



**BUREAU  
VERITAS**

**MINERAL LABORATORIES**  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client: Noble Exploration Services Ltd.**

6584 Felderhof Rd.

Sooke British Columbia V9Z 0V8 Canada

Submitted By: Ray Lett

Receiving Lab: Canada-Vancouver

Received: September 16, 2019

Report Date: October 10, 2019

Page: 1 of 3

## CERTIFICATE OF ANALYSIS

VAN19002655.1

### CLIENT JOB INFORMATION

Project: Soil-Gas  
Shipment ID: Soil-Gas -1  
P.O. Number  
Number of Samples: 51

### SAMPLE DISPOSAL

RTRN-PLP Return After 90 days

Bureau Veritas does not accept responsibility for samples left at the laboratory after 90 days without prior written instructions for sample storage or return.

Invoice To: Noble Exploration Services Ltd.  
6584 Felderhof Rd.  
Sooke British Columbia V9Z 0V8  
Canada

CC: Wayne Jackaman

### SAMPLE PREPARATION AND ANALYTICAL PROCEDURES

Procedure Code	Number of Samples	Code Description	Test Wgt (g)	Report Status	Lab
SLBHP	51	Sorting, labeling and boxing samples received as pulps			VAN
LH101	51	Partial Leach with H2O by ICP-MS	1	Completed	VAN
LH101_SETUP	51	Setup Charge for <35 samples			VAN
AQ250	51	1:1:1 Aqua Regia digestion Ultratrace ICP-MS analysis	0.5	Completed	VAN

### ADDITIONAL COMMENTS

  
JEFFREY CANNON  
Geochemistry Department Supervisor

This report supersedes all previous preliminary and final reports with this file number dated prior to the date on this certificate. Signature indicates final approval; preliminary reports are unsigned and should be used for reference only. All results are considered the confidential property of the client. Bureau Veritas assumes the liabilities for actual cost of analysis only. Results apply to samples as submitted.  
\*\*\* asterisk indicates that an analytical result could not be provided due to unusually high levels of interference from other elements.



**BUREAU** MINERAL LABORATORIES  
**VERITAS** Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Noble Exploration Services Ltd.**  
6584 Felderhof Rd.  
Sooke British Columbia V9Z 0V8 Canada

**Project:** Soil-Gas  
**Report Date:** October 10, 2019

**Page:** 2 of 3

**Part:** 1 of 5

# CERTIFICATE OF ANALYSIS

**VAN19002655.1**

	Method Analyte Unit MDL	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101
		Ag	Al	As	Au	Ba	Be	Bi	Br	Ca	Cd	Ce	Cl	Co	Cs	Cu	Dy	Er	Eu	Fe
		ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppm
		0.5	1	5	1	10	1	0.5	10	5	0.5	1	2	1	0.5	5	0.1	0.1	0.1	0.1
2019-1101	Soil Pulp	<0.5	24	16	<1	1072	<1	<0.5	<10	26	1.0	17	9	23	0.8	57	0.8	0.6	0.2	17.4
2019-1102	Soil Pulp	<0.5	21	14	<1	423	<1	<0.5	<10	55	<0.5	3	5	5	0.8	32	0.2	0.2	<0.1	13.7
2019-1103	Soil Pulp	0.8	39	21	<1	554	1	<0.5	57	46	<0.5	29	8	12	2.0	146	3.8	2.4	1.2	21.1
2019-1104	Soil Pulp	<0.5	19	32	<1	728	<1	<0.5	21	58	1.2	11	9	8	0.7	69	1.1	0.6	0.3	12.3
2019-1105	Soil Pulp	<0.5	34	17	<1	595	<1	<0.5	<10	33	<0.5	12	<2	20	1.6	78	1.3	0.6	0.3	23.7
2019-1106	Soil Pulp	<0.5	25	24	<1	581	<1	<0.5	10	46	<0.5	11	9	12	1.0	70	1.2	0.5	0.3	17.7
2019-1107	Soil Pulp	<0.5	25	19	<1	352	<1	<0.5	24	34	<0.5	5	12	17	1.0	71	0.4	0.4	<0.1	19.6
2019-1108	Soil Pulp	<0.5	19	31	<1	358	<1	<0.5	22	40	<0.5	7	14	8	<0.5	79	0.8	0.5	0.2	17.1
2019-1109	Soil Pulp	<0.5	27	20	<1	339	1	<0.5	29	37	<0.5	23	10	28	0.7	105	2.9	1.8	1.0	20.6
2019-1114	Soil Pulp	<0.5	17	23	<1	303	<1	<0.5	15	32	<0.5	4	4	8	<0.5	74	0.5	0.3	0.1	16.5
2019-1115	Soil Pulp	<0.5	14	18	<1	256	<1	<0.5	<10	29	<0.5	3	5	6	<0.5	51	0.3	0.2	<0.1	15.0
2019-1116	Soil Pulp	<0.5	17	29	<1	300	<1	<0.5	11	45	<0.5	12	5	22	<0.5	78	1.4	0.7	0.5	14.8
2019-1117	Soil Pulp	<0.5	31	25	<1	854	<1	<0.5	11	40	<0.5	3	4	24	1.2	50	0.3	0.2	<0.1	18.3
2019-1118	Soil Pulp	<0.5	18	17	<1	363	<1	<0.5	18	34	<0.5	4	10	17	0.7	68	0.7	0.3	0.2	17.0
2019-1119	Soil Pulp	0.6	13	30	<1	178	<1	3.1	364	76	0.9	36	11	10	<0.5	223	2.6	1.5	0.9	18.5
2019-1201	Soil Pulp	<0.5	18	12	<1	314	<1	<0.5	47	33	<0.5	4	4	9	<0.5	42	0.7	0.4	0.1	15.3
2019-1202	Soil Pulp	<0.5	12	14	<1	235	<1	<0.5	<10	27	<0.5	2	8	9	<0.5	27	0.3	0.1	<0.1	10.8
2019-1203	Soil Pulp	<0.5	18	22	<1	548	<1	<0.5	15	32	<0.5	4	4	11	<0.5	33	0.6	0.3	<0.1	13.0
2019-1204	Soil Pulp	<0.5	9	14	<1	160	<1	<0.5	<10	11	<0.5	2	<2	6	<0.5	27	0.2	<0.1	<0.1	7.9
2019-1205	Soil Pulp	<0.5	13	13	<1	281	<1	<0.5	<10	28	<0.5	3	4	6	<0.5	72	0.6	0.3	<0.1	12.0
2019-1206	Soil Pulp	<0.5	20	13	<1	282	<1	<0.5	<10	33	<0.5	12	4	11	<0.5	60	1.9	1.2	0.5	15.6
2019-1207	Soil Pulp	<0.5	22	21	<1	194	<1	<0.5	11	43	<0.5	2	2	10	<0.5	43	0.3	0.2	<0.1	19.8
2019-1208	Soil Pulp	<0.5	16	11	<1	193	<1	<0.5	64	17	<0.5	6	5	8	<0.5	61	0.9	0.4	0.2	11.6
2019-1209	Soil Pulp	<0.5	16	23	<1	496	<1	<0.5	18	23	0.6	3	3	28	<0.5	39	0.2	0.1	<0.1	12.3
2019-1210	Soil Pulp	<0.5	19	19	<1	801	<1	<0.5	<10	41	0.8	3	<2	11	0.6	62	0.2	0.2	<0.1	14.6
2019-1211	Soil Pulp	<0.5	28	21	<1	514	<1	<0.5	35	49	<0.5	7	3	13	0.6	33	0.7	0.5	0.1	19.9
2019-1212	Soil Pulp	<0.5	21	9	<1	304	<1	<0.5	<10	33	<0.5	11	4	10	0.6	61	1.8	1.1	0.6	15.9
2019-1304	Soil Pulp	<0.5	14	12	<1	269	<1	<0.5	<10	40	<0.5	3	5	10	<0.5	38	0.3	0.1	<0.1	13.3
2019-1306	Soil Pulp	<0.5	14	14	<1	207	<1	<0.5	<10	25	<0.5	9	2	6	<0.5	50	1.4	0.8	0.5	10.3
2019-1307	Soil Pulp	<0.5	10	13	<1	281	<1	<0.5	<10	21	<0.5	2	<2	7	<0.5	26	0.2	0.1	<0.1	10.7



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** Noble Exploration Services Ltd.  
6584 Felderhof Rd.  
Sooke British Columbia V9Z 0V8 Canada

**Project:** Soil-Gas  
**Report Date:** October 10, 2019

**Page:** 2 of 3

**Part:** 2 of 5

# CERTIFICATE OF ANALYSIS

VAN19002655.1

	Method Analyte Unit MDL	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101
		Gd	Ge	Hf	Hg	Ho	In	K	La	Li	Lu	Mg	Mn	Mo	Na	Nb	Nd	Ni	P	Pb
		ppb 0.1	ppb 0.1	ppb 0.1	ppb 1	ppb 0.05	ppb 0.05	ppm 2	ppb 2	ppb 0.1	ppb 0.05	ppm 0.1	ppb 50	ppb 1	ppm 3	ppb 0.5	ppb 1	ppb 5	ppm 0.1	ppb 3
2019-1101	Soil Pulp	0.9	0.6	0.3	<1	0.18	<0.05	37	12	20.2	0.05	9.4	4486	6	6	1.4	8	33	39.7	5
2019-1102	Soil Pulp	0.2	0.8	0.3	<1	<0.05	<0.05	21	3	7.9	<0.05	9.9	806	8	5	1.6	2	18	36.0	4
2019-1103	Soil Pulp	4.3	0.7	0.7	<1	0.90	<0.05	32	13	21.7	0.36	18.1	732	8	11	1.3	15	50	18.9	4
2019-1104	Soil Pulp	1.4	0.6	0.2	<1	0.24	<0.05	62	6	18.9	0.08	16.1	3884	7	5	0.9	6	37	45.4	4
2019-1105	Soil Pulp	1.1	1.0	2.7	<1	0.24	<0.05	17	6	21.5	0.12	12.2	1475	4	6	4.1	6	27	15.9	6
2019-1106	Soil Pulp	0.9	0.6	0.3	<1	0.16	<0.05	19	6	16.4	<0.05	10.1	1187	6	6	2.2	5	23	22.2	5
2019-1107	Soil Pulp	0.6	0.6	0.4	<1	0.15	<0.05	27	2	20.8	<0.05	8.7	393	6	5	1.6	3	23	17.0	4
2019-1108	Soil Pulp	1.0	0.3	0.3	<1	0.17	<0.05	36	4	13.3	<0.05	10.9	475	6	6	1.2	4	25	27.0	4
2019-1109	Soil Pulp	3.0	0.6	0.8	<1	0.78	<0.05	39	11	12.6	0.28	14.1	1161	5	7	1.0	14	37	14.1	<3
2019-1114	Soil Pulp	0.4	0.2	0.3	<1	0.08	<0.05	21	2	17.4	<0.05	8.1	219	5	<3	1.0	2	23	20.4	<3
2019-1115	Soil Pulp	0.2	0.2	0.2	<1	<0.05	<0.05	21	<2	12.3	<0.05	9.1	588	4	<3	1.1	1	18	24.1	<3
2019-1116	Soil Pulp	1.2	0.3	0.3	<1	0.25	<0.05	29	6	12.7	0.06	16.2	721	6	<3	1.5	6	20	32.3	<3
2019-1117	Soil Pulp	0.2	0.9	0.3	<1	0.06	<0.05	30	<2	15.4	<0.05	6.3	1855	4	<3	2.0	1	27	21.5	4
2019-1118	Soil Pulp	0.6	0.3	0.3	<1	0.11	<0.05	29	<2	16.8	0.13	8.1	385	6	6	1.1	3	18	18.6	3
2019-1119	Soil Pulp	2.7	0.7	0.3	<1	0.59	0.14	21	14	4.0	0.22	24.4	4633	5	44	2.1	16	14	4.3	14
2019-1201	Soil Pulp	0.5	0.2	0.4	<1	0.13	<0.05	27	2	6.9	<0.05	5.8	356	3	3	0.9	3	20	8.5	<3
2019-1202	Soil Pulp	0.4	0.3	0.2	<1	<0.05	<0.05	24	<2	5.9	<0.05	5.7	544	4	<3	0.7	1	14	18.4	<3
2019-1203	Soil Pulp	0.4	0.3	0.3	<1	<0.05	<0.05	28	<2	10.7	<0.05	5.7	999	3	<3	1.0	1	14	22.6	<3
2019-1204	Soil Pulp	0.1	0.2	<0.1	<1	<0.05	<0.05	24	<2	9.4	<0.05	4.8	166	3	<3	<0.5	1	10	33.0	<3
2019-1205	Soil Pulp	0.5	0.3	0.3	<1	0.10	<0.05	22	2	10.6	<0.05	9.2	359	4	<3	1.0	2	19	30.4	<3
2019-1206	Soil Pulp	2.5	0.5	0.6	<1	0.42	<0.05	32	6	8.6	0.15	10.2	264	5	<3	0.8	9	23	17.1	<3
2019-1207	Soil Pulp	0.4	0.5	0.4	<1	<0.05	<0.05	24	<2	12.0	<0.05	7.5	221	5	<3	1.1	1	22	16.6	<3
2019-1208	Soil Pulp	0.9	0.3	0.5	<1	0.12	<0.05	99	3	5.1	<0.05	4.0	157	6	<3	0.6	3	15	11.1	<3
2019-1209	Soil Pulp	0.3	0.2	0.2	<1	0.06	<0.05	32	<2	19.9	<0.05	4.9	1558	2	<3	0.5	<1	16	17.7	<3
2019-1210	Soil Pulp	0.2	0.6	0.3	<1	<0.05	<0.05	27	<2	10.4	<0.05	6.5	3343	4	<3	0.8	2	22	15.8	<3
2019-1211	Soil Pulp	0.7	0.5	0.7	<1	0.16	<0.05	40	2	11.5	0.06	7.9	1808	4	<3	1.1	3	31	14.3	<3
2019-1212	Soil Pulp	2.3	0.4	0.5	<1	0.41	<0.05	34	6	9.7	0.18	10.7	276	6	<3	0.9	8	25	16.9	<3
2019-1304	Soil Pulp	0.4	0.4	0.3	<1	<0.05	<0.05	31	<2	11.6	<0.05	8.3	307	4	<3	0.9	2	17	34.2	<3
2019-1306	Soil Pulp	1.8	0.4	0.4	<1	0.26	<0.05	24	5	6.5	0.10	9.0	336	5	<3	0.8	6	21	20.6	<3
2019-1307	Soil Pulp	<0.1	0.1	0.2	<1	<0.05	<0.05	10	<2	12.9	<0.05	6.0	414	5	<3	0.6	<1	12	17.9	<3



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Noble Exploration Services Ltd.**  
6584 Felderhof Rd.  
Sooke British Columbia V9Z 0V8 Canada

**Project:** Soil-Gas  
**Report Date:** October 10, 2019

**Page:** 2 of 3

**Part:** 3 of 5

# CERTIFICATE OF ANALYSIS

**VAN19002655.1**

	Method Analyte Unit MDL	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101
		Rb	Re	S	Sb	Sc	Se	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti	Ti	Tm	U	V	W
		ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb
		2	0.05	10	1	20	5	0.5	1	10	0.5	0.05	1	2	0.05	0.2	0.05	0.1	50	2
2019-1101	Soil Pulp	16	<0.05	<10	13	<20	<5	0.9	<1	206	<0.5	0.11	<1	3	0.89	<0.2	<0.05	1.2	85	<2
2019-1102	Soil Pulp	23	<0.05	<10	10	<20	<5	<0.5	<1	195	<0.5	0.09	<1	<2	1.30	<0.2	<0.05	0.8	96	<2
2019-1103	Soil Pulp	44	<0.05	<10	8	<20	<5	3.8	<1	237	<0.5	0.68	<1	4	0.78	0.3	0.32	1.9	124	<2
2019-1104	Soil Pulp	17	<0.05	<10	10	<20	<5	1.7	<1	239	<0.5	0.18	<1	<2	0.61	<0.2	0.06	0.6	106	<2
2019-1105	Soil Pulp	29	<0.05	12	9	<20	<5	1.4	<1	151	<0.5	0.24	<1	2	1.27	<0.2	0.07	0.9	120	<2
2019-1106	Soil Pulp	17	<0.05	10	6	<20	<5	1.2	<1	175	<0.5	0.16	<1	<2	0.93	<0.2	<0.05	1.1	119	<2
2019-1107	Soil Pulp	20	<0.05	14	6	<20	<5	0.7	<1	164	<0.5	0.08	<1	<2	1.13	<0.2	0.07	1.5	143	<2
2019-1108	Soil Pulp	9	<0.05	21	8	<20	<5	1.1	<1	166	<0.5	0.13	<1	2	0.77	<0.2	<0.05	1.2	129	<2
2019-1109	Soil Pulp	19	<0.05	20	6	<20	<5	3.7	1	163	<0.5	0.56	<1	3	0.65	<0.2	0.25	1.3	102	<2
2019-1114	Soil Pulp	9	<0.05	13	4	<20	<5	0.5	<1	145	<0.5	0.06	<1	<2	0.53	<0.2	<0.05	1.0	137	<2
2019-1115	Soil Pulp	7	<0.05	12	4	<20	<5	<0.5	<1	100	<0.5	<0.05	<1	<2	0.53	<0.2	<0.05	0.7	130	<2
2019-1116	Soil Pulp	9	<0.05	15	5	<20	<5	1.7	<1	158	<0.5	0.19	<1	<2	0.57	<0.2	0.08	1.1	103	<2
2019-1117	Soil Pulp	45	<0.05	10	6	<20	<5	<0.5	<1	224	<0.5	<0.05	<1	<2	1.37	<0.2	<0.05	0.7	100	<2
2019-1118	Soil Pulp	9	<0.05	14	6	<20	<5	<0.5	<1	158	<0.5	0.06	<1	<2	0.75	<0.2	<0.05	0.9	130	<2
2019-1119	Soil Pulp	34	0.06	16	39	<20	9	3.7	2	116	<0.5	0.48	<1	4	0.74	0.5	0.22	2.5	<50	<2
2019-1201	Soil Pulp	13	<0.05	<10	5	<20	<5	0.6	<1	140	<0.5	0.05	<1	2	0.44	<0.2	<0.05	1.0	72	<2
2019-1202	Soil Pulp	6	<0.05	<10	5	<20	<5	<0.5	<1	104	<0.5	<0.05	<1	<2	0.55	<0.2	<0.05	0.7	96	<2
2019-1203	Soil Pulp	10	<0.05	<10	6	<20	<5	<0.5	<1	121	<0.5	<0.05	<1	<2	0.62	<0.2	<0.05	0.9	93	<2
2019-1204	Soil Pulp	4	<0.05	<10	5	<20	<5	<0.5	<1	63	<0.5	<0.05	<1	<2	0.36	<0.2	<0.05	0.5	71	<2
2019-1205	Soil Pulp	10	<0.05	<10	7	<20	<5	<0.5	<1	156	<0.5	0.05	<1	<2	0.55	<0.2	<0.05	0.8	84	<2
2019-1206	Soil Pulp	15	<0.05	<10	8	<20	<5	2.1	<1	174	<0.5	0.33	<1	2	0.57	<0.2	0.14	1.4	87	<2
2019-1207	Soil Pulp	12	<0.05	<10	5	<20	<5	<0.5	<1	146	<0.5	<0.05	<1	<2	0.75	<0.2	<0.05	0.9	125	<2
2019-1208	Soil Pulp	22	<0.05	<10	7	<20	<5	0.8	<1	72	<0.5	0.38	<1	<2	0.41	<0.2	<0.05	1.3	82	<2
2019-1209	Soil Pulp	14	<0.05	<10	7	<20	<5	<0.5	<1	94	<0.5	<0.05	<1	<2	0.35	<0.2	<0.05	0.9	69	<2
2019-1210	Soil Pulp	30	<0.05	<10	6	<20	<5	<0.5	<1	124	<0.5	<0.05	<1	<2	0.61	<0.2	<0.05	0.7	73	<2
2019-1211	Soil Pulp	32	<0.05	<10	6	<20	<5	<0.5	<1	116	<0.5	0.12	<1	2	0.69	<0.2	<0.05	1.1	95	<2
2019-1212	Soil Pulp	16	<0.05	<10	7	<20	<5	2.2	<1	175	<0.5	0.37	<1	2	0.57	<0.2	0.14	1.4	89	<2
2019-1304	Soil Pulp	6	<0.05	<10	4	<20	<5	<0.5	<1	137	<0.5	<0.05	<1	<2	0.56	<0.2	<0.05	0.7	90	<2
2019-1306	Soil Pulp	12	<0.05	<10	3	<20	<5	1.3	<1	110	<0.5	0.29	<1	<2	0.37	<0.2	0.06	1.0	77	<2
2019-1307	Soil Pulp	6	<0.05	<10	2	<20	<5	<0.5	<1	93	<0.5	<0.05	<1	<2	0.53	<0.2	<0.05	0.7	83	<2



**BUREAU** MINERAL LABORATORIES  
**VERITAS** Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Noble Exploration Services Ltd.**  
6584 Felderhof Rd.  
Sooke British Columbia V9Z 0V8 Canada

**Project:** Soil-Gas  
**Report Date:** October 10, 2019

**Page:** 2 of 3

**Part:** 4 of 5

# CERTIFICATE OF ANALYSIS

**VAN19002655.1**

	Method	Analyte	Unit	MDL	LH101	LH101	LH101	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250		
					Yb	Zn	Zr	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi
					ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm
					0.5	10	1	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02
2019-1101	Soil Pulp		0.7	235	23	0.51	10.70	4.75	38.7	77	8.5	4.3	364	1.48	2.2	0.3	2.8	1.3	16.9	0.11	0.23	0.08		
2019-1102	Soil Pulp		<0.5	96	23	0.33	5.97	5.01	38.3	63	6.6	3.0	191	1.22	1.3	0.2	3.2	1.1	18.7	0.12	0.18	0.09		
2019-1103	Soil Pulp		2.5	95	50	0.63	34.51	4.15	55.8	99	23.7	9.0	333	2.13	4.3	0.4	3.0	1.6	28.9	0.11	0.38	0.06		
2019-1104	Soil Pulp		<0.5	291	15	0.58	16.42	4.82	47.4	132	10.5	5.6	972	1.37	2.9	0.2	1.5	0.8	25.6	0.19	0.29	0.06		
2019-1105	Soil Pulp		0.8	160	33	0.29	8.01	4.24	31.2	105	6.7	3.6	182	1.22	1.4	0.2	3.4	1.4	15.7	0.06	0.15	0.07		
2019-1106	Soil Pulp		0.5	135	16	0.33	8.42	4.27	26.7	88	6.2	3.4	181	1.16	1.6	0.2	6.2	1.2	15.9	0.04	0.15	0.06		
2019-1107	Soil Pulp		<0.5	79	38	0.37	9.81	4.20	32.0	76	7.3	3.7	117	1.31	1.7	0.2	0.8	1.3	16.2	0.05	0.16	0.06		
2019-1108	Soil Pulp		<0.5	130	15	0.35	9.39	4.03	26.8	90	6.5	2.8	108	1.27	2.6	0.2	7.6	1.0	16.6	0.06	0.21	0.06		
2019-1109	Soil Pulp		1.5	83	36	0.47	20.75	4.48	38.0	99	13.1	8.0	265	1.81	3.4	0.2	1.1	1.4	19.8	0.07	0.25	0.06		
2019-1114	Soil Pulp		<0.5	115	15	0.38	13.32	4.28	35.3	76	10.2	3.9	134	1.49	2.6	0.2	1.8	1.4	16.1	0.05	0.19	0.05		
2019-1115	Soil Pulp		<0.5	109	9	0.37	9.70	4.28	30.8	51	8.6	3.5	141	1.37	2.3	0.2	1.6	1.4	16.5	0.06	0.22	0.06		
2019-1116	Soil Pulp		0.6	59	14	0.34	11.21	4.55	29.8	110	7.5	4.2	148	1.18	2.0	0.2	1.2	1.2	19.0	0.05	0.14	0.06		
2019-1117	Soil Pulp		<0.5	112	22	0.61	12.92	5.31	55.1	74	12.2	7.3	237	2.23	6.3	0.3	0.4	1.7	29.5	0.09	0.24	0.08		
2019-1118	Soil Pulp		<0.5	64	16	0.42	10.43	4.70	33.7	82	8.3	3.6	128	1.39	1.9	0.2	0.4	1.6	18.0	0.06	0.17	0.06		
2019-1119	Soil Pulp		1.5	51	13	0.72	48.94	14.04	72.3	235	19.2	12.8	1112	3.31	15.4	0.8	6.4	2.8	10.5	0.19	4.24	2.01		
2019-1201	Soil Pulp		<0.5	68	24	0.60	17.14	4.95	47.2	152	13.9	5.7	177	2.18	4.4	0.3	0.9	1.5	19.3	0.08	0.34	0.08		
2019-1202	Soil Pulp		<0.5	52	14	0.38	9.38	4.44	33.5	51	8.2	4.0	196	1.58	2.9	0.2	1.3	1.3	17.1	0.06	0.24	0.06		
2019-1203	Soil Pulp		<0.5	101	22	0.36	10.45	5.25	50.8	102	10.4	4.9	210	1.66	3.2	0.2	0.8	1.5	16.5	0.08	0.20	0.07		
2019-1204	Soil Pulp		<0.5	51	7	0.26	4.42	3.99	17.5	31	3.7	1.7	63	0.86	1.1	0.2	0.6	1.1	12.1	0.04	0.12	0.05		
2019-1205	Soil Pulp		<0.5	73	12	0.72	11.52	3.91	33.2	50	9.1	3.6	126	1.48	2.4	0.2	1.7	1.6	18.2	0.07	0.30	0.06		
2019-1206	Soil Pulp		1.0	46	23	0.52	14.23	4.11	40.1	68	15.0	5.8	163	1.75	2.7	0.2	0.3	1.6	21.6	0.07	0.25	0.06		
2019-1207	Soil Pulp		<0.5	105	19	0.47	12.46	4.75	39.9	116	13.5	4.8	161	1.92	3.7	0.2	6.0	1.2	18.4	0.08	0.21	0.07		
2019-1208	Soil Pulp		<0.5	34	25	0.69	23.67	5.04	62.4	111	19.9	7.8	198	2.34	4.8	0.3	0.9	1.6	19.1	0.10	0.34	0.07		
2019-1209	Soil Pulp		<0.5	163	11	0.63	15.86	4.69	69.6	68	18.2	7.4	235	2.35	4.5	0.2	0.9	1.4	16.6	0.10	0.27	0.07		
2019-1210	Soil Pulp		<0.5	165	21	0.44	20.04	4.39	63.9	89	11.1	7.3	692	2.29	5.1	0.2	5.3	1.1	35.0	0.15	0.47	0.06		
2019-1211	Soil Pulp		<0.5	85	31	0.54	14.54	3.89	62.6	39	25.5	11.2	348	2.41	4.3	0.2	1.1	1.2	17.3	0.06	0.32	0.05		
2019-1212	Soil Pulp		1.0	39	25	0.57	15.48	4.13	40.4	67	14.7	5.7	160	1.77	2.7	0.3	0.8	1.7	22.3	0.07	0.28	0.05		
2019-1304	Soil Pulp		<0.5	97	13	0.31	7.43	4.44	44.5	160	9.3	3.5	117	1.35	1.4	0.2	1.2	1.2	16.5	0.07	0.14	0.06		
2019-1306	Soil Pulp		0.6	36	16	0.46	15.73	3.88	44.3	80	16.5	5.7	220	1.71	2.7	0.3	0.8	1.7	19.1	0.08	0.25	0.04		
2019-1307	Soil Pulp		<0.5	99	13	0.43	10.33	4.26	42.4	69	11.5	4.2	129	1.58	2.2	0.2	0.7	1.6	15.1	0.07	0.19	0.05		



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** Noble Exploration Services Ltd.  
6584 Felderhof Rd.  
Sooke British Columbia V9Z 0V8 Canada

**Project:** Soil-Gas  
**Report Date:** October 10, 2019

**Page:** 2 of 3

**Part:** 5 of 5

# CERTIFICATE OF ANALYSIS

VAN19002655.1

Method Analyte Unit MDL		AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga
		ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm
		1	0.01	0.001	0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1
2019-1101	Soil Pulp	49	0.24	0.057	8.2	21.0	0.20	131.1	0.065	<20	0.78	0.009	0.05	<0.1	2.2	0.05	<0.02	31	<0.1	<0.02	3.7
2019-1102	Soil Pulp	41	0.30	0.048	7.7	18.6	0.16	93.6	0.073	<20	0.64	0.008	0.06	<0.1	1.8	0.05	<0.02	20	<0.1	<0.02	3.4
2019-1103	Soil Pulp	64	0.37	0.038	10.1	34.1	0.43	107.1	0.093	<20	1.14	0.010	0.06	<0.1	3.8	0.06	<0.02	41	<0.1	<0.02	3.9
2019-1104	Soil Pulp	46	0.36	0.045	7.1	19.9	0.22	127.3	0.057	<20	0.66	0.007	0.07	<0.1	2.2	0.05	<0.02	59	0.1	<0.02	2.7
2019-1105	Soil Pulp	42	0.24	0.029	7.1	19.2	0.16	82.7	0.065	<20	0.66	0.009	0.04	<0.1	1.9	0.05	<0.02	18	<0.1	<0.02	3.5
2019-1106	Soil Pulp	41	0.27	0.033	7.0	16.9	0.15	86.0	0.063	<20	0.66	0.008	0.04	<0.1	1.9	0.05	<0.02	34	<0.1	<0.02	3.5
2019-1107	Soil Pulp	48	0.26	0.033	6.8	18.1	0.17	63.5	0.072	<20	0.70	0.008	0.05	<0.1	1.7	0.05	<0.02	20	<0.1	<0.02	3.6
2019-1108	Soil Pulp	49	0.27	0.030	6.3	17.8	0.17	58.7	0.069	<20	0.62	0.008	0.05	<0.1	1.9	0.04	<0.02	24	<0.1	<0.02	3.5
2019-1109	Soil Pulp	58	0.32	0.048	7.8	25.7	0.32	74.4	0.069	<20	1.01	0.008	0.06	<0.1	3.0	0.05	<0.02	27	<0.1	<0.02	4.0
2019-1114	Soil Pulp	52	0.29	0.043	5.9	20.0	0.28	67.5	0.065	<20	0.83	0.007	0.05	<0.1	2.2	0.04	<0.02	30	<0.1	<0.02	3.8
2019-1115	Soil Pulp	51	0.28	0.038	7.7	19.4	0.23	47.7	0.075	<20	0.73	0.008	0.05	<0.1	2.2	0.04	<0.02	36	<0.1	<0.02	3.9
2019-1116	Soil Pulp	41	0.27	0.033	7.2	19.0	0.19	72.7	0.071	<20	0.70	0.008	0.06	<0.1	2.1	0.05	<0.02	20	<0.1	<0.02	3.5
2019-1117	Soil Pulp	72	0.30	0.075	8.1	30.2	0.25	128.8	0.099	<20	1.06	0.006	0.05	<0.1	3.0	0.05	<0.02	22	<0.1	<0.02	5.8
2019-1118	Soil Pulp	50	0.27	0.032	7.6	20.3	0.20	68.6	0.083	<20	0.75	0.009	0.05	<0.1	2.1	0.05	<0.02	28	<0.1	<0.02	3.9
2019-1119	Soil Pulp	58	0.33	0.085	19.4	27.9	0.59	80.7	0.085	<20	1.81	0.032	0.07	0.1	4.6	0.13	0.02	97	0.3	0.03	7.1
2019-1201	Soil Pulp	66	0.30	0.074	7.8	28.5	0.28	83.3	0.070	<20	1.16	0.008	0.06	<0.1	2.9	0.05	<0.02	36	<0.1	<0.02	4.9
2019-1202	Soil Pulp	56	0.30	0.050	6.1	20.9	0.19	68.9	0.067	<20	0.77	0.008	0.05	<0.1	2.0	0.04	<0.02	27	<0.1	<0.02	4.0
2019-1203	Soil Pulp	49	0.26	0.107	6.6	23.8	0.22	137.6	0.068	<20	0.97	0.009	0.05	<0.1	2.2	0.06	<0.02	27	<0.1	<0.02	4.8
2019-1204	Soil Pulp	34	0.19	0.017	6.6	13.5	0.09	30.0	0.064	<20	0.43	0.007	0.04	<0.1	1.4	0.04	<0.02	6	<0.1	<0.02	2.5
2019-1205	Soil Pulp	52	0.26	0.026	7.2	22.7	0.19	56.6	0.087	<20	0.63	0.007	0.05	<0.1	2.0	0.04	<0.02	19	<0.1	<0.02	3.5
2019-1206	Soil Pulp	56	0.30	0.038	7.4	27.7	0.29	77.5	0.085	<20	0.90	0.008	0.05	<0.1	2.5	0.05	<0.02	34	<0.1	<0.02	4.0
2019-1207	Soil Pulp	58	0.32	0.082	6.6	26.2	0.26	61.8	0.065	<20	1.07	0.008	0.05	<0.1	2.4	0.06	<0.02	35	<0.1	<0.02	4.8
2019-1208	Soil Pulp	70	0.31	0.122	7.9	32.5	0.34	81.8	0.077	<20	1.44	0.009	0.08	<0.1	3.3	0.05	<0.02	38	<0.1	<0.02	5.2
2019-1209	Soil Pulp	63	0.25	0.147	6.6	31.4	0.34	89.8	0.065	<20	1.51	0.008	0.06	<0.1	2.6	0.06	<0.02	60	<0.1	<0.02	5.1
2019-1210	Soil Pulp	79	0.33	0.052	5.8	34.4	0.27	164.9	0.087	<20	0.95	0.009	0.04	<0.1	3.0	0.05	<0.02	22	<0.1	<0.02	4.8
2019-1211	Soil Pulp	74	0.35	0.059	5.7	63.1	0.65	100.9	0.108	<20	1.55	0.009	0.06	<0.1	3.2	0.05	<0.02	25	<0.1	<0.02	6.5
2019-1212	Soil Pulp	56	0.30	0.038	7.3	26.8	0.29	75.3	0.091	<20	0.90	0.008	0.05	<0.1	2.6	0.05	<0.02	46	<0.1	<0.02	3.9
2019-1304	Soil Pulp	43	0.27	0.054	6.6	22.3	0.18	71.7	0.064	<20	0.74	0.007	0.06	<0.1	2.0	0.04	<0.02	23	<0.1	<0.02	3.9
2019-1306	Soil Pulp	53	0.34	0.051	8.3	27.7	0.37	67.0	0.090	<20	0.94	0.009	0.05	<0.1	2.5	0.05	<0.02	17	<0.1	<0.02	3.3
2019-1307	Soil Pulp	51	0.27	0.064	7.3	23.0	0.26	75.5	0.076	<20	0.88	0.008	0.04	<0.1	2.4	0.05	<0.02	23	<0.1	<0.02	3.7



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** Noble Exploration Services Ltd.  
6584 Felderhof Rd.  
Sooke British Columbia V9Z 0V8 Canada

**Project:** Soil-Gas  
**Report Date:** October 10, 2019

**Page:** 3 of 3

**Part:** 1 of 5

# CERTIFICATE OF ANALYSIS

VAN19002655.1

	Method Analyte Unit MDL	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101
		Ag	Al	As	Au	Ba	Be	Bi	Br	Ca	Cd	Ce	Cl	Co	Cs	Cu	Dy	Er	Eu	Fe
		ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppm
		0.5	1	5	1	10	1	0.5	10	5	0.5	1	2	1	0.5	5	0.1	0.1	0.1	0.1
2019-1308	Soil Pulp	<0.5	15	19	<1	457	<1	<0.5	<10	21	<0.5	3	<2	12	<0.5	34	0.2	<0.1	<0.1	16.2
2019-1309	Soil Pulp	<0.5	14	14	<1	372	<1	<0.5	<10	30	<0.5	7	3	8	<0.5	40	0.9	0.4	0.1	10.9
2019-1311	Soil Pulp	<0.5	13	10	<1	273	<1	<0.5	<10	21	<0.5	6	<2	11	<0.5	40	0.9	0.5	0.2	9.7
2019-1312	Soil Pulp	<0.5	13	10	<1	263	<1	<0.5	<10	21	<0.5	7	<2	11	<0.5	41	0.9	0.7	0.2	9.8
2019-1313	Soil Pulp	0.7	13	25	<1	184	<1	2.7	409	78	1.0	33	11	8	<0.5	209	2.5	1.3	0.7	15.3
2019-2101	Soil Pulp	0.8	19	47	<1	135	<1	<0.5	<10	71	0.8	12	8	8	0.5	263	1.4	0.7	0.2	12.5
2019-2102	Soil Pulp	4.1	29	95	<1	231	1	<0.5	91	177	1.1	16	18	9	1.4	871	3.0	1.7	0.7	24.1
2019-2103	Soil Pulp	<0.5	22	70	<1	97	<1	<0.5	31	46	<0.5	18	6	12	0.7	293	4.7	2.5	1.3	19.9
2019-2104	Soil Pulp	<0.5	14	46	<1	112	<1	<0.5	<10	39	<0.5	12	7	10	<0.5	157	1.1	0.7	0.3	9.6
2019-2105	Soil Pulp	1.0	13	48	<1	116	<1	<0.5	<10	50	1.0	5	5	5	<0.5	97	0.5	0.1	<0.1	7.5
2019-2107	Soil Pulp	0.6	23	25	<1	211	<1	<0.5	39	84	1.0	3	5	7	<0.5	42	0.2	<0.1	<0.1	14.4
2019-2108	Soil Pulp	<0.5	35	27	<1	267	<1	<0.5	70	70	0.7	3	9	12	0.6	66	0.3	0.2	<0.1	21.6
2019-2201	Soil Pulp	<0.5	11	<5	<1	163	<1	<0.5	<10	19	<0.5	3	3	5	<0.5	51	0.3	<0.1	<0.1	7.2
2019-2202	Soil Pulp	0.6	11	7	<1	107	<1	<0.5	21	40	<0.5	3	9	3	<0.5	20	0.4	<0.1	<0.1	6.1
2019-2203	Soil Pulp	0.6	18	11	<1	128	<1	<0.5	<10	52	<0.5	8	8	5	<0.5	155	2.0	1.0	0.5	11.7
2019-2204	Soil Pulp	<0.5	18	7	<1	195	<1	<0.5	21	59	<0.5	3	4	4	<0.5	29	0.2	<0.1	<0.1	9.8
2019-2205	Soil Pulp	<0.5	19	12	<1	326	<1	<0.5	15	57	<0.5	3	8	4	0.5	24	0.3	0.2	<0.1	7.8
2019-2206	Soil Pulp	<0.5	19	5	<1	193	<1	<0.5	49	38	<0.5	4	4	7	<0.5	36	0.3	0.2	<0.1	10.5
2019-2207	Soil Pulp	<0.5	15	7	<1	155	<1	<0.5	11	41	<0.5	3	3	4	<0.5	29	0.1	<0.1	<0.1	10.9
2019-2208	Soil Pulp	<0.5	37	30	<1	251	1	<0.5	64	74	<0.5	3	9	13	0.6	68	0.2	0.2	<0.1	21.5
2019-2209	Soil Pulp	0.8	16	30	<1	217	<1	3.3	382	75	<0.5	44	11	12	<0.5	227	3.2	1.6	0.7	20.2



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** Noble Exploration Services Ltd.  
6584 Felderhof Rd.  
Sooke British Columbia V9Z 0V8 Canada

**Project:** Soil-Gas  
**Report Date:** October 10, 2019

**Page:** 3 of 3

**Part:** 2 of 5

# CERTIFICATE OF ANALYSIS

VAN19002655.1

	Method Analyte Unit MDL	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101
		Gd	Ge	Hf	Hg	Ho	In	K	La	Li	Lu	Mg	Mn	Mo	Na	Nb	Nd	Ni	P	Pb	Pr
		ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppm	ppb	ppb
		0.1	0.1	0.1	1	0.05	0.05	2	2	0.1	0.05	0.1	50	1	3	0.5	1	5	0.1	3	0.5
2019-1308	Soil Pulp	0.1	<0.1	0.2	<1	<0.05	<0.05	22	<2	18.1	<0.05	5.9	865	4	<3	0.8	<1	19	27.6	<3	<0.5
2019-1309	Soil Pulp	0.8	0.4	0.3	<1	0.20	<0.05	27	4	6.5	<0.05	8.7	544	3	<3	0.8	4	19	30.1	<3	0.9
2019-1311	Soil Pulp	1.0	0.2	0.3	<1	0.17	<0.05	15	3	8.0	<0.05	6.7	578	3	<3	0.9	4	15	22.3	<3	0.9
2019-1312	Soil Pulp	1.2	0.3	0.2	<1	0.16	<0.05	15	4	8.7	0.05	6.7	596	3	<3	0.9	4	14	22.2	<3	0.8
2019-1313	Soil Pulp	2.8	0.5	0.3	<1	0.44	0.22	21	12	3.6	0.26	22.1	4208	6	46	1.8	15	14	4.5	15	3.5
2019-2101	Soil Pulp	1.4	0.4	0.5	<1	0.31	<0.05	37	4	11.4	0.12	9.4	769	10	3	0.7	6	41	15.2	4	1.2
2019-2102	Soil Pulp	2.9	1.0	0.4	1	0.69	<0.05	34	8	36.0	0.27	22.3	456	33	13	1.4	11	76	33.2	8	2.1
2019-2103	Soil Pulp	4.6	0.7	1.1	<1	0.84	<0.05	37	14	12.9	0.48	10.1	678	5	3	1.0	18	39	27.9	7	3.6
2019-2104	Soil Pulp	1.4	0.3	0.4	<1	0.19	<0.05	41	5	14.6	0.11	8.5	527	5	5	<0.5	7	38	18.8	7	1.3
2019-2105	Soil Pulp	0.5	0.3	0.3	<1	0.08	<0.05	59	2	6.3	<0.05	10.6	518	7	<3	<0.5	3	22	25.4	<3	0.5
2019-2107	Soil Pulp	0.4	0.2	0.4	<1	<0.05	<0.05	33	<2	9.4	<0.05	6.8	808	6	4	1.1	3	21	17.3	<3	<0.5
2019-2108	Soil Pulp	0.2	0.4	0.6	<1	<0.05	0.05	59	<2	26.6	<0.05	7.2	695	4	8	1.4	1	26	23.7	5	<0.5
2019-2201	Soil Pulp	0.5	0.1	0.2	<1	0.07	<0.05	28	<2	11.4	<0.05	3.4	352	<1	<3	0.6	1	8	9.2	<3	<0.5
2019-2202	Soil Pulp	0.3	0.2	0.2	<1	<0.05	<0.05	41	<2	2.2	<0.05	4.8	310	5	3	<0.5	1	<5	13.1	<3	<0.5
2019-2203	Soil Pulp	2.3	0.3	0.3	<1	0.37	<0.05	53	9	8.4	0.08	8.0	165	9	6	4.5	11	15	30.9	3	2.1
2019-2204	Soil Pulp	0.2	0.4	0.4	<1	<0.05	<0.05	35	<2	6.0	<0.05	4.5	290	5	<3	0.8	2	12	9.0	<3	<0.5
2019-2205	Soil Pulp	0.4	0.5	0.7	<1	0.06	<0.05	54	<2	4.7	<0.05	5.8	622	6	4	1.2	2	10	21.1	<3	<0.5
2019-2206	Soil Pulp	0.3	0.1	0.4	<1	0.06	<0.05	34	<2	7.0	<0.05	6.0	302	5	<3	0.8	2	10	9.8	<3	<0.5
2019-2207	Soil Pulp	0.3	0.4	0.3	<1	<0.05	<0.05	24	<2	7.7	<0.05	6.0	529	3	3	0.9	1	11	9.6	<3	<0.5
2019-2208	Soil Pulp	0.2	0.3	0.5	<1	<0.05	<0.05	60	<2	29.5	<0.05	7.8	760	4	8	1.6	1	25	26.6	3	<0.5
2019-2209	Soil Pulp	3.4	0.6	0.3	<1	0.49	0.22	21	19	4.6	0.25	22.1	4440	4	46	2.8	19	13	4.6	16	4.8





**BUREAU** MINERAL LABORATORIES  
**VERITAS** Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Noble Exploration Services Ltd.**  
6584 Felderhof Rd.  
Sooke British Columbia V9Z 0V8 Canada

**Project:** Soil-Gas  
**Report Date:** October 10, 2019

**Page:** 3 of 3

**Part:** 3 of 5

# CERTIFICATE OF ANALYSIS

**VAN19002655.1**

	Method Analyte Unit MDL	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101
		Rb	Re	S	Sb	Sc	Se	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti	Ti	Tm	U	V	W
		ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb
		2	0.05	10	1	20	5	0.5	1	10	0.5	0.05	1	2	0.05	0.2	0.05	0.1	50	2
2019-1308	Soil Pulp	4	<0.05	<10	3	<20	<5	<0.5	<1	99	<0.5	<0.05	<1	<2	0.36	<0.2	<0.05	0.7	102	<2
2019-1309	Soil Pulp	11	<0.05	<10	4	<20	<5	0.9	<1	114	<0.5	0.11	<1	<2	0.56	<0.2	<0.05	1.5	78	<2
2019-1311	Soil Pulp	6	<0.05	<10	3	<20	<5	1.0	<1	105	<0.5	0.09	<1	<2	0.45	<0.2	<0.05	2.3	61	<2
2019-1312	Soil Pulp	7	<0.05	<10	3	<20	<5	0.7	<1	105	<0.5	0.14	<1	<2	0.53	<0.2	<0.05	0.9	66	<2
2019-1313	Soil Pulp	35	0.11	22	41	<20	7	3.2	4	115	<0.5	0.37	<1	4	0.80	0.4	0.13	2.9	<50	<2
2019-2101	Soil Pulp	30	<0.05	<10	3	<20	<5	1.0	<1	206	<0.5	0.17	<1	4	0.32	<0.2	0.10	2.0	64	<2
2019-2102	Soil Pulp	28	0.09	20	12	<20	12	2.8	<1	403	<0.5	0.44	<1	7	0.58	<0.2	0.29	3.4	107	<2
2019-2103	Soil Pulp	21	<0.05	<10	5	37	<5	5.3	<1	158	<0.5	0.74	<1	6	0.65	<0.2	0.44	2.1	133	<2
2019-2104	Soil Pulp	23	<0.05	<10	3	<20	<5	1.4	<1	136	<0.5	0.22	<1	4	0.24	<0.2	0.12	1.4	61	<2
2019-2105	Soil Pulp	21	<0.05	<10	4	<20	<5	<0.5	<1	177	<0.5	<0.05	<1	3	0.21	<0.2	<0.05	1.0	73	<2
2019-2107	Soil Pulp	22	<0.05	12	5	<20	<5	<0.5	<1	295	<0.5	<0.05	<1	3	0.44	<0.2	<0.05	1.3	61	<2
2019-2108	Soil Pulp	32	<0.05	12	5	<20	<5	<0.5	<1	290	<0.5	<0.05	<1	4	0.43	<0.2	<0.05	1.6	73	<2
2019-2201	Soil Pulp	28	<0.05	<10	2	<20	<5	<0.5	<1	106	<0.5	<0.05	<1	<2	0.27	<0.2	<0.05	0.7	<50	<2
2019-2202	Soil Pulp	28	<0.05	17	3	<20	<5	<0.5	<1	133	<0.5	<0.05	<1	<2	0.19	<0.2	<0.05	1.1	<50	<2
2019-2203	Soil Pulp	24	<0.05	<10	4	<20	<5	1.7	<1	172	<0.5	0.38	<1	6	0.34	<0.2	0.11	1.8	<50	<2
2019-2204	Soil Pulp	30	<0.05	<10	2	<20	<5	<0.5	<1	185	<0.5	<0.05	<1	3	0.32	<0.2	<0.05	1.3	<50	<2
2019-2205	Soil Pulp	27	<0.05	<10	3	<20	<5	<0.5	<1	249	<0.5	<0.05	<1	<2	0.58	<0.2	<0.05	0.9	<50	<2
2019-2206	Soil Pulp	36	<0.05	<10	1	<20	<5	<0.5	<1	148	<0.5	<0.05	<1	2	0.37	<0.2	<0.05	1.0	<50	<2
2019-2207	Soil Pulp	29	<0.05	<10	<1	<20	<5	<0.5	<1	164	<0.5	<0.05	<1	2	0.41	<0.2	<0.05	1.1	<50	<2
2019-2208	Soil Pulp	33	<0.05	11	6	<20	<5	<0.5	<1	306	<0.5	<0.05	<1	5	0.48	<0.2	<0.05	1.5	76	<2
2019-2209	Soil Pulp	35	0.08	19	38	<20	8	4.3	2	106	<0.5	0.44	<1	4	0.93	0.5	0.23	2.6	<50	<2



**BUREAU VERITAS** MINERAL LABORATORIES  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** Noble Exploration Services Ltd.  
6584 Felderhof Rd.  
Sooke British Columbia V9Z 0V8 Canada

**Project:** Soil-Gas  
**Report Date:** October 10, 2019

**Page:** 3 of 3

**Part:** 4 of 5

# CERTIFICATE OF ANALYSIS

VAN19002655.1

	Method Analyte Unit MDL	LH101	LH101	LH101	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Yb	Zn	Zr	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi
		ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	10	1	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02
2019-1308	Soil Pulp	<0.5	190	12	0.45	9.98	4.26	47.8	67	11.1	3.4	113	1.50	2.2	0.2	0.8	1.5	12.7	0.08	0.17	0.06
2019-1309	Soil Pulp	<0.5	67	13	0.46	12.04	4.39	49.0	74	14.8	4.8	174	1.67	2.5	0.3	1.6	2.1	17.5	0.09	0.23	0.06
2019-1311	Soil Pulp	<0.5	75	12	0.29	7.88	4.59	37.2	77	8.1	3.3	122	1.13	1.4	0.2	2.8	1.4	16.1	0.07	0.13	0.05
2019-1312	Soil Pulp	<0.5	67	14	0.27	7.54	4.19	35.0	79	7.8	3.2	127	1.12	1.3	0.2	63.1	1.5	14.8	0.06	0.13	0.05
2019-1313	Soil Pulp	1.5	44	11	0.65	45.65	12.89	67.3	218	18.6	11.7	1065	3.21	14.6	0.8	12.8	2.3	9.8	0.19	4.12	1.84
2019-2101	Soil Pulp	0.9	117	25	1.05	76.74	12.79	174.9	185	57.4	13.4	494	3.19	16.9	0.5	4.4	2.1	40.9	0.33	0.18	0.12
2019-2102	Soil Pulp	1.7	128	42	1.59	184.53	11.63	130.8	499	49.1	14.3	702	3.31	21.5	1.2	23.5	2.8	60.2	0.37	0.39	0.18
2019-2103	Soil Pulp	3.0	81	90	1.02	206.58	13.34	131.1	103	66.4	28.1	989	6.91	24.6	0.7	12.7	3.4	58.6	0.20	0.22	0.10
2019-2104	Soil Pulp	0.5	83	26	1.01	65.38	17.80	165.1	206	74.2	18.2	575	3.65	18.4	0.5	5.0	2.6	53.7	0.31	0.23	0.11
2019-2105	Soil Pulp	<0.5	93	19	0.99	41.13	10.73	160.3	181	40.8	13.1	622	3.24	15.4	0.5	3.3	2.2	44.8	0.46	0.24	0.13
2019-2107	Soil Pulp	<0.5	146	27	0.73	17.72	6.79	185.4	152	36.3	10.3	427	3.07	7.7	0.4	1.6	3.4	36.6	0.43	0.14	0.14
2019-2108	Soil Pulp	<0.5	193	30	0.98	26.16	7.33	139.7	239	42.8	10.9	250	3.30	11.3	0.4	1.3	3.6	36.9	0.33	0.22	0.12
2019-2201	Soil Pulp	<0.5	43	12	0.55	17.79	6.07	104.7	105	28.4	10.5	208	3.09	2.6	0.4	0.4	5.5	15.5	0.06	0.07	0.12
2019-2202	Soil Pulp	<0.5	18	13	0.73	13.64	6.97	128.9	133	21.2	10.5	409	3.54	5.5	0.5	0.4	3.0	33.2	0.14	0.13	0.16
2019-2203	Soil Pulp	0.7	22	23	0.81	39.92	6.13	67.9	189	26.6	8.3	198	2.82	3.4	0.5	0.8	3.9	32.1	0.07	0.11	0.11
2019-2204	Soil Pulp	<0.5	29	21	0.57	18.88	6.26	91.7	87	33.0	11.8	319	3.41	4.9	0.5	1.1	3.9	34.6	0.10	0.12	0.13
2019-2205	Soil Pulp	<0.5	83	45	0.51	10.22	5.43	90.7	145	12.0	7.8	426	2.45	4.2	0.4	<0.2	2.0	46.9	0.13	0.12	0.10
2019-2206	Soil Pulp	<0.5	27	20	0.70	21.07	7.09	94.7	146	27.9	11.1	256	3.12	3.8	0.4	1.1	3.2	46.9	0.14	0.11	0.13
2019-2207	Soil Pulp	<0.5	36	18	0.46	12.79	5.31	85.2	113	24.1	9.1	329	2.89	2.5	0.5	0.2	4.4	47.1	0.11	0.09	0.11
2019-2208	Soil Pulp	<0.5	204	28	0.98	28.20	7.11	129.9	234	42.0	12.2	250	3.38	11.5	0.5	1.8	3.0	35.5	0.33	0.23	0.12
2019-2209	Soil Pulp	1.7	57	18	0.65	41.11	12.60	63.6	225	17.0	12.1	991	3.18	14.3	0.8	5.9	2.5	9.9	0.17	4.37	1.89



**BUREAU** MINERAL LABORATORIES  
**VERITAS** Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client:** **Noble Exploration Services Ltd.**  
6584 Felderhof Rd.  
Sooke British Columbia V9Z 0V8 Canada

**Project:** Soil-Gas  
**Report Date:** October 10, 2019

**Page:** 3 of 3

**Part:** 5 of 5

# CERTIFICATE OF ANALYSIS

VAN19002655.1

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Ti	S	Hg	Se	Te
		ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm
		1	0.01	0.001	0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02
2019-1308	Soil Pulp	44	0.22	0.077	7.1	23.1	0.23	68.2	0.069	<20	0.90	0.008	0.05	<0.1	2.3	0.05	<0.02	18	<0.1	<0.02
2019-1309	Soil Pulp	49	0.29	0.069	8.9	27.2	0.29	104.7	0.080	<20	0.87	0.008	0.05	<0.1	2.4	0.04	<0.02	21	<0.1	<0.02
2019-1311	Soil Pulp	39	0.24	0.031	7.7	19.8	0.18	61.0	0.080	<20	0.65	0.009	0.05	<0.1	1.7	0.04	<0.02	12	<0.1	<0.02
2019-1312	Soil Pulp	39	0.23	0.028	7.2	18.9	0.18	59.1	0.074	<20	0.63	0.008	0.05	<0.1	1.9	0.03	<0.02	12	<0.1	<0.02
2019-1313	Soil Pulp	55	0.31	0.080	16.9	26.9	0.58	69.2	0.086	<20	1.75	0.030	0.06	<0.1	4.5	0.12	<0.02	80	0.3	0.02
2019-2101	Soil Pulp	67	0.54	0.063	10.7	66.6	0.91	71.1	0.081	<20	2.02	0.010	0.12	0.1	3.5	0.10	<0.02	262	0.3	0.10
2019-2102	Soil Pulp	70	1.01	0.066	13.6	61.9	0.84	105.9	0.056	<20	2.18	0.007	0.14	0.2	5.9	0.16	0.02	250	0.8	0.14
2019-2103	Soil Pulp	237	1.71	0.141	11.7	91.8	1.89	71.5	0.285	<20	3.81	0.009	0.14	0.4	15.1	0.12	<0.02	243	0.3	0.04
2019-2104	Soil Pulp	97	0.75	0.075	11.4	75.5	1.39	74.8	0.122	<20	2.33	0.009	0.12	0.1	5.3	0.11	<0.02	91	0.4	0.07
2019-2105	Soil Pulp	77	0.57	0.092	10.3	61.3	0.82	83.0	0.065	<20	2.04	0.009	0.14	0.1	3.5	0.11	0.02	101	0.4	0.08
2019-2107	Soil Pulp	58	0.40	0.070	11.8	49.4	0.71	87.7	0.055	<20	2.05	0.008	0.12	<0.1	3.1	0.10	<0.02	44	0.1	0.03
2019-2108	Soil Pulp	64	0.36	0.098	11.4	51.6	0.76	83.2	0.059	<20	2.29	0.006	0.14	0.1	3.0	0.11	<0.02	46	0.3	0.04
2019-2201	Soil Pulp	34	0.12	0.078	18.9	35.9	0.65	94.5	0.038	<20	1.87	0.006	0.09	<0.1	2.6	0.07	<0.02	27	<0.1	<0.02
2019-2202	Soil Pulp	64	0.28	0.208	9.9	30.0	0.48	130.9	0.057	<20	2.61	0.008	0.10	0.1	3.2	0.07	<0.02	75	0.1	0.03
2019-2203	Soil Pulp	47	0.23	0.042	16.8	33.9	0.59	88.1	0.046	<20	1.77	0.007	0.10	<0.1	2.4	0.06	<0.02	18	<0.1	<0.02
2019-2204	Soil Pulp	58	0.30	0.108	13.5	33.9	0.71	134.5	0.060	<20	2.46	0.008	0.13	0.1	2.9	0.07	<0.02	38	<0.1	<0.02
2019-2205	Soil Pulp	60	0.41	0.116	9.3	20.7	0.39	182.8	0.084	<20	1.79	0.006	0.10	<0.1	3.6	0.05	<0.02	103	<0.1	<0.02
2019-2206	Soil Pulp	58	0.29	0.107	11.6	34.2	0.55	164.2	0.064	<20	2.44	0.009	0.11	<0.1	3.2	0.07	<0.02	44	<0.1	<0.02
2019-2207	Soil Pulp	48	0.23	0.057	16.7	29.1	0.63	139.8	0.052	<20	1.81	0.010	0.10	<0.1	2.8	0.06	<0.02	26	<0.1	<0.02
2019-2208	Soil Pulp	64	0.34	0.107	11.6	51.5	0.76	84.5	0.062	<20	2.23	0.006	0.14	0.1	3.1	0.10	<0.02	47	0.3	0.04
2019-2209	Soil Pulp	56	0.30	0.082	17.3	25.4	0.56	78.2	0.079	<20	1.73	0.028	0.06	0.1	4.8	0.12	<0.02	91	0.3	0.03



Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada  
PHONE (604) 253-3158

## QUALITY CONTROL REPORT

VAN19002655.1

Method Analyte Unit MDL	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101
	Ag	Al	As	Au	Ba	Be	Bi	Br	Ca	Cd	Ce	Cl	Co	Cs	Cu	Dy	Er	Eu	Fe	Ga
	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb
	0.5	1	5	1	10	1	0.5	10	5	0.5	1	2	1	0.5	5	0.1	0.1	0.1	0.1	0.5
Pulp Duplicates																				
2019-1101 Soil Pulp	<0.5	24	16	<1	1072	<1	<0.5	<10	26	1.0	17	9	23	0.8	57	0.8	0.6	0.2	17.4	5.8
REP 2019-1101 QC	<0.5	22	16	<1	1035	<1	<0.5	<10	25	1.0	17	8	22	0.7	59	1.0	0.5	0.3	16.2	5.3
2019-1308 Soil Pulp	<0.5	15	19	<1	457	<1	<0.5	<10	21	<0.5	3	<2	12	<0.5	34	0.2	<0.1	<0.1	16.2	2.3
REP 2019-1308 QC																				
2019-2101 Soil Pulp	0.8	19	47	<1	135	<1	<0.5	<10	71	0.8	12	8	8	0.5	263	1.4	0.7	0.2	12.5	3.0
REP 2019-2101 QC	0.8	19	46	<1	144	1	<0.5	12	65	0.6	10	7	7	0.5	245	1.4	0.8	0.2	12.4	2.8
2019-2207 Soil Pulp	<0.5	15	7	<1	155	<1	<0.5	11	41	<0.5	3	3	4	<0.5	29	0.1	<0.1	<0.1	10.9	2.8
REP 2019-2207 QC																				
Reference Materials																				
STD BVGE001 Standard																				
STD DS11 Standard																				
STD DS12 Standard	0.6	37	40	2	1291	12	12.1	140	341	4.0	13	131	6	4.1	227	0.8	0.5	0.3	14.0	16.6
STD DS12 Standard	0.6	25	32	2	1150	7	7.5	152	333	2.4	11	136	4	2.3	220	0.5	0.2	<0.1	8.6	13.2
STD DS12 Standard	<0.5	25	31	3	1000	9	8.5	147	333	2.1	11	128	3	2.7	213	0.4	0.2	<0.1	9.6	11.8
STD DS12 Standard	0.8	26	31	2	1035	9	9.7	128	339	2.2	12	130	4	2.9	223	0.2	<0.1	<0.1	10.6	12.6
STD OREAS262 Standard																				
STD OREAS262 Standard																				
STD BVGE001 Expected																				
STD DS11 Expected																				
STD OREAS262 Expected																				
STD DS12 Expected	0.6	27	44	2	1000	7	6.4	190	274	2.4	9	152	4	2.7	165	0.4	0.2		8	14.4
BLK Blank																				
BLK Blank																				
BLK Blank	<0.5	<1	<5	<1	<10	<1	<0.5	<10	<5	<0.5	<1	<2	<1	<0.5	<5	<0.1	<0.1	<0.1	<0.1	<0.5
BLK Blank	<0.5	<1	<5	<1	<10	<1	<0.5	<10	<5	<0.5	<1	<2	<1	<0.5	<5	<0.1	<0.1	<0.1	<0.1	<0.5
BLK Blank	<0.5	<1	<5	<1	<10	<1	<0.5	<10	<5	<0.5	<1	<2	<1	<0.5	<5	<0.1	<0.1	<0.1	<0.1	<0.5
BLK Blank	<0.5	<1	<5	<1	<10	<1	<0.5	<10	<5	<0.5	<1	<2	<1	<0.5	<5	<0.1	<0.1	<0.1	<0.1	<0.5



**BUREAU  
VERITAS**

**MINERAL LABORATORIES**  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client: Noble Exploration Services Ltd.**

6584 Felderhof Rd.

Sooke British Columbia V9Z 0V8 Canada

Project: Soil-Gas

Report Date: October 10, 2019

Page: 1 of 1

Part: 2 of 5

## QUALITY CONTROL REPORT

**VAN19002655.1**

	Method Analyte Unit MDL	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101
		Gd	Ge	Hf	Hg	Ho	In	K	La	Li	Lu	Mg	Mn	Mo	Na	Nb	Nd	Ni	P	Pb	Pr
		ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppm	ppb	ppb	ppm	ppb	ppb	ppb	ppm	ppb	ppb
		0.1	0.1	0.1	1	0.05	0.05	2	2	0.1	0.05	0.1	50	1	3	0.5	1	5	0.1	3	0.5
Pulp Duplicates																					
2019-1101	Soil Pulp	0.9	0.6	0.3	<1	0.18	<0.05	37	12	20.2	0.05	9.4	4486	6	6	1.4	8	33	39.7	5	2.5
REP 2019-1101	QC	0.9	0.5	0.4	<1	0.20	<0.05	36	11	21.6	0.08	8.9	4265	4	6	1.4	6	31	40.4	4	2.0
2019-1308	Soil Pulp	0.1	<0.1	0.2	<1	<0.05	<0.05	22	<2	18.1	<0.05	5.9	865	4	<3	0.8	<1	19	27.6	<3	<0.5
REP 2019-1308	QC																				
2019-2101	Soil Pulp	1.4	0.4	0.5	<1	0.31	<0.05	37	4	11.4	0.12	9.4	769	10	3	0.7	6	41	15.2	4	1.2
REP 2019-2101	QC	1.4	0.4	0.5	<1	0.27	<0.05	39	4	10.1	0.14	9.7	702	9	<3	0.7	5	36	14.9	5	1.1
2019-2207	Soil Pulp	0.3	0.4	0.3	<1	<0.05	<0.05	24	<2	7.7	<0.05	6.0	529	3	3	0.9	1	11	9.6	<3	<0.5
REP 2019-2207	QC																				
Reference Materials																					
STD BVGEO01	Standard																				
STD DS11	Standard																				
STD DS12	Standard	0.9	1.1	0.2	1	0.14	4.67	153	6	209.9	0.06	38.5	831	255	156	9.0	6	34	1.9	144	1.2
STD DS12	Standard	0.7	0.7	0.1	1	0.08	2.99	146	4	197.6	<0.05	38.2	623	276	153	5.8	4	29	1.5	100	1.1
STD DS12	Standard	0.3	0.6	<0.1	<1	0.05	3.66	143	4	219.0	<0.05	34.7	652	220	143	4.5	5	27	1.7	96	1.0
STD DS12	Standard	0.4	0.6	<0.1	<1	0.07	3.67	148	5	211.8	<0.05	37.8	701	233	153	3.9	5	28	1.4	97	1.2
STD OREAS262	Standard																				
STD OREAS262	Standard																				
STD BVGEO01 Expected																					
STD DS11 Expected																					
STD OREAS262 Expected																					
STD DS12 Expected		0.4	0.9	0.1	1	0.09	3.01	162	3	217.5	0.04	38.5	680	277	148	4.8	3	27	1.3	86	0.9
BLK	Blank																				
BLK	Blank																				
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.05	<0.05	<2	<2	<0.1	<0.05	<0.1	<50	<1	<3	<0.5	<1	<5	<0.1	<3	<0.5
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.05	<0.05	<2	<2	<0.1	<0.05	<0.1	<50	<1	<3	<0.5	<1	<5	<0.1	<3	<0.5
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.05	<0.05	<2	<2	0.1	<0.05	<0.1	<50	<1	<3	<0.5	<1	<5	<0.1	<3	<0.5
BLK	Blank	<0.1	<0.1	<0.1	<1	<0.05	<0.05	<2	<2	<0.1	<0.05	<0.1	<50	<1	<3	<0.5	<1	<5	<0.1	<3	<0.5



**BUREAU  
VERITAS**

**MINERAL LABORATORIES**  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client: Noble Exploration Services Ltd.**

6584 Felderhof Rd.

Sooke British Columbia V9Z 0V8 Canada

Project: Soil-Gas

Report Date: October 10, 2019

Page: 1 of 1

Part: 3 of 5

## QUALITY CONTROL REPORT

**VAN19002655.1**

Method Analyte Unit MDL	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101	LH101
	Rb	Re	S	Sb	Sc	Se	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti	Tl	Tm	U	V	W	Y
	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb
	2	0.05	10	1	20	5	0.5	1	10	0.5	0.05	1	2	0.05	0.2	0.05	0.1	50	2	1
Pulp Duplicates																				
2019-1101 Soil Pulp	16	<0.05	<10	13	<20	<5	0.9	<1	206	<0.5	0.11	<1	3	0.89	<0.2	<0.05	1.2	85	<2	6
REP 2019-1101 QC	16	<0.05	<10	12	<20	<5	1.0	<1	194	<0.5	0.14	<1	2	0.85	<0.2	<0.05	1.3	76	<2	5
2019-1308 Soil Pulp	4	<0.05	<10	3	<20	<5	<0.5	<1	99	<0.5	<0.05	<1	<2	0.36	<0.2	<0.05	0.7	102	<2	1
REP 2019-1308 QC																				
2019-2101 Soil Pulp	30	<0.05	<10	3	<20	<5	1.0	<1	206	<0.5	0.17	<1	4	0.32	<0.2	0.10	2.0	64	<2	9
REP 2019-2101 QC	29	<0.05	<10	3	<20	<5	1.1	<1	194	<0.5	0.23	<1	4	0.38	<0.2	0.10	1.9	66	<2	9
2019-2207 Soil Pulp	29	<0.05	<10	<1	<20	<5	<0.5	<1	164	<0.5	<0.05	<1	2	0.41	<0.2	<0.05	1.1	<50	<2	2
REP 2019-2207 QC																				
Reference Materials																				
STD BVGE001 Standard																				
STD DS11 Standard																				
STD DS12 Standard	309	26.96	249	60	<20	172	1.0	9	2504	<0.5	0.10	10	5	1.00	80.4	<0.05	16.3	<50	193	6
STD DS12 Standard	267	25.67	254	61	<20	175	1.0	7	2437	<0.5	<0.05	5	3	0.76	67.3	<0.05	15.7	<50	196	3
STD DS12 Standard	260	24.59	215	52	<20	153	1.0	7	2307	<0.5	<0.05	5	<2	0.68	63.6	<0.05	12.7	<50	178	2
STD DS12 Standard	273	26.15	237	56	<20	162	0.6	9	2348	<0.5	<0.05	7	3	0.74	67.2	<0.05	12.2	<50	188	3
STD OREAS262 Standard																				
STD OREAS262 Standard																				
STD BVGE001 Expected																				
STD DS11 Expected																				
STD OREAS262 Expected																				
STD DS12 Expected	274	28.1	194	65	10	235	0.7	6	2260	0.2	0.06	5	3	0.73	75.1	0.05	16.4	30	211	3
BLK Blank																				
BLK Blank																				
BLK Blank	<2	<0.05	<10	<1	<20	<5	<0.5	<1	<10	<0.5	<0.05	<1	<2	<0.05	<0.2	<0.05	<0.1	<50	<2	<1
BLK Blank	<2	<0.05	<10	<1	<20	<5	<0.5	<1	<10	<0.5	<0.05	<1	<2	<0.05	<0.2	<0.05	<0.1	<50	<2	<1
BLK Blank	<2	<0.05	<10	<1	<20	<5	<0.5	<1	<10	<0.5	<0.05	<1	<2	<0.05	<0.2	<0.05	<0.1	<50	<2	<1
BLK Blank	<2	<0.05	<10	<1	<20	<5	<0.5	<1	<10	<0.5	<0.05	<1	<2	<0.05	<0.2	<0.05	<0.1	<50	<2	<1



**BUREAU  
VERITAS**

**MINERAL LABORATORIES**  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client: Noble Exploration Services Ltd.**

6584 Felderhof Rd.

Sooke British Columbia V9Z 0V8 Canada

Project: Soil-Gas

Report Date: October 10, 2019

Page: 1 of 1

Part: 4 of 5

## QUALITY CONTROL REPORT

**VAN19002655.1**

	Method Analyte Unit MDL	LH101	LH101	LH101	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		Yb	Zn	Zr	Mo	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi
		ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppb	ppm	ppm	ppm	%	ppm	ppm	ppb	ppm	ppm	ppm	ppm	ppm
		0.5	10	1	0.01	0.01	0.01	0.1	2	0.1	0.1	1	0.01	0.1	0.1	0.2	0.1	0.5	0.01	0.02	0.02
Pulp Duplicates																					
2019-1101	Soil Pulp	0.7	235	23	0.51	10.70	4.75	38.7	77	8.5	4.3	364	1.48	2.2	0.3	2.8	1.3	16.9	0.11	0.23	0.08
REP 2019-1101	QC	<0.5	233	21																	
2019-1308	Soil Pulp	<0.5	190	12	0.45	9.98	4.26	47.8	67	11.1	3.4	113	1.50	2.2	0.2	0.8	1.5	12.7	0.08	0.17	0.06
REP 2019-1308	QC				0.45	9.93	4.52	48.5	68	11.1	3.6	107	1.53	2.3	0.2	1.7	1.6	14.1	0.07	0.16	0.06
2019-2101	Soil Pulp	0.9	117	25	1.05	76.74	12.79	174.9	185	57.4	13.4	494	3.19	16.9	0.5	4.4	2.1	40.9	0.33	0.18	0.12
REP 2019-2101	QC	0.6	107	25																	
2019-2207	Soil Pulp	<0.5	36	18	0.46	12.79	5.31	85.2	113	24.1	9.1	329	2.89	2.5	0.5	0.2	4.4	47.1	0.11	0.09	0.11
REP 2019-2207	QC				0.45	12.53	5.36	79.5	105	23.5	8.9	323	2.93	2.4	0.4	1.1	3.5	44.5	0.10	0.09	0.11
Reference Materials																					
STD BVGEO01	Standard				10.64	4503.29	178.93	1753.7	2525	161.5	23.3	743	3.76	106.6	3.5	213.0	14.4	53.3	5.59	2.67	22.42
STD DS11	Standard				17.24	165.70	148.51	358.0	1694	84.3	13.8	1030	3.22	41.3	2.9	77.0	7.1	69.4	2.21	7.12	11.38
STD DS12	Standard	<0.5	161	9																	
STD DS12	Standard	<0.5	125	4																	
STD DS12	Standard	<0.5	108	3																	
STD DS12	Standard	<0.5	117	5																	
STD OREAS262	Standard				0.66	122.34	59.35	148.1	495	61.6	27.9	505	3.38	34.8	1.3	65.4	8.2	36.9	0.63	2.66	1.00
STD OREAS262	Standard				0.66	127.72	60.21	152.7	498	61.9	27.2	530	3.41	34.3	1.3	64.7	9.5	36.3	0.59	2.59	1.02
STD BVGEO01 Expected					10.8	4415	187	1741	2530	163	25	733	3.7	121	3.77	219	14.4	55	6.5	2.2	25.6
STD DS11 Expected					13.9	149	138	345	1710	77.7	14.2	1055	3.1	42.8	2.59	79	7.65	67.3	2.37	7.2	12.2
STD OREAS262 Expected					0.68	118	56	154	450	62	26.9	530	3.284	35.8	1.22	65	9.33	36	0.61	3.39	1.03
STD DS12 Expected		0.3	100	5																	
BLK	Blank				<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02
BLK	Blank				<0.01	<0.01	<0.01	<0.1	<2	<0.1	<0.1	<1	<0.01	<0.1	<0.1	<0.2	<0.1	<0.5	<0.01	<0.02	<0.02
BLK	Blank	<0.5	<10	<1																	
BLK	Blank	<0.5	<10	<1																	
BLK	Blank	<0.5	13	<1																	
BLK	Blank	<0.5	<10	<1																	



**BUREAU  
VERITAS**

**MINERAL LABORATORIES**  
Canada

[www.bureauveritas.com/um](http://www.bureauveritas.com/um)

Bureau Veritas Commodities Canada Ltd.

9050 Shaughnessy St Vancouver British Columbia V6P 6E5 Canada

PHONE (604) 253-3158

**Client: Noble Exploration Services Ltd.**

6584 Felderhof Rd.

Sooke British Columbia V9Z 0V8 Canada

Project: Soil-Gas

Report Date: October 10, 2019

Page: 1 of 1

Part: 5 of 5

## QUALITY CONTROL REPORT

**VAN19002655.1**

	Method Analyte Unit MDL	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250	AQ250
		V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	W	Sc	Tl	S	Hg	Se	Te	Ga
		ppm	%	%	ppm	ppm	%	ppm	%	ppm	%	%	%	ppm	ppm	ppm	%	ppb	ppm	ppm	ppm
		1	0.01	0.001	0.5	0.5	0.01	0.5	0.001	20	0.01	0.001	0.01	0.1	0.1	0.02	0.02	5	0.1	0.02	0.1
Pulp Duplicates																					
2019-1101	Soil Pulp	49	0.24	0.057	8.2	21.0	0.20	131.1	0.065	<20	0.78	0.009	0.05	<0.1	2.2	0.05	<0.02	31	<0.1	<0.02	3.7
REP 2019-1101	QC																				
2019-1308	Soil Pulp	44	0.22	0.077	7.1	23.1	0.23	68.2	0.069	<20	0.90	0.008	0.05	<0.1	2.3	0.05	<0.02	18	<0.1	<0.02	4.3
REP 2019-1308	QC	47	0.23	0.081	7.3	23.0	0.23	73.3	0.072	<20	0.92	0.007	0.05	<0.1	2.3	0.05	<0.02	16	<0.1	<0.02	4.3
2019-2101	Soil Pulp	67	0.54	0.063	10.7	66.6	0.91	71.1	0.081	<20	2.02	0.010	0.12	0.1	3.5	0.10	<0.02	262	0.3	0.10	6.5
REP 2019-2101	QC																				
2019-2207	Soil Pulp	48	0.23	0.057	16.7	29.1	0.63	139.8	0.052	<20	1.81	0.010	0.10	<0.1	2.8	0.06	<0.02	26	<0.1	<0.02	6.9
REP 2019-2207	QC	48	0.23	0.060	17.2	29.1	0.64	131.3	0.051	<20	1.82	0.008	0.10	<0.1	2.6	0.06	<0.02	26	<0.1	<0.02	6.2
Reference Materials																					
STD BVGEO01	Standard	75	1.32	0.068	28.8	176.2	1.25	346.8	0.234	<20	2.25	0.189	0.90	3.8	5.7	0.61	0.66	94	4.7	0.98	7.3
STD DS11	Standard	52	1.07	0.076	18.3	56.4	0.87	460.6	0.100	<20	1.20	0.073	0.41	3.0	3.3	5.21	0.28	293	2.2	4.78	5.4
STD DS12	Standard																				
STD DS12	Standard																				
STD DS12	Standard																				
STD DS12	Standard																				
STD OREAS262	Standard	23	3.07	0.042	17.3	40.3	1.17	276.7	0.003	<20	1.33	0.070	0.33	0.1	3.6	0.52	0.27	179	0.4	0.24	4.2
STD OREAS262	Standard	23	3.13	0.040	17.8	40.2	1.16	274.0	0.003	<20	1.35	0.070	0.33	<0.1	3.7	0.50	0.27	173	0.4	0.24	4.4
STD BVGEO01 Expected		73	1.3219	0.0727	25.9	171	1.2963	340	0.233		2.347	0.1924	0.89	3.5	5.97	0.62	0.6655	100	4.84	1.02	7.37
STD DS11 Expected		50	1.063	0.0701	18.6	61.5	0.85	417	0.0976		1.129	0.0694	0.4	2.9	3.1	4.9	0.2835	260	2.2	4.56	4.7
STD OREAS262 Expected		22.5	2.98	0.04	15.9	41.7	1.17	248	0.003		1.204	0.071	0.312	0.13	3.24	0.47	0.253	170	0.4	0.23	3.73
STD DS12 Expected																					
BLK	Blank	<1	<0.01	<0.001	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1
BLK	Blank	<1	<0.01	<0.001	<0.5	<0.5	<0.01	<0.5	<0.001	<20	<0.01	<0.001	<0.01	<0.1	<0.1	<0.02	<0.02	<5	<0.1	<0.02	<0.1
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				
BLK	Blank																				