



AE Order Number Banner

Report Description

This report shows an AE Order Number in Barcode format for purposes of scanning. The Barcode format is Code 39.



App Number: pLWJ1014457195

1RP - 2541

ENERVEST OPERATING L.L.C.

ENERVEST/CRAWFORD
RRR RANCH
FOR: GAYLE McQUEENSTON



Whole Earth Environmental, Inc.

2103 Arbor Cove
Katy, Tx. 77494
281.394.2050
whearth@msn.com

May 31, 2010

EnerVest Operating, Ltd
1001 Fannin St.
Suite 800
Houston, TX 77002

Attn: Elroy Ardoin

Reference:

Dear Mr. Ardoin:

Enclosed, please find a draft copy of our proposed remediation and restoration report for the Jal West spill.

Upon your receipt and approval, I will forward a copy of this report to Larry Johnson.

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

Warmest personal regards,

Mike Griffin
President
Whole Earth Environmental, Inc.

THIS REPORT
IS TOO CONFUSING
LI 6.18.10

SUGGEST NUMBERING
PAGES.

QP2541



Executive Summary EnerVest Jack B-2 & 3 Remediation Project

Location

The site is located approximately ten miles north of the City of Jal, Lea County, New Mexico on fee 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 is S-30, T-24S, R-37E. Depth to groundwater is estimated to be approximately 112' below ground surface.

History

A small grass fire occurred at an unknown date and unreported to EnerVest. The responder to the fire placed a clamp on a singed section of poly line. During a recent acidizing of the line, a pressure drop was detected & the line was immediately walked to find the source of the pressure drop. The clamp was removed & the line fully re-bonded.

Delineation Activities

The affected area was delineated with a Geonics EM-38 providing conductivity / resistivity comparisons from the ground surface to a depth of 5'. The results of the survey indicated that the leak traveled due east atop an OXY reserve pit and puddled in two distinct areas. The first is situated immediately east of the pit area - extending approximately 45', the second is situated along the northern end of the reserve pit extending approximately 10' into the pasture. A series of four bores were advanced. The first, situated directly above the location of the burned line showed elevated chloride concentrations to a depth of 20' below ground surface. The second (background) boring revealed non-detectable chloride concentrations. The third boring was taken at the northern edge of the reserve pit and revealed comparatively higher chloride concentrations probably resulting from leaching of the reserve pit. The final boring taken atop the eastern "finger" showed minor to moderate chloride concentrations to a depth of 20' below ground surface.

Remediation

The chloride concentrations over the entire site are minor to moderate in concentrations. Borings confirm that chloride concentrations diminish quickly with depth and pose no threat to the shallow groundwater but will prove to be problematic when establishing revegetation over the affected areas. We propose to remove and commercially dispose of all soils containing a chloride concentration exceeding 1,200 ppm and backfilling the excavated areas with fresh topsoil and organics.



Exhibit Index

1. Initial C-141
2. Satellite Zoom Out
3. Satellite Zoom In
4. Plat map & Driving Instructions
5. EM-38 Electromagnetic Survey

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	Contact	Elroy Ardoin
Address	1001 Fannin St # 800 Houston, TX 77002	Telephone No.	(713) 495-6534
Facility Name	Jack B-2 21800	Facility Type	N/A
Surface Owner	RRR Ranch	Mineral Owner	EnerVest
		Lease No.	API 30-025-25871

LOCATION OF RELEASE

JACK B 30 #2

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	30	24S	37E					LEA COUNTY NM

Latitude 32.186633N Longitude 103.2000048W

WTR 110r'

NATURE OF RELEASE

Type of Release	PRODUCED WATER	Volume of Release	5 BBLs EST	Volume Recovered	0
Source of Release	LEAKING CLAMP	Date and Hour of Occurrence	N/A	Date and Hour of Discovery	5/13/10 PM
Was Immediate Notice Given?	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom?	Larry Johnson		
By Whom?	Phyllis R. Gunter, Billy Sneed	Date and Hour	5/17/10 8:00 AM		
Was a Watercourse Reached?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.			

If a Watercourse was Impacted, Describe Fully.*

Describe Cause of Problem and Remedial Action Taken.*

A small grass fire occurred at an unknown date and unreported to EnerVest. The responder to the fire placed a clamp on a singed section of poly line. During a recent acidizing of the line, a pressure drop was detected & the line was immediately walked to find the source of the pressure drop. The clamp was removed & the line fully re-bonded.

Describe Area Affected and Cleanup Action Taken *

The affected area is mainly situated atop an OXY reserve pit. Small fingers extend beyond the pit perimeter. The area was surveyed, soil samples collected and sent to Cardinal for analysis. The lab results came back showing chloride concentrations in excess of standards. Vertical delineation the site is scheduled 5-27-10.

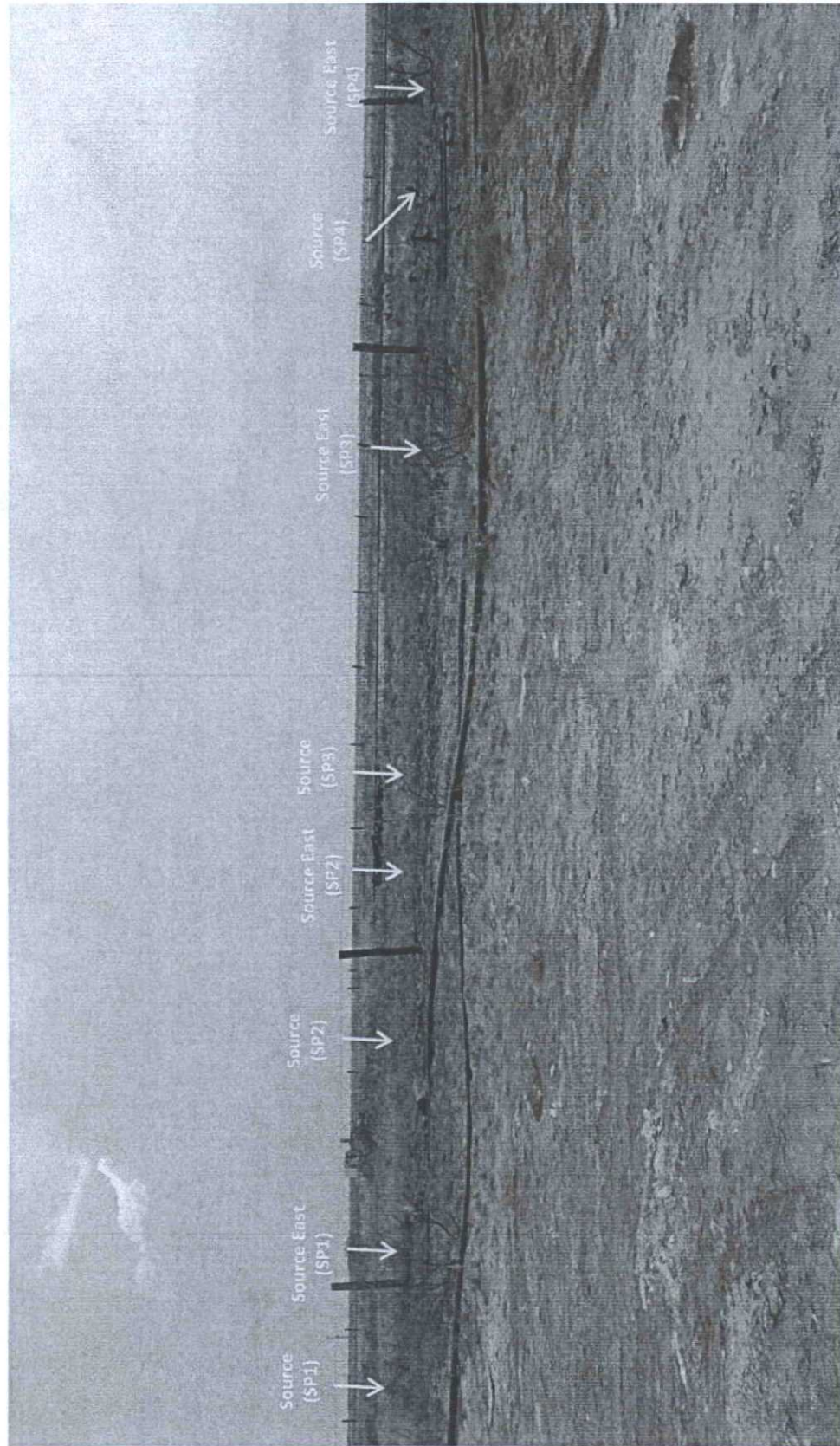
I hereby certify that the information given above is true and complete to the best of my knowledge and understand that pursuant to NMOCD rules and regulations all operators are required to report and/or file certain release notifications and perform corrective actions for releases which may endanger 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: <u>Douglas Watne</u>	OIL CONSERVATION DIVISION	
Printed Name: Douglas Watne	Approved by District <u>Sub 410</u> ENVIRONMENTAL ENGINEER	
Title: HSE Tech	Approval Date: <u>5-24-10</u>	Expiration Date: <u>7-26-10</u>
E-mail Address: <u>dwatne@EnerVest.net</u>	Conditions of Approval.	
Date: <u>5-24-08</u> Phone: (979) 212 0148	Submitted Final C-141 w/DOCS 34	
	Attached <input type="checkbox"/> IRP# <u>10.5.2541</u>	

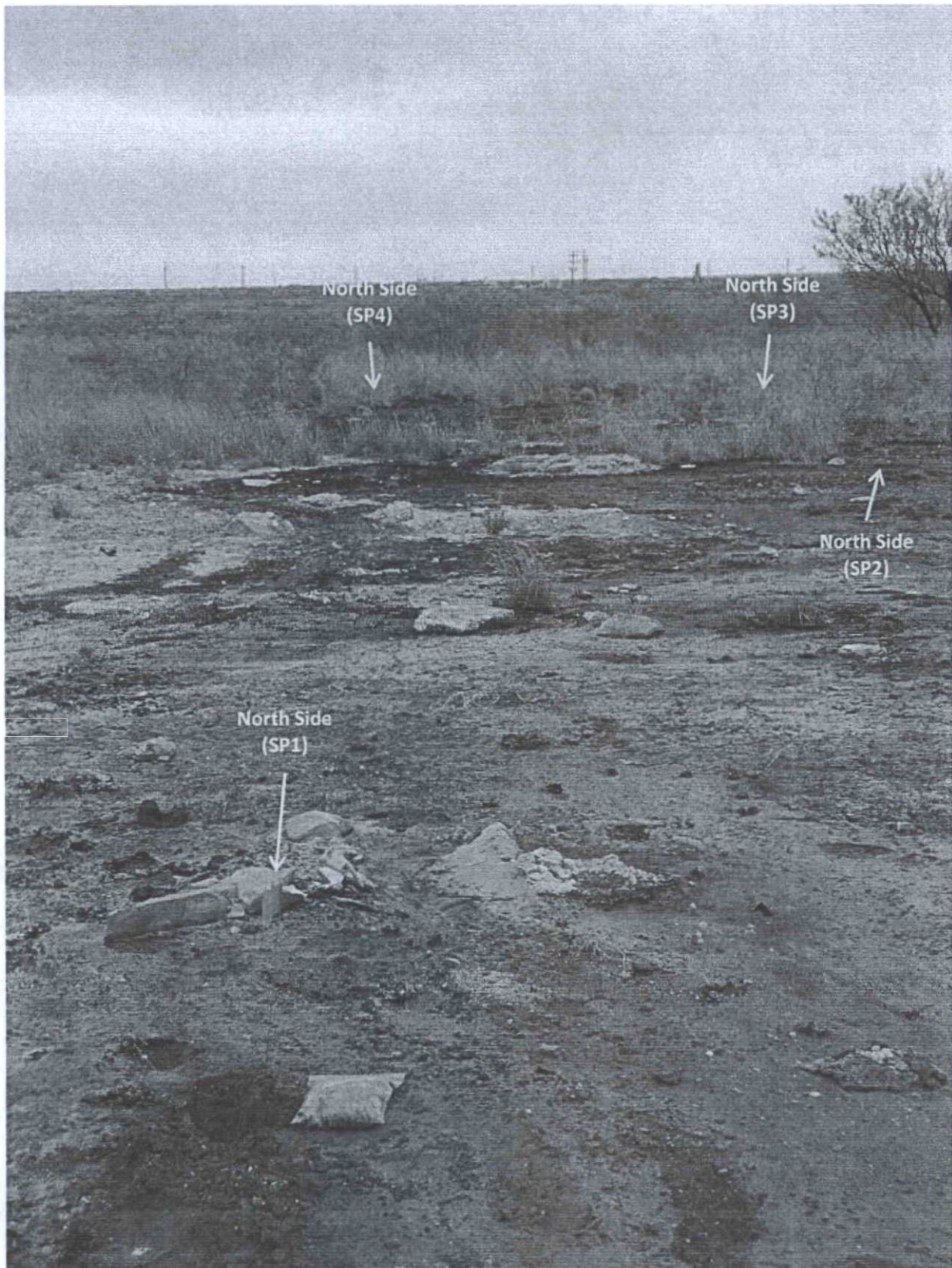
* Attach Additional Sheets If Necessary

IPC - PLW51014456827
Azm. PLW51014457195

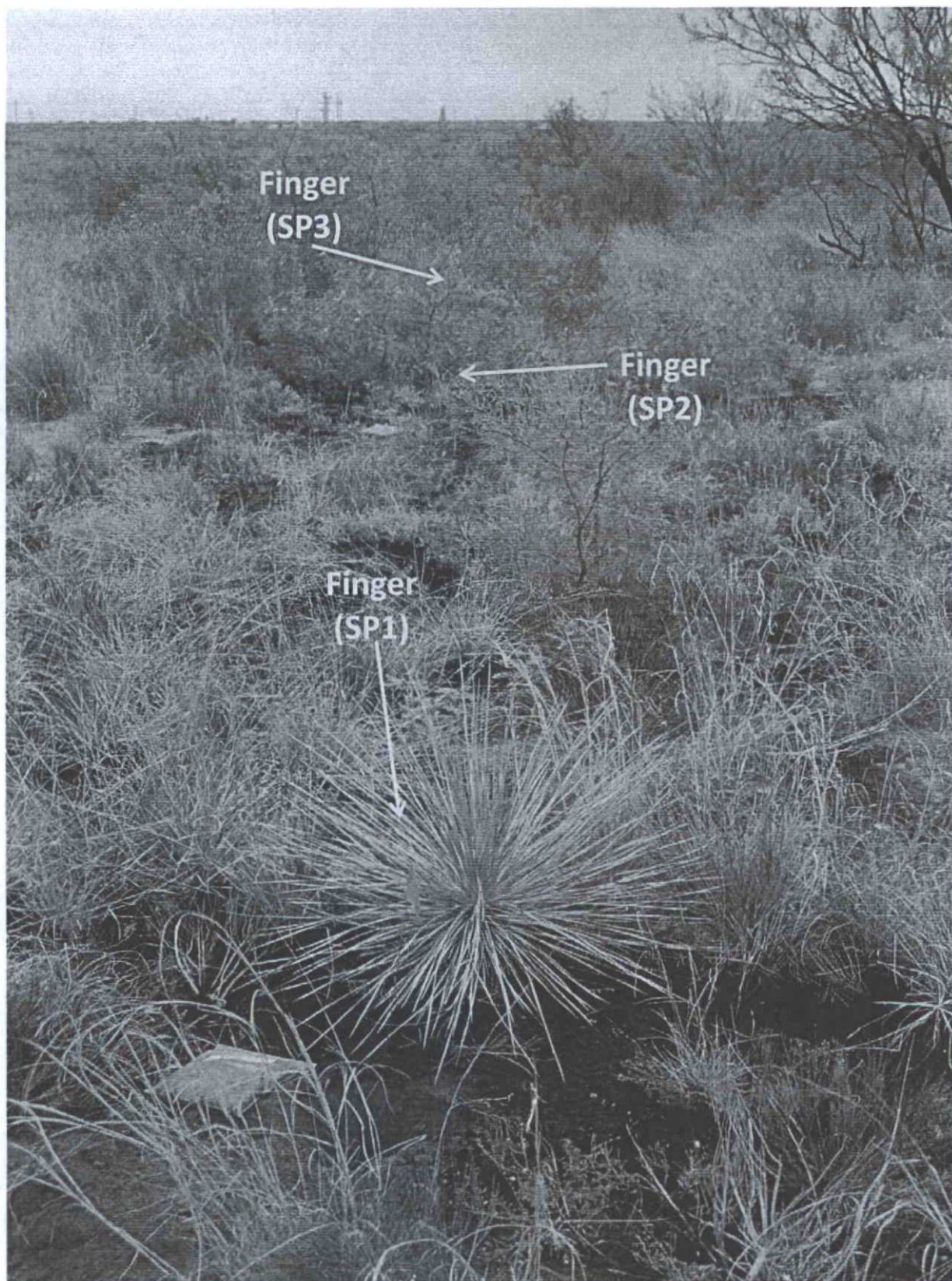
Detail of Source Sampling Locations

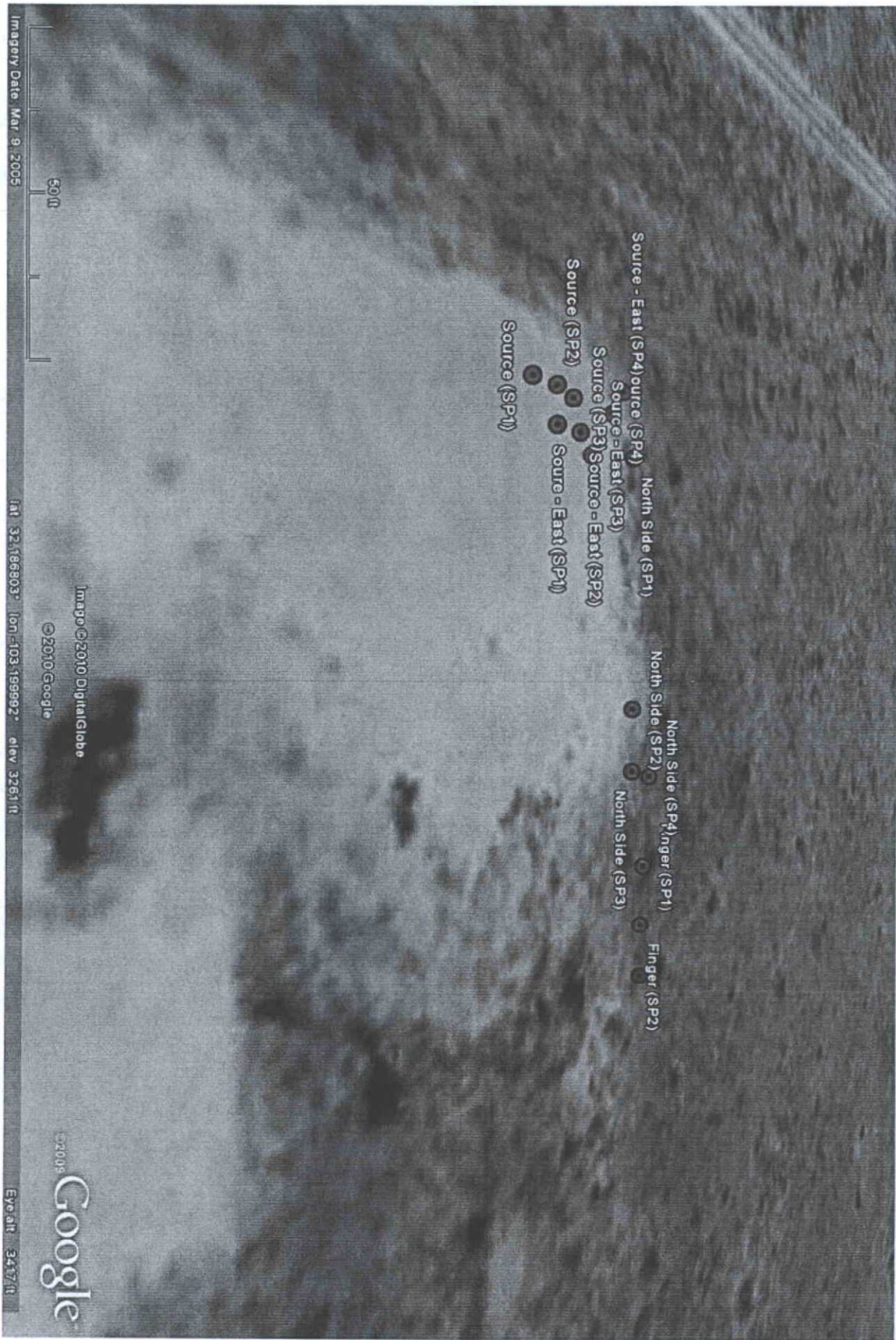


Deatil of North Side Sampling Locations



Detail of Finger Sampling Locations





©2010 Google

Google

Imagery Date: Mar 9, 2005

lat: 32.166803° lon: -103.199992° elev: 3261 ft

©2010 Google

50m

Summary of Excavation Soil Sample Analytical Enervest Jal PL (West)

Soil Sample ID.	Depth (Feet)	Sample Date	Soil Status	PID Reading (ppm)	Field Chloride Analysis (ppm)
Bore 1 (Finger)	Surface	6/1/2010	Discrete Bit Sample	29.1	2,294
	5'			10.6	1,054
	10'			4.3	770
	15'			3.6	855
Bore 2 (Background)	20'	6/1/10	Discrete Bit	4.7	798
	Surface			3.7	106
	5'			4.2	83
	Surface				1,492
Bore 3 (Source)	5'	5/15/2010	Discrete Bit Sample	19.3	3,407
	10'			12.1	2,915
	15'			7.2	1,458
	20'			5.5	460
Bore 4	Surface	5/15/2010	Discrete Bit Sample		2,408
	5'			63.0	1,155
	10'			10.8	613
	15'			7.4	543
	20'	6/2/2010		2.4	397



Enervest Jal Pipeline Spill (West)

Sample Point	Latitude	Longitude	Chlorides (PPM)
Source (SP1)	N32° 11.214'	W103° 12.014'	99
Source (SP2)	N32° 11.217'	W103° 12.014'	1492
Source (SP3)	N32° 11.218'	W103° 12.013'	908
Source (SP4)	N32° 11.223'	W103° 12.014'	3671
Source-East (SP1)	N32° 11.216'	W103° 12.012'	130
Source-East (SP2)	N32° 11.218'	W103° 12.012'	2009
Source-East (SP3)	N32° 11.219'	W103° 12.011'	1292
Source-East (SP4)	N32° 11.222'	W103° 12.015'	2092
North Side (SP1)	N32° 11.223'	W103° 12.007'	5400
North Side (SP2)	N32° 11.223'	W103° 11.999'	3762
North Side (SP3)	N32° 11.223'	W103° 11.994'	4115
North Side (SP4)	N32° 11.225'	W103° 11.993'	3896
Finger (SP1)	N32° 11.224'	W103° 11.987'	2410
Finger (SP2)	N32° 11.224'	W103° 11.983'	1936
Finger (SP3)	N32° 11..224'	W103° 11.981'	857

Sampled by MCG 5-14-10

(Highlighted items sent to Cardinal Labs. For Chlorides, BTEX, 8015M)

WHAT IS THIS ?



CL- FIELD TITRATION RESULTS

LOCATION: Enervest, Jal PL Spill (West)								
DEPTH TO GW: 80'								
GPS LAT & LON NAD27 (DECIMAL) N32.18684 W-103.19928								
Sample pt.	DEPTH	SOIL	WATER	CF	AGNO3	CL-	PID	SOIL LITHOLOGY
Finger (B1)	Surface	12.2	29.2	2.39	0.96	2,297	29.1	10R-4/4 Weak Red, Soft, Sandy, Dry
	5'	13	32.6	2.51	0.42	1,053	10.6	10R-3/6 Dark Red, Soft Sandy Damp
	10'	14.1	31	2.20	0.35	769	4.3	7.5YR - 7/3 Pink, Soft, Sandy, Rocky, Caliche
	15'	10.6	31.3	2.95	0.29	856	3.6	7.5YR - 7/3 Pink, Soft, Sandy, Rocky, Caliche
	20'	11.2	31.9	2.85	0.28	797	4.7	7.5YR - 7/3 Pink, Soft, Sandy, Rocky, Caliche

Field titration performed by Michael C. Griffin on 6-1-10



ARDINAL LABORATORIES

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

May 20, 2010

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

Re: Enervest Jal Spill West

Enclosed are the results of analyses for sample number H19906, received by the laboratory on 05/14/10 at 4:25 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 through 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.



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

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

Receiving Date: 05/14/10
Reporting Date: 05/19/10
Project Owner: NOT GIVEN
Project Name: ENERVEST JAL SPILL WEST
Project Location: NOT GIVEN


Sampling Date: 05/14/10
Sample Type: SOIL
Sample Condition: COOL & INTACT @ 3.5°C
Sample Received By: JH
Analyzed By: AB/ZL/HM

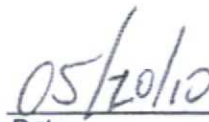
LAB NO.	SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)	DRO (C ₁₀ -C ₂₈) (mg/kg)	BENZENE (mg/kg)	TOLUENE (mg/kg)	ETHYL BENZENE (mg/kg)	TOTAL XYLENES (mg/kg)	CI* (mg/kg)
ANALYSIS DATE:		05/18/10	05/18/10	05/18/10	05/18/10	05/18/10	05/18/10	05/17/10
H19906-1	SOURCE (SP4)	931	9,190	0.092	2.28	1.15	9.96	3,720
H19906-2	SOURCE EAST (SP2)	<10.0	<10.0	<0.050	0.193	0.057	0.393	2,680
H19906-3	N. SIDE (SP1)	125	3,030	<0.050	0.145	0.162	0.848	7,360
H19906-4	N. SIDE (SP3)	33.4	1,360	<0.050	0.089	0.100	0.747	4,640
H19906-5	FINGER (SP1)	1,970	9,550	0.099	5.00	0.898	39.9	3,040
Quality Control		454	437	0.010	0.010	0.010	0.029	500
True Value QC		500	500	0.010	0.010	0.010	0.030	500
% Recovery		90.8	87.4	100	100	100	96.7	100
Relative Percent Difference		2.2	1.1	9.3	8.8	10.9	10.7	< 0.1

METHODS: TPH GRO & DRO - EPA SW-846 8015 M; BTEX - SW-846 8021B; CI-: Std. Methods 4500-CI-B

*Analyses performed on 1:4 w:v aqueous extracts. Reported on wet weight.

TEXAS NELAP ACCREDITATION T104704398-08-TX FOR BENZENE, TOLUENE, ETHYL BENZENE,
AND TOTAL XYLENES. Not accredited for GRO/DRO and Chloride.


Lab Director


Date

H19906 TBCL WEE

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or 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. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of 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

BILL TO										ANALYSIS REQUEST													
Company Name: Whole Earth Environmental																							
Project Manager: Mike Griffin																							
Address:																							
City: Katy State: TX Zip:																							
Phone #: Fax #:																							
Project #: Project Owner:																							
Project Name: Encuest Jal Spill West																							
Project Location:																							
Sampler Name: MGA																							
FOR LAB USE ONLY																							
Lab I.D.										Sample I.D.													
<div style="float: right; width: 100px; text-align: right;">H19906-1 Source (SP4)</div> <div style="clear: both;"></div> <div style="float: right; width: 100px; text-align: right;">2 Source East (SP2)</div> <div style="clear: both;"></div> <div style="float: right; width: 100px; text-align: right;">3 N.Side (SP1)</div> <div style="clear: both;"></div> <div style="float: right; width: 100px; text-align: right;">4 N.Side (SP3)</div> <div style="clear: both;"></div> <div style="float: right; width: 100px; text-align: right;">5 Finger (SP1)</div> <div style="clear: both;"></div>										# CONTAINERS		(G)RAB OR (C)OMP.		MATRIX				PRESERV.		SAMPLING		<div style="float: right; width: 100px; text-align: right;">Chlorides</div> <div style="clear: both;"></div> <div style="float: right; width: 100px; text-align: right;">BTEX BTEX</div> <div style="clear: both;"></div> <div style="float: right; width: 100px; text-align: right;">8015M</div> <div style="clear: both;"></div>	
														GROUNDWATER WASTEWATER SOIL OIL SLUDGE OTHER :				ACID/BASE: ICE / COOL OTHER :		DATE TIME			
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 services. 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.										Received By:		Date: 5-14-10		Time: 4:25		Relinquished By: [Signature] Relinquished By: _____ Date: _____ Time: _____		Phone Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Phone #: _____			
												Fax Result: <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		Add'l Fax #: _____									
Delivered By: (Circle One) Sampler - UPS - Bus - Other: _____										CHECKED BY: Jodi Benson (initials) [Signature]		Sample Condition Cool Intact <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		REMARKS: email to m.kega@vadose.us									

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

#26



ARDINAL LABORATORIES

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

June 9, 2010

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

Re: Enervest – Jal (West)

Enclosed are the results of analyses for sample number H20028, received by the laboratory on 06/03/10 at 10:44 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 through 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: 4 (includes Chain of Custody)

Sincerely,

Celey D. Keene
Laboratory Director



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

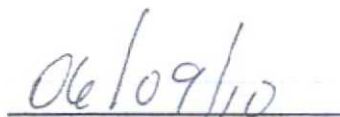
Receiving Date: 06/03/10
Reporting Date: 06/08/10
Project Owner: NOT GIVEN
Project Name: ENERVEST-JAL (WEST)
Project Location: NOT GIVEN

Sampling Date: 06/01/10 - 06/03/10
Sample Type: SOIL
Sample Condition: COOL & INTACT @ -1.5°C
Sample Received By: CK
Analyzed By: AB

LAB NUMBER SAMPLE ID	GRO (C ₆ -C ₁₀) (mg/kg)	DRO (>C ₁₀ -C ₂₈) (mg/kg)
	06/07/10	06/07/10
H20028-1 (B1) SURFACE	<50.0	4,100
H20028-2 (B1) 20'	<10.0	<10.0
H20028-4 (B3) SURFACE	<10.0	<10.0
H20028-5 (B3) 20'	<10.0	<10.0
H20028-7 (B4) 15'	<10.0	<10.0
Quality Control	510	488
True Value QC	500	500
% Recovery	102	97.6
Relative Percent Difference	4.8	4.6

METHOD: SW-846 8015 M. Reported on wet weight.


Chemist


Date

H20028 TPH WEE

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or 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. Results relate only to the samples identified above. This report shall not be reproduced except in full with written approval of Cardinal Laboratories.



ARDINAL LABORATORIES

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(505) 393-2326 FAX (505) 393-2476 (325) 673-7001 FAX (325) 673-7020

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

BILL TO										ANALYSIS REQUEST									
Company Name: Whole Earth Environmental										P.O. #:									
Project Manager: Mike Goffin										Company:									
Address:										Attn:									
City: Katy										Address:									
Phone #: 714										City:									
Project #:										State: TX									
Project Name: Enervest - Tral (West)										Zip:									
Project Location:										Phone #:									
Sampler Name: MB										Fax #:									
FOR LAB USE ONLY																			
Lab I.D.										Sample I.D.									
H 20023-										W5108									
1 (B1) Surface										DATE 6-1-10 9:28									
2 (B1) 20'										DATE 6-1-10 10:20									
3 (B2) 5'										DATE 6-4-10 11:09									
4 (B5) Surface										DATE 6-3-10 9:15									
5 (B3) 20'										DATE 6-1-10 2:11									
6 (B3) 25'										DATE 6-1-10 2:45									
7 (B4) 15'										DATE 6-2-10 9:44									
8 (B4) 20'										DATE 6-2-10 10:03									

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 in connection with 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:	Received By:	Date:
	6-3-10		6-3-10
Time:	10:44	Time:	
Date:		Date:	
Time:		Time:	

Delivered By: (Circle One)	Checked By: (Initials)
Sampler - UPS - Bus - Other:	col

Relinquished By: Date: 6-3-10 Time: 10:44

Received By: Date: 6-3-10 Time: 10:44

Delivered By: (Circle One) Sampler - UPS - Bus - Other:

Checked By: (Initials) col

Sample Condition: Cool ☒ Intact ☒ Yes ☐ No ☐

Remarks: email to Mike Goffin



**Remediation and Site Restoration Protocol
EnerVest Jack B-2 & B-3**

1.0 Purpose

This protocol is to provide a detailed outline of the steps to be employed in the remediation of a brine and hydrocarbon affected area in Lea County, New Mexico.

2.0 Scope

This protocol is site specific for the above 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 shall meet with appointed personnel within EnerVest to review this protocol and make any requested modifications or alterations.
- 3.1.2 Changes to this protocol will be documented and submitted for final review by EnerVest prior to the initiation of actual fieldwork.
- 3.1.3 Upon client approval, this protocol and supporting documentation will be submitted to the Hobbs district of the NMOCD for approval.

4.0 Safety

- 4.1 Prior to work on the site, Whole Earth shall obtain the location and phone numbers of the nearest emergency medical treatment facility. We will review all safety related issues with the appropriate EnerVest 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.

5.0 Remediation Procedure

5.1 The areas not related to the recent brine spill or leaking tank issues will be electromagnetically surveyed to determine the comparative conductivity / resistivity of the soils. Bare spots will be tested for the presence and concentrations of chlorides.

5.2 All soils containing chloride concentrations exceeding 1,200 ppm shall be excavated and sent to commercial disposal. All excavated areas will be backfilled with fresh topsoils and organic mixtures.

6.0 Site Restoration Procedure

6.1 Once all contaminants of concern are remediated to the NMOCD Assessment Criteria guidelines, the area will be superficially disked or tilled and covered in fresh topsoils, organics and NMSLO approved seed mixtures. The area will be re-contoured to replicate background elevations.

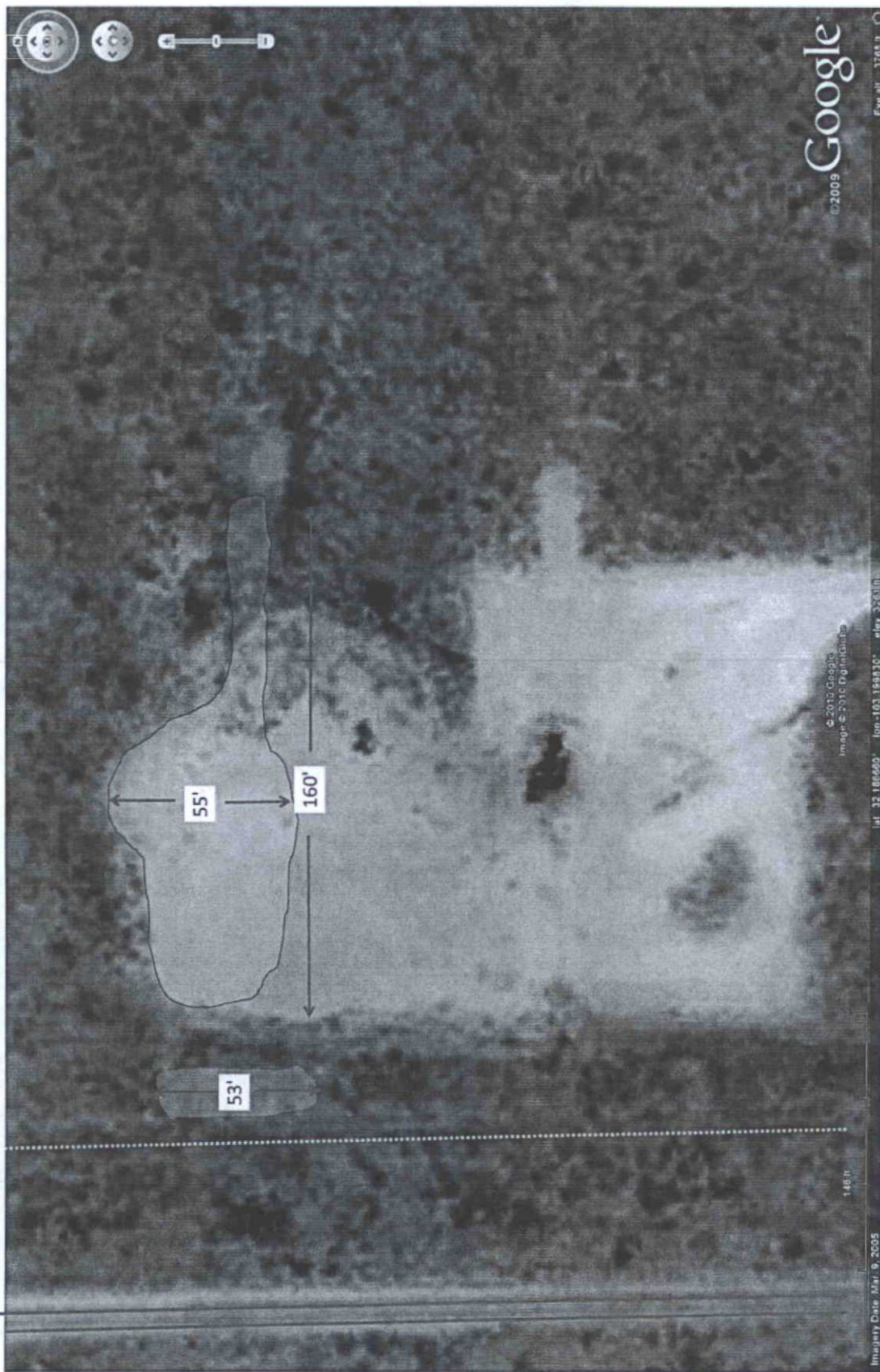
7.0 Closure Report

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

- Photographs of the location prior to remediation
- Photographs of all excavations at the point of maximum soil removal
- Photographs of the location at time of final closure
- All pre-closure contaminant concentrations
- Copies of this protocol and all testing procedures
- Manifests of all materials sent to commercial disposal



WHICH IS THE 'REAL' LOCATION ??



©2009 Google

Eye alt: 3768 ft

© 2015 Google
Image © 2015 DigitalGlobe

lat: 32.186499° lon: -103.188130° elev: 3263m

146 ft

Imagery Date: May 9, 2005



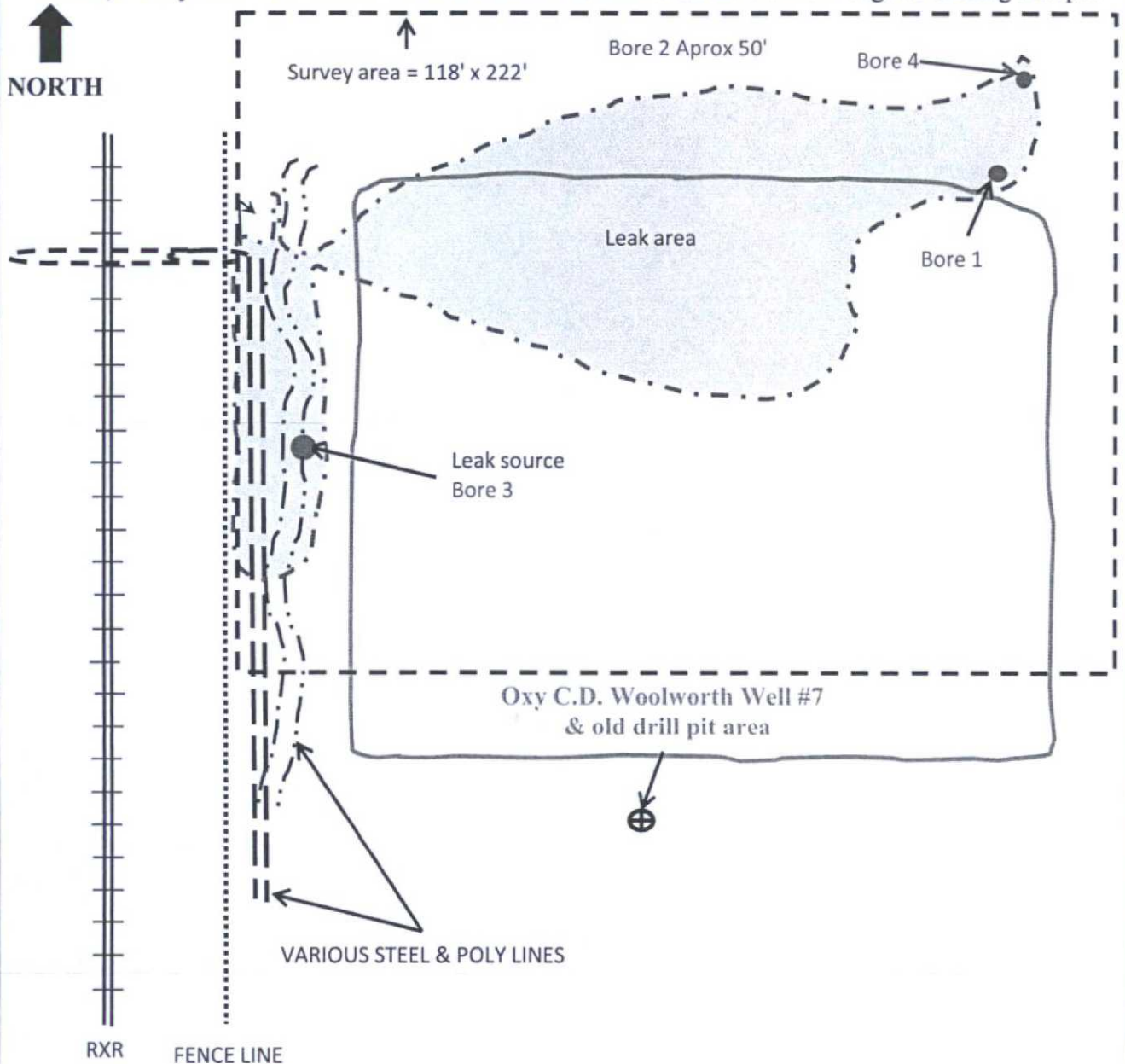
ENERVEST JAL WEST LEAK

NW/SE UL/J SEC30 - T24S - R37E

GPS LAT & LON NAD27 (DECIMAL) N32.16897350 / W103.20043950

DTW: 100' > 120' BGS Texaco / Chevron 2005 water data map

Driving Directions: In Jal @ intersection of Hwy 18 & Jct 128, go N. 4.2mi, turn L. go 0.38mi, turn R, go 0.34mi, to Oxy C.D. Woolworth Well #7. Leak site is located on the Northern edge of existing drill pit.





Enervest Operating Ltd, LLC

Jal West Spill

Geonics EM-38 Survey 0-5'



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	Contact Elroy Ardoin	
Address 1001 Fannin St # 800 Houston, TX 77002	Telephone No. (713) 495-6534	
Facility Name Jack B-2 & B-3	Facility Type N/A	
Surface Owner RRR Ranch	Mineral Owner EnerVest	Lease No. API 30-025-25871

LOCATION OF RELEASE

Unit Letter	Section	Township	Range	Feet from the	North/South Line	Feet from the	East/West Line	County
D	30	24S	37E					LEA COUNTY NM

Latitude 32.186633N Longitude 103.2000048W

NATURE OF RELEASE

Type of Release PRODUCED WATER	Volume of Release 5 BBLS EST	Volume Recovered 0
Source of Release LEAKING CLAMP	Date and Hour of Occurrence N/A	Date and Hour of Discovery 5/13/10 PM
Was Immediate Notice Given? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No <input type="checkbox"/> Not Required	If YES, To Whom? Larry Johnson	
By Whom? Phyllis R. Gunter, Billy Sneed	Date and Hour 5/17/10 8:00 AM	
Was a Watercourse Reached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	If YES, Volume Impacting the Watercourse.	

If a Watercourse was Impacted, Describe Fully.*

*DON'T SENT
UNSIGNED COPY*

Describe Cause of Problem and Remedial Action Taken.*

A small grass fire occurred at an unknown date and unreported to EnerVest. The responder to the fire placed a clamp on a singed section of poly line. During a recent acidizing of the line, a pressure drop was detected & the line was immediately walked to find the source of the pressure drop. The clamp was removed & the line fully re-bonded.

Describe Area Affected and Cleanup Action Taken.*

The affected area is mainly situated atop an OXY reserve pit. Small fingers extend beyond the pit perimeter. The area was surveyed, soil samples collected and sent to Cardinal for analysis. The lab results came back showing chloride concentrations in excess of standards. Vertical delineation the site is scheduled 5-27-10.

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: <i>[Signature]</i>		OIL CONSERVATION DIVISION	
Printed Name: Elroy Ardoin		Approved by District Supervisor: <i>[Signature]</i>	
Title: Engineer		Approval Date:	Expiration Date:
E-mail Address: <u>eardoin@EnerVest.net</u>		Conditions of Approval:	
Date: 5-24-08 Phone: (713) 495-6534		Attached <input type="checkbox"/>	

* Attach Additional Sheets If Necessary