

# Evergreen Analytical Laboratory



4036 Youngfield Street  
Wheat Ridge, CO 80033-3862

(303) 425-6021  
FAX (303) 425-6854

RECEIVED

INVOICE

04060154 0%

COGCC

Invoice Date: June 08, 2004

Invoice To: Colorado Oil & Gas Conservation Comm.  
1120 Lincoln St #801  
Denver, CO 80203-

Attn:  
Phone: (303) 894-2100

Client Project ID: Noonan Ranch  
Date Samples Received: 5/21/04

Noonan Ranch  
Pit Discharge Areas  
Walsh Prod  
Adams County

Work Order: 04-3454  
PO Number:

QuoteID:

Item	Matrix	Qty	Unit Price	Unit Surcharge	Total Unit Price	Extended Price
pH	Soil	5	\$20.00	0%	\$20.00	\$100.00
Sodium Absorption Ratio for Soils	Soil	5	\$116.00	0%	\$116.00	\$580.00
Specific Conductance @ 25°C	Soil	5	\$20.00	0%	\$20.00	\$100.00

Sub total: \$780.00  
Surcharge: 0.00%  
Discount: 0.00%  
Misc: \$0.00

Invoice Total \$780.00

Prepayment: \$0.00

Balance Due: \$780.00

I HEREBY CERTIFY THAT I HAVE RECEIVED THE  
ARTICLES LISTED ABOVE, THAT I HAVE CAREFULLY  
INSPECTED, WEIGHTED, COUNTED OR MEASURED THE  
COMMODITIES AND FOUND THEM IN GOOD CONDITION  
AND COMPLYING WITH THE SPECIFICATIONS GIVEN  
OR THAT THE SERVICES WERE SATISFACTORY EXCEPT  
AS NOTED

Comments:

*Randall J. Jager* 6/10/04  
SIGNATURE DATE

-Original Invoice-  
Forward to  
Accounts Payable

FEIN

84-0906043

WE ARE AN EQUAL OPPORTUNITY EMPLOYER

TERMS

NET 30 Days. A 1.5% service charge will be added to all past due accounts.  
THANK YOU FOR YOUR BUSINESS

1 of 1





June 07, 2004

Randall Ferguson  
Colorado Oil & Gas Conservation Comm.  
1120 Lincoln St #801  
Denver, CO 80203

Lab Work Order: 04-3454  
Client Project ID: Noonan Ranch

Dear Randall Ferguson:

Enclosed are the analytical results and invoice for the samples shown in the Laboratory Work Order Summary.

The enclosed data for testing performed at Evergreen Analytical Laboratory (EAL) have been reviewed for quality assurance. A case narrative is included to describe any anomalies associated with the samples or data.

EAL will dispose of all samples one month from the date of this letter. If you want samples returned, please advise us by mail or fax as soon as possible.

A copy of this project report and supporting data will be retained for a period of five years unless we are otherwise advised by you. A document retrieval charge will apply.

Thank you for using the services of Evergreen Analytical. If you have any questions concerning the analytical data, please contact me. Please direct other questions to Client Services.

Sincerely,

A handwritten signature in cursive script that reads "Carl Smits".

Carl Smits  
Technical Director of Chemical Analysis

# WORK ORDER Summary

Evergreen Analytical, Inc.

04-3454

Rpt To: Randall Ferguson

Fax To: Randall Ferguson

FX: (303) 894-2109 PH: (303) 894-2100

Colorado Oil & Gas Conservation

5/21/04 3:36:26 PM

Comm.

Client Project ID: Noonan Ranch

1120 Lincoln St #801

Denver, CO 80203-

(303) 894-2100

QC Level: Level I

## Comments:

Sample ID	Client Sample ID	Matrix	Collection Date	Date Received	Storage	Test Code	Test Name	Hold MS	Date Due	Hold Time
04-3454-01A	Champlin 113 A Discharge Area	Soil	5/19/04	5/21/04	E6	6010_D *	6010 Dissolved Metals	<input type="checkbox"/>	6/7/04	11/15/04
04-3454-01A	Champlin 113 A Discharge Area	Soil	5/19/04	5/21/04	E6	COND_S	Specific Conductance @ 25°C	<input type="checkbox"/>	6/7/04	6/16/04
04-3454-01A	Champlin 113 A Discharge Area	Soil	5/19/04	5/21/04	E6	PH_S	pH	<input type="checkbox"/>	6/7/04	6/16/04
04-3454-01A	Champlin 113 A Discharge Area	Soil	5/19/04	5/21/04	E6	SAR_S	Sodium Adsorption Ratio, Soil Leachate	<input type="checkbox"/>	6/7/04	11/15/04
04-3454-02A	Downing B-1 Discharge Area	Soil	5/19/04	5/21/04	E6	6010_D *	6010 Dissolved Metals	<input type="checkbox"/>	6/7/04	11/15/04
04-3454-02A	Downing B-1 Discharge Area	Soil	5/19/04	5/21/04	E6	COND_S	Specific Conductance @ 25°C	<input type="checkbox"/>	6/7/04	6/16/04
04-3454-02A	Downing B-1 Discharge Area	Soil	5/19/04	5/21/04	E6	PH_S	pH	<input type="checkbox"/>	6/7/04	6/16/04
04-3454-02A	Downing B-1 Discharge Area	Soil	5/19/04	5/21/04	E6	SAR_S	Sodium Adsorption Ratio, Soil Leachate	<input type="checkbox"/>	6/7/04	11/15/04
04-3454-03A	Ralph Downing 24-1&2 Discharge Area	Soil	5/19/04	5/21/04	E6	6010_D *	6010 Dissolved Metals	<input type="checkbox"/>	6/7/04	11/15/04
04-3454-03A	Ralph Downing 24-1&2 Discharge Area	Soil	5/19/04	5/21/04	E6	COND_S	Specific Conductance @ 25°C	<input type="checkbox"/>	6/7/04	6/16/04
04-3454-03A	Ralph Downing 24-1&2 Discharge Area	Soil	5/19/04	5/21/04	E6	PH_S	pH	<input type="checkbox"/>	6/7/04	6/16/04
04-3454-03A	Ralph Downing 24-1&2 Discharge Area	Soil	5/19/04	5/21/04	E6	SAR_S	Sodium Adsorption Ratio, Soil Leachate	<input type="checkbox"/>	6/7/04	11/15/04
04-3454-04A	Michael Noonan #1 Discharge Area-N	Soil	5/19/04	5/21/04	E6	6010_D *	6010 Dissolved Metals	<input type="checkbox"/>	6/7/04	11/15/04
04-3454-04A	Michael Noonan #1 Discharge Area-N	Soil	5/19/04	5/21/04	E6	COND_S	Specific Conductance @ 25°C	<input type="checkbox"/>	6/7/04	6/16/04

Definitions: \* - Test Code has a Select List

**WORK ORDER Summary****Evergreen Analytical, Inc.****04-3454****Rpt To:** Randall Ferguson**Fax To:** Randall Ferguson**FX:** (303) 894-2109 **PH:** (303) 894-2100

Colorado Oil &amp; Gas Conservation

5/21/04 3:36:26 PM

Comm.

**Client Project ID:** Noonan Ranch

1120 Lincoln St #801

Denver, CO 80203-

**QC Level:** Level I

(303) 894-2100

04-3454-04A	Michael Noonan #1 Discharge Area-N	Soil	5/19/04	5/21/04	E6	PH_S	<input type="checkbox"/>	<input type="checkbox"/>	6/7/04	6/16/04
04-3454-04A	Michael Noonan #1 Discharge Area-N	Soil	5/19/04	5/21/04	E6	SAR_S	<input type="checkbox"/>	<input type="checkbox"/>	6/7/04	11/15/04
04-3454-05A	Michael Noonan #1 Discharge Area-S	Soil	5/19/04	5/21/04	E6	6010_D *	<input type="checkbox"/>	<input type="checkbox"/>	6/7/04	11/15/04
04-3454-05A	Michael Noonan #1 Discharge Area-S	Soil	5/19/04	5/21/04	E6	COND_S	<input type="checkbox"/>	<input type="checkbox"/>	6/7/04	6/16/04
04-3454-05A	Michael Noonan #1 Discharge Area-S	Soil	5/19/04	5/21/04	E6	PH_S	<input type="checkbox"/>	<input type="checkbox"/>	6/7/04	6/16/04
04-3454-05A	Michael Noonan #1 Discharge Area-S	Soil	5/19/04	5/21/04	E6	SAR_S	<input type="checkbox"/>	<input type="checkbox"/>	6/7/04	11/15/04



**Evergreen Analytical, Inc.**

**Date:** 08-Jun-04

**Client Project ID:** Noonan Ranch

**Lab Order:** 04-3454

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## **CASE NARRATIVE**

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### **SAMPLE RECEIVING**

Samples were received in good condition within method specified holding times.

Samples were hand delivered to the laboratory by the client.

Samples did not require preservation.

The temperature of the sample(s) upon arrival was 24° C. NJO

### **QUALITY ASSURANCE**

Analyses performed on samples in this work order meet the requirements of the EAL Quality Assurance Program. CMS

### **CLIENT SERVICES**

There are no anomalies to report. PM

### **GENERAL CHEMISTRY**

There are no anomalies to report. MM

### **METALS ANALYSIS**

There are no anomalies to report. MA

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**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

Client Sample ID: Champlin 113 A Discharge Area  
Client Project ID: Noonan Ranch  
Date Collected: 5/19/04  
Date Received: 5/21/04

Lab Work Order: 04-3454  
Lab Sample ID: 04-3454-01  
Sample Matrix: Soil

**6010 DISSOLVED METALS, WATER**

Method: SW6010

Prep Method: E200.7/SW3010

Date Prepared: 6/2/04  
Date Analyzed: 6/4/04

Lab File ID: 60404PM  
Method Blank: MB-4690

Dilution Factor: 1  
Lab Fraction ID: 04-3454-01A

Analytes	CAS Number	Result	LQL	Units
Calcium	7440-70-2	440	1.9	mg/L
Magnesium	7439-95-4	55	0.75	mg/L
Sodium	7440-23-5	4300	2.0	mg/L

**SODIUM ADSORPTION RATIO, SOIL**

Method: USDA

Prep Method:

Date Prepared: 6/2/04  
Date Analyzed: 6/7/04

Dilution Factor: 1  
Lab Fraction ID: 04-3454-01A

Analytes	CAS Number	Result	LQL	Units
Sodium-Adsorption-Ratio		51	0.10	ratio

  
\_\_\_\_\_  
Analyst

  
\_\_\_\_\_  
Approved

Qualifiers: B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL)

Definitions: NA - Not Applicable  
LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 6/7/04



**Evergreen Analytical, Inc.**

4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

Client Sample ID: Downing B-1 Discharge Area  
Client Project ID: Noonan Ranch  
Date Collected: 5/19/04  
Date Received: 5/21/04

Lab Work Order: 04-3454  
Lab Sample ID: 04-3454-02  
Sample Matrix: Soil

**6010 DISSOLVED METALS, WATER****Method: SW6010****Prep Method: E200.7/SW3010**

Date Prepared: 6/2/04  
Date Analyzed: 6/4/04

Lab File ID: 60404PM  
Method Blank: MB-4690

Dilution Factor: 1  
Lab Fraction ID: 04-3454-02A

Analytes	CAS Number	Result	LQL	Units
Calcium	7440-70-2	51	1.9	mg/L
Magnesium	7439-95-4	3.6	0.75	mg/L
Sodium	7440-23-5	2800	2.0	mg/L

**SODIUM ADSORPTION RATIO, SOIL****Method: USDA****Prep Method:**

Date Prepared: 6/2/04  
Date Analyzed: 6/7/04

Dilution Factor: 1  
Lab Fraction ID: 04-3454-02A

Analytes	CAS Number	Result	LQL	Units
Sodium-Adsorption-Ratio		100	0.10	ratio

  
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Analyst

  
\_\_\_\_\_  
Approved

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL)

**Definitions:** NA - Not Applicable  
LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 6/7/04

**Evergreen Analytical, Inc.**

4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

Client Sample ID: Ralph Downing 24-1&2 Discharge Area  
Client Project ID: Noonan Ranch  
Date Collected: 5/19/04  
Date Received: 5/21/04

Lab Work Order: 04-3454  
Lab Sample ID: 04-3454-03  
Sample Matrix: Soil

**6010 DISSOLVED METALS, WATER****Method: SW6010****Prep Method: E200.7/SW3010**

Date Prepared: 6/2/04  
Date Analyzed: 6/4/04

Lab File ID: 60404PM  
Method Blank: MB-4690

Dilution Factor: 1  
Lab Fraction ID: 04-3454-03A

Analytes	CAS Number	Result	LQL	Units
Calcium	7440-70-2	260	1.9	mg/L
Magnesium	7439-95-4	49	0.75	mg/L
Sodium	7440-23-5	5200	2.0	mg/L

**SODIUM ADSORPTION RATIO, SOIL****Method: USDA****Prep Method:**

Date Prepared: 6/2/04  
Date Analyzed: 6/7/04

Dilution Factor: 1  
Lab Fraction ID: 04-3454-03A

Analytes	CAS Number	Result	LQL	Units
Sodium-Adsorption-Ratio		78	0.10	ratio

**Analyst****Approved**

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL)

**Definitions:** NA - Not Applicable  
LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 6/7/04

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**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

**Client Sample ID:** Michael Noonan #1 Discharge Area-N  
**Client Project ID:** Noonan Ranch  
**Date Collected:** 5/19/04  
**Date Received:** 5/21/04

**Lab Work Order:** 04-3454  
**Lab Sample ID:** 04-3454-04  
**Sample Matrix:** Soil

**6010 DISSOLVED METALS, WATER**

**Method:** SW6010

**Prep Method:** E200.7/SW3010

**Date Prepared:** 6/2/04  
**Date Analyzed:** 6/5/04

**Lab File ID:** 60404PM  
**Method Blank:** MB-4690

**Dilution Factor:** 1  
**Lab Fraction ID:** 04-3454-04A

Analytes	CAS Number	Result	LQL	Units
Calcium	7440-70-2	620	1.9	mg/L
Magnesium	7439-95-4	130	0.75	mg/L
Sodium	7440-23-5	4200	2.0	mg/L

**SODIUM ADSORPTION RATIO, SOIL**

**Method:** USDA

**Prep Method:**

**Date Prepared:** 6/2/04  
**Date Analyzed:** 6/7/04

**Dilution Factor:** 1  
**Lab Fraction ID:** 04-3454-04A

Analytes	CAS Number	Result	LQL	Units
Sodium-Adsorption-Ratio		40	0.10	ratio

  
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**Analyst**

  
\_\_\_\_\_  
**Approved**

**Qualifiers:** B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL)

**Definitions:** NA - Not Applicable  
LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 6/7/04

**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

Client Sample ID: Michael Noonan #1 Discharge Area-S  
Client Project ID: Noonan Ranch  
Date Collected: 5/19/04  
Date Received: 5/21/04

Lab Work Order: 04-3454  
Lab Sample ID: 04-3454-05  
Sample Matrix: Soil

**6010 DISSOLVED METALS, WATER**

Method: SW6010

Prep Method: E200.7/SW3010

Date Prepared: 6/2/04  
Date Analyzed: 6/5/04

Lab File ID: 60404PM  
Method Blank: MB-4690

Dilution Factor: 1  
Lab Fraction ID: 04-3454-05A

Analytes	CAS Number	Result	LQL	Units
Calcium	7440-70-2	110	1.9	mg/L
Magnesium	7439-95-4	14	0.75	mg/L
Sodium	7440-23-5	16	2.0	mg/L

**SODIUM ADSORPTION RATIO, SOIL**

Method: USDA

Prep Method:

Date Prepared: 6/2/04  
Date Analyzed: 6/7/04

Dilution Factor: 1  
Lab Fraction ID: 04-3454-05A

Analytes	CAS Number	Result	LQL	Units
Sodium-Adsorption-Ratio		0.38	0.10	ratio

  
\_\_\_\_\_  
Analyst

  
\_\_\_\_\_  
Approved

Qualifiers: B - Analyte detected in the associated Method Blank, value not subtracted from result  
E - Extrapolated value. Value exceeds calibration range  
H - Sample exceeded analytical holding time  
J - Indicates an estimated value when the compound is detected, but is below the LQL  
S - Spike Recovery outside accepted limits  
U - Compound analyzed for but not detected  
X - See case narrative  
\* - Value exceeded the Maximum Contamination Level (MCL)

Definitions: NA - Not Applicable  
LQL - Lower Quantitation Limit  
Surr - Surrogate

Print Date: 6/7/04

Work Order: 04-3454

Client Project ID: Noonon Ranch

## ANALYTICAL QC SUMMARY REPORT

BatchID: 4690

Sample ID: MB-4690	SampType: MBLK	TestCode: 200.7_T	Run ID: ICP_040604A	Prep Date: 6/2/04	Units: mg/L						
	Batch ID: 4690	TestNo: E200.7	FileID: 60404PM	Analysis Date: 6/4/04	SeqNo: 193056						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	U	0.39									
Magnesium	0	0.15									
Sodium	U	0.40									

Sample ID: LCS-4690	SampType: LCS	TestCode: 200.7_T	Run ID: ICP_040604A	Prep Date: 6/2/04	Units: mg/L						
	Batch ID: 4690	TestNo: E200.7	FileID: 60404PM	Analysis Date: 6/4/04	SeqNo: 193057						
Analyte	Result	LQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	RPD Ref Val	%RPD	RPDLimit	Qual

Calcium	9.085	0.39	10	0.04942	90.9	75	125	0	0		
Magnesium	9.255	0.15	10	0	92.5	75	125	0	0		
Sodium	9.074	0.40	10	0.06804	90.7	75	125	0	0		

## Qualifiers:

ND - Not Detected at the Reporting Limit  
J - Analyte detected below quantitation limits  
S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits  
B - Analyte detected in the associated Method Blank  
H - Sample exceeded analytical holding time

Print Date: 6/7/04

**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

**Client Project ID** Noonen Ranch  
**Collection Date:** 5/19/04

**Lab Order:** 04-3454  
**Date Received:** 5/21/04  
**Units:** µmhos/cm

**Specific Conductance @ 25°C**  
**Specific Conductance**

**Method:** Dept of Ag.

**Prep Method:**

Lab ID	Client ID	Matrix	Date Prepared	Date Analyzed	Results	LQL	DF
04-3454-01A	Champlin 113 A Discharge Area	Soil	5/25/04	6/4/04	814	1.00	1
04-3454-02A	Downing B-1 Discharge Area	Soil	5/25/04	6/4/04	20300	1.00	1
04-3454-03A	Ralph Downing 24-1&2 Discharge Area	Soil	5/25/04	6/4/04	22700	1.00	1
04-3454-04A	Michael Noonan #1 Discharge Area-N	Soil	5/25/04	6/4/04	13500	1.00	1
04-3454-05A	Michael Noonan #1 Discharge Area-S	Soil	5/25/04	6/4/04	19600	1.00	1

**Comments** Method :US Dept. of Ag, Handbook #60, p89



Analyst



Approved

**Qualifiers:** J - Indicates an estimated value when the compound is detected, but is below the LQL  
U - Compound analyzed for but not detected  
X - See case narrative

**Definitions:** DF - Dilution Factor  
LQL - Lower Quantitation Limit

Print Date: 6/7/04

10-4  
10-3

**Evergreen Analytical, Inc.**  
4036 Youngfield Street, Wheat Ridge, Colorado 80033-3862  
(303) 425-6021

**Client Project ID** Noonen Ranch  
**Collection Date:** 5/19/04

**Lab Order:** 04-3454  
**Date Received:** 5/21/04  
**Units:** pH Units

**pH**

**Method:** SW9045C

**Prep Method:**

Lab ID	Client ID	Matrix	Date Prepared	Date Analyzed	Results	LQL	DF
04-3454-01A	Champlin 113 A Discharge Area	Soil	5/27/04	5/27/04	8.37	1.00	1
04-3454-02A	Downing B-1 Discharge Area	Soil	5/27/04	5/27/04	8.54	1.00	1
04-3454-03A	Ralph Downing 24-1&2 Discharge Area	Soil	5/27/04	5/27/04	9.52	1.00	1
04-3454-04A	Michael Noonan #1 Discharge Area-N	Soil	5/27/04	5/27/04	8.40	1.00	1
04-3454-05A	Michael Noonan #1 Discharge Area-S	Soil	5/27/04	5/27/04	8.03	1.00	1

**Comments**



Analyst



Approved

**Qualifiers:** J - Indicates an estimated value when the compound is detected, but is below the LQL  
U - Compound analyzed for but not detected  
X - See case narrative

**Definitions:** DF - Dilution Factor  
LQL - Lower Quantitation Limit

Print Date 6/7/04