

State of Colorado
Oil and Gas Conservation Commission



#8085

FOR OGCC USE ONLY

RECEIVED
11/19/2013

1120 Lincoln Street, Suite 801, Denver, Colorado 80203 (303)894-2100 Fax:(303)894-2109

SITE INVESTIGATION AND REMEDIATION WORKPLAN

This form shall be submitted to the Director for approval prior to the initiation of site investigation and remediation activities. Form 27 is intended to be used whenever possible. Additional documentation will be required when large volumes of soil and groundwater have been impacted or involve large facilities with multiple source areas. See Rule 910. Attach as many pages as needed to fully describe the proposed work.

OGCC Employee:

- Spill Complaint
 Inspection NOAV

Tracking No:

CAUSE OF CONDITION BEING INVESTIGATED AND REMEDIATED

- Spill or Release Plug & Abandon Central Facility Closure Site/Facility Closure Other (describe): Pit Closure

OGCC Operator Number: 53255	Contact Name and Telephone: Naomi Azulai
Name of Operator: Maralex Resources, Inc.	No: (970) 563-4000
Address: P.O. Box 338	Fax: (970) 563-4116
City: Ignacio State: CO Zip: 81137	

API Number: 05-077-05126	County: Mesa
Facility Name:	Facility Number: 35610
Well Name: Coon Hollow	Well Number: 1
Location: (QtrQtr, Sec, Twp, Rng, Meridian): SESE Sec. 26 T8S R98W 6	Latitude: 39.326 Longitude: 108.291

TECHNICAL CONDITIONS

Type of Waste Causing Impact (crude oil, condensate, produced water, etc): Low-level Petroleum Hydrocarbon contamination in the Diesel Range

Site Conditions: Is location within a sensitive area (according to Rule 901e)? Y N If yes, attach evaluation.

Adjacent land use (cultivated, irrigated, dry land farming, industrial, residential, etc.): non-cropland - undeveloped

Soil type, if not previously identified on Form 2A or Federal Surface Use Plan: Colluvium - clayey sand w/ gravel

Potential receptors (water wells within 1/4 mi, surface waters, etc.): _____

Description of Impact (if previously provided, refer to that form or document):

Impacted Media (check):	Extent of Impact:	How Determined:
<input type="checkbox"/> Soils	Surface soils @ bottom of pit(s)	lab analysis - Not visually apparent
<input type="checkbox"/> Vegetation	growing grass and weeds in pit bottom	Visual
<input type="checkbox"/> Groundwater	N/A - GW was not observed in the pit to as	of April 4, 2013 - Visual
<input type="checkbox"/> Surface Water	N/A - evidence or stormwater was not observed in	In the Pit as of of April 4, 2013 - Visual

REMEDIATION WORKPLAN

Describe initial action taken (if previously provided, refer to that form or document):

Characterization sampling was performed by ESI on April 4, 2013. A composite soil sample was obtained from the pit's bottom.

Describe how source is to be removed:

No source removal appears to be necessary at this time.
Based on the reported laboratory data the soil, at both the Calcium Chloride Pit and the Separator Pit met the COGCC Table 910-1 Concentration Levels with the following exceptions:

Based on the reported laboratory data, the contaminated soil met the Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 Concentration Levels with the exception of DRO which was reported at 890 mg/Kg. Arsenic concentrations from the composite soil obtained from the pit's bottom and from the three undisturbed locations adjacent to Coon Hollow #1 were reported at 1.4, 1.2, 2.1 and 1.7 mg/Kg, respectively. These Arsenic concentrations exceed the COGCC standard of 0.39 mg/Kg.

Describe how remediation of existing impacts is to be accomplished, including removal and disposal at an injection well or licensed facility, land treatment on site, removal of impacted groundwater, insitu bioremediation, burning of oily vegetation, etc.:

The reported laboratory analyses have been compared to the COGCC Concentration Levels included in Table 910-1, dated April 2009, and indicate that low-level petroleum hydrocarbon, in the diesel range, is present in the pit. We believe the reported Arsenic concentrations represent background. Based on our experience, soils in Colorado commonly fail the State's standards for Arsenic.



Tracking Number: _____
Name of Operator: _____
OGCC Operator No: _____
Received Date: _____
Well Name & No: _____
Facility Name & No: _____

REMEDIATION WORKPLAN (Cont.)

OGCC Employee: _____

If groundwater has been impacted, describe proposed monitoring plan (# of wells or sample points, sampling schedule, analytical methods, etc.):

Evidence of storm water or groundwater was not observed in the pit at the time of our Site visit on April 4, 2013

Describe reclamation plan. Discuss existing and new grade recontouring; method and testing of compaction alleviation; and reseeding program, including location of new seed, seed mix and noxious weed prevention. Attach diagram or drawing. Use additional sheet for description if required.

Maralex proposes to remove the contaminated soil from the pit. The contaminated soil will be placed into a lined containment with soil berms and allowed to naturally attenuate for approximately three months. Two confirmation soil samples, with the intent of demonstrating that sufficient quantities of contaminated soil have been removed, will be obtained from the pit bottom following the excavation. These samples will be analyzed for BTEX, GRO and DRO. Following three months, confirmation soil samples, from the contaminated soil stockpile will be obtained at the rate of one per 50 cubic yards and also analyzed for BTEX, GRO and DRO. The reported laboratory data for all samples will be summarized and compared to the COGCC Table 910-1 Concentration Levels. If the reported concentrations of BTEX, GRO and DRO do not exceed the COGCC standards the soil will be used to backfill the pit pending review of subsequent data reports and approval by the BLM.

Attach samples and analytical results taken to verify remediation of impacts. Show locations of samples on an onsite schematic or drawing.

Is further site investigation required? Y N If yes, describe:

Two confirmation soil samples, with the intent of demonstrating that sufficient quantities of contaminated soil have been removed, will be obtained from the pit bottom following the excavation. These samples will be analyzed for BTEX, GRO and DRO. Following three months, confirmation soil samples, from the contaminated soil stockpile will be obtained at the rate of one per 50 cubic yards and also analyzed for BTEX, GRO and DRO. The reported laboratory data for all samples will be summarized and compared to the COGCC Table 910-1 Concentration Levels.

Final disposition of E&P waste (landtreated and disposed onsite, name of licensed disposal facility, recycling, reuse, etc.):

If the reported concentrations of BTEX, GRO and DRO do not exceed the COGCC standards the soil will be used to backfill the pit pending review of subsequent data reports and approval by the COGCC/BLM.

IMPLEMENTATION SCHEDULE

Date Site Investigation Began: April, 2013 Date Site Investigation Completed: Nov., 2013 Date Remediation Plan Submitted: Nov., 2013
Remediation Start Date: Dec., 2013 Anticipated Completion Date: Mar., 2013 Actual Completion Date: N/A

I hereby certify that the statements made in this form are, to the best of my knowledge, true, correct, and complete.

Print Name: Naomi Azulai Signed: _____
Title: Production Technician Date: 11/18/2013

OGCC Approved: _____ Title: _____ Date: _____



esi.craig@sopris.net
(970) 948-8978 Cell
(970) 963-8556 Office

November 18, 2013

Via email

naomi@maralexinc.com

Maralex Resources, Inc
Atten: Naomi Azulai
775 Goddard Ave,
Ignacio, Colorado 81137

RE: Sampling and Laboratory Analysis of a Pit Characterization & Soil Sample Collection Coon Hollow #1

Dear Nomi,

Environmental Services, Inc. (ESI) is pleased to present the reported laboratory results representing a pit characterization evaluation associated with a Maralex Resources (Maralex) facility identified as Coon Hollow #1 (Site). The designation Coon Hollow #1 is synonymous with the Bureau of Land Management's (BLM) Site name Federal #1.

SAMPLING

Characterization sampling was performed by ESI on April 4, 2013. During the field activities we were accompanied by Mr. Leland Clifton with Maralex. The Site's location was recorded with a Global Positioning System using the North American Datum 83. The latitude was recorded at 39.32663 degrees and Longitude at 108.29162 degrees. Digital photographs are summarized in an attached Power Point presentation. The pit measured approximately twelve by six feet and was seven feet deep. The pit included grass and weeds at the time of our Site visit. Evidence of storm water was not observed in the pit at the time of our Site visit. A composite soil sample was obtained from the pit's bottom.

SAMPLING AND COOLER PREPARATION

Surgical gloves were donned during sampling and sample preparation. The sample was immediately transferred into appropriate containers provided by the laboratory. The individual sample containers included completed labels that were secured with film tape. The samples were then placed into individual baggies, and immediately placed into a cooler with ice. The sample was logged and recorded on a Chain of Custody form.

Additional ice was placed into doubled two-gallon baggies and placed on each side and on top of the sample sufficient to maintain an internal cooler temperature of less than four degrees

Celsius. The Chain of Custody form was placed into an individual baggie and affixed to the underside of the cooler lid. Copies of the Chain of Custody forms have been retained in the ESI project file. The cooler included a signed and dated security label. The cooler lid was secured with reinforced packing tape and film tape. The cooler was delivered to FedEx in Basalt, Colorado for Priority Overnight Delivery to the Analytica Environmental Laboratory in Thornton, Colorado (Analytica) on April 4, 2013. A copy of the FedEx Air Bill has been retained in the ESI project file and secured to a copy of the completed Chain of Custody.

LABORATORY ANALYSIS

The samples were received by Analytica. The Characterization soil sample was analyzed for

- Total metals Method SW6010B Low-Level Arsenic Method SW846, Mercury Method SW7471A.
- Sodium Absorption Ratio Method Sodium Absorption Ratio.
- Diesel Range Organics (DRO) and Gasoline Range Organics, (GRO) Method 8015B.
- Semi-Volatile Organics (SVOCs) Method SW8270C.
- Trivalent Chromium Method SM3500-CrB.
- Hexavalent Chromium Method SW7196A.
- Specific Conductance Method Specific Conductance.
- pH Method Ph.
- Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) Method Aromatic VOCs by GC/PID method 8021B.

LABORATORY DATA

The reported laboratory results representing the Characterization soil sample and background Arsenic soil samples are summarized on the attached table (**Table 1**). Based on the reported laboratory data, the contaminated soil met the Colorado Oil and Gas Conservation Commission (COGCC) Table 910-1 Concentration Levels with the exception of DRO, which was reported at 890 mg/Kg. GRO was not reported at a concentration greater than the Reporting Limit. BTEX was also not reported at concentrations greater than the respective Reporting Limit. Poly Aromatic Hydrocarbons were not reported at concentrations above their respective Reporting Limit. Based on the reported laboratory data, the Chemical of Concern is low-level petroleum hydrocarbon in the diesel range.

Arsenic concentrations from the composite soil obtained from the pit's bottom and from the three undisturbed locations adjacent to Coon Hollow #1 were reported at 1.4, 1.2, 2.1 and 1.7 mg/Kg, respectively. These Arsenic concentrations exceed the COGCC standard of 0.39 mg/Kg.

A copy of the reported laboratory results, including the Chain of Custody form, under the Analytica Work Orders B1304036 is attached.

We have also attached the completed COGCC Form 27 and the BLM Notice of Intent

FINDINGS

The reported laboratory analyses have been compared to the COGCC Concentration Levels included in Table 910-1, dated April 2009, and indicate that low-level petroleum hydrocarbon, in the diesel range, is present in the pit. We believe the reported Arsenic concentrations represent background. Based on our experience, soils in Colorado commonly fail the State's standards for Arsenic.

PROPOSED REMEDIATION

Maralex proposes to remove the contaminated soil from the pit. The contaminated soil will be placed into a lined containment with soil berms and allowed to naturally attenuate for approximately three months. Two confirmation soil samples, with the intent of demonstrating that sufficient quantities of contaminated soil have been removed, will be obtained from the pit bottom following the excavation. These samples will be analyzed for BTEX, GRO and DRO. Following three months, confirmation soil samples from the contaminated soil stockpile will be obtained at the rate of one per 50 cubic yards and also analyzed for BTEX, GRO and DRO. The reported laboratory data for all samples will be summarized and compared to the COGCC Table 910-1 Concentration Levels. If the reported concentrations of BTEX, GRO and DRO do not exceed the COGCC standards, the soil will be used to backfill the pit pending review of subsequent data reports and approval by the BLM.

LIMITATIONS

This report has been prepared in accordance with generally acceptable environmental engineering practices in the area to sample soil for the purpose of closing pits. The information submitted in this report is primarily based on the observations and the review of reported laboratory data. The soil samples and the reported laboratory data are indicative of conditions only at those locations. This assessment is based on information made available to ESI at the time of our investigation and provides an indication of the status at that time. A complete definition of Site soil conditions would require substantial testing and a more detailed investigation. Because of uncertainties related to subsurface conditions and the changing nature of soil conditions, it is not possible for ESI to provide guarantees with this assessment.

Should you have any questions or require additional information, please do not hesitate to contact us.

Very truly yours,

ENVIRONMENTAL SERVICES, INC.

By



D. Craig Heydenberk
Environmental Consultant



esi.craig@sopris.net
 (970) 948-8978 Cell
 (970) 963-8556 Office

TABLE 1
Maralex Resources, Inc.
Location: Coon Hollow#1 or (Federal #1)
Reported Laboratory Results Representing:
Pit Soil Characterization: Lab Report #B1304036

	Laboratory Sample No.		B1304036	COGCC
	Sample Date		4/3/2013	Standards
	Sample Time		10:22 AM	
	Sample Name		Coon Hollow #1	
Parameter	Method	Units	Result	
Total Metals	SW6020	mg/Kg		
Barium	SW6010B	mg/Kg	290	15,000 mg/Kg
Boron	SW6010B	mg/Kg	<6.1	2 mg/L
Cadmium	SW6020	mg/Kg	<0.98	70 mg/Kg
Chromium	SW6010B	mg/Kg	8.1	N/A
Copper	SW6010B	mg/Kg	8.4	3,100 mg/Kg
Lead	SW6010B	mg/Kg	12.0	400 mg/Kg
Nickel	SW6010B	mg/Kg	7.2	1,600 mg/Kg
Selenium	SW6020	mg/Kg	<12	390 mg/Kg
Silver	SW6020	mg/Kg	<1.8	390 mg/Kg
Zinc	SW6010B	mg/Kg	43.00	23,000 mg/Kg
Mercury	SW7471A - Mercury in Solid or Semisolid Waste by CVAA	mg/Kg	0	23 mg/Kg
Arsenic	Metals, Total - EPA SW846	mg/Kg	1.4	0.39 mg/Kg
Sodium Absorbtion Ratio	Sodium Absorbtion Ratio SW6010B	unitless	0.15	<12
Diesel Range Organics	SVOC by GC/ FID via method 8015B - DRO	mg/Kg	890	TPH - 500 mg/Kg

Semivoatile Organics	SW8270C - Semivoatile Organics by GC/MS - PAH	µg/Kg		
Acenaphthene		µg/Kg	<160	1,000 mg/Kg
Anthracene		µg/Kg	<340	1,000 mg/Kg
Benzo(a)anthracene		µg/Kg	<360	0.22 mg/Kg
Benzo(a)pyrene		µg/Kg	<290	0.022 mg/Kg
Benzo(b)fluoranthene		µg/Kg	<290	0.22 mg/Kg
Benzo(k)fluoranthene		µg/Kg	<350	2.2 mg/Kg
Chrysene		µg/Kg	<450	22 mg/Kg
Dibenzo(a,h)anthracene		µg/Kg	<280	0.022 mg/Kg
Fluoranthene		µg/Kg	<380	1,000 mg/Kg
Fluorene		µg/Kg	<310	1,000 mg/Kg
Indeno(1,2,3-cd)pyrene		µg/Kg	<280	0.22 mg/Kg
Napthalene		µg/Kg	<120	23 mg/Kg
Pyrene		µg/Kg	<670	1,000 mg/Kg
Gasoline Range Organics	VOC by GC/FID method 8015B - GRO	µg/Kg	>250	TPH 500 mg/kg
Chromium, Trivalent	SM3500-CrB - Chromium, Colorimetric Method Total Cr(III)cal	mg/Kg	8.1	120,000 mg/Kg
Chromium, Hexavalent - Soluble	SW7196A	mg/Kg	<5	23 mg/Kg
Conductance	Specific Conductance - Cond.	umhos /cm	490	<4 mmhos/cm or 2x background
pH	Corrosivity in Waste by pH - pH	pH	8.0	6-9
BTEX	Aromatic VOCs by GC/PID method 8021B - BTEX	µg/Kg		
Benzene		µg/Kg	<1.2	0.17 mg/Kg
Ethylbenzene		µg/Kg	<1.8	100 mg/kg
Toluene		µg/Kg	<1.2	85 ug/Kg
Xylenes, Total		µg/Kg	<3.7	175 mg/Kg

Note 1: Reported laboratory analyses have been compared to the COGCC Concentration Levels in Table 910-1 April 1, 2009.

Note 2: Three samples were collected to evaluate background concentrations in arsenic. These samples are identified as BGCH #1, #2, #3. Arsenic concentrations were reported at 1.2, 2.1, and 1.7 mg/kg respectively.



Analytica Group, LLC-Thornton
12189 Pennsylvania Street
Thornton, CO 80241
Phone: 303-469-8868
Fax: 303-469-5254

5/7/2013

Maralex Resources, Inc.
864 20 Road
Unit A
Fruita, CO 81521
Attn: Jim Graves

Work Order #: B1304036
Date: 5/7/2013
Work ID: Coon Hollow #1
Date Received: 4/5/2013
Proj #: None

Sample Identification

Lab Sample Number	Client Description	Lab Sample Number	Client Description
B1304036-01	Coon Hollow #1	B1304036-02	BG CH #1
B1304036-03	BG CH #2	B1304036-04	BG CH #3

Enclosed are the analytical results for the submitted sample(s). Please review the CASE NARRATIVE for a discussion of any data and/or quality control issues. Listings of data qualifiers, analytical codes, key dates, and QC relationships are provided at the end of the report.

Sincerely,

Carissa Seltrecht
Project Manager

"The Science of Analysis, The Art of Service"

Case Narrative

Analytica Group, LLC - Thornton

Work Order: B1304036

Samples were prepared and analyzed according to EPA or equivalent methods outlined in the following references:

Standard Method for Laboratory Determination of Water (Moisture) Content of Soil, Rock, and Soil-Aggregate Mixtures, ASTM D 2216-80, July 1980.

Test Methods for Evaluating Solid Waste, USEPA SW-846, Third Edition, Revision 4, December 1996.

SAMPLE RECEIPT:

Four (4) samples were received on 4/5/2013 10:18:00 AM at a temperature of 2.2°C at Analytica-Thornton. The samples were received in good condition and in order per chain of custody.

REVIEW FOR COMPLIANCE WITH ANALYTICA QA PLAN

A summary of our review is shown below.

All analytical results contained in this report have been reviewed under Analytica's internal quality assurance and quality control program. Any deviations in quality control parameters for specific analyses are noted in the following text. A complete quality assurance report, including laboratory control, matrix spike, and sample duplicate recoveries, is kept on file in our office and is available upon request.

All method specifications were met for the following tests, unless otherwise noted:

Test Method: ASTM D2216 - Pmoist - Soil

Test Method: Corrosivity in Waste by pH - pH - Soil

Test Method: SM3500-CrB - Chromium, Colorimetric Method - Total Cr(III) calculat - Soil

Test Method: Specific Conductance - Cond. - Soil

Test Method: SVOC by GC/FID via method 8015B - DRO - Soil

Test Method: SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Total Hg - Soil

Test Method: Aromatic VOCs by GC/PID via method 8021B - BTEX - Soil

MS/MSD and DUP OUTLIERS:

Several targets were recovered outside the acceptance limits in the batch MS/MSD associated with this analysis. However, the sample spiked is not associated with this project.

Test Method: SW8270C - Semivolatile Organics by GC/MS - PAH - Soil

LCS OUTLIERS:

The LCS shown below has a target outside of control windows. This is a high recovery and the target is not detected in associated samples.

Type	BatchNumber	Analyte	Recovery	LCL	UCL	Status
LCS	T130411013	Acenaphthylene	272.	48	133	Complete

MS/MSD and DUP OUTLIERS:

The matrix spike and matrix spike duplicate recoveries shown below indicate a possible matrix effect. No corrective action was taken, as the recoveries of these compounds in the LCS/LCSD were acceptable.

Type	Client Sample	LabSample	Analyte	Recovery	LCL	UCL	Parent	Spike
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Case Narrative

Analytica Group, LLC - Thornton

Work Order: B1304036

(continued)

MS Coon Hollow #1	B1304036-01B	Acenaphthylene	307	48	133	0.00	2050
MSD Coon Hollow #1	B1304036-01B	Acenaphthylene	499	48	133	0.00	2050
MSD Coon Hollow #1	B1304036-01B	Dibenzo(a,h)anthrace	131	50	129	0.00	2050
MSD Coon Hollow #1	B1304036-01B	Benzo(a)anthracene	125	58	118	0.00	2050
MSD Coon Hollow #1	B1304036-01B	Indeno(1,2,3-cd)pyre	128	48	125	0.00	2050

Test Method: VOC by GC/FID via method 8015B - GRO - Soil

MS/MSD and DUP OUTLIERS:

The target was recovered outside the acceptance limits in the batch MS/MSD associated with this analysis. However, the sample spiked is not associated with this project.

The following are subcontracted tests and have been represented to us as having met criteria:

Test Method: Chromium, Hexavalent (Colorimetric) - Cr(VI) - Soil

Test Method: Pmoist-(Energy) - Soil

Test Method: Sodium Absorption Ratio - Soil

Test Method: SW6010B - ICP - Total - Soil

Test Method: SW6020 - ICPMS - Low Level Metals - Sol - Soil

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: **Coon Hollow #1**

Matrix: Soil

Collection Date: 4/3/2013 10:22:00AM

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1304036-01B	Analysis Date:	4/18/2013 12:38:35PM
Prep Date:	4/11/2013	Instrument:	GC_E
Analytical Method ID:	SVOC by GC/FID via method 8015B - DRO	File Name:	13041720.D
Prep Method ID:	3550B	Dilution Factor:	10
Prep Batch Number:	T130411012	Percent Moisture:	19
Report Basis:	Dry Weight Basis	Analyst Initials:	kh
Sample prep wt./vol:	29.97 g	Prep Extract Vol:	1.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL				run #:
Diesel Range Organics	n/a	890		mg/Kg	62	18				2

Surrogate	CASNo	Result	Flags	Units	PQL	MDL	Spike	% Recov	LCL	UCL	run #:
o-Terphenyl	84-15-1	ND		mg/Kg	4.1	3.2	2.1	96.6	50	150	2 DIL

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1304036-01B	Analysis Date:	4/16/2013 2:30:00PM
Prep Date:	4/11/2013	Instrument:	MS2BNA
Analytical Method ID:	SW8270C - Semivolatile Organics by GC/MS - PAH	File Name:	13041605.D
Prep Method ID:	3550B	Dilution Factor:	10
Prep Batch Number:	T130411013	Percent Moisture:	19
Report Basis:	Dry Weight Basis	Analyst Initials:	kh
Sample prep wt./vol:	29.98 g	Prep Extract Vol:	1.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL				run #:
Acenaphthene	83-32-9	ND		ug/Kg	1,000	160				1
Anthracene	120-12-7	ND		ug/Kg	2,000	340				
Benzo(a)anthracene	56-55-3	ND		ug/Kg	2,000	360				
Benzo(a)pyrene	50-32-8	ND		ug/Kg	2,000	290				
Benzo(b)fluoranthene	205-99-2	ND		ug/Kg	2,000	290				
Benzo(k)fluoranthene	207-08-9	ND		ug/Kg	2,000	350				
Chrysene	218-01-9	ND		ug/Kg	2,000	450				
Dibenzo(a,h)anthracene	53-70-3	ND		ug/Kg	2,000	280				
Fluoranthene	206-44-0	ND		ug/Kg	2,000	380				
Fluorene	86-73-7	ND		ug/Kg	2,000	310				
Indeno(1,2,3-cd)pyrene	193-39-5	ND		ug/Kg	1,000	280				
Naphthalene	91-20-3	ND		ug/Kg	1,000	120				
Pyrene	129-00-0	ND		ug/Kg	2,000	670				

Surrogate	CASNo	Result	Flags	Units	PQL	MDL	Spike	% Recov	LCL	UCL	run #:
2-Fluorobiphenyl	321-60-8	2,500		ug/Kg	1,000	120	4,100	60.3	36	121	1
D14-Terphenyl	92-94-4D	2,600		ug/Kg	1,000	120	4,100	62.6	30	134	
D5-Nitrobenzene	98-95-3D	2,300		ug/Kg	1,000	150	4,100	54.8	30	122	

The following test was conducted by: Analytica - Thornton

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: **Coon Hollow #1**

Matrix: Soil Collection Date: 4/3/2013 10:22:00AM

Lab Sample Number: B1304036-01D Analysis Date: 5/3/2013 12:43:17PM
Prep Date: 5/3/2013 Instrument: N/A
Analytical Method ID: Sodium Absorption Ratio File Name:
Prep Method ID: Dilution Factor:
Prep Batch Number: T130422010 Percent Moisture
Report Basis: As Received Analyst Initials: TE
Sample prep wt./vol: 1.00 ml Prep Extract Vol: 1.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
See Subcontractor Report							

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1304036-01D Analysis Date: 4/19/2013 12:06:00PM
Prep Date: 4/19/2013 Instrument: Hank-Hg
Analytical Method ID: SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Total File Name: 041913S.CSV
Prep Method ID: 7471A Dilution Factor: 1
Prep Batch Number: T130419001 Percent Moisture: 19
Report Basis: Dry Weight Basis Analyst Initials: RM
Sample prep wt./vol: 0.50 g Prep Extract Vol: 30.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Mercury	7439-97-6	0.072		mg/Kg	0.037	0.0051	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1304036-01D Analysis Date: 4/17/2013 3:42:06PM
Prep Date: 4/16/2013 Instrument: ICP_2
Analytical Method ID: SW6010B - ICP - Total File Name: 032612
Prep Method ID: 3050B Dilution Factor: 1
Prep Batch Number: T130416005 Percent Moisture: 19
Report Basis: Dry Weight Basis Analyst Initials: TE
Sample prep wt./vol: 0.50 g Prep Extract Vol: 50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Barium	7440-39-3	290		mg/Kg	0.49	0.038	1
Boron	7440-42-8	ND		mg/Kg	6.1	0.82	
Cadmium	7440-43-9	ND		mg/Kg	0.98	0.070	
Chromium	7440-47-3	8.1		mg/Kg	2.4	0.36	
Copper	7440-50-8	8.4		mg/Kg	0.73	0.19	
Lead	7439-92-1	12		mg/Kg	7.3	1.3	
Nickel	7440-02-0	7.2		mg/Kg	4.9	0.52	
Selenium	7784-49-2	ND		mg/Kg	12	3.0	
Silver	7440-22-4	ND		mg/Kg	1.8	0.19	
Zinc	7440-66-6	43		mg/Kg	0.73	0.27	

The following test was conducted by: Energy Laboratories

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: **Coon Hollow #1**

Matrix: Soil

Collection Date: 4/3/2013 10:22:00AM

Lab Sample Number: B1304036-01A

Analysis Date:

Prep Date:

Instrument:

Analytical Method ID: Chromium, Hexavalent (Colorimetric) - Cr(VI)

File Name:

Prep Method ID: 3060A

Dilution Factor:

Prep Batch Number: T130415005

Percent Moisture

Report Basis: As Received

Analyst Initials:

Sample prep wt./vol:

Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
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See Subcontractor Report

The following test was conducted by: Energy Laboratories

Lab Sample Number: B1304036-01A

Analysis Date:

Prep Date:

Instrument:

Analytical Method ID: SW6020 - ICPMS - Low Level Metals - Sol

File Name:

Prep Method ID:

Dilution Factor:

Prep Batch Number: T130415004

Percent Moisture

Report Basis: As Received

Analyst Initials:

Sample prep wt./vol:

Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
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See Subcontractor Report

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1304036-01C

Analysis Date: 4/11/2013 5:36:00PM

Prep Date: 4/11/2013

Instrument: GC_B

Analytical Method ID: Aromatic VOCs by GC/PID via method 8021B - BTEX

File Name: 13041110.D

Prep Method ID: 5030B

Dilution Factor: 1

Prep Batch Number: T130415003

Percent Moisture 19

Report Basis: Dry Weight Basis

Analyst Initials: CK

Sample prep wt./vol: 5.00 g

Prep Extract Vol: 5.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
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Benzene	71-43-2	ND		ug/Kg	1.2	0.41	1
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Ethylbenzene	100-41-4	ND		ug/Kg	1.8	0.57	
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Toluene	108-88-3	ND		ug/Kg	1.2	0.24	
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Xylenes, Total	1330-20-7	ND		ug/Kg	3.7	1.0	
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<u>Surrogate</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>Spike</u>	<u>% Recov</u>	<u>LCL</u>	<u>UCL</u>	<u>run #:</u>
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p-Bromofluorobenzene	460-00-4	30		ug/Kg	0.62	0.41	33	90.5	70	130	1
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The following test was conducted by: Analytica - Thornton

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: **Coon Hollow #1**

Matrix: Soil Collection Date: 4/3/2013 10:22:00AM

Lab Sample Number: B1304036-01C Analysis Date: 4/11/2013 5:36:00PM
Prep Date: 4/11/2013 Instrument: GC_B
Analytical Method ID: VOC by GC/FID via method 8015B - GRO File Name: 13041110.D
Prep Method ID: 5030B Dilution Factor: 1
Prep Batch Number: T130415002 Percent Moisture: 19
Report Basis: Dry Weight Basis Analyst Initials: CK
Sample prep wt./vol: 5.00 g Prep Extract Vol: 5.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Gasoline Range Organics	n/a	ND		ug/Kg	250	33	2

Surrogate	CASNo	Result	Flags	Units	PQL	MDL	Spike	% Recov	LCL	UCL	run #:
p-Bromofluorobenzene	460-00-4	23		ug/Kg	3.7	1.2	33	69.6	50	150	2

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1304036-01D Analysis Date: 4/19/2013 11:35:56AM
Prep Date: 4/19/2013 Instrument: BERTHA
Analytical Method ID: SM3500-CrB - Chromium, Colorimetric Method - Total Cr(III) cal File Name:
Prep Method ID: 3500-Cr-B Dilution Factor: 1
Prep Batch Number: T130419007 Percent Moisture:
Report Basis: As Received Analyst Initials: kl
Sample prep wt./vol: 1.00 g Prep Extract Vol: 1.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Chromium, Trivalent	16065-83-1	8.1		mg/Kg	0.010	0.0020	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1304036-01D Analysis Date: 4/10/2013 2:00:00PM
Prep Date: 4/10/2013 Instrument: Probe
Analytical Method ID: Specific Conductance - Cond. File Name:
Prep Method ID: 9050A Dilution Factor: 1
Prep Batch Number: T130410016 Percent Moisture:
Report Basis: As Received Analyst Initials: jc
Sample prep wt./vol: 10.00 g Prep Extract Vol: 100.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Conductance		490		umhos/cm	50	10.0	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1304036-01D Analysis Date: 4/8/2013 10:00:00AM
Prep Date: 4/8/2013 Instrument: Probe
Analytical Method ID: Corrosivity in Waste by pH - pH File Name:
Prep Method ID: 9045B Dilution Factor: 1
Prep Batch Number: T130410007 Percent Moisture:
Report Basis: As Received Analyst Initials: JCC
Sample prep wt./vol: 10.01 g Prep Extract Vol: 10.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
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Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: Coon Hollow #1

Matrix: Soil Collection Date: 4/3/2013 10:22:00AM

Lab Sample Number:	B1304036-01D	Analysis Date:	4/8/2013 10:00:00AM
Prep Date:	4/8/2013	Instrument:	Probe
Analytical Method ID:	Corrosivity in Waste by pH - pH	File Name:	
Prep Method ID:	9045B	Dilution Factor:	1
Prep Batch Number:	T130410007	Percent Moisture	
Report Basis:	As Received	Analyst Initials:	JCC
Sample prep wt./vol:	10.01 g	Prep Extract Vol:	10.00 ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
pH		8.0		pH	0.100	0.100	1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: **BG CH #1**

Matrix: Soil

Collection Date: 4/3/2013 10:30:00AM

The following test was conducted by: Energy Laboratories

Lab Sample Number: B1304036-02A

Prep Date:

Analytical Method ID: SW6020 - ICPMS - Low Level Metals - Sol

Prep Method ID:

Prep Batch Number: T130415004

Report Basis: As Received

Sample prep wt./vol:

Analysis Date:

Instrument:

File Name:

Dilution Factor:

Percent Moisture

Analyst Initials:

Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
Sec Subcontractor Report				NA	1.0	1.0	1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: **BG CH #2**

Matrix: Soil Collection Date: 4/3/2013 10:34:00AM

The following test was conducted by: Energy Laboratories

Lab Sample Number: B1304036-03A

Prep Date:

Analytical Method ID: SW6020 - ICPMS - Low Level Metals - Sol

Prep Method ID:

Prep Batch Number: T130415004

Report Basis: As Received

Sample prep wt./vol:

Analysis Date:

Instrument:

File Name:

Dilution Factor:

Percent Moisture

Analyst Initials:

Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>POL</u>	<u>MDL</u>	<u>run #:</u>
See Subcontractor Report				NA	1.0	1.0	1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Client Sample Report

Client Sample Name: **BG CH #3**

Matrix: Soil Collection Date: 4/3/2013 10:36:00AM

The following test was conducted by: Energy Laboratories

Lab Sample Number: B1304036-04A

Prep Date:

Analytical Method ID: SW6020 - ICPMS - Low Level Metals - Sol

Prep Method ID:

Prep Batch Number: T130415004

Report Basis: As Received

Sample prep wt./vol:

Analysis Date:

Instrument:

File Name:

Dilution Factor:

Percent Moisture

Analyst Initials:

Prep Extract Vol: ml

<u>Analyte</u>	<u>CASNo</u>	<u>Result</u>	<u>Flags</u>	<u>Units</u>	<u>PQL</u>	<u>MDL</u>	<u>run #:</u>
See Subcontractor Report				NA	1.0	1.0	1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Method Blank Report

Client Sample Name:

MB

Matrix: Solid

Collection Date: 4/11/2013 3:23:00PM

The following test was conducted by: Analytica - Thornton

Lab Sample Number: T130411012-MB
Prep Date: 4/11/2013
Analytical Method ID: SVOC by GC/FID via method 8015B - DRO
Prep Method ID: 3550B
Prep Batch Number: T130411012
Report Basis: As Received
Sample prep wt./vol: 29.97 g

Analysis Date: 4/17/2013 2:46:49PM
Instrument: GC_E
File Name: 13041706.D
Dilution Factor: 1
Percent Moisture: NA
Analyst Initials: kh
Prep Extract Vol: 1.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL				run #:
Diesel Range Organics	n/a	ND		mg/Kg	5.0	1.4				1

Surrogate	CASNo	Result	Flags	Units	PQL	MDL	Spike	% Recov	LCL	UCL	run #:
o-Terphenyl	84-15-1	1.3		mg/Kg	0.33	0.26	1.7	76.3	50	150	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: T130411013-MB
Prep Date: 4/11/2013
Analytical Method ID: SW8270C - Semivolatile Organics by GC/MS - PAH
Prep Method ID: 3550B
Prep Batch Number: T130411013
Report Basis: As Received
Sample prep wt./vol: 30.04 g

Analysis Date: 4/16/2013 1:15:00PM
Instrument: MS2BNA
File Name: 13041603.D
Dilution Factor: 1
Percent Moisture: NA
Analyst Initials: kh
Prep Extract Vol: 1.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL					run #:
Acenaphthene	83-32-9	ND		ug/Kg	83	13					1
Anthracene	120-12-7	ND		ug/Kg	160	27					
Benzo(a)anthracene	56-55-3	ND		ug/Kg	160	29					
Benzo(a)pyrene	50-32-8	ND		ug/Kg	160	24					
Benzo(b)fluoranthene	205-99-2	ND		ug/Kg	160	24					
Benzo(k)fluoranthene	207-08-9	ND		ug/Kg	160	28					
Chrysene	218-01-9	ND		ug/Kg	160	37					
Dibenzo(a,h)anthracene	53-70-3	ND		ug/Kg	160	22					
Fluoranthene	206-44-0	ND		ug/Kg	160	30					
Fluorene	86-73-7	ND		ug/Kg	160	25					
Indeno(1,2,3-cd)pyrene	193-39-5	ND		ug/Kg	83	23					
Naphthalene	91-20-3	ND		ug/Kg	83	9.8					
Pyrene	129-00-0	ND		ug/Kg	160	54					

Surrogate	CASNo	Result	Flags	Units	PQL	MDL	Spike	% Recov	LCL	UCL	run #:
2-Fluorobiphenyl	321-60-8	1,700		ug/Kg	83	9.9	3,300	51.4	36	121	1
D14-Terphenyl	92-94-4D	2,500		ug/Kg	83	9.9	3,300	73.8	30	134	
D5-Nitrobenzene	98-95-3D	1,800		ug/Kg	83	12	3,300	54.7	30	122	

The following test was conducted by: Analytica - Thornton

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Method Blank Report

Client Sample Name:

MB

Matrix: Solid

Collection Date: 4/19/2013 12:00:00AM

Lab Sample Number: T130419001-MB Analysis Date: 4/19/2013 11:58:00AM
Prep Date: 4/19/2013 Instrument: Hank-Hg
Analytical Method ID: SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Total I File Name: 041913S.CSV
Prep Method ID: 7471A Dilution Factor: 1
Prep Batch Number: T130419001 Percent Moisture: NA
Report Basis: As Received Analyst Initials: RM
Sample prep wt./vol: 0.50 g Prep Extract Vol: 30.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Mercury	7439-97-6	ND		mg/Kg	0.030	0.0041	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: T130416005-MB Analysis Date: 4/17/2013 1:20:47PM
Prep Date: 4/16/2013 Instrument: ICP_2
Analytical Method ID: SW6010B - ICP - Total File Name: 032612
Prep Method ID: 3050B Dilution Factor: 1
Prep Batch Number: T130416005 Percent Moisture: NA
Report Basis: As Received Analyst Initials: TE
Sample prep wt./vol: 0.50 g Prep Extract Vol: 50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Barium	7440-39-3	ND		mg/Kg	0.40	0.031	2
Boron	7440-42-8	ND		mg/Kg	5.0	0.67	
Cadmium	7440-43-9	ND		mg/Kg	0.80	0.058	
Chromium	7440-47-3	ND		mg/Kg	2.0	0.30	
Copper	7440-50-8	ND		mg/Kg	0.60	0.16	
Lead	7439-92-1	ND		mg/Kg	6.0	1.1	
Nickel	7440-02-0	ND		mg/Kg	4.0	0.43	
Selenium	7784-49-2	ND		mg/Kg	10	2.5	
Silver	7440-22-4	ND		mg/Kg	1.5	0.15	
Zinc	7440-66-6	ND		mg/Kg	0.60	0.22	

The following test was conducted by: Analytica - Thornton

Lab Sample Number: T130415003-MB Analysis Date: 4/11/2013 2:22:00PM
Prep Date: 4/11/2013 Instrument: GC_B
Analytical Method ID: Aromatic VOCs by GC/PID via method 8021B - BTEX File Name: 13041104.D
Prep Method ID: 5030B Dilution Factor: 1
Prep Batch Number: T130415003 Percent Moisture: NA
Report Basis: As Received Analyst Initials: CK
Sample prep wt./vol: 5.00 g Prep Extract Vol: 5.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Benzene	71-43-2	ND		ug/Kg	1.0	0.33	1
Ethylbenzene	100-41-4	ND		ug/Kg	1.5	0.46	
Toluene	108-88-3	ND		ug/Kg	1.0	0.20	

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

Report Section: Method Blank Report

Client Sample Name: **MB**

Matrix: Solid Collection Date: 4/11/2013 1:17:00PM

Lab Sample Number: T130415003-MB Analysis Date: 4/11/2013 2:22:00PM
 Prep Date: 4/11/2013 Instrument: GC_B
 Analytical Method ID: Aromatic VOCs by GC/PID via method 8021B - BTEX File Name: 13041104.D
 Prep Method ID: 5030B Dilution Factor: 1
 Prep Batch Number: T130415003 Percent Moisture: NA
 Report Basis: As Received Analyst Initials: CK
 Sample prep wt./vol: 5.00 g Prep Extract Vol: 5.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL					run #:
Xylenes, Total	1330-20-7	ND		ug/Kg	3.0	0.82					1
Surrogate	CASNo	Result	Flags	Units	PQL	MDL	Spike	% Recov	LCL	UCL	run #:
p-Bromofluorobenzene	460-00-4	26		ug/Kg	0.50	0.33	27	95.7	70	130	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: T130415002-MB Analysis Date: 4/11/2013 2:22:00PM
 Prep Date: 4/11/2013 Instrument: GC_B
 Analytical Method ID: VOC by GC/FID via method 8015B - GRO File Name: 13041104.D
 Prep Method ID: 5030B Dilution Factor: 1
 Prep Batch Number: T130415002 Percent Moisture: NA
 Report Basis: As Received Analyst Initials: CK
 Sample prep wt./vol: 5.00 g Prep Extract Vol: 5.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL					run #:
Gasoline Range Organics	n/a	ND		ug/Kg	200	26					1
Surrogate	CASNo	Result	Flags	Units	PQL	MDL	Spike	% Recov	LCL	UCL	run #:
p-Bromofluorobenzene	460-00-4	23		ug/Kg	3.0	1.0	27	86.2	50	150	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: T130410016-MB Analysis Date: 4/10/2013 2:00:00PM
 Prep Date: 4/10/2013 Instrument: Probe
 Analytical Method ID: Specific Conductance - Cond. File Name:
 Prep Method ID: 9050A Dilution Factor: 1
 Prep Batch Number: T130410016 Percent Moisture: NA
 Report Basis: As Received Analyst Initials: jc
 Sample prep wt./vol: 100.00 ml Prep Extract Vol: 100.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL					run #:
Conductance		ND		umhos/cm	5.0	1.0					1

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036
Project: Coon Hollow #1
Client: Maralex Resources, Inc.
Client Project Number: None

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado
Workorder (SDG): B1304036
Project: Coon Hollow #1
Project Number:
Prep Batch: T130411012

QUALITY CONTROL REPORT

LCS REPORT

Analysis: SVOC by GC/FID via method 8015B - DRO MB: T130411012-MB
Prep Date: 4/11/2013
MB Anal. Date: 4/17/2013 2:46:49PM Units: mg/Kg
LCS Anal. Date: 4/17/2013 4:30:40PM Matrix: Solid

<u>Analyte Name</u>	<u>SampResult</u>	<u>LCSRes.</u>	<u>SPLev</u>	<u>Recov.</u>	<u>Recov Lim</u>	<u>RPDLim</u>	<u>Flag</u>
Diesel Range Organics	ND	59.9	66.6	89.9	75 - 125		

FOOTNOTES TO QC REPORT

- Note 1: Results are shown to three significant figures to avoid rounding errors in calculations.
- Note 2: If the sample concentration is greater than 4 times the spike level, a recovery is not meaningful, and the result should be used as a replicate. In such cases the spike is not as high as expected random measurement variability of the sample result itself.
- Note 3: For sample duplicates, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample and duplicate results are not five times the PQL or greater, then the RPD is not expected to fall within the window shown and the comparison should be made on the basis of the absolute difference. Analytica uses the criterion that the absolute difference should be less than the PQL for water or less than 2XPQL for other matrices.
- Note 4: For serial dilutions, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample result is not 50 times the MDL or greater, then the fact that the RPD does not meet the 10% criterion has little significance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado

Workorder (SDG): B1304036

Project: Coon Hollow #1

Project Number:

QUALITY CONTROL REPORT

Prep Batch: T130411013

LCS REPORT

Analysis: SW8270C - Semivolatile Organics by GC/MS - PAH

MB: T130411013-MB

Prep Date: 4/11/2013

MB Anal. Date: 4/16/2013 1:15:00PM

Units: ug/Kg

LCS Anal. Date: 4/16/2013 1:52:00PM

Matrix: Solid

Analyte Name	SampResult	LCSRes.	SPLev	Recov.	Recov Lim	RPDLim	Flag
Naphthalene	ND	860	1,670	51.5	45 - 136		
Acenaphthene	ND	1,000	1,670	59.9	43 - 122		
Fluorene	ND	1,140	1,670	68.3	58 - 130		
Anthracene	ND	1,310	1,670	78.5	59 - 131		
Fluoranthene	ND	1,440	1,670	86.3	51 - 140		
Pyrene	ND	1,220	1,670	73.1	40 - 127		
Benzo(a)anthracene	ND	1,470	1,670	88.1	58 - 118		
Chrysene	ND	1,430	1,670	85.7	55 - 139		
Benzo(b)fluoranthene	ND	1,400	1,670	83.9	41 - 133		
Benzo(k)fluoranthene	ND	1,430	1,670	85.7	49 - 138		
Benzo(a)pyrene	ND	1,450	1,670	86.9	40 - 138		
Indeno(1,2,3-cd)pyrene	ND	1,580	1,670	94.7	48 - 125		
Dibenzo(a,h)anthracene	ND	1,600	1,670	95.9	50 - 129		

MS/MSD REPORT

Analysis: SW8270C - Semivolatile Organics by GC/MS - PAH

Parent: B1304036-01B

Prep Date: 4/11/2013

Samp. Anal. Date: 4/16/2013 2:30:00PM

Units: ug/Kg

MS Anal. Date: 4/16/2013 3:45:00PM MSD Anal. Date: 4/16/2013 5:00:00PM

Matrix: Soil

Analyte Name	SampResult	MSRes.	MSDRes	SPLev	SPDLev	Recov.	MSD Rec.	RPD	Recov Lim	RPDLim	Flag
Naphthalene	ND	1,430	2,170	2,050	2,050	69.6	105.7	41.1	45 - 136	40	RPD
Acenaphthene	ND	1,440	2,300	2,050	2,050	70.1	112.0	46.0	43 - 122	40	RPD
Fluorene	ND	1,530	2,440	2,050	2,050	74.5	118.8	45.8	58 - 130	40	RPD
Anthracene	ND	1,680	2,670	2,050	2,050	81.8	130.0	45.5	59 - 131	40	RPD
Fluoranthene	ND	1,690	2,740	2,050	2,050	82.3	133.4	47.4	51 - 140	40	RPD
Pyrene	ND	1,390	2,140	2,050	2,050	67.7	104.2	42.5	46 - 135	40	RPD
Benzo(a)anthracene	ND	1,640	2,570	2,050	2,050	79.9	125.2	44.2	58 - 118	40	highMSD RPD
Chrysene	ND	1,610	2,470	2,050	2,050	78.4	120.3	42.2	55 - 139	40	RPD

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036
 Project: Coon Hollow #1
 Client: Maralex Resources, Inc.
 Client Project Number: None

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado
 Workorder (SDG): B1304036
 Project: Coon Hollow #1
 Project Number:
 Prep Batch: T130411013

QUALITY CONTROL REPORT

MS/MSD REPORT

Analysis: SW8270C - Semivolatile Organics by GC/MS - PAH Parent: B1304036-01B
 Prep Date: 4/11/2013
 Samp. Anal. Date: 4/16/2013 2:30:00PM Units: ug/Kg
 MS Anal. Date: 4/16/2013 3:45:00PM MSD Anal. Date: 4/16/2013 5:00:00PM Matrix: Soil

Analyte Name	SampResult	MSRes.	MSDRes	SPLev	SPDLev	Recov.	MSD Rec.	RPD	Recov Lim	RPDLim	Flag
Benzo(b)fluoranthene	ND	1,520	2,400	2,050	2,050	74.0	116.9	44.9	41 - 133	40	RPD
Benzo(k)fluoranthene	ND	1,680	2,420	2,050	2,050	81.8	117.9	36.1	49 - 138	40	
Benzo(a)pyrene	ND	1,560	2,430	2,050	2,050	76.0	118.3	43.6	40 - 138	40	RPD
Indeno(1,2,3-cd)pyrene	ND	1,630	2,620	2,050	2,050	79.4	127.6	46.6	48 - 125	40	highMSD RPD
Dibenzo(a,h)anthracene	ND	1,590	2,700	2,050	2,050	77.4	131.5	51.7	50 - 129	40	highMSD RPD

FOOTNOTES TO QC REPORT

- Note 1: Results are shown to three significant figures to avoid rounding errors in calculations.
- Note 2: If the sample concentration is greater than 4 times the spike level, a recovery is not meaningful, and the result should be used as a replicate. In such cases the spike is not as high as expected random measurement variability of the sample result itself.
- Note 3: For sample duplicates, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample and duplicate results are not five times the PQL or greater, then the RPD is not expected to fall within the window shown and the comparison should be made on the basis of the absolute difference. Analytica uses the criterion that the absolute difference should be less than the PQL for water or less than 2XPQL for other matrices.
- Note 4: For serial dilutions, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample result is not 50 times the MDL or greater, then the fact that the RPD does not meet the 10% criterion has little significance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado

Workorder (SDG): B1304036

Project: Coon Hollow #1

Project Number:

Prep Batch: T130416005

QUALITY CONTROL REPORT

LCS REPORT

Analysis: SW6010B - ICP - Total

MB: T130416005-MB

Prep Date: 4/16/2013

MB Anal. Date: 4/17/2013 1:20:47PM

Units: mg/Kg

LCS Anal. Date: 4/17/2013 1:25:54PM

Matrix: Solid

<u>Analyte Name</u>	<u>SampResult</u>	<u>LCSRes.</u>	<u>SPLev</u>	<u>Recov.</u>	<u>Recov Lim</u>	<u>RPDLim</u>	<u>Flag</u>
Barium	ND	201	200	100.5	70 - 130		
Boron	ND	46.4	50.0	92.8	70 - 130		
Cadmium	ND	4.83	5.00	96.6	70 - 130		
Chromium	ND	20.1	20.0	100.5	70 - 130		
Copper	ND	24.6	25.0	98.4	70 - 130		
Lead	ND	49.7	50.0	99.4	70 - 130		
Nickel	ND	49.7	50.0	99.4	70 - 130		
Selenium	ND	199	200	99.5	70 - 130		
Silver	ND	20.3	25.0	81.2	70 - 130		
Zinc	ND	48.4	50.0	96.8	70 - 130		

Prep Batch: T130419001

SAMPLE DUPLICATE REPORT

Analysis: SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Tot

Base Sample: B1304036-01D

Prep Date: 4/19/2013

Samp. Anal. Date: 4/19/2013 12:06:00PM

Units: mg/Kg

DUP Anal. Date: 4/19/2013 12:08:00PM

Matrix: Soil

<u>Analyte Name</u>	<u>SampResult</u>	<u>DUPRes.</u>	<u>RPD</u>	<u>RPDLim</u>	<u>Flag</u>
Mercury	0.0716	0.0762	6.2	35	

LCS REPORT

Analysis: SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Tot

MB: T130419001-MB

Prep Date: 4/19/2013

MB Anal. Date: 4/19/2013 11:58:00AM

Units: mg/Kg

LCS Anal. Date: 4/19/2013 12:04:00PM

Matrix: Solid

<u>Analyte Name</u>	<u>SampResult</u>	<u>LCSRes.</u>	<u>SPLev</u>	<u>Recov.</u>	<u>Recov Lim</u>	<u>RPDLim</u>	<u>Flag</u>
Mercury	ND	1.50	1.50	100.0	70 - 130		

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036
Project: Coon Hollow #1
Client: Maralex Resources, Inc.
Client Project Number: None

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado
Workorder (SDG): B1304036
Project: Coon Hollow #1
Project Number:
Prep Batch: T130419001

QUALITY CONTROL REPORT

MS/MSD REPORT

Analysis: SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Tot Parent: B1304036-01D
Prep Date: 4/19/2013
Samp. Anal. Date: 4/19/2013 12:06:00PM Units: mg/Kg
MS Anal. Date: 4/19/2013 12:10:00PM MSD Anal. Date: 4/19/2013 12:12:00PM Matrix: Soil

Analyte Name	SampResult	MSRes.	MSDRes	SPLev	SPDLev	Recov.	MSD Rec.	RPD	Recov Lim	RPDLim	Flag
Mercury	0.0716	1.91	1.92	1.85	1.85	99.5	100.0	0.5	70 - 130	35	

FOOTNOTES TO QC REPORT

Note 1: Results are shown to three significant figures to avoid rounding errors in calculations.

Note 2: If the sample concentration is greater than 4 times the spike level, a recovery is not meaningful, and the result should be used as a replicate. In such cases the spike is not as high as expected random measurement variability of the sample result itself.

Note 3: For sample duplicates, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample and duplicate results are not five times the PQL or greater, then the RPD is not expected to fall within the window shown and the comparison should be made on the basis of the absolute difference. Analytica uses the criterion that the absolute difference should be less than the PQL for water or less than 2XPQL for other matrices.

Note 4: For serial dilutions, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample result is not 50 times the MDL or greater, then the fact that the RPD does not meet the 10% criterion has little significance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado

Workorder (SDG): B1304036

Project: Coon Hollow #1

Project Number:

QUALITY CONTROL REPORT

Prep Batch: T130415002

LCS REPORT

Analysis: VOC by GC/FID via method 8015B - GRO

MB: T130415002-MB

Prep Date: 4/11/2013

MB Anal. Date: 4/11/2013 2:22:00PM

Units: ug/Kg

LCS Anal. Date: 4/11/2013 3:26:00PM

Matrix: Solid

<u>Analyte Name</u>	<u>SampResult</u>	<u>LCSRes.</u>	<u>SPLev</u>	<u>Recov.</u>	<u>Recov Lim</u>	<u>RPDLim</u>	<u>Flag</u>
Gasoline Range Organics	ND	445	500	89.0	60 - 118		

Prep Batch: T130415003

LCS REPORT

Analysis: Aromatic VOCs by GC/PID via method 8021B - BTEX

MB: T130415003-MB

Prep Date: 4/11/2013

MB Anal. Date: 4/11/2013 2:22:00PM

Units: ug/Kg

LCS Anal. Date: 4/11/2013 2:54:00PM

Matrix: Solid

<u>Analyte Name</u>	<u>SampResult</u>	<u>LCSRes.</u>	<u>SPLev</u>	<u>Recov.</u>	<u>Recov Lim</u>	<u>RPDLim</u>	<u>Flag</u>
Benzene	ND	10.3	10.0	103.0	70 - 130		
Toluene	ND	10.3	10.0	103.0	70 - 130		
Ethylbenzene	ND	10.8	10.0	108.0	70 - 130		
Xylenes, Total	ND	31.9	30.0	106.3	70 - 130		

FOOTNOTES TO QC REPORT

Note 1: Results are shown to three significant figures to avoid rounding errors in calculations.

Note 2: If the sample concentration is greater than 4 times the spike level, a recovery is not meaningful, and the result should be used as a replicate. In such cases the spike is not as high as expected random measurement variability of the sample result itself.

Note 3: For sample duplicates, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample and duplicate results are not five times the PQL or greater, then the RPD is not expected to fall within the window shown and the comparison should be made on the basis of the absolute difference. Analytica uses the criterion that the absolute difference should be less than the PQL for water or less than 2XPQL for other matrices.

Note 4: For serial dilutions, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample result is not 50 times the MDL or greater, then the fact that the RPD does not meet the 10% criterion has little significance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado

Workorder (SDG): B1304036

Project: Coon Hollow #1

Project Number:

QUALITY CONTROL REPORT

Prep Batch: T130410016

LCS/LCSD REPORT

Analysis: Specific Conductance - Cond.

MB: T130410016-MB

Prep Date: 4/10/2013

MB Anal. Date: 4/10/2013 2:00:00PM

Units: umhos/cm

LCS Anal. Date: 4/10/2013 2:00:00PM LCSD Anal. Date: 4/10/2013 2:00:00PM Matrix: Solid

<u>Analyte Name</u>	<u>SampResult</u>	<u>LCSRes.</u>	<u>SDRes.</u>	<u>SPLev</u>	<u>SPDLev</u>	<u>Recov.</u>	<u>SD Recov</u>	<u>RPD</u>	<u>Recov Lim</u>	<u>RPDLim</u>	<u>Flag</u>
Conductance	ND	149	152	150	150	99.3	101.3	2.0	80 - 120	20	

FOOTNOTES TO QC REPORT

Note 1: Results are shown to three significant figures to avoid rounding errors in calculations.

Note 2: If the sample concentration is greater than 4 times the spike level, a recovery is not meaningful, and the result should be used as a replicate. In such cases the spike is not as high as expected random measurement variability of the sample result itself.

Note 3: For sample duplicates, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample and duplicate results are not five times the PQL or greater, then the RPD is not expected to fall within the window shown and the comparison should be made on the basis of the absolute difference. Analytica uses the criterion that the absolute difference should be less than the PQL for water or less than 2XPQL for other matrices.

Note 4: For serial dilutions, if the result is less than the PQL, the duplicate RPD is not applicable. If the sample result is not 50 times the MDL or greater, then the fact that the RPD does not meet the 10% criterion has little significance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036
Project: Coon Hollow #1
Client: Maralex Resources, Inc.
Client Project Number: None

SURROGATE RECOVERY SUMMARY REPORT

Test Method: SVOC by GC/FID via method 8015B - DRO

Lab Sample #:	B1304036-01B	Dilution:	1		
Analysis Date:	4/17/2013 10:14:03PM	Client Sample:	<u>Coon Hollow #1</u>		
Batch Number:	T130411012	Data File:	13041715.D		
<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	93	50	150		Rrun
Lab Sample #:	B1304036-01B	Dilution:	10		
Analysis Date:	4/18/2013 12:38:35PM	Client Sample:	<u>Coon Hollow #1</u>		
Batch Number:	T130411012	Data File:	13041720.D		
<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	97	50	150	DILUTED OUT	Complete
Lab Sample #:	B1304038-01B	Dilution:	1		
Analysis Date:	4/18/2013 3:17:49PM	Client Sample:	<u>Batch QC</u>		
Batch Number:	T130411012	Data File:	13041723.D		
<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	89	50	150		Complete
Lab Sample #:	B1304038-01B	Dilution:	10		
Analysis Date:	4/18/2013 4:07:14PM	Client Sample:	<u>Batch QC</u>		
Batch Number:	T130411012	Data File:	13041724.D		
<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	70	50	150	DILUTED OUT	Rrun
Lab Sample #:	T130411012-MB	Dilution:	1		
Analysis Date:	4/17/2013 2:46:49PM	Client Sample:	<u>MB</u>		
Batch Number:	T130411012	Data File:	13041706.D		
<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	76	60	120		Complete
Lab Sample #:	T130411012-LCS	Dilution:	1		
Analysis Date:	4/17/2013 4:30:40PM	Client Sample:	<u>LCS</u>		
Batch Number:	T130411012	Data File:	13041708.D		
<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	87	60	120		Complete
Lab Sample #:	B1304038-01B-MS	Dilution:	1		
Analysis Date:	4/18/2013 4:56:58PM	Client Sample:	<u>MS</u>		
Batch Number:	T130411012	Data File:	13041725.D		
<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	100	50	150		Complete
Lab Sample #:	B1304038-01B-MSD	Dilution:	1		
Analysis Date:	4/19/2013 9:44:43AM	Client Sample:	<u>MSD</u>		
Batch Number:	T130411012	Data File:	13041727.D		
<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
o-Terphenyl	102	50	150		Complete

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036
 Project: Coon Hollow #1
 Client: Maralex Resources, Inc.
 Client Project Number: None

Test Method: Aromatic VOCs by GC/PID via method 8021B - BTEX

Lab Sample #:	B1304036-01C	Dilution:	1		
Analysis Date:	4/11/2013 5:36:00PM	Client Sample:	Coon Hollow #1		
Batch Number:	T130415003	Data File:	13041110.D		
AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
p-Bromofluorobenzene	91	70	130		Complete

Lab Sample #:	B1304038-02C	Dilution:	1		
Analysis Date:	4/11/2013 8:50:00PM	Client Sample:	Batch QC		
Batch Number:	T130415003	Data File:	13041116.D		
AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
p-Bromofluorobenzene	101	70	130		Complete
p-Bromofluorobenzene	101	70	130		Rrun

Lab Sample #:	T130415003-MB	Dilution:	1		
Analysis Date:	4/11/2013 2:22:00PM	Client Sample:	MB		
Batch Number:	T130415003	Data File:	13041104.D		
AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
p-Bromofluorobenzene	96	70	130		Complete
p-Bromofluorobenzene	96	70	130		Rrun

Lab Sample #:	T130415003-LCS	Dilution:	1		
Analysis Date:	4/11/2013 2:54:00PM	Client Sample:	LCS		
Batch Number:	T130415003	Data File:	13041105.D		
AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
p-Bromofluorobenzene	113	70	130		Complete
p-Bromofluorobenzene	113	70	130		Rrun

Lab Sample #:	B1304038-02C-MS	Dilution:	1		
Analysis Date:	4/11/2013 9:22:00PM	Client Sample:	MS		
Batch Number:	T130415003	Data File:	13041117.D		
AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
p-Bromofluorobenzene	109	70	130		Complete

Lab Sample #:	B1304038-02C-MSD	Dilution:	1		
Analysis Date:	4/11/2013 9:54:00PM	Client Sample:	MSD		
Batch Number:	T130415003	Data File:	13041118.D		
AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
p-Bromofluorobenzene	100	70	130		Complete

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

Test Method: VOC by GC/FID via method 8015B - GRO

Lab Sample #:	B1304036-01C	Dilution:	1		
Analysis Date:	4/11/2013 5:36:00PM	Client Sample:	<u>Coon Hollow #1</u>		
Batch Number:	T130415002	Data File:	13041110.D		
<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	70	50	150		Complete
p-Bromofluorobenzene	70	50	150		Rrun

Lab Sample #:	B1304038-01C	Dilution:	1		
Analysis Date:	4/11/2013 6:40:00PM	Client Sample:	<u>Batch QC</u>		
Batch Number:	T130415002	Data File:	13041112.D		
<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	80	50	150		Complete
p-Bromofluorobenzene	80	50	150		Rrun

Lab Sample #:	T130415002-MB	Dilution:	1		
Analysis Date:	4/11/2013 2:22:00PM	Client Sample:	<u>MB</u>		
Batch Number:	T130415002	Data File:	13041104.D		
<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	86	63	130		Complete

Lab Sample #:	T130415002-LCS	Dilution:	1		
Analysis Date:	4/11/2013 3:26:00PM	Client Sample:	<u>LCS</u>		
Batch Number:	T130415002	Data File:	13041106.D		
<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	96	63	130		Complete
p-Bromofluorobenzene	96	63	130		Rrun

Lab Sample #:	B1304038-01C-MS	Dilution:	1		
Analysis Date:	4/11/2013 7:13:00PM	Client Sample:	<u>MS</u>		
Batch Number:	T130415002	Data File:	13041113.D		
<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	80	50	150		Complete
p-Bromofluorobenzene	80	50	150		Rrun

Lab Sample #:	B1304038-01C-MSD	Dilution:	1		
Analysis Date:	4/11/2013 7:45:00PM	Client Sample:	<u>MSD</u>		
Batch Number:	T130415002	Data File:	13041114.D		
<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
p-Bromofluorobenzene	98	50	150		Complete
p-Bromofluorobenzene	98	50	150		Rrun

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036
 Project: Coon Hollow #1
 Client: Maralex Resources, Inc.
 Client Project Number: None

Test Method: SW8270C - Semivolatile Organics by GC/MS - PAH

Lab Sample #: B1304036-01B Dilution: 10
 Analysis Date: 4/16/2013 2:30:00PM Client Sample: Coon Hollow #1
 Batch Number: T130411013 Data File: 13041605.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
2-Fluorobiphenyl	60	36	121		Complete
D14-Terphenyl	63	30	134		Complete
D5-Nitrobenzene	55	30	122		Complete

Lab Sample #: B1304036-01B Dilution: 1
 Analysis Date: 4/16/2013 3:07:00PM Client Sample: Coon Hollow #1
 Batch Number: T130411013 Data File: 13041606.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
2-Fluorobiphenyl	52	36	121		Rrun
D14-Terphenyl	77	30	134		Rrun
D5-Nitrobenzene	52	30	122		Rrun

Lab Sample #: T130411013-MB Dilution: 1
 Analysis Date: 4/16/2013 1:15:00PM Client Sample: MB
 Batch Number: T130411013 Data File: 13041603.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
2-Fluorobiphenyl	51	36	121		Complete
D14-Terphenyl	74	30	134		Complete
D5-Nitrobenzene	55	30	122		Complete

Lab Sample #: T130411013-LCS Dilution: 1
 Analysis Date: 4/16/2013 1:52:00PM Client Sample: LCS
 Batch Number: T130411013 Data File: 13041604.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
2-Fluorobiphenyl	48	36	121		Complete
D14-Terphenyl	79	30	134		Complete
D5-Nitrobenzene	45	30	122		Complete

Lab Sample #: B1304036-01B-MS Dilution: 10
 Analysis Date: 4/16/2013 3:45:00PM Client Sample: MS
 Batch Number: T130411013 Data File: 13041607.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
2-Fluorobiphenyl	65	36	121		Complete
D14-Terphenyl	77	30	134		Complete
D5-Nitrobenzene	59	30	122		Complete

Lab Sample #: B1304036-01B-MS Dilution: 1
 Analysis Date: 4/16/2013 4:23:00PM Client Sample: MS
 Batch Number: T130411013 Data File: 13041608.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
2-Fluorobiphenyl	48	36	121		Rrun
D14-Terphenyl	85	30	134		Rrun
D5-Nitrobenzene	48	30	122		Rrun

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036
Project: Coon Hollow #1
Client: Maralex Resources, Inc.
Client Project Number: None

Test Method: SW8270C - Semivolatile Organics by GC/MS - PAH

Lab Sample #: B1304036-01B-MSD Dilution: 10
Analysis Date: 4/16/2013 5:00:00PM Client Sample: MSD
Batch Number: T130411013 Data File: 13041609.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
2-Fluorobiphenyl	104	36	121		Complete
D14-Terphenyl	119	30	134		Complete
D5-Nitrobenzene	87	30	122		Complete

Lab Sample #: B1304036-01B-MSD Dilution: 1
Analysis Date: 4/16/2013 5:38:00PM Client Sample: MSD
Batch Number: T130411013 Data File: 13041610.D

<u>AnalyteName</u>	<u>SSRecov</u>	<u>LCL</u>	<u>UCL</u>	<u>SSFlag</u>	<u>Result Status</u>
2-Fluorobiphenyl	88	36	121		Rrun
D14-Terphenyl	154	30	134	HIGH	Rrun
D5-Nitrobenzene	81	30	122		Rrun

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID: 147,851 Lab Project Number: B1304036

Prep Date: 4/10/2013

Lab Method Blank Id: T130410009-MB
Prep Batch ID: T130410009
Method: ASTM D2216 - Pmoist

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
B1304036-01B	Coon Hollow #1		4/11/2013 9:49:33AM
B1304038-02B	Batch QC		4/11/2013 9:49:33AM
B1304038-02B-DUP	DUP		4/11/2013 9:49:33AM

Prep Date: 4/10/2013

Lab Method Blank Id: T130410016-MB
Prep Batch ID: T130410016
Method: Specific Conductance - Cond.

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
B1304036-01D	Coon Hollow #1		4/10/2013 2:00:00PM
T130410016-LCS	LCS		4/10/2013 2:00:00PM
T130410016-LCSD	LCSD		4/10/2013 2:00:00PM

Prep Date: 4/11/2013

Lab Method Blank Id: T130411012-MB
Prep Batch ID: T130411012
Method: SVOC by GC/FID via method 8015B - DRO

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
T130411012-LCS	LCS	13041708.D	4/17/2013 4:30:40PM
B1304036-01B	Coon Hollow #1	13041720.D	4/18/2013 12:38:35PM
B1304038-01B	Batch QC	13041723.D	4/18/2013 3:17:49PM
B1304038-01B-MS	MS	13041725.D	4/18/2013 4:56:58PM
B1304038-01B-MSD	MSD	13041727.D	4/19/2013 9:44:43AM

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036
Project: Coon Hollow #1
Client: Maralex Resources, Inc.
Client Project Number: None

QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID: 147,851 Lab Project Number: B1304036

Prep Date: 4/11/2013

Lab Method Blank Id: T130411013-MB
Prep Batch ID: T130411013
Method: SW8270C - Semivolatile Organics by GC/MS - PAH

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
T130411013-LCS	LCS	13041604.D	4/16/2013 1:52:00PM
B1304036-01B	Coon Hollow #1	13041605.D	4/16/2013 2:30:00PM
B1304036-01B-MS	MS	13041607.D	4/16/2013 3:45:00PM
B1304036-01B-MSD	MSD	13041609.D	4/16/2013 5:00:00PM

Prep Date: 4/11/2013

Lab Method Blank Id: T130415002-MB
Prep Batch ID: T130415002
Method: VOC by GC/FID via method 8015B - GRO

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
T130415002-LCS	LCS	13041106.D	4/11/2013 3:26:00PM
B1304036-01C	Coon Hollow #1	13041110.D	4/11/2013 5:36:00PM
B1304038-01C	Batch QC	13041112.D	4/11/2013 6:40:00PM
B1304038-01C-MS	MS	13041113.D	4/11/2013 7:13:00PM
B1304038-01C-MSD	MSD	13041114.D	4/11/2013 7:45:00PM

Prep Date: 4/11/2013

Lab Method Blank Id: T130415003-MB
Prep Batch ID: T130415003
Method: Aromatic VOCs by GC/PID via method 8021B - BTEX

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
T130415003-LCS	LCS	13041105.D	4/11/2013 2:54:00PM
B1304036-01C	Coon Hollow #1	13041110.D	4/11/2013 5:36:00PM
B1304038-02C	Batch QC	13041116.D	4/11/2013 8:50:00PM
B1304038-02C-MS	MS	13041117.D	4/11/2013 9:22:00PM
B1304038-02C-MSD	MSD	13041118.D	4/11/2013 9:54:00PM

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036
Project: Coon Hollow #1
Client: Maralex Resources, Inc.
Client Project Number: None

QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID: 147,851 Lab Project Number: B1304036

Prep Date: 4/16/2013

Lab Method Blank Id: T130416005-MB
Prep Batch ID: T130416005
Method: SW6010B - ICP - Total

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
B1304036-01D	Coon Hollow #1	032612	4/17/2013 3:42:06PM
T130416005-LCS	LCS	032612	4/17/2013 1:25:54PM
B1304002-01A-DUP	DUP	032612	4/17/2013 1:46:22PM

Prep Date: 4/19/2013

Lab Method Blank Id: T130419001-MB
Prep Batch ID: T130419001
Method: SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Tot

This Method blank and sample preparation batch are associated with the following samples, spikes, and duplicates:

<u>SampleNum</u>	<u>ClientSampleName</u>	<u>DataFile</u>	<u>AnalysisDate</u>
B1304036-01D	Coon Hollow #1	041913S.CSV	4/19/2013 12:06:00PM
T130419001-LCS	LCS	041913S.CSV	4/19/2013 12:04:00PM
B1304036-01D-DUP	DUP	041913S.CSV	4/19/2013 12:08:00PM
B1304036-01D-MS	MS	041913S.CSV	4/19/2013 12:10:00PM
B1304036-01D-MSD	MSD	041913S.CSV	4/19/2013 12:12:00PM

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

DATA FLAGS AND DEFINITIONS

The PQL is the Method Quantitation Limit as defined by USACE.

Reporting Limit: Limit below which results are shown as "ND". This may be the PQL, MDL, or a value between. See the report conventions below.

Result Field:

ND = Not Detected at or above the Reporting Limit

NA = Analyte not applicable (see Case Narrative for discussion)

Qualifier Fields:

LOW = Recovery is below Lower Control Limit

HIGH = Recovery, RPD, or other parameter is above Upper Control Limit

E = Reported concentration is above the instrument calibration upper range

Organic Analysis Flags:

B = Analyte was detected in the laboratory method blank

J = Analyte was detected above MDL or Reporting Limit but below the Quant Limit (PQL)

Inorganic Analysis Flags:

J = Analyte was detected above the Reporting Limit but below the Quant Limit (PQL)

W = Post digestion spike did not meet criteria

S = Reported value determined by the Method of Standard Additions (MSA)

Several ways of defining the limit of detection and quantitation are prevalent in the laboratory industry and may appear in Analytica reports. These include the following:

MRL = "minimum reporting level", from the EPA Safe Drinking Water program (SDW)

PQL = "practical quantitation limit", from SW-846

EQL = "estimated quantitation limit", from SW-846

LOQ = "limit of quantitation", from a number of authoritative sources

In Analytica's work, all of these terms have the same meaning, equivalent to the EPA definition of the MRL. This reporting level is supported by a satisfactory calibration data point which is at that level or lower, and also is supported by a method detection limit (MDL) determined by the procedure in 40CFR. The MDL is lower than the MRL and represents an estimate of the level where positive detections have a 99% probability of being real, but where quantitation accuracy is unknown.

The MRL as defined by Analytica is the lowest demonstrated point of known quantitation accuracy.

The MRL should not be confused with the MCL, which is the EPA-defined "maximum contaminant level" allowed for certain regulated targets under specific regulations, such as the National Primary Drinking Water Regulations. Normally, the MRL is set at a level which is much lower than the MCL in order to ensure that levels are well below those limits. Not all target analytes have MCL levels established.

Other Flags may be applied. See Case Narrative for Description

Detailed Analytical Report

Analytica Group, LLC - Thornton

Workorder (SDG): B1304036

Project: Coon Hollow #1

Client: Maralex Resources, Inc.

Client Project Number: None

REPORTING CONVENTIONS FOR THIS REPORT

B1304036

<u>TestPkgName</u>	<u>Basis</u>	<u># Sig Figs</u>	<u>Reporting Limit</u>
3500-Cr-B/3500-Cr-B (Solid) - Total Cr(III) calculat	As Received	2	Report to PQL
6010B/3050B (Solid) - Total	Dry Weight Basis	2	Report to PQL
6020 (Solid) - Low Level Metals - Sol	Dry Weight Basis	2	Report to PQL
7196_A/3060A (Solid) - Cr(VI)	Dry Weight Basis	2	Report to PQL
7471A/7471A (Solid) - Total Hg	Dry Weight Basis	2	Report to PQL
8015/5030B (Solid) - GRO	Dry Weight Basis	2	Report to PQL
8015B/3550B (Solid) - DRO	Dry Weight Basis	2	Report to PQL
8021/5030B (Solid) - BTEX	Dry Weight Basis	2	Report to PQL
8270C/3550B (Solid) - PAH	Dry Weight Basis	2	Report to MDL, J qual below PQL
9045B/9045B (Solid) - pH	As Received	2	Report to PQL
9050A/9050A (Solid) - Cond.	As Received	2	Report to PQL
ASTMD2216/ASTMD2216 (Solid) - Pmoist	As Received	3	Report to MDL, J qual below PQL
SAR (Solid)	As Received	2	Report to PQL



ANALYTICAL SUMMARY REPORT

May 05, 2013

Analytica Group Inc
12189 Pennsylvania St
Thornton, CO 80241

Workorder No.: B13040740

Project Name: Not Indicated

Energy Laboratories Inc Billings MT received the following 4 samples for Analytica Group Inc on 4/9/2013 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B13040740-001	B1304036-01A, Coon Hollow #1	04/03/13 10:22	04/09/13	Soil	Metals by ICP/ICPMS, Total or Soluble Cations, Saturated Paste Chromium, Hexavalent Water Extraction for Hex Chromium Digestion, Total Metals Saturated Paste Extraction Sodium Adsorption Ratio
B13040740-002	B1304036-02A, BG CH #1	04/03/13 10:30	04/09/13	Soil	Metals by ICP/ICPMS, Total or Soluble Cations, Saturated Paste Digestion, Total Metals Saturated Paste Extraction Sodium Adsorption Ratio
B13040740-003	B1304036-03A, BG CH #2	04/03/13 10:34	04/09/13	Soil	Same As Above
B13040740-004	B1304036-04A, BG CH #3	04/03/13 10:36	04/09/13	Soil	Same As Above

The analyses presented in this report were performed by Energy Laboratories, Inc., 1120 S 27th St., Billings, MT 59101, unless otherwise noted. Any exceptions or problems with the analyses are noted in the Laboratory Analytical Report, the QA/QC Summary Report, or the Case Narrative.

The results as reported relate only to the item(s) submitted for testing.

If you have any questions regarding these test results, please call.

Report Approved By:



CLIENT: Analytica Group Inc
Project: Not Indicated
Sample Delivery Group: B13040740

Revised Date: 05/05/13

Report Date: 04/15/13

CASE NARRATIVE

Per request from Carissa Seltrecht on 4/26/13, add Sodium Adsorption Ratio by Saturated Paste to all samples.

The report has been revised and replaces any previously issued report in its entirety.



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Revised Date: 05/05/13

Report Date: 04/15/13

Collection Date: 04/03/13 10:22

Date Received: 04/09/13

Matrix: Soil

Client: Analytica Group Inc
Project: Not Indicated
Lab ID: B13040740-001
Client Sample ID: B1304036-01A, Coon Hollow #1

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SATURATED PASTE							
Calcium, sat. paste	5.80	meq/L		0.05		SW6010B	05/02/13 20:24 / rlh
Magnesium, sat. paste	0.43	meq/L		0.08		SW6010B	05/02/13 20:24 / rlh
Sodium, sat. paste	0.26	meq/L		0.04		SW6010B	05/02/13 20:24 / rlh
Sodium Adsorption Ratio (SAR)	0.15	unitless		0.01		Calculation	05/03/13 15:19 / srm
METALS, WATER EXTRACTABLE							
Chromium, Hexavalent - Soluble	ND	mg/kg		5		SW7196A	04/10/13 15:30 / mas
METALS, TOTAL - EPA SW846							
Arsenic	1.4	mg/kg		0.2		SW6020	04/10/13 20:44 / mas

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Revised Date: 05/05/13

Report Date: 04/15/13

Collection Date: 04/03/13 10:30

Date Received: 04/09/13

Matrix: Soil

Client: Analytica Group Inc
Project: Not Indicated
Lab ID: B13040740-002
Client Sample ID: B1304036-02A, BG CH #1

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SATURATED PASTE							
Calcium, sat. paste	3.89	meq/L		0.05		SW6010B	05/02/13 20:28 / rlh
Magnesium, sat. paste	0.85	meq/L		0.08		SW6010B	05/02/13 20:28 / rlh
Sodium, sat. paste	1.54	meq/L		0.04		SW6010B	05/02/13 20:28 / rlh
Sodium Adsorption Ratio (SAR)	1.00	unitless		0.01		Calculation	05/03/13 15:19 / srm
METALS, TOTAL - EPA SW846							
Arsenic	1.2	mg/kg		0.2		SW6020	04/10/13 20:50 / mas

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Analytica Group Inc
Project: Not Indicated
Lab ID: B13040740-003
Client Sample ID B1304036-03A, BG CH #2

Revised Date: 05/05/13
Report Date: 04/15/13
Collection Date: 04/03/13 10:34
Date Received: 04/09/13
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SATURATED PASTE							
Calcium, sat. paste	0.58	meq/L		0.05		SW6010B	05/02/13 20:31 / rh
Magnesium, sat. paste	0.24	meq/L		0.08		SW6010B	05/02/13 20:31 / rh
Sodium, sat. paste	7.81	meq/L		0.04		SW6010B	05/02/13 20:31 / rh
Sodium Adsorption Ratio (SAR)	12.2	unitless		0.01		Calculation	05/03/13 15:19 / srm
METALS, TOTAL - EPA SW846							
Arsenic	2.1	mg/kg		0.2		SW6020	04/10/13 20:55 / mas

Report Definitions: RL - Analyte reporting limit.
QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Analytica Group Inc
Project: Not Indicated
Lab ID: B13040740-004
Client Sample ID B1304036-04A, BG CH #3

Revised Date: 05/05/13
Report Date: 04/15/13
Collection Date: 04/03/13 10:36
Date Received: 04/09/13
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
SATURATED PASTE							
Calcium, sat. paste	0.78	meq/L		0.05		SW6010B	05/02/13 20:34 / rh
Magnesium, sat. paste	5.67	meq/L		0.08		SW6010B	05/02/13 20:34 / rh
Sodium, sat. paste	12.7	meq/L		0.04		SW6010B	05/02/13 20:34 / rh
Sodium Adsorption Ratio (SAR)	7.06	unitless		0.01		Calculation	05/03/13 15:19 / srm
METALS, TOTAL - EPA SW846							
Arsenic	1.7	mg/kg		0.2		SW6020	04/10/13 21:22 / mas

Report RL - Analyte reporting limit.
Definitions: QCL - Quality control limit.

MCL - Maximum contaminant level.
ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Analytica Group Inc

Report Date: 04/12/13

Project: Not Indicated

Work Order: B13040740

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020							Analytical Run: ICPMS203-B_130410A			
Sample ID: QCS	Initial Calibration Verification Standard									04/10/13 11:32
Arsenic		0.0483	mg/L	0.0010	97	90	110			
Sample ID: ICSA	Interference Check Sample A									04/10/13 11:59
Arsenic		0.00596	mg/L	0.0010						
Sample ID: ICSAB	Interference Check Sample AB									04/10/13 12:04
Arsenic		0.0106	mg/L	0.0010	106	70	130			
Method: SW6020							Batch: 70357			
Sample ID: MB-70357	Method Blank			Run: ICPMS203-B_130410A						04/10/13 20:17
Arsenic		ND	mg/kg	0.8						
Sample ID: B13040740-004ADIL	Serial Dilution			Run: ICPMS203-B_130410A						04/10/13 21:28
Arsenic		2.55	mg/kg	0.20		0	0	39	20	R
Sample ID: LFB-70357	Laboratory Fortified Blank			Run: ICPMS203-B_130410A						04/10/13 21:33
Arsenic		43.2	mg/kg	1.0	86	80	120			
Sample ID: SRM-70357	Standard Reference Material			Run: ICPMS203-B_130410A						04/10/13 21:39
Arsenic		298	mg/kg	4.0	86	71	106			
Sample ID: B13040740-004APDS1	Post Digestion/Distillation Spike			Run: ICPMS203-B_130410A						04/10/13 21:44
Arsenic		4.51	mg/kg	0.20	71	70	130			
Sample ID: B13040740-004AMS3	Sample Matrix Spike			Run: ICPMS203-B_130410A						04/10/13 21:49
Arsenic		46.8	mg/kg	0.20	67	75	125			S
Sample ID: B13040740-004AMSD	Sample Matrix Spike Duplicate			Run: ICPMS203-B_130410A						04/10/13 21:55
Arsenic		48.8	mg/kg	0.20	69	75	125	4.2	20	S

Qualifiers:

RL - Analyte reporting limit.

R - RPD exceeds advisory limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.



QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Analytica Group Inc

Report Date: 04/12/13

Project: Not Indicated

Work Order: B13040740

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW7196A										Batch: 70380
Sample ID: MB-70380		Method Blank					Run: SPEC_130410B			04/10/13 15:30
Chromium, Hexavalent - Soluble		ND	mg/kg	0.1						
Sample ID: B13040736-001AMS		Sample Matrix Spike					Run: SPEC_130410B			04/10/13 15:30
Chromium, Hexavalent - Soluble		0.387	mg/kg	5.0	102	70	130			
Sample ID: B13040736-001AMSD		Sample Matrix Spike Duplicate					Run: SPEC_130410B			04/10/13 15:30
Chromium, Hexavalent - Soluble		0.378	mg/kg	5.0	99	70	130		20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by Billings, MT Branch

Revised Date: 05/05/13

Client: Analytica Group Inc

Report Date: 04/15/13

Project: Not Indicated

Work Order: B13040740

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: Calculation										Batch: R204040
Sample ID: B13040736-001A DUP	Sample Duplicate						Run: MISC-SOIL_130503B			05/03/13 15:19
Sodium Adsorption Ratio (SAR)		0.520	unitless	0.010				0.0	30	
Sample ID: B13040742-001A DUP	Sample Duplicate						Run: MISC-SOIL_130503B			05/03/13 15:19
Sodium Adsorption Ratio (SAR)		118	unitless	0.010				0.7	30	
Sample ID: LCS-1305031519	Laboratory Control Sample						Run: MISC-SOIL_130503B			05/03/13 15:19
Sodium Adsorption Ratio (SAR)		5.29	unitless	0.010	86	50	150			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



QA/QC Summary Report

Prepared by Billings, MT Branch

Revised Date: 05/05/13

Report Date: 04/15/13

Work Order: B13040740

Client: Analytica Group Inc

Project: Not Indicated

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6010B		Analytical Run: ICP201-B_130502A								
Sample ID: QCS	3	Initial Calibration Verification Standard								05/02/13 10:41
Calcium		53.4	mg/L	1.0	107	90	110			
Magnesium		53.6	mg/L	1.0	107	90	110			
Sodium		49.3	mg/L	1.0	99	90	110			
Sample ID: ICSA	3	Interference Check Sample A								05/02/13 10:54
Calcium		509	mg/L	1.0	102	80	120			
Magnesium		544	mg/L	1.0	109	80	120			
Sodium		0.0451	mg/L	1.0						
Sample ID: ICSAB	3	Interference Check Sample AB								05/02/13 10:57
Calcium		523	mg/L	1.0	105	80	120			
Magnesium		558	mg/L	1.0	112	80	120			
Sodium		19.0	mg/L	1.0	95	80	120			
Method: SW6010B		Batch: 70923								
Sample ID: MB-70923	6	Method Blank				Run: ICP201-B_130502A		05/02/13 19:51		
Calcium		ND	mg/L	1.0						
Magnesium		ND	mg/L	1.0						
Sodium		ND	mg/L	1.0						
Calcium, sat. paste		ND	meq/L	0.050						
Magnesium, sat. paste		ND	meq/L	0.080						
Sodium, sat. paste		ND	meq/L	0.040						
Sample ID: LCS-70923	3	Laboratory Control Sample				Run: ICP201-B_130502A		05/02/13 19:54		
Calcium, sat. paste		43.9	meq/L	0.050	83	50	150			
Magnesium, sat. paste		28.3	meq/L	0.082	84	50	150			
Sodium, sat. paste		31.7	meq/L	0.19	76	50	150			
Sample ID: B13040736-001A DUP	3	Sample Duplicate				Run: ICP201-B_130502A		05/02/13 20:01		
Calcium, sat. paste		3.64	meq/L	0.050				4.1	30	
Magnesium, sat. paste		1.05	meq/L	0.082				4.3	30	
Sodium, sat. paste		0.797	meq/L	0.044				1.7	30	
Sample ID: B13040736-002AMS2	3	Sample Matrix Spike				Run: ICP201-B_130502A		05/02/13 20:14		
Calcium, sat. paste		11.0	meq/L	0.050	93	50	150			
Magnesium, sat. paste		9.49	meq/L	0.082	98	50	150			
Sodium, sat. paste		5.22	meq/L	0.044	98	50	150			
Sample ID: B13040742-003AMS2	3	Sample Matrix Spike				Run: ICP201-B_130502A		05/02/13 20:58		
Calcium, sat. paste		13.9	meq/L	0.050	103	50	150			
Magnesium, sat. paste		21.6	meq/L	0.082	103	50	150			
Sodium, sat. paste		37.4	meq/L	0.099	113	50	150			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.



Standard Reporting Procedures

Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH, Dissolved Oxygen and Residual Chlorine, are qualified as being analyzed outside of recommended holding time.

Solid/soil samples are reported on a wet weight basis (as received) unless specifically indicated. If moisture corrected, data units are typically noted as –dry. For agricultural and mining soil parameters/characteristics, all samples are dried and ground prior to sample analysis.

Workorder Receipt Checklist

Analytica Group Inc

B13040740

Login completed by: Leslie S. Cadreau

Date Received: 4/9/2013

Reviewed by: BL2000\jklir

Received by: adr

Reviewed Date: 4/10/2013

Carrier FedEx
name:

- Shipping container/cooler in good condition? Yes No Not Present
- Custody seals intact on shipping container/cooler? Yes No Not Present
- Custody seals intact on sample bottles? Yes No Not Present
- Chain of custody present? Yes No
- Chain of custody signed when relinquished and received? Yes No
- Chain of custody agrees with sample labels? Yes No
- Samples in proper container/bottle? Yes No
- Sample containers intact? Yes No
- Sufficient sample volume for indicated test? Yes No
- All samples received within holding time?
(Exclude analyses that are considered field parameters such as pH, DO, Res Cl, Sulfite, Ferrous Iron, etc.) Yes No
- Temp Blank received? Yes No Not Applicable
- Container/Temp Blank temperature: 3.2°C Blue Ice
- Water - VOA vials have zero headspace? Yes No No VOA vials submitted
- Water - pH acceptable upon receipt? Yes No Not Applicable

Contact and Corrective Action Comments:

None

ANALYTICA SUBCONTRACTOR CHAIN OF CUSTODY

COC Number: 147851-2

Analytica Thornton
 12189 Pennsylvania Street
 Thornton, CO 80241
 Report to: Carissa Seltrecht
 phone: 303-469-8868

Standard
 TAT

PO# T14653

Testing Laboratory:

Energy Laboratories
 1120 South 27th St.
 Billings, MT 59101-0916
 phone: 800-735-4489 x6269

Client Identifier: **Coon Hollow #1**

Analytica ID	Test Method	Method Description	Sample Da	Matrix	Comments
B1304036-01A	6020	Low Level Arsenic	4/3/2013 10:22	Soil	B13040740-001
B1304036-01A	7196_A	Hexachrome	4/3/2013 10:22	Soil	↓

Client Identifier: **BG CH #1**

Analytica ID	Test Method	Method Description	Sample Da	Matrix	Comments
B1304036-02A	6020		4/3/2013 10:30	Soil	-002

Client Identifier: **BG CH #2**

Analytica ID	Test Method	Method Description	Sample Da	Matrix	Comments
B1304036-03A	6020		4/3/2013 10:34	Soil	-003

Client Identifier: **BG CH #3**

Analytica ID	Test Method	Method Description	Sample Da	Matrix	Comments
B1304036-04A	6020		4/3/2013 10:36	Soil	-004

Analytica Relinquished by: <i>[Signature]</i>	Date/Time: 4/8/13 16:00	Received by: <i>Ashtan Penman</i>	Date/Time: 4-4-13 09:30
Relinquished by:	Date/Time:	Received by:	Date/Time:

fedex address N/A
 custody seals C
 3.2TFB

