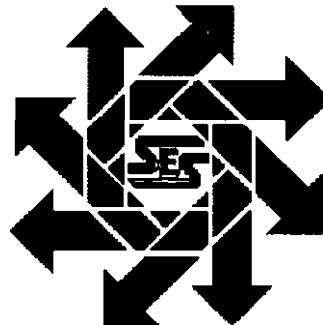


Cimarex Energy Company

**Gadwall 18, Federal Com 3
Section 18, T25S, R27E
Eddy County, New Mexico**

Delineation Report/Work Plan

February 20, 2014



Prepared for:

**Cimarex Energy Company
2020 West Bender Street
Hobbs, New Mexico 88240**

By:

**Safety & Environmental Solutions, Inc.
703 East Clinton Street
Hobbs, New Mexico 88240
(575) 397-0510**

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I. Company Contacts

Representative	Company	Telephone	E-mail
Terry Ainsworth	Cimarex Energy Co.	575-390-1388	tainsworth@cimarex.com
David Davis	SESI	575-397-0510	ddavis@sesi-nm.com

II. Background

Safety and Environmental Solutions, Inc. (SESI) was engaged by Cimarex Energy Company to perform a site assessment of a release area at the Gadwall 18 Federal Com 3 located in Section 18 of Township 25 South, Range 27 East, Eddy County, New Mexico. GPS coordinates of the location are 32.136280N, 104.235358W. The site is approximately 19.5 miles south of Carlsbad.

According to the C-141 dated November 24, 2012, the source of the release was due to illegal dumping. The dumping was found on the NW corner of the location.

III. Surface and Ground Water

The nearest surface water is the Pecos River located 11.5 miles east of the release location.

The nearest groundwater of record is approximately 3.6 miles south west of the site. The New Mexico Office of State Engineer record is in Section 22 Range 26 East and Township 25 South. The reported depth was 118 feet below ground surface (BGS).

IV. Characterization

The target cleanup levels are determined using the *Guidelines for Remediation of Leaks, Spills and Releases* published by the NMOCD (August 13, 1993). Based on the ranking criteria presented below, the applicable Recommended Remediation Action Levels (RRAL) are 10 parts per million (ppm) Benzene, 50 ppm combined benzene, toluene, ethylbenzene, and total xylenes (BTEX), and 5,000 ppm Total Petroleum Hydrocarbons (TPH).

Depth to Ground Water:			
(Vertical distance from contaminants to seasonal high water elevation of groundwater)	Less than 50 feet	20 points	
	50 feet to 99 feet	10 points	
	>100 feet	0 points	X
Wellhead Protection Area:			
(Less than 200 feet from a private domestic water source; or less than 1000 feet from all other water sources)	Yes	20 points	
	No	0 points	X
Distance to Surface Water:			
(Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, irrigation canals and ditches)	Less than 200 feet	20 points	
	200 feet to 1000 feet	10 points	
	>1000 feet	0 points	X
RANKING SCORE (TOTAL POINTS)			0

V. Work Performed

From December 3 through December 11, 2012, SESI representative was onsite with dirt contractor to excavate the spill and transport contaminated soil to Lea Land for disposal. Approximately a total of 660 tons of contaminated soil was transported. Ms. Terry Gregston (BLM representative) made a couple of site visits during this process.

On December 10, 2012, samples were taken from the side and bottom of the excavation, properly packaged, preserved and transported under chain of custody to Cardinal Laboratories for analysis for Chlorides (EPA Method SM4500Cl-B). The results of the laboratory analysis are shown in the table below:

Sample Date: 12/10/12	Sample ID	Cl (mg/kg)
Lab ID:		
H202989-01	North Wall - West	512
H202989-02	North Wall - Central	224
H202989-03	North Wall - East	448
H202989-04	West Wall - North	48.0
H202989-05	West Wall - South	48.0
H202989-06	East Wall - South	48.0
H202989-07	East Wall - North	128
H202989-08	South Wall - West	<16.0
H202989-09	South Wall - Central	240
H202989-10	South Wall - East	464
H202989-11	Bottom - West	400
H202989-12	Bottom - Central	1760
H202989-13	Bottom - East	480

In an email to Mr. Ainsworth dated January 8, 2014, Mike Bratcher, NMOCD, identified additional pad areas that should be investigated for possible impact from illegal dumping. These locations are shown on the attached Google Earth photograph as having brown staining. After receiving Cimarex approval, SESI mobilized to the site on February 6, 2014 together with Alfredo's Trucking, a dirt excavation company, to install test trenches for delineation.

Samples were taken from locations shown on the figure, properly packaged, preserved and transported under chain of custody to Cardinal Laboratories for analysis for Chlorides (EPA Method SM4500Cl-B). The results of the laboratory analysis are shown in the table below:

Sample Date: 02/06/14	Sample ID	Cl (mg/kg)
Lab ID:		
H400389-01	TT1 - Surface	352
H400389-02	TT1 - 6 in.	224
H400389-03	TT1 - 1 ft.	160
H400389-04	TT2 - Surface	592
H400389-05	TT2 - 6 in.	64.0
H400389-06	TT2 - 1 ft.	64.0
H400389-07	TT3 - Surface	2360
H400389-08	TT3 - 6 in.	224

Sample Date 02/06/14	Sample ID	Cl (mg/kg)
Lab ID		
H400389-09	TT3 - 1 ft.	80.0
H400389-10	TT4 - Surface	1660
H400389-11	TT4 - 5'6"	272
H400389-12	TT5 - Surface	96.0
H400389-13	TT5 - 6 in.	<16.0
H400389-14	TT6 - Surface	160
H400389-15	TT6 - 6 in.	<16.0

VI. Action Plan

Northwest area excavation:

At the request of the OCD, additional material will be excavated from the location identified as "Bottom -Central" to achieve chloride levels at or below 1000 mg/Kg. The area will then be backfilled to grade with like soils and contoured to match the surrounding area.

Central pad stained area:

With one exception, the areas identified on the Google map as having staining and chloride surface impacts will be excavated to 1 ft. and soils removed for proper disposal at a location authorized by the OCD. The exception is Test Trench 4 where soil having elevated chloride exceeding 1000 mg/kg was found at a depth of 1 ft. At this location soil will be excavated to 2 ft. or deeper if testing shows chloride levels remaining elevated.

The pad location is to be downsized to dimensions as determined by Cimarex and the material from the downsizing may be used for backfill of the excavation and for use at other locations. However, OCD will require any material from this site to be tested prior to backfill at this location or utilization at any other site.

VII. Figures & Appendices

Figure 1 – Vicinity Map

Figure 2 – Site Plan/Test Trench Depths with Chloride Levels

Figure 3 - Site Plan

Appendix A – Analytical Results

Appendix B – Site Photographs

Figure 1
Vicinity Map

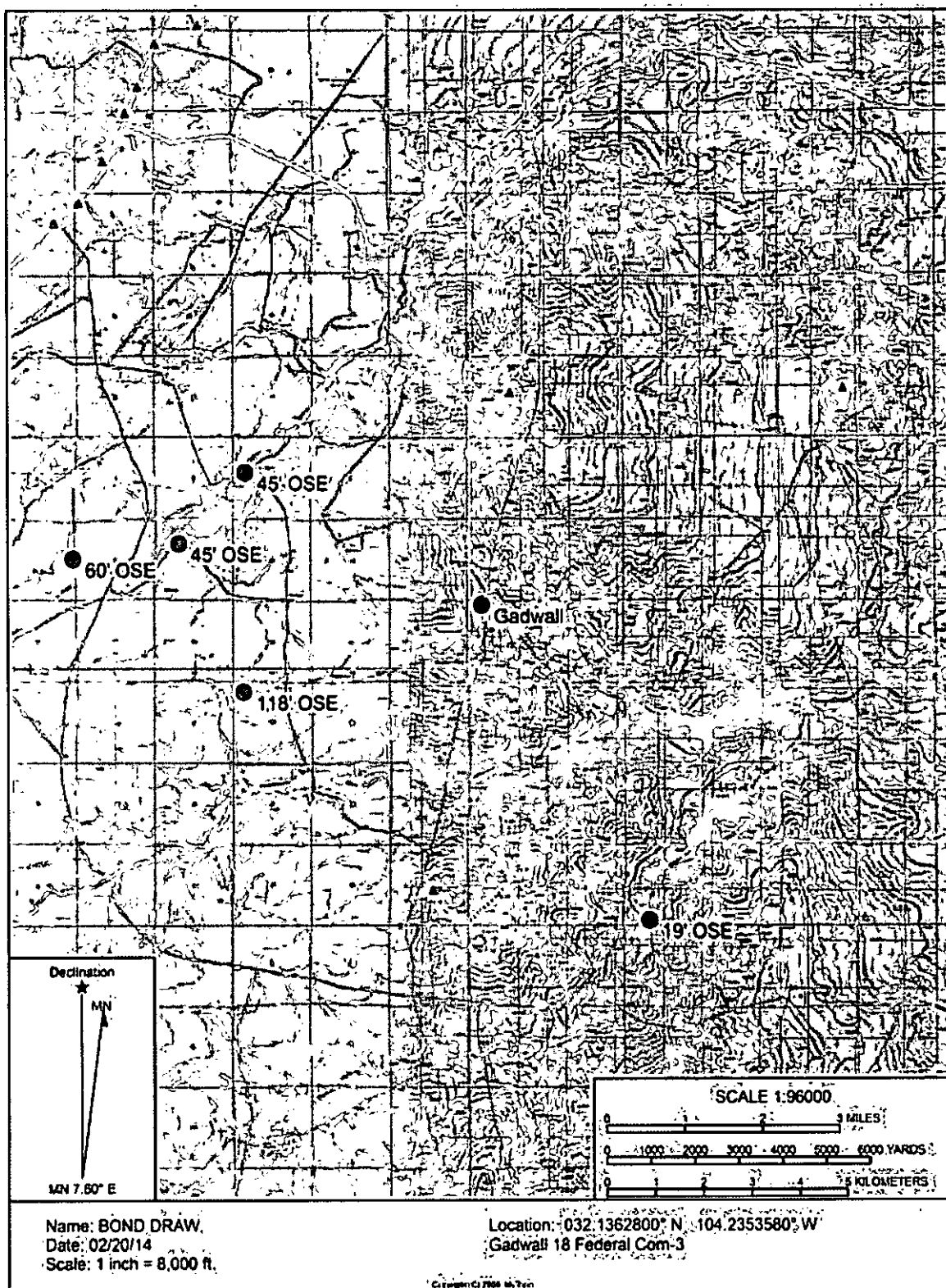


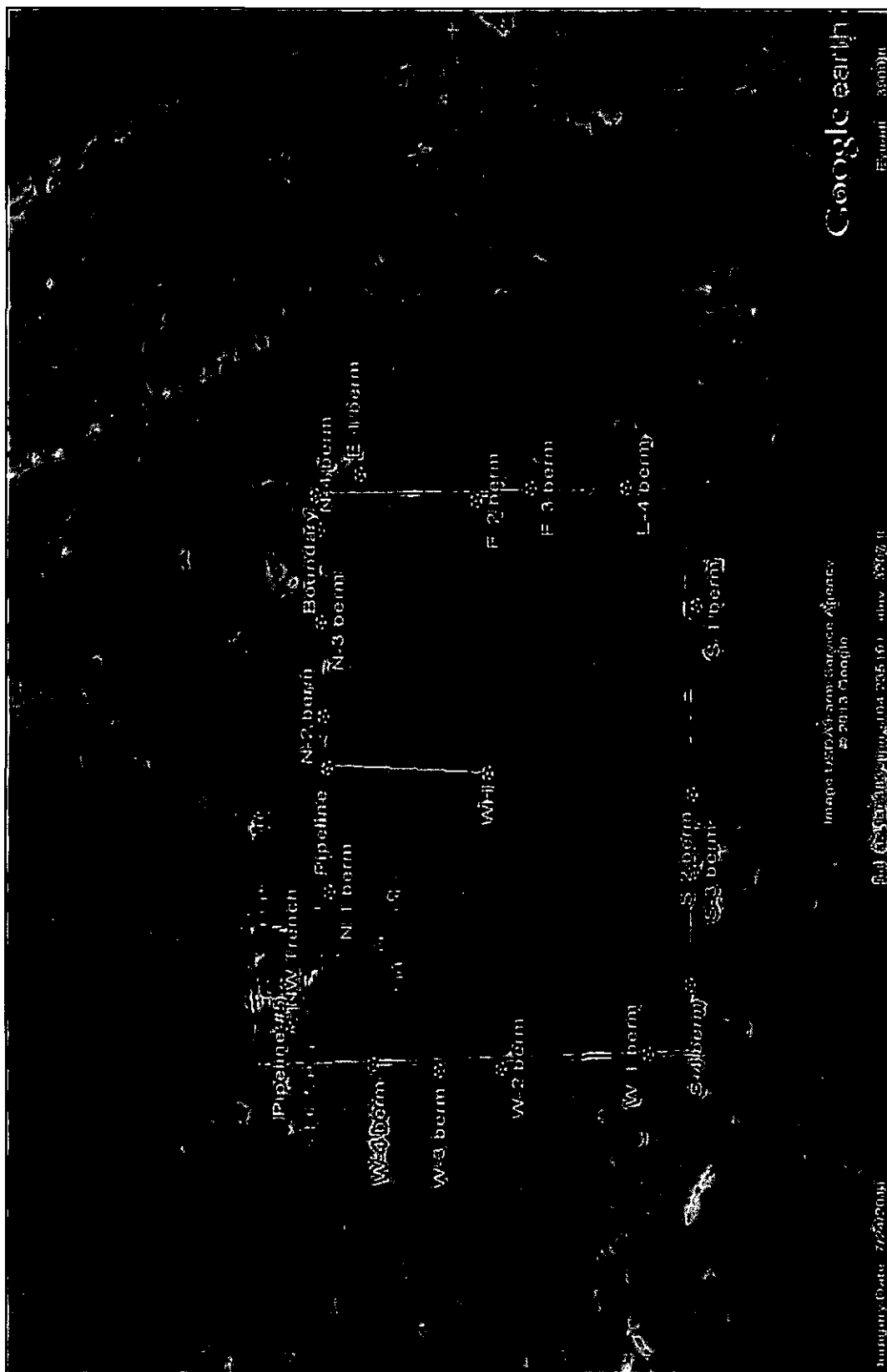
Figure 2
Site Plan/Test Trench Depths with Chloride Levels





GADWALL 18 Federal Com #3 Test Trench Depths with Chloride Levels

Figure 3
Site Plan





Appendix A

Analytical Results



PHONE (775) 393-2328 • 181 E. MARLAND • HOBBS, NM 88249

December 13, 2012

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: GADWELL 18, FED. COM. 3

Enclosed are the results of analyses for samples received by the laboratory on 12/07/12 @ 8:40.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/field/csl/lab/accred_certif.html.

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

Method EPA 552.2	Halooacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Coley D. Keene

Lab Director/Quality Manager



CARDINAL Laboratories

PHONE (575) 393-2730 • 101 E. HAWLAND • ROSA, NM 88240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 12/07/2012
Reported: 12/13/2012
Project Name: GADWELL, 18, FED. COM. 3
Project Number: CDH-12-053
Project Location: EDDY COUNTY, NM

Sampling Date: 11/29/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Henson

Sample ID: NORTH 1 (H202941-01)

Chloride, DM5000-6 mg/kg

Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Quality
Chloride	1360	16.0	12/12/2012	ND	448	112	400	3.64	

Sample ID: NORTH 3 (H202941-02)

Chloride, DM5000-6 mg/kg

Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Quality
Chloride	144	16.0	12/12/2012	ND	448	112	400	3.64	

Sample ID: EAST 2 (H202941-03)

Chloride, DM5000-6 mg/kg

Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Quality
Chloride	48.0	16.0	12/12/2012	ND	448	112	400	3.64	

Sample ID: EAST 4 (H202941-04)

Chloride, DM5000-6 mg/kg

Analyzed By: AP

Analyte	Result	Reporting Limit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Quality
Chloride	64.0	16.0	12/12/2012	ND	448	112	400	3.64	

Cardinal Laboratories

* Accredited Analyte

WARNING: Lead, Cadmium, and Mercury. Cardinal Laboratories and its subsidiaries are not responsible for the results of any analysis performed by this laboratory. The results of any analysis performed by this laboratory are for informational purposes only and are not to be used for legal or regulatory purposes. The results of any analysis performed by this laboratory are for informational purposes only and are not to be used for legal or regulatory purposes. The results of any analysis performed by this laboratory are for informational purposes only and are not to be used for legal or regulatory purposes.

Coley D. Koone

Coley D. Koone, Lab Director/Quality Manager

Page 2 of 5



Safety & Environmental Solutions
Bob Allen
 703 East Clinton
 Hobbs NM, 88240
 Fax To: (575) 393-4188

Received: 12/07/2012
Reported: 12/13/2012
Project Name: GADWELL, 18, FED. COM. 3
Project Number: CDM-12-053
Project Location: EDDY COUNTY, NM

Sampling Date: 11/29/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Hanson

Florida, D44300-9

10/10/10

Analysed By: AF

Analyte	Result	Reporting Unit	Analysis	Method Blank	SS	% Recovery	True Value QC	RPO	Qualifier
Chloride	<16.0	16.0	12/12/2012	ND	648	112	400	3.64	

Ontario, 214-5003-9

www/100

Abstracts by AP

Analyte	Result	Reporting Limit	Analysis	Method Blank	DS	% Recovery	True Value QC	RPD	Quality
Chloride	< 16.0	16.0	12/12/2012	ND	498	112	403	3.64	

Florida, 24-5000-9

Page 10

3. **Approved by:**

Analyte	Result	Reporting Limit	Analysed	Method Blank	BS	% Recovery	True Value QC	RPD	Qualifier
Chloride	32.0	15.0	12/12/2017	ND	448	112	400	1.64	

Chloride, 574,500-8

— 24 —

2 Analyzed by AP

Asset	Asset	Reported Lick	Analysis	Method Used	ES	% Recovery	True Value QC	RPD	Qualifier
Chloride	336	15.0	12/12/2012	NO	448	112	400	3.64	

*=Accredited Analyte

[illegible]

Chas. D. Kane

Coley D. Keene, Lab Director/Quality Manager



PHONE (575) 393-2326 • 101 E. MARLAND • MORGAN, NM 87040

Notes and Definitions

NO Analyte NOT DETECTED at or above the reporting limit.

SPD Relative Percent Difference

NO Samples not received at proper temperature of 6°C or below.

NO Insufficient time to reach temperature.

NO Chloride by the 3000-8 does not require samples be cooled at or below 6°C.

NO Samples reported on as an assumed basic (neg) unless otherwise noted on report.

Cardinal Laboratories

* Accredited Analytical

NOTICE: This document contains neither recommendations nor conclusions of the FBI. It is the property of the FBI and is loaned to your agency; it and its contents are not to be distributed outside your agency.

Calvin D. Korman

Celey D. Kagné, Lab Director/Quality Manager

Page 4 of 5 -



ANALYTICAL AND TESTING SERVICES • 101 E. MARLBOROUGH • HOBBES, NM 88240
PHONE (575) 283-2228 • FAX (575) 283-2229

December 18, 2012

Bob Allen

Safety & Environmental Solutions

703 East Clinton

Hobbs, NM 88240

RE: GADWELL 18 FED. CON #3

Enclosed are the results of analyses for samples received by the laboratory on 12/13/12.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-11-3. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at: www.tceq.texas.gov/factsheets/accr/accr.html.

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

Method EPA 832.2	Halocyclic Acids (HAA-5)
Method EPA 824.2	Total Trihalomethanes (TTHM)
Method EPA 824.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celey D. Keene
Lab Director/Quality Manager



Safety & Environmental Solutions
Bob Allen
 703 East Clinton
 Hobbs NM, 88240
 Fax To: (575) 393-4388

Received: 12/13/2012
Reported: 12/18/2012
Project Name: GADWELL 18 - FED. COM #3
Project Number: CD-12-052
Project Location: EDDY COUNTY, NM

Sampling Date:	12/10/2012
Sampling Type:	Soil
Sampling Condition:	Coat & Intact
Sample Received By:	Joel Hanson

Chicago, 946900-8

1992

Archived By: AP

Analyte	Result	Reporting Unit	Analyzed	Method Blank	SS	% Recovery	True Value QC	RPD	Qualifier
Chloride	512	mg/L	12/17/2012	ND	416	104	400	5.92	

CHURCH, EMERSON

附圖

Abstract 315 AB

Analyte	Result	Reporting Unit	Analyst	Method Blank	± SS	% Recovery	True Value QC	RPD	Qualifier
Chloride	234	15.0	12/17/2012	> ND	416	104	400	3.92	

Order No. 54500-0

www.pearsoned.com

Amplified by 1000

Analyte	Result	Reporting Unit	Analysis	Method	SS	% Recovery	True Value QC	RPD	Qualifier
Chloride	448	16.0	12/17/2012	ND	416	1104	400	3.92	

Circle 24

1992/1993

Abstracted In: ACP

Aschya	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RPD	Quality
Chloride	48.0	16.0	12/17/2012	ND	416	104	400	3.92	

Cardinal Laboratories[®]

• Accredited Analyst

[illegible]

W. D. K.

Coley D; Kasma, Lab Director/Quality Manager

Page 2 of 7.



Analytical Results For:

Safety & Environmental Solutions
• Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4388

Received: 12/13/2012
Reported: 12/18/2012
Project Name: GADWELL 18 FED. COM #3
Project Number: CIM-12-052
Project Location: EDDY COUNTY, NM

Sampling Date: 12/11/2012
Sampling Type: Soil
Sampling Condition: Cool & Intact
Sample Received By: Jodi Hanson

Sample ID: SOUTH WALL - EAST (H202989-10)

Charles, 2445000-8

1998/10/23

Analyst: Dyt AP

Analyte	Result	Reporting Unit	Analysis Date	Method Blank	SP	% Recovery	True Value CC	SPD	Quality
Chloride	484	16.0	12/17/2012	ND	416	104	400	3.92	

• Sample ID: BOTTOM - WEST (H202009-11)

CHARTER, D-40000-4

www.elsevier.com/locate/jmb

Analysed By: AP

Analysis	Result	Reporting Limit	Analysis Date	Method Blank	SS	% Recovery	True Value QC	RPD	Qualifier
Chloride	400	16.0	12/17/2012	ND	416	104	400	3.92	

Sample ID: BOTTOM - CENTRAL (H202989-12)

✓ Colombo, EM4500C-III

sig/leg

Analyzed By: AP

Analyte	Result	Reporting Unit	Analyzed	Method Blank	BS	% Recovery	True Value QC	RSD	Qualifier
Chloride	1760	16.0	12/17/2012	ND	416	104	408	3.92	

Sample ID: BOTTOM - EAST (H202989-13)

CHRYSLER, CHRYSLER-5

संस्कृत

Acetylated Bys AP

Analyte	Run#	Reporting Unit	Analyte	Method Blank	IS	% Recovery	True Value QC	RPD	Quality
Chloride	480	15.0	12/17/2012	ND	416	104	400	3.92	

Cardinal Laboratories

* = Accredited Analyte

[illegible]

Calvin D. Kama

Coley D. Keene, Lab Director/Quality Manager

Page 4 of 74



PHONE (575) 339-2326 • 101 E. MARLAND • MOORE, NM 88340

Notes and Definitions:

- ND Analyte NOT DETECTED at or above the reporting level.
- RPD Relative Percent Difference
- ** Samples not received at proper temperature of 4°C or below.
- *** Insufficient time to reach temperature.
- Obtains by 5M45000-8 does not require samples be received at or below 4°C
- Samples reported on an as received basis (wet) unless otherwise noted on report.

Cardinal Laboratories

Accredited Analyte

These data, results and reports are confidential and shall remain the property of Cardinal Laboratories. They shall not be used for any other purpose without the written consent of Cardinal Laboratories. This report and its contents shall not be used for any other purpose without the written consent of Cardinal Laboratories. This report and its contents shall not be used for any other purpose without the written consent of Cardinal Laboratories.

Cole D. Keene

Cole D. Keene, Lab Director/Quality Manager

Page 5 of 7



CARDINAL LABORATORIES
 181 East Main Street, Suite 100, St. Paul, MN 55101
 (612) 293-1126 Fax: (612) 293-1474

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Safety & Environmental Solutions, Inc. Project Manager: Brian Allen Address: 703 East Clinton City: Lincoln State: NE Zip: 68502 Phone: 402-441-0510 Fax: 402-441-0510 Project Name: Grandview 11-19-10 Project Location: Grandview 11-19-10 Sample Name: David Davis		Client: CHILANTO, INC. Project: P.O. 6 Analyst: [Blank] Lab: [Blank] Phone: [Blank] Fax: [Blank]	
--	--	---	--

Lab ID	Sample ID	ANALYSIS REQUEST
1	West Wall - West	
2	West Wall - Central	
3	West Wall - East	
4	West Wall - North	
5	West Wall - South	
6	East Wall - North	
7	East Wall - Central	
8	East Wall - East	
9	East Wall - South	
10	South Wall - West	
11	South Wall - Central	
12	South Wall - East	
13	South Wall - North	
14	South Wall - South	
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172	South Wall - East	
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175	North Wall - West	
176	North Wall - Central	
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179	North Wall - South	
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186	West Wall - Central	
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195	North Wall - West	
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210	South Wall - West	
211	South Wall - Central	
212	South Wall - East	
213	South Wall - North	
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216	North Wall - Central	
217	North Wall - East	
218	North Wall - North	
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221	East Wall - Central	
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225	West Wall - West	
226	West Wall - Central	
227	West Wall - East	
228	West Wall - North	
229	West Wall - South	
230	South Wall - West	
231	South Wall - Central	
232	South Wall - East	
233	South Wall - North	
234	South Wall - South	
235	North Wall - West	
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377	North Wall - East	
378	North Wall - North	
379	North Wall - South	
380	East Wall - West	
381	East Wall - Central	
382	East Wall - East	
383	East Wall - North	
384	East Wall - South	
385	West Wall	

181 East Broadway, Hoboken, NJ 07030
 (201) 763-1124 Fax: (201) 763-2476

no. 1-2

[illegible]



PHONE (575) 353-3324 • 101 E. MARLBOROUGH • HOBBS, NM 88240

February 13, 2014

Bob Aden
Safety & Environmental Solutions
700 East Clinton
Hobbs, NM 88240

RE: GADWELL 18 - FED. COM #3

Enclosed are the results of analyses for samples received by the laboratory on 02/07/14 5:37.

Cardinal Laboratories is accredited through Texas NELAP under certificate number T104704398-13-5. Accreditation applies to drinking water, non-potable water and solid and chemical materials. All accredited analytes are denoted by an asterisk (*). For a complete list of accredited analytes and matrices visit the TCEQ website at www.tceq.texas.gov/fields/qa/accr_cred_cred.html.

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

Method EPA 552.2	Halogenated Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.4	Regulated VOCs (V1, V2, V3)

Accreditation applies to public drinking water matrices.

This report meets NELAP requirements and is made up of a cover page, analytical results, and a copy of the original chain-of-custody. If you have any questions concerning this report, please feel free to contact me.

Sincerely,

Celine D. Keane
Lab Director/Quality Manager



PHONE (575) 343-2338 • 181 E. HAWKLAND • MORGAN, NM 86240

Analytical Results For:

Safety & Environmental Solutions
Bob Allen
703 East Clinton
Hobbs NM, 88240
Fax To: (575) 393-4368

Received:	02/07/2014	Sampling Date:	02/06/2014
Reported:	02/13/2014	Sampling Type:	Soil
Project Name:	GADWELL 18 - FED. COM #3	Sampling Conditions:	** (See Notes)
Project Number:	COM-12-052	Sample Received By:	Jodi Henson
Project Location:	EDDY COUNTY, NM		

Sample ID: TT1 @ SURFACE (H400389-01)

Chloride, EPA3000-B		mg/kg	Analyzed By: AP	
Analyte	Result	Reporting Limit	Analyzed	Method Date
Chloride	353	16.0	02/12/2014	ND

Sample ID: TT1 @ 6" (H400389-02)

Chloride, EPA3000-B		mg/kg	Analyzed By: AP	
Analyte	Result	Reporting Limit	Analyzed	Method Date
Chloride	234	16.0	02/12/2014	ND

Sample ID: TT1 @ 1' (H400389-03)

Chloride, EPA3000-B		mg/kg	Analyzed By: AP	
Analyte	Result	Reporting Limit	Analyzed	Method Date
Chloride	160	16.0	02/12/2014	ND

Sample ID: TT2 @ SURFACE (H400389-04)

Chloride, EPA3000-B		mg/kg	Analyzed By: AP	
Analyte	Result	Reporting Limit	Analyzed	Method Date
Chloride	592	16.0	02/12/2014	ND

Cardinal Laboratories

Accredited Analyte

NOTE: While we utilize our rigorous quality control and quality assurance systems to ensure that our data is accurate and reliable, we cannot guarantee that our data is 100% accurate. We do not warrant, represent, or defend against any liability or damages arising from the use of our data. We do not warrant, represent, or defend against any liability or damages arising from the use of our data. We do not warrant, represent, or defend against any liability or damages arising from the use of our data.

Cathy D. Keene

Cathy D. Keene, Lab Director/Quality Manager

Page 2 of 8



Safety & Environmental Solutions
Bob Allen
 703 East Clinton
 Hobbs NM, 88240
 Fax To: (575) 393-4388

Received:	02/07/2014	Sampling Date:	02/06/2014
Reported:	02/13/2014	Sampling Type:	Soil
Project Name:	GADWELL IS - FED. COM #3	Sampling Condition:	IN (See Notes)
Project Number:	COM-12-052	Sample Received By:	Joel Horton
Project Location:	EDDY COUNTY, NM		

Chloride, DMASDC-6		mg/kg		Analysis by AP						
Analysis	Result	Reporting Unit	Analysis	Method Used	SS	% Recovery	True Value QC	RPD	Quality	
Chloride	64.0	16.0	02/12/2014	ND	400	100	400	3.51		

Calibration: 10452003-8									
mg/kg ± (Analyzed By: AP)									
Analyte	Result	Reporting Unit	Analyst	Method Name	IS	% Recovery	Test Value QC	RPD	Qualifier
Chloride	64.0	16.0	02/12/2014	60	400	100	600	1.91	

Chloride, EMASOCC-0		mg/kg		Analyzed By AP					
Analyte	Result	Reporting Limit	Analyst	Method Date	IS	% Recovery	True Value QC	RPD	Qualifier
Chloride	2360	16.0	02/17/2014	ND	400	100	400	3.92	

Chloride, GW3500-B		mg/lug		Analyzed By: AP						
Analyte	Result	Reporting Limit	Assayed	Method Name	SI	% Recovery	True Value QC	RPD	Quality	
Chloride	224	15.0	02/12/2014	80	400	100	400	132		

Chloride, CHL3000-B		mg/kg Analyzed By: AP							
Analyte	Result	Reporting Limit	Analysis	Method Code	IS	% Recovery	True Value QC	STD	Quality
Chloride	65.0	16.9	02/11/2016	100	416	104	400	1.97	

• **Accredited Analysis**

[illegible]

Celery D. Keene

Page 3 of 8



PHONE (575) 353-2336 • 201 E. HAWKLAND • HOUSTON, NM 87040

Analytical Results Form

Safety & Environmental Solutions

Bob Allen

703 East Clinton

Hobbs NM, 88240

Fax To: (575) 393-4388

Received: 02/07/2014 Sampling Date: 02/06/2014
Reported: 02/13/2014 Sampling Type: Soil
Project Name: GADWELL 18 - FED. COM #3 Sampling Conditions: ** (See Notes)
Project Number: CPM-12-057 Sample Received By: Jodi Henson
Project Location: EDDY COUNTY, NM

Sample ID: TT4 @ SURFACE (H400389-10)

Chloride, EPA3000-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Name	IS	% Recovery	True Value QC	RPD	Quality
Chloride	1660	16.0	02/13/2014	ND	416	104	400	1.92	

Sample ID: TT4 @ 5" (H400389-11)

Chloride, EPA3000-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Name	IS	% Recovery	True Value QC	RPD	Quality
Chloride	272	16.0	02/13/2014	ND	416	104	400	3.92	

Sample ID: TT5 @ SURFACE (H400389-12)

Chloride, EPA3000-B		mg/lbs		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Name	IS	% Recovery	True Value QC	RPD	Quality
Chloride	96.0	16.0	02/13/2014	ND	416	104	400	1.92	

Sample ID: TT5 @ 6" (H400389-13)

Chloride, EPA3000-B		mg/kg		Analyzed By: AP					
Analyte	Result	Reporting Limit	Analyzed	Method Name	IS	% Recovery	True Value QC	RPD	Quality
Chloride	<16.0	16.0	02/13/2014	ND	416	104	400	1.92	

Sample ID: TT6 @ SURFACE (H400389-14)

Chloride, EPA3000-B		mg/kg	Analyzed By: AP						
Analyte	Result	Reporting Limit	Analyzed	Method Name	IS	% Recovery	True Value QC	RPD	Quality
Chloride	180	16.0	02/13/2014	ND	416	104	400	1.92	

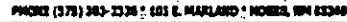
Cardinal Laboratories

* Accredited Analyte

NOTE: EPA 3000-B is a standard method for determining chloride in soil. This method is not applicable to samples containing high concentrations of other anions such as nitrate, sulfate, or carbonate. The results of this analysis should be used in conjunction with other analytical data to determine the total chloride content of the sample. The results of this analysis should be used in conjunction with other analytical data to determine the total chloride content of the sample.

Colleen D. Knepp

Colleen D. Knepp, Lab Director/Quality Manager



Safety & Environmental Solutions
Bob Allen
7011 East Clinton
Hixson, MN, 55240
Fax To: (575) 393-4388

Sample ID: TT6 @ 6" (H400389-15)

CHARTER, 1945000-0

मध्य/विद्य

Amendment No. 1

Cardinal Laboratories

Acoustic Analysis

[illegible]

உறுதிப்படுத்தப்பட்டுள்ளது.

Cathy D. Keene, Lab Director/Quality Manager

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NO Analysis NOT OBTAINED at or above the reporting limit

*** Relative Percent Difference

*** Samples not received at proper temperature of 4°C or below

*** Insufficient time to reach temperature

*** Chloride by SM5033-01 does not require samples to be received at or below 4°C

*** Samples reported as an as received basis (wet) versus anhydrous basis or report

Accredited Analyte

[illegible]

Coley D. Keene

Coley D. Keene, Lab Director/Quality Manager

Page 6 of 8

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 15 of 15

#54



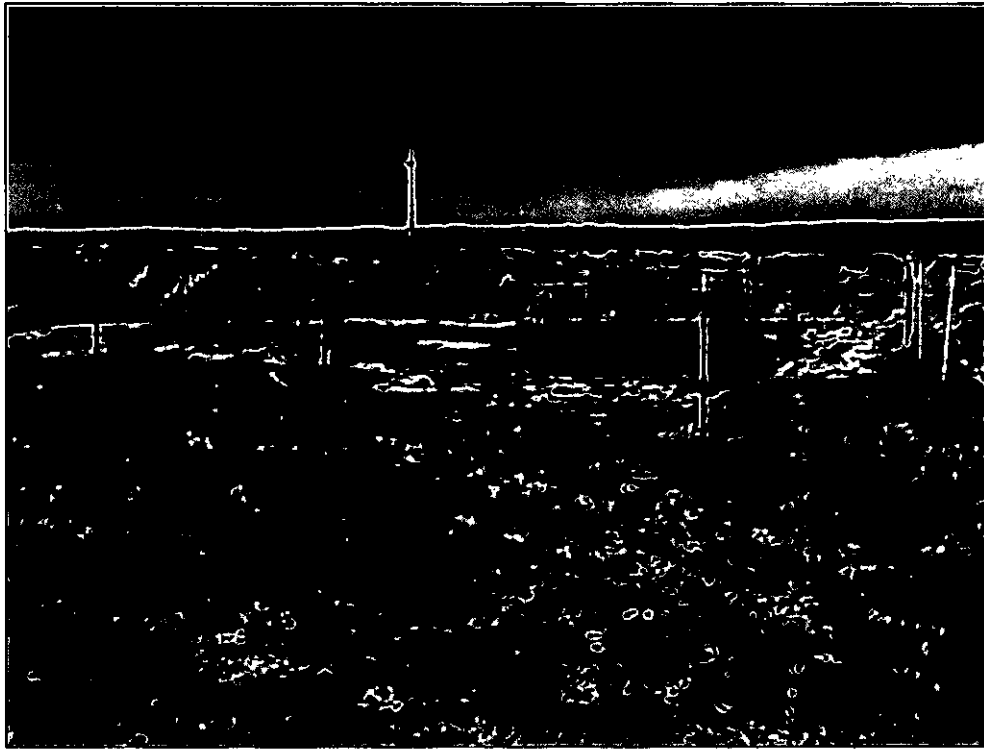
CARDINAL LABORATORIES

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

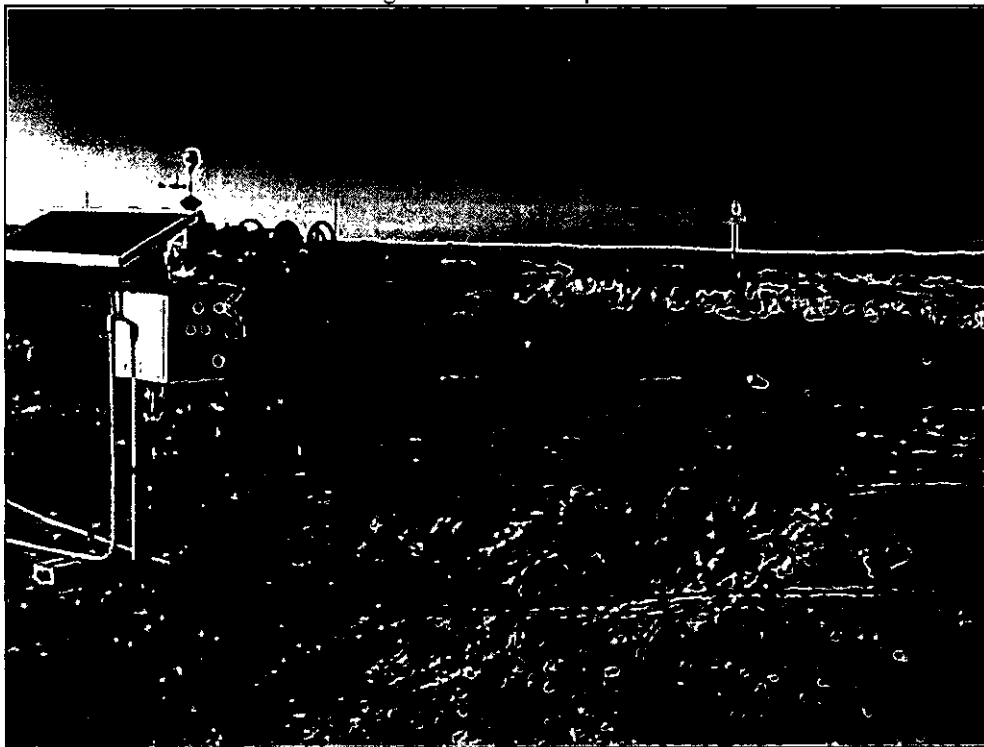
Company Name: Safety & Environmental Solutions, Inc.
Address: 703 East Clinton
City: Hobbs, NM 88240
Phone #: 575-397-0610 Fax #: 575-363-4388
Project Name: CEM-02-052 Hobbs, NM
Client Name: CEM-02-052 Hobbs, NM
Sample ID: 4224
Lab I.D.: Sample I.D.
Date: 11-4-05
Time: 17:00
Location: 17000
Analysis Request: Chlorides
Delivered By: (Name) 4224
Received By: (Name) 4224
Signature: (Signature) 4224
Date: 11-4-05
Time: 17:00
Location: 17000
Analysis Request: Chlorides

Appendix B

Site Photographs



Facing north fenced off spill area



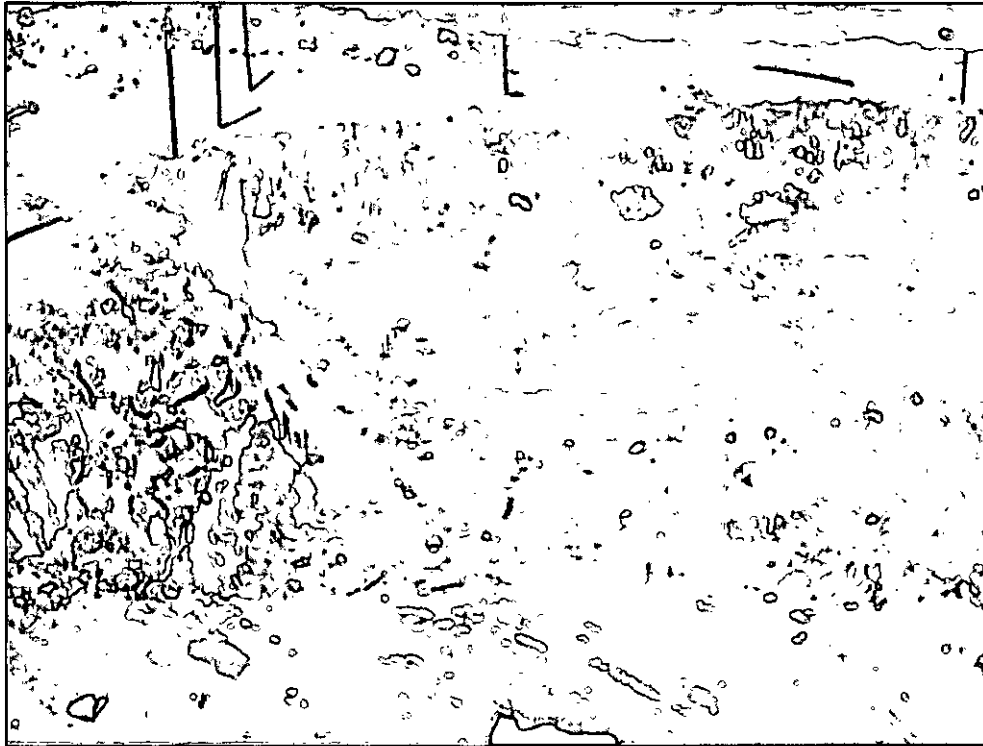
Facing northeast



Facing north excavated area



Facing west excavated area



East facing west



North facing south