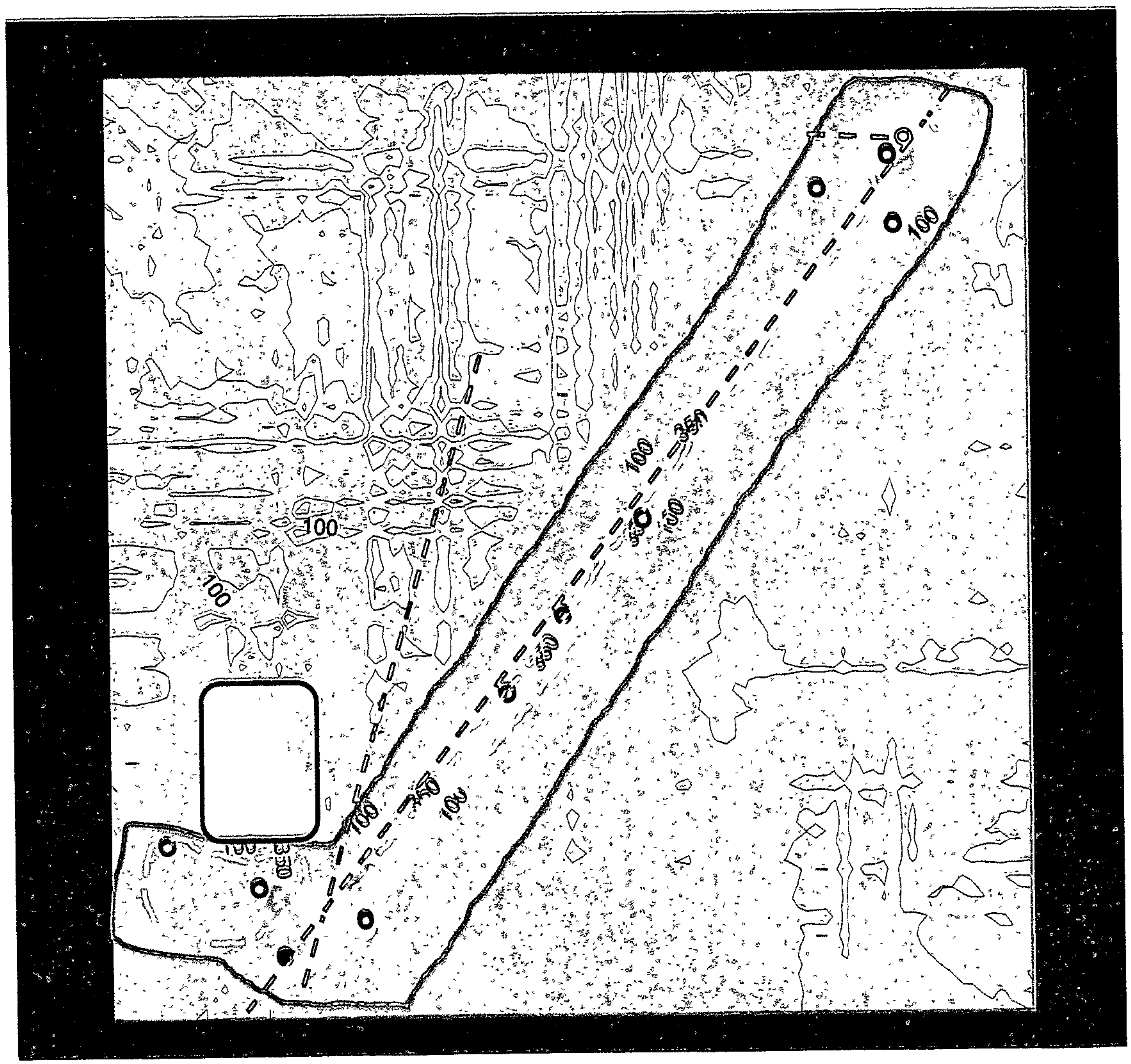
cc: Gary Newton

MELROSE OPERATING STATE 647-711 #89 LEAK SITE
EM38 SURVEY VERTICAL 0'>5' BGS

NORTH

blue solid line = survey area
red dashed line = pipelines
yellow long dash line = leak area

white center outer red line = leak origin
red center outer line black = sample pts by TNT
black square = fenced area

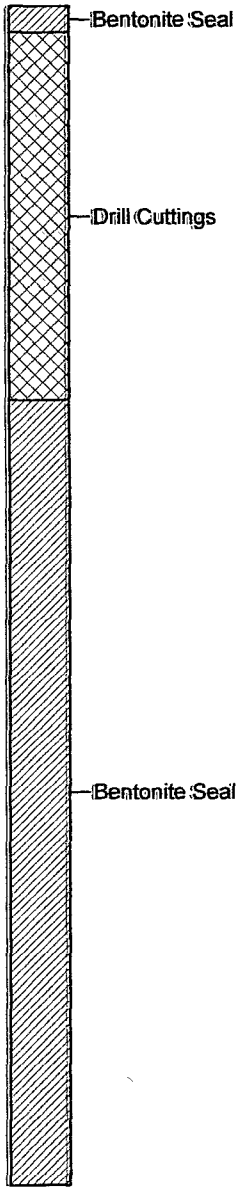


Log of Boring Melrose Soil Bore #1

Atkins ENGINEERING ASSOCIATES

Whole Earth Environmental 2103 Arbor Cove Katy TX 77494	Drilling Start	: 05-06-10	Logged By : M. Bates
	Drilling End	: 05-07-10	
	Boring Location	: Far N on Pipeline	
Contact: Mike Griffin	Site Location	: Oxy Pad B1, Loco Hills Area	
Job #: WHOLETH MEL.10	Auger Type	: 4¼ Hollow Stem	

Depth in Feet	GRAPHIC	USCS	Sample	DESCRIPTION
0			1	Caliche, silty clay, tan, firm, dry
5			2	
			3	Caliche, sand, tan, loose, dry
10			4	Layers of sand and cemented sand, reddish brown, firm, damp
15			5	
20			6	
25		SP	7	
30			8	
35			9	
40			10	Fine grained, poorly graded sand, brown, loose, damp
45			11	
50			12	
55			13	
60		SP	14	
65			15	
70			16	
75			17	
80			18	
85			19	
90		CL	20	Clay, reddish brown, firm, damp
95				Total Depth 90' Congomerate rock, hard. Auger refusal.
100				



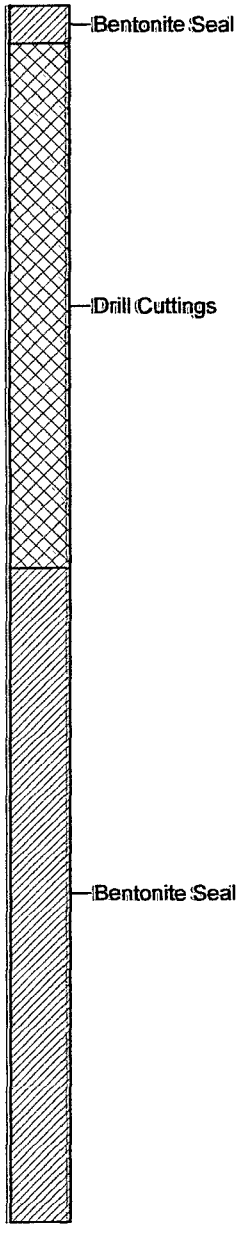
05-20-2010 C:\Users\Paddy\Documents\Whole Earth\Melrose Site Eddy Co\sb1.bor

Log of Boring Melrose Soil Bore #2

Atkins ENGINEERING ASSOCIATES

Whole Earth Environmental 2103 Arbor Cove Katy TX 77494	Drilling Start	: 05-10-10	Logged By : M. Bates
	Drilling End	: 05-10-10	
	Boring Location	: ±75'S of SB#1	
Contact: Mike Griffin	Site Location	: Oxy Pad B1, Loco Hills Area	
Job #: WHOLETH.MEL.10	Auger Type	: 4¼ Hollow Stem	

Depth in Feet	GRAPHIC	USCS	Sample	DESCRIPTION
0		CL	1	Sandy clayey, tan, loose, dry
			2	
5		SC	3	Clayey sand, reddish tan, firm, dry
10			4	
15		GC	5	Clayey gravel, reddish tan, loose, dry
20			6	
		CL		Sandy clay, reddish brown, loose damp
25			7	
30			8	
35			9	
		SP		Coarse sand, brown, loose, damp
40			10	
		CL		Clay, red, stiff, damp
45		SP	11	Poorly graded sand, red, damp
50			12	
55			13	
60			14	
		SP		Clayey sand, red, loose, damp
65			15	
				Total Depth 65'
70				

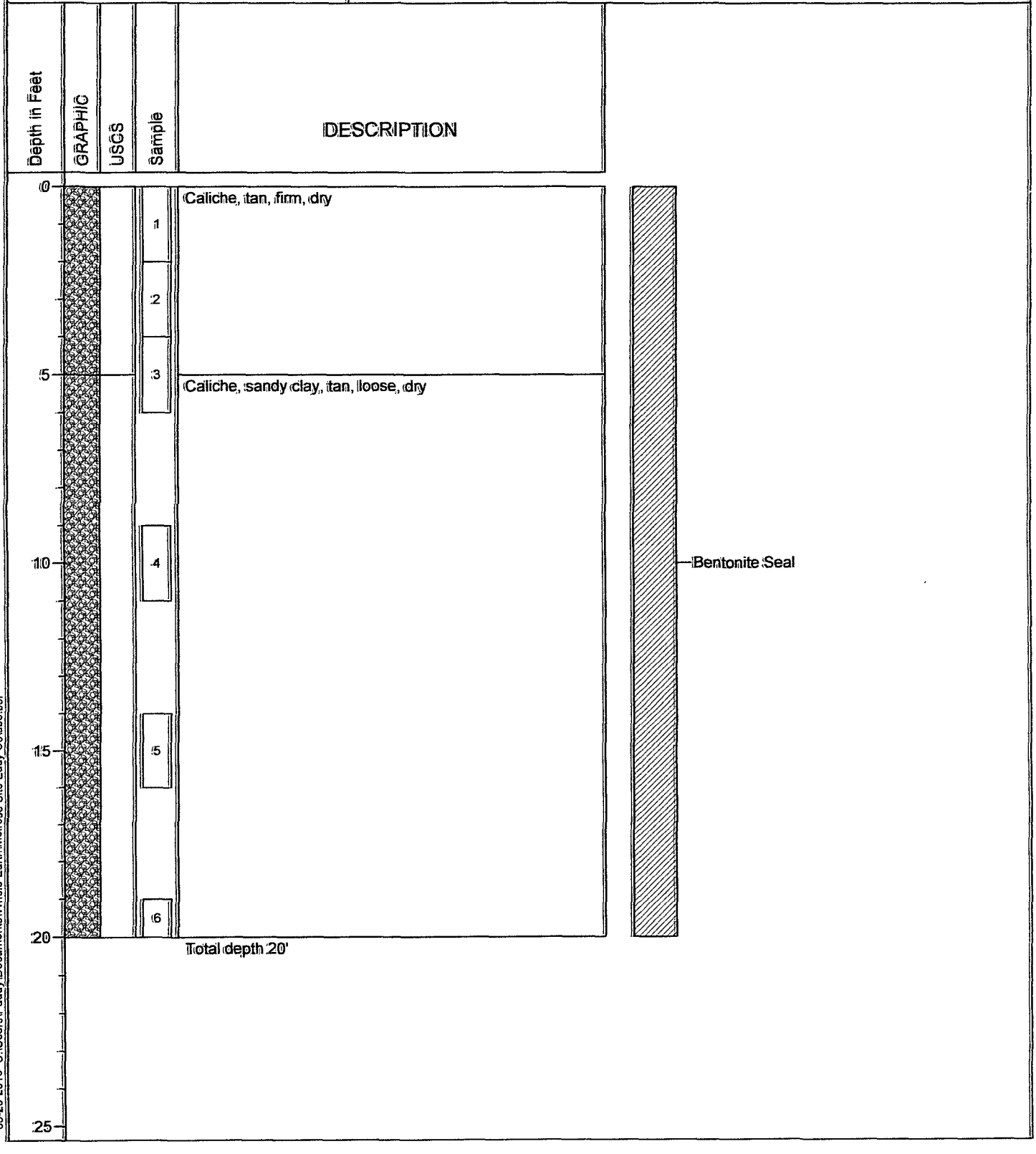


05-26-2010 C:\Users\Paddy\Documents\Whole Earth\Melrose Site Eddy Co\sb2.bor

Log of Boring Melrose Soil Bore #3

Atkins ENGINEERING ASSOCIATES

Whole Earth Environmental 2103 Arbor Cove Katy TX 77494	Drilling Start	: 05-10-10	Logged By : M. Bates
	Drilling End	: 05-10-10	
	Boring Location	: ±50'S of SB#2	
Contact: Mike Griffin	Site Location	: Oxy Pad B1, Loco Hills Area	
Job #: WHOLETH.MEL.10	Auger Type	: 4¼ Hollow Stem	



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Log of Boring Melrose Soil Bore #4

Atkins ENGINEERING ASSOCIATES

Whole Earth Environmental 2103 Arbor Cove Katy TX 77494	Drilling Start	: 05-11-10	Logged By : M. Bates
	Drilling End	: 05-11-10	
	Boring Location	: On Pipeline just E of SB#5	
Contact: Mike Griffin	Site Location	: Oxy Pad B1, Loco Hills Area	
Job #: WHOLETH MEL.10	Auger Type	: 4¼ Hollow Stem	

Depth in Feet	GRAPHIC	USCS	Sample	DESCRIPTION
0			1	Caliche, tan, firm, dry
5			2	
		SC	3	Clayey sand, tan, soft, damp
10		SC	4	Clayey sand, reddish tan, loose, damp
15		SP	5	Sand and cemented sand layers, reddish tan, firm, damp
20		SC	6	Clayey sand, reddish tan, loose, damp
25			7	
30			8	
		SW	9	Sand and gravel, reddish tan, loose, red, damp
35				
40		SP	10	Poorly graded sand, red, loose, damp
45			11	
		CL	12	Clay, red, stiff, damp
50				
55		GC	13	Clayey gravel, red, loose, damp
60		CL	14	Sandy clay, red, loose, damp
65			15	
70			16	
75		CL	17	Sandy clay, yellow, loose, damp
80				Total Depth 76'

Bentonite Seal

Drill Cuttings

Bentonite Seal

05-20-2010 C:\Users\Paddy\Documents\Whole Earth\Melrose Site Eddy Co\sb4.bor

Log of Boring Melrose Soil Bore #5

Atkins ENGINEERING ASSOCIATES

Whole Earth Environmental 2103 Arbor Cove Katy TX 77494	Drilling Start	: 05-06-10	Logged By : M. Bates
	Drilling End	: 05-06-10	
	Boring Location	: SE Corner of Pad	
Contact: Mike Griffin	Site Location	: Oxy Pad B1, Loco Hills Area	
Job #: WHOLETH MEL.10	Auger Type	: 4¼ Hollow Stem	

Depth in Feet	GRAPHIC	USCS	Sample	DESCRIPTION
0			1	Caliche, tan, firm, dry
5			2	
			3	
10			4	
15			5	Poorly graded sand cemented in layers, reddish brown, firm, dry
20			6	
25			7	
30			8	
35		SP	9	
40			10	
45			11	
50			12	
55			13	
60			14	Poorly graded sand cemented in layers, rust yellow, firm, damp
65		SP	15	Poorly graded sand, reddish tan, loose, damp
70		SP	16	Poorly graded sand, yellowish tan, loose, damp
75		SP	17	
80				Total Depth 75'

Bentonite Seal

Drill Cuttings

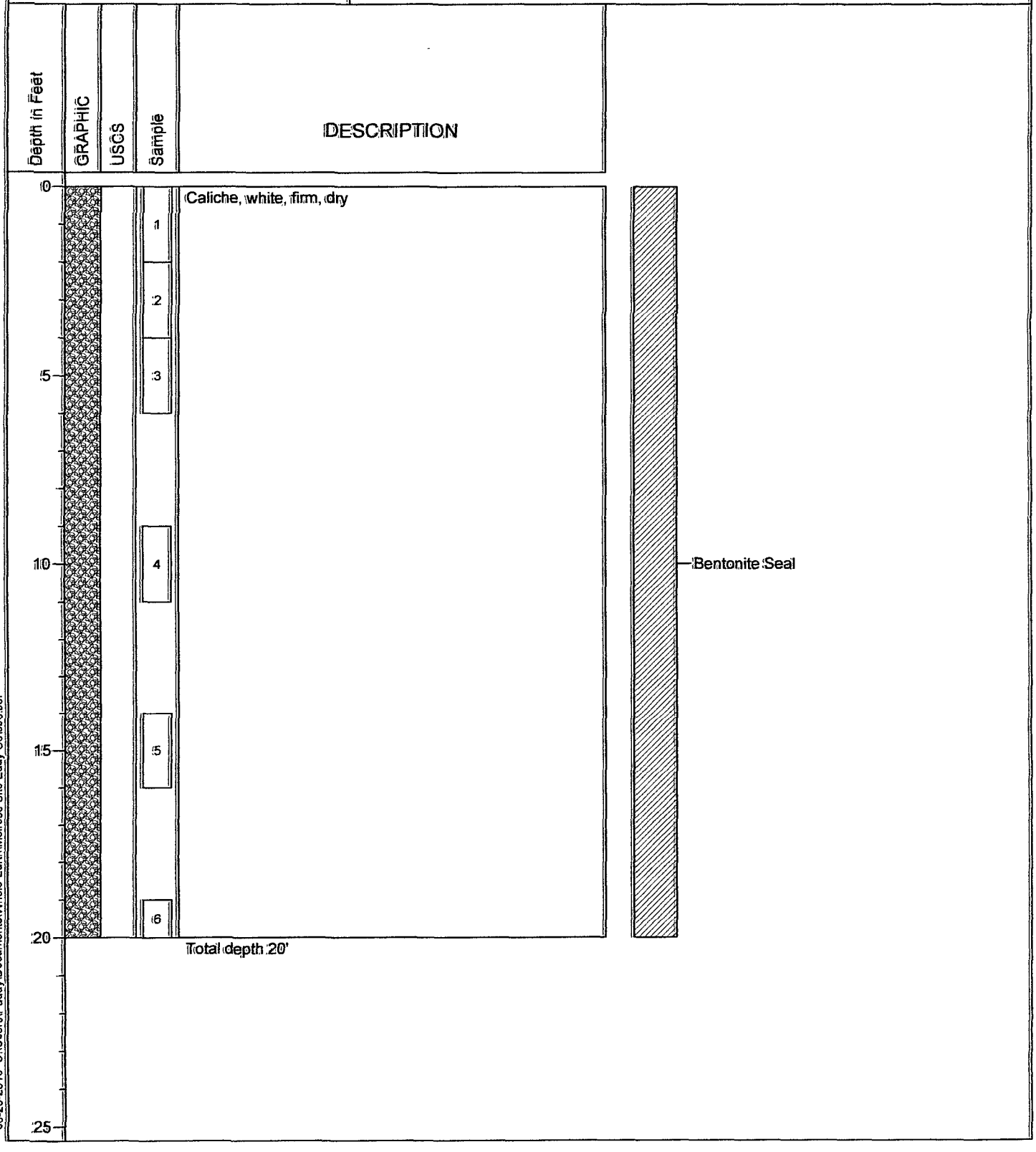
Bentonite Seal

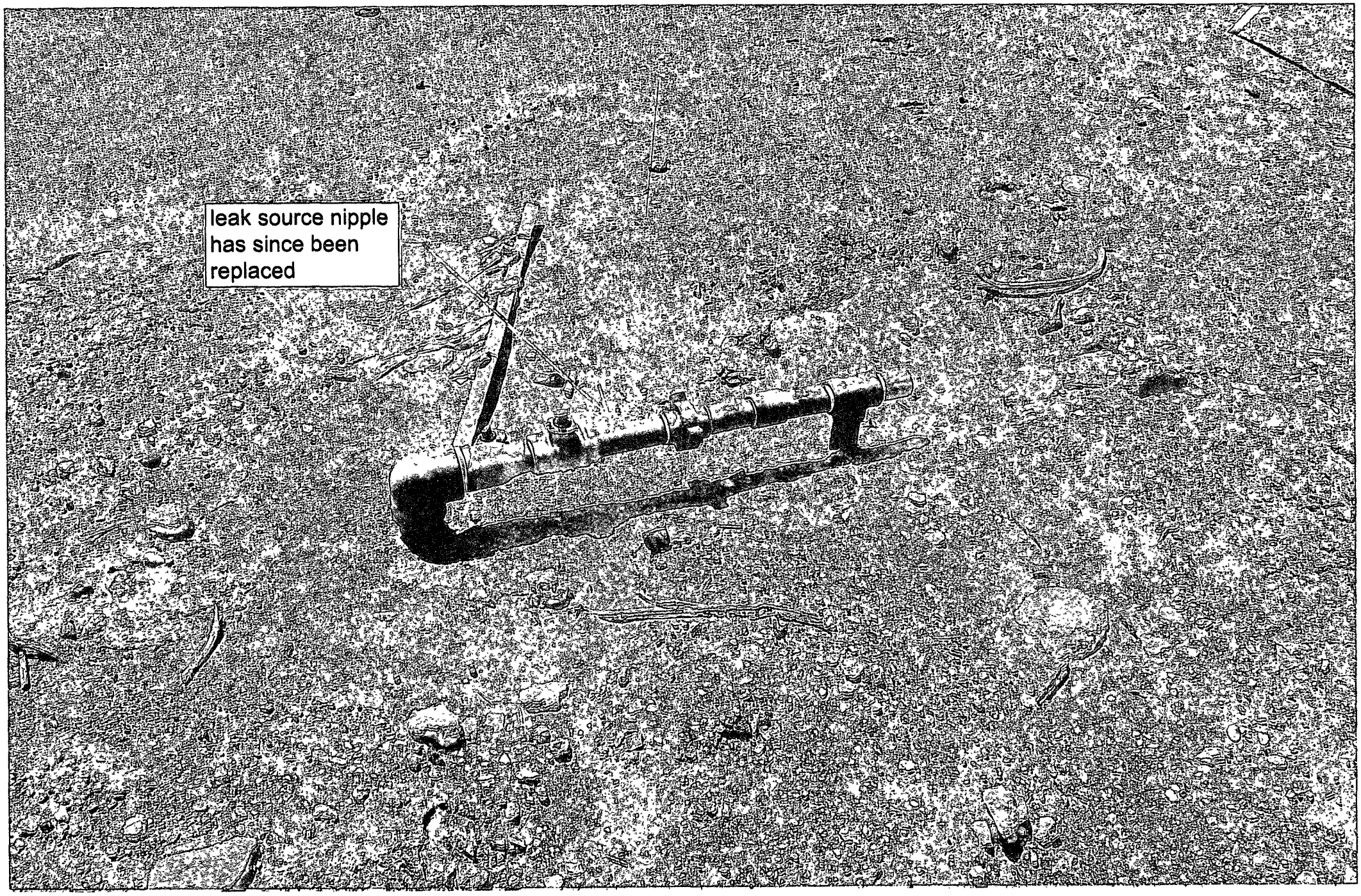
06-20-2010 C:\Users\Paddy\Documents\Whole Earth\Melrose Site Eddy Colsb5.bor

Log of Boring Melrose Soil Bore #6

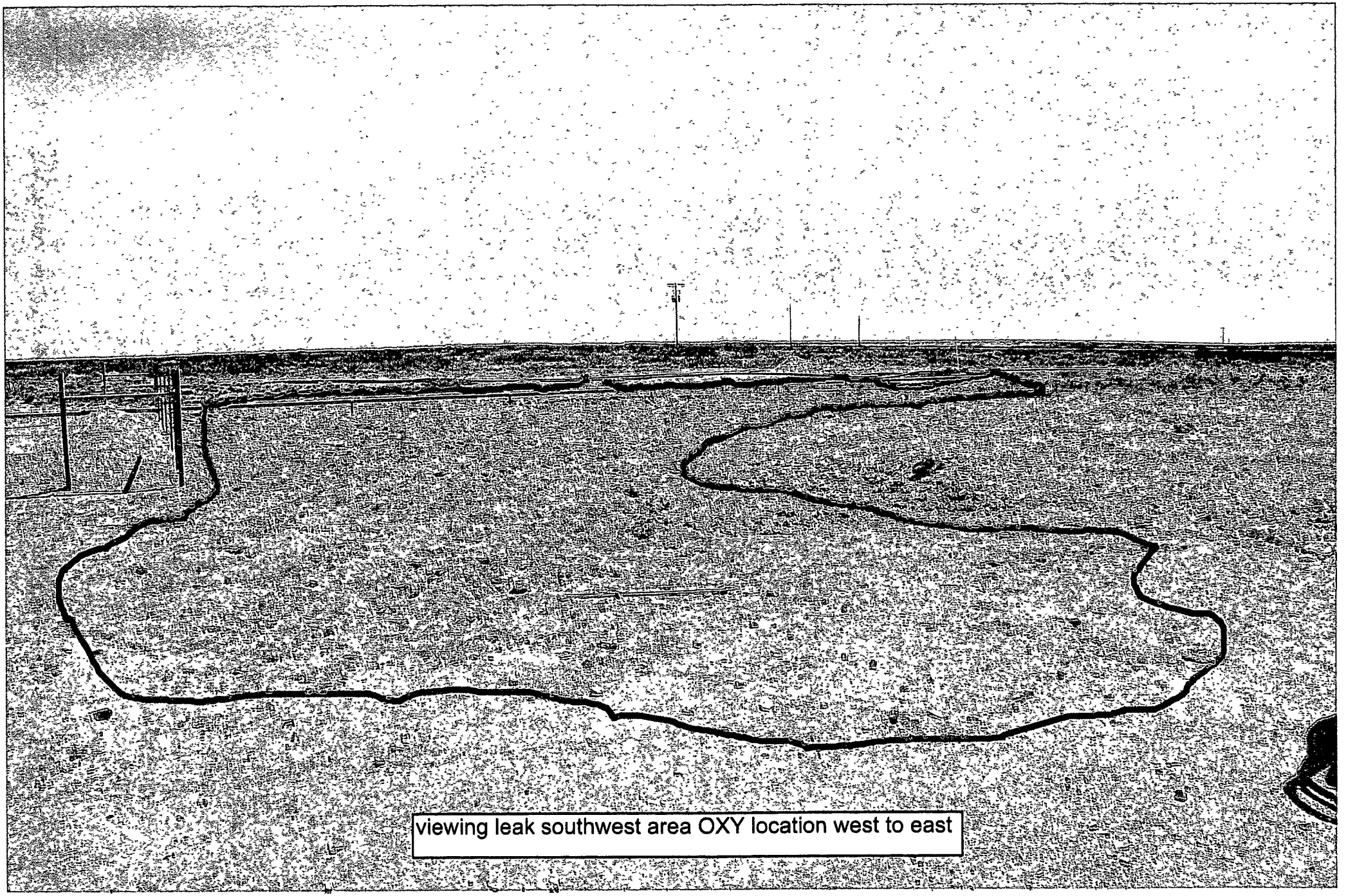
Atkins ENGINEERING ASSOCIATES

Whole Earth Environmental 2103 Arbor Cove Katy TX 77494	Drilling Start	: 05-11-10	Logged By : M. Bates
	Drilling End	: 05-11-10	
	Boring Location	: E of SB#1	
Contact: Mike Griffin	Site Location	: Oxy Pad B1, Loco Hills Area	
Job #: WHOLETH.MEL.10	Auger Type	: 4¼ Hollow Stem	

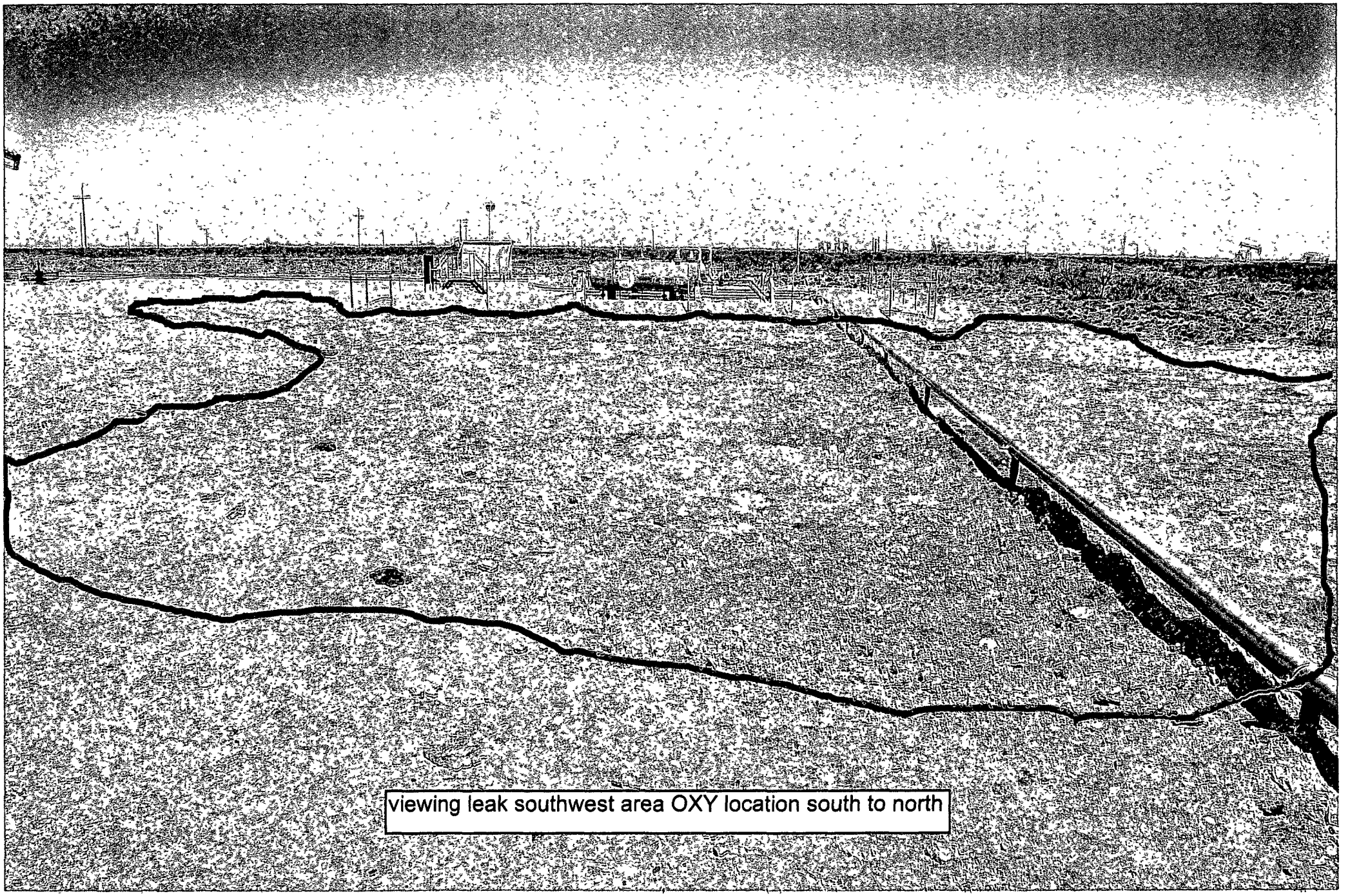



leak source nipple
has since been
replaced

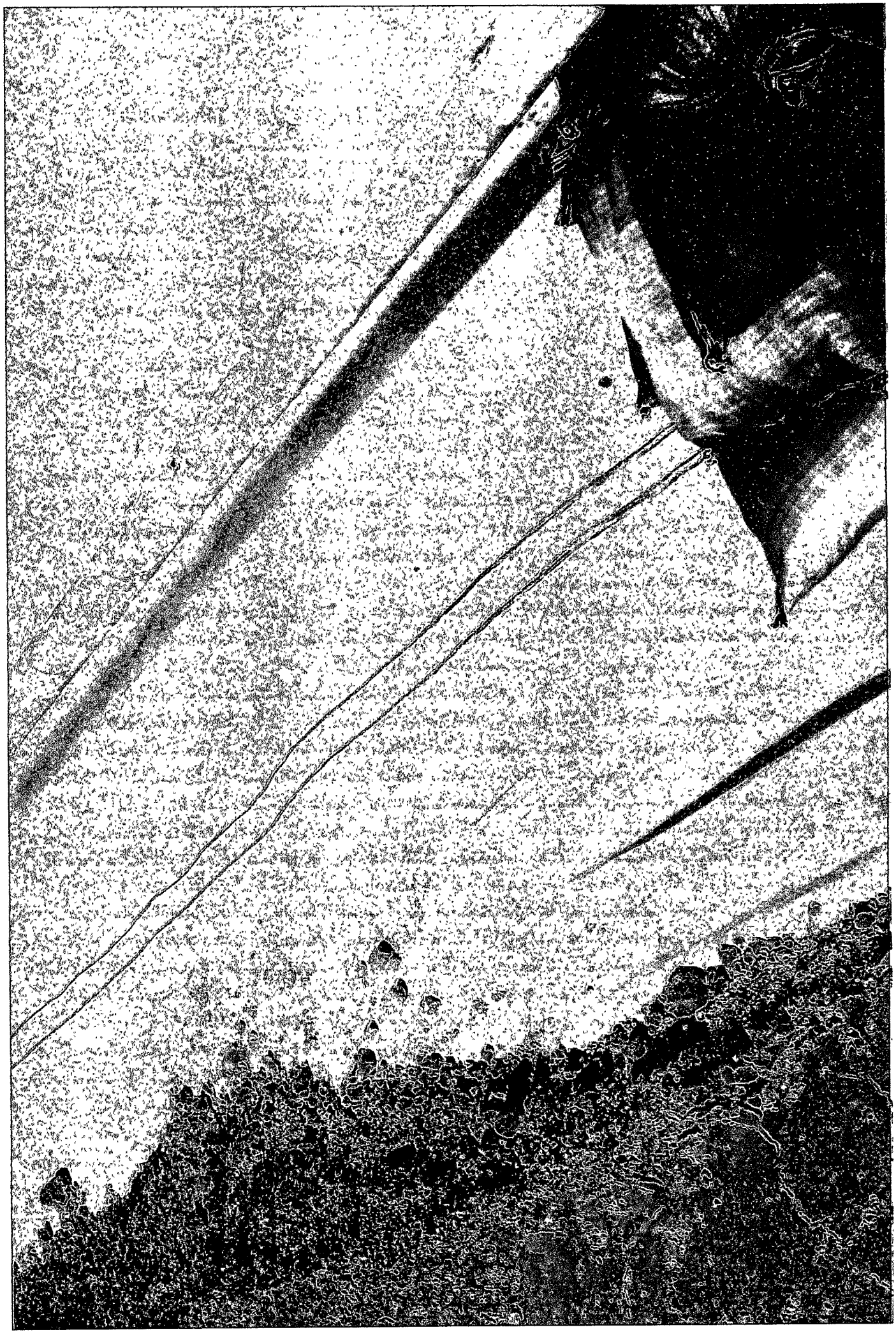

viewing leak from southwest to northeast

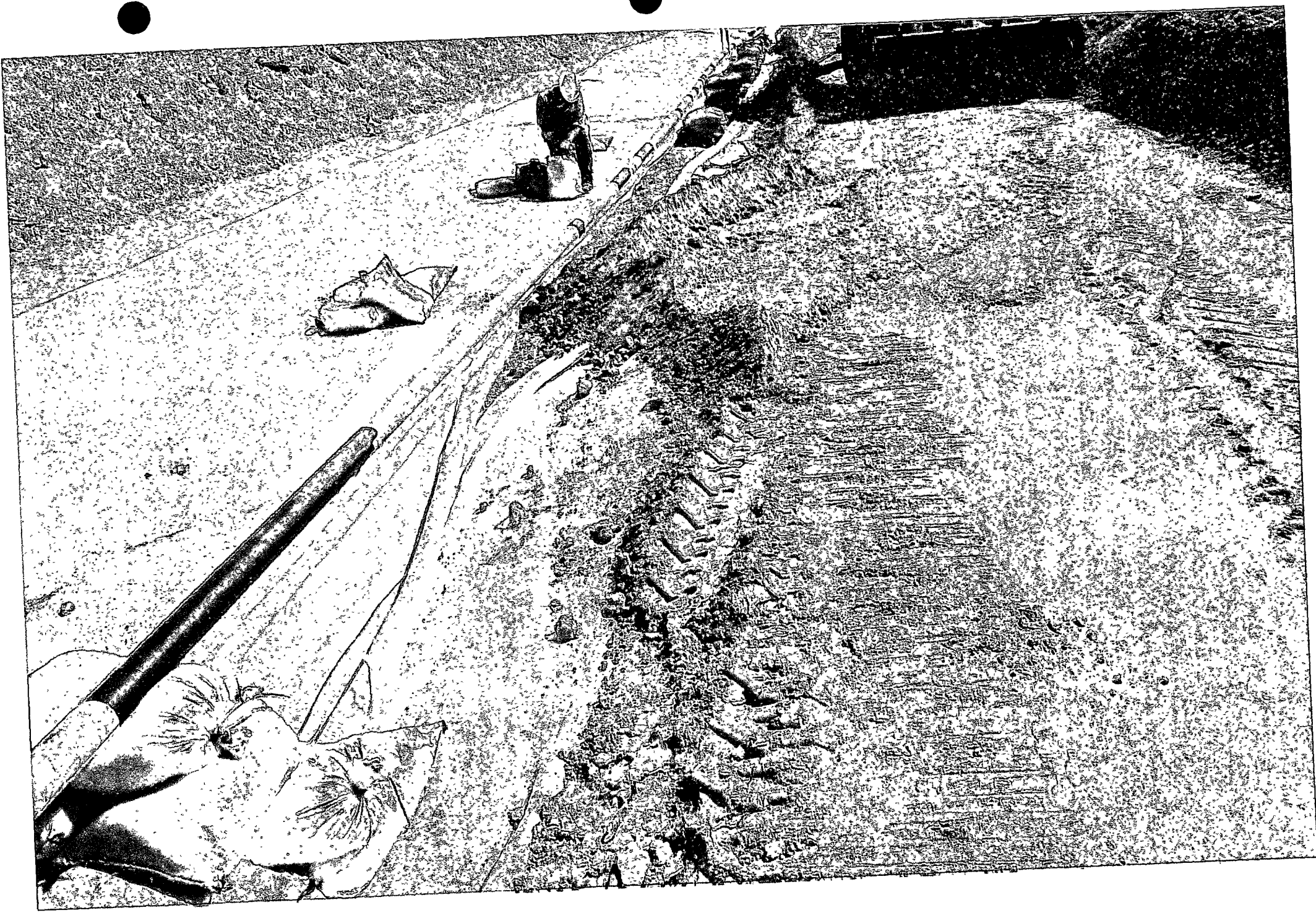


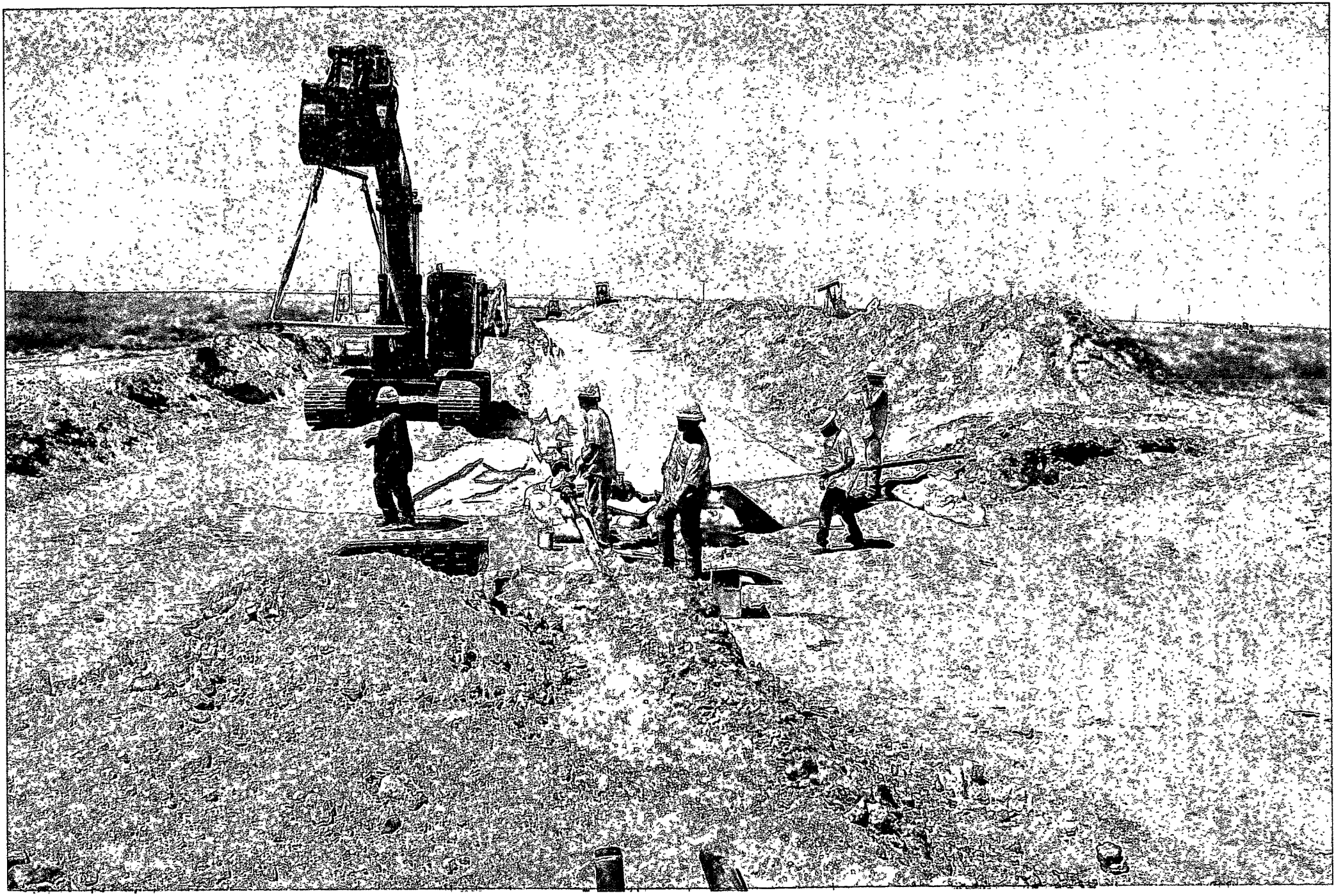
viewing leak southwest area OXY location west to east

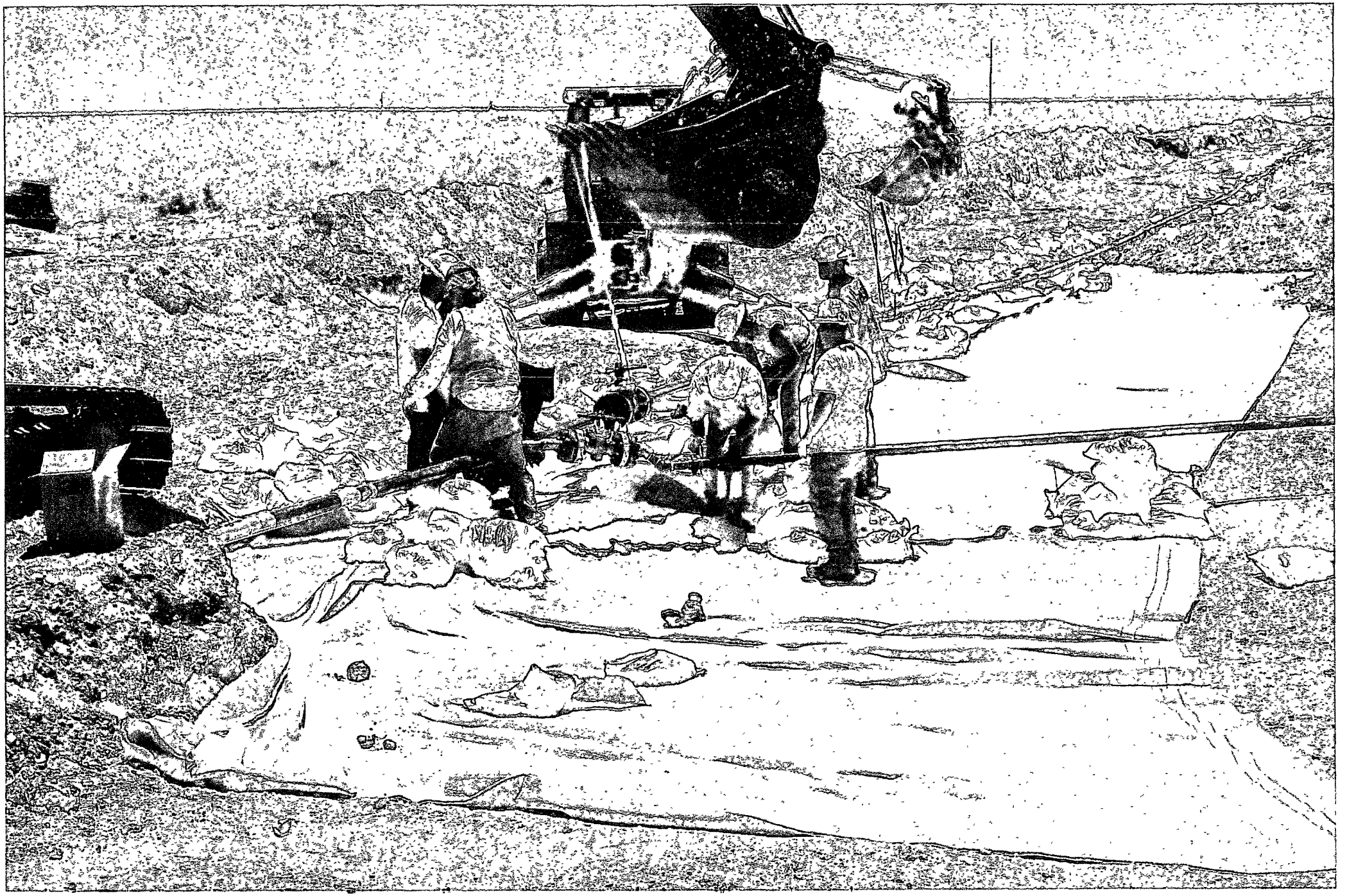

viewing leak southwest area OXY location south to north


EC240BLC





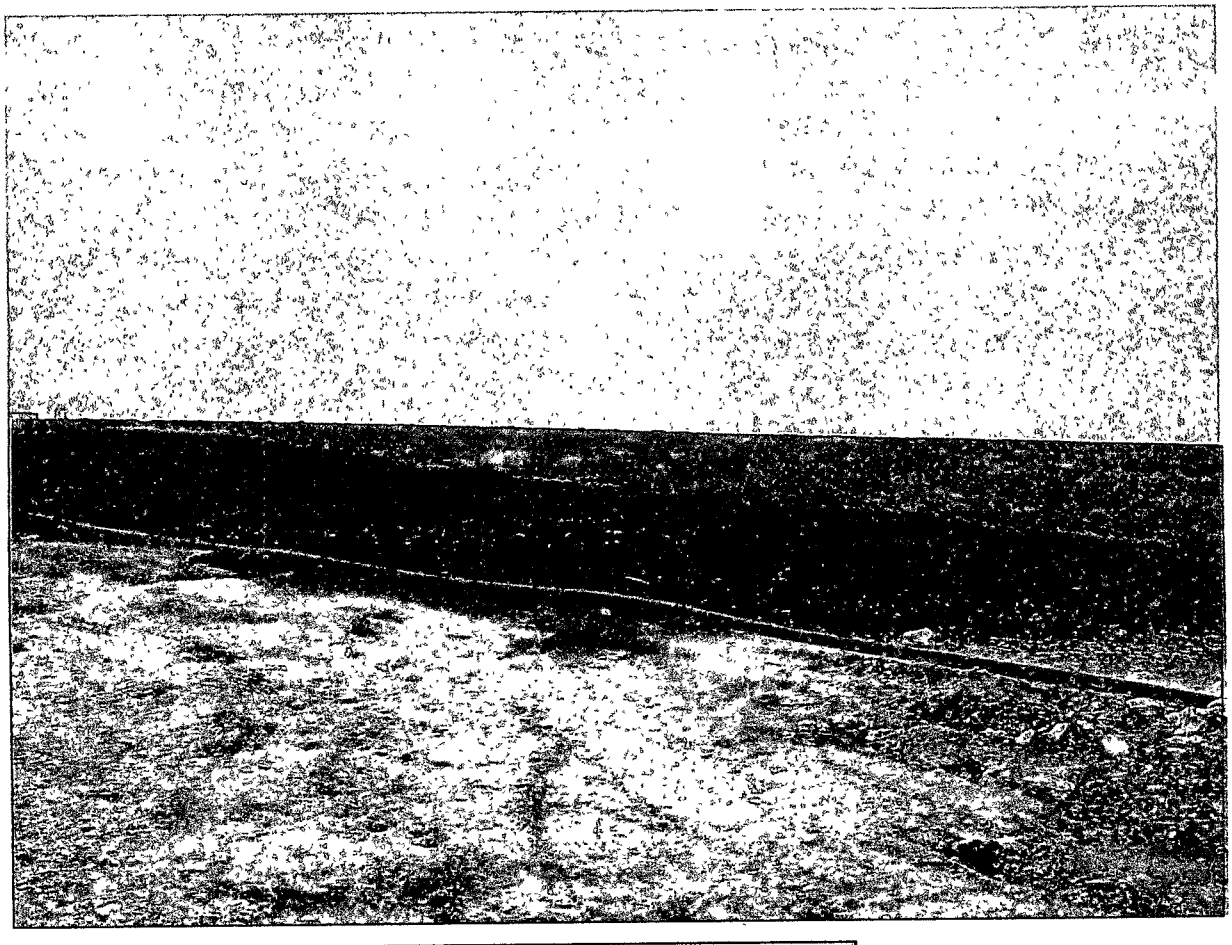




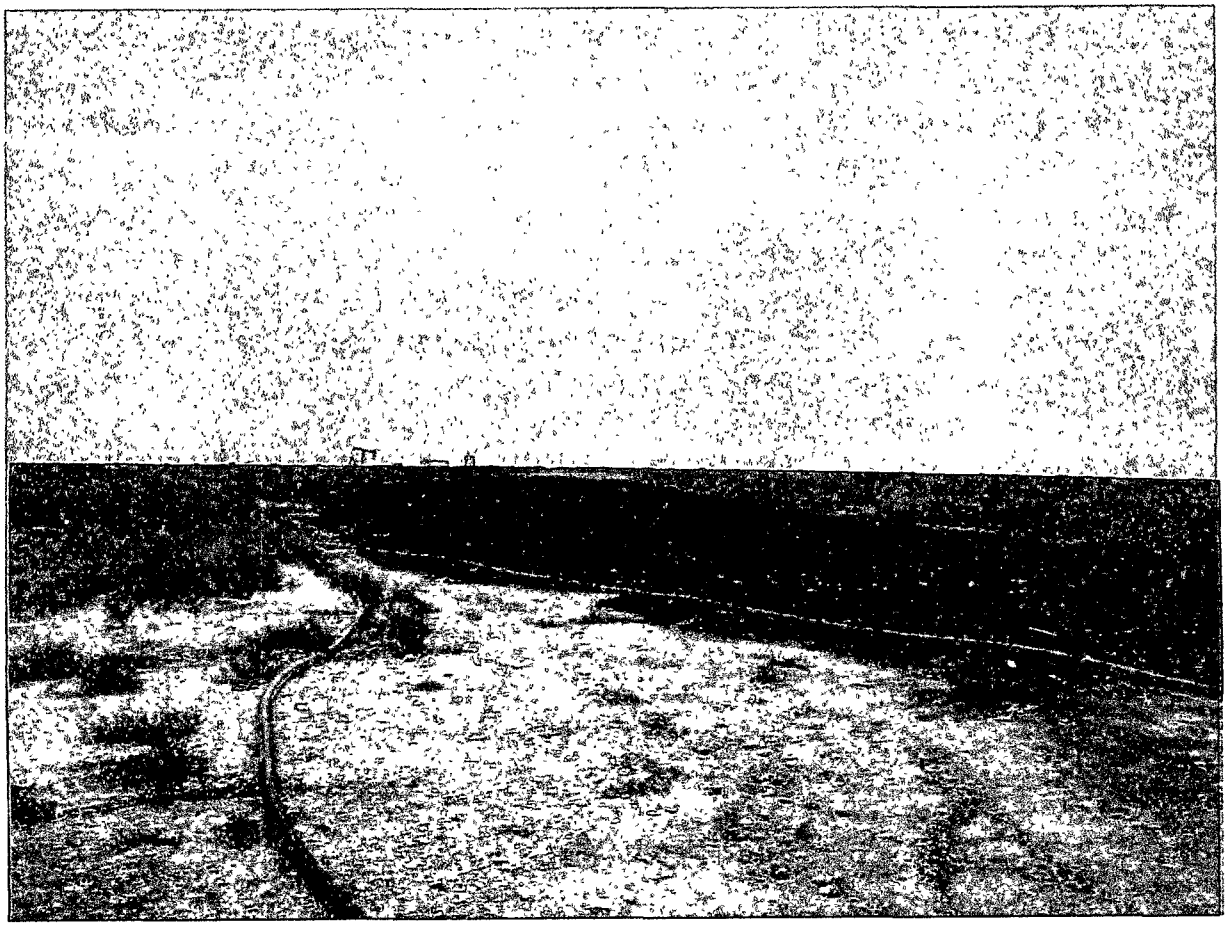

DEERE
SIERRA
916-772-0613


DEERE

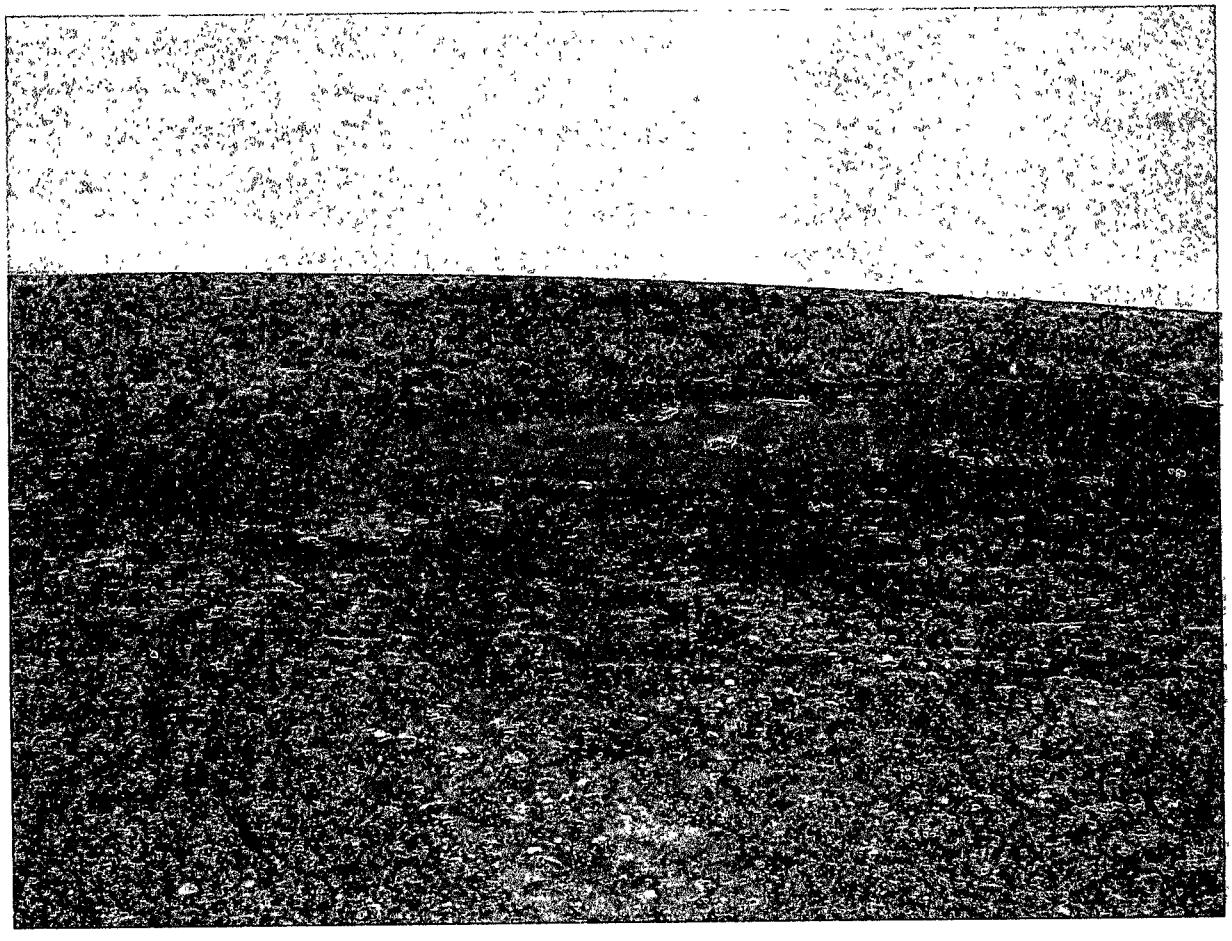
Melrose St. 647-711 #89 p/l leak
Photo viewing: from the sw. end of
leak area looking ene



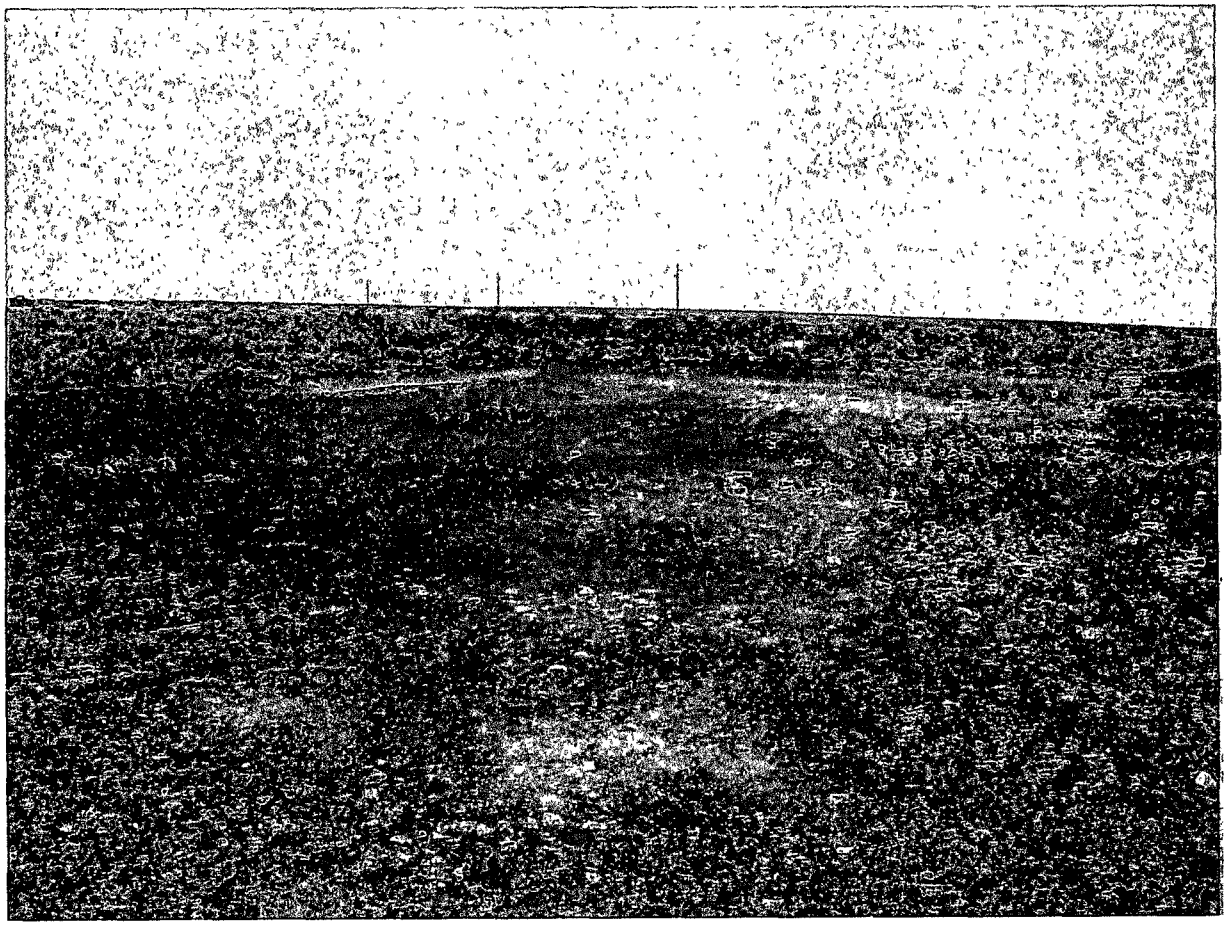
Melrose St. 647-711 #89 p/l leak
Photo viewing: from the sw. end of
leak area looking ne



Melrose St. 647-711 #89 p/l leak
Photo viewing: from the sw. end of leak area looking nne

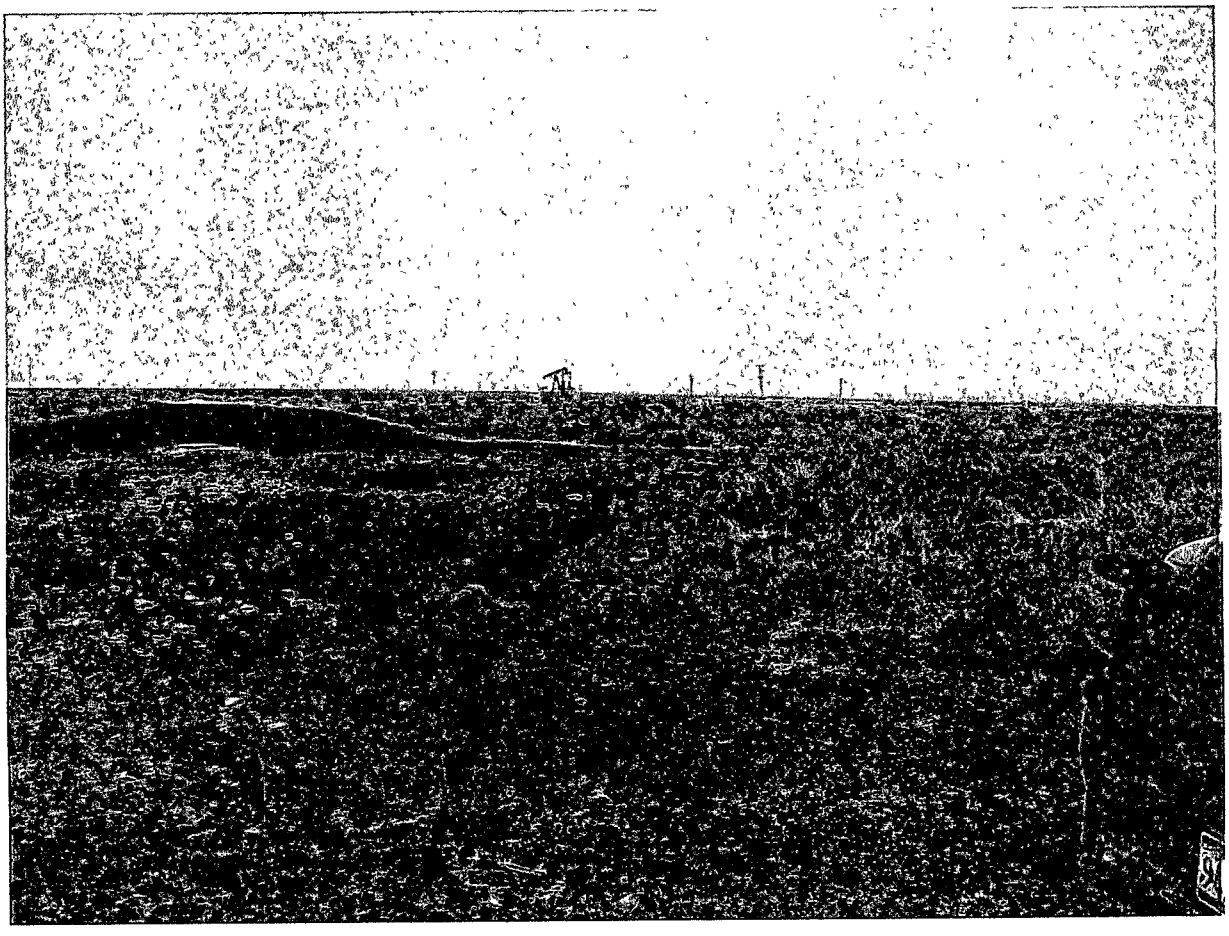


Melrose St. 647-711 #89 p/l leak
Photo viewing: from the nne. end of
leak area looking e.
Area of truck turn around

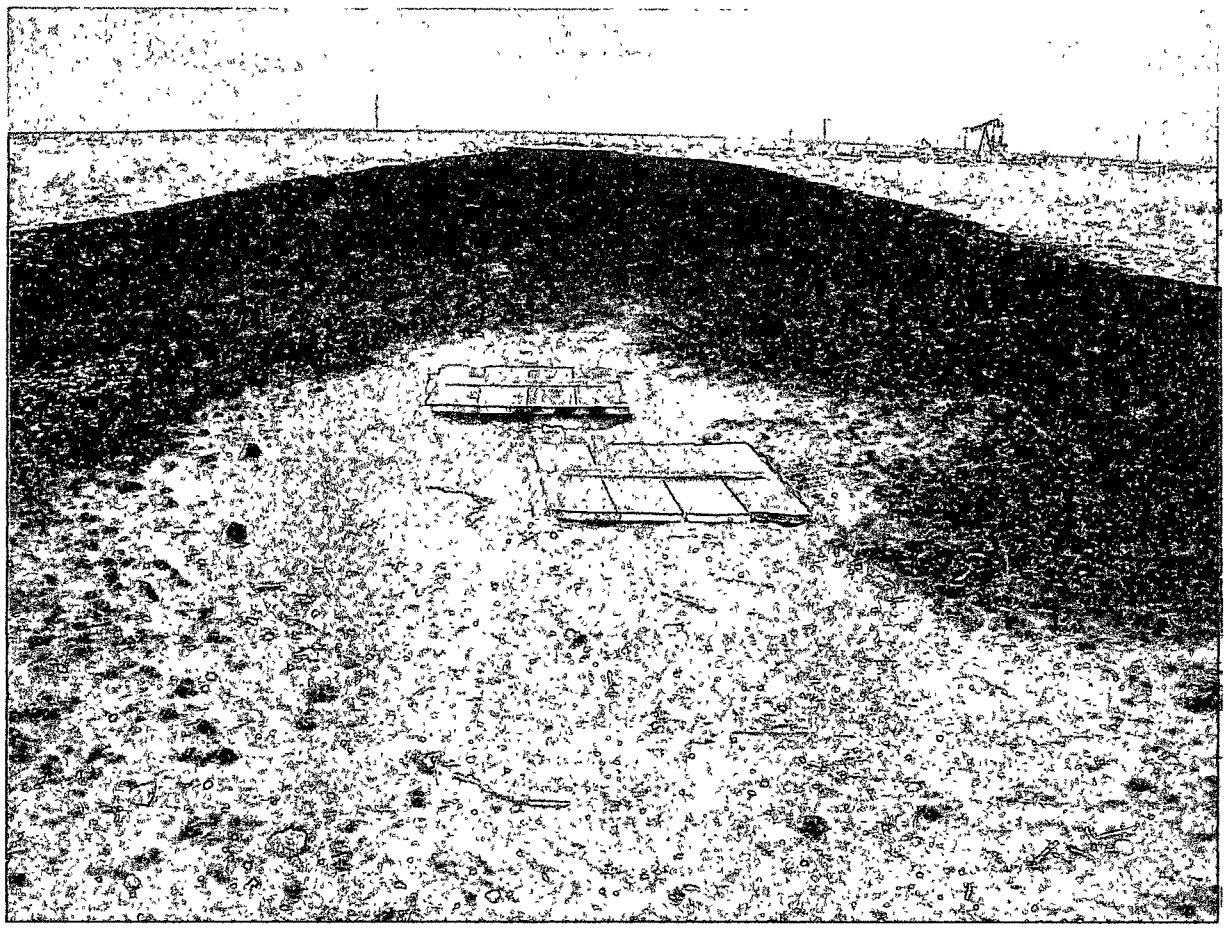


Melrose St. 647-711 #89 p/l leak
Photo viewing: from the nne. end of
leak area looking se.
Area of truck turn around

Melrose St. 647-711 #89 p/l leak
Photo viewing: from the nne. end of leak area looking sw



Melrose St. 647-711 #89 p/l leak
Photo viewing: from the nne. end of leak area looking ssw



Melrose St. 647-711 #89 p/l leak
Photo viewing: from the nne. to sw.
Close up view of juction boxes for valves