

## Summary Report

Dorsey Rogers  
Cimarex  
207 S Mesa  
Carlsbad, NM, 88220

Report Date: May 30, 2007

Work Order: 7052912



Project Location: S23 T255 R26E,Eddy Co.,NM  
Project Name: API-30-015-33563  
Project Number: Wigeon 23 Fed #1

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
125649	1-NE Quad 10'	soil	2007-05-25	10:20	2007-05-29
125650	2-SE Quad 10'	soil	2007-05-25	10:35	2007-05-29
125651	3-N Center 10'	soil	2007-05-25	10:45	2007-05-29
125652	4-S Center 10'	soil	2007-05-25	11:05	2007-05-29
125653	5-NW Quad 10'	soil	2007-05-25	11:26	2007-05-29
125654	6- SW Quad 10'	soil	2007-05-25	11:30	2007-05-29
125655	7- Background 0-6 Inch	soil	2007-05-25	11:50	2007-05-29

**Sample: 125649 - 1-NE Quad 10'**

Param	Flag	Result	Units	RL
Chloride		411	mg/Kg	5.00

**Sample: 125650 - 2-SE Quad 10'**

Param	Flag	Result	Units	RL
Chloride		253	mg/Kg	5.00

**Sample: 125651 - 3-N Center 10'**

Param	Flag	Result	Units	RL
Chloride		310	mg/Kg	5.00

**Sample: 125652 - 4-S Center 10'**

Param	Flag	Result	Units	RL
Chloride		236	mg/Kg	5.00

Report Date: May 30, 2007  
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S23 T255 R26E, Eddy Co., NM

**Sample: 125653 - 5-NW Quad 10'**

Param	Flag	Result	Units	RL
Chloride		143	mg/Kg	5.00

**Sample: 125654 - 6- SW Quad 10'**

Param	Flag	Result	Units	RL
Chloride		648	mg/Kg	5.00

**Sample: 125655 - 7- Background 0-6 Inch**

Param	Flag	Result	Units	RL
Chloride		<20.0	mg/Kg	5.00



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## Analytical and Quality Control Report

Dorsey Rogers  
Cimarex  
207 S Mesa  
Carlsbad, NM, 88220

Report Date: May 30, 2007

Work Order: 7052912



Project Location: S23 T255 R26E, Eddy Co., NM  
Project Name: API-30-015-33563  
Project Number: Wigeon 23 Fed #1

Enclosed are the Analytical Report and Quality Control Report for the following sample(s) submitted to TraceAnalysis, Inc.

Sample	Description	Matrix	Date Taken	Time Taken	Date Received
125649	1-NE Quad 10'	soil	2007-05-25	10:20	2007-05-29
125650	2-SE Quad 10'	soil	2007-05-25	10:35	2007-05-29
125651	3-N Center 10'	soil	2007-05-25	10:45	2007-05-29
125652	4-S Center 10'	soil	2007-05-25	11:05	2007-05-29
125653	5-NW Quad 10'	soil	2007-05-25	11:26	2007-05-29
125654	6- SW Quad 10'	soil	2007-05-25	11:30	2007-05-29
125655	7- Background 0-6 Inch	soil	2007-05-25	11:50	2007-05-29

These results represent only the samples received in the laboratory. The Quality Control Report is generated on a batch basis. All information contained in this report is for the analytical batch(es) in which your sample(s) were analyzed.

This report consists of a total of 6 pages and shall not be reproduced except in its entirety, without written approval of TraceAnalysis, Inc.

Dr. Blair Leftwich, Director

### Standard Flags

B - The sample contains less than ten times the concentration found in the method blank.

## Case Narrative

Samples for project API-30-015-33563 were received by TraceAnalysis, Inc. on 2007-05-29 and assigned to work order 7052912. Samples for work order 7052912 were received intact at a temperature of 6 C.

Samples were analyzed for the following tests using their respective methods.

Test	Method
Chloride (Titration)	SM 4500-Cl B

Results for these samples are reported on a wet weight basis unless data package indicates otherwise.

A matrix spike (MS) and matrix spike duplicate (MSD) sample is chosen at random from each preparation batch. The MS and MSD will indicate if a site specific matrix problem is occurring, however, it may not pertain to the samples for work order 7052912 since the sample was chosen at random. Therefore, the validity of the analytical data reported has been determined by the laboratory control sample (LCS) and the method blank (MB). These quality control measures are performed with each preparation batch to ensure data integrity.

All other exceptions associated with this report have been footnoted on the appropriate analytical page to assist in general data comprehension. Please contact the laboratory directly if there are any questions regarding this project.

## Analytical Report

### Sample: 125649 - 1-NE Quad 10'

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	37627	Date Analyzed:	2007-05-29	Analyzed By:	JS
Prep Batch:	32602	Sample Preparation:	2007-05-29	Prepared By:	JS

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		411	mg/Kg	10	5.00

### Sample: 125650 - 2-SE Quad 10'

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	37627	Date Analyzed:	2007-05-29	Analyzed By:	JS
Prep Batch:	32602	Sample Preparation:	2007-05-29	Prepared By:	JS

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		253	mg/Kg	10	5.00

### Sample: 125651 - 3-N Center 10'

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	37627	Date Analyzed:	2007-05-29	Analyzed By:	JS
Prep Batch:	32602	Sample Preparation:	2007-05-29	Prepared By:	JS

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		310	mg/Kg	10	5.00

### Sample: 125652 - 4-S Center 10'

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	37627	Date Analyzed:	2007-05-29	Analyzed By:	JS
Prep Batch:	32602	Sample Preparation:	2007-05-29	Prepared By:	JS

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		236	mg/Kg	10	5.00

### Sample: 125653 - 5-NW Quad 10'

Analysis:	Chloride (Titration)	Analytical Method:	SM 4500-Cl B	Prep Method:	N/A
QC Batch:	37627	Date Analyzed:	2007-05-29	Analyzed By:	JS
Prep Batch:	32602	Sample Preparation:	2007-05-29	Prepared By:	JS

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		143	mg/Kg	10	5.00

**Sample: 125654 - 6- SW Quad 10'**

Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 37627      Date Analyzed: 2007-05-29      Analyzed By: JS  
Prep Batch: 32602      Sample Preparation: 2007-05-29      Prepared By: JS

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		648	mg/Kg	100	5.00

**Sample: 125655 - 7- Background 0-6 Inch**

Analysis: Chloride (Titration)      Analytical Method: SM 4500-Cl B      Prep Method: N/A  
QC Batch: 37628      Date Analyzed: 2007-05-29      Analyzed By: JS  
Prep Batch: 32603      Sample Preparation: 2007-05-29      Prepared By: JS

Parameter	Flag	RL Result	Units	Dilution	RL
Chloride		<20.0	mg/Kg	4	5.00

**Method Blank (1)      QC Batch: 37627**

QC Batch: 37627      Date Analyzed: 2007-05-29      Analyzed By: JS  
Prep Batch: 32602      QC Preparation: 2007-05-29      Prepared By: JS

Parameter	Flag	MDL Result	Units	RL
Chloride		<3.25	mg/Kg	5

**Method Blank (1)      QC Batch: 37628**

QC Batch: 37628      Date Analyzed: 2007-05-29      Analyzed By: JS  
Prep Batch: 32603      QC Preparation: 2007-05-29      Prepared By: JS

Parameter	Flag	MDL Result	Units	RL
Chloride		<3.25	mg/Kg	5

**Laboratory Control Spike (LCS-1)**

QC Batch: 37627      Date Analyzed: 2007-05-29      Analyzed By: JS  
Prep Batch: 32602      QC Preparation: 2007-05-29      Prepared By: JS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	100	mg/Kg	1	100	<3.25	100	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	100	mg/Kg	1	100	<3.25	100	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

#### Laboratory Control Spike (LCS-1)

QC Batch: 37628  
Prep Batch: 32603

Date Analyzed: 2007-05-29  
QC Preparation: 2007-05-29

Analyzed By: JS  
Prepared By: JS

Param	LCS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	101	mg/Kg	1	100	<3.25	101	90 - 110

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	LCSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	101	mg/Kg	1	100	<3.25	101	90 - 110	0	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

#### Matrix Spike (MS-1) Spiked Sample: 125654

QC Batch: 37627  
Prep Batch: 32602

Date Analyzed: 2007-05-29  
QC Preparation: 2007-05-29

Analyzed By: JS  
Prepared By: JS

Param	MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	<sup>1</sup> 904	mg/Kg	100	10000	648	2	84.6 - 117

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param	MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	<sup>2</sup> 982	mg/Kg	100	10000	648	3	84.6 - 117	8	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

#### Matrix Spike (MS-1) Spiked Sample: 125655

QC Batch: 37628  
Prep Batch: 32603

Date Analyzed: 2007-05-29  
QC Preparation: 2007-05-29

Analyzed By: JS  
Prepared By: JS

<sup>1</sup>Matrix spike recoveries out of control limits due to matrix spike being diluted out. Use LCS/LCSD to demonstrate analysis is under control.

<sup>2</sup>Matrix spike recoveries out of control limits due to matrix spike being diluted out. Use LCS/LCSD to demonstrate analysis is under control.

Param		MS Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit
Chloride	<sup>3</sup>	212	mg/Kg	4	400	17.4	49	84.6 - 117

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

Param		MSD Result	Units	Dil.	Spike Amount	Matrix Result	Rec.	Rec. Limit	RPD	RPD Limit
Chloride	<sup>4</sup>	207	mg/Kg	4	400	17.4	47	84.6 - 117	2	20

Percent recovery is based on the spike result. RPD is based on the spike and spike duplicate result.

**Standard (ICV-1)**

QC Batch: 37627

Date Analyzed: 2007-05-29

Analyzed By: JS

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	101	101	85 - 115	2007-05-29

**Standard (CCV-1)**

QC Batch: 37627

Date Analyzed: 2007-05-29

Analyzed By: JS

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.4	99	85 - 115	2007-05-29

**Standard (ICV-1)**

QC Batch: 37628

Date Analyzed: 2007-05-29

Analyzed By: JS

Param	Flag	Units	ICVs True Conc.	ICVs Found Conc.	ICVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	100	100	85 - 115	2007-05-29

**Standard (CCV-1)**

QC Batch: 37628

Date Analyzed: 2007-05-29

Analyzed By: JS

Param	Flag	Units	CCVs True Conc.	CCVs Found Conc.	CCVs Percent Recovery	Percent Recovery Limits	Date Analyzed
Chloride		mg/Kg	100	99.9	100	85 - 115	2007-05-29

<sup>3</sup>Matrix spike recoveries out of control limits due to matrix spike being diluted out. Use LCS/LCSD to demonstrate analysis is under control.

<sup>4</sup>Matrix spike recoveries out of control limits due to matrix spike being diluted out. Use LCS/LCSD to demonstrate analysis is under control.



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 Contact Person: JUSTIN HUTCHINS E-mail: jhutchins@leaco.net  
 Invoice to: (If different from above) CIMAREX - DARREY ROGERS  
 Project #: WIGEON 23 FEB #1 Project Name: API 30-015-33563  
 Project Location (including state): S23 T25S R26E Eddy Co., NM Sampler Signature: [Signature]

ANALYSIS REQUEST  
(Circle or Specify Method No.)

LAB # (LAB USE ONLY)	FIELD CODE	# CONTAINERS	Volume / Amount	MATRIX				PRESERVATIVE METHOD						SAMPLING		DATE	TIME	MTBE 8021B / 602 / 8260B / 624	BTX 8021B / 602 / 8260B / 624	TPH 418.1 / TX1005 / TX1005 Ext(C35)	TPH 8015 GRO / DRO / TVHC	PAH 8270C / 625	Total Metals Ag As Ba Cd Cr Pb Se Hg 6010B/200.7	TCLP Metals Ag As Ba Cd Cr Pb Se Hg	TCLP Volatiles	TCLP Semi Volatiles	TCLP Pesticides	RCI	GC/MS Vol. 8260B / 624	GC/MS Semi. Vol. 8270C / 625	PCB's 8082 / 608	Pesticides 8081A / 608	BOD, TSS, pH	Moisture Content	Chlorides	Turn Around Time if different from standard	Hold
				WATER	SOIL	AIR	SLUDGE	HCl	HNO <sub>3</sub>	H <sub>2</sub> SO <sub>4</sub>	NaOH	ICE	NONE																								
123049	1 - NE QUAD 10'	1	4oz	X								X				5/25/07	10:20A																				
50	2 - SE QUAD 10'	1		X								X					10:25A																				
51	3 - N CENTER 10'	1		X								X					10:45A																				
52	4 - S CENTER 10'	1		X								X					11:05A																				
53	5 - NW QUAD 10'	1		X								X					11:20A																				
54	6 - SW QUAD 10'	1		X								X					11:30A																				
55	7 - BACKGROUND 0.6"	1		X								X					11:50A																				

Relinquished by: [Signature] Date: 5/29/07 Time: 11:10A  
 Received by: [Signature] Date: 05/29/07 Time: 11:15AM

## LAB USE ONLY

Intact ☒ N  
 Headspace Y / N  
 Temp 60C  
 Log-in-Review [Signature]

REMARKS: PLEASE EMAIL COPY OF RESULTS TO ALLEN HODGE & MIKE BRATCHER

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

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

ORIGINAL COPY

Carrier # White-in