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ANALYTICA
Environmental Laboratories

8/22/2012

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

Work Order #: B1208016
Date: 8/22/2012
Work ID: Sulphur Gulch
Date Received: 8/3/2012
Proj #: None

Sample Identification

Lab Sample Number	Client Description	Lab Sample Number	Client Description
B1208016-01	Ars - B.G. #1	B1208016-02	Ars - B.G. #2
B1208016-03	Ars - B.G. #3	B1208016-04	CSP - Comp

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 Environmental Laboratories, Inc.
Work Order: B1208016

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

Standard Methods for the Examination of Water and Wastewater, 20th Edition, 1998.

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:
There were four (4) samples received on 8/3/2012 10:23:00 AM 2 at a temperature of 5.7°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-CrD - Chromium, Colorimetric Method - Total Cr(III) calculat - Soil
Test Method: Sodium Absorption Ratio - Soil
Test Method: Specific Conductance - Cond. - Soil

Test Method: SVOC by GC/FID via method 8015B - DRO - Soil
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
MS	CSP - Comp	B1208016-04C	Diesel Range Organic	152	50	129	4790	70.7
MSD	CSP - Comp	B1208016-04C	Diesel Range Organic	-135	50	129	4790	70.6

Test Method: SW6010B - ICP - Total - Soil
MS/MSD and DUP OUTLIERS:
A 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.

Test Method: SW8270C - Semivolatile Organics by GC/MS - PAH - Soil
INTERNAL STANDARD AREAS:
The samples shown below exhibited internal standard recoveries outside the control

windows. This has been reproduced upon reanalysis, and is likely due to the sample matrix. The repression of the internal standard areas may indicate some reduced accuracy of quantification of associated targets.

Sample	LabID	Int Std	Area	CCVArea	LCL	UCL	FILE
CSP - Comp	B1208016-04C	Chrysene d12	398149	1336406	668203	2672812	12081610.D
CSP - Comp	B1208016-04C	Perylene-d12	338968	814406	407203	1628812	12081610.D
MS	B1208016-04C-MS	Phenanthrene-	1039665	2168722	1084361	4337444	12081612.D
MS	B1208016-04C-MS	Chrysene d12	321262	1336406	668203	2672812	12081612.D
MS	B1208016-04C-MS	Perylene-d12	252967	814406	407203	1628812	12081612.D

LCS OUTLIERS:

The LCS recovery for the target shown below was below the lower control limit. The target was recovered normally in the CCVs and no corrective action was taken.

Type	BatchNumber	Analyte	Recovery	LCL	UCL	Status
LCS	T120810017	Acenaphthylene	16.8	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
MS	CSP - Comp	B1208016-04C	Acenaphthylene	26.7	48	133	0.00	1770
MSD	CSP - Comp	B1208016-04C	Acenaphthylene	27.8	48	133	0.00	1770
MSD	CSP - Comp	B1208016-04C	Indeno(1,2,3-cd)pyre	188	48	125	0.00	1770
MSD	CSP - Comp	B1208016-04C	Dibenzo(a,h)anthrace	153	50	129	0.00	1770
MSD	CSP - Comp	B1208016-04C	Benzo(a)anthracene	224	58	118	0.00	1770
MSD	CSP - Comp	B1208016-04C	Chrysene	213	55	139	0.00	1770
MSD	CSP - Comp	B1208016-04C	Benzo(b)fluoranthene	206	41	133	0.00	1770

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

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
MS	CSP - Comp	B1208016-04D	Gasoline Range Organ	-103	50	138	8050	530
MSD	CSP - Comp	B1208016-04D	Gasoline Range Organ	-448	50	138	8050	530

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: SW8260B - VOCs by GC/MS - SC - Soil

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

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

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Report Section: Client Sample Report

Client Sample Name: **Ars - B.G. #1**

Matrix: Soil

Collection Date: 8/2/2012 9:41:00AM

The following test was conducted by: Energy Laboratories

Lab Sample Number: B1208016-01A

Analysis Date:

Prep Date:

Instrument:

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

File Name:

Prep Method ID:

Dilution Factor:

Prep Batch Number: T120816019

Percent Moisture

Report Basis: As Received

Analyst Initials:

Sample prep wt./vol:

Prep Extract Vol: ml

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

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Report Section: Client Sample Report

Client Sample Name: **Ars - B.G. #2**

Matrix: Soil

Collection Date: 8/2/2012 9:49:00AM

The following test was conducted by: Energy Laboratories

Lab Sample Number: B1208016-02A

Analysis Date:

Prep Date:

Instrument:

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

File Name:

Prep Method ID:

Dilution Factor:

Prep Batch Number: T120816019

Percent Moisture

Report Basis: As Received

Analyst Initials:

Sample prep wt./vol:

Prep Extract Vol: ml

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

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Report Section: Client Sample Report

Client Sample Name: **Ars - B.G. #3**

Matrix: Soil

Collection Date: 8/2/2012 9:58:00AM

The following test was conducted by: Energy Laboratories

Lab Sample Number: B1208016-03A

Analysis Date:

Prep Date:

Instrument:

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

File Name:

Prep Method ID:

Dilution Factor:

Prep Batch Number: T120816019

Percent Moisture

Report Basis: As Received

Analyst Initials:

Sample prep wt./vol:

Prep Extract Vol: ml

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

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Report Section: Client Sample Report

Client Sample Name: **CSP - Comp**

Matrix: Soil

Collection Date: 8/2/2012 10:10:00AM

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1208016-04C	Analysis Date:	8/16/2012 6:43:11PM
Prep Date:	8/10/2012	Instrument:	GC_E
Analytical Method ID:	SVOC by GC/FID via method 8015B - DRO	File Name:	12081612.D
Prep Method ID:	3550B	Dilution Factor:	10
Prep Batch Number:	T120810018	Percent Moisture	5.61
Report Basis:	Dry Weight Basis	Analyst Initials:	kh
Sample prep wt./vol:	29.96 g	Prep Extract Vol:	3.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Diesel Range Organics	n/a	**4,800**		mg/Kg	160	46	2

Surrogate	CASNo	Result	Flags	Units	PQL	MDL	Spike	% Recov	LCL	UCL	run #:
o-Terphenyl	84-15-1	**ND**		mg/Kg	11	8.3	1.8	**99.6**	50	150	2 DIL

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1208016-04C	Analysis Date:	8/16/2012 3:44:00PM
Prep Date:	8/10/2012	Instrument:	MS1BNA
Analytical Method ID:	SW8270C - Semivolatile Organics by GC/MS - PAH	File Name:	12081610.D
Prep Method ID:	3550B	Dilution Factor:	1
Prep Batch Number:	T120810017	Percent Moisture	5.61
Report Basis:	Dry Weight Basis	Analyst Initials:	kh
Sample prep wt./vol:	30.05 g	Prep Extract Vol:	3.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Acenaphthene	83-32-9	**ND**		ug/Kg	260	40	2
Acenaphthylene	208-96-8	**ND**		ug/Kg	260	44	
Anthracene	120-12-7	**ND**		ug/Kg	520	87	
Benzo(a)anthracene	56-55-3	**ND**		ug/Kg	520	93	
Benzo(a)pyrene	50-32-8	**ND**		ug/Kg	520	76	
Benzo(b)fluoranthene	205-99-2	**ND**		ug/Kg	520	75	
Benzo(g,h,i)perylene	191-24-2	**ND**		ug/Kg	520	74	
Benzo(k)fluoranthene	207-08-9	**ND**		ug/Kg	520	90	
Chrysene	218-01-9	**ND**		ug/Kg	520	120	
Dibenzo(a,h)anthracene	53-70-3	**ND**		ug/Kg	520	71	
Fluoranthene	206-44-0	**ND**		ug/Kg	520	97	
Fluorene	86-73-7	**ND**		ug/Kg	520	79	
Indeno(1,2,3-cd)pyrene	193-39-5	**ND**		ug/Kg	260	73	
Naphthalene	91-20-3	**ND**		ug/Kg	260	31	
Phenanthrene	85-01-8	**ND**		ug/Kg	520	85	
Pyrene	129-00-0	**ND**		ug/Kg	520	170	

Surrogate	CASNo	Result	Flags	Units	PQL	MDL	Spike	% Recov	LCL	UCL	run #:
2-Fluorobiphenyl	321-60-8	**4,100**		ug/Kg	260	32	3,500	**117**	36	121	2
D14-Terphenyl	92-94-4D	**3,700**		ug/Kg	260	32	3,500	**104**	30	134	
D5-Nitrobenzene	98-95-3D	**3,800**		ug/Kg	260	39	3,500	**107**	30	122	

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Report Section: Client Sample Report

Client Sample Name: **CSP - Comp**

Matrix: Soil

Collection Date: 8/2/2012 10:10:00AM

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1208016-04E	Analysis Date:	8/16/2012 4:00:00PM
Prep Date:	8/16/2012	Instrument:	N/A
Analytical Method ID:	Sodium Absorption Ratio	File Name:	
Prep Method ID:		Dilution Factor:	1
Prep Batch Number:	T120816018	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 #:
Sodium Absorption Ratio	SAR	**0.12**		%	0.010	0.010	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1208016-04E	Analysis Date:	8/15/2012 3:52:23PM
Prep Date:	8/14/2012	Instrument:	ICP_2
Analytical Method ID:	SW6010B - ICP - Total	File Name:	081512
Prep Method ID:	3050B	Dilution Factor:	1
Prep Batch Number:	T120814003	Percent Moisture	5.61
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	**850**		mg/Kg	0.42	0.033	1
Boron	7440-42-8	**ND**		mg/Kg	5.3	0.71	
Cadmium	7440-43-9	**ND**		mg/Kg	0.84	0.061	
Chromium	7440-47-3	**17**		mg/Kg	2.1	0.31	
Copper	7440-50-8	**45**		mg/Kg	0.63	0.17	
Lead	7439-92-1	**14**		mg/Kg	6.3	1.1	
Nickel	7440-02-0	**18**		mg/Kg	4.2	0.45	
Selenium	7784-49-2	**ND**		mg/Kg	11	2.6	
Silver	7440-22-4	**ND**		mg/Kg	1.6	0.16	
Zinc	7440-66-6	**290**		mg/Kg	0.63	0.23	

The following test was conducted by: Energy Laboratories

Lab Sample Number:	B1208016-04A	Analysis Date:	
Prep Date:		Instrument:	
Analytical Method ID:	Chromium, Hexavalent (Colorimetric) - Cr(VI)	File Name:	
Prep Method ID:	3060A	Dilution Factor:	
Prep Batch Number:	T120816020	Percent Moisture	
Report Basis:	As Received	Analyst Initials:	
Sample prep wt./vol:		Prep Extract Vol:	ml

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

The following test was conducted by: Energy Laboratories

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Report Section: Client Sample Report

Client Sample Name: **CSP - Comp**

Matrix: Soil

Collection Date: 8/2/2012 10:10:00AM

Lab Sample Number: B1208016-04A
Analysis Date:
Prep Date:
Instrument:
Analytical Method ID: SW6020 - ICPMS - Low Level Metals - Sol
File Name:
Prep Method ID:
Dilution Factor:
Prep Batch Number: T120816019
Percent Moisture
Report Basis: As Received
Analyst Initials:
Sample prep wt./vol:
Prep Extract Vol: ml

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

The following test was conducted by: ChemSolutions

Lab Sample Number: B1208016-04B
Analysis Date:
Prep Date:
Instrument:
Analytical Method ID: SW8260B - VOCs by GC/MS - SC
File Name:
Prep Method ID:
Dilution Factor:
Prep Batch Number: T120816019
Percent Moisture
Report Basis: As Received
Analyst Initials:
Sample prep wt./vol:
Prep Extract Vol: ml

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

The following test was conducted by: Energy Laboratories

Lab Sample Number: B1208016-04A
Analysis Date:
Prep Date:
Instrument:
Analytical Method ID: SW7471A - Mercury in Solid or Semisolid Waste by CVAA - Total M
File Name:
Prep Method ID:
Dilution Factor:
Prep Batch Number: T120816021
Percent Moisture
Report Basis: As Received
Analyst Initials:
Sample prep wt./vol:
Prep Extract Vol: ml

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

The following test was conducted by: Analytica - Thornton

Lab Sample Number: B1208016-04D
Analysis Date: 8/6/2012 4:03:00PM
Prep Date: 8/6/2012
Instrument: GC_B
Analytical Method ID: VOC by GC/FID via method 8015B - GRO
File Name: 12080607.D
Prep Method ID: 5030B
Dilution Factor: 1
Prep Batch Number: T120807013
Percent Moisture 5.61
Report Basis: Dry Weight Basis
Analyst Initials: RA
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	**8,100**		ug/Kg	210	28	1

Surrogate	CASNo	Result	Flags	Units	PQL	MDL	Spike	% Recov	LCL	UCL	run #:

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Report Section: Client Sample Report

Client Sample Name: **CSP - Comp**

Matrix: Soil

Collection Date: 8/2/2012 10:10:00AM

Lab Sample Number:	B1208016-04D	Analysis Date:	8/6/2012 4:03:00PM
Prep Date:	8/6/2012	Instrument:	GC_B
Analytical Method ID:	VOC by GC/FID via method 8015B - GRO	File Name:	12080607.D
Prep Method ID:	5030B	Dilution Factor:	1
Prep Batch Number:	T120807013	Percent Moisture	5.61
Report Basis:	Dry Weight Basis	Analyst Initials:	RA
Sample prep wt./vol:	5.00 g	Prep Extract Vol:	5.00 ml

p-Bromofluorobenzene	460-00-4	**30**	ug/Kg	3.2	1.1	29	**106**	50	150	1	

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1208016-04E	Analysis Date:	8/17/2012 9:38:59AM
Prep Date:	8/17/2012	Instrument:	calc
Analytical Method ID:	SM3500-CrD - Chromium, Colorimetric Method - Total Cr(III) cal	File Name:	
Prep Method ID:	3500-CrD	Dilution Factor:	1
Prep Batch Number:	T120817006	Percent Moisture	
Report Basis:	As Received	Analyst Initials:	kl
Sample prep wt./vol:	1.00 ml	Prep Extract Vol:	1.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Chromium, Trivalent	16065-83-1	**17**		mg/L	0.010	0.0020	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1208016-04E	Analysis Date:	8/14/2012 4:30:00PM
Prep Date:	8/14/2012	Instrument:	Probe
Analytical Method ID:	Specific Conductance - Cond.	File Name:	
Prep Method ID:	9050A	Dilution Factor:	1
Prep Batch Number:	T120815002	Percent Moisture	
Report Basis:	As Received	Analyst Initials:	CK
Sample prep wt./vol:	40.06 g	Prep Extract Vol:	40.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Conductance		**380**		umhos/cm	5.0	1.00	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	B1208016-04E	Analysis Date:	8/14/2012 4:10:00PM
Prep Date:	8/14/2012	Instrument:	Probe
Analytical Method ID:	Corrosivity in Waste by pH - pH	File Name:	
Prep Method ID:	9045B	Dilution Factor:	1
Prep Batch Number:	T120815001	Percent Moisture	
Report Basis:	As Received	Analyst Initials:	TA
Sample prep wt./vol:	10.06 g	Prep Extract Vol:	10.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
pH		**8.4**		pH	0.099	0.099	1

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Report Section: Method Blank Report

Client Sample Name: **MB**

Matrix: Solid

Collection Date: 8/10/2012 4:18:00PM

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	T120810018-MB	Analysis Date:	8/16/2012 2:39:36PM
Prep Date:	8/10/2012	Instrument:	GC_E
Analytical Method ID:	SVOC by GC/FID via method 8015B - DRO	File Name:	12081607.D
Prep Method ID:	3550B	Dilution Factor:	1
Prep Batch Number:	T120810018	Percent Moisture	NA
Report Basis:	As Received	Analyst Initials:	kh
Sample prep wt./vol:	29.96 g	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	**77.4**	50	150	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number:	T120810017-MB	Analysis Date:	8/16/2012 12:53:00PM
Prep Date:	8/10/2012	Instrument:	MS1BNA
Analytical Method ID:	SW8270C - Semivolatile Organics by GC/MS - PAH	File Name:	12081605.D
Prep Method ID:	3550B	Dilution Factor:	1
Prep Batch Number:	T120810017	Percent Moisture	NA
Report Basis:	As Received	Analyst Initials:	kh
Sample prep wt./vol:	29.97 g	Prep Extract Vol:	1.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Acenaphthene	83-32-9	**ND**		ug/Kg	83	13	1
Acenaphthylene	208-96-8	**ND**		ug/Kg	83	14	
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(g,h,i)perylene	191-24-2	**ND**		ug/Kg	160	23	
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	23	
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	9.9	
Phenanthrene	85-01-8	**ND**		ug/Kg	160	27	
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	**2,100**		ug/Kg	83	10.0	3,300	**62.4**	36	121	1
D14-Terphenyl	92-94-4D	**4,300**		ug/Kg	83	10.0	3,300	**128**	30	134	
D5-Nitrobenzene	98-95-3D	**1,900**		ug/Kg	83	12	3,300	**58.2**	30	122	

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Report Section: Method Blank Report

Client Sample Name: **MB**

Matrix: Solid

Collection Date: 8/10/2012 4:29:00PM

The following test was conducted by: Analytica - Thornton

Lab Sample Number: T120814003-MB
Prep Date: 8/14/2012
Analytical Method ID: SW6010B - ICP - Total
Prep Method ID: 3050B
Prep Batch Number: T120814003
Report Basis: As Received
Sample prep wt./vol: 50.00 ml

Analysis Date: 8/15/2012 3:11:13PM
Instrument: ICP_2
File Name: 081512
Dilution Factor: 1
Percent Moisture NA
Analyst Initials: TE
Prep Extract Vol: 50.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:
Barium	7440-39-3	**ND**		mg/Kg	0.0040	0.00031	1
Boron	7440-42-8	**ND**		mg/Kg	0.050	0.0067	
Cadmium	7440-43-9	**ND**		mg/Kg	0.0080	0.00058	
Chromium	7440-47-3	**ND**		mg/Kg	0.020	0.0030	
Copper	7440-50-8	**ND**		mg/Kg	0.0060	0.0016	
Lead	7439-92-1	**ND**		mg/Kg	0.060	0.011	
Nickel	7440-02-0	**ND**		mg/Kg	0.040	0.0043	
Selenium	7784-49-2	**ND**		mg/Kg	0.10	0.025	
Silver	7440-22-4	**ND**		mg/Kg	0.015	0.0015	
Zinc	7440-66-6	**ND**		mg/Kg	0.0060	0.0022	

The following test was conducted by: Analytica - Thornton

Lab Sample Number: T120807013-MB
Prep Date: 8/6/2012
Analytical Method ID: VOC by GC/FID via method 8015B - GRO
Prep Method ID: 5030B
Prep Batch Number: T120807013
Report Basis: As Received
Sample prep wt./vol: 5.00 g

Analysis Date: 8/6/2012 2:25:00PM
Instrument: GC_B
File Name: 12080604.D
Dilution Factor: 1
Percent Moisture NA
Analyst Initials: RA
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	**30**		ug/Kg	3.0	1.0	27	**112**	50	150	1

The following test was conducted by: Analytica - Thornton

Lab Sample Number: T120815002-MB
Prep Date: 8/14/2012
Analytical Method ID: Specific Conductance - Cond.
Prep Method ID: 9050A
Prep Batch Number: T120815002
Report Basis: As Received
Sample prep wt./vol: 40.00 g

Analysis Date: 8/14/2012 4:30:00PM
Instrument: Probe
File Name:
Dilution Factor: 1
Percent Moisture NA
Analyst Initials: CK
Prep Extract Vol: 40.00 ml

Analyte	CASNo	Result	Flags	Units	PQL	MDL	run #:

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Report Section: Method Blank Report

Client Sample Name: **MB**

Matrix: Solid

Collection Date: 8/14/2012 4:30:00PM

Lab Sample Number:	T120815002-MB	Analysis Date:	8/14/2012 4:30:00PM
Prep Date:	8/14/2012	Instrument:	Probe
Analytical Method ID:	Specific Conductance - Cond.	File Name:	
Prep Method ID:	9050A	Dilution Factor:	1
Prep Batch Number:	T120815002	Percent Moisture	NA
Report Basis:	As Received	Analyst Initials:	CK
Sample prep wt./vol:	40.00 g	Prep Extract Vol:	40.00 ml

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

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado

Workorder (SDG): B1208016

Project: Sulphur Gulch

Project Number:

Prep Batch: **T120810018**

QUALITY CONTROL REPORT

LCS REPORT

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

MB: T120810018-MB

Prep Date: 8/10/2012

MB Anal. Date: 8/16/2012 2:39:36PM

Units: mg/Kg

LCS Anal. Date: 8/16/2012 3:28:16PM

Matrix: Solid

Analyte Name	SampResult	LCSRes.	SPLev	Recov.	Recov Lim	RPDLim	Flag
Diesel Range Organics	ND	53.7	66.6	80.7	75 - 125		

MS/MSD REPORT

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

Parent: B1208016-04C

Prep Date: 8/10/2012

Samp. Anal. Date: 8/16/2012 6:43:11PM

Units: mg/Kg

MS Anal. Date: 8/16/2012 8:21:11PM MSD Anal. Date: 8/16/2012 9:59:14PM

Matrix: Soil

Analyte Name	SampResult	MSRes.	MSDRes	SPLev	SPDLev	Recov.	MSD Rec.	RPD	Recov Lim	RPDLim	Flag
Diesel Range Organics	4,790	4,890	3,830	70.7	70.6	141.4	-1,359.6	24.3	50 - 129	20	*NOTE 2* *NOTE 2* *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 signifcance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado

Workorder (SDG): B1208016

Project: Sulphur Gulch

Project Number:

Prep Batch: **T120810017**

QUALITY CONTROL REPORT

LCS REPORT

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

MB: T120810017-MB

Prep Date: 8/10/2012

MB Anal. Date: 8/16/2012 12:53:00PM

Units: ug/Kg

LCS Anal. Date: 8/16/2012 7:11:00PM

Matrix: Solid

Analyte Name	SampResult	LCSRes.	SPLev	Recov.	Recov Lim	RPDLim	Flag
Naphthalene	ND	1,090	1,670	65.3	45 - 136		
Acenaphthylene	ND	280	1,670	16.8	48 - 133		low
Acenaphthene	ND	1,230	1,670	73.7	43 - 122		
Fluorene	ND	1,350	1,670	80.9	58 - 130		
Phenanthrene	ND	1,540	1,670	92.3	54 - 140		
Anthracene	ND	1,560	1,670	93.5	59 - 131		
Fluoranthene	ND	1,290	1,670	77.3	51 - 140		
Pyrene	ND	1,910	1,670	114.4	40 - 127		
Benzo(a)anthracene	ND	1,610	1,670	96.5	58 - 118		
Chrysene	ND	1,550	1,670	92.9	55 - 139		
Benzo(b)fluoranthene	ND	1,700	1,670	101.9	41 - 133		
Benzo(k)fluoranthene	ND	1,370	1,670	82.1	49 - 138		
Benzo(a)pyrene	ND	1,460	1,670	87.5	40 - 138		
Indeno(1,2,3-cd)pyrene	ND	1,650	1,670	98.9	48 - 125		
Dibenzo(a,h)anthracene	ND	1,650	1,670	98.9	50 - 129		
Benzo(g,h,i)perylene	ND	1,640	1,670	98.3	50 - 125		

MS/MSD REPORT

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

Parent: B1208016-04C

Prep Date: 8/10/2012

Samp. Anal. Date: 8/16/2012 3:44:00PM

Units: ug/Kg

MS Anal. Date: 8/16/2012 4:53:00PM MSD Anal. Date: 8/16/2012 6:02:00PM

Matrix: Soil

Analyte Name	SampResult	MSRes.	MSDRes	SPLev	SPDLev	Recov.	MSD Rec.	RPD	Recov Lim	RPDLim	Flag
Naphthalene	ND	1,700	1,810	1,770	1,770	96.2	102.3	6.3	45 - 136	40	
Acenaphthylene	ND	472	492	1,770	1,770	26.7	27.8	4.1	48 - 133	40	*lowMS lowMSD*
Acenaphthene	ND	1,860	1,970	1,770	1,770	105.2	111.4	5.7	43 - 122	40	
Fluorene	ND	1,790	2,010	1,770	1,770	101.3	113.6	11.6	58 - 130	40	
Phenanthrene	ND	1,850	1,880	1,770	1,770	104.7	106.3	1.6	54 - 140	40	
Anthracene	ND	1,870	2,020	1,770	1,770	105.8	114.2	7.7	59 - 131	40	

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado

Workorder (SDG): B1208016

Project: Sulphur Gulch

Project Number:

Prep Batch: **T120810017**

QUALITY CONTROL REPORT

MS/MSD REPORT

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

Parent: B1208016-04C

Prep Date: 8/10/2012

Samp. Anal. Date: 8/16/2012 3:44:00PM

Units: ug/Kg

MS Anal. Date: 8/16/2012 4:53:00PM MSD Anal. Date: 8/16/2012 6:02:00PM

Matrix: Soil

Analyte Name	SampResult	MSRes.	MSDRes	SPLev	SPDLev	Recov.	MSD Rec.	RPD	Recov Lim	RPDLim	Flag	
Fluoranthene	ND	1,220	1,650	1,770	1,770	69.0	93.3	30.0	51 - 140	40		
Pyrene	ND	2,250	1,800	1,770	1,770	127.3	101.8	22.2	46 - 135	40		
Benzo(a)anthracene	ND	1,840	3,960	1,770	1,770	104.1	223.9	73.1	58 - 118	40	*highMSD*	*RPD*
Chrysene	ND	1,970	3,770	1,770	1,770	111.5	213.1	62.7	55 - 139	40	*highMSD*	*RPD*
Benzo(b)fluoranthene	ND	1,690	3,640	1,770	1,770	95.6	205.8	73.2	41 - 133	40	*highMSD*	*RPD*
Benzo(k)fluoranthene	ND	1,530	2,270	1,770	1,770	86.6	128.3	38.9	49 - 138	40		
Benzo(a)pyrene	ND	1,520	2,180	1,770	1,770	86.0	123.3	35.7	40 - 138	40		
Indeno(1,2,3-cd)pyrene	ND	2,040	3,330	1,770	1,770	115.4	188.3	48.0	48 - 125	40	*highMSD*	*RPD*
Dibenzo(a,h)anthracene	ND	1,790	2,710	1,770	1,770	101.3	153.2	40.9	50 - 129	40	*highMSD*	*RPD*
Benzo(g,h,i)perylene	ND	1,840	2,110	1,770	1,770	104.1	119.3	13.7	50 - 125	40		

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 signifcance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado

Workorder (SDG): B1208016

Project: Sulphur Gulch

Project Number:

Prep Batch: **T120814003**

QUALITY CONTROL REPORT

LCS REPORT

Analysis: SW6010B - ICP - Total

MB: T120814003-MB

Prep Date: 8/14/2012

MB Anal. Date: 8/15/2012 3:11:13PM

Units: mg/Kg

LCS Anal. Date: 8/15/2012 3:43:10PM

Matrix: Solid

Analyte Name	SampResult	LCSRes.	SPLev	Recov.	Recov Lim	RPDLim	Flag
Barium	ND	2.00	2.00	100.0	70 - 130		
Boron	ND	0.503	0.500	100.6	70 - 130		
Cadmium	ND	0.0410	0.0500	82.0	70 - 130		
Chromium	ND	0.202	0.200	101.0	70 - 130		
Copper	ND	0.248	0.250	99.2	70 - 130		
Lead	ND	0.488	0.500	97.6	70 - 130		
Nickel	ND	0.487	0.500	97.4	70 - 130		
Selenium	ND	2.05	2.00	102.5	70 - 130		
Silver	ND	0.257	0.250	102.8	70 - 130		
Zinc	ND	0.497	0.500	99.4	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 signifcance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado

Workorder (SDG): B1208016

Project: Sulphur Gulch

Project Number:

Prep Batch: **T120808011**

QUALITY CONTROL REPORT

SAMPLE DUPLICATE REPORT

Analysis: ASTM D2216 - Pmoist

Base Sample: B1208016-04C
Prep Date: 8/8/2012

Samp. Anal. Date: 8/9/2012 9:50:06AM

DUP Anal. Date: 8/9/2012 9:50:06AM

Units: %

Matrix: Soil

Analyte Name	SampResult	DUPRes.	RPD	RPDLim	Flag
Moisture	5.61	9.55	52.0	20	OUT

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 signifcance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado

Workorder (SDG): B1208016

Project: Sulphur Gulch

Project Number:

Prep Batch: **T120807013**

QUALITY CONTROL REPORT

LCS REPORT

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

MB: T120807013-MB

Prep Date: 8/6/2012

MB Anal. Date: 8/6/2012 2:25:00PM

Units: ug/Kg

LCS Anal. Date: 8/6/2012 2:58:00PM

Matrix: Solid

Analyte Name	SampResult	LCSRes.	SPLev	Recov.	Recov Lim	RPDLim	Flag
Gasoline Range Organics	ND	550	500	110.0	60 - 118		

MS/MSD REPORT

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

Parent: B1208016-04D

Prep Date: 8/6/2012

Samp. Anal. Date: 8/6/2012 4:03:00PM

Units: ug/Kg

MS Anal. Date: 8/6/2012 4:36:00PM MSD Anal. Date: 8/6/2012 5:09:00PM

Matrix: Soil

Analyte Name	SampResult	MSRes.	MSDRes	SPLev	SPDLev	Recov.	MSD Rec.	RPD	Recov Lim	RPDLim		Flag
Gasoline Range Organics	8,050	2,570	5,680	530	530	-1,034.5	-447.4	75.4	50 - 138	20	*NOTE 2*	*NOTE 2*	*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 signifcance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

Tests Run at: Analytica Environmental Laboratories - Thornton, Colorado

Workorder (SDG): B1208016

Project: Sulphur Gulch

Project Number:

QUALITY CONTROL REPORT

Prep Batch: **T120815001**

SAMPLE DUPLICATE REPORT

Analysis: Corrosivity in Waste by pH - pH

Base Sample: B1208016-04E

Prep Date: 8/14/2012

Samp. Anal. Date: 8/14/2012 4:10:00PM

Units: pH

DUP Anal. Date: 8/14/2012 4:10:00PM

Matrix: Soil

Analyte Name	SampResult	DUPRes.	RPD	RPDLim	Flag
pH	8.38	8.45	0.8	35	

Prep Batch: **T120815002**

LCS REPORT

Analysis: Specific Conductance - Cond.

MB: T120815002-MB

Prep Date: 8/14/2012

MB Anal. Date: 8/14/2012 4:30:00PM

Units: umhos/cm

LCS Anal. Date: 8/14/2012 4:30:00PM

Matrix: Solid

Analyte Name	SampResult	LCSRes.	SPLev	Recov.	Recov Lim	RPDLim	Flag
Conductance	ND	158	147	107.5	80 - 120		

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 signifcance. Otherwise it indicates that a matrix bias may exist at the analytical step.

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

SURROGATE RECOVERY SUMMARY REPORT

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

Lab Sample #: B1208016-04C | Dilution: 1
Analysis Date: 8/16/2012 5:54:33PM | Client Sample: **CSP - Comp**
Batch Number: T120810018 | Data File: 12081611.D

AnalyteName	SSRecov	LCL	UCL	SSFlag		Result Status
o-Terphenyl	384	50	150	HIGH		Rrun

Lab Sample #: B1208016-04C | Dilution: 10
Analysis Date: 8/16/2012 6:43:11PM | Client Sample: **CSP - Comp**
Batch Number: T120810018 | Data File: 12081612.D

AnalyteName	SSRecov	LCL	UCL	SSFlag		Result Status
o-Terphenyl	100	50	150		DILUTED OUT	Complete

Lab Sample #: T120810018-MB | Dilution: 1
Analysis Date: 8/16/2012 2:39:36PM | Client Sample: **MB**
Batch Number: T120810018 | Data File: 12081607.D

AnalyteName	SSRecov	LCL	UCL	SSFlag		Result Status
o-Terphenyl	77	60	120			Complete

Lab Sample #: T120810018-LCS | Dilution: 1
Analysis Date: 8/16/2012 3:28:16PM | Client Sample: **LCS**
Batch Number: T120810018 | Data File: 12081608.D

AnalyteName	SSRecov	LCL	UCL	SSFlag		Result Status
o-Terphenyl	88	60	120			Complete

Lab Sample #: B1208016-04C-MS | Dilution: 1
Analysis Date: 8/16/2012 7:32:14PM | Client Sample: **MS**
Batch Number: T120810018 | Data File: 12081613.D

AnalyteName	SSRecov	LCL	UCL	SSFlag		Result Status
o-Terphenyl	496	50	150	HIGH		Rrun

Lab Sample #: B1208016-04C-MS | Dilution: 10
Analysis Date: 8/16/2012 8:21:11PM | Client Sample: **MS**
Batch Number: T120810018 | Data File: 12081614.D

AnalyteName	SSRecov	LCL	UCL	SSFlag		Result Status
o-Terphenyl	100	50	150		DILUTED OUT	Complete

Lab Sample #: B1208016-04C-MSD | Dilution: 1
Analysis Date: 8/16/2012 9:10:17PM | Client Sample: **MSD**
Batch Number: T120810018 | Data File: 12081615.D

AnalyteName	SSRecov	LCL	UCL	SSFlag		Result Status
o-Terphenyl	371	50	150	HIGH		Rrun

Lab Sample #: B1208016-04C-MSD | Dilution: 10
Analysis Date: 8/16/2012 9:59:14PM | Client Sample: **MSD**
Batch Number: T120810018 | Data File: 12081616.D

AnalyteName	SSRecov	LCL	UCL	SSFlag		Result Status
o-Terphenyl	92	50	150		DILUTED OUT	Complete

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

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

Lab Sample #: B1208016-04D | Dilution: 1
Analysis Date: 8/6/2012 4:03:00PM | Client Sample: **CSP - Comp**
Batch Number: T120807013 | Data File: 12080607.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
p-Bromofluorobenzene	106	50	150		Complete

Lab Sample #: T120807013-MB | Dilution: 1
Analysis Date: 8/6/2012 2:25:00PM | Client Sample: **MB**
Batch Number: T120807013 | Data File: 12080604.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
p-Bromofluorobenzene	112	63	130		Complete

Lab Sample #: T120807013-LCS | Dilution: 1
Analysis Date: 8/6/2012 2:58:00PM | Client Sample: **LCS**
Batch Number: T120807013 | Data File: 12080605.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
p-Bromofluorobenzene	107	63	130		Complete

Lab Sample #: B1208016-04D-MS | Dilution: 1
Analysis Date: 8/6/2012 4:36:00PM | Client Sample: **MS**
Batch Number: T120807013 | Data File: 12080608.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
p-Bromofluorobenzene	98	50	150		Complete

Lab Sample #: B1208016-04D-MSD | Dilution: 1
Analysis Date: 8/6/2012 5:09:00PM | Client Sample: **MSD**
Batch Number: T120807013 | Data File: 12080609.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
p-Bromofluorobenzene	98	50	150		Complete

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

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

Lab Sample #: B1208016-04C | Dilution: 10
Analysis Date: 8/16/2012 3:10:00PM | Client Sample: **CSP - Comp**
Batch Number: T120810017 | Data File: 12081609.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
2-Fluorobiphenyl	119	36	121		Rrun
D14-Terphenyl	131	30	134		Rrun
D5-Nitrobenzene	86	30	122		Rrun

Lab Sample #: B1208016-04C | Dilution: 1
Analysis Date: 8/16/2012 3:44:00PM | Client Sample: **CSP - Comp**
Batch Number: T120810017 | Data File: 12081610.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
2-Fluorobiphenyl	117	36	121		Complete
D14-Terphenyl	104	30	134		Complete
D5-Nitrobenzene	107	30	122		Complete

Lab Sample #: T120810017-MB | Dilution: 1
Analysis Date: 8/16/2012 12:53:00PM | Client Sample: **MB**
Batch Number: T120810017 | Data File: 12081605.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
2-Fluorobiphenyl	62	36	121		Complete
D14-Terphenyl	128	30	134		Complete
D5-Nitrobenzene	58	30	122		Complete

Lab Sample #: T120810017-LCS | Dilution: 1
Analysis Date: 8/16/2012 1:27:00PM | Client Sample: **LCS**
Batch Number: T120810017 | Data File: 12081606.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
2-Fluorobiphenyl	76	36	121		Rrun
D14-Terphenyl	102	30	134		Rrun
D5-Nitrobenzene	68	30	122		Rrun

Lab Sample #: T120810017-LCS | Dilution: 1
Analysis Date: 8/16/2012 7:11:00PM | Client Sample: **LCS**
Batch Number: T120810017 | Data File: 12081616.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
2-Fluorobiphenyl	60	36	121		Complete
D14-Terphenyl	102	30	134		Complete
D5-Nitrobenzene	55	30	122		Complete

Lab Sample #: B1208016-04C-MS | Dilution: 10
Analysis Date: 8/16/2012 4:19:00PM | Client Sample: **MS**
Batch Number: T120810017 | Data File: 12081611.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
2-Fluorobiphenyl	116	36	121		Rrun
D14-Terphenyl	132	30	134		Rrun
D5-Nitrobenzene	91	30	122		Rrun

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

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

Lab Sample #: B1208016-04C-MS | Dilution: 1
Analysis Date: 8/16/2012 4:53:00PM | Client Sample: **MS**
Batch Number: T120810017 | Data File: 12081612.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
2-Fluorobiphenyl	112	36	121		Complete
D14-Terphenyl	106	30	134		Complete
D5-Nitrobenzene	98	30	122		Complete

Lab Sample #: B1208016-04C-MSD | Dilution: 10
Analysis Date: 8/16/2012 5:27:00PM | Client Sample: **MSD**
Batch Number: T120810017 | Data File: 12081613.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
2-Fluorobiphenyl	125	36	121	HIGH	Rrun
D14-Terphenyl	133	30	134		Rrun
D5-Nitrobenzene	95	30	122		Rrun

Lab Sample #: B1208016-04C-MSD | Dilution: 1
Analysis Date: 8/16/2012 6:02:00PM | Client Sample: **MSD**
Batch Number: T120810017 | Data File: 12081614.D

AnalyteName	SSRecov	LCL	UCL	SSFlag	Result Status
2-Fluorobiphenyl	109	36	121		Complete
D14-Terphenyl	92	30	134		Complete
D5-Nitrobenzene	109	30	122		Complete

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID: **140,641** **Lab Project Number:** **B1208016**

Prep Date: 8/6/2012

Lab Method Blank Id: T120807013-MB
Prep Batch ID: T120807013
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:

SampleNum	ClientSampleName	DataFile	AnalysisDate
T120807013-LCS	LCS	12080605.D	8/6/2012 2:58:00PM
B1208016-04D	CSP - Comp	12080607.D	8/6/2012 4:03:00PM
B1208016-04D-MS	MS	12080608.D	8/6/2012 4:36:00PM
B1208016-04D-MSD	MSD	12080609.D	8/6/2012 5:09:00PM

Prep Date: 8/8/2012

Lab Method Blank Id: T120808011-MB
Prep Batch ID: T120808011
Method: ASTM D2216 - Pmoist

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

SampleNum	ClientSampleName	DataFile	AnalysisDate
B1208016-04C	CSP - Comp		8/9/2012 9:50:06AM
B1208016-04C-DUP	DUP		8/9/2012 9:50:06AM

Prep Date: 8/10/2012

Lab Method Blank Id: T120810017-MB
Prep Batch ID: T120810017
Method: SW8270C - Semivolatile Organics by GC/MS - PAH

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

SampleNum	ClientSampleName	DataFile	AnalysisDate
B1208016-04C	CSP - Comp	12081610.D	8/16/2012 3:44:00PM
B1208016-04C-MS	MS	12081612.D	8/16/2012 4:53:00PM
B1208016-04C-MSD	MSD	12081614.D	8/16/2012 6:02:00PM
T120810017-LCS	LCS	12081616.D	8/16/2012 7:11:00PM

Detailed Analytical Report

Analytica Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

QC BATCH ASSOCIATIONS - BY METHOD BLANK

Lab Project ID: **140,641** **Lab Project Number:** **B1208016**

Prep Date: 8/10/2012

Lab Method Blank Id: T120810018-MB
Prep Batch ID: T120810018
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:

SampleNum	ClientSampleName	DataFile	AnalysisDate
T120810018-LCS	LCS	12081608.D	8/16/2012 3:28:16PM
B1208016-04C	CSP - Comp	12081612.D	8/16/2012 6:43:11PM
B1208016-04C-MS	MS	12081614.D	8/16/2012 8:21:11PM
B1208016-04C-MSD	MSD	12081616.D	8/16/2012 9:59:14PM

Prep Date: 8/14/2012

Lab Method Blank Id: T120814003-MB
Prep Batch ID: T120814003
Method: SW6010B - ICP - Total

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

SampleNum	ClientSampleName	DataFile	AnalysisDate
B1207164-04A	Batch QC	081512	8/15/2012 4:06:07PM
B1208016-04E	CSP - Comp	081512	8/15/2012 3:52:23PM
T120814003-LCS	LCS	081512	8/15/2012 3:43:10PM
B1207164-04A-DUP	DUP	081512	8/15/2012 4:10:42PM
B1207164-04A-MS	MS	081512	8/15/2012 4:15:17PM
B1207164-04A-MSD	MSD	081512	8/15/2012 4:19:52PM

Prep Date: 8/14/2012

Lab Method Blank Id: T120815002-MB
Prep Batch ID: T120815002
Method: Specific Conductance - Cond.

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

SampleNum	ClientSampleName	DataFile	AnalysisDate
B1208016-04E	CSP - Comp		8/14/2012 4:30:00PM
T120815002-LCS	LCS		8/14/2012 4:30:00PM
T120815002-LCSD	LCSD		8/14/2012 4:30:00PM

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 Environmental Laboratories, Inc.

Workorder (SDG): B1208016

Project: **Sulphur Gulch**

Client: **Maralex Resources, Inc.**

Client Project Number: **None**

REPORTING CONVENTIONS FOR THIS REPORT

B1208016

TestPkgName	Basis	# Sig Figs	Reporting Limit
3500-CrD/3500-CrD (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 (Solid) - Total Mercury (Hg) SC	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
8260B (Solid) - SC	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

August 16, 2012

Analytica Group Inc
12189 Pennsylvania St
Thornton, CO 80241

Workorder No.: B12080698

Project Name: Not Indicated

Energy Laboratories Inc Billings MT received the following 4 samples for Analytica Group Inc on 8/7/2012 for analysis.

Sample ID	Client Sample ID	Collect Date	Receive Date	Matrix	Test
B12080698-001	B1208016-01A	08/02/12 9:41	08/07/12	Soil	Metals by ICP/ICPMS, Total or Soluble Digestion, Total Metals
B12080698-002	B1208016-02A	08/02/12 9:49	08/07/12	Soil	Same As Above
B12080698-003	B1208016-03A	08/02/12 9:58	08/07/12	Soil	Same As Above
B12080698-004	B1208016-04A	08/02/12 10:10	08/07/12	Soil	Metals by ICP/ICPMS, Total or Soluble Chromium, Hexavalent Water Extraction for Hex Chromium Mercury in Solid By CVAA Moisture Moisture Prep Digestion, Total Metals Digestion, Mercury by CVAA Volatile Organics, Methanol Extraction 8260-Volatile Organic Compounds-BTEX

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:

LABORATORY ANALYTICAL REPORT

Prepared by Billings, MT Branch

Client: Analytica Group Inc
Project: Not Indicated
Lab ID: B12080698-001
Client Sample ID B1208016-01A

Report Date: 08/16/12
Collection Date: 08/02/12 09:41
DateReceived: 08/07/12
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, TOTAL - EPA SW846							
Arsenic	5.0	mg/kg		0.2		SW6020	08/11/12 15:41 / 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: B12080698-002
Client Sample ID B1208016-02A

Report Date: 08/16/12
Collection Date: 08/02/12 09:49
DateReceived: 08/07/12
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, TOTAL - EPA SW846							
Arsenic	4.3	mg/kg		0.2		SW6020	08/11/12 15:46 / 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: B12080698-003
Client Sample ID B1208016-03A

Report Date: 08/16/12
Collection Date: 08/02/12 09:58
DateReceived: 08/07/12
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
METALS, TOTAL - EPA SW846							
Arsenic	4.5	mg/kg		0.2		SW6020	08/11/12 15:51 / 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: B12080698-004
Client Sample ID B1208016-04A

Report Date: 08/16/12
Collection Date: 08/02/12 10:10
DateReceived: 08/07/12
Matrix: Soil

Analyses	Result	Units	Qualifiers	RL	MCL/ QCL	Method	Analysis Date / By
PHYSICAL CHARACTERISTICS							
Moisture	8.6	wt%		0.2		SW3550A	08/14/12 09:54 / amn
METALS, WATER EXTRACTABLE							
Chromium, Hexavalent - Soluble	ND	mg/kg		5		SW7196A	08/10/12 07:50 / mas
METALS, TOTAL - EPA SW846							
Arsenic	4.0	mg/kg		0.2		SW6020	08/11/12 15:56 / mas
Mercury	ND	mg/kg		1		SW7471A	08/14/12 18:51 / jlw
VOLATILE ORGANIC COMPOUNDS							
Benzene	ND	mg/kg		0.20		SW8260B	08/15/12 16:10 / jrj
Ethylbenzene	ND	mg/kg		0.20		SW8260B	08/15/12 16:10 / jrj
Toluene	ND	mg/kg		0.20		SW8260B	08/15/12 16:10 / jrj
m+p-Xylenes	ND	mg/kg		0.20		SW8260B	08/15/12 16:10 / jrj
o-Xylene	ND	mg/kg		0.20		SW8260B	08/15/12 16:10 / jrj
Xylenes, Total	ND	mg/kg		0.20		SW8260B	08/15/12 16:10 / jrj
Surr: 1,2-Dichloroethane-d4	89.0	%REC		60-136		SW8260B	08/15/12 16:10 / jrj
Surr: Dibromofluoromethane	96.0	%REC		70-132		SW8260B	08/15/12 16:10 / jrj
Surr: p-Bromofluorobenzene	104	%REC		78-160		SW8260B	08/15/12 16:10 / jrj
Surr: Toluene-d8	116	%REC		75-138		SW8260B	08/15/12 16:10 / jrj

Report Definitions:
RL - Analyte reporting limit.
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
Project: Not Indicated

Report Date: 08/15/12
Work Order: B12080698

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW6020									Analytical Run: ICPMS203-B_120810A	
Sample ID: ICSA		Interference Check Sample A							08/10/12 12:43	
Arsenic		0.000125	mg/L	0.0010						
Sample ID: ICSAB		Interference Check Sample AB							08/10/12 12:48	
Arsenic		0.0107	mg/L	0.0010	107	70	130			
Sample ID: QCS		Initial Calibration Verification Standard							08/11/12 08:30	
Arsenic		0.0472	mg/L	0.0010	94	90	110			
Method: SW6020									Batch: 64465	
Sample ID: MB-64465		Method Blank				Run: ICPMS203-B_120810A			08/11/12 14:57	
Arsenic		0.2	mg/kg	0.02						
Sample ID: B12080765-002ADIL		Serial Dilution				Run: ICPMS203-B_120810A			08/11/12 16:30	
Arsenic		16.7	mg/kg-dry	5.2		0	0		20	N
Sample ID: LFB-64465		Laboratory Fortified Blank				Run: ICPMS203-B_120810A			08/11/12 16:35	
Arsenic		51.5	mg/kg	1.0	103	80	120			
Sample ID: SRM3-64465		Standard Reference Material				Run: ICPMS203-B_120810A			08/11/12 16:40	
Arsenic		296	mg/kg	1.0	86	72.3	106.4			
Sample ID: B12080765-002AMS3		Sample Matrix Spike				Run: ICPMS203-B_120810A			08/11/12 16:49	
Arsenic		2600	mg/kg-dry	1.1	103	75	125			
Sample ID: B12080765-002AMSD3		Sample Matrix Spike Duplicate				Run: ICPMS203-B_120810A			08/11/12 16:54	
Arsenic		2490	mg/kg-dry	1.1	103	75	125	4.4	20	
Method: SW6020									Batch: 64465	
Sample ID: MB-64465		Method Blank				Run: ICPMS203-B_120814A			08/14/12 21:08	
Arsenic		0.138	mg/kg	0.20						
Sample ID: B12080765-002APDS1		Post Digestion/Distillation Spike				Run: ICPMS203-B_120814A			08/14/12 22:07	
Arsenic		247	mg/kg-dry	1.0	102	70	130			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

N - The analyte concentration was not sufficiently high to calculate a RPD for the serial dilution test.

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Analytica Group Inc
Project: Not Indicated

Report Date: 08/15/12
Work Order: B12080698

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW7196A										Batch: 64496
Sample ID: MB-64496		Method Blank				Run: SPEC_120810A				08/10/12 07:50
Chromium, Hexavalent - Soluble		ND	mg/kg	0.1						
Sample ID: B12080769-002ADUP		Sample Duplicate				Run: SPEC_120810A				08/10/12 07:50
Chromium, Hexavalent - Soluble		ND	mg/kg	0.10					30	
Sample ID: B12080769-002ADUPM		Sample Matrix Spike				Run: SPEC_120810A				08/10/12 07:50
Chromium, Hexavalent - Soluble		0.469	mg/kg	0.10	123	70	130			
Sample ID: B12080769-002ADUPM		Sample Matrix Spike Duplicate				Run: SPEC_120810A				08/10/12 07:50
Chromium, Hexavalent - Soluble		0.481	mg/kg	0.10	127	70	130	2.5	20	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Analytica Group Inc
Project: Not Indicated

Report Date: 08/15/12
Work Order: B12080698

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW7471A									Analytical Run: HGCV201-B_120814B	
Sample ID: QCS		Initial Calibration Verification Standard							08/14/12 16:59	
Mercury		0.00213	mg/kg	1.0	106	90	110			
Method: SW7471A									Batch: 64594	
Sample ID: MB-64594		Method Blank				Run: HGCV201-B_120814B			08/14/12 18:44	
Mercury		ND	mg/kg	0.002						
Sample ID: SRM3-64594		Standard Reference Material				Run: HGCV201-B_120814B			08/14/12 18:46	
Mercury		4.86	mg/kg	1.0	98	70	130			
Sample ID: LFB-64594		Laboratory Fortified Blank				Run: HGCV201-B_120814B			08/14/12 18:49	
Mercury		11.2	mg/kg	1.0	112	85	115			
Sample ID: B12080698-004ADIL		Serial Dilution				Run: HGCV201-B_120814B			08/14/12 18:53	
Mercury		ND	mg/kg	1.0		0	0		20	
Sample ID: B12081104-001AMS3		Sample Matrix Spike				Run: HGCV201-B_120814B			08/14/12 19:38	
Mercury		12.7	mg/kg	1.0	118	80	120			
Sample ID: B12081104-001AMSD3		Sample Matrix Spike Duplicate				Run: HGCV201-B_120814B			08/14/12 19:41	
Mercury		11.9	mg/kg	1.0	111	80	120	6.5	30	

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

QA/QC Summary Report

Prepared by Billings, MT Branch

Client: Analytica Group Inc **Report Date:** 08/16/12

Project: Not Indicated **Work Order:** B12080698

Analyte	Count	Result	Units	RL	%REC	Low Limit	High Limit	RPD	RPDLimit	Qual
Method: SW8260B										Batch: 64596
Sample ID: lcs-64596	9	Laboratory Control Sample				Run: CS5972A.I_120814A				08/14/12 10:45
Benzene		1.10	mg/kg	0.20	110	70	127			
Ethylbenzene		1.21	mg/kg	0.20	121	74	136			
Toluene		1.22	mg/kg	0.20	122	73	137			
m+p-Xylenes		2.40	mg/kg	0.20	120	75	136			
o-Xylene		1.15	mg/kg	0.20	115	72	134			
Surr: 1,2-Dichloroethane-d4				0.20	90	60	136			
Surr: Dibromofluoromethane				0.20	96	70	132			
Surr: p-Bromofluorobenzene				0.20	101	78	160			
Surr: Toluene-d8				0.20	113	75	138			
Sample ID: mb-64596	10	Method Blank				Run: CS5972A.I_120814A				08/14/12 11:38
Benzene		ND	mg/kg	0.20						
Ethylbenzene		ND	mg/kg	0.20						
Toluene		ND	mg/kg	0.20						
m+p-Xylenes		ND	mg/kg	0.20						
o-Xylene		ND	mg/kg	0.20						
Xylenes, Total		ND	mg/kg	0.20						
Surr: 1,2-Dichloroethane-d4				0.20	92	60	136			
Surr: Dibromofluoromethane				0.20	99	70	132			
Surr: p-Bromofluorobenzene				0.20	105	78	160			
Surr: Toluene-d8				0.20	112	75	138			
Sample ID: b12080826-001ams	9	Sample Matrix Spike				Run: CS5972A.I_120814A				08/14/12 13:25
Benzene		1.17	mg/kg	0.20	117	70	127			
Ethylbenzene		1.26	mg/kg	0.20	126	74	136			
Toluene		1.25	mg/kg	0.20	125	73	137			
m+p-Xylenes		2.50	mg/kg	0.20	125	75	136			
o-Xylene		1.19	mg/kg	0.20	119	72	134			
Surr: 1,2-Dichloroethane-d4				0.20	91	60	136			
Surr: Dibromofluoromethane				0.20	97	70	132			
Surr: p-Bromofluorobenzene				0.20	99	78	160			
Surr: Toluene-d8				0.20	110	75	138			
Sample ID: b12080826-001amsd	9	Sample Matrix Spike Duplicate				Run: CS5972A.I_120814A				08/14/12 13:52
Benzene		1.30	mg/kg	0.20	130	70	127	10	20	S
Ethylbenzene		1.41	mg/kg	0.20	141	74	136	11	20	S
Toluene		1.39	mg/kg	0.20	139	73	137	11	20	S
m+p-Xylenes		2.79	mg/kg	0.20	140	75	136	11	20	S
o-Xylene		1.33	mg/kg	0.20	133	72	134	11	20	
Surr: 1,2-Dichloroethane-d4				0.20	92	60	136			
Surr: Dibromofluoromethane				0.20	98	70	132			
Surr: p-Bromofluorobenzene				0.20	103	78	160			
Surr: Toluene-d8				0.20	114	75	138			

Qualifiers:

RL - Analyte reporting limit.

ND - Not detected at the reporting limit.

S - Spike recovery outside of advisory limits.

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 B12080698

Login completed by: Randa Nees
Date Received: 8/7/2012
Reviewed by: BL2000\jklier
Received by: ser
Reviewed Date: 8/7/2012
Carrier name: FedEx

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:	3.4°C		
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: 140641-2

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

Standard TAT

PO# T1451

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

Client Identifier: **Ars - B.G. #1**

Analytica ID	Test Method	Method Description	Sample Da	Matrix	Comments
B1208016-01A	6020	Low Level Arsenic	8/2/2012 9:41	Soil	B12080698-001

Client Identifier: **Ars - B.G. #2**

Analytica ID	Test Method	Method Description	Sample Da	Matrix	Comments
B1208016-02A	6020	Low Level Arsenic	8/2/2012 9:49	Soil	002

Client Identifier: **Ars - B.G. #3**

Analytica ID	Test Method	Method Description	Sample Da	Matrix	Comments
B1208016-03A	6020	Low Level Arsenic	8/2/2012 9:58	Soil	003

Client Identifier: **CSP - Comp**

Analytica ID	Test Method	Method Description	Sample Da	Matrix	Comments
B1208016-04A	7471A	Total Mercury	8/2/2012 10:10	Soil	004
B1208016-04A	6020	Low Level Arsenic	8/2/2012 10:10	Soil	
B1208016-04A	7196_A	Hexachrome Hexavalent Chromium	8/2/2012 10:10	Soil	

Analytica Relinquished by:	Date/Time:	Received by:	Date/Time:
[signature]	8/6/12 16:00	Lydia Rain 9:25am	8/7/12
Relinquised by:	**Date/Time:**	**Received by:**	**Date/Time:**

ANALYTICA SUBCONTRACTOR CHAIN OF CUSTODY

COC Number: 140641-2

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

Standard TAT

PO # T14451

~~Testing Laboratory:~~
~~ChemSolutions~~
~~7388 South Revere Parkway~~
~~Centennial, CO 80112~~
~~phone: 303-771-5570~~

Energy Laboratories

Client Identifier: **CSP - Comp**

Analytica ID	Test Method	Method Description	Sample Da	Matrix	Comments
B1208016-04B	8260B	BTEX	8/2/2012 10:10	Soil	B12080698-004

Analytica Relinquised by:	Date/Time:	Received by:	Date/Time:
[illegible]	8/6/12 16:00	[illegible] 9:25am	8/7/12
Relinquised by:	**Date/Time:**	**Received by:**	**Date/Time:**

Fedex Express
3.4°C none

*Shipped In Two Coolers

ANALYTICA GROUP

Analytica Chain of Custody Form

5438 Shaune Drive, Juneau, AK 99801, (907) 780-6668, (907) 780-6670 fax
5761 Silverado Way, # N, Anchorage, AK 99518, (907) 258-2155, (907) 258-5634 fax
3330 Industrial Ave, Fairbanks, AK 99701, (907) 456-3116, (907) 456-3125 fax
12189 Pennsylvania St, Thornton, CO 80241, (303) 469-8868, (303) 469-5254 fax

Page 1 of 1

Chain of Custody No: 77894

Client Name & Address: Environmental Services, Inc

Public Water System (PWS) ID#:

Project Name: Maralex Resources, Inc Sulfur Gulch 9-98-10#1

Section To be Completed by Analytica
Quote ID:
LGN: B1208016
Account #: Cash Credit Card

Report to: Heydenberk
Phone No:
Fax No:
E-mail: esi.craig@sopris.net

Turnaround Time for Results (TAT)
X Standard ___ Expedited (< 10 days, prior authorization required) (please specify due date below; add'l charges may apply)
Requested Due Date for Results:

Invoice to Name & Address: Maralex Resources Jim Graves

P.O. or Contract No:

Special Instructions/Comments: CSP-Comp. = CO6CC Table 910-Solids
All BTEX 8260 LL Arsenic = Low Level

Kit Prep/Shipping Charge: $

Requested Analysis/Method

Client Sample Identification / Location	Date Sampled	Time Sampled	Matrix (S-DW-WW-Other)	No. of Containers	8260 Tot # Pres.	BTEX Tot # Pres.	LL Arsenic Tot # Pres.	Table 910-1 Tot # Pres.	Tot # Pres.	Tot # Pres.	Tot # Pres.	Field Preserved	Field Filtered	MS/MSD ?
Pit-N @ 3'	8/2	9:20		2	X	X								
Pit-S @ 3'		9:21		2	X	X								
Pit-E @ 3		9:24		2	X	X								
Pit-W @ 3		9:30		2	X	X								
Pit-Bot. @ 6		9:00		2	X	X								
Ars-B.6. #1		9:41		1			X	X No						
Ars-B6. #2		9:49		1			X	X No						
Ars-B6. #3		9:58		1			X	X No						
CSP-Comp run 1st → det. only concern (by ish)		10:10		4			X	X						

Relinquished by:	Date	Time	Received by:	Date	Time
Heydenberk	8/2/12	15:00	Dianne Schull	8/3/12	10:23
Relinquished by:	Date	Time	Received by:	Date	Time
Relinquished by:	Date	Time	Received by:	Date	Time

Name of Sampler: (printed) Heydenberk

Section To Be Completed by Analytica

	THO	ANC	JNU	FBKS
Condition of Custody Seal?:	Intact			
Initialed By:	DCH			
Temp/Loc:	5.7, 3.0			
Thermo ID#:				
Shipped Via:	F			

Version 2.0

Hold pit samples per CHeydenberk GP 8/3/12