Table 1a. Chemical composition of rocks in the Goldenville and Halifax groups in the western area, southwestern Nova Scotia.

Strat Order	Sample Number	Ref	Formation/ Member	Description	UTM Coordinates Easting	UTM Coordinates Northing	Zone
112	A12-RT05-03	3, 4	Bear River	slate	288969	4941406	20T
111	A12-RT05-04	3, 4	Bear River	slate	286945	4943686	20T
110	A12-RT05-05	3, 4	Acacia Brook	slate	282190	4942232	20T
109	A12-W06-141	4	Acacia Brook	slate	281293	4940377	20T
108	A12-W06-135	4	Acacia Brook	slate	278850	4941157	20T
107	O16-RT05-09B	4	Acacia Brook	metasandstone	245776	4865023	20T
106	O16-RT05-09A	4	Acacia Brook	slate	245776	4865023	20T
105	H 1085	2	Acacia Brook	slate	245695	4865052	20T
104	H 1093	2	Acacia Brook	slate	245683	4865059	20T
103	H 1088	2	Acacia Brook	slate	245669	4865066	20T
102	H 1087	2	Acacia Brook	slate	245660	4865074	20T
101	H 1086	2	Acacia Brook	slate	245652	4865080	20T
100	A12-W06-140	4	Acacia Brook	slate	280957	4940575	20T
99	A12-W06-139A	4	Bloomfield	metasiltstone	277569	4939052	20T
98	A12-W06-134B	4	Bloomfield	metasiltstone	278371	4941096	20T
97	A12-W06-134A	4	Bloomfield	metasiltstone	278371	4941096	20T
96	A05-RT05-06	3, 4	Bloomfield	metasiltstone	278192	4941102	20T
95	85336	1	Bloomfield	slate	245590	4865577	20T
94	85334	1	Bloomfield	slate	245555	4865541	20T
93	H 1084	2	Bloomfield	metasiltstone	245554	4865553	20T
92	H 1083	2	Bloomfield	metasiltstone	245553	4865561	20T
91	O16-RT05-10	3, 4	Bloomfield	metasiltstone	245560	4865280	20T
90	A12-W06-138	4	Church Point	metasandstone	276936	4939200	20T
89	A12-W06-136	4	Church Point	metasandstone	276265	4939824	20T
88	H 1082	2	Church Point	slate	245544	4865559	20T
87	H 1081	2	Church Point	metasiltstone	245539	4865567	20T
86	H 1080	2	Church Point	slate	245537	4865573	20T
85	H 1079	2	Church Point	slate	245533	4865578	20T
84	O16-RT05-11	3, 4	Church Point	metasandstone	245521	4865760	20T
83	LR-042	4	Church Point	metasandstone	245514	4865736	20T
82	85332	1	Church Point	wacke	245531	4865598	20T
81	85331	1	Church Point	wacke	245523	4865604	20T
80	85333	1	Church Point	grey slate	245527	4865611	20T
79	85330	1	Church Point	wacke	245523	4865613	20T
78	85329	1	Church Point	slaty wacke (top)	245526	4865615	20T
77	85328	1	Church Point	wacke (base)	245521	4865616	20T
76	85327	1	Church Point	wacke	245523	4865617	20T
75	85335	1	Church Point	cherty band top of wacke	245523	4865621	20T
74	85325	1	Church Point	wacke	245525	4865623	20T
73	85323	1	Church Point	wacke	245523	4865623	20T
72	85322	1	Church Point	grey slate	245523	4865623	20T
71	85321	1	Church Point	wacke (base)	245525	4865623	20T
70	85320	1	Church Point	crosslaminated wacke (top)	245527	4865624	20T
69	85319	1	Church Point	wacke (base)	245524	4865629	20T
68	85318	1	Church Point	green slate	245526	4865628	20T
67	85317	1	Church Point	wacke	245525	4865629	20T
66	85316	1	Church Point	black slate	245526	4865632	20T
65	85315	1	Church Point	crossbedded argillite	245526	4865635	20T
64	85314	1	Church Point	grey wacke; parallel-lamination	245729	4866738	20T
63	85313	1	Church Point	wacke	245730	4866739	20T
62	85312	1	Church Point	wacke	245728	4866740	20T
61	85311	1	Church Point	wacke; bottom of top half	245730	4866741	20T
60	85310	1	Church Point	wacke; top	245730	4866744	20T
59	85309	1	Church Point	grey slate; pair w/ 85308	245729	4866746	20T
58	85308	1	Church Point	wacke; top third	245728	4866746	20T
57	85307	1	Church Point	wacke	245729	4866748	20T
56	85306	1	Church Point	grey slate; pair w/85305	245730	4866751	20T
55	85305	1	Church Point	wacke; top; pair w/85306	245729	4866753	20T
54	85302	1	Church Point	wacke; host to 85301	245731	4866766	20T
53	85301	1	Church Point	doughnut concretion	245731	4866766	20T
52	85300	1	Church Point	nodule	245729	4866770	20T
51	O16-RT05-12	3, 4	Church Point	metasiltstone	247033	4868395	20T
50	O16-RT05-13	3, 4	Church Point	metasandstone	247021	4868694	20T
49	85285	1	Church Point	siltstone	247009	4868966	20T
48	85284	1	Church Point	green slate	247009	4868971	20T
47	85283	1	Church Point	green slate	247000	4869024	20T
46	85282	1	Church Point	wacke lens	246997	4869025	20T
45	85279	1	Church Point	speckled slate	246995	4869031	20T
44	85278	1	Church Point	argillite	246993	4869035	20T
43	85277	1	Church Point	green slate	246992	4869043	20T
42	85276	1	Church Point	green slate	246991	4869048	20T
41	85275	1	Church Point	green slate	246992	4869053	20T
40	85274	1	Church Point	green slate	246992	4869056	20T
39	85273	1	Church Point	speckled slate	246992	4869057	20T
38	85272	1	Church Point	green slate	246992	4869060	20T
37	85271	1	Church Point	wacke	246992	4869061	20T
36	85270	1	Church Point	argillite	246991	4869063	20T
35	85268	1	Church Point	argillite	246991	4869066	20T
34	85269	1	Church Point	wacke	246989	4869066	20T
33	85267	1	Church Point	wacke	246988	4869068	20T
32	85266	1	Church Point	grey slate	246989	4869069	20T
31	85265	1	Church Point	wacke	246990	4869071	20T
30	85264	1	Church Point	wacke	246989	4869073	20T
29	85263	1	Church Point	grey slate	246988	4869072	20T
28	85262	1	Church Point	wacke	246987	4869074	20T
27	85261	1	Church Point	grey slate	246986	4869075	20T
26	85260	1	Church Point	wacke	246985	4869078	20T
25	O16-RT05-14	3, 4	Church Point	metasandstone	246811	4870435	20T
24	O16-RT05-15	3, 4	High Head	metasiltstone	246332	4871866	20T
23	LA-090	4	High Head	metasandstone	246228	4871942	20T
22	O16-RT05-16B	3, 4	High Head	metasandstone	246228	4871942	20T
21	O16-RT05-16A	3, 4	High Head	metasiltstone	246228	4871942	20T
20	A12-RT05-21	3, 4	Church Point	metasandstone	272886	4933534	20T
19	A12-RT05-20	3, 4	Church Point	metasandstone	271225	4934849	20T
18	85250	1	Church Point	wacke above concretion	246185	4872384	20T
17	85249	1	Church Point	wacke	246185	4872386	20T
16	85248	1	Church Point	green sandy slate	246184	4872399	20T
15	85247	1	Church Point	wacke	246183	4872399	20T
14	85246	1	Church Point	wacke	246182	4872399	20T
13	85245	1	Church Point	green slate	246182	4872401	20T
12	85244	1	Church Point	wacke (above concretion)	246183	4872402	20T
11	85243	1	Church Point	concretion	246183	4872403	20T
10	85242	1	Church Point	green slate	246183	4872405	20T
9	85241	1	Church Point	sandstone w/concretionary films	246182	4872408	20T
8	85240	1	Church Point	wacke	246181	4872412	20T
7	O16-RT05-17	3, 4	Church Point	metasiltstone	246391	4874834	20T
6	A12-RT05-19B	3, 4	Church Point	metasandstone	268749	4932825	20T
5	A12-RT05-19A	3, 4	Church Point	metasiltstone	268749	4932825	20T
4	A05-RT05-07	3, 4	Church Point	metasandstone	265298	4930836	20T
3	A05-RT05-08	3, 4	Church Point	metasandstone	263928	4930002	20T
2	LA-089	4	Church Point	metasandstone	246901	4878304	20T
1	B01-RT05-18A	3, 4	Church Point	metasandstone	246897	4878316	20T

Strat Order	SiO_2 wt.%	TiO_2 wt.%	Al_2O_3 wt.%	$Fe_2O_3^T$ wt.%	Fe_2O_3 wt.%	FeO wt.%	MnO wt.%	MgO wt.%	CaO wt.%	Na_2O wt.%	K_2O wt.%	P_2O_5 wt.%	LOI wt.%	Total wt.%	S^T wt.%	CO_2 %	C^T wt.%	N^T wt.%
112	57.25	0.97	22.01	7.75			0.16	1.87	0.23	1.06	3.75	0.13	4.59	99.77	0.01			
111	58.49	1.02	20.78	7.09			0.06	2.03	0.44	1.41	4.28	0.13	4.45	100.18	0.01			
110	57.39	0.90	22.23	8.12			0.18	1.79	0.12	1.12	3.29	0.12	4.45	99.70	0.01			
109	62.50	0.63	19.86	7.28			0.16	1.72	0.14	1.03	2.85	0.11	3.72	99.99				
108	51.66	0.86	26.15	7.71			0.46	2.16	0.19	1.72	4.45	0.12	4.51	99.99				
107	87.82	0.46	5.56	2.11			0.03	0.84	1.15	0.83	0.04	0.04	0.76	99.63	0.14			
106	62.60	0.92	19.72	4.95			0.05	1.63	0.69	1.02	3.40	0.04	4.22	99.24	0.40			
105	62.08	0.84	18.54	6.32			0.14	1.78	0.40	1.42	3.57	0.04	5.63	100.78	0.70		0.34	0.058
104	54.37	1.41	24.72	6.63			0.09	2.18	0.14	1.45	5.10	0.05	3.11	99.26	0.05		0.02	0.077
103	58.13	0.62	22.79	5.10			0.05	1.96	0.13	1.41	4.10	0.02	4.59	98.92	0.24		0.42	0.068
102	56.00	1.08	22.40	6.17			0.12	1.78	0.57	1.47	4.43	0.12	6.04	100.20	2.07		0.30	0.073
101	56.88	0.93	24.39	4.85			0.11	2.01	1.03	2.18	4.42	0.08	4.05	100.94	0.03		0.35	0.061
100	59.30	0.75	20.39	8.72			0.22	2.19	0.10	1.03	2.74	0.11	4.46	100.00				
99	59.00	0.74	20.40	7.62			0.16	2.35	0.25	2.28	3.75	0.19	3.27	100.01				
98	55.84	0.76	20.74	6.25			0.51	2.45	2.85	1.34	3.12	0.10	6.03	99.99				
97	56.52	0.69	22.77	8.30			0.33	2.29	0.21	1.43	3.41	0.12	3.94	100.00				
96	56.98	0.88	19.78	9.92			0.28	2.03	0.18	1.18	3.98	0.11	4.13	99.45	0.01			
95	71.21	1.12	11.92	6.82			0.22	0.95	2.59	3.24	1.80	0.12		100.00				
94	60.58	0.94	20.40	7.71			0.37	2.21	0.86	2.70	3.94	0.29		100.00				
93	55.60	0.93	21.75	10.04			0.36	2.53	0.39	1.42	3.46	0.14	3.74	100.39	0.01		0.02	0.042
92	56.50	1.02	23.93	6.97			0.23	1.77	0.38	1.63	4.70	0.11	3.62	100.88	0.01		0.01	0.056
91	69.25	0.71	14.43	6.28			0.15	1.78	0.74	2.60	1.42	0.11	2.08	99.55	0.01			
90	74.58	0.56	12.63	3.67			0.07	1.42	0.68	2.77	1.65	0.15	1.83	100.00				
89	77.78	0.40	10.14	2.64			0.08	1.11	1.63	2.91	0.96	0.12	2.23	100.00				
88	55.13	0.84	22.80	8.78			0.35	2.59	0.53	1.54	4.41	0.13	3.76	100.85	0.04		0.01	
87	62.08	0.82	16.11	5.85			0.15	1.89	2.09	2.85	2.72	0.13	3.74	98.45	0.02		0.41	
86	53.89	1.15	28.06	3.35			0.04	1.60	0.55	1.36	5.44	0.01	4.48	99.95	0.04		0.38	
85	50.63	1.41	28.83	3.50			0.07	1.18	0.09	1.82	5.44	0.11	6.74	99.85	0.08		1.77	
84	75.98	0.50	10.97	3.40			0.12	1.15	1.54	2.83	1.30	0.13	2.33	100.24	0.01			
83	75.88	0.52	10.86	3.06			0.17	1.13	1.39	2.78	1.32	0.12	2.60	99.82	0.02		0.26	
82	63.08	0.45	22.68	3.27			0.15	2.72	0.56	2.47	4.38	0.24		100.00				
81	75.93	0.47	13.09	3.45			0.20	1.53	1.37	2.62	1.23	0.12		100.00				
80	67.91	0.88	13.15	9.25			0.26	1.86	2.15	3.02	1.38	0.16		100.00				
79	74.01	0.53	13.95	4.84			0.24	1.39	1.36	1.60	1.90	0.18		100.00				
78	70.94	0.93	13.74	7.36			0.18	1.49	1.48	1.64	2.05	0.19		100.00				
77	50.64	0.63	28.94	6.98			0.35	2.69	1.10	0.55	7.73	0.39		100.00				
76	81.90	0.47	10.10	2.72			0.24	0.91	1.20	1.37	0.99	0.11		100.00				
75	77.50	0.52	10.73	3.99			0.24	1.39	0.80	3.56	1.14	0.15		100.00				
74	64.40	0.52	20.95	4.06			0.38	2.95	1.84	0.98	3.60	0.34		100.00				
73	79.11	0.35	10.94	3.28			0.15	0.90	2.00	1.97	1.18	0.13		100.00				
72	65.64	1.31	16.08	8.47			0.21	2.09	1.70	2.10	2.23	0.17		100.00				
71	63.34	0.61	20.19	5.11			0.31	2.25	2.21	1.64	3.98	0.37		100.00				
70	75.37	0.55	12.16	5.15			0.14	1.78	1.29	2.14	1.31	0.12		100.00				
69	74.66	0.58	12.93	4.27			0.23	1.39	1.98	2.32	1.51	0.14		100.00				
68	71.58	1.03	11.68	7.67			0.26	1.34	2.61	2.26	1.43	0.13		100.00				
67	57.32	0.54	23.42	5.90			0.32	3.99	2.25	1.57	4.32	0.38		100.00				
66	57.65	0.95	23.51	7.28			0.15	2.58	1.27	0.96	5.52	0.13		100.00				
65	75.51	0.60	11.26	3.44			0.19	1.57	3.38	1.78	2.14	0.12		100.00				
64	61.57	0.45	25.27	2.41			0.22	2.23	0.43	1.48	5.82	0.12		100.00				
63	62.10	0.51	23.63	3.18			0.16	2.38	0.18	1.34	6.39	0.13		100.00				
62	81.87	0.60	7.76	4.94			0.10	0.57	0.47	3.19	0.42	0.09		100.00				
61	61.00	0.66	22.20	4.95			0.04	2.90	0.34	4.82	2.96	0.13		100.00				
60	78.20	0.37	10.60	2.86			0.36	0.98	2.20	3.30	1.06	0.06		100.00				
59	52.47	1.18	24.24	8.62			0.14	3.69	0.42	1.19	7.87	0.19		100.00				
58	72.96	0.49	14.52	3.45			0.03	1.79	1.02	3.29	2.42	0.02		100.00				
57	57.60	0.85	20.11	9.02			0.18	4.27	1.04	2.37	4.44	0.11		100.00				
56	73.19	1.07	11.24	7.44			0.09	1.26	1.06	2.98	1.64	0.05		100.00				
55	79.37	0.46	11.36	2.58			0.26	0.93	0.98	2.00	1.95	0.11		100.00				
54	77.76	0.54	11.58	2.86			0.03	1.26	1.22	2.90	1.82	0.04		100.00				
53	77.10	0.28	12.28	3.28			0.06	1.61	0.67	2.80	1.93			100.00				
52	77.88	0.28	11.62	3.42			0.11	1.52	0.85	2.66	1.64	0.02		100.00				
51	56.59	0.82	22.29	7.60			0.48	2.00	0.57	1.66	4.07	0.11	3.35	99.53	0.01			
50	75.32	0.54	11.90	3.48			0.11	1.24	1.01	2.94	1.48	0.13	2.14	100.30	0.01			
49	54.23	1.49	17.24		1.53	7.51	0.41	5.29	7.19	4.10	0.35	0.66		100.00	0.08	3.31		
48	72.78	0.67	15.39		0.69	1.94	0.54	1.35	1.68	1.87	3.02	0.08		100.00	0.49	0.98		
47	49.77	1.71	13.79		2.18	12.45	0.26	11.19	8.11	0.06	0.27	0.22		100.00	0.01	4.66		
46	56.01	0.93	20.35		2.19	5.08	0.09	3.40	3.74	7.83	0.29	0.10		100.00	0.02	1.21		
45	57.68	0.90	22.47		4.72	3.97	0.38	2.66	0.30	0.86	5.96	0.09		100.00			0.01	
44	49.13	3.43	14.92		4.44	10.65	0.24	5.22	7.62	3.46	0.29	0.60		100.00	0.20	3.48		
43	60.35	1.03	21.02		1.35	7.35	0.22	2.45	0.74	1.82	3.55	0.12		100.00	0.02	0.20		
42	60.71	1.03	21.90		2.11	5.53	0.19	2.36	0.28	1.03	4.73	0.13		100.00		0.07		
41	60.37	1.00	20.81		1.46	7.01	0.18	2.59	1.26	0.99	4.21	0.11		100.00	0.11	0.37	0.04	
40	59.59	1.03	21.33		1.97	5.61	0.16	2.60	0.44	4.12	3.06	0.10		100.00			0.01	
39	51.24	1.84	13.64		0.86	13.12	0.24	10.02	8.10	0.29	0.31	0.33		100.00	0.01	5.23		
38	61.23	1.01	20.70		1.82	5.69	0.16	2.50	0.35	3.24	3.18	0.12		100.00			0.01	
37	80.07	0.42	10.53		0.21	3.03	0.26	1.50	0.78	1.97	1.20	0.03		100.00		0.53	0.02	
36	75.63	0.53	12.14		1.20	3.59	0.09	1.46	0.88	3.00	1.36	0.12		100.00	0.01	0.33		
35	78.74	0.58	11.43		0.26	2.84	0.23	1.36	0.86	1.96	1.70	0.03		100.00		0.47	0.03	
34	72.65	0.58	13.26		1.38	3.84	0.15	1.69	1.83	3.09	1.40	0.12		100.00	0.01	0.73		
33	79.59	0.48	10.42		0.00	3.35	0.27	1.53	0.99	2.04	1.25	0.08		100.00		0.63		
32	61.20	1.12	21.05		1.02	5.06	0.34	2.71	0.65	1.33	5.39	0.13		100.00		0.26		
31	74.80	0.46	10.12		0.84	2.83	0.28	1.16	5.61	2.76	1.04	0.11		100.00	0.02	3.16		
30	71.72	0.49	11.91		3.06	3.74	0.10	2.08	1.64	1.84	3.43	0.00		100.00	0.01	0.95		
29	63.21	1.01	19.09		1.76	5.21	0.14	2.17	1.72	1.93	3.58	0.18		100.00	0.01	0.44		
28	78.12	0.37	11.14		0.08	3.52	0.04	1.33	1.75	2.77	0.77	0.11		100.00	0.01	1.19	0.15	
27	64.53	0.66	15.67		1.55	5.58	0.22	2.34	4.89	2.13	2.25	0.17		100.00		1.83	0.14	
26	74.12	0.49	11.82		1.20	4.21	0.10	1.60	2.29	2.91	1.15	0.10		100.00	0.02	0.86		
25	76.77	0.48	10.64	2.86			0.07	1.07	1.19	2.72	1.59	0.13	2.18	99.69	0.01			
24	63.25	0.76	15.04	6.17			0.15	2.69	2.51	2.65	2.37	0.15	3.34	99.08	0.01			
23	69.76	0.77	11.03	4.70			0.17	2.06	3.64	3.00	0.59	0.29	4.00	100.01				
22	67.85	0.88	13.41	5.73			0.13	2.47	1.75	3.67	0.91	0.15	2.90	99.85	0.01			
21	66.51	0.88	14.11	6.17			0.14	2.67	1.65	3.67	1.04	0.16	2.88	99.88	0.01			
20	63.57	0.84	16.80	6.98			0.13	2.72	1.24	2.10	2.72	0.14	3.26	100.50	0.01			
19	64.21	0.90	14.40	7.03			0.13	3.09	1.95	3.18	1.26	0.13	3.89	100.17	0.01			
18	69.09	0.77	15.32	6.08			0.04	2.50	1.19	4.20	0.64	0.18		100.00				
17	71.68	1.32	11.91	7.00			0.07	2.54	1.35	3.33	0.65	0.16		100.00				
16	60.85	0.98	17.96	9.54			0.06	3.68	1.32	3.45	1.95	0.21		100.00				
15	67.56	0.79	15.48	7.01			0.03	3.07	1.41	3.51	0.89	0.25		100.00				
14	67.81	0.70	15.51	7.72			0.10	3.35	1.13	3.31	0.26	0.13		100.00				
13	49.84	1.35	26.38	11.36			0.15	5.01	1.21	1.61	2.86	0.24		100.00				
12	68.58	0.73	14.56	6.98			0.08	2.84	1.41	3.65	0.98	0.20		100.00				
11	70.50	1.00	14.27	5.18			0.46	1.55	1.55	4.27	1.00	0.23		100.00				
10	61.09	0.81	20.16	7.82			0.04	3.25	1.10	2.15	3.38	0.20		100.00				
9	68.41	0.63	14.44	6.92			0.06	2.94	1.46	4.24	0.76	0.13		100.00				
8	67.09	0.92	16.19	6.92			0.08	3.18	1.46	3.40	1.22	0.24		100.00				
7	59.66	0.81	18.27	7.81			0.12	3.31	1.34	1.74	3.73	0.15	2.82	99.76				
6	66.61	0.87	13.16	6.42			0.10	2.91	1.80	2.99	1.28	0.14	3.53	99.82				
5	58.52	1.05	17.56	8.56			0.11	3.96	1.16	3.54	1.94	0.15	3.61	100.15				
4	68.39	0.86	13.71	5.83			0.10	2.43	1.59	3.90	1.01	0.12	1.80	99.74				
3	68.48	0.93	12.57	6.20			0.11	2.76	1.56	3.04	1.24	0.13	2.44	99.46				
2	70.47	0.70	13.48	5.31			0.08	2.04	1.37	4.03	1.12	0.26	1.14	100.01				
1	67.38	0.88	14.52	6.20			0.09	2.38	1.30	3.88	1.83	0.14	1.53	100.14				

Strat Order	Ag* ppb	As ppm	As* ppm	Au ppb	Au* ppb	B* ppm	Ba ppm	Ba* ppm	Be* ppm	Bi* ppm	Cd ppm	Cd* ppm	Ce ppm	Ce* ppm	Co ppm	Co* ppm	Cr ppm	Cr* ppm	Cs* ppm	Cu ppm	Cu* ppm	Dy* ppm	Er* ppm	Eu ppm	Eu* ppm	Ga ppm	Ga* ppm	Gd* ppm	Ge* ppm	Hf ppm	Hf* ppm	Hg* ppb	Ho* ppm
112	17		6.5		0.2	1.0	601	50.7	1.3	0.35		0.02		104.0	39.00	20.5	86	36.8	2.54	42	34.02					29	6.7		0.1		0.15	9.00	
111	75		7.5		0.2	3.0	724	67.2	1.7	0.32		0.12		107.0	38.00	25.4	93	26.5	1.18	33	30.47					18	6.2		0.1		0.16	26.00	
110	19		5.7		0.2	1.0	537	49.8	0.7	0.46		0.01		82.0	47.00	31.4	84	36.7	0.92	35	32.38					32	9.2		0.1		0.17	13.00	
109							548.6							69.2	28.8		74.2		4.1	22.9						24.7							
108							976.8							60	21		132.5		0	22.3						33.1							
107	9		2.7		1.2	1.0	25	2.4	0.2	0.07		0.22		11.8	70.00	95.1	19	19.1	0.05	33	5.23					5	3.1		0.1		0.14	105.00	
106	39		29.5		1.5	1.0	482	37.9	0.6	0.29		0.04		31.2	41.00	43.2	100	26.8	0.39	57	36.29					27	4.8		0.1		0.30	29.00	
105		52					723								10					12						24							
104		33					1,125													13						33							
103		32					885													26						30							
102		19					973								15					46						29							
101		45					957													21						30							
100							549.1							72.1	19.2		106		8.1	34.7						26.8							
99							649.2							30.6	24		102.5		3.3	3.3						24							
98							614.5							72.2	29.9		107.3		13.7	18.4						24.3							
97							661.6							46.9	29		107.2		9.2	21						27.4							
96	7		1.30		0.6	1.0	711	57.2	0.4	0.36		0.02		45.7	52.00	36.0	96	46.2	1.93	4	1.82					24	5.7		0.1		0.18	5.00	
95		60.7		18.0			812										129			42						27				5.00			
94		105		27.0			819										127			37						28				3.00			
93		26					762								19											28							
92		21					986								11											29							
91	12		27.80		3.3	1.0	155	25.3	0.3	0.16		0.02		72.1	43.00	30.3	62	30.6	0.53	55	32.23					15	6.7		0.1		0.29	47.00	
90							527.6							65.3	24.8		61.9		6	15.4						12.9							
89							279.2							49.8	28.3		36		3.6	5.4						8.7							
88							830								23											32							
87							588								15											23							
86							1130																			36							
85							1327																			40							
84	12		19.50		3.7	1.0	45	29.3	0.1	0.10		0.02		45.4	47.00	52.6	40	22.5	0.35	24	4.66					10	3.4		0.1		0.20	105.00	
83	<0.1		9.90		1.7			229	0.1	<0.1		<0.1		45.6		47.4			2.0		8.4	2.77	1.67		0.87		11.6	3.29			5.4	<0.01	0.59
82		11					183										52									12				4.00			
81		13					193										55									17				4.00			
80		85.2		21.0			612										113			38						23				6.00			
79		32		14.0			185										64			4						14				6.00			
78		30		55.0			652										114			23						30				6.00			
77		16		22.0			342										80			15						19				5.00			
76		17		7.0			185										53			2						16				5.00			
75		25		10.0			314										54			9						13				3.00			
74		16					211										60									13				6.00			
73		13					170										43			2						13				3.00			
72		38		22.0			1209										156			34						43				4.00			
71		23					317										75			11						16				5.00			
70		28					309										69			14						20				4.00			
69		19					261										68			3						17				5.00			
68		10					730										125			26						31				5.00			
67		20					249										58			7						16				5.00			
66		136		6.0			667										120			34						27				5.00			
65		121					244										61			2						12				7.00			
64		50.5					378										51			10						15				6.00			
63		10					315										54									14				5.00			
62		31					624										77			19						19				4.00			
61		32					524										79			6						20				5.00			
60		7.7					297										44			8						13				4.00			
59		98.6		17.0			1460										148			47						31				5.00			
58		12					366										62			2						16				4.00			
57		49					745										102			47						25				4.00			
56		66.3					1413										144									36				4.00			
55		10					272										55			5						12				6.00			
54		17					326										61			3						13				6.00			
53		7.9		7.0			375										35			2						13				2.00			
52		10					352										36			6						15				3.00			
51	8		0.2		4.7	1.0	701	37.9	0.4	0.03		0.02		81.3	46.00	38.7	97	32.1	0.71	4	0.18					29	6.9		0.1		0.44	131.00	
50	6		11.7		1.3	1.0	106	30	0.2	0.04		0.02		47.0	44.00	47.7	47	22.4	0.35	36	11.34					12	3.5		0.1		0.21	94.00	
49		5.4					25										45			29						14				6.00			
48		1.4		8.0			396										75			95						18				3.00			
47		6.2		11.0													544			43						13				5.00			
46		1.8		28.0			12										132			155						17				14.00			
45		2.5					644										117			6						33				3.00			
44		4.7		4.0			24										42			18						21				10.00			
43		25		3.0			574										128			10						22				6.00			
42		31		8.0			795										131									25				5.00			
41		22		76.0			757				2.00						116			17						19				7.00			
40		34		21.0			742				5.00						132			21						25				6.00			
39		38		19.0													377			17						16				5.00			
38		32					781										114			21						22				9.00			
37		8.4					188										44			2						14				4.00			
36		35					258										67			12						13				23.00			
35		11					236										57			10						13				5.00			
34		8					270										73			3						14				18.00			
33		4.7					197										53			12						14				5.00			
32		22					883										137			23						32				6.00			
31		9.4					172										52									9				21.00			
30		11					240										63			5						13				29.00			
29		23					679				5.00						123			4						22				11.00			
28		11					189										45			14						16				7.00			
27		14		4.0			441										79			4						17				8.00			
26		11					215										68			4						12				20.00			
25	35		0.6		3.1	1.0	115	53.1	0.3	0.23		0.01		41.6	52.00	63.2	37	18.6	0.58	26	4.53					10	3.5		0.1		0.20	131.00	
24	6		1.5		1.0	1.0	242	29.3	0.2	0.12		0.03		37.2	42.00	39.3	67	31.6	0.29	20	11.08					19	5.0		0.1		0.22	34.00	
23							117.1							45.1	29.5		108		3.6	17.7						8.4							
22	7		0.4		0.8	1.0	25	15.6	0.2	0.09		0.03		28.5	52.00	46.8	97	69.0	0.19	29	13.66					15	6.6		0.1		0.17	69.00	
21	8		0.4		0.8	1.0	79	18	0.3	0.06		0.02		29.5	51.00	42.4	89	67.7	0.20	37	19.05					16	6.6		0.1		0.14	67.00	
20	6		2.0		0.9	1.0	343	30.1	0.2	0.17		0.03		43.9	44.00	30.3	71	35.2	0.24	4	2.61					22	6.3		0.1		0.28	15.00	
19	23		2.3		1.4	1.0	317	43.6	0.2	0.10		0.03		36.8	54.00	41.8	99	67.7	0.27	18	15.23					17	8.3		0.1		0.16	40.00	
18		7.2					129										114			32						16				7.00			
17		4					105										164			17						15				13.00			
16		21		3.0			313										150			37						22				5.00			
15		4.7		4.0			129										111			18						14				7.00			
14		3.4					106										104			19						15				5.00			
13		17		4.0			876										212			30						33				5.00			
12		8.6					130										105			18						17				5.00			
11		13					208										145			11						14				6.00			
10		3.8					572				3.00						109			22						29				6.00			
9		3.4					110										101			14						16				6.00			
8		10					208										129			23						18				7.00			
7	7		4.4		1.5	1.0	566	82.7	0.2	0.14		0.01		40.9	44.00	33.4	89	48.1	4.96	4	0.27					24	10.2		0.1		0.22	14.00	
6	17		31.7		0.5	1.0	60	28.4	0.2	0.11		0.05		36.8	51.00	41.3	247	150.1	0.29	36	22.52					15	6.3		0.1		0.29	55.00	
5	25		34.3		1	1.0	285	30.6	0.2	0.11		0.06		35	52.00	32.3	125	75.5	0.28	48	42.54					20	10.1		0.1		0.32	9.00	
4	10		6.8		1.2	1.0	25	55.3	0.2	0.13		0.05		26.4	51.00	47.4	111	104.5	3.07	25	12.94					13	8.9		0.1		0.16	70	
3	36		16.1		1.3	4.0	120	66.4	0.4	0.17		0.21		39.6	49.00	46.6	319	256.9	6.26	30	21.99					15	9.4		0.1		0.09	59	
2							267							54.4	42.3		103.3		8.8	8.2						14.3							
1	15		2		0.2	1.0	284	183	0.1	0.10		0.02		26.1	62.00	61.3	112	91.6	3.02	26	16.26					17	9.8		0.1		0.21	76.00	

Strat Order	In* ppm	La ppm	La* ppm	Li* ppm	Lu ppm	Lu* ppm	Mn* ppm	Mo ppm	Mo* ppm	Nb ppm	Nb* ppm	Nd ppm	Nd* ppm	Ni ppm	Ni* ppm	Pb ppm	Pb* ppm	Pd* ppb	Pr* ppm	Pt* ppb	Rb ppm	Rb* ppm	Re* ppb	Sb ppm	Sb* ppm	Sc ppm	Sc* ppm	Se* ppm	Sm ppm	Sm* ppm	Sn* ppm
112	0.03	68	54.10	84.1			1135		0.12	19	0.10	59		37	39.7	41	22.77	10.0		2.0	166	12	1		0.09		2.70	0.1			0.3
111	0.04	70	55.90	53.2			438		0.31	19	0.00	58		36	36.8	29	12.76	10.0		2.0	150	11	1		0.48		3.40	0.1			0.4
110	0.03	66	44.10	114.0			1355		0.21	17	0.10	59		41	48.3	40	18.83	10.0		2.0	145	10	1		0.24		3.90	0.1			0.2
109		47.4								15.6		31		43.9		15.9					141.2										
108		23.4								19.2		19.5		55.5		13.2					189.8										
107	0.02	8	6.00	28.6			142		0.18	11	0.02	12		3	5.9	35	2.71	10.0		2.0	41	0.3	2		0.49		2.40	0.1			0.1
106	0.02	39	17.70	49.8			223		3.02	18	0.00	34		5	18.8	37	6.29	10.0		3.0	145	6.2	1		2.63		1.90	0.30			0.2
105								10		14						23					123			10							
104										23						26					203										
103										13						30					171										
102										19						26					174										
101										20						33					171										
100		50.3								16.7		35.9		65.8		13					123.4										
99		16.2								15		16		57.4		17.8					163.1										
98		70.4								15.6		42.1		68.8		18.9					148.9										
97		13.3								12.9		13.7		64		22					163.4										
96	0.02	53	29.70	61.8			2091		0.13	14	0.20	54		48	53.1	37	7.25	10.0		2.0	142	11	1		0.12		2.00	0.1			0.3
95			62					3.00		17				33		21					194			4.00							
94			56					2.00		15				66		36					172			4.30							
93										16						11					144										
92										17						21					195										
91	0.02	90	71.80	80.7			717		0.07	11	0.20	68		37	39.4	48	12.67	10.0		2.0	88	5.5	1		2.02		3.00	0.1			0.1
90		13.7								10.6		11.6		29.1		3.3					71										
89		28.8								6.9		18.7		20.4		6.6					45.6										
88										15						27					195			11							
87										14						15					116										
86										23						37					227										
85								16		25						20					223										
84	0.02	25	24.80	26.9			770		0.50	11	0.10	25		11	18.4	30	4.95	10.0		2.0	73	5.3	3		0.32		1.60	0.1			0.1
83			26.0			0.26			0.7		9.4		22.6		16.6		4.6		5.93			44.8		0.4			8	<0.5		3.97	1
82		27						3.00		9				16		28					39			1.60							
81		24						4.00		11				20		19					44			1.50							
80		62						2.00		16				46		13					119			3.80							
79		33						4.00		11				18		6					37			1.50							
78		45						2.00		18				41		10					130			2.90							
77		45						3.00		13				31		11					69			3.40							
76		36						6.00		10				9		9					38			1.50							
75		43						3.00		10				19		12					84			9.40							
74		29						4.00		12				13		5					44			1.70							
73		21						4.00		9				7		9					33			1.30							
72		60						2.00		24				61		19					246			7.70							
71		33						4.00		14				20		10					66			1.90							
70		27						3.00		10				18		15					64			2.40							
69		30						3.00		12				18		8					54			1.40							
68		44						2.00		20				40		5					150			2.70							
67		36						4.00		11				26		16					52			1.60							
66		44						4.00		17				38		16					134			5.30							
65		32						5.00		12				21		15					37			1.30							
64		20						5.00		9				9		15					59			2.80							
63		25						3.00		10				15		16					43			1.20							
62		31						5.00		13				24		15					95			2.30							
61		32						5.00		12				24		10					76			2.70							
60		23						4.00		8				11		21					49			0.80							
59		44						2.00		20				65		14					201			14.20							
58		27						3.00		10				13		9					56			0.80							
57		45						2.00		15				40		16					117			3.50							
56		40						2.00		19				54		23					199			2.50							
55		26						5.00		10				12		19					42			0.80							
54		28						5.00		11				12		14					43			1.00							
53		15						6.00		6				12		13					39			1.00							
52		17						6.00		7				16		18					37			1.00							
51	0.02	68	54.70	74.3			1235		0.05	14	0.10	57		53	57.5	38	4.00	10.0		2.0	162	8.2	1		1.29		2.40	0.1			0.1
50	0.02	26	25.80	31.7			469		0.09	13	0.10	27		13	22.1	32	4.62	10.0		2.0	79	5.1	2		0.14		1.60	0.1			0.1
49		68								23				32		39					3			35.70							
48		39						4.00		15				27		27					105			24.50							
47		18								17				193		10								56.90							
46		46								17				36		22								25.80							
45		29						2.00		15				53		33					208			7.50							
44		42								45				62		10								14.60							
43		47								16				50		35					132			3.40							
42		51								16				50		23					173			2.40							
41		53								15				47		13					146			4.30							
40		46						2.00		16				44		19					115			12.20							
39		24								22				120		33								3.90							
38		44								16				40		15					113			7.80							
37		25						4.00		10				13		18					35			1.20							
36		37								11				14		13					46			1.50							
35		28						3.00		11				17		16					48			1.30							
34		35								12				17		17					49			1.10							
33		30						4.00		10				15		19					35			1.20							
32		48						3.00		19				45		11					153			2.10							
31		26								6				12		21					32			1.10							
30		32								10				17		13					42			1.00							
29		34								18				36		10					124			2.30							
28		26						3.00		10				11		17					34			1.00							
27		43								13				30		10					76			1.50							
26		32								11				16		13					36			0.90							
25	0.02	22	22.90	15.7			405		0.12	10	0.20	22		6	17.0	37	12.16	10.0		6.0	87	13	2		0.08		1.50	0.1			0.2
24	0.02	35	20.00	39.9			1135		0.04	12	0.20	35		35	40.0	26	3.26	10.0		2.0	96	6.8	1		0.07		3.10	0.1			0.4
23		21.7								7.8		18.5		30.2		18.3					24.9										
22	0.02	33	15.10	41.6			653		0.21	8	0.10	37		31	34.0	36	6.87	10.0		2.0	55	2.8	1		0.03		4.50	0.1			0.2
21	0.02	35	15.40	40.3			673		0.25	10	0.10	38		33	35.9	33	4.68	10.0		3.0	55	3.4	2		0.03		4.20	0.1			0.2
20	0.02	45	26.50	48.8			938		0.04	15	0.30	45		75	38.0	29	2.56	10.0		2.0	100	5.5	1		0.15		3.30	0.1			0.6
19	0.02	42	23.70	61.3			1007		0.15	8	0.00	44		94	45.8	31	4.25	10.0		2.0	58	3.4	2		0.12		4.50	0.1			0.1
18		16						3.00		10				22		10					31			0.30							
17		31						4.00		15				26		20					39			0.40							
16		17						1.00		15				41		12					74			0.90							
15		27						3.00		11				23		10					42			0.40							
14		16						2.00		9				28		15					46			0.40							
13		21						2.00		16				62		15					128			0.20							
12		22						2.00		10				30		21					54			0.30							
11		47						9.00		13				41		21					90			0.40							
10		25						1.00		19				36		10					110			0.60							
9		20						3.00		11				30		8					44			0.30							
8		22						4.00		13				32		9					55			0.20							
7	0.03	35	20.60	52.0			651		0.06	15	0.30	38		51	49	22	1.39	10.0		7.0	112	67	1		0.05		5.1	0.1			0.7
6	0.02	33	18.8	53.6			600		0.18	9	0.00	39		124	64.6	30	4.94	10.0		2.0	59	3.7	1		0.11		3.4	0.1			0.1
5	0.02	38	18	72.9			561		0.14	12	0.00	46		121	69	29	3.38	10.0		3.0	68	4.1	1		0.09		3.9	0.1			0.1
4	0.03	28	14.3	34.1			447		0.14	9	0.30	34		39	48.5	29	1.28	10.0		2.0	60	22	2		0.03		9.6	0.1			0.9
3	0.04	36	20.7	96.1			533		0.28	7	0.20	38		66	64.6	26	3.36	10.0		2.0	87	30	2		0.03		10.0	0.1			3.7
2		26.1								9.6		20.7		40.5		14.5					46.5										
1	0.04	27	11.90	37.0			446		0.14	13	0.30	32		30	41.8	28	1.85	10.0		2.0	69	48	1		0.03		8.4	0.1			1.2

Strat Order	Sr ppm	Sr* ppm	Ta ppm	Ta* ppm	Tb ppm	Tb* ppm	Te* ppm	Th ppm	Th* ppm	Tl* ppm	Tm* ppm	U ppm	U* ppm	V ppm	V* ppm	W* ppm	Y ppm	Y* ppm	Yp ppm	Yb* ppm	Zn ppm	Zn* ppm	Zr ppm	Zr* ppm
112	137	14.4		0.05			0.02	32	12.8	0.10		4.0	1.4	124	18	10.6	30	12.90			100	99.7	143	8.1
111	99	26.5		0.05			0.02	29	15.5	0.10		4.0	1.3	130	19	22.1	32	9.09			112	111.4	219	7.2
110	144	13.8		0.05			0.02	34	12	0.10		4.0	1.1	115	18	15	29	9.49			110	123.6	124	7.7
109	120.2							16.4				3.4		87.2			26				85.4		117.5	
108	160.3							18.8				6.5		141.4			32.5				80.5		196.7	
107	90	12.6		0.05			0.02	28	6.2	0.02		6.0	1.2	48	9	100	41	5.62			44	59.8	294	4.7
106	147	14.6		0.05			0.03	24	10	0.10		4.0	2.1	122	13	70.9	28	9.62			81	88.5	175	8.9
105	212													198			18				85		181	
104	132													281			21				109		243	
103	161													296			18				97		199	
102	154													216			30				84		232	
101	243													240			25				95		180	
100	124.6							18.1				5.4		113.2			34				142.9		147.8	
99	211.5							9.3				2.7		111.3			19.3				106.5		165.6	
98	208.4							16.5				4.8		121			26.6				126.6		157.3	
97	251.7							13.1				4.6		134.6			25.3				116.1		128.8	
96	159	12.9		0.05			0.04	27	9.7			3.0	0.7	125	33	11.9	21	15.60			90	100.8	140	7.2
95	147							13				2.2		140			28				86		162	
94	118							14				3.2		222			31				113		152	
93	152													193			16				122		149	
92	200													222			16				85		149	
91	145	5.5		0.05			0.02	28	6.7			5.0	2.2	88	23	100	32	12.10			87	88.8	148	10.4
90	157.8							10.4				0		75.9			24.1				43.7		224.8	
89	168.5							7.5				0.1		50.6			19.8				40.9		163.2	
88	248													173			19				124		142	
87	140													173			21				82		182	
86	200													277			22				69		168	
85	398													345			40				31		214	
84	119	36.4		0.05			0.02	24	4.3			5.0	0.4	67	14	100	35	4.80			41	41.6	158	6.0
83		153.2		1.0		0.53			7.3	<0.1	0.28		1.2		54	370.6		16.3		1.65		32		195.1
82	117							5.9				1.0		61			20				53		145	
81	120							5.4				0.9		71			18				51		148	
80	134							13				1.9		156			33				137		179	
79	111							6.9				1.0		67			23				72		178	
78	183							13				3.7		139			40				98		189	
77	162							8.8				2.4		93			29				86		163	
76	136							6.7				1.2		62			18				40		184	
75	209							6.4				1.6		67			21				50		160	
74	131							7.8				1.4		62			19				50		168	
73	105							4.4				1.0		49			16				49		106	
72	130							20.9				3.9		204			33				118		212	
71	127							8				1.4		93			21				66		178	
70	128							6.8				1.6		90			20				68		146	
69	119							7.4				1.5		77			20				63		183	
68	127							12				2.6		161			25				102		195	
67	137							7.3				1.2		79			22				73		155	
66	141							13				3.0		154			41				99		187	
65	110							7.9				1.4		69			20				49		237	
64	191							5.1				1.2		53			16				31		154	
63	157							5.7				1.1		57			17				46		181	
62	163							7.1				1.6		93			22				85		171	
61	169							7				1.7		86			21				76		169	
60	172							4.7				0.9		47			14				39		133	
59	126							16				3.2		181			39				122		191	
58	169							6				1.4		67			18				52		158	
57	142							9.1				2.1		116			25				130		156	
56	142							15				3.0		174			39				115		182	
55	130							6.3				1.3		54			17				42		190	
54	122							6.9				1.0		57			17				47		200	
53	90							2.3				1.0		63			12				66		83	
52	80							2.3				0.6		58			13				64		83	
51	239	10.5		0.05			0.02	25	10.7	0.10		3.0	1.4	115	18	53.8	24	11.90			99	107.7	121	16.1
50	79	13.8		0.05			0.02	26	4.7			6.0	0.4	73	15	100	33	5.04			41	41.1	179	5.9
49	649							6.6				1.6		172			22				139		144	
48	166							8.6				2.2		81			22				50		147	
47	99							1.6				0.4		297			18				102		91	
46	888							13				1.5		158			28				57		144	
45	311							12				1.4		145			25				124		142	
44	598							4.1				1.0		336			27				136		280	
43	164							13				1.7		153			29				109		157	
42	127							15				2.4		169			23				98		149	
41	100							12				2.4		149			29				112		159	
40	232							12				3.5		188			30				86		160	
39	168							2.7				0.8		268			19				116		137	
38	187							12				2.6		161			27				90		161	
37	83							5.1				0.8		55			18				58		127	
36	84							8.2				1.2		77			17				49		177	
35	88							6.3				1.4		74			17				54		169	
34	84							8				1.5		78			25				60		161	
33	72							6.6				1.1		56			20				57		164	
32	105							15				2.9		174			32				97		197	
31	123							6.2				1.1		50			19				36		156	
30	79							5.8				1.3		70			19				55		152	
29	97							12				2.1		139			29				77		179	
28	75							4.4				0.7		63			18				55		122	
27	118							9				2.3		99			27				86		133	
26	77							6.2				1.1		72			21				59		152	
25	152	26.6		0.05			0.04	25	5.6	0.10		6.0	0.8	64	12	100	37	8.79			31	38.6	194	6.4
24	144	33.7		0.05			0.02	19	4.9			4.0	0.4	102	24	100	33	8.50			88	86.1	147	6.3
23	117.3							9.4				2.4		97.9			23.7				56.7		207.5	
22	115	22.5		0.05			0.02	25	3.8	0.02		5.0	0.6	115	37	100	33	10.80			64	64.3	167	3.9
21	121	21.6		0.05			0.02	24	3.4			4.0	0.5	116	39	100	31	10.20			67	61.1	165	3.7
20	168	31.1		0.05			0.02	26	5.2			4.0	0.5	113	23	51.5	31	9.10			92	84.9	174	9.3
19	129	19.1		0.05			0.02	24	3.6			4.0	0.6	126	46	100	30	13.70			79	76.6	137	4.3
18	114							4.5				1.2		148			20				71		124	
17	94							9.4				1.7		140			27				83		259	
16	122							6.9				1.6		214			24				105		142	
15	117							5.1				1.3		141			22				87		134	
14	116							3.6				1.1		127			20				100		96	
13	145							10				1.7		315			27				132		181	
12	123							3.9				1.1		133			20				90		108	
11	177							5.9				1.6		139			38				66		141	
10	138							12				1.8		170			28				95		186	
9	108							3.3				0.9		118			19				86		88	
8	126							5.5				1.4		174			24				87		140	
7	161	10.1		0.05			0.02	20	8.1	0.40		3.0	1.0	116	44	50.9	24	15.40			110	109.3	152	8.7
6	130	18.7		0.05			0.02	24	3			4.0	0.4	120	43	100	29	4.12			65	56.9	148	7.7
5	149	14.6		0.05			0.02	26	3.5			4.0	0.5	148	51	65.9	27	5.11			90	81.7	136	10.4
4	197	12.2		0.05			0.02	22	3.5	0.1		4.0	0.6	117	88	100	32	12.00			54	53.6	138	5.0
3	175	14.5		0.05			0.02	22	5	0.3		4.0	0.9	130	92	100	31	15.00			66	69.2	195	3.2
2	166.3							10				5.7		116.4			21.7				56.5		177.8	
1	159	4.5		0.05			0.02	21	5	0.20		4.0	0.6	121	86	100	30	5.06			76	66.8	172	7.0

1. Graves and Zentilli (1988); 2. Glasmacher *et al.* (2003); 3. Toole (2006); 4. Unpublished NSDNR data.

* analyses in RT05 samples done by ICP/ES and MS at ACME; without (*) major and traces by XRF at Saint Mary's University; LR-042 sample: majors and traces by ICP/ES and MS at ACME; W06 samples and LA-089: major and traces by XRF at Saint Mary's University