2014
Prospecting Report
Faries Lake Property
Cecil Township
(G-2857)
Thunder Bay Mining Division
NTS 42 F 04

Submitted by:

Michael Stares
December 9, 2014

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1.0 Introduction

The Faries Lake property claims are held by Gilles and Mabel Gionet of Manitouwadge Ontario. An option agreement was signed between the property owners and 1191557 Ontario Inc on January 11, 2013 and amended to add further claims on February 4, 2014. 1191557 Ontario Inc. has subsequently been named White Metal Resources Corp. Prospecting was carried out from July 7, 2014 to October 27, 2014. Prospecting consisted of sampling of outcrops, simultaneous beep mat survey and GPS controlled humus and soil sampling.

2.0 Location and Access

The Faries Lake property, (Figure 1) is located in northern Ontario approximately 700 km northwest of Sudbury, 420 km east-northeast of Thunder Bay and 32 km east of Manitouwadge (driving distances). The town of Manitouwadge is situated at the north end of Highway 614, 331 kilometres (206 mi) east of Thunder Bay and 378 kilometres (235 mi) west of Sault Ste. Marie, north-western Ontario. The property is easily accessed by logging roads that depart eastward from the town of Manitouwadge. The property is located within Cecil (G-2857) township of the Thunder Bay Mining District within NTS 42 F 04.

3.0 Claims

The Faries Lake property consists of 13 mining claims comprising 75 units or approximately 1200 hectares in area (Figure 2). A summary of the 8 claims on which work was carried out is presented in Table 1.

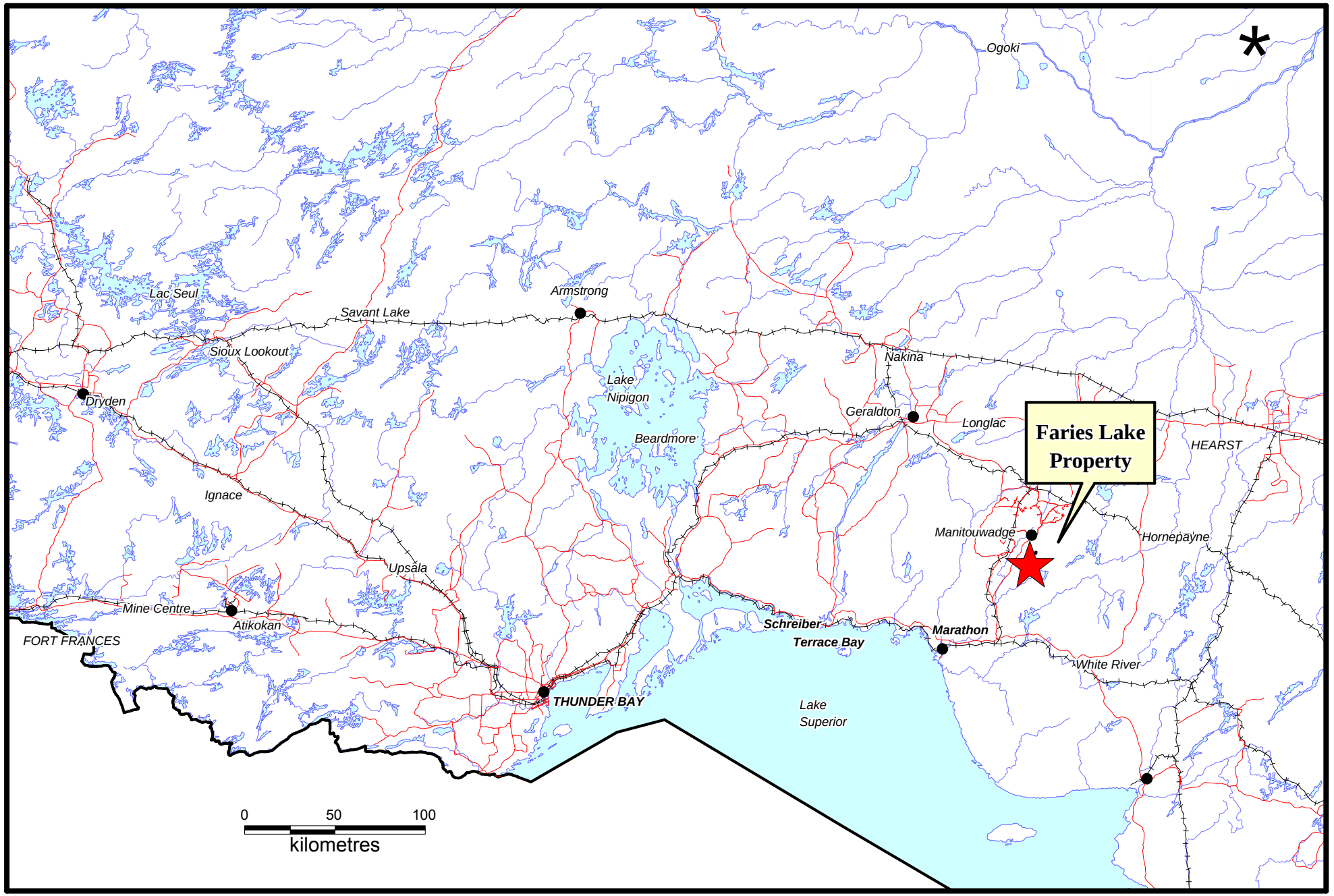

Figure 1
General Location Map

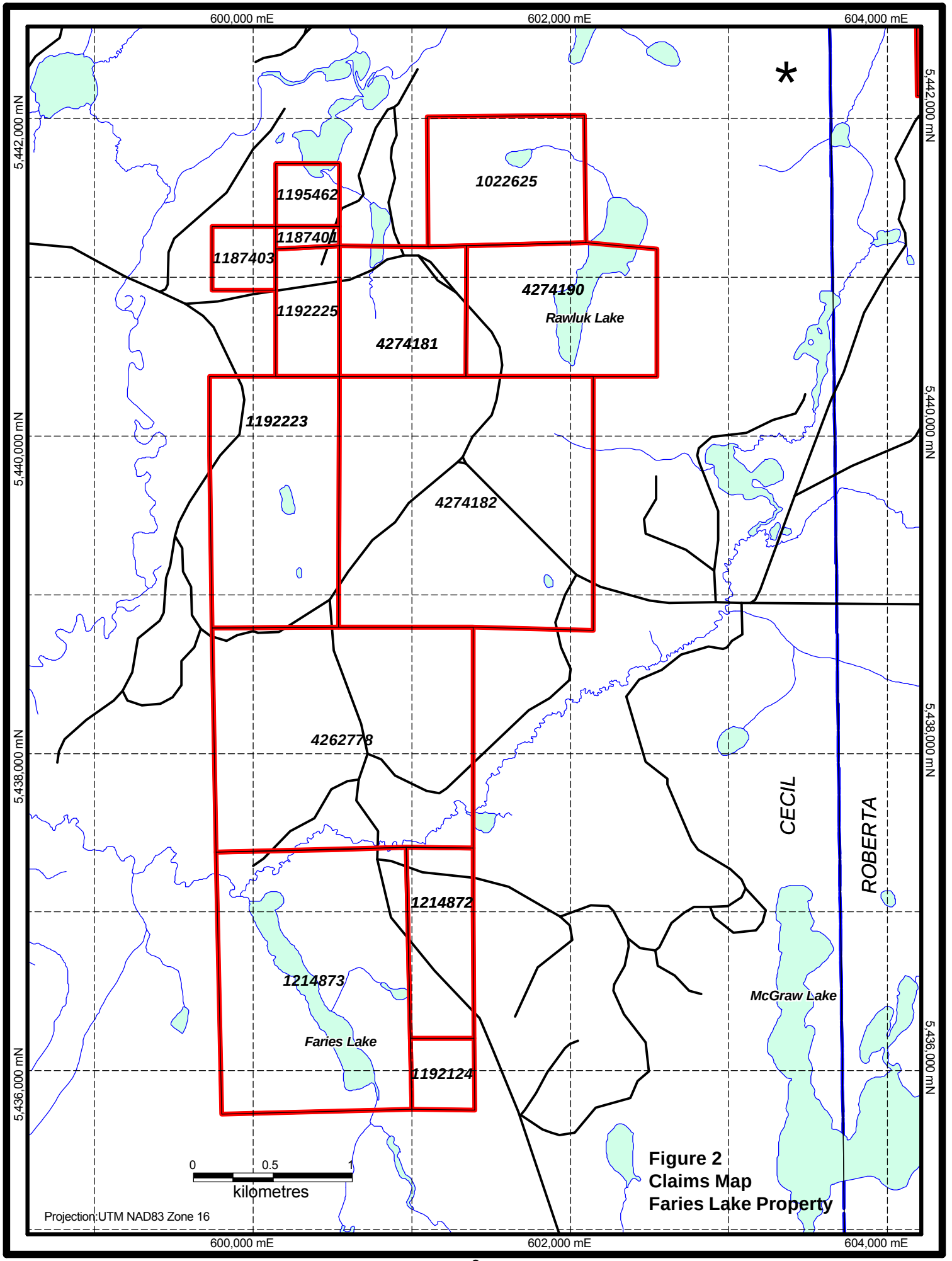

Figure 2
Claims Map
Faries Lake Property

Table 1

Claim Number	Township/Area	Recorded Holder	Due Date	Units
1022625	CECIL (G-2857)	GIONET, GILLES (100.00%)	26. May. 2015	6
1192223	CECIL (G-2857)	GIONET, MABEL OLIVE (100.00%)	19. Jul. 2015	8
1214872	CECIL (G-2857)	GIONET, GILLES (100.00%)	2. May. 2015	3
1214873	CECIL (G-2857)	GIONET, GILLES (100.00%)	19. Jan. 2015	12
4262778	CECIL (G-2857)	GIONET, GILLES (100.00%)	1. Feb. 2015	14
4274181	CECIL (G-2857)	GIONET, GILLES (100.00%)	17. Jun. 2015	4
4274182	CECIL (G-2857)	GIONET, GILLES (100.00%)	17. Jun. 2015	16
4274190	CECIL (G-2857)	GIONET, GILLES (100.00%)	4. Sep. 2015	6

4.0 Prospecting

A total of 11 rock samples and 560 humus and soil samples were taken from July 9 2014 to October 27 2014. Sample descriptions and locations are described in Tables 2 and 3 (Appendix 1) and shown on Maps 1 a and b (Pocket) along with corresponding traverses at a scale of 1:5,000. A daily prospecting log is attached in Appendix 2. Rock samples were analyzed by Actlabs in Thunder Bay for gold, platinum and palladium using the fire assay method and ICP (inductively coupled plasma). Multiple elements including nickel and copper were analyzed using aqua regia digestion of pulps and ICP.. Assay certificates are presented in Appendix 3. Soil and humus samples were dried in paper bags and submitted to Actlabs and analyzed for multiple elements using aqua-regia digestion and ICP method. Gold, platinum, and palladium were analyzed using fire assay and ICP. Assay certificates are attached in Appendix 4.

Analytical results are listed below:

Rock Sample Assay Ranges for Cu, Ni, Au, Pt, and Pd.

Cu 183 – 6850 ppm
Ni 8 - 1690 ppm
Au <2 - 135 ppb
Pt <5 - 45 ppb
Pd <5 – 34 ppb

Humus/Soil Analytical Ranges for Cu, Ni, Au, Pt, and Pd

Cu	1 – 989 ppm
Ni	8 – 1690 ppm
Au	tr – 68 ppb
Pt	tr – 26 ppb
Pd	tr – 32 ppb

Eight distinctive traverses totalling 12.8 km were carried out for prospecting and a simultaneous beep mat survey. Traverse tracks were recorded and plotted using a handheld GPS device. The beep mat was on loan from the MNDM regional geologists office in Thunder Bay and a summary of its operating principles is enclosed in Appendix 5.

Soil samples were collected approximately every 25m on portable GPS controlled reconnaissance lines as shown on Map 1a and b. Attempts were made to collect the B horizon soil but in the absence of a well developed soil profile humus samples were collected.

The beep mat survey indicated one significant negative anomaly centred UTM coordinates 600816mE, 5437739mN. A strong negative reading of -3500 is indicative of magnetite mineralization. A rock sample 991153 was collected in close proximity to the anomaly. The sample yielded 0.06% Cu, 0.17% Ni, 4ppb Au, 8ppb Pt and <5ppb Pd.

5.0 Personnel

The following personnel were employed during the prospecting programs:

Jeff Skaling

Jordan Skaling

Austin Charette

James Crane

Michael Stares

Respectfully submitted
Michael Stares
December 9, 2014

Appendix 1
Sample Descriptions and Location

Rock Sample Descriptions and Location

Sample_No	UTME	UTMN	Zone	NAD	Au_ppb	Pd_ppb	Pt_ppb	Cu_ppm	Ni_ppm	Descr	Sulph
1320059	600818	5437724	16	83	10	< 5	7	355	1040	0/C ultramafic, rusty	TR
1320060	600834	5437763	16	83	135	6	11	6850	1470	Large Peridotite O/C with rusty pods	up to 5% cpy tr po
1320061	601170	5437694	16	83	5	7	10	804	1040	rusty gabbro subcrop	5% PY, tr po, cpy
1320062	601174	5437701	16	83	8	26	25	1380	541	rusty gabbro subcrop	5%py tr po
1320063	601172	5437700	16	83	4	13	16	842	1590	O/C sil Gabbro,	5%po, tr cpy
991152	601294	5437142	16	83	2	24	45	1500	1690	Boulder, sil, extremly rusted, down ice from good mag!	1% po, cpy
991153	600816	5437739	16	83	4	< 5	8	570	1670	near sample 1320060 (new area 15 meters away)	.5% po. Cpy
991154	601294	5437142	16	83	10	16	19	1840	1520	resample of 1320063,	15% po, py
991155	601351	5441461	16	83	< 2	< 5	< 5	183	8	sil , ser, sch, 1.5 m wide	5% sulfides
991156	601298	5440904	16	83	3	34	< 5	993	1200	mineralized amphibolite boulder, on road	5% po, cpy
991158	601743	5441985	16	83	6	7	6	1110	126	sil , rusty zones, 1 m wide each	3% po, tr cpy

Soil-Humus Descriptions

SAMPLE No.	Long EAST	Lat NORTH	UTME	UTMN	Elevation (m)	Soil Type	Line
MAN01	-85.6157	49.0743	601100	5436633	364.2	soil	L82
MAN02	-85.6159	49.0742	601086	5436622	364.7	soil	L82
MAN03	-85.6160	49.0741	601077	5436612	364.5	soil	L82
MAN04	-85.6162	49.0738	601065	5436579	363.0	soil	L82
MAN05	-85.6165	49.0736	601042	5436563	361.3	soil	L82
MAN06	-85.6168	49.0735	601022	5436546	360.9	soil	L82
MAN07	-85.6169	49.0733	601014	5436522	360.4	soil	L82
MAN08	-85.6172	49.0732	600994	5436518	358.5	soil	L82
MAN09	-85.6170	49.0728	601005	5436474	352.7	soil	L82
MAN10	-85.6173	49.0726	600983	5436442	353.4	humus	L82
MAN11	-85.6177	49.0725	600956	5436438	356.8	soil	L82
MAN12	-85.6181	49.0724	600930	5436426	362.8	soil	L82
MAN13	-85.6183	49.0723	600915	5436416	361.6	soil	L82
MAN14	-85.6188	49.0723	600879	5436412	354.1	soil	L82
MAN15	-85.6190	49.0721	600860	5436393	363.3	soil	L82
MAN16	-85.6194	49.0720	600835	5436383	366.4	soil	L82
MAN17	-85.6196	49.0718	600821	5436360	366.4	soil	L82
MAN18	-85.6197	49.0717	600809	5436344	365.2	soil	L82
MAN19	-85.6200	49.0716	600787	5436327	368.8	soil	L82
MAN20	-85.6203	49.0715	600767	5436318	367.1	soil	L82
MAN21	-85.6207	49.0714	600740	5436304	365.4	soil	L82
MAN22	-85.6209	49.0712	600725	5436283	367.1	soil	L82
MAN23	-85.6212	49.0710	600706	5436259	365.7	soil	L82
MAN24	-85.6214	49.0709	600688	5436249	364.0	soil	L82
MAN25	-85.6216	49.0707	600673	5436233	364.7	humus	L82
MAN26	-85.6218	49.0705	600659	5436202	354.6	soil	L82
MAN27	-85.6253	49.0739	600401	5436577	338.3	soil	L86
MAN28	-85.6251	49.0740	600416	5436590	341.2	soil	L86
MAN29	-85.6248	49.0740	600436	5436596	352.2	soil	L86
MAN30	-85.6245	49.0742	600459	5436613	361.6	soil	L86
MAN31	-85.6241	49.0741	600488	5436600	361.8	soil	L86
MAN32	-85.6238	49.0741	600509	5436606	363.5	soil	L86
MAN33	-85.6234	49.0741	600535	5436609	360.9	soil	L86
MAN34	-85.6232	49.0742	600555	5436615	359.9	soil	L86
MAN35	-85.6228	49.0742	600583	5436622	354.4	soil	L86
MAN36	-85.6225	49.0744	600605	5436643	352.9	humus	L86
MAN37	-85.6221	49.0744	600631	5436638	354.8	soil	L86
MAN38	-85.6217	49.0744	600659	5436637	356.3	soil	L86
MAN39	-85.6214	49.0745	600682	5436658	356.1	soil	L86
MAN40	-85.6210	49.0746	600711	5436659	355.1	soil	L86
MAN41	-85.6208	49.0745	600725	5436656	359.9	soil	L86
MAN42	-85.6204	49.0747	600753	5436677	362.8	soil	L86
MAN43	-85.6201	49.0747	600777	5436680	360.4	soil	L86
MAN44	-85.6198	49.0747	600800	5436680	358.5	humus	L86
MAN45	-85.6195	49.0748	600824	5436689	357.0	soil	L86
MAN46	-85.6191	49.0749	600848	5436700	356.5	soil	L86
MAN47	-85.6188	49.0749	600871	5436701	354.8	soil	L86
MAN48	-85.6184	49.0751	600901	5436718	353.2	soil	L86
MAN49	-85.6181	49.0751	600922	5436719	353.2	soil	L86
MAN50	-85.6178	49.0751	600943	5436720	353.2	soil	L86

Soil-Humus Descriptions

SAMPLE No.	Long EAST	Lat NORTH	UTME	UTMN	Elevation (m)	Soil Type	Line
MAN51	-85.6174	49.0752	600971	5436733	357.7	soil	L86
MAN52	-85.6171	49.0752	600998	5436731	358.0	soil	L86
MAN53	-85.6168	49.0752	601017	5436741	358.9	soil	L86
MAN54	-85.6162	49.0753	601059	5436748	355.3	soil	L86
MAN55	-85.6160	49.0753	601074	5436752	352.4	soil	L86
MAN56	-85.6157	49.0754	601094	5436761	353.2	humus	L86
MAN57	-85.6155	49.0754	601115	5436765	353.9	humus	L86
MAN58	-85.6152	49.0755	601137	5436768	353.4	humus	L82
MAN59	-85.6093	49.0729	601568	5436491	377.0	humus	L82
MAN60	-85.6097	49.0726	601539	5436463	374.6	soil	L82
MAN61	-85.6100	49.0727	601516	5436468	372.6	soil	L82
MAN62	-85.6104	49.0726	601489	5436461	366.6	soil	L82
MAN63	-85.6108	49.0726	601463	5436459	363.0	humus	L82
MAN64	-85.6110	49.0725	601444	5436439	363.0	humus	L82
MAN65	-85.6114	49.0724	601418	5436431	363.0	humus	L82
MAN66	-85.6117	49.0724	601393	5436433	365.7	humus	L82
MAN67	-85.6121	49.0724	601367	5436428	368.1	soil	L82
MAN68	-85.6124	49.0722	601347	5436412	370.0	soil	L82
MAN69	-85.6127	49.0721	601326	5436394	368.8	soil	L82
MAN70	-85.6176	49.0790	600948	5437153	336.6	humus	L90
MAN71	-85.6180	49.0789	600922	5437145	334.4	humus	L90
MAN72	-85.6183	49.0788	600901	5437138	333.0	humus	L90
MAN73	-85.6186	49.0787	600877	5437125	333.7	humus	L90
MAN74	-85.6189	49.0787	600855	5437120	334.7	soil	L90
MAN75	-85.6195	49.0786	600814	5437114	336.1	soil	L90
MAN76	-85.6197	49.0786	600799	5437114	335.4	soil	L90
MAN77	-85.6200	49.0785	600779	5437103	335.4	soil	L90
MAN78	-85.6203	49.0784	600754	5437093	337.8	soil	L90
MAN79	-85.6205	49.0784	600737	5437085	341.6	soil	L90
MAN80	-85.6210	49.0784	600702	5437083	347.4	soil	L90
MAN81	-85.6213	49.0783	600684	5437075	347.9	humus	L90
MAN82	-85.6216	49.0782	600658	5437065	350.3	soil	L90
MAN83	-85.6219	49.0782	600636	5437061	350.0	soil	L90
MAN84	-85.6222	49.0781	600617	5437048	349.6	soil	L90
MAN85	-85.6226	49.0781	600585	5437046	349.8	humus	L90
MAN86	-85.6229	49.0780	600564	5437035	349.1	soil	L90
MAN87	-85.6233	49.0779	600540	5437031	347.2	soil	L90
MAN88	-85.6235	49.0778	600519	5437015	342.4	soil	L90
MAN89	-85.6239	49.0778	600490	5437012	340.9	soil	L90
MAN90	-85.6243	49.0777	600466	5437004	340.2	soil	L90
MAN91	-85.6246	49.0777	600443	5437000	341.6	soil	L90
MAN92	-85.6249	49.0776	600419	5436989	337.8	soil	L90
MAN93	-85.6252	49.0775	600398	5436985	337.1	soil	L90
MAN94	-85.6255	49.0774	600381	5436971	335.1	soil	L90
MAN95	-85.6258	49.0774	600353	5436969	334.4	soil	L90
MAN96	-85.6168	49.0827	601001	5437570	332.0	soil	L94
MAN97	-85.6165	49.0827	601023	5437572	332.5	soil	L94
MAN98	-85.6161	49.0827	601054	5437575	332.7	soil	L94
MAN99	-85.6158	49.0828	601075	5437585	332.5	soil	L94
MAN100	-85.6155	49.0829	601097	5437591	332.3	soil	L94

Soil-Humus Descriptions

SAMPLE No.	Long EAST	Lat NORTH	UTME	UTMN	Elevation (m)	Soil Type	Line
MAN101	-85.6152	49.0829	601120	5437599	333.0	soil	L94
MAN102	-85.6148	49.0830	601144	5437602	332.5	soil	L94
MAN103	-85.6146	49.0831	601164	5437617	333.5	soil	L94
MAN104	-85.6142	49.0832	601191	5437627	331.5	soil	L94
MAN105	-85.6139	49.0832	601212	5437635	331.1	soil	L94
MAN106	-85.6136	49.0833	601234	5437640	330.8	humus	L94
MAN107	-85.6133	49.0833	601257	5437646	331.5	humus	L94
MAN108	-85.6121	49.0836	601344	5437675	331.1	humus	L94
MAN109	-85.6118	49.0837	601364	5437685	329.4	humus	L94
MAN110	-85.6113	49.0837	601398	5437689	329.1	humus	L94
MAN111	-85.6110	49.0838	601424	5437697	329.9	humus	L94
MAN112	-85.6106	49.0839	601451	5437707	328.7	humus	L94
MAN113	-85.6134	49.0859	601247	5437931	328.4	humus	L97
MAN114	-85.6137	49.0858	601225	5437920	327.7	humus	L97
MAN115	-85.6140	49.0858	601202	5437915	330.6	humus	L97
MAN116	-85.6143	49.0858	601175	5437916	330.3	soil	L97
MAN117	-85.6146	49.0857	601153	5437910	328.4	humus	L97
MAN118	-85.6150	49.0855	601126	5437888	327.9	humus	L97
MAN119	-85.6154	49.0855	601101	5437884	330.3	soil	L97
MAN120	-85.6157	49.0855	601080	5437883	331.8	soil	L97
MAN121	-85.6160	49.0854	601056	5437876	331.1	soil	L97
MAN122	-85.6163	49.0854	601030	5437874	330.3	soil	L97
MAN123	-85.6167	49.0853	601007	5437858	331.1	soil	L97
MAN124	-85.6170	49.0852	600979	5437845	332.3	soil	L97
MAN125	-85.6173	49.0852	600958	5437849	333.0	soil	L97
MAN126	-85.6177	49.0852	600935	5437842	333.7	soil	L97
MAN127	-85.6181	49.0851	600905	5437834	335.6	soil	L97
MAN128	-85.6184	49.0851	600881	5437837	334.2	soil	L97
MAN129	-85.6187	49.0851	600860	5437831	332.5	soil	L97
MAN130	-85.6190	49.0850	600835	5437827	332.5	humus	L97
MAN131	-85.6194	49.0849	600810	5437812	329.9	humus	L97
MAN132	-85.6197	49.0849	600788	5437808	330.1	humus	L97
MAN133	-85.6200	49.0849	600764	5437805	328.9	humus	L97
MAN134	-85.6204	49.0848	600734	5437801	330.1	humus	L97
MAN135	-85.6208	49.0848	600707	5437801	330.6	soil	L97
MAN136	-85.6211	49.0848	600686	5437797	330.8	soil	L97
MAN137	-85.6213	49.0846	600667	5437781	330.6	soil	L97
MAN138	-85.6220	49.0846	600617	5437773	328.9	humus	L97
MAN139	-85.6224	49.0845	600590	5437766	329.1	humus	L97
MAN140	-85.6227	49.0844	600570	5437754	329.4	humus	L97
MAN141	-85.6230	49.0845	600542	5437759	330.1	humus	L97
MAN142	-85.6234	49.0844	600516	5437753	332.3	soil	L97
MAN143	-85.6237	49.0843	600493	5437743	333.5	soil	L97
MAN144	-85.6240	49.0843	600472	5437737	333.0	soil	L97
MAN145	-85.6243	49.0842	600448	5437732	337.1	humus	L97
MAN146	-85.6247	49.0842	600425	5437727	342.4	soil	L97
MAN147	-85.6251	49.0842	600393	5437730	347.2	humus	L97
MAN148	-85.6254	49.0841	600370	5437713	349.8	soil	L97
MAN149	-85.6257	49.0841	600349	5437714	352.0	humus	L97
MAN150	-85.6261	49.0840	600322	5437707	333.0	soil	L97

Soil-Humus Descriptions

SAMPLE No.	Long EAST	Lat NORTH	UTME	UTMN	Elevation (m)	Soil Type	Line
MAN151	-85.6264	49.0840	600297	5437699	340.2	soil	L97
MAN152	-85.6051	49.0994	601821	5439440	347.4	soil	L97
MAN153	-85.6047	49.0994	601849	5439446	346.7	soil	L97
MAN154	-85.6043	49.0995	601879	5439451	347.2	soil	L112
MAN155	-85.6065	49.1011	601719	5439630	344.5	soil	L112
MAN156	-85.6070	49.1010	601679	5439622	343.6	humus	L112
MAN158	-85.6077	49.1010	601627	5439612	346.0	humus	L112
MAN159	-85.6081	49.1009	601601	5439609	347.2	soil	L112
MAN160	-85.6087	49.1008	601557	5439590	345.5	humus	L112
MAN161	-85.6090	49.1008	601531	5439588	344.3	humus	L112
MAN162	-85.6093	49.1007	601510	5439579	343.3	humus	L112
MAN164	-85.6100	49.1006	601461	5439566	344.0	humus	L112
MAN165	-85.6103	49.1005	601440	5439559	343.8	humus	L112
MAN166	-85.6107	49.1005	601410	5439555	344.3	humus	L112
MAN167	-85.6111	49.1004	601385	5439544	346.2	humus	L112
MAN168	-85.6113	49.1003	601364	5439534	345.7	humus	L112
MAN169	-85.6117	49.1003	601341	5439533	346.4	humus	L112
MAN170	-85.6120	49.1002	601318	5439526	345.2	humus	L112
MAN171	-85.6123	49.1002	601295	5439521	345.7	humus	L112
MAN172	-85.6127	49.1001	601267	5439514	345.2	humus	L112
MAN173	-85.6130	49.1001	601243	5439506	345.0	humus	L112
MAN174	-85.6133	49.1000	601224	5439498	344.8	humus	L112
MAN191	-85.6187	49.0897	600851	5438352	339.0	humus	L102
MAN192	-85.6185	49.0899	600867	5438363	339.2	humus	L102
MAN193	-85.6181	49.0900	600889	5438376	339.5	humus	L102
MAN194	-85.6178	49.0900	600916	5438385	339.5	humus	L102
MAN195	-85.6174	49.0900	600940	5438384	338.5	humus	L102
MAN196	-85.6171	49.0901	600965	5438389	337.8	humus	L102
MAN197	-85.6168	49.0901	600986	5438398	338.7	humus	L102
MAN198	-85.6165	49.0902	601009	5438404	337.8	humus	L102
MAN199	-85.6162	49.0904	601029	5438427	337.3	humus	L102
MAN201	-85.6155	49.0905	601085	5438436	338.0	humus	L102
MAN202	-85.6151	49.0905	601110	5438438	337.8	humus	L102
MAN203	-85.6148	49.0905	601132	5438445	338.3	humus	L102
MAN204	-85.6145	49.0906	601154	5438453	338.0	humus	L102
MAN205	-85.6142	49.0907	601179	5438460	339.2	humus	L102
MAN206	-85.6138	49.0907	601201	5438467	339.2	humus	L102
MAN207	-85.6135	49.0908	601227	5438474	339.7	soil	L102
MAN208	-85.6132	49.0909	601249	5438484	341.6	soil	L102
MAN209	-85.6131	49.0927	601249	5438682	345.0	humus	L104
MAN210	-85.6133	49.0926	601234	5438676	344.0	humus	L104
MAN211	-85.6137	49.0925	601210	5438669	343.1	humus	L104
MAN212	-85.6140	49.0926	601183	5438672	342.1	humus	L104
MAN213	-85.6144	49.0925	601159	5438664	342.1	humus	L104
MAN214	-85.6147	49.0924	601139	5438653	342.1	soil	L104
MAN215	-85.6150	49.0924	601112	5438648	341.9	soil	L104
MAN216	-85.6154	49.0923	601086	5438643	342.4	soil	L104
MAN217	-85.6157	49.0922	601064	5438630	344.5	humus	L104
MAN218	-85.6160	49.0922	601042	5438628	344.3	humus	L104
MAN219	-85.6163	49.0921	601021	5438612	344.3	humus	L104

Soil-Humus Descriptions

SAMPLE No.	Long EAST	Lat NORTH	UTME	UTMN	Elevation (m)	Soil Type	Line
MAN220	-85.6167	49.0921	600992	5438613	345.0	humus	L104
MAN221	-85.6170	49.0920	600969	5438606	344.3	humus	L104
MAN222	-85.6173	49.0919	600944	5438597	344.8	humus	L104
MAN223	-85.6177	49.0919	600920	5438591	344.0	humus	L104
MAN224	-85.6180	49.0918	600896	5438584	344.5	humus	L104
MAN225	-85.6184	49.0918	600869	5438580	344.0	humus	L104
MAN226	-85.6187	49.0917	600848	5438571	346.2	humus	L104
MAN227	-85.6190	49.0917	600824	5438566	344.5	humus	L104
MAN228	-85.6193	49.0917	600801	5438563	346.4	humus	L104
MAN229	-85.6145	49.0944	601148	5438873	348.1	humus	L106
MAN230	-85.6149	49.0943	601120	5438863	347.6	humus	L106
MAN231	-85.6152	49.0942	601097	5438855	348.4	humus	L106
MAN232	-85.6155	49.0940	601076	5438834	347.2	humus	L106
MAN233	-85.6158	49.0940	601049	5438829	346.7	humus	L106
MAN234	-85.6162	49.0939	601025	5438821	346.0	humus	L106
MAN235	-85.6165	49.0939	601004	5438819	346.7	humus	L106
MAN236	-85.6168	49.0938	600982	5438806	347.4	humus	L106
MAN237	-85.6172	49.0938	600953	5438803	346.0	humus	L106
MAN238	-85.6174	49.0937	600933	5438794	347.6	humus	L106
MAN239	-85.6178	49.0937	600909	5438790	346.4	humus	L106
MAN240	-85.6181	49.0936	600883	5438780	346.0	humus	L106
MAN241	-85.6184	49.0935	600862	5438771	346.2	humus	L106
MAN242	-85.6188	49.0935	600834	5438769	346.0	humus	L106
MAN243	-85.6191	49.0934	600811	5438760	345.0	humus	L106
MAN244	-85.6195	49.0934	600785	5438759	344.5	humus	L106
MAN245	-85.6198	49.0933	600761	5438745	346.2	humus	L106
MAN246	-85.6201	49.0933	600738	5438740	345.0	humus	L106
MAN247	-85.6043	49.0978	601885	5439260	348.6	soil	L108
MAN248	-85.6046	49.0977	601859	5439258	347.9	soil	L108
MAN249	-85.6049	49.0977	601841	5439254	347.6	soil	L108
MAN250	-85.6052	49.0976	601815	5439241	345.2	soil	L108
MAN251	-85.6056	49.0976	601789	5439243	345.2	soil	L108
MAN252	-85.6060	49.0975	601763	5439232	345.0	soil	L108
MAN253	-85.6063	49.0975	601736	5439228	343.6	soil	L108
MAN254	-85.6066	49.0975	601717	5439226	342.6	soil	L108
MAN255	-85.6069	49.0974	601692	5439217	341.2	humus	L108
MAN256	-85.6073	49.0973	601666	5439210	341.4	humus	L108
MAN257	-85.6076	49.0973	601644	5439205	341.6	humus	L108
MAN258	-85.6079	49.0972	601619	5439200	341.9	humus	L108
MAN259	-85.6083	49.0972	601596	5439195	341.4	humus	L108
MAN260	-85.6086	49.0972	601569	5439190	340.7	humus	L108
MAN261	-85.6090	49.0971	601543	5439184	341.2	humus	L108
MAN262	-85.6093	49.0971	601521	5439178	343.3	humus	L108
MAN263	-85.6096	49.0971	601496	5439175	343.6	humus	L108
MAN264	-85.6100	49.0970	601471	5439168	344.8	humus	L108
MAN265	-85.6103	49.0969	601449	5439159	343.1	humus	L108
MAN266	-85.6106	49.0969	601425	5439156	343.6	humus	L108
MAN267	-85.6109	49.0968	601401	5439148	343.8	soil	L110
MAN268	-85.6164	49.0978	600998	5439249	348.8	humus	L110
MAN269	-85.6162	49.0978	601016	5439252	347.2	humus	L110

Soil-Humus Descriptions

SAMPLE No.	Long EAST	Lat NORTH	UTME	UTMN	Elevation (m)	Soil Type	Line
MAN270	-85.6158	49.0978	601042	5439254	348.6	humus	L110
MAN271	-85.6155	49.0979	601066	5439262	347.4	humus	L110
MAN272	-85.6152	49.0980	601089	5439278	347.6	humus	L110
MAN273	-85.6149	49.0981	601112	5439287	348.1	humus	L110
MAN274	-85.6145	49.0981	601137	5439290	348.6	humus	L110
MAN275	-85.6142	49.0982	601161	5439293	348.1	humus	L110
MAN276	-85.6139	49.0982	601185	5439301	347.4	humus	L110
MAN277	-85.6135	49.0983	601210	5439309	347.6	humus	L110
MAN278	-85.6132	49.0984	601233	5439316	347.6	humus	L110
MAN279	-85.6129	49.0985	601258	5439327	347.6	humus	L110
MAN280	-85.6125	49.0984	601284	5439321	347.9	humus	L110
MAN281	-85.6122	49.0985	601308	5439328	347.9	humus	L110
MAN282	-85.6118	49.0985	601332	5439336	347.4	humus	L110
MAN283	-85.6115	49.0986	601355	5439346	346.7	humus	L110
MAN284	-85.6112	49.0986	601380	5439346	345.7	humus	L110
MAN285	-85.6108	49.0987	601404	5439354	348.1	humus	L110
MAN286	-85.6105	49.0987	601429	5439356	347.6	humus	L110
MAN287	-85.6102	49.0987	601454	5439361	347.2	soil	L110
MAN288	-85.6098	49.0988	601478	5439369	346.9	humus	L110
MAN289	-85.6095	49.0988	601502	5439374	346.9	humus	L110
MAN290	-85.6092	49.0989	601525	5439379	346.0	humus	L110
MAN291	-85.6088	49.0989	601554	5439380	345.5	humus	L110
MAN292	-85.6085	49.0990	601576	5439389	346.4	humus	L110
MAN293	-85.6081	49.0990	601602	5439395	347.4	humus	L110
MAN294	-85.6078	49.0991	601625	5439400	346.0	humus	L110
MAN295	-85.6075	49.0991	601648	5439403	346.4	soil	L110
MAN296	-85.6071	49.0991	601673	5439407	346.0	humus	L110
MAN297	-85.6068	49.0991	601699	5439412	345.7	humus	L110
MAN298	-85.6064	49.0992	601724	5439418	346.2	humus	L110
MAN299	-85.6058	49.0993	601769	5439427	344.0	humus	L110
MAN300	-85.6195	49.0980	600773	5439273	354.8	soil	L110
MAN301	-85.6198	49.0980	600750	5439273	355.1	soil	L111
MAN302	-85.6201	49.0981	600728	5439273	355.3	humus	L111
MAN303	-85.6207	49.0981	600683	5439274	358.0	soil	L111
MAN304	-85.6209	49.0981	600668	5439276	357.7	humus	L111
MAN305	-85.6212	49.0980	600652	5439263	358.0	soil	L111
MAN306	-85.6216	49.0979	600623	5439257	365.4	soil	L111
MAN307	-85.6218	49.0979	600607	5439253	367.3	soil	L111
MAN308	-85.6222	49.0978	600579	5439240	371.9	soil	L111
MAN309	-85.6225	49.0978	600556	5439237	375.8	soil	L111
MAN310	-85.6228	49.0977	600532	5439228	379.8	soil	L111
MAN311	-85.6232	49.0977	600506	5439224	381.5	soil	L111
MAN312	-85.6235	49.0976	600483	5439216	382.0	soil	L111
MAN313	-85.6239	49.0975	600456	5439211	380.1	soil	L111
MAN314	-85.6242	49.0975	600431	5439205	375.3	humus	L111
MAN315	-85.6245	49.0974	600410	5439197	372.4	soil	L111
MAN316	-85.6248	49.0972	600388	5439168	366.4	soil	L111
MAN317	-85.6251	49.0971	600368	5439164	364.0	soil	L111
MAN318	-85.6255	49.0970	600336	5439153	353.2	soil	L111
MAN319	-85.6257	49.0971	600325	5439154	352.0	soil	L111

Soil-Humus Descriptions

SAMPLE No.	Long EAST	Lat NORTH	UTME	UTMN	Elevation (m)	Soil Type	Line
MAN320	-85.6314	49.0996	599905	5439427	353.6	soil	L115
MAN321	-85.6309	49.0996	599935	5439435	360.4	soil	L115
MAN322	-85.6307	49.1000	599955	5439473	376.0	soil	L115
MAN323	-85.6304	49.1000	599975	5439480	375.0	soil	L115
MAN324	-85.6300	49.1001	600000	5439485	374.3	soil	L115
MAN325	-85.6297	49.1003	600022	5439505	380.3	soil	L115
MAN326	-85.6294	49.1004	600045	5439517	375.3	soil	L115
MAN327	-85.6291	49.1004	600067	5439525	372.2	soil	L115
MAN328	-85.6288	49.1006	600091	5439542	365.7	humus	L115
MAN329	-85.6284	49.1006	600115	5439546	359.9	soil	L115
MAN330	-85.6281	49.1007	600140	5439555	358.0	humus	L115
MAN331	-85.6278	49.1007	600163	5439558	349.8	soil	L115
MAN332	-85.6264	49.1008	600262	5439571	344.8	soil	L115
MAN333	-85.6261	49.1009	600284	5439586	352.0	soil	L115
MAN334	-85.6258	49.1010	600309	5439597	359.7	soil	L115
MAN335	-85.6255	49.1012	600333	5439613	362.8	soil	L115
MAN336	-85.6251	49.1012	600357	5439613	362.5	soil	L115
MAN337	-85.6247	49.1011	600385	5439607	363.5	soil	L115
MAN338	-85.6244	49.1011	600407	5439605	359.9	soil	L115
MAN339	-85.6240	49.1011	600438	5439610	358.2	soil	L115
MAN340	-85.6237	49.1011	600461	5439606	357.0	humus	L115
MAN341	-85.6234	49.1012	600484	5439615	353.9	soil	L115
MAN342	-85.6230	49.1012	600511	5439614	355.6	soil	L115
MAN343	-85.6227	49.1014	600531	5439638	353.6	soil	L115
MAN344	-85.6223	49.1013	600560	5439625	353.9	soil	L115
MAN345	-85.6118	49.1041	601321	5439954	355.3	soil	L115
MAN346	-85.6217	49.1015	600608	5439654	356.8	soil	L115
MAN347	-85.6214	49.1015	600631	5439656	358.2	soil	L115
MAN348	-85.6210	49.1015	600654	5439658	349.6	humus	L115
MAN349	-85.6207	49.1015	600676	5439660	352.4	soil	L115
MAN350	-85.6204	49.1016	600704	5439666	357.0	soil	L115
MAN351	-85.6200	49.1016	600731	5439670	357.5	soil	L115
MAN352	-85.6197	49.1017	600752	5439678	359.4	soil	L115
MAN353	-85.6193	49.1018	600778	5439685	358.7	soil	L115
MAN354	-85.6190	49.1018	600804	5439686	359.7	soil	L115
MAN355	-85.6187	49.1018	600825	5439696	360.6	soil	L115
MAN356	-85.6184	49.1019	600847	5439704	360.4	soil	L115
MAN357	-85.6174	49.0791	600967	5437169	331.3	soil	L91
MAN358	-85.6170	49.0792	600991	5437182	332.3	soil	L91
MAN359	-85.6168	49.0794	601012	5437198	333.0	soil	L91
MAN360	-85.6163	49.0792	601042	5437181	336.8	soil	L91
MAN361	-85.6160	49.0792	601066	5437178	334.9	soil	L91
MAN362	-85.6156	49.0791	601095	5437173	334.4	soil	L91
MAN363	-85.6153	49.0792	601118	5437185	334.9	humus	L91
MAN364	-85.6150	49.0794	601139	5437207	333.2	humus	L91
MAN365	-85.6148	49.0796	601157	5437229	333.2	soil	L91
MAN366	-85.6144	49.0798	601182	5437249	333.7	soil	L91
MAN367	-85.6140	49.0798	601210	5437253	333.2	soil	L91
MAN368	-85.6137	49.0798	601231	5437249	334.7	soil	L91
MAN369	-85.6130	49.0798	601282	5437258	333.0	soil	L91

Soil-Humus Descriptions

SAMPLE No.	Long EAST	Lat NORTH	UTME	UTMN	Elevation (m)	Soil Type	Line
MAN370	-85.6127	49.0799	601304	5437268	332.7	humus	L91
MAN371	-85.6123	49.0798	601333	5437256	332.3	humus	L91
MAN372	-85.6120	49.0798	601359	5437250	333.0	soil	L91
MAN373	-85.6117	49.0799	601384	5437261	335.4	soil	L91
MAN374	-85.6113	49.0800	601407	5437282	333.7	soil	L91
MAN375	-85.6110	49.0801	601429	5437288	332.0	soil	L91
MAN376	-85.6106	49.0800	601457	5437282	331.8	humus	L91
MAN377	-85.6103	49.0800	601480	5437284	332.0	humus	L91
MAN378	-85.6099	49.0802	601508	5437298	334.2	humus	L91
MAN379	-85.6097	49.0802	601527	5437299	331.5	humus	L91
MAN380	-85.6093	49.0802	601554	5437303	332.7	humus	L91
MAN381	-85.6090	49.0803	601577	5437310	332.7	humus	L91
MAN382	-85.6086	49.0803	601604	5437315	332.0	humus	L91
MAN383	-85.6083	49.0803	601626	5437320	333.0	humus	L91
MAN384	-85.6080	49.0804	601650	5437323	332.7	soil	L91
MAN385	-85.6077	49.0823	601670	5437542	334.4	humus	L90
MAN386	-85.6080	49.0823	601645	5437540	334.2	humus	L90
MAN387	-85.6084	49.0823	601619	5437538	333.9	soil	L90
MAN388	-85.6087	49.0823	601595	5437533	334.4	humus	L90
MAN389	-85.6090	49.0823	601569	5437535	333.7	soil	L90
MAN390	-85.6093	49.0821	601550	5437511	334.2	humus	L90
MAN391	-85.6097	49.0820	601523	5437503	334.7	humus	L90
MAN392	-85.6099	49.0819	601504	5437492	335.4	humus	L90
MAN393	-85.6103	49.0817	601482	5437470	334.4	humus	L90
MAN394	-85.6106	49.0818	601455	5437477	333.9	humus	L90
MAN395	-85.6111	49.0820	601423	5437499	333.9	soil	L90
MAN396	-85.6114	49.0818	601401	5437480	336.1	soil	L90
MAN397	-85.6117	49.0818	601377	5437475	334.4	soil	L90
MAN398	-85.6121	49.0817	601350	5437468	334.2	soil	L90
MAN399	-85.6123	49.0816	601331	5437456	333.2	soil	L90
MAN400	-85.6123	49.0817	601331	5437471	333.2	soil	L90
MAN401	-85.6126	49.0816	601307	5437455	333.7	soil	L90
MAN402	-85.6130	49.0815	601284	5437440	334.2	humus	L90
MAN403	-85.6133	49.0815	601256	5437442	333.7	soil	L90
MAN404	-85.6137	49.0814	601232	5437431	334.2	soil	L90
MAN405	-85.6140	49.0813	601212	5437413	333.5	soil	L90
MAN406	-85.6142	49.0811	601191	5437399	334.7	soil	L90
MAN407	-85.6146	49.0811	601164	5437400	335.4	soil	L90
MAN408	-85.6150	49.0811	601135	5437396	335.1	soil	L90
MAN409	-85.6153	49.0811	601115	5437391	335.1	soil	L90
MAN410	-85.6156	49.0810	601092	5437380	335.6	soil	L90
MAN411	-85.6160	49.0809	601067	5437373	335.9	soil	L90
MAN412	-85.6163	49.0809	601043	5437367	336.6	soil	L90
MAN413	-85.6166	49.0808	601019	5437361	336.3	soil	L90
MAN414	-85.6169	49.0807	600997	5437352	335.4	soil	L90
MAN415	-85.6173	49.0807	600972	5437347	335.6	soil	L90
MAN416	-85.6176	49.0806	600948	5437338	334.4	soil	L90
MAN417	-85.6179	49.0806	600925	5437332	334.9	soil	L90
MAN418	-85.6182	49.0805	600903	5437325	335.4	soil	L90
MAN419	-85.6067	49.1049	601697	5440051	338.5	humus	L116

Soil-Humus Descriptions

SAMPLE No.	Long EAST	Lat NORTH	UTME	UTMN	Elevation (m)	Soil Type	Line
MAN420	-85.6068	49.1049	601683	5440054	339.5	humus	L116
MAN421	-85.6072	49.1049	601656	5440052	339.2	humus	L116
MAN422	-85.6076	49.1049	601632	5440047	339.2	humus	L116
MAN423	-85.6078	49.1047	601612	5440031	339.9	humus	L116
MAN424	-85.6082	49.1047	601587	5440025	341.6	humus	L116
MAN425	-85.6085	49.1046	601562	5440020	340.7	humus	L116
MAN426	-85.6089	49.1046	601536	5440018	340.9	humus	L116
MAN427	-85.6092	49.1045	601514	5440003	341.2	humus	L116
MAN428	-85.6095	49.1045	601488	5440002	341.2	humus	L116
MAN429	-85.6099	49.1045	601464	5439998	340.2	humus	L116
MAN430	-85.6102	49.1043	601442	5439986	341.9	soil	L116
MAN431	-85.6105	49.1043	601417	5439977	345.0	soil	L116
MAN432	-85.6109	49.1043	601386	5439975	348.6	soil	L116
MAN433	-85.6115	49.1042	601344	5439962	355.8	soil	L116
MAN434	-85.6121	49.1040	601303	5439950	363.0	soil	L116
MAN435	-85.6122	49.1040	601295	5439948	356.5	soil	L116
MAN436	-85.6125	49.1040	601273	5439939	356.3	soil	L116
MAN437	-85.6128	49.1039	601250	5439929	357.7	soil	L116
MAN438	-85.6132	49.1039	601225	5439927	356.5	soil	L116
MAN439	-85.6135	49.1038	601201	5439919	355.1	soil	L116
MAN440	-85.6138	49.1037	601179	5439908	355.3	soil	L116
MAN441	-85.6142	49.1036	601151	5439902	354.4	soil	L116
MAN442	-85.6145	49.1036	601126	5439897	353.9	humus	L116
MAN443	-85.6148	49.1035	601105	5439890	353.4	humus	L116
MAN444	-85.6152	49.1035	601079	5439885	353.6	humus	L116
MAN445	-85.6155	49.1034	601056	5439877	353.9	humus	L116
MAN446	-85.6158	49.1034	601031	5439869	355.1	soil	L116
MAN447	-85.6161	49.1033	601008	5439864	356.3	soil	L116
MAN448	-85.6165	49.1033	600983	5439856	357.5	soil	L116
MAN449	-85.6168	49.1032	600962	5439852	356.3	soil	L116
MAN450	-85.6214	49.1062	600619	5440179	348.4	humus	L121
MAN451	-85.6211	49.1063	600637	5440191	348.4	soil	L121
MAN452	-85.6208	49.1064	600663	5440201	346.2	humus	L121
MAN453	-85.6204	49.1065	600688	5440207	345.5	humus	L121
MAN454	-85.6202	49.1065	600707	5440210	345.7	humus	L121
MAN455	-85.6198	49.1065	600732	5440213	351.2	humus	L121
MAN456	-85.6194	49.1066	600764	5440219	352.7	humus	L121
MAN457	-85.6191	49.1066	600784	5440227	355.8	soil	L121
MAN458	-85.6188	49.1068	600807	5440246	358.5	soil	L121
MAN459	-85.6185	49.1067	600829	5440241	360.1	soil	L121
MAN460	-85.6180	49.1068	600869	5440245	360.6	soil	L121
MAN461	-85.6178	49.1070	600883	5440272	361.8	soil	L121
MAN462	-85.6173	49.1070	600913	5440268	358.0	humus	L121
MAN463	-85.6171	49.1069	600932	5440265	357.3	humus	L121
MAN464	-85.6167	49.1070	600959	5440271	356.8	soil	L121
MAN465	-85.6164	49.1071	600979	5440283	358.5	soil	L121
MAN466	-85.6161	49.1072	601000	5440299	360.1	soil	L121
MAN467	-85.6158	49.1072	601025	5440298	361.6	soil	L121
MAN468	-85.6154	49.1073	601052	5440305	361.1	soil	L121
MAN469	-85.6151	49.1074	601073	5440316	357.5	soil	L121

Soil-Humus Descriptions

SAMPLE No.	Long EAST	Lat NORTH	UTME	UTMN	Elevation (m)	Soil Type	Line
MAN470	-85.6148	49.1074	601100	5440317	356.5	soil	L121
MAN471	-85.6145	49.1075	601122	5440327	361.1	soil	L121
MAN472	-85.6141	49.1075	601146	5440331	360.9	soil	L121
MAN473	-85.6138	49.1076	601169	5440345	362.1	soil	L121
MAN474	-85.6135	49.1076	601194	5440343	360.4	soil	L121
MAN475	-85.6131	49.1076	601218	5440345	358.9	soil	L121
MAN476	-85.6128	49.1078	601242	5440364	358.2	soil	L121
MAN477	-85.6125	49.1078	601266	5440369	359.9	soil	L121
MAN479	-85.6118	49.1079	601316	5440380	362.1	soil	L121
MAN480	-85.6115	49.1080	601341	5440387	363.5	soil	L121
MAN481	-85.6112	49.1081	601361	5440400	360.6	soil	L121
MAN482	-85.6108	49.1081	601388	5440401	358.7	soil	L121
MAN483	-85.6105	49.1082	601409	5440412	359.2	soil	L121
MAN484	-85.6102	49.1083	601434	5440424	360.9	soil	L121
MAN485	-85.6098	49.1083	601458	5440425	360.9	soil	L121
MAN486	-85.6095	49.1083	601486	5440423	361.6	soil	L121
MAN487	-85.6091	49.1083	601511	5440426	363.3	soil	L121
MAN488	-85.6088	49.1085	601533	5440444	361.6	soil	L121
MAN489	-85.6085	49.1085	601556	5440451	359.2	soil	L121
MAN490	-85.6082	49.1085	601580	5440455	361.3	soil	L121
MAN491	-85.6078	49.1086	601603	5440462	356.8	soil	L121
MAN492	-85.6075	49.1087	601626	5440470	353.6	soil	L121
MAN493	-85.6072	49.1087	601652	5440477	351.0	soil	L121
MAN494	-85.6068	49.1088	601678	5440483	348.4	humus	L121
MAN495	-85.6066	49.1089	601697	5440496	349.1	humus	L121
MAN496	-85.6062	49.1090	601723	5440504	355.3	soil	L121
MAN497	-85.6058	49.1090	601749	5440508	359.9	humus	L121
MAN498	-85.6055	49.1090	601771	5440511	359.9	soil	L121
MAN499	-85.6052	49.1090	601794	5440515	359.9	soil	L121
MAN500	-85.6048	49.1091	601822	5440526	356.3	soil	L121
MAN501	-85.6042	49.1093	601869	5440539	344.3	soil	L121
MAN502	-85.6038	49.1093	601893	5440545	342.6	soil	L121
MAN503	-85.6035	49.1094	601916	5440553	342.8	humus	L121
MAN504	-85.6160	49.1144	600998	5441096	341.9	humus	L128
MAN505	-85.6156	49.1146	601028	5441118	342.6	humus	L128
MAN506	-85.6151	49.1146	601060	5441122	345.2	soil	L128
MAN507	-85.6146	49.1147	601100	5441130	352.4	soil	L128
MAN508	-85.6142	49.1148	601126	5441138	359.4	soil	L128
MAN509	-85.6139	49.1148	601150	5441140	363.5	soil	L128
MAN510	-85.6135	49.1148	601174	5441140	364.7	humus	L128
MAN511	-85.6132	49.1149	601198	5441152	367.1	soil	L128
MAN512	-85.6129	49.1150	601222	5441161	369.0	soil	L128
MAN513	-85.6125	49.1149	601249	5441160	373.8	soil	L128
MAN514	-85.6122	49.1150	601271	5441166	377.9	soil	L128
MAN515	-85.6118	49.1150	601298	5441168	379.1	soil	L128
MAN516	-85.6115	49.1149	601326	5441160	379.6	soil	L128
MAN517	-85.6111	49.1149	601351	5441163	380.1	soil	L128
MAN518	-85.6108	49.1150	601374	5441173	381.3	soil	L128
MAN519	-85.6105	49.1151	601398	5441177	378.9	soil	L128
MAN520	-85.6101	49.1152	601423	5441187	377.7	humus	L128

Soil-Humus Descriptions

SAMPLE No.	Long EAST	Lat NORTH	UTME	UTMN	Elevation (m)	Soil Type	Line
MAN521	-85.6098	49.1152	601446	5441193	379.6	soil	L128
MAN522	-85.6095	49.1153	601468	5441206	380.1	soil	L128
MAN523	-85.6091	49.1153	601498	5441203	378.9	soil	L128
MAN524	-85.6088	49.1154	601518	5441213	380.3	humus	L128
MAN525	-85.6084	49.1154	601548	5441222	378.2	soil	L128
MAN526	-85.6081	49.1154	601569	5441222	377.0	soil	L128
MAN527	-85.6078	49.1155	601592	5441232	376.5	soil	L128
MAN528	-85.6074	49.1156	601619	5441237	376.0	soil	L128
MAN529	-85.6071	49.1156	601642	5441243	372.2	soil	L128
MAN530	-85.6068	49.1157	601666	5441256	370.0	soil	L128
MAN531	-85.6065	49.1158	601688	5441261	366.1	humus	L128
MAN532	-85.6062	49.1158	601711	5441270	364.0	humus	L128
MAN533	-85.6058	49.1159	601734	5441274	363.3	soil	L128
MAN534	-85.6055	49.1159	601761	5441282	363.0	soil	L128
MAN535	-85.6052	49.1160	601784	5441287	368.3	soil	L128
MAN536	-85.6048	49.1160	601812	5441291	369.0	soil	L128
MAN537	-85.6045	49.1161	601831	5441304	374.1	humus	L128
MAN538	-85.6042	49.1161	601857	5441306	376.0	soil	L128
MAN539	-85.6039	49.1163	601878	5441319	377.4	soil	L128
MAN540	-85.6035	49.1163	601905	5441322	377.0	soil	L128
MAN541	-85.6032	49.1164	601928	5441333	376.5	soil	L128
MAN542	-85.6028	49.1164	601953	5441341	372.2	soil	L128
MAN543	-85.6025	49.1165	601977	5441344	370.7	soil	L128
MAN544	-85.6022	49.1165	601998	5441348	367.8	soil	L128
MAN545	-85.6027	49.1189	601961	5441617	365.2	humus	L131
MAN546	-85.6032	49.1189	601922	5441616	367.3	humus	L131
MAN547	-85.6034	49.1189	601904	5441609	369.5	soil	L131
MAN548	-85.6037	49.1189	601887	5441607	373.1	soil	L131
MAN549	-85.6040	49.1187	601860	5441591	372.9	soil	L131
MAN550	-85.6044	49.1186	601833	5441579	375.0	humus	L131
MAN551	-85.6047	49.1185	601811	5441569	380.3	humus	L131
MAN552	-85.6051	49.1186	601783	5441575	381.5	soil	L131
MAN553	-85.6054	49.1185	601761	5441568	382.0	humus	L131
MAN554	-85.6057	49.1184	601740	5441553	383.4	soil	L131
MAN555	-85.6060	49.1184	601715	5441552	385.9	soil	L131
MAN556	-85.6064	49.1183	601688	5441543	386.3	soil	L131
MAN557	-85.6067	49.1183	601668	5441544	384.9	soil	L131
MAN558	-85.6071	49.1183	601640	5441540	376.5	soil	L131
MAN559	-85.6073	49.1181	601619	5441522	374.6	soil	L131
MAN560	-85.6077	49.1180	601596	5441510	372.9	soil	L131
MAN561	-85.6080	49.1180	601572	5441505	371.9	humus	L131
MAN562	-85.6083	49.1179	601549	5441493	371.2	humus	L131
MAN563	-85.6087	49.1179	601523	5441494	370.0	humus	L131
MAN564	-85.6090	49.1179	601497	5441489	371.7	soil	L131
MAN565	-85.6094	49.1178	601474	5441482	372.9	humus	L131
MAN566	-85.6097	49.1177	601450	5441471	374.1	soil	L131
MAN567	-85.6100	49.1176	601428	5441464	375.5	soil	L131
MAN568	-85.6104	49.1176	601401	5441458	377.2	humus	L131
MAN569	-85.6106	49.1175	601381	5441450	377.0	humus	L131
MAN570	-85.6111	49.1175	601351	5441444	376.0	soil	L131

Soil-Humus Descriptions

SAMPLE No.	Long EAST	Lat NORTH	UTME	UTMN	Elevation (m)	Soil Type	Line
MAN571	-85.6114	49.1175	601328	5441447	373.8	soil	L131
MAN572	-85.6116	49.1173	601308	5441428	373.4	soil	L131
MAN573	-85.6120	49.1173	601283	5441424	370.2	humus	L131
MAN574	-85.6123	49.1173	601257	5441420	368.3	humus	L131
MAN575	-85.6128	49.1173	601225	5441418	368.3	soil	L131
MAN576	-85.6130	49.1171	601210	5441405	367.8	soil	L131
MAN577	-85.6132	49.1170	601196	5441392	367.3	soil	L131
MAN578	-85.6136	49.1169	601163	5441380	362.8	humus	L131
MAN579	-85.6140	49.1170	601140	5441388	358.9	humus	L131
MAN580	-85.6143	49.1170	601113	5441384	355.1	humus	L131

Appendix 2
Daily Prospecting Log

Prospecting Log

PROPERTY	DATE	ACTIVITY	Mandays
Manitouwadge PGE	July 07/14	Drove to Manitouwadge, Mick& Jordan	2
Manitouwadge PGE	July 09/14	pulled beep map around on certral mag anomalies (Map Source data)	2
Manitouwadge PGE	July 10/14	pulled beep map around on certral mag anomalies (Map Source data)	2
Manitouwadge PGE	Oct 18/14	soil sampling and prospecting (Mick, Jeff, James, Austin)	4
Manitouwadge PGE	Oct 19/14	soil sampling and prospecting (Mick, Jeff, James, Austin)	4
Manitouwadge PGE	Oct 20/14	soil sampling and prospecting (Jeff, James, Austin)	3
Manitouwadge PGE	Oct 21/14	soil sampling and prospecting (Jeff, James, Austin)	3
Manitouwadge PGE	Oct 22/14	soil sampling and prospecting (Mick, Jeff, James, Austin)	4
Manitouwadge PGE	Oct 23/14	soil sampling and prospecting (Mick, Jeff, James, Austin)	4
Manitouwadge PGE	Oct 24/14	soil sampling and prospecting (Mick, Jeff, James, Austin)	4
Manitouwadge PGE	Oct 25/14	soil sampling and prospecting (Mick, Jeff, James, Austin)	4
Manitouwadge PGE	Oct 26/14	soil sampling and prospecting (Mick, Jeff, James, Austin)	4
Manitouwadge PGE	Oct 27/14	soil sampling and prospecting (Mick, Jeff, James, Austin)	4
Manitouwadge PGE	Oct 28/14	Preparing soils for lab (Mick, Jeff)	2
Manitouwadge PGE	Oct 29/14	Preparing soils for lab (Mick, Jeff)	2
Manitouwadge PGE	Oct 30/14	Preparing soils for lab (Mick, Jeff)	2
		Total	**50**

Appendix 3
Assay Certificates
Rock
2014

Date Submitted: 03-Nov-14
Invoice No.: A14-08288
Invoice Date: 06-Nov-14
Your Reference: MAN PGE

White Metal Resources
3250 Highway,130 Rosslyn
ON
Canada

ATTN: Mike Stares

CERTIFICATE OF ANALYSIS

8 Rock samples were submitted for analysis.

The following analytical package was requested: Code 1C-OES-Tbay Fire Assay ICPOES (QOP Fire Assay Tbay)
Code 1F2-Tbay Total Digestion ICP(TOTAL)

REPORT **A14-08288**

Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

ACTIVATION LABORATORIES LTD.
1201 Walsh Street West, Thunder Bay, Ontario, Canada, P7E 4X6
TELEPHONE +807 622-6707 or +1.888.228.5227 FAX +1.905.648.9613
E-MAIL Tbay@actlabs.com ACTLABS GROUP WEBSITE www.actlabs.com

Results

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
991151	< 2	< 5	< 5	< 0.3	6.12	3	712	< 1	8	0.45	< 0.3	< 1	8	10	0.66	14	< 1	3.05	0.02	4	106	16	2.61
991152	2	24	45	0.3	2.34	5	< 7	< 1	< 2	2.68	< 0.3	146	884	1500	11.5	11	< 1	0.02	12.1	< 1	1670	< 1	0.09
991153	4	< 5	8	< 0.3	3.26	< 3	< 7	< 1	< 2	2.65	< 0.3	127	1880	570	9.74	9	1	0.01	13.6	< 1	1310	< 1	0.04
991154	10	16	19	0.5	7.32	< 3	45	< 1	4	5.38	< 0.3	143	191	1840	10.1	17	< 1	0.41	5.43	21	1040	< 1	1.12
991155	< 2	< 5	< 5	0.3	6.95	< 3	472	< 1	< 2	1.12	< 0.3	7	14	183	1.42	20	< 1	1.14	0.08	7	105	3	3.49
991156	3	34	< 5	0.3	4.43	< 3	10	< 1	< 2	7.94	0.5	163	58	993	12.2	17	< 1	0.25	6.97	14	991	3	0.68
991157	2	< 5	< 5	0.4	6.67	< 3	270	< 1	< 2	1.41	< 0.3	5	32	165	1.02	13	< 1	0.34	0.07	3	76	< 1	4.07
991158	6	7	6	0.6	5.50	10	38	< 1	4	1.91	< 0.3	239	80	1110	16.2	22	1	0.30	5.86	40	1810	< 1	0.89

Results

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
991151	2	0.004	8	< 5	0.04	< 4	30	< 2	< 0.01	< 5	< 10	4	< 5	9	6	56
991152	1690	0.013	< 3	< 5	1.51	10	7	< 2	0.07	< 5	< 10	59	< 5	3	91	10
991153	1670	0.009	4	< 5	0.42	16	9	< 2	0.08	< 5	< 10	69	< 5	2	76	10
991154	1520	0.010	13	< 5	2.63	29	156	24	0.15	< 5	< 10	117	< 5	4	60	7
991155	8	0.009	< 3	< 5	0.22	< 4	245	< 2	0.05	< 5	< 10	5	< 5	2	6	61
991156	1200	0.199	14	< 5	1.13	< 4	8	< 2	0.16	< 5	< 10	124	< 5	23	57	18
991157	4	0.005	< 3	< 5	0.30	< 4	177	< 2	0.05	< 5	< 10	16	< 5	6	5	102
991158	126	0.045	7	< 5	2.47	39	55	10	0.82	< 5	< 10	321	< 5	14	82	42

QC

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Lower Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Method Code	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas				31.4	2.23	445	650	1	1380	0.88	0.9	7		1170	23.6	13	9	0.05	0.20	7	875	15	0.05
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20		1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-4 Meas				3.4	6.53	97	303	2	21	1.06	0.4	16	47	6090	3.01	20	< 1	3.61	1.67	10	167	313	0.53
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
SDC-1 Meas					7.97	4	630	3		1.10		20	38	36	4.81	23	< 1	2.80	1.01	34	850		1.50
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.000	4.82	21.00	0.20	2.72	1.02	34.00	880.00		1.52
GXR-6 Meas				0.4	13.0	265	> 1000	1	5	0.18	< 0.3	14	58	69	5.65	33	< 1	1.99	0.61	33	1050	2	0.10
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
OREAS 14P Meas												623		8340	28.4								
OREAS 14P Cert												750		9970	37.2								
Oreas 72a (4 Acid Digest) Meas						< 3						150	215	311	9.00								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
SAR-M (U.S.G.S.) Meas				3.7	6.04	32	810	3	< 2	0.63	5.4	13	73	336	3.24	17		2.67	0.48	28	5290	7	1.18
SAR-M (U.S.G.S.) Cert				3.64	6.30	38.8	801	2.20	1.94	0.61	5.27	10.70	79.7	331.0000	2.99	17		2.94	0.50	27.4	5220	13.1	1.140
DNC-1a Meas							95					55	206	97						4			
DNC-1a Cert							118					57.0	270	100.00						5.20			
OREAS 13b (4-Acid) Meas				1.0		44						76	9060	2260								6	
OREAS 13b (4-Acid) Cert				0.86		57						75	8650.000	2327.0000								9.0	
PK2 Meas	5010	6050	4760																				
PK2 Cert	4785.000	5918.000	4749.000																				
SBC-1 Meas						27	791	3	< 2		< 0.3	25	91	41		29				168		3	
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109	31.0000		27.0				163.0		2.40	
CDN-PGMS-25 Meas	520	1930	425																				
CDN-PGMS-25 Cert	483	1830	400																				
991157 Orig	2	< 5	< 5																				
991157 Dup	2	< 5	< 5																				
991158 Orig	6	7	6	0.6	5.50	10	38	< 1	4	1.91	< 0.3	239	80	1110	16.2	22	1	0.30	5.86	40	1810	< 1	0.89
991158 Split	5	7	8	0.5	5.44	< 3	38	< 1	4	1.91	< 0.3	238	78	1090	16.2	22	< 1	0.30	5.84	40	1820	< 1	0.88
Method Blank	< 2	< 5	< 5																				
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		3	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01

QC

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas	47	0.059	721	51	0.26	< 4	286	< 2	0.03	< 5	40	90	160	28	729	29
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-4 Meas	40	0.129	50	< 5	1.75	8	214	5	0.29	< 5	< 10	86	34	13	67	47
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
SDC-1 Meas	40	0.054	23	< 5		17	172		0.11	< 5	< 10	45	< 5		102	32
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Method Code	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-6 Meas	28	0.036	89	< 5	0.02	26	39	3		< 5	< 10	113	< 5	11	122	67
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
OREAS 14P Meas	> 10000															
OREAS 14P Cert	21000															
Oreas 72a (4 Acid Digest) Meas	6410				1.58											
Oreas 72a (4 Acid Digest) Cert	6930.000				1.74											
SAR-M (U.S.G.S.) Meas	48	0.063	1000	7		10	154	< 2	0.23	< 5	< 10	50	12	33	957	
SAR-M (U.S.G.S.) Cert	41.5	0.07	982	6.0		7.83	151	0.96	0.38	2.7	3.57	67.2	9.78	28.00	930.0	
DNC-1a Meas	259			< 5		31	124		0.27			139		14	56	35
DNC-1a Cert	247			0.96		31	144.0		0.29			148.00		18.0	70.0	38.000
OREAS 13b (4-Acid) Meas	2230				1.14										127	
OREAS 13b (4-Acid) Cert	2247.0000				1.2										133	
PK2 Meas																
PK2 Cert																
SBC-1 Meas	92		24	< 5		21	179		0.53	< 5	< 10	222	< 5	29	175	122
SBC-1 Cert	82.8		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186.0	134.0
CDN-PGMS-25 Meas																
CDN-PGMS-25 Cert																
991157 Orig																
991157 Dup																
991158 Orig	126	0.045	7	< 5	2.47	39	55	10	0.82	< 5	< 10	321	< 5	14	82	42
991158 Split	123	0.045	< 3	< 5	2.46	38	56	< 2	0.81	< 5	< 10	322	< 5	14	81	42
Method Blank																
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	12	< 5

Quality Analysis ... *Innovative Technologies*

Date Submitted: 14-Jul-14
Invoice No.: A14-04710
Invoice Date: 18-Jul-14
Your Reference:

White Metal Resources

ATTN: Mike Stares

CERTIFICATE OF ANALYSIS

5 Rock samples were submitted for analysis.

The following analytical package was requested: Code 1C-OES-Tbay Fire Assay ICPOES (QOP Fire Assay Tbay)
Code 1F2-Tbay Total Digestion ICP(TOTAL)

REPORT **A14-04710**

Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN
TM

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Results

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Detection Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Analysis Method	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
1320059	10	< 5	7	0.7	3.93	< 3	59	< 1	8	6.96	2.9	81	447	355	8.43	15	< 1	0.13	11.5	3	1150	< 1	0.53
1320060	135	6	11	2.9	4.66	< 3	< 7	< 1	< 2	6.82	2.6	100	1140	6850	9.71	12	< 1	0.06	10.5	8	1310	< 1	0.47
1320061	5	7	10	0.4	6.42	13	18	< 1	< 2	7.13	0.8	83	343	804	8.96	14	< 1	0.18	8.38	11	1320	< 1	0.94
1320062	8	26	25	0.7	6.92	< 3	29	< 1	< 2	7.47	1.1	132	306	1380	10.2	18	< 1	0.22	5.56	14	1020	< 1	1.29
1320063	4	13	16	0.4	6.21	< 3	18	< 1	2	6.93	2.7	99	282	842	9.85	14	< 1	0.16	7.93	15	1410	< 1	1.09

Results

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Analysis Method	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
1320059	1040	0.012	3	< 5	0.11	18	66	< 2	0.12	14	< 10	61	< 5	9	72	35
1320060	1470	0.036	9	< 5	0.75	33	27	< 2	0.18	< 5	< 10	99	< 5	7	101	18
1320061	1040	0.008	< 3	< 5	0.98	36	96	< 2	0.15	< 5	< 10	134	< 5	4	75	8
1320062	541	0.012	6	< 5	2.70	45	169	< 2	0.20	6	< 10	158	< 5	6	55	9
1320063	1590	0.007	10	< 5	1.54	43	85	9	0.18	< 5	< 10	144	< 5	4	80	9

QC

Analyte Symbol	Au	Pd	Pt	Ag	Al	As	Ba	Be	Bi	Ca	Cd	Co	Cr	Cu	Fe	Ga	Hg	K	Mg	Li	Mn	Mo	Na
Unit Symbol	ppb	ppb	ppb	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	%	ppm	ppm	%	%	ppm	ppm	ppm	%
Detection Limit	2	5	5	0.3	0.01	3	7	1	2	0.01	0.3	1	1	1	0.01	1	1	0.01	0.01	1	1	1	0.01
Analysis Method	FA-ICP	FA-ICP	FA-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas				31.8	2.03	449	718	1	1380	0.98	3.4	11		1180	24.1	13	1	0.05	0.22	8	915	16	0.05
GXR-1 Cert				31.0	3.52	427	750	1.22	1380	0.960	3.30	8.20		1110	23.6	13.8	3.90	0.050	0.217	8.20	852	18.0	0.0520
GXR-4 Meas				3.4	6.12	96	185	2	16	1.15	0.6	14	34	6440	2.96	22	< 1	3.78	1.77	10	149	312	0.55
GXR-4 Cert				4.0	7.20	98.0	1640	1.90	19.0	1.01	0.860	14.6	64.0	6520	3.09	20.0	0.110	4.01	1.66	11.1	155	310	0.564
SDC-1 Meas					4.93	< 3	630	3		0.81		20	54	30	4.47	22	< 1	1.95	0.91	33	876		1.44
SDC-1 Cert					8.34	0.220	630	3.00		1.00		18.0	64.00	30.00	4.82	21.00	0.20	2.72	1.02	34.00	880.00		1.52
GXR-6 Meas				0.6	12.0	233	> 1000	1	< 2	0.19	0.6	14	45	71	5.55	32	< 1	1.88	0.65	34	1040	1	0.10
GXR-6 Cert				1.30	17.7	330	1300	1.40	0.290	0.180	1.00	13.8	96.0	66.0	5.58	35.0	0.0680	1.87	0.609	32.0	1010	2.40	0.104
OREAS 14P Meas												684		9410	32.7								
OREAS 14P Cert												750		9970	37.2								
Oreas 72a (4 Acid Digest) Meas						< 3						145	193	304	8.84								
Oreas 72a (4 Acid Digest) Cert						14.7						157	228	316	9.63								
SAR-M (U.S.G.S.) Meas				3.5	5.85	32	885	3	< 2	0.68	5.8	12	69	324	3.17	17		2.55	0.51	29	5200	5	1.24
SAR-M (U.S.G.S.) Cert				3.64	6.30	38.8	801	2.20	1.94	0.61	5.27	10.70	79.7	331	2.99	17		2.94	0.50	27.4	5220	13.1	1.140
DNC-1a Meas							106					55	228	95						4			
DNC-1a Cert							118					57.0	270	100.0						5.20			
OREAS 13b (4-Acid) Meas				1.1		48						75	9530	2430								7	
OREAS 13b (4-Acid) Cert				0.86		57						75	8650.000	2327.0000								9.0	
PK2 Meas	5060	6110	4810																				
PK2 Cert	4785.000	5918.000	4749.000																				
SBC-1 Meas						21	842	3	3		1.5	25	89	29		27				160		2	
SBC-1 Cert						25.7	788.0	3.20	0.70		0.40	22.7	109	31.0		27.0				163.0		2.40	
1320061 Orig	5	7	10																				
1320061 Dup	4	7	10																				
1320063 Orig	4	13	16	0.4	6.21	< 3	18	< 1	2	6.93	2.7	99	282	842	9.85	14	< 1	0.16	7.93	15	1410	< 1	1.09
1320063 Split	3	13	15	< 0.3	6.14	4	17	< 1	< 2	6.78	2.6	95	261	820	9.68	10	< 1	0.16	7.79	15	1370	< 1	1.09
Method Blank	< 2	< 5	< 5																				
Method Blank				< 0.3	< 0.01	< 3	< 7	< 1	< 2	< 0.01	< 0.3	< 1		5	< 0.01	< 1	< 1	< 0.01	< 0.01	< 1		< 1	< 0.01

QC

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Analysis Method	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
GXR-1 Meas	47	0.061	742	42	0.26	< 4	302	< 2	0.03	< 5	30	89	162	29	757	27
GXR-1 Cert	41.0	0.0650	730	122	0.257	1.58	275	13.0	0.036	0.390	34.9	80.0	164	32.0	760	38.0
GXR-4 Meas	36	0.130	57	< 5	1.75	9	221	10	0.29	< 5	< 10	84	32	13	68	40
GXR-4 Cert	42.0	0.120	52.0	4.80	1.77	7.70	221	0.970	0.29	3.20	6.20	87.0	30.8	14.0	73.0	186
SDC-1 Meas	36	0.056	16	< 5		12	147		0.61	< 5	< 10	98	< 5		95	52
SDC-1 Cert	38.0	0.0690	25.00	0.54		17.00	180.00		0.606	0.70	3.10	102.00	0.80		103.00	290.00
GXR-6 Meas	28	0.033	90	< 5	0.01	30	38	2		7	< 10	107	< 5	11	122	59
GXR-6 Cert	27.0	0.0350	101	3.60	0.0160	27.6	35.0	0.0180		2.20	1.54	186	1.90	14.0	118	110
OREAS 14P Meas	> 10000															

Analyte Symbol	Ni	P	Pb	Sb	S	Sc	Sr	Te	Ti	Tl	U	V	W	Y	Zn	Zr
Unit Symbol	ppm	%	ppm	ppm	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Detection Limit	1	0.001	3	5	0.01	4	1	2	0.01	5	10	2	5	1	1	5
Analysis Method	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP	TD-ICP
OREAS 14P Cert	21000															
Oreas 72a (4 Acid Digest) Meas	6270				1.60											
Oreas 72a (4 Acid Digest) Cert	6930.000				1.74											
SAR-M (U.S.G.S.) Meas	45	0.059	980	< 5		10	157	< 2	0.25	< 5	< 10	52	14	32	937	
SAR-M (U.S.G.S.) Cert	41.5	0.07	982	6.0		7.83	151	0.96	0.38	2.7	3.57	67.2	9.78	28.00	930.0	
DNC-1a Meas	252			< 5		35	135		0.29			142		14	58	34
DNC-1a Cert	247			0.96		31	144.0		0.29			148.00		18.0	70.0	38.000
OREAS 13b (4-Acid) Meas	2240				1.25										159	
OREAS 13b (4-Acid) Cert	2247.0000				1.2										133	
PK2 Meas																
PK2 Cert																
SBC-1 Meas	84		30	< 5		23	183		0.50	6	< 10	204	6	29	187	108
SBC-1 Cert	82.8		35.0	1.01		20.0	178.0		0.51	0.89	5.76	220.0	1.60	36.5	186.0	134.0
1320061 Orig																
1320061 Dup																
1320063 Orig	1590	0.007	10	< 5	1.54	43	85	9	0.18	< 5	< 10	144	< 5	4	80	9
1320063 Split	1580	0.007	16	5	1.52	42	80	< 2	0.18	< 5	< 10	143	< 5	5	79	9
Method Blank																
Method Blank	< 1	< 0.001	< 3	< 5	< 0.01	< 4	< 1	< 2	< 0.01	< 5	< 10	< 2	< 5	< 1	< 1	< 5

Appendix 4
Assay Certificates
Soils/Humus
Taken Oct. 2014

Quality Analysis ... *Innovative Technologies*

Date Submitted: 04-Nov-14
Invoice No.: A14-08410
Invoice Date: 28-Nov-14
Your Reference: MAN PGE

White Metal Resources
3250 Highway,130 Rosslyn
ON
Canada

ATTN: Mike Stares

CERTIFICATE OF ANALYSIS

569 Soil samples were submitted for analysis.

The following analytical package was requested: Code 1C-OES-Tbay Fire Assay ICPOES (QOP Fire Assay Tbay)
Code 1E3-Tbay Aqua Regia ICP(AQUAGEO)

REPORT **A14-08410**

Notes:

Values which exceed the upper limit should be assayed for accurate numbers.

Note: Samples with no results showing had insufficient sample material for analysis.

CERTIFIED BY:

Emmanuel Eseme , Ph.D.
Quality Control

SCC Accredited LAB
LAB Accrédité CCN

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Results

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN1	< 2	< 5	< 5	< 0.2	< 0.5	6	65	< 1	8	4	13	1.75	< 2	< 10	30	< 0.5	< 2	0.20	3	21	1.27	< 10	< 1
MAN2	< 2	< 5	< 5	< 0.2	< 0.5	11	103	2	16	4	15	2.15	< 2	< 10	40	< 0.5	< 2	0.35	5	32	2.62	< 10	< 1
MAN3	< 2	< 5	< 5	< 0.2	< 0.5	5	101	< 1	21	5	17	1.70	< 2	< 10	56	< 0.5	< 2	0.29	7	29	2.00	< 10	< 1
MAN4	< 2	< 5	< 5	< 0.2	< 0.5	39	137	< 1	13	3	12	0.87	< 2	< 10	27	< 0.5	< 2	0.39	4	23	1.04	< 10	< 1
MAN5	< 2	< 5	< 5	< 0.2	< 0.5	4	63	2	10	5	12	0.81	< 2	< 10	25	< 0.5	< 2	0.20	2	21	0.92	< 10	< 1
MAN6	< 2	< 5	< 5	< 0.2	< 0.5	6	109	< 1	29	< 2	20	1.11	< 2	< 10	22	< 0.5	< 2	0.21	6	51	1.28	< 10	< 1
MAN7	2	< 5	< 5	< 0.2	< 0.5	3	55	< 1	9	3	6	0.73	< 2	< 10	15	< 0.5	< 2	0.15	2	18	0.98	< 10	< 1
MAN8	< 2	< 5	< 5	< 0.2	< 0.5	10	71	< 1	11	4	8	1.51	< 2	< 10	30	< 0.5	< 2	0.13	4	23	1.16	< 10	< 1
MAN9	< 2	< 5	< 5	< 0.2	< 0.5	23	93	< 1	18	3	16	1.01	< 2	< 10	37	< 0.5	< 2	0.71	5	24	0.94	< 10	< 1
MAN10	< 2	< 5	< 5	< 0.2	< 0.5	35	359	1	42	5	26	1.73	< 2	< 10	44	< 0.5	< 2	0.73	18	28	1.42	< 10	< 1
MAN11	< 2	< 5	< 5	< 0.2	< 0.5	15	99	3	22	4	15	1.36	5	< 10	22	< 0.5	< 2	0.24	6	34	2.79	< 10	< 1
MAN12	< 2	< 5	< 5	< 0.2	< 0.5	8	57	1	12	7	9	0.87	< 2	< 10	17	< 0.5	< 2	0.27	3	17	0.62	< 10	< 1
MAN13	< 2	< 5	< 5	< 0.2	< 0.5	14	71	4	13	6	10	0.91	< 2	< 10	20	< 0.5	< 2	0.39	3	16	0.65	< 10	< 1
MAN14	< 2	< 5	< 5	< 0.2	< 0.5	49	185	2	23	4	18	1.16	< 2	< 10	42	< 0.5	< 2	0.43	6	23	1.17	< 10	< 1
MAN15	< 2	< 5	< 5	< 0.2	< 0.5	1	54	< 1	3	3	12	0.55	< 2	< 10	22	< 0.5	< 2	0.15	1	10	0.52	< 10	< 1
MAN16	< 2	< 5	< 5	< 0.2	< 0.5	2	76	< 1	9	6	15	1.30	< 2	< 10	37	< 0.5	< 2	0.21	3	21	1.78	< 10	< 1
MAN17	< 2	< 5	< 5	< 0.2	< 0.5	< 1	43	< 1	< 1	3	4	0.30	< 2	< 10	14	< 0.5	< 2	0.11	< 1	7	0.33	< 10	< 1
MAN18	< 2	< 5	< 5	< 0.2	< 0.5	1	47	< 1	3	5	6	0.43	< 2	< 10	31	< 0.5	< 2	0.14	< 1	8	0.56	< 10	< 1
MAN19	< 2	< 5	< 5	< 0.2	< 0.5	3	50	< 1	1	9	9	0.59	< 2	< 10	28	< 0.5	< 2	0.14	< 1	10	0.42	< 10	< 1
MAN20	< 2	< 5	< 5	< 0.2	< 0.5	2	75	< 1	4	6	13	0.99	< 2	< 10	26	< 0.5	< 2	0.20	2	15	1.16	< 10	< 1
MAN21	< 2	< 5	< 5	< 0.2	< 0.5	< 1	48	< 1	1	6	6	0.41	< 2	< 10	21	< 0.5	< 2	0.13	< 1	8	0.40	< 10	< 1
MAN22	< 2	< 5	< 5	< 0.2	< 0.5	4	39	< 1	2	6	10	0.78	< 2	< 10	30	< 0.5	< 2	0.11	< 1	10	0.40	< 10	< 1
MAN23	< 2	< 5	< 5	< 0.2	< 0.5	6	86	1	6	6	13	0.83	2	< 10	31	< 0.5	< 2	0.18	2	18	1.35	< 10	< 1
MAN24	< 2	< 5	< 5	< 0.2	< 0.5	1	96	1	7	4	14	1.12	< 2	< 10	40	< 0.5	< 2	0.23	3	16	0.91	< 10	< 1
MAN25	< 2	< 5	< 5	< 0.2	< 0.5	3	69	< 1	6	5	11	1.66	< 2	< 10	26	< 0.5	< 2	0.14	3	20	1.90	< 10	< 1
MAN26	< 2	< 5	< 5	< 0.2	< 0.5	4	57	< 1	2	7	7	0.63	< 2	< 10	19	< 0.5	< 2	0.13	1	10	0.78	< 10	< 1
MAN27	< 2	< 5	< 5	< 0.2	< 0.5	2	73	< 1	5	< 2	10	0.94	< 2	< 10	26	< 0.5	< 2	0.18	2	16	0.93	< 10	< 1
MAN28	< 2	< 5	< 5	< 0.2	< 0.5	2	71	< 1	6	4	13	0.95	2	< 10	23	< 0.5	< 2	0.18	2	14	0.87	< 10	< 1
MAN29	< 2	< 5	< 5	< 0.2	< 0.5	4	73	< 1	8	9	9	0.69	< 2	< 10	16	< 0.5	< 2	0.27	2	22	1.09	< 10	< 1
MAN30	5	< 5	< 5	< 0.2	< 0.5	6	93	< 1	11	< 2	11	1.21	4	< 10	21	< 0.5	< 2	0.28	5	22	1.27	< 10	< 1
MAN31	< 2	< 5	< 5	< 0.2	< 0.5	2	47	< 1	2	2	5	0.49	< 2	< 10	16	< 0.5	< 2	0.15	1	9	0.44	< 10	< 1
MAN32	< 2	< 5	< 5	< 0.2	< 0.5	8	98	< 1	13	3	16	1.35	< 2	< 10	38	< 0.5	< 2	0.23	5	23	1.23	< 10	< 1
MAN33	< 2	< 5	< 5	< 0.2	< 0.5	4	179	< 1	12	8	23	0.98	< 2	< 10	39	< 0.5	< 2	0.32	6	25	1.60	< 10	< 1
MAN34	< 2	< 5	< 5	< 0.2	< 0.5	6	95	< 1	16	4	16	1.67	< 2	< 10	36	< 0.5	< 2	0.25	6	27	1.45	< 10	< 1
MAN35	< 2	< 5	< 5	< 0.2	< 0.5	7	70	1	7	6	14	1.05	< 2	< 10	23	< 0.5	< 2	0.15	2	16	1.33	< 10	< 1
MAN36				< 0.2	< 0.5	44	109	3	10	9	44	0.45	< 2	12	32	< 0.5	< 2	3.05	2	9	0.36	< 10	< 1
MAN37				< 0.2	< 0.5	7	83	< 1	15	7	10	1.10	2	< 10	18	< 0.5	< 2	0.22	5	27	1.38	< 10	< 1
MAN38	< 2	< 5	< 5	< 0.2	< 0.5	3	53	< 1	3	4	6	0.65	< 2	< 10	25	< 0.5	< 2	0.19	2	12	0.61	< 10	< 1
MAN39	< 2	< 5	< 5	< 0.2	< 0.5	15	358	< 1	31	5	19	1.63	< 2	< 10	42	< 0.5	< 2	1.01	14	33	1.84	< 10	< 1
MAN40	< 2	< 5	< 5	< 0.2	< 0.5	4	82	< 1	13	3	14	1.21	< 2	< 10	25	< 0.5	< 2	0.24	5	23	1.25	< 10	< 1
MAN41	< 2	< 5	< 5	< 0.2	< 0.5	5	91	< 1	15	4	13	1.51	< 2	< 10	37	< 0.5	< 2	0.23	5	28	1.68	< 10	< 1
MAN42	< 2	< 5	< 5	< 0.2	< 0.5	1	38	< 1	< 1	3	4	0.34	< 2	< 10	16	< 0.5	< 2	0.12	< 1	7	0.23	< 10	< 1
MAN43				< 0.2	< 0.5	58	97	< 1	172	< 2	12	0.96	< 2	< 10	27	< 0.5	< 2	0.23	9	26	1.13	< 10	< 1
MAN44				< 0.2	< 0.5	43	142	< 1	42	3	14	1.81	< 2	< 10	44	< 0.5	< 2	1.30	17	29	1.73	< 10	< 1
MAN45	< 2	< 5	< 5	< 0.2	< 0.5	8	101	2	19	2	15	1.25	< 2	< 10	36	< 0.5	< 2	0.36	7	20	1.09	< 10	< 1
MAN46	< 2	< 5	< 5	< 0.2	< 0.5	1	80	< 1	6	< 2	11	0.70	< 2	< 10	20	< 0.5	< 2	0.22	2	12	0.67	< 10	< 1
MAN47	8	< 5	< 5	< 0.2	< 0.5	9	118	< 1	26	4	23	1.72	< 2	< 10	46	< 0.5	< 2	0.26	9	34	1.85	< 10	< 1
MAN48	< 2	< 5	< 5	< 0.2	< 0.5	35	156	< 1	43	4	15	1.07	< 2	< 10	38	< 0.5	< 2	0.46	10	20	1.27	< 10	< 1
MAN49	< 2	< 5	< 5	< 0.2	< 0.5	50	185	< 1	100	3	37	1.65	< 2	< 10	52	< 0.5	< 2	0.68	25	26	1.34	< 10	< 1

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN50	< 2	< 5	< 5	< 0.2	< 0.5	6	92	2	39	3	14	1.20	< 2	< 10	29	< 0.5	< 2	0.29	6	30	1.30	< 10	< 1
MAN51	< 2	< 5	< 5	< 0.2	< 0.5	18	93	2	25	5	18	1.21	< 2	< 10	37	< 0.5	< 2	0.25	5	27	1.75	< 10	< 1
MAN52	2	< 5	< 5	< 0.2	< 0.5	11	107	2	15	9	19	1.17	< 2	< 10	44	< 0.5	< 2	0.23	4	19	0.95	< 10	< 1
MAN53	< 2	< 5	< 5	< 0.2	< 0.5	6	74	6	4	4	12	0.88	< 2	< 10	30	< 0.5	< 2	0.27	2	13	0.70	< 10	< 1
MAN54	20	< 5	< 5	< 0.2	< 0.5	31	73	2	45	6	15	2.06	< 2	< 10	31	< 0.5	< 2	0.25	5	51	2.16	< 10	< 1
MAN55	11	< 5	< 5	< 0.2	< 0.5	10	125	1	36	5	16	1.07	< 2	< 10	36	< 0.5	< 2	0.54	6	47	1.04	< 10	< 1
MAN56	8	< 5	9	< 0.2	< 0.5	105	373	2	14	10	21	1.19	< 2	< 10	63	< 0.5	< 2	2.44	6	17	0.75	< 10	< 1
MAN57				< 0.2	< 0.5	22	66	1	8	15	15	0.39	< 2	< 10	62	< 0.5	< 2	0.24	2	9	0.44	< 10	< 1
MAN58				< 0.2	< 0.5	121	780	1	19	2	10	0.82	< 2	12	68	< 0.5	< 2	3.51	8	12	0.62	< 10	< 1
MAN59				< 0.2	< 0.5	24	62	1	5	43	18	0.30	5	< 10	72	< 0.5	< 2	1.49	3	4	0.29	< 10	< 1
MAN60	< 2	< 5	< 5	< 0.2	< 0.5	61	156	< 1	26	3	20	0.99	< 2	< 10	41	< 0.5	< 2	0.42	13	21	1.42	< 10	< 1
MAN61	< 2	< 5	< 5	< 0.2	< 0.5	24	93	< 1	17	3	16	1.63	< 2	< 10	43	< 0.5	< 2	0.24	6	22	1.80	< 10	< 1
MAN62				< 0.2	< 0.5	3	58	< 1	2	7	7	0.62	< 2	< 10	22	< 0.5	< 2	0.19	1	11	0.61	< 10	< 1
MAN63				0.3	< 0.5	542	369	2	108	2	22	3.35	< 2	< 10	65	0.5	< 2	1.41	72	39	1.66	< 10	< 1
MAN64				< 0.2	< 0.5	420	228	2	26	5	13	0.78	< 2	< 10	42	< 0.5	< 2	1.67	5	19	0.81	< 10	< 1
MAN65				< 0.2	0.6	81	474	1	8	8	9	0.36	< 2	12	95	< 0.5	< 2	4.47	2	5	0.33	< 10	< 1
MAN66				< 0.2	< 0.5	3	77	< 1	8	4	12	1.19	< 2	< 10	33	< 0.5	< 2	0.19	3	20	1.38	< 10	< 1
MAN67				< 0.2	< 0.5	69	185	2	7	4	15	0.91	< 2	< 10	39	< 0.5	< 2	0.47	6	9	2.47	< 10	< 1
MAN68				< 0.2	< 0.5	14	101	1	13	4	15	4.21	5	< 10	30	< 0.5	< 2	0.22	4	38	2.52	< 10	< 1
MAN69				< 0.2	< 0.5	4	149	< 1	7	4	10	0.66	< 2	< 10	29	< 0.5	< 2	0.23	3	15	0.97	< 10	< 1
MAN70				< 0.2	< 0.5	26	145	4	14	2	12	0.12	< 2	11	57	< 0.5	< 2	3.26	< 1	1	0.09	< 10	< 1
MAN71				< 0.2	< 0.5	26	311	3	10	< 2	16	0.29	< 2	11	80	< 0.5	< 2	4.40	1	3	0.21	< 10	< 1
MAN72				< 0.2	< 0.5	42	334	3	21	21	22	0.16	3	23	70	< 0.5	< 2	4.78	< 1	2	0.17	< 10	< 1
MAN73				0.2	0.5	84	220	1	24	3	8	0.89	< 2	< 10	80	< 0.5	< 2	4.71	5	12	0.51	< 10	< 1
MAN74				< 0.2	< 0.5	19	118	1	12	3	13	0.99	< 2	< 10	55	< 0.5	< 2	0.74	4	19	0.84	< 10	< 1
MAN75				< 0.2	< 0.5	3	57	1	5	4	8	0.67	< 2	< 10	27	< 0.5	< 2	0.20	1	15	0.72	< 10	< 1
MAN76				< 0.2	< 0.5	< 1	33	< 1	< 1	3	5	0.38	< 2	< 10	18	< 0.5	< 2	0.08	< 1	7	0.33	< 10	< 1
MAN77				< 0.2	< 0.5	1	66	1	3	< 2	8	0.61	< 2	< 10	22	< 0.5	< 2	0.17	1	13	0.70	< 10	< 1
MAN78	68	< 5	< 5	< 0.2	< 0.5	6	202	2	13	3	12	0.77	< 2	< 10	28	< 0.5	< 2	0.28	6	23	1.10	< 10	< 1
MAN79	< 2	< 5	< 5	< 0.2	< 0.5	16	137	2	21	2	14	1.05	< 2	< 10	34	< 0.5	< 2	0.31	5	21	1.21	< 10	< 1
MAN80	< 2	< 5	< 5	< 0.2	< 0.5	7	67	1	8	8	11	0.78	< 2	< 10	17	< 0.5	< 2	0.19	5	13	0.96	< 10	< 1
MAN81	< 2	< 5	< 5	< 0.2	< 0.5	5	76	< 1	7	6	12	1.41	< 2	< 10	29	< 0.5	< 2	0.18	2	19	1.20	< 10	< 1
MAN82	< 2	< 5	< 5	< 0.2	< 0.5	22	97	1	23	< 2	15	1.70	< 2	< 10	28	< 0.5	< 2	0.24	7	33	1.58	< 10	< 1
MAN83	10	< 5	< 5	< 0.2	< 0.5	19	69	< 1	12	10	15	1.00	< 2	< 10	32	< 0.5	< 2	0.16	3	22	1.36	< 10	< 1
MAN84	< 2	< 5	< 5	< 0.2	< 0.5	17	88	2	48	7	15	1.24	< 2	< 10	27	< 0.5	< 2	0.23	6	18	0.95	< 10	< 1
MAN85	< 2	< 5	< 5	< 0.2	< 0.5	8	30	< 1	6	11	13	0.43	< 2	< 10	35	< 0.5	< 2	0.16	1	7	0.36	< 10	< 1
MAN86	< 2	< 5	< 5	< 0.2	< 0.5	36	84	2	74	4	13	0.91	< 2	< 10	25	< 0.5	< 2	0.20	8	21	0.83	< 10	< 1
MAN87	< 2	< 5	< 5	< 0.2	< 0.5	8	80	1	10	6	14	0.99	< 2	< 10	21	< 0.5	< 2	0.23	3	15	0.78	< 10	< 1
MAN88	< 2	< 5	< 5	< 0.2	< 0.5	2	51	< 1	2	5	6	0.50	< 2	< 10	17	< 0.5	< 2	0.15	2	9	0.51	< 10	< 1
MAN89	< 2	< 5	< 5	< 0.2	< 0.5	3	113	< 1	4	3	10	0.76	< 2	< 10	23	< 0.5	< 2	0.20	3	13	0.70	< 10	< 1
MAN90	< 2	< 5	< 5	< 0.2	< 0.5	1	177	< 1	2	4	8	0.48	< 2	< 10	33	< 0.5	< 2	0.21	1	8	0.44	< 10	< 1
MAN91	< 2	< 5	< 5	< 0.2	< 0.5	1	47	< 1	< 1	4	11	0.48	< 2	< 10	27	< 0.5	< 2	0.14	< 1	9	0.39	< 10	< 1
MAN92	< 2	< 5	< 5	< 0.2	< 0.5	4	163	< 1	13	3	12	1.27	< 2	< 10	27	< 0.5	< 2	0.25	5	25	1.08	< 10	< 1
MAN93	< 2	< 5	< 5	< 0.2	< 0.5	1	41	< 1	1	6	5	0.42	< 2	< 10	18	< 0.5	< 2	0.16	< 1	8	0.40	< 10	< 1
MAN94				< 0.2	< 0.5	< 1	33	< 1	1	4	4	0.38	< 2	< 10	17	< 0.5	< 2	0.08	< 1	5	0.21	< 10	< 1
MAN95				< 0.2	< 0.5	7	725	1	15	6	49	1.38	2	< 10	45	< 0.5	< 2	0.34	9	28	1.78	< 10	< 1
MAN96				< 0.2	< 0.5	< 1	40	< 1	< 1	4	5	0.64	< 2	< 10	20	< 0.5	< 2	0.08	< 1	10	0.63	< 10	< 1
MAN97				< 0.2	< 0.5	6	372	< 1	11	6	23	1.67	4	< 10	46	< 0.5	< 2	1.09	5	30	1.80	< 10	< 1
MAN98				< 0.2	< 0.5	< 1	51	< 1	1	4	8	0.64	< 2	< 10	18	< 0.5	< 2	0.10	< 1	15	0.88	< 10	< 1
MAN99				< 0.2	< 0.5	2	75	< 1	4	10	21	1.24	< 2	< 10	33	< 0.5	< 2	0.13	2	25	1.69	< 10	< 1

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN100				< 0.2	< 0.5	4	109	< 1	13	6	25	1.77	< 2	< 10	44	< 0.5	< 2	0.16	7	32	1.91	< 10	< 1
MAN101				< 0.2	< 0.5	6	106	2	19	7	27	2.67	5	< 10	78	0.5	< 2	0.16	9	40	2.51	< 10	< 1
MAN102				< 0.2	< 0.5	2	96	< 1	9	6	23	1.21	< 2	< 10	26	< 0.5	< 2	0.16	3	30	2.05	< 10	< 1
MAN103				< 0.2	< 0.5	2	95	< 1	8	7	27	1.96	3	< 10	41	< 0.5	< 2	0.14	4	28	2.06	< 10	< 1
MAN104				< 0.2	< 0.5	2	61	< 1	3	4	11	0.64	< 2	< 10	22	< 0.5	< 2	0.51	1	14	0.67	< 10	< 1
MAN105				< 0.2	< 0.5	67	112	< 1	40	6	23	1.47	< 2	< 10	46	< 0.5	< 2	0.69	4	43	1.79	< 10	< 1
MAN106				< 0.2	< 0.5	20	57	< 1	7	4	26	0.74	< 2	< 10	36	< 0.5	< 2	2.36	2	16	0.74	< 10	< 1
MAN107				< 0.2	< 0.5	14	127	< 1	10	5	28	1.05	< 2	< 10	34	< 0.5	< 2	1.29	3	25	0.82	< 10	< 1
MAN108				< 0.2	< 0.5	16	109	< 1	10	5	36	1.34	< 2	< 10	30	< 0.5	< 2	1.17	4	30	1.23	< 10	< 1
MAN109				< 0.2	0.6	36	48	< 1	9	7	18	1.18	3	< 10	28	< 0.5	< 2	2.25	3	24	0.97	< 10	< 1
MAN110				< 0.2	< 0.5	30	79	< 1	8	7	18	1.16	< 2	< 10	30	< 0.5	< 2	2.17	3	21	1.08	< 10	< 1
MAN111				< 0.2	0.6	32	116	< 1	9	6	25	1.30	3	< 10	40	< 0.5	< 2	1.65	4	26	0.96	< 10	< 1
MAN112				< 0.2	< 0.5	17	321	< 1	13	6	45	1.46	2	< 10	52	< 0.5	< 2	0.77	6	32	1.63	< 10	< 1
MAN113				< 0.2	0.5	7	1060	< 1	3	2	53	0.23	5	< 10	70	< 0.5	< 2	3.46	3	3	0.93	< 10	< 1
MAN114				< 0.2	< 0.5	8	566	< 1	8	6	30	0.92	2	< 10	53	< 0.5	< 2	1.41	5	17	1.38	< 10	< 1
MAN115				< 0.2	0.6	10	224	1	4	20	24	0.23	4	< 10	46	< 0.5	< 2	3.25	2	4	0.47	< 10	< 1
MAN116				< 0.2	< 0.5	24	154	1	12	4	26	1.51	< 2	< 10	49	< 0.5	< 2	1.07	9	13	2.29	< 10	< 1
MAN117				< 0.2	0.7	22	760	< 1	14	5	8	0.53	2	< 10	64	< 0.5	< 2	3.98	3	5	0.40	< 10	< 1
MAN118				< 0.2	1.0	21	62	< 1	10	20	23	0.63	4	< 10	60	< 0.5	< 2	1.15	6	7	0.58	< 10	< 1
MAN119				< 0.2	< 0.5	29	115	1	27	8	25	2.11	3	< 10	40	< 0.5	< 2	0.25	7	28	1.88	< 10	< 1
MAN120				< 0.2	< 0.5	11	82	< 1	15	7	18	1.58	< 2	< 10	29	< 0.5	< 2	0.16	4	26	1.56	< 10	< 1
MAN121				< 0.2	< 0.5	54	80	2	25	6	19	2.41	3	< 10	22	< 0.5	< 2	0.18	9	46	3.46	< 10	< 1
MAN122				< 0.2	< 0.5	7	70	< 1	3	8	15	0.97	< 2	< 10	26	< 0.5	< 2	0.17	2	16	1.28	< 10	< 1
MAN123				< 0.2	< 0.5	6	74	1	9	3	13	2.11	4	< 10	28	< 0.5	< 2	0.14	5	27	1.84	< 10	< 1
MAN124				< 0.2	< 0.5	6	80	< 1	7	6	18	1.41	< 2	< 10	28	< 0.5	< 2	0.20	3	21	1.48	< 10	< 1
MAN125				< 0.2	< 0.5	4	139	< 1	8	11	42	1.33	3	< 10	36	< 0.5	< 2	0.25	4	26	1.63	< 10	< 1
MAN126				< 0.2	< 0.5	2	53	< 1	4	7	11	1.27	< 2	< 10	30	< 0.5	< 2	0.25	2	17	1.17	< 10	< 1
MAN127				< 0.2	< 0.5	16	64	1	10	5	13	2.55	2	< 10	27	< 0.5	< 2	0.14	4	27	1.57	< 10	< 1
MAN128				< 0.2	< 0.5	12	69	1	13	5	17	2.17	< 2	< 10	27	< 0.5	< 2	0.15	4	27	1.98	< 10	< 1
MAN129				< 0.2	< 0.5	15	91	1	16	5	16	1.89	2	< 10	30	< 0.5	< 2	0.15	6	26	1.55	< 10	< 1
MAN130				< 0.2	0.7	13	30	< 1	11	10	38	0.17	3	< 10	17	< 0.5	< 2	0.57	< 1	7	0.14	< 10	< 1
MAN131				0.3	0.7	7	18400	14	12	17	34	0.19	11	< 10	560	< 0.5	< 2	3.99	9	3	3.04	< 10	< 1
MAN132				< 0.2	< 0.5	11	768	2	10	< 2	3	0.15	< 2	11	103	< 0.5	< 2	5.24	2	2	0.53	< 10	< 1
MAN133				< 0.2	< 0.5	13	382	2	7	< 2	6	0.19	2	< 10	70	< 0.5	< 2	4.15	2	2	0.98	< 10	< 1
MAN134				< 0.2	0.7	40	580	< 1	18	7	10	0.75	3	< 10	68	< 0.5	< 2	4.22	2	9	0.89	< 10	< 1
MAN135				< 0.2	< 0.5	3	47	< 1	6	6	10	0.73	< 2	< 10	16	< 0.5	< 2	0.12	2	17	1.12	< 10	< 1
MAN136				< 0.2	< 0.5	12	76	< 1	37	5	15	2.40	2	< 10	35	< 0.5	< 2	0.17	10	35	2.21	< 10	< 1
MAN137				< 0.2	< 0.5	95	163	< 1	67	7	22	1.50	< 2	< 10	41	< 0.5	< 2	0.38	14	27	1.62	< 10	< 1
MAN138				< 0.2	< 0.5	134	33	< 1	22	4	4	0.51	3	< 10	62	< 0.5	< 2	4.89	2	6	0.31	< 10	< 1
MAN139				< 0.2	1.0	17	19	2	3	9	9	0.22	3	< 10	29	< 0.5	< 2	3.41	< 1	2	0.18	< 10	< 1
MAN140				< 0.2	0.8	61	719	1	8	16	22	0.15	3	10	54	< 0.5	< 2	4.12	2	2	0.14	< 10	< 1
MAN141				< 0.2	0.7	298	105	1	13	3	5	1.29	< 2	< 10	43	< 0.5	< 2	2.93	9	13	1.05	< 10	< 1
MAN142	< 2	< 5	< 5	< 0.2	< 0.5	114	153	< 1	21	3	13	1.22	< 2	< 10	37	< 0.5	< 2	0.52	11	19	0.96	< 10	< 1
MAN143	< 2	< 5	< 5	< 0.2	< 0.5	1	63	< 1	2	5	8	0.60	3	< 10	20	< 0.5	< 2	0.12	2	11	0.86	< 10	< 1
MAN144				< 0.2	< 0.5	4	199	< 1	7	9	12	0.49	< 2	< 10	19	< 0.5	< 2	2.97	2	15	0.87	< 10	< 1
MAN145				< 0.2	< 0.5	40	58	< 1	18	13	22	1.33	< 2	< 10	46	< 0.5	< 2	0.25	3	13	0.73	< 10	< 1
MAN146				< 0.2	< 0.5	37	90	1	11	8	31	2.53	2	< 10	55	< 0.5	< 2	0.23	4	25	1.94	10	< 1
MAN147				< 0.2	< 0.5	16	60	< 1	12	11	14	1.33	3	< 10	39	< 0.5	< 2	0.51	4	15	0.62	< 10	< 1
MAN148				< 0.2	< 0.5	46	90	< 1	13	5	16	1.76	< 2	< 10	34	< 0.5	< 2	0.18	6	24	1.64	< 10	< 1
MAN149				< 0.2	< 0.5	27	62	< 1	9	23	13	0.86	< 2	< 10	43	< 0.5	< 2	0.27	3	16	0.71	< 10	< 1

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN150				< 0.2	< 0.5	< 1	49	< 1	< 1	5	6	0.36	< 2	< 10	19	< 0.5	< 2	0.10	< 1	13	0.65	< 10	< 1
MAN151				< 0.2	< 0.5	2	48	< 1	3	4	9	0.65	< 2	< 10	18	< 0.5	< 2	0.09	1	14	0.96	< 10	< 1
MAN152				< 0.2	0.7	10	48	1	3	15	22	1.59	3	< 10	42	< 0.5	< 2	0.21	2	12	0.74	< 10	< 1
MAN153				< 0.2	< 0.5	7	96	< 1	8	5	15	1.22	< 2	< 10	38	< 0.5	< 2	0.20	5	17	1.21	< 10	< 1
MAN154				< 0.2	< 0.5	4	84	< 1	2	6	13	0.60	< 2	< 10	21	< 0.5	< 2	0.16	1	5	0.70	< 10	< 1
MAN155				< 0.2	< 0.5	10	38	< 1	8	6	6	0.50	< 2	< 10	19	< 0.5	< 2	0.08	1	8	0.33	< 10	< 1
MAN156				< 0.2	< 0.5	4	26	< 1	4	9	13	0.17	< 2	< 10	44	< 0.5	< 2	1.01	< 1	2	0.10	< 10	< 1
MAN158				< 0.2	< 0.5	10	60	< 1	16	8	14	1.74	< 2	< 10	23	< 0.5	< 2	0.13	4	24	1.75	< 10	< 1
MAN159				< 0.2	< 0.5	3	33	< 1	2	5	8	0.57	< 2	< 10	13	< 0.5	< 2	0.12	< 1	9	0.80	< 10	< 1
MAN160				< 0.2	< 0.5	3	110	< 1	1	11	11	0.61	< 2	< 10	42	< 0.5	< 2	0.54	1	9	0.35	< 10	< 1
MAN161				< 0.2	0.5	12	273	< 1	5	11	20	0.45	5	< 10	66	< 0.5	< 2	2.24	3	6	0.58	< 10	< 1
MAN162				< 0.2	0.5	5	236	< 1	4	6	50	0.25	3	17	50	< 0.5	< 2	3.32	1	3	0.73	< 10	< 1
MAN164				< 0.2	< 0.5	6	635	1	2	5	37	0.13	< 2	16	53	< 0.5	< 2	3.95	< 1	2	0.38	< 10	< 1
MAN165				< 0.2	< 0.5	8	404	2	4	4	9	0.14	2	17	39	< 0.5	< 2	4.32	< 1	2	0.26	< 10	< 1
MAN166				< 0.2	< 0.5	8	394	1	2	6	19	0.09	< 2	19	37	< 0.5	< 2	3.94	< 1	2	0.21	< 10	< 1
MAN167				< 0.2	0.5	8	1240	1	3	11	14	0.09	3	18	59	< 0.5	< 2	4.63	< 1	2	0.20	< 10	< 1
MAN168				0.2	< 0.5	5	14500	3	5	8	11	0.11	3	12	569	< 0.5	< 2	4.47	2	2	0.59	< 10	< 1
MAN169				< 0.2	< 0.5	9	5830	1	4	4	17	0.08	< 2	21	182	< 0.5	< 2	3.90	2	2	0.48	< 10	< 1
MAN170				< 0.2	< 0.5	11	10400	2	3	11	12	0.07	2	25	221	< 0.5	2	3.87	2	2	0.62	< 10	< 1
MAN171				< 0.2	< 0.5	19	1420	1	8	2	10	0.12	< 2	19	78	< 0.5	< 2	4.43	< 1	2	0.38	< 10	< 1
MAN172				< 0.2	< 0.5	9	12200	3	5	10	13	0.06	4	20	105	< 0.5	< 2	3.94	1	2	1.32	< 10	< 1
MAN173				3.1	< 0.5	4	28400	4	< 1	12	10	0.19	11	10	58	< 0.5	10	3.10	7	2	10.6	< 10	< 1
MAN174				< 0.2	< 0.5	6	738	< 1	2	16	28	0.12	5	14	57	< 0.5	< 2	4.41	< 1	2	0.41	< 10	< 1
MAN191				< 0.2	< 0.5	5	568	< 1	4	3	26	0.14	< 2	13	52	< 0.5	< 2	3.92	< 1	2	0.09	< 10	< 1
MAN192				< 0.2	0.7	4	784	1	4	18	24	0.10	3	13	48	< 0.5	< 2	4.26	1	2	0.17	< 10	< 1
MAN193				< 0.2	< 0.5	5	1550	< 1	2	14	29	0.14	3	< 10	60	< 0.5	< 2	3.57	2	2	0.35	< 10	< 1
MAN194				< 0.2	< 0.5	3	491	< 1	2	< 2	10	0.12	< 2	11	42	< 0.5	< 2	3.52	< 1	2	0.26	< 10	< 1
MAN195				< 0.2	< 0.5	4	1090	1	1	7	28	0.10	3	< 10	44	< 0.5	< 2	3.47	1	2	0.62	< 10	< 1
MAN196				< 0.2	0.7	5	320	1	4	13	25	0.12	< 2	11	43	< 0.5	< 2	3.73	2	3	0.40	< 10	< 1
MAN197				0.2	< 0.5	6	717	< 1	4	< 2	9	0.13	< 2	< 10	52	< 0.5	< 2	4.08	2	3	0.41	< 10	< 1
MAN198				< 0.2	< 0.5	6	459	1	4	2	45	0.18	< 2	11	40	< 0.5	< 2	3.06	2	2	0.81	< 10	< 1
MAN199	6	< 5	7	< 0.2	< 0.5	4	325	< 1	1	< 2	24	0.13	4	< 10	60	< 0.5	< 2	3.64	2	2	1.70	< 10	< 1
MAN201				< 0.2	< 0.5	8	677	< 1	5	7	27	0.21	2	< 10	49	< 0.5	< 2	2.63	4	2	0.57	< 10	< 1
MAN202	< 2	< 5	< 5	< 0.2	0.6	11	3000	1	5	18	41	0.27	12	< 10	76	< 0.5	< 2	2.64	8	3	1.32	< 10	< 1
MAN203	7	27	5	< 0.2	< 0.5	19	650	1	8	7	26	0.34	< 2	< 10	50	< 0.5	< 2	2.49	3	4	0.46	< 10	< 1
MAN204				< 0.2	0.6	29	967	1	13	13	19	0.50	4	< 10	74	< 0.5	< 2	2.60	12	4	0.92	< 10	< 1
MAN205				< 0.2	< 0.5	110	1440	1	31	3	7	0.69	< 2	< 10	65	< 0.5	< 2	3.07	1	4	0.22	< 10	< 1
MAN206	< 2	< 5	< 5	< 0.2	< 0.5	38	139	< 1	18	2	15	0.62	< 2	< 10	39	< 0.5	< 2	0.96	3	17	0.59	< 10	< 1
MAN207	< 2	< 5	< 5	< 0.2	< 0.5	30	191	< 1	11	3	12	0.60	< 2	< 10	33	< 0.5	< 2	0.38	3	14	0.68	< 10	< 1
MAN208	< 2	< 5	< 5	< 0.2	< 0.5	10	32	< 1	5	5	7	0.52	< 2	< 10	26	< 0.5	< 2	0.10	1	11	0.30	< 10	< 1
MAN209	13	27	< 5	< 0.2	0.8	14	936	< 1	5	7	50	0.15	< 2	11	59	< 0.5	< 2	4.25	1	2	0.11	< 10	< 1
MAN210	3	< 5	< 5	< 0.2	< 0.5	12	739	< 1	7	2	19	0.24	< 2	< 10	56	< 0.5	< 2	4.44	2	3	0.23	< 10	< 1
MAN211				< 0.2	< 0.5	9	375	< 1	5	< 2	9	0.13	< 2	< 10	56	< 0.5	< 2	3.70	2	2	0.38	< 10	< 1
MAN212				< 0.2	< 0.5	8	874	< 1	4	4	18	0.14	< 2	< 10	47	< 0.5	< 2	2.93	2	2	0.22	< 10	< 1
MAN213				< 0.2	< 0.5	8	165	< 1	6	3	8	0.34	< 2	< 10	49	< 0.5	< 2	2.88	2	5	1.27	< 10	< 1
MAN214	< 2	< 5	< 5	< 0.2	< 0.5	6	139	< 1	8	3	12	0.73	< 2	< 10	32	< 0.5	< 2	0.36	3	13	1.01	< 10	< 1
MAN215				< 0.2	< 0.5	11	1620	< 1	5	9	26	0.28	5	< 10	62	< 0.5	< 2	2.15	7	6	1.06	< 10	< 1
MAN216	< 2	< 5	< 5	< 0.2	< 0.5	6	2240	< 1	5	8	74	0.49	4	< 10	64	< 0.5	< 2	1.59	10	5	1.63	< 10	< 1
MAN217	5	< 5	< 5	< 0.2	< 0.5	4	1790	< 1	3	21	35	0.18	3	< 10	73	< 0.5	< 2	4.10	4	3	0.74	< 10	< 1
MAN218				< 0.2	0.5	6	158	< 1	< 1	16	25	0.11	< 2	18	48	< 0.5	< 2	3.64	1	2	0.33	< 10	< 1

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN219	9	< 5	< 5	< 0.2	< 0.5	5	765	< 1	2	8	26	0.09	2	14	68	< 0.5	< 2	3.40	2	2	1.26	< 10	< 1
MAN220	7	< 5	< 5	< 0.2	< 0.5	6	210	< 1	3	9	13	0.18	< 2	19	56	< 0.5	< 2	4.67	2	3	0.60	< 10	< 1
MAN221	< 2	< 5	< 5	< 0.2	< 0.5	6	759	< 1	2	< 2	8	0.14	4	13	103	< 0.5	< 2	4.25	7	3	0.51	< 10	< 1
MAN222	< 2	6	9	< 0.2	< 0.5	8	417	< 1	1	< 2	14	0.10	< 2	12	64	< 0.5	< 2	4.00	3	1	0.82	< 10	< 1
MAN223	< 2	10	7	< 0.2	< 0.5	7	326	< 1	3	< 2	11	0.07	< 2	13	43	< 0.5	< 2	3.03	2	1	0.50	< 10	< 1
MAN224	< 2	10	< 5	< 0.2	< 0.5	8	1090	< 1	2	6	23	0.14	2	14	60	< 0.5	< 2	3.83	3	2	0.57	< 10	< 1
MAN225	3	< 5	9	< 0.2	< 0.5	6	1200	1	2	7	31	0.09	4	14	45	< 0.5	< 2	3.12	6	1	0.38	< 10	< 1
MAN226	< 2	< 5	< 5	< 0.2	< 0.5	4	545	< 1	2	8	11	0.13	4	11	34	< 0.5	< 2	3.75	2	2	0.39	< 10	< 1
MAN227	10	< 5	< 5	< 0.2	< 0.5	4	160	< 1	2	3	15	0.14	4	12	24	< 0.5	< 2	3.21	2	2	0.33	< 10	< 1
MAN228				< 0.2	< 0.5	3	278	1	2	11	14	0.14	< 2	< 10	28	< 0.5	< 2	3.65	< 1	2	0.27	< 10	< 1
MAN229				< 0.2	< 0.5	38	123	< 1	48	8	15	0.54	< 2	< 10	71	< 0.5	< 2	0.92	6	14	1.25	< 10	< 1
MAN230				< 0.2	< 0.5	10	203	< 1	22	4	14	0.16	< 2	< 10	51	< 0.5	< 2	2.72	6	2	0.58	< 10	< 1
MAN231				< 0.2	0.6	12	517	1	6	5	30	0.25	2	13	58	< 0.5	< 2	2.36	8	2	0.72	< 10	< 1
MAN232				< 0.2	< 0.5	5	421	1	2	11	23	0.20	3	< 10	47	< 0.5	< 2	2.81	2	3	0.67	< 10	< 1
MAN233				< 0.2	< 0.5	4	137	1	< 1	7	17	0.14	2	13	38	< 0.5	< 2	3.36	< 1	2	0.44	< 10	< 1
MAN234				< 0.2	< 0.5	4	151	1	2	6	11	0.10	< 2	12	26	< 0.5	< 2	3.15	< 1	1	0.11	< 10	< 1
MAN235				< 0.2	< 0.5	6	6	< 1	3	3	3	0.20	< 2	10	43	< 0.5	< 2	3.93	1	2	0.30	< 10	< 1
MAN236	< 2	15	< 5	< 0.2	< 0.5	28	266	< 1	4	< 2	3	0.20	< 2	10	49	< 0.5	< 2	3.87	1	3	0.27	< 10	< 1
MAN237	7	5	< 5	< 0.2	< 0.5	37	241	< 1	7	< 2	5	0.11	2	17	53	< 0.5	< 2	3.64	2	2	0.21	< 10	< 1
MAN238	5	< 5	< 5	< 0.2	< 0.5	17	427	< 1	4	13	17	0.10	3	17	48	< 0.5	< 2	3.74	1	2	0.50	< 10	< 1
MAN239	3	5	< 5	< 0.2	< 0.5	21	154	1	5	< 2	11	0.16	2	17	47	< 0.5	< 2	4.40	< 1	2	0.17	< 10	< 1
MAN240				< 0.2	< 0.5	9	219	< 1	6	4	4	0.07	< 2	12	41	< 0.5	< 2	3.83	< 1	< 1	0.23	< 10	< 1
MAN241	5	< 5	8	< 0.2	< 0.5	10	682	2	5	6	10	0.14	3	14	55	< 0.5	< 2	4.08	< 1	2	0.12	< 10	< 1
MAN242	< 2	< 5	< 5	< 0.2	< 0.5	9	158	1	4	3	16	0.14	< 2	14	42	< 0.5	< 2	4.39	< 1	2	0.12	< 10	< 1
MAN243	2	7	< 5	< 0.2	< 0.5	4	129	< 1	3	2	5	0.15	< 2	< 10	21	< 0.5	< 2	3.44	< 1	2	0.07	< 10	< 1
MAN244				< 0.2	< 0.5	4	296	< 1	3	6	13	0.09	< 2	14	31	< 0.5	< 2	3.72	< 1	2	0.08	< 10	< 1
MAN245	2	< 5	< 5	< 0.2	< 0.5	7	169	< 1	2	3	24	0.11	< 2	16	36	< 0.5	< 2	4.05	5	2	0.12	< 10	< 1
MAN246				< 0.2	< 0.5	10	258	< 1	6	5	4	0.13	2	13	35	< 0.5	< 2	4.24	3	2	0.13	< 10	< 1
MAN247	< 2	< 5	< 5	< 0.2	< 0.5	7	91	< 1	8	4	12	1.07	< 2	< 10	27	< 0.5	< 2	0.22	4	20	1.13	< 10	< 1
MAN248	< 2	< 5	< 5	< 0.2	< 0.5	3	76	< 1	7	5	11	1.00	< 2	< 10	29	< 0.5	< 2	0.16	3	16	1.01	< 10	< 1
MAN249	< 2	< 5	< 5	< 0.2	< 0.5	2	72	< 1	9	6	16	1.26	< 2	< 10	38	< 0.5	< 2	0.17	4	18	1.22	< 10	< 1
MAN250	< 2	< 5	< 5	< 0.2	< 0.5	4	57	< 1	7	5	9	1.11	2	< 10	26	< 0.5	< 2	0.13	3	19	1.35	< 10	< 1
MAN251	3	< 5	< 5	< 0.2	< 0.5	2	53	< 1	7	4	7	0.80	2	< 10	15	< 0.5	< 2	0.13	2	16	1.07	< 10	< 1
MAN252	< 2	< 5	< 5	< 0.2	< 0.5	10	108	1	16	5	21	2.03	2	< 10	26	< 0.5	< 2	0.19	7	25	1.68	< 10	< 1
MAN253	< 2	< 5	< 5	< 0.2	< 0.5	30	105	1	55	3	20	2.10	2	< 10	32	< 0.5	< 2	0.19	14	26	1.80	< 10	< 1
MAN254	< 2	< 5	5	< 0.2	< 0.5	13	58	2	15	5	12	1.11	< 2	< 10	30	< 0.5	< 2	0.19	3	15	1.02	< 10	1
MAN255				< 0.2	< 0.5	22	328	3	10	3	10	0.29	< 2	< 10	62	< 0.5	< 2	2.61	8	3	0.43	< 10	< 1
MAN256				< 0.2	< 0.5	9	179	< 1	4	< 2	5	0.18	< 2	< 10	54	< 0.5	< 2	3.04	2	2	0.33	< 10	< 1
MAN257	6	< 5	< 5	< 0.2	0.6	5	233	2	5	3	9	0.11	< 2	< 10	48	< 0.5	< 2	2.84	1	1	0.15	< 10	< 1
MAN258				< 0.2	< 0.5	2	43	< 1	4	8	10	0.12	< 2	< 10	55	< 0.5	< 2	2.80	< 1	2	0.32	< 10	< 1
MAN259				< 0.2	0.5	3	49	< 1	3	7	14	0.17	3	< 10	52	< 0.5	< 2	2.38	1	2	0.30	< 10	< 1
MAN260				< 0.2	< 0.5	4	65	1	5	5	15	0.15	< 2	< 10	48	< 0.5	< 2	2.51	< 1	2	0.14	< 10	< 1
MAN261				< 0.2	< 0.5	3	119	< 1	3	< 2	5	0.08	< 2	< 10	36	< 0.5	< 2	2.47	< 1	1	0.10	< 10	< 1
MAN262				< 0.2	< 0.5	3	303	< 1	1	4	14	0.13	< 2	< 10	45	< 0.5	< 2	2.37	< 1	2	0.14	< 10	< 1
MAN263				< 0.2	< 0.5	4	302	1	4	4	14	0.18	< 2	< 10	45	< 0.5	< 2	2.57	2	2	0.21	< 10	< 1
MAN264				< 0.2	< 0.5	4	214	< 1	5	4	13	0.20	< 2	< 10	37	< 0.5	< 2	2.25	1	3	0.15	< 10	< 1
MAN265				< 0.2	< 0.5	3	113	1	3	4	15	0.18	< 2	< 10	37	< 0.5	< 2	2.28	< 1	3	0.14	< 10	< 1
MAN266	4	< 5	< 5	< 0.2	< 0.5	4	214	< 1	7	4	8	0.14	< 2	< 10	28	< 0.5	< 2	2.36	< 1	2	0.11	< 10	< 1
MAN267	18	< 5	< 5	< 0.2	< 0.5	8	178	< 1	11	3	16	0.14	< 2	< 10	34	< 0.5	< 2	2.20	< 1	2	0.12	< 10	< 1
MAN268	< 2	< 5	< 5	< 0.2	< 0.5	4	122	< 1	5	5	11	0.93	< 2	< 10	30	< 0.5	< 2	0.79	3	18	1.18	< 10	< 1

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN269				< 0.2	< 0.5	13	82	< 1	5	4	6	0.41	< 2	< 10	50	< 0.5	< 2	3.39	1	4	0.57	< 10	< 1
MAN270				< 0.2	< 0.5	3	144	< 1	1	5	10	0.11	< 2	12	37	< 0.5	< 2	3.55	< 1	1	0.10	< 10	< 1
MAN271				< 0.2	< 0.5	3	88	1	2	4	10	0.14	3	12	37	< 0.5	< 2	3.77	< 1	2	0.12	< 10	< 1
MAN272				< 0.2	0.6	2	217	1	< 1	9	23	0.12	3	11	35	< 0.5	< 2	3.52	< 1	1	0.11	< 10	< 1
MAN273				< 0.2	< 0.5	3	117	1	2	17	34	0.11	6	13	38	< 0.5	< 2	4.13	< 1	1	0.19	< 10	< 1
MAN274				< 0.2	< 0.5	2	325	1	2	6	20	0.13	2	14	41	< 0.5	< 2	4.23	< 1	1	0.21	< 10	< 1
MAN275				< 0.2	< 0.5	2	33	< 1	1	4	6	0.13	2	< 10	25	< 0.5	< 2	3.33	< 1	1	0.90	< 10	< 1
MAN276	7	< 5	< 5	< 0.2	< 0.5	2	186	< 1	2	3	10	0.25	7	< 10	42	< 0.5	< 2	3.79	2	3	1.46	< 10	< 1
MAN277	< 2	< 5	< 5	< 0.2	< 0.5	3	173	< 1	2	4	26	0.13	6	< 10	47	< 0.5	< 2	4.19	2	2	2.04	< 10	< 1
MAN278				< 0.2	< 0.5	3	1280	1	3	< 2	10	0.20	8	11	63	< 0.5	< 2	2.93	4	3	1.69	< 10	< 1
MAN279				< 0.2	1.0	10	464	< 1	3	8	26	0.92	8	< 10	107	< 0.5	< 2	3.31	4	17	2.15	< 10	< 1
MAN280				< 0.2	0.6	10	465	< 1	4	4	26	0.89	5	< 10	108	< 0.5	< 2	3.31	3	16	2.14	< 10	< 1
MAN281				< 0.2	< 0.5	3	191	< 1	2	5	26	0.07	2	12	24	< 0.5	< 2	3.81	< 1	< 1	0.06	< 10	< 1
MAN282				< 0.2	< 0.5	4	3150	1	2	3	33	0.19	2	11	139	< 0.5	< 2	4.07	6	3	0.81	< 10	< 1
MAN283				< 0.2	0.6	3	157	1	2	15	37	0.08	3	14	19	< 0.5	< 2	3.62	< 1	1	0.09	< 10	< 1
MAN284				< 0.2	< 0.5	5	1930	< 1	7	< 2	18	0.16	3	12	88	< 0.5	< 2	4.80	3	2	0.49	< 10	< 1
MAN285				0.3	< 0.5	3	14900	< 1	2	11	45	0.16	11	12	289	< 0.5	4	3.44	6	3	3.34	< 10	< 1
MAN286	< 2	< 5	< 5	< 0.2	0.7	7	320	< 1	2	3	17	0.58	3	< 10	58	< 0.5	< 2	3.16	5	12	1.90	< 10	< 1
MAN287	< 2	< 5	< 5	< 0.2	< 0.5	2	71	1	4	7	15	1.11	< 2	< 10	36	< 0.5	< 2	0.14	3	21	0.73	< 10	< 1
MAN288	6	< 5	7	< 0.2	< 0.5	3	480	< 1	2	2	6	0.18	6	14	68	< 0.5	< 2	3.44	2	4	1.20	< 10	< 1
MAN289	5	< 5	< 5	< 0.2	0.5	5	196	< 1	3	2	15	0.19	< 2	14	25	< 0.5	< 2	3.07	< 1	4	0.79	< 10	< 1
MAN290				< 0.2	0.6	6	305	< 1	6	3	24	0.21	< 2	< 10	36	< 0.5	< 2	2.79	1	3	0.29	< 10	< 1
MAN291	5	< 5	< 5	< 0.2	< 0.5	4	212	< 1	2	4	16	0.20	< 2	< 10	39	< 0.5	< 2	2.37	1	2	0.16	< 10	< 1
MAN292	6	< 5	< 5	< 0.2	< 0.5	3	125	< 1	3	5	14	0.13	< 2	< 10	41	< 0.5	< 2	2.00	< 1	1	0.09	< 10	< 1
MAN293	< 2	< 5	8	< 0.2	< 0.5	4	63	< 1	4	6	11	0.14	< 2	< 10	43	< 0.5	< 2	2.08	< 1	2	0.18	< 10	< 1
MAN294	< 2	< 5	< 5	< 0.2	< 0.5	3	90	< 1	11	6	12	0.85	< 2	< 10	32	< 0.5	< 2	0.44	5	14	0.71	< 10	< 1
MAN295	< 2	< 5	< 5	< 0.2	< 0.5	17	171	< 1	30	5	21	1.52	< 2	< 10	47	< 0.5	< 2	0.47	8	44	1.58	< 10	< 1
MAN296	15	8	< 5	< 0.2	< 0.5	3	85	2	4	6	19	0.15	< 2	< 10	62	< 0.5	< 2	1.63	< 1	2	0.21	< 10	< 1
MAN297	4	< 5	9	< 0.2	< 0.5	5	139	3	8	3	10	0.19	< 2	< 10	72	< 0.5	< 2	2.52	1	2	1.12	< 10	< 1
MAN298	< 2	11	< 5	< 0.2	< 0.5	11	449	5	14	7	24	0.21	3	10	72	< 0.5	< 2	2.82	4	2	0.31	< 10	< 1
MAN299	< 2	32	< 5	< 0.2	< 0.5	17	1340	11	64	9	33	0.10	2	17	137	< 0.5	< 2	3.87	2	2	0.10	< 10	< 1
MAN300	< 2	< 5	< 5	< 0.2	< 0.5	2	47	< 1	1	7	7	0.67	< 2	< 10	16	< 0.5	< 2	0.13	1	9	0.44	< 10	< 1
MAN301	< 2	< 5	< 5	< 0.2	< 0.5	7	615	< 1	8	8	26	1.34	3	< 10	75	< 0.5	< 2	0.82	4	22	1.18	< 10	< 1
MAN302	< 2	< 5	< 5	< 0.2	0.8	16	442	< 1	4	6	20	0.27	< 2	16	54	< 0.5	< 2	4.06	2	5	0.23	< 10	< 1
MAN303	< 2	< 5	< 5	< 0.2	< 0.5	29	329	< 1	10	8	20	0.70	< 2	< 10	46	< 0.5	< 2	1.94	3	16	0.86	< 10	< 1
MAN304	9	< 5	< 5	< 0.2	0.6	152	695	< 1	21	13	22	1.36	5	< 10	71	0.5	< 2	2.53	6	16	0.75	< 10	< 1
MAN305	< 2	< 5	< 5	< 0.2	< 0.5	45	110	< 1	12	5	13	0.80	< 2	< 10	27	< 0.5	< 2	0.26	4	17	0.89	< 10	< 1
MAN306	< 2	< 5	< 5	< 0.2	< 0.5	21	73	< 1	9	6	17	1.31	< 2	< 10	30	< 0.5	< 2	0.16	3	20	1.38	< 10	< 1
MAN307	5	< 5	< 5	< 0.2	< 0.5	12	80	< 1	6	6	13	0.84	< 2	< 10	20	< 0.5	< 2	0.15	3	18	1.02	< 10	< 1
MAN308	< 2	< 5	< 5	< 0.2	< 0.5	15	90	1	10	7	18	1.24	< 2	< 10	29	< 0.5	< 2	0.20	4	20	1.26	< 10	< 1
MAN309	< 2	< 5	< 5	< 0.2	< 0.5	50	84	1	22	5	17	1.40	4	< 10	36	< 0.5	< 2	0.20	6	23	1.47	< 10	< 1
MAN310	< 2	< 5	< 5	< 0.2	< 0.5	6	35	< 1	9	5	3	0.38	< 2	< 10	16	< 0.5	< 2	0.09	< 1	6	0.28	< 10	< 1
MAN311	< 2	< 5	8	< 0.2	< 0.5	3	72	< 1	5	4	8	0.52	< 2	< 10	18	< 0.5	< 2	0.45	2	9	0.81	< 10	< 1
MAN312	< 2	< 5	< 5	< 0.2	< 0.5	< 1	36	< 1	2	4	5	0.80	< 2	< 10	15	< 0.5	< 2	0.10	< 1	10	0.69	< 10	< 1
MAN313	< 2	< 5	< 5	< 0.2	< 0.5	3	64	< 1	9	7	12	1.20	< 2	< 10	36	< 0.5	< 2	0.16	3	19	1.07	< 10	< 1
MAN314	< 2	< 5	< 5	< 0.2	< 0.5	3	82	< 1	3	8	22	0.40	3	< 10	59	< 0.5	< 2	0.38	1	8	0.36	< 10	< 1
MAN315	< 2	< 5	< 5	< 0.2	< 0.5	3	82	< 1	9	6	11	1.48	< 2	< 10	39	< 0.5	< 2	0.15	4	19	1.22	< 10	< 1
MAN316	2	< 5	< 5	< 0.2	< 0.5	5	98	< 1	11	3	15	1.45	< 2	< 10	38	< 0.5	< 2	0.18	5	25	1.40	< 10	< 1
MAN317	< 2	< 5	< 5	< 0.2	< 0.5	4	69	< 1	5	6	11	0.78	< 2	< 10	18	< 0.5	< 2	0.15	3	18	1.15	< 10	< 1
MAN318	< 2	< 5	< 5	< 0.2	< 0.5	8	78	< 1	14	4	16	1.53	3	< 10	27	< 0.5	< 2	0.22	5	18	1.14	< 10	< 1

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN319	< 2	< 5	< 5	< 0.2	< 0.5	42	46	1	13	6	11	0.61	< 2	< 10	25	< 0.5	< 2	0.75	6	13	0.59	< 10	< 1
MAN320	< 2	< 5	< 5	< 0.2	< 0.5	1	85	< 1	2	6	6	0.52	< 2	< 10	21	< 0.5	< 2	0.12	1	9	0.70	< 10	< 1
MAN321	< 2	< 5	< 5	< 0.2	< 0.5	12	92	< 1	19	5	18	1.39	< 2	< 10	46	< 0.5	< 2	0.25	9	21	1.57	< 10	< 1
MAN322	< 2	< 5	< 5	< 0.2	< 0.5	18	64	1	12	6	16	2.09	3	< 10	29	< 0.5	< 2	0.13	5	25	1.74	< 10	< 1
MAN323	< 2	< 5	< 5	< 0.2	< 0.5	14	61	< 1	7	6	10	1.07	< 2	< 10	28	< 0.5	< 2	0.14	3	14	0.86	< 10	< 1
MAN324	< 2	< 5	< 5	< 0.2	< 0.5	44	54	< 1	5	7	10	0.72	< 2	< 10	36	< 0.5	< 2	0.35	3	12	0.43	< 10	< 1
MAN325	< 2	< 5	< 5	< 0.2	< 0.5	16	65	< 1	5	9	21	1.51	< 2	< 10	23	< 0.5	< 2	0.16	3	17	1.68	< 10	< 1
MAN326	< 2	< 5	< 5	< 0.2	< 0.5	15	63	< 1	8	5	12	2.21	6	< 10	27	< 0.5	< 2	0.13	4	25	2.28	< 10	< 1
MAN327	< 2	< 5	< 5	< 0.2	< 0.5	10	71	2	5	6	10	0.65	< 2	< 10	16	< 0.5	< 2	0.29	2	11	0.66	< 10	< 1
MAN328	8	< 5	< 5	< 0.2	0.5	13	474	< 1	6	46	34	0.39	4	< 10	64	< 0.5	< 2	0.46	2	8	0.37	< 10	< 1
MAN329	< 2	< 5	< 5	< 0.2	< 0.5	13	176	2	11	8	17	1.24	2	< 10	38	< 0.5	< 2	0.19	6	24	1.70	< 10	< 1
MAN330	< 2	< 5	< 5	< 0.2	< 0.5	10	88	< 1	2	12	13	0.33	< 2	< 10	26	< 0.5	< 2	0.26	2	9	0.47	< 10	< 1
MAN331	< 2	< 5	< 5	< 0.2	< 0.5	49	144	1	12	16	30	1.52	< 2	< 10	63	< 0.5	< 2	0.32	8	19	1.70	< 10	< 1
MAN332	2	< 5	< 5	0.8	< 0.5	4	79	1	11	6	11	1.36	< 2	< 10	37	< 0.5	< 2	0.36	5	27	1.61	< 10	< 1
MAN333	< 2	< 5	< 5	0.3	< 0.5	< 1	39	< 1	1	4	3	0.24	< 2	< 10	12	< 0.5	< 2	0.14	< 1	5	0.32	< 10	< 1
MAN334	< 2	< 5	< 5	< 0.2	< 0.5	4	52	< 1	3	6	7	0.98	< 2	< 10	21	< 0.5	< 2	0.11	3	12	0.83	< 10	< 1
MAN335	< 2	< 5	< 5	< 0.2	< 0.5	5	60	< 1	5	4	9	1.04	< 2	< 10	24	< 0.5	< 2	0.14	3	15	0.78	< 10	< 1
MAN336	< 2	< 5	< 5	< 0.2	< 0.5	2	49	< 1	4	5	7	1.00	< 2	< 10	25	< 0.5	< 2	0.15	2	14	0.84	< 10	< 1
MAN337	< 2	< 5	< 5	< 0.2	< 0.5	8	60	< 1	3	3	10	1.07	< 2	< 10	20	< 0.5	< 2	0.16	2	13	0.88	< 10	< 1
MAN338	< 2	< 5	< 5	< 0.2	< 0.5	10	61	< 1	6	6	9	1.25	< 2	< 10	25	< 0.5	< 2	0.12	3	18	1.10	< 10	< 1
MAN339	< 2	< 5	< 5	< 0.2	< 0.5	212	324	1	20	16	15	1.20	< 2	< 10	53	< 0.5	< 2	2.08	9	16	0.93	< 10	< 1
MAN340	13	13	26	< 0.2	1.0	26	212	< 1	5	14	134	0.31	4	< 10	60	< 0.5	< 2	0.56	2	4	0.26	< 10	< 1
MAN341	< 2	< 5	< 5	< 0.2	< 0.5	13	86	< 1	9	2	11	0.83	< 2	< 10	25	< 0.5	< 2	0.23	4	16	0.90	< 10	< 1
MAN342	< 2	< 5	< 5	< 0.2	< 0.5	24	46	< 1	4	8	12	0.50	3	< 10	21	< 0.5	< 2	0.15	2	10	0.63	< 10	< 1
MAN343	< 2	< 5	< 5	< 0.2	< 0.5	9	59	< 1	3	3	6	0.42	< 2	< 10	22	< 0.5	< 2	0.18	1	10	0.37	< 10	< 1
MAN344	< 2	< 5	< 5	< 0.2	< 0.5	7	89	< 1	12	4	14	1.83	< 2	< 10	31	< 0.5	< 2	0.15	5	26	1.70	< 10	< 1
MAN345	< 2	< 5	< 5	< 0.2	< 0.5	4	48	< 1	3	5	9	0.61	< 2	< 10	21	< 0.5	< 2	0.16	2	20	1.50	< 10	< 1
MAN346	< 2	< 5	< 5	< 0.2	< 0.5	6	52	< 1	2	6	9	0.72	2	< 10	20	< 0.5	< 2	0.10	< 1	12	1.04	< 10	< 1
MAN347	< 2	< 5	< 5	< 0.2	0.6	281	196	2	27	3	7	0.74	< 2	< 10	52	< 0.5	< 2	4.32	5	9	0.24	< 10	< 1
MAN348	< 2	< 5	< 5	< 0.2	0.7	15	98	< 1	3	4	18	0.24	< 2	16	52	< 0.5	< 2	5.30	< 1	4	0.17	< 10	< 1
MAN349	< 2	< 5	< 5	< 0.2	< 0.5	1	310	< 1	3	6	12	0.63	< 2	< 10	39	< 0.5	< 2	0.28	2	12	0.65	< 10	< 1
MAN350	< 2	< 5	< 5	< 0.2	< 0.5	4	147	< 1	14	6	18	1.67	4	< 10	36	< 0.5	< 2	0.27	6	29	1.45	< 10	< 1
MAN351	< 2	< 5	< 5	< 0.2	< 0.5	3	381	< 1	10	5	35	1.15	< 2	< 10	50	< 0.5	< 2	0.43	5	29	1.42	< 10	< 1
MAN352	< 2	< 5	< 5	< 0.2	< 0.5	5	62	1	5	6	15	1.11	< 2	< 10	37	< 0.5	< 2	0.26	3	16	0.90	< 10	< 1
MAN353	< 2	< 5	< 5	< 0.2	< 0.5	1	77	< 1	5	5	15	0.96	< 2	< 10	42	< 0.5	< 2	0.31	2	18	0.76	< 10	< 1
MAN354	< 2	< 5	< 5	< 0.2	< 0.5	2	160	< 1	9	6	17	1.03	< 2	< 10	36	< 0.5	< 2	0.65	3	21	1.05	< 10	< 1
MAN355	< 2	< 5	< 5	< 0.2	< 0.5	< 1	74	< 1	5	6	14	1.08	< 2	< 10	31	< 0.5	< 2	0.20	3	17	1.01	< 10	< 1
MAN356	< 2	< 5	< 5	< 0.2	< 0.5	2	85	< 1	8	4	17	1.20	3	< 10	42	< 0.5	< 2	0.20	3	21	1.55	< 10	< 1
MAN357	< 2	< 5	< 5	< 0.2	< 0.5	1	52	< 1	3	3	12	1.13	3	< 10	17	< 0.5	< 2	0.10	2	20	1.38	< 10	< 1
MAN358	< 2	< 5	< 5	< 0.2	< 0.5	< 1	34	< 1	1	< 2	7	0.51	< 2	< 10	14	< 0.5	< 2	0.13	< 1	11	0.73	< 10	< 1
MAN359	< 2	< 5	< 5	< 0.2	< 0.5	3	48	< 1	3	4	15	1.01	2	< 10	22	< 0.5	< 2	0.09	2	16	1.05	< 10	< 1
MAN360	< 2	< 5	< 5	< 0.2	< 0.5	2	47	< 1	7	3	8	1.33	< 2	< 10	25	< 0.5	< 2	0.09	3	17	1.05	< 10	< 1
MAN361	< 2	< 5	< 5	< 0.2	< 0.5	< 1	28	< 1	< 1	2	3	0.34	< 2	< 10	13	< 0.5	< 2	0.06	< 1	8	0.39	< 10	< 1
MAN362	< 2	< 5	< 5	< 0.2	< 0.5	2	45	< 1	4	3	7	1.21	4	< 10	24	< 0.5	< 2	0.08	3	17	1.10	< 10	< 1
MAN363	3	< 5	< 5	< 0.2	0.6	108	1560	4	26	11	23	0.58	4	< 10	105	< 0.5	< 2	2.98	12	8	0.59	< 10	< 1
MAN364	< 2	< 5	< 5	< 0.2	< 0.5	14	285	< 1	7	5	12	0.55	< 2	< 10	47	< 0.5	< 2	1.49	4	16	0.84	< 10	< 1
MAN365	< 2	< 5	< 5	< 0.2	< 0.5	3	92	1	6	3	12	0.67	3	< 10	25	< 0.5	< 2	0.38	3	26	1.73	< 10	< 1
MAN366	< 2	< 5	< 5	< 0.2	< 0.5	3	85	< 1	7	9	13	0.73	< 2	< 10	30	< 0.5	< 2	0.22	2	28	1.35	< 10	< 1
MAN367	< 2	< 5	< 5	< 0.2	< 0.5	1	57	< 1	4	4	13	0.71	< 2	< 10	23	< 0.5	< 2	0.25	2	21	1.50	< 10	< 1
MAN368	< 2	< 5	< 5	< 0.2	< 0.5	7	332	< 1	10	4	14	1.36	2	< 10	43	< 0.5	< 2	0.26	4	25	1.32	< 10	< 1

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN369	< 2	< 5	< 5	< 0.2	< 0.5	11	156	< 1	5	3	11	0.49	< 2	< 10	26	< 0.5	< 2	0.37	2	21	1.09	< 10	< 1
MAN370	7	< 5	10	< 0.2	< 0.5	216	141	1	32	8	10	0.67	< 2	< 10	84	< 0.5	< 2	3.77	20	6	0.38	< 10	< 1
MAN371	2	< 5	< 5	< 0.2	< 0.5	134	648	< 1	51	10	87	0.85	3	< 10	83	< 0.5	< 2	3.19	32	14	1.09	< 10	< 1
MAN372	< 2	< 5	< 5	< 0.2	< 0.5	2	91	1	10	7	22	1.30	3	< 10	40	< 0.5	< 2	0.38	5	46	3.48	< 10	< 1
MAN373	< 2	< 5	< 5	< 0.2	< 0.5	2	52	< 1	5	5	17	1.36	3	< 10	22	< 0.5	< 2	0.13	3	21	1.35	< 10	< 1
MAN374	7	< 5	< 5	< 0.2	< 0.5	3	66	< 1	8	3	13	1.15	2	< 10	18	< 0.5	< 2	0.15	4	20	1.13	< 10	< 1
MAN375	< 2	< 5	< 5	< 0.2	< 0.5	1	37	< 1	1	3	5	0.44	< 2	< 10	20	< 0.5	< 2	0.42	< 1	10	0.70	< 10	< 1
MAN376	< 2	< 5	< 5	< 0.2	0.6	15	189	2	8	4	16	0.21	3	12	81	< 0.5	< 2	4.35	< 1	3	0.19	< 10	< 1
MAN377	6	< 5	< 5	< 0.2	0.5	123	444	< 1	45	17	9	0.55	< 2	15	116	< 0.5	< 2	3.78	2	5	0.38	< 10	< 1
MAN378	< 2	< 5	< 5	< 0.2	< 0.5	9	382	< 1	9	5	17	0.99	< 2	< 10	54	< 0.5	< 2	1.44	4	20	1.26	< 10	< 1
MAN379	< 2	< 5	< 5	< 0.2	< 0.5	12	128	< 1	6	5	9	0.28	< 2	< 10	57	< 0.5	< 2	4.90	< 1	4	0.24	< 10	< 1
MAN380	5	< 5	< 5	< 0.2	< 0.5	12	377	< 1	7	3	6	0.19	< 2	11	51	< 0.5	< 2	5.28	< 1	3	0.14	< 10	< 1
MAN381	< 2	< 5	< 5	< 0.2	0.7	48	1890	2	15	4	8	0.34	< 2	11	183	< 0.5	< 2	5.70	10	5	0.27	< 10	< 1
MAN382	< 2	< 5	< 5	< 0.2	< 0.5	57	627	1	13	4	21	0.77	6	< 10	95	< 0.5	< 2	2.90	5	22	2.07	< 10	< 1
MAN383	< 2	< 5	< 5	< 0.2	< 0.5	10	153	< 1	6	5	11	0.42	< 2	< 10	25	< 0.5	< 2	0.64	3	19	1.12	< 10	< 1
MAN384	< 2	< 5	< 5	< 0.2	< 0.5	25	250	< 1	13	5	17	1.07	< 2	< 10	51	< 0.5	< 2	1.32	4	23	1.26	< 10	< 1
MAN385	< 2	< 5	< 5	< 0.2	< 0.5	18	1090	1	2	3	36	0.23	4	10	130	< 0.5	< 2	3.40	2	6	1.28	< 10	< 1
MAN386	7	< 5	< 5	< 0.2	< 0.5	13	450	1	2	3	7	0.15	3	< 10	72	< 0.5	< 2	2.87	2	4	1.36	< 10	< 1
MAN387	< 2	< 5	< 5	< 0.2	< 0.5	1	93	< 1	10	7	15	1.34	< 2	< 10	31	< 0.5	< 2	0.29	4	24	1.36	< 10	< 1
MAN388				< 0.2	0.6	10	453	< 1	4	3	4	0.52	3	< 10	51	< 0.5	< 2	3.39	3	11	1.26	< 10	< 1
MAN389	< 2	< 5	< 5	< 0.2	< 0.5	< 1	50	< 1	4	6	12	1.66	< 2	< 10	29	< 0.5	< 2	0.11	2	18	1.09	< 10	< 1
MAN390	< 2	< 5	< 5	< 0.2	0.6	6	1030	< 1	3	6	13	0.33	< 2	< 10	60	< 0.5	< 2	4.38	2	5	0.38	< 10	< 1
MAN391	< 2	< 5	< 5	< 0.2	< 0.5	5	852	1	2	12	25	0.21	4	< 10	56	< 0.5	< 2	4.27	1	4	0.66	< 10	< 1
MAN392	< 2	< 5	< 5	< 0.2	< 0.5	16	241	2	3	6	14	0.22	2	10	62	< 0.5	< 2	4.24	1	4	0.65	< 10	< 1
MAN393	< 2	< 5	< 5	< 0.2	< 0.5	75	745	2	9	5	12	0.18	5	12	105	< 0.5	< 2	4.37	3	4	1.49	< 10	< 1
MAN394	< 2	< 5	< 5	< 0.2	< 0.5	95	21	2	9	3	5	0.19	< 2	13	65	< 0.5	< 2	4.51	< 1	4	0.40	< 10	< 1
MAN395	< 2	< 5	< 5	< 0.2	< 0.5	3	76	< 1	10	5	11	1.44	< 2	< 10	32	< 0.5	< 2	0.17	5	22	1.08	< 10	< 1
MAN396	< 2	< 5	< 5	< 0.2	< 0.5	2	63	< 1	4	4	13	1.21	< 2	< 10	18	< 0.5	< 2	0.11	2	24	1.51	< 10	< 1
MAN397	< 2	< 5	< 5	< 0.2	< 0.5	3	51	< 1	4	3	14	1.33	< 2	< 10	25	< 0.5	< 2	0.10	3	21	1.35	< 10	< 1
MAN398	< 2	< 5	< 5	< 0.2	< 0.5	1	57	< 1	5	4	9	1.32	< 2	< 10	24	< 0.5	< 2	0.09	4	22	1.29	< 10	< 1
MAN399	< 2	< 5	< 5	< 0.2	< 0.5	< 1	31	< 1	1	2	4	0.31	< 2	< 10	13	< 0.5	< 2	0.05	< 1	9	0.60	< 10	< 1
MAN400	< 2	< 5	< 5	< 0.2	< 0.5	2	139	< 1	8	6	24	1.14	< 2	< 10	44	< 0.5	< 2	0.38	3	23	1.00	< 10	< 1
MAN401	< 2	< 5	< 5	< 0.2	< 0.5	2	66	< 1	7	5	19	1.42	2	< 10	27	< 0.5	< 2	0.13	4	25	1.53	< 10	< 1
MAN402	< 2	< 5	< 5	< 0.2	< 0.5	7	129	< 1	2	2	3	0.16	< 2	< 10	42	< 0.5	< 2	1.97	< 1	5	0.14	< 10	< 1
MAN403	< 2	< 5	< 5	< 0.2	< 0.5	< 1	38	< 1	< 1	2	7	0.56	< 2	< 10	25	< 0.5	< 2	0.18	1	10	0.41	< 10	< 1
MAN404	< 2	< 5	< 5	< 0.2	< 0.5	3	95	< 1	7	7	19	1.25	3	< 10	32	< 0.5	< 2	0.17	4	25	1.65	< 10	< 1
MAN405	< 2	< 5	< 5	< 0.2	< 0.5	3	74	< 1	6	7	18	0.96	< 2	< 10	29	< 0.5	< 2	0.32	3	21	1.06	< 10	< 1
MAN406	< 2	< 5	< 5	< 0.2	< 0.5	3	126	< 1	7	3	12	0.80	< 2	< 10	24	< 0.5	< 2	1.18	3	25	1.46	< 10	< 1
MAN407	< 2	< 5	< 5	< 0.2	< 0.5	2	61	< 1	6	5	17	1.36	< 2	< 10	26	< 0.5	< 2	0.11	3	22	1.51	< 10	< 1
MAN408	< 2	< 5	< 5	< 0.2	< 0.5	3	135	1	10	8	33	1.80	3	< 10	47	< 0.5	< 2	0.13	4	28	2.12	< 10	< 1
MAN409	< 2	< 5	< 5	< 0.2	< 0.5	2	102	< 1	8	4	14	1.55	< 2	< 10	29	< 0.5	< 2	0.16	5	26	1.41	< 10	< 1
MAN410	< 2	< 5	< 5	< 0.2	< 0.5	5	103	1	12	7	36	2.33	< 2	< 10	57	< 0.5	< 2	0.13	7	33	2.20	< 10	< 1
MAN411	< 2	< 5	< 5	< 0.2	< 0.5	1	54	< 1	2	6	12	0.74	< 2	< 10	22	< 0.5	< 2	0.10	1	15	1.00	< 10	< 1
MAN412	< 2	< 5	< 5	< 0.2	< 0.5	2	82	< 1	4	4	23	1.47	< 2	< 10	29	< 0.5	< 2	0.11	3	25	1.65	< 10	< 1
MAN413	< 2	< 5	< 5	< 0.2	< 0.5	2	86	1	7	6	24	1.62	< 2	< 10	32	< 0.5	< 2	0.12	4	28	2.07	< 10	2
MAN414	< 2	< 5	< 5	< 0.2	< 0.5	1	73	< 1	4	6	21	1.23	2	< 10	30	< 0.5	< 2	0.10	2	20	1.42	< 10	< 1
MAN415	23	< 5	< 5	< 0.2	< 0.5	3	91	1	4	7	18	1.14	< 2	< 10	27	< 0.5	< 2	0.12	3	19	1.20	< 10	< 1
MAN416	< 2	< 5	< 5	< 0.2	< 0.5	1	66	< 1	5	3	14	1.17	< 2	< 10	26	< 0.5	< 2	0.11	2	22	1.47	< 10	< 1
MAN417	< 2	< 5	< 5	< 0.2	< 0.5	3	89	< 1	7	5	13	1.00	< 2	< 10	29	< 0.5	< 2	0.24	4	23	1.14	< 10	< 1
MAN418	< 2	< 5	< 5	< 0.2	< 0.5	3	101	< 1	7	5	20	1.34	3	< 10	31	< 0.5	< 2	0.33	4	25	1.60	< 10	< 1

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN419	6	< 5	< 5	< 0.2	< 0.5	3	2680	< 1	1	7	28	0.12	6	12	126	< 0.5	< 2	3.85	2	2	0.85	< 10	< 1
MAN420	< 2	< 5	< 5	< 0.2	< 0.5	3	230	< 1	2	7	12	0.10	2	13	37	< 0.5	< 2	3.83	< 1	2	0.22	< 10	< 1
MAN421	< 2	< 5	< 5	< 0.2	< 0.5	2	60	< 1	1	4	11	0.12	< 2	15	33	< 0.5	< 2	3.63	< 1	2	0.17	< 10	< 1
MAN422	2	< 5	< 5	< 0.2	< 0.5	2	1090	1	1	11	12	0.11	< 2	14	54	< 0.5	< 2	3.67	< 1	2	0.22	< 10	< 1
MAN423	5	< 5	< 5	< 0.2	< 0.5	3	4620	< 1	1	14	30	0.13	3	14	160	< 0.5	< 2	4.16	2	2	0.25	< 10	< 1
MAN424	< 2	< 5	< 5	< 0.2	< 0.5	3	480	< 1	1	7	6	0.12	< 2	13	46	< 0.5	< 2	4.11	1	1	0.11	< 10	< 1
MAN425	< 2	< 5	< 5	< 0.2	< 0.5	2	98	1	2	13	7	0.10	2	18	35	< 0.5	< 2	3.91	< 1	1	0.05	< 10	< 1
MAN426	5	< 5	< 5	< 0.2	< 0.5	2	113	< 1	< 1	15	30	0.10	5	< 10	31	< 0.5	< 2	3.49	< 1	2	0.16	< 10	< 1
MAN427	< 2	< 5	< 5	< 0.2	< 0.5	3	131	1	< 1	15	13	0.10	3	15	35	< 0.5	< 2	4.10	< 1	2	0.17	< 10	< 1
MAN428	< 2	< 5	< 5	< 0.2	< 0.5	3	424	< 1	< 1	5	23	0.06	< 2	14	45	< 0.5	< 2	4.05	< 1	1	0.10	< 10	< 1
MAN429	< 2	< 5	< 5	< 0.2	< 0.5	10	102	1	3	8	18	0.09	< 2	20	47	< 0.5	< 2	5.12	< 1	1	0.15	< 10	< 1
MAN430	< 2	< 5	< 5	< 0.2	< 0.5	3	245	< 1	9	5	18	1.02	< 2	< 10	38	< 0.5	< 2	0.43	4	24	1.25	< 10	< 1
MAN431	< 2	< 5	< 5	< 0.2	< 0.5	2	71	< 1	7	5	12	1.30	< 2	< 10	27	< 0.5	< 2	0.17	4	21	1.39	< 10	< 1
MAN432	< 2	< 5	< 5	< 0.2	< 0.5	3	132	1	10	8	23	1.40	2	< 10	31	< 0.5	< 2	0.25	4	29	1.94	< 10	< 1
MAN433	< 2	< 5	< 5	< 0.2	< 0.5	1	99	< 1	4	6	13	0.98	3	< 10	30	< 0.5	< 2	0.22	2	17	1.19	< 10	< 1
MAN434	< 2	< 5	< 5	< 0.2	< 0.5	2	166	< 1	8	5	17	1.22	3	< 10	46	< 0.5	< 2	0.28	3	23	1.52	< 10	< 1
MAN435	< 2	< 5	< 5	< 0.2	< 0.5	2	106	< 1	9	5	15	1.28	< 2	< 10	49	< 0.5	< 2	0.24	3	21	1.18	< 10	< 1
MAN436	< 2	< 5	< 5	< 0.2	< 0.5	3	176	< 1	11	6	16	1.60	2	< 10	58	< 0.5	< 2	0.24	5	26	1.48	< 10	< 1
MAN437	< 2	< 5	< 5	< 0.2	< 0.5	1	153	< 1	6	6	16	1.13	< 2	< 10	48	< 0.5	< 2	0.21	2	20	1.49	< 10	< 1
MAN438	< 2	< 5	< 5	< 0.2	< 0.5	< 1	86	< 1	6	6	12	1.04	< 2	< 10	36	< 0.5	< 2	0.19	3	17	1.08	< 10	< 1
MAN439	< 2	< 5	< 5	< 0.2	< 0.5	< 1	104	< 1	3	6	9	0.74	< 2	< 10	24	< 0.5	< 2	0.15	2	14	0.95	< 10	< 1
MAN440	< 2	< 5	< 5	< 0.2	< 0.5	2	84	1	9	4	16	1.76	< 2	< 10	46	< 0.5	< 2	0.16	5	26	1.94	< 10	< 1
MAN441	< 2	< 5	< 5	< 0.2	< 0.5	2	64	< 1	6	6	11	1.30	< 2	< 10	28	< 0.5	< 2	0.14	3	19	1.22	< 10	< 1
MAN442	4	< 5	< 5	< 0.2	< 0.5	2	19	< 1	1	4	41	0.07	3	12	31	< 0.5	< 2	4.04	< 1	1	0.06	< 10	< 1
MAN443	< 2	< 5	< 5	< 0.2	0.6	9	773	1	< 1	15	29	0.14	< 2	21	60	< 0.5	< 2	5.34	2	3	0.26	< 10	< 1
MAN444	4	< 5	< 5	< 0.2	< 0.5	7	885	< 1	1	11	16	0.10	2	16	62	< 0.5	< 2	3.99	2	2	0.59	< 10	< 1
MAN445	< 2	< 5	< 5	< 0.2	< 0.5	9	358	< 1	6	5	6	0.67	< 2	< 10	48	< 0.5	< 2	3.87	3	12	0.74	< 10	< 1
MAN446	< 2	< 5	< 5	< 0.2	< 0.5	2	147	< 1	11	4	14	1.25	2	< 10	33	< 0.5	< 2	0.25	5	26	1.38	< 10	< 1
MAN447	< 2	< 5	< 5	< 0.2	< 0.5	3	180	< 1	11	4	19	1.37	< 2	< 10	40	< 0.5	< 2	0.29	6	27	1.62	< 10	< 1
MAN448	< 2	< 5	< 5	< 0.2	< 0.5	4	138	< 1	13	4	18	1.30	< 2	< 10	33	< 0.5	< 2	0.27	5	26	1.45	< 10	< 1
MAN449	< 2	< 5	< 5	< 0.2	< 0.5	2	113	< 1	8	4	12	0.83	< 2	< 10	30	< 0.5	< 2	0.38	3	19	0.98	< 10	< 1
MAN450	2	< 5	< 5	< 0.2	0.8	34	504	< 1	9	19	25	0.14	2	18	45	< 0.5	< 2	4.45	1	2	0.14	< 10	< 1
MAN451	< 2	< 5	< 5	< 0.2	< 0.5	4	130	< 1	5	2	8	0.47	< 2	< 10	18	< 0.5	< 2	5.97	2	13	0.70	< 10	< 1
MAN452	< 2	< 5	< 5	< 0.2	0.8	6	45	< 1	< 1	13	44	0.17	5	< 10	93	< 0.5	< 2	0.40	< 1	3	0.13	< 10	< 1
MAN453	< 2	< 5	< 5	< 0.2	< 0.5	36	375	< 1	11	7	32	1.62	2	< 10	70	< 0.5	< 2	2.13	5	32	1.55	< 10	< 1
MAN454	< 2	< 5	< 5	< 0.2	< 0.5	104	327	< 1	13	4	22	1.26	4	< 10	73	< 0.5	< 2	2.81	5	27	1.29	< 10	< 1
MAN455	3	< 5	< 5	< 0.2	< 0.5	29	151	1	6	4	12	0.70	< 2	< 10	29	< 0.5	< 2	0.79	2	16	0.88	< 10	< 1
MAN456	< 2	< 5	< 5	< 0.2	< 0.5	65	156	1	11	7	8	1.40	< 2	< 10	32	< 0.5	< 2	1.71	4	18	1.04	< 10	< 1
MAN457	11	< 5	< 5	< 0.2	< 0.5	< 1	42	< 1	1	3	4	0.42	< 2	< 10	16	< 0.5	< 2	0.10	< 1	8	0.51	< 10	< 1
MAN458	3	< 5	< 5	< 0.2	< 0.5	70	90	1	20	2	14	1.32	< 2	< 10	43	< 0.5	< 2	0.21	5	23	1.43	< 10	< 1
MAN459	< 2	< 5	< 5	< 0.2	< 0.5	5	49	< 1	2	4	7	0.55	< 2	< 10	17	< 0.5	< 2	0.13	2	15	1.16	< 10	< 1
MAN460	< 2	< 5	< 5	< 0.2	< 0.5	14	134	< 1	11	3	17	1.04	2	< 10	28	< 0.5	< 2	0.33	5	29	1.17	< 10	< 1
MAN461	< 2	< 5	< 5	< 0.2	< 0.5	83	69	2	12	7	13	0.77	< 2	< 10	24	< 0.5	< 2	0.15	3	22	1.78	< 10	< 1
MAN462	< 2	< 5	< 5	< 0.2	0.9	23	1110	2	7	39	33	0.71	3	< 10	75	< 0.5	< 2	3.31	3	10	0.64	< 10	< 1
MAN463	< 2	< 5	< 5	< 0.2	< 0.5	16	513	< 1	11	4	25	1.36	< 2	< 10	61	< 0.5	< 2	1.31	6	27	1.61	< 10	< 1
MAN464	< 2	< 5	< 5	< 0.2	< 0.5	< 1	42	< 1	< 1	3	6	0.43	< 2	< 10	13	< 0.5	< 2	0.11	< 1	8	0.40	< 10	< 1
MAN465	< 2	< 5	< 5	< 0.2	< 0.5	1	62	< 1	2	4	14	0.93	< 2	< 10	19	< 0.5	< 2	0.13	2	18	1.29	< 10	< 1
MAN466	< 2	< 5	< 5	< 0.2	< 0.5	< 1	42	< 1	< 1	4	5	0.37	< 2	< 10	18	< 0.5	< 2	0.11	< 1	8	0.50	< 10	< 1
MAN467	< 2	< 5	< 5	< 0.2	< 0.5	4	125	2	19	8	17	1.96	< 2	< 10	50	< 0.5	< 2	0.32	6	31	2.00	< 10	< 1
MAN468	< 2	< 5	< 5	< 0.2	< 0.5	1	83	< 1	6	4	14	0.96	< 2	< 10	37	< 0.5	< 2	0.17	2	18	1.24	< 10	< 1

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN469	2	< 5	< 5	< 0.2	< 0.5	< 1	61	< 1	3	5	9	0.89	< 2	< 10	37	< 0.5	< 2	0.17	2	13	0.85	< 10	< 1
MAN470	< 2	< 5	< 5	< 0.2	< 0.5	2	85	< 1	9	3	13	1.00	< 2	< 10	36	< 0.5	< 2	0.24	4	21	0.98	< 10	< 1
MAN471	< 2	< 5	< 5	< 0.2	< 0.5	< 1	43	< 1	2	4	7	0.58	< 2	< 10	18	< 0.5	< 2	0.13	< 1	7	0.40	< 10	< 1
MAN472	< 2	< 5	< 5	< 0.2	< 0.5	< 1	32	< 1	< 1	< 2	3	0.28	< 2	< 10	12	< 0.5	< 2	0.08	< 1	4	0.21	< 10	< 1
MAN473	< 2	< 5	< 5	< 0.2	< 0.5	4	83	< 1	15	5	18	1.24	3	< 10	35	< 0.5	< 2	0.14	5	46	1.92	< 10	< 1
MAN474	< 2	< 5	< 5	< 0.2	< 0.5	1	78	< 1	8	6	19	1.50	< 2	< 10	41	< 0.5	< 2	0.16	3	21	1.81	< 10	< 1
MAN475	< 2	< 5	< 5	< 0.2	< 0.5	1	82	< 1	5	4	12	0.92	< 2	< 10	44	< 0.5	< 2	0.24	3	14	0.83	< 10	< 1
MAN476	< 2	< 5	< 5	< 0.2	< 0.5	6	154	< 1	11	3	27	1.35	< 2	< 10	45	< 0.5	< 2	0.76	6	26	1.67	< 10	< 1
MAN477	< 2	< 5	< 5	< 0.2	< 0.5	4	115	< 1	6	3	10	0.65	< 2	< 10	28	< 0.5	< 2	0.35	3	16	0.91	< 10	< 1
MAN479	< 2	< 5	< 5	< 0.2	< 0.5	4	99	< 1	10	5	19	1.13	< 2	< 10	47	< 0.5	< 2	0.29	4	22	1.38	< 10	< 1
MAN480	< 2	< 5	< 5	< 0.2	< 0.5	7	104	< 1	10	6	27	1.61	4	< 10	43	< 0.5	< 2	0.25	5	21	1.44	< 10	< 1
MAN481	< 2	< 5	< 5	< 0.2	< 0.5	< 1	46	< 1	2	3	5	0.30	< 2	< 10	15	< 0.5	< 2	0.14	< 1	5	0.25	< 10	< 1
MAN482	2	< 5	< 5	< 0.2	< 0.5	1	55	< 1	4	3	6	0.52	< 2	< 10	16	< 0.5	< 2	0.18	1	16	1.11	< 10	< 1
MAN483	< 2	< 5	< 5	< 0.2	< 0.5	< 1	111	< 1	4	3	10	0.73	< 2	< 10	24	< 0.5	< 2	0.34	3	16	0.90	< 10	< 1
MAN484	< 2	< 5	< 5	< 0.2	< 0.5	< 1	85	< 1	6	< 2	9	0.72	< 2	< 10	22	< 0.5	< 2	0.30	3	15	1.04	< 10	< 1
MAN485	< 2	< 5	< 5	< 0.2	< 0.5	4	103	< 1	13	4	14	1.56	< 2	< 10	33	< 0.5	< 2	0.27	5	25	1.40	< 10	< 1
MAN486	< 2	< 5	< 5	< 0.2	< 0.5	3	126	< 1	10	4	15	1.06	4	< 10	52	< 0.5	< 2	0.27	4	23	1.52	< 10	< 1
MAN487	< 2	< 5	< 5	< 0.2	< 0.5	< 1	57	< 1	< 1	4	5	0.29	< 2	< 10	20	< 0.5	< 2	0.16	< 1	6	0.30	< 10	< 1
MAN488	< 2	< 5	< 5	< 0.2	< 0.5	2	100	< 1	10	7	18	1.25	< 2	< 10	54	< 0.5	< 2	0.25	4	24	1.61	< 10	< 1
MAN489	< 2	< 5	< 5	< 0.2	< 0.5	10	474	< 1	8	4	21	0.95	< 2	< 10	40	< 0.5	< 2	2.31	5	30	1.58	< 10	< 1
MAN490	< 2	< 5	< 5	< 0.2	< 0.5	6	495	< 1	6	15	25	0.77	< 2	< 10	54	< 0.5	< 2	1.47	4	18	0.93	< 10	< 1
MAN491	< 2	< 5	< 5	< 0.2	< 0.5	5	155	< 1	8	4	19	1.04	< 2	< 10	42	< 0.5	< 2	3.13	4	22	1.29	< 10	< 1
MAN492	16	7	< 5	< 0.2	1.1	8	39	< 1	2	32	102	0.18	2	< 10	50	< 0.5	< 2	0.93	< 1	3	0.18	< 10	< 1
MAN493	< 2	< 5	< 5	< 0.2	0.6	19	1240	1	5	6	15	0.51	49	< 10	95	< 0.5	< 2	2.93	8	10	7.58	< 10	< 1
MAN494	< 2	< 5	< 5	< 0.2	< 0.5	13	338	< 1	8	8	19	0.88	< 2	< 10	56	< 0.5	< 2	1.73	4	21	1.01	< 10	< 1
MAN495	17	< 5	< 5	< 0.2	< 0.5	34	251	1	9	11	19	0.81	3	< 10	56	< 0.5	< 2	1.89	3	12	0.68	< 10	< 1
MAN496	< 2	< 5	< 5	< 0.2	< 0.5	6	90	< 1	10	4	13	1.29	< 2	< 10	34	< 0.5	< 2	0.22	5	23	1.33	< 10	< 1
MAN497	< 2	< 5	< 5	< 0.2	< 0.5	1	29	< 1	< 1	3	6	0.46	< 2	< 10	15	< 0.5	< 2	0.13	< 1	8	0.38	< 10	< 1
MAN498	< 2	< 5	< 5	< 0.2	< 0.5	< 1	38	< 1	2	3	3	0.35	< 2	< 10	17	< 0.5	< 2	0.11	< 1	7	0.37	< 10	< 1
MAN499	< 2	< 5	< 5	< 0.2	< 0.5	18	83	1	31	5	17	1.22	2	< 10	23	< 0.5	< 2	0.14	4	21	1.56	< 10	< 1
MAN500	< 2	< 5	< 5	< 0.2	< 0.5	6	56	< 1	3	7	10	0.73	< 2	< 10	23	< 0.5	< 2	0.13	2	10	0.66	< 10	< 1
MAN501	< 2	< 5	< 5	< 0.2	< 0.5	17	102	2	15	5	19	1.15	< 2	< 10	34	< 0.5	< 2	0.32	4	20	0.96	< 10	< 1
MAN502	< 2	< 5	< 5	< 0.2	< 0.5	2	77	1	7	6	16	1.78	2	< 10	28	< 0.5	< 2	0.16	4	26	2.02	< 10	< 1
MAN503	< 2	< 5	< 5	< 0.2	< 0.5	6	37	< 1	3	5	6	0.49	< 2	< 10	17	< 0.5	< 2	0.11	1	8	0.43	< 10	< 1
MAN504	4	8	12	< 0.2	0.9	48	399	< 1	18	11	17	0.24	4	14	62	< 0.5	< 2	4.42	2	4	0.25	< 10	< 1
MAN505	< 2	< 5	< 5	< 0.2	< 0.5	29	192	< 1	17	4	18	1.11	2	< 10	55	< 0.5	< 2	1.15	5	21	0.97	< 10	< 1
MAN506	< 2	< 5	< 5	< 0.2	< 0.5	15	266	< 1	16	6	29	0.97	3	< 10	30	< 0.5	< 2	6.50	7	27	1.51	< 10	< 1
MAN507	< 2	< 5	< 5	< 0.2	< 0.5	19	247	< 1	16	4	21	1.19	3	< 10	40	< 0.5	< 2	5.44	6	25	1.41	< 10	< 1
MAN508	< 2	< 5	< 5	< 0.2	< 0.5	2	78	< 1	9	6	20	1.45	3	< 10	33	< 0.5	< 2	0.25	4	21	1.43	< 10	< 1
MAN509	< 2	< 5	< 5	< 0.2	< 0.5	13	84	< 1	13	4	18	0.94	< 2	< 10	25	< 0.5	< 2	0.27	4	25	1.31	< 10	< 1
MAN510	< 2	< 5	< 5	< 0.2	< 0.5	23	65	< 1	22	9	17	1.35	< 2	< 10	46	< 0.5	< 2	0.28	6	28	1.29	< 10	< 1
MAN511	16	< 5	< 5	< 0.2	< 0.5	8	56	< 1	5	10	24	0.89	< 2	< 10	38	< 0.5	< 2	0.16	2	12	0.92	< 10	< 1
MAN512	< 2	< 5	< 5	< 0.2	< 0.5	10	167	< 1	22	7	20	1.95	< 2	< 10	59	< 0.5	< 2	0.39	8	31	1.51	< 10	< 1
MAN513	< 2	< 5	< 5	< 0.2	< 0.5	13	64	< 1	9	8	17	1.56	3	< 10	29	< 0.5	< 2	0.13	3	20	2.18	< 10	< 1
MAN514	< 2	< 5	< 5	< 0.2	< 0.5	11	65	< 1	2	6	13	1.20	< 2	< 10	33	< 0.5	< 2	0.15	2	10	1.21	< 10	< 1
MAN515	< 2	< 5	< 5	< 0.2	< 0.5	4	29	< 1	< 1	4	3	0.53	< 2	< 10	12	< 0.5	< 2	0.09	< 1	6	0.26	< 10	< 1
MAN516	< 2	< 5	< 5	< 0.2	< 0.5	63	54	1	23	< 2	8	3.38	< 2	< 10	25	< 0.5	< 2	0.27	11	24	2.22	< 10	< 1
MAN517	< 2	< 5	< 5	< 0.2	< 0.5	31	39	< 1	5	12	8	0.58	< 2	< 10	28	< 0.5	< 2	0.17	1	11	0.29	< 10	< 1
MAN518	5	< 5	< 5	< 0.2	< 0.5	115	43	< 1	6	6	10	1.42	< 2	< 10	30	< 0.5	< 2	0.36	2	11	0.55	< 10	< 1
MAN519	< 2	< 5	< 5	< 0.2	< 0.5	35	80	< 1	5	4	10	0.91	< 2	< 10	24	< 0.5	< 2	0.46	3	10	0.64	< 10	< 1

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN520	< 2	< 5	< 5	< 0.2	< 0.5	168	90	< 1	12	5	13	1.36	< 2	< 10	30	< 0.5	< 2	0.53	6	14	0.67	< 10	< 1
MAN521	< 2	< 5	< 5	< 0.2	< 0.5	989	63	< 1	19	5	15	1.49	< 2	< 10	25	< 0.5	< 2	0.22	6	13	0.86	< 10	< 1
MAN522	< 2	< 5	< 5	< 0.2	< 0.5	6	68	< 1	3	4	11	1.52	< 2	< 10	23	< 0.5	< 2	0.19	2	16	1.25	< 10	< 1
MAN523	< 2	< 5	< 5	< 0.2	< 0.5	4	82	< 1	5	5	11	1.23	2	< 10	25	< 0.5	< 2	0.16	3	16	1.12	< 10	< 1
MAN524	< 2	< 5	< 5	< 0.2	< 0.5	3	354	< 1	4	7	12	0.70	2	< 10	51	< 0.5	< 2	0.25	3	15	1.13	< 10	< 1
MAN525	< 2	< 5	< 5	< 0.2	< 0.5	3	114	< 1	10	4	13	1.30	< 2	< 10	31	< 0.5	< 2	0.23	4	24	1.34	< 10	< 1
MAN526	< 2	< 5	< 5	< 0.2	< 0.5	4	111	< 1	9	4	11	1.03	< 2	< 10	26	< 0.5	< 2	0.29	4	21	1.13	< 10	< 1
MAN527	< 2	< 5	< 5	< 0.2	< 0.5	4	215	< 1	9	5	19	1.24	< 2	< 10	43	< 0.5	< 2	0.30	4	20	1.08	< 10	< 1
MAN528	< 2	< 5	< 5	< 0.2	< 0.5	7	65	< 1	3	10	13	0.70	< 2	< 10	20	< 0.5	< 2	0.14	2	11	0.67	< 10	< 1
MAN529	< 2	< 5	< 5	< 0.2	< 0.5	7	146	< 1	12	6	23	1.48	2	< 10	36	< 0.5	< 2	0.90	5	25	1.20	< 10	< 1
MAN530	< 2	< 5	< 5	< 0.2	< 0.5	4	83	< 1	7	6	18	1.27	< 2	< 10	29	< 0.5	< 2	0.16	3	18	1.26	< 10	< 1
MAN531	5	< 5	< 5	< 0.2	0.6	59	447	< 1	13	12	31	1.01	< 2	< 10	57	< 0.5	< 2	1.55	5	16	1.01	< 10	< 1
MAN532	< 2	< 5	< 5	< 0.2	0.7	26	87	2	4	7	23	0.17	< 2	< 10	47	< 0.5	< 2	2.36	2	3	0.18	< 10	< 1
MAN533	< 2	< 5	< 5	< 0.2	< 0.5	11	234	< 1	9	5	16	0.82	< 2	< 10	33	< 0.5	< 2	5.15	4	19	0.99	< 10	< 1
MAN534	< 2	< 5	< 5	< 0.2	< 0.5	13	118	< 1	7	3	11	0.73	< 2	< 10	26	< 0.5	< 2	0.48	4	17	0.91	< 10	< 1
MAN535	< 2	< 5	< 5	< 0.2	< 0.5	13	67	1	4	6	24	1.56	< 2	< 10	27	< 0.5	< 2	0.13	2	22	1.47	< 10	< 1
MAN536	< 2	< 5	< 5	< 0.2	< 0.5	< 1	59	< 1	4	5	6	0.73	< 2	< 10	21	< 0.5	< 2	0.14	2	11	0.66	< 10	< 1
MAN537	3	< 5	< 5	< 0.2	0.6	6	165	< 1	< 1	17	34	0.15	< 2	< 10	59	< 0.5	< 2	0.44	< 1	2	0.24	< 10	< 1
MAN538	< 2	< 5	< 5	< 0.2	< 0.5	2	74	1	4	8	17	1.02	< 2	< 10	30	< 0.5	< 2	0.15	3	16	0.99	< 10	< 1
MAN539	< 2	< 5	< 5	< 0.2	< 0.5	1	77	< 1	7	4	12	1.17	< 2	< 10	30	< 0.5	< 2	0.15	4	18	1.11	< 10	< 1
MAN540	5	< 5	< 5	< 0.2	< 0.5	2	84	< 1	6	5	13	1.14	< 2	< 10	34	< 0.5	< 2	0.16	4	19	1.22	< 10	< 1
MAN541	< 2	< 5	< 5	< 0.2	< 0.5	< 1	53	< 1	< 1	3	5	0.43	< 2	< 10	20	< 0.5	< 2	0.14	< 1	9	0.45	< 10	< 1
MAN542	< 2	< 5	< 5	< 0.2	< 0.5	3	61	1	3	5	11	0.88	< 2	< 10	24	< 0.5	< 2	0.13	2	14	1.23	< 10	< 1
MAN543	< 2	< 5	< 5	< 0.2	< 0.5	4	272	< 1	8	6	20	1.20	< 2	< 10	43	< 0.5	< 2	0.52	4	23	1.18	< 10	< 1
MAN544	< 2	< 5	< 5	< 0.2	< 0.5	2	135	< 1	6	4	18	1.05	< 2	< 10	39	< 0.5	< 2	0.34	3	18	1.00	< 10	< 1
MAN545	3	< 5	< 5	< 0.2	< 0.5	21	266	1	10	3	17	1.45	< 2	< 10	55	< 0.5	< 2	1.20	5	20	1.01	< 10	< 1
MAN546	< 2	< 5	< 5	< 0.2	< 0.5	55	672	1	22	6	19	1.94	4	< 10	61	< 0.5	< 2	1.05	12	26	1.55	< 10	< 1
MAN547	< 2	< 5	< 5	< 0.2	< 0.5	7	81	< 1	5	3	9	0.78	< 2	< 10	20	< 0.5	< 2	0.20	3	16	0.85	< 10	< 1
MAN548	< 2	< 5	< 5	< 0.2	< 0.5	3	55	< 1	< 1	6	9	0.55	< 2	< 10	29	< 0.5	< 2	0.15	< 1	7	0.40	< 10	< 1
MAN549	< 2	< 5	< 5	< 0.2	< 0.5	42	145	< 1	31	11	28	1.48	< 2	< 10	41	< 0.5	< 2	0.20	11	22	1.14	< 10	< 1
MAN550	< 2	< 5	< 5	< 0.2	< 0.5	4	78	< 1	1	6	10	0.55	< 2	< 10	27	< 0.5	< 2	0.14	1	9	0.52	< 10	< 1
MAN551	< 2	< 5	< 5	< 0.2	< 0.5	12	94	< 1	4	11	23	0.76	< 2	< 10	29	< 0.5	< 2	0.20	2	11	0.64	< 10	< 1
MAN552	< 2	< 5	< 5	< 0.2	< 0.5	8	159	< 1	14	7	30	1.65	2	< 10	43	< 0.5	< 2	0.20	6	21	1.80	< 10	< 1
MAN553	< 2	< 5	< 5	< 0.2	< 0.5	9	70	< 1	2	9	16	0.75	< 2	< 10	33	< 0.5	< 2	0.19	2	9	0.67	< 10	< 1
MAN554	< 2	< 5	< 5	< 0.2	< 0.5	2	54	< 1	< 1	7	9	0.48	< 2	< 10	23	< 0.5	< 2	0.13	< 1	7	0.37	< 10	< 1
MAN555	< 2	< 5	< 5	< 0.2	< 0.5	1	59	< 1	2	5	10	0.61	< 2	< 10	22	< 0.5	< 2	0.14	1	8	0.53	< 10	< 1
MAN556	< 2	< 5	< 5	< 0.2	< 0.5	3	74	1	6	5	16	1.14	2	< 10	29	< 0.5	< 2	0.15	2	20	1.67	< 10	< 1
MAN557	< 2	< 5	< 5	< 0.2	< 0.5	6	77	< 1	< 1	9	14	0.42	< 2	< 10	52	< 0.5	< 2	0.23	1	6	0.37	< 10	< 1
MAN558	< 2	< 5	< 5	< 0.2	< 0.5	5	111	< 1	6	5	16	1.13	< 2	< 10	36	< 0.5	< 2	0.59	3	18	1.00	< 10	< 1
MAN559	< 2	< 5	< 5	< 0.2	< 0.5	2	138	< 1	6	4	15	0.80	< 2	< 10	29	< 0.5	< 2	0.30	3	17	0.98	< 10	< 1
MAN560	14	< 5	< 5	< 0.2	< 0.5	8	445	< 1	8	6	17	1.03	< 2	< 10	50	< 0.5	< 2	0.54	5	19	1.07	< 10	< 1
MAN561	2	< 5	< 5	< 0.2	< 0.5	20	349	< 1	11	10	20	0.82	< 2	< 10	37	< 0.5	< 2	1.27	5	14	0.72	< 10	< 1
MAN562	5	5	< 5	< 0.2	0.8	31	468	< 1	4	10	30	0.28	< 2	< 10	60	< 0.5	< 2	3.32	5	4	0.26	< 10	< 1
MAN563	< 2	< 5	< 5	< 0.2	0.5	13	345	< 1	2	9	27	0.17	3	< 10	57	< 0.5	< 2	2.50	3	2	0.20	< 10	< 1
MAN564	< 2	< 5	< 5	< 0.2	< 0.5	40	86	1	17	6	16	3.10	3	< 10	42	< 0.5	< 2	0.17	5	30	2.11	< 10	< 1
MAN565	< 2	< 5	< 5	< 0.2	< 0.5	7	60	2	4	5	9	1.09	< 2	< 10	27	< 0.5	< 2	0.26	1	11	0.64	< 10	< 1
MAN566	< 2	< 5	< 5	< 0.2	< 0.5	18	45	< 1	< 1	6	6	0.90	< 2	< 10	25	< 0.5	< 2	0.09	< 1	14	0.99	< 10	< 1
MAN567	3	< 5	< 5	< 0.2	< 0.5	34	58	2	8	8	11	1.36	< 2	< 10	33	< 0.5	< 2	0.42	3	13	0.61	< 10	< 1
MAN568	17	< 5	< 5	< 0.2	< 0.5	15	41	< 1	5	19	11	0.46	< 2	< 10	53	< 0.5	< 2	0.32	1	6	0.25	< 10	< 1
MAN569	< 2	< 5	< 5	< 0.2	< 0.5	7	64	1	14	10	14	1.13	< 2	< 10	35	< 0.5	< 2	0.40	3	8	0.90	< 10	< 1

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN570	< 2	< 5	< 5	< 0.2	< 0.5	103	51	6	20	18	21	1.13	< 2	< 10	24	< 0.5	< 2	0.22	6	10	0.93	< 10	< 1
MAN571	< 2	< 5	< 5	< 0.2	< 0.5	35	79	1	23	3	11	0.99	< 2	< 10	21	< 0.5	< 2	0.18	4	18	0.97	< 10	< 1
MAN572	< 2	< 5	6	< 0.2	< 0.5	16	45	< 1	5	13	10	0.54	< 2	< 10	43	< 0.5	< 2	0.18	2	8	0.42	< 10	< 1
MAN573	6	6	< 5	< 0.2	< 0.5	26	38	1	7	15	19	0.58	3	< 10	54	< 0.5	< 2	0.33	3	4	0.59	< 10	< 1
MAN574	4	< 5	< 5	< 0.2	< 0.5	11	45	< 1	6	4	8	0.89	< 2	< 10	26	< 0.5	< 2	0.15	2	12	0.48	< 10	< 1
MAN575	< 2	< 5	< 5	< 0.2	< 0.5	10	75	< 1	7	4	11	0.73	< 2	< 10	22	< 0.5	< 2	0.19	3	13	0.74	< 10	< 1
MAN576	< 2	< 5	< 5	< 0.2	< 0.5	3	54	< 1	2	6	11	0.28	< 2	< 10	14	< 0.5	< 2	0.19	1	9	0.41	< 10	< 1
MAN577	< 2	< 5	< 5	< 0.2	< 0.5	14	58	< 1	51	4	9	1.37	< 2	< 10	17	< 0.5	< 2	0.20	7	19	1.13	< 10	< 1
MAN578	< 2	< 5	< 5	< 0.2	< 0.5	8	43	< 1	17	9	10	0.33	< 2	< 10	31	< 0.5	< 2	0.16	6	5	0.42	< 10	< 1
MAN579	< 2	< 5	< 5	< 0.2	< 0.5	55	63	1	119	10	22	1.24	2	< 10	38	< 0.5	< 2	0.20	18	18	0.97	< 10	< 1
MAN580	< 2	< 5	< 5	< 0.2	< 0.5	31	152	< 1	112	6	10	1.35	< 2	< 10	30	< 0.5	< 2	0.41	18	15	1.24	< 10	< 1
MR1	< 2	< 5	< 5	< 0.2	< 0.5	1	57	< 1	2	5	14	0.89	< 2	< 10	21	< 0.5	< 2	0.10	1	13	0.95	< 10	< 1
MR2	< 2	< 5	< 5	< 0.2	< 0.5	3	87	< 1	5	6	20	1.64	< 2	< 10	31	< 0.5	< 2	0.14	4	25	1.94	< 10	< 1
MR3	< 2	< 5	< 5	< 0.2	< 0.5	4	242	< 1	11	8	34	1.67	4	< 10	84	< 0.5	< 2	0.28	5	27	1.98	< 10	< 1
MR4	< 2	< 5	< 5	< 0.2	< 0.5	2	76	< 1	5	6	9	0.80	< 2	< 10	25	< 0.5	< 2	0.52	2	20	1.13	< 10	< 1
MR5	< 2	< 5	< 5	< 0.2	< 0.5	3	66	1	6	4	10	1.35	< 2	< 10	26	< 0.5	< 2	0.17	2	24	1.48	< 10	< 1
MR6	< 2	< 5	< 5	< 0.2	< 0.5	5	108	< 1	10	5	15	1.60	< 2	< 10	42	< 0.5	< 2	0.18	5	28	1.48	< 10	< 1
MR7	< 2	< 5	< 5	< 0.2	< 0.5	1	62	< 1	1	6	11	0.67	2	< 10	23	< 0.5	< 2	0.12	< 1	11	0.73	< 10	< 1
MR8	< 2	< 5	< 5	< 0.2	< 0.5	2	58	< 1	3	5	11	1.19	< 2	< 10	32	< 0.5	< 2	0.11	2	15	0.96	< 10	< 1
MR9	< 2	< 5	< 5	< 0.2	< 0.5	5	115	1	11	4	13	1.25	< 2	< 10	36	< 0.5	< 2	0.42	5	27	1.30	< 10	< 1

Results

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN1	0.05	13	0.17	0.032	0.021	0.02	< 2	2	13	0.08	< 1	< 2	< 10	30	< 10	3	2
MAN2	0.05	11	0.24	0.031	0.045	0.03	< 2	2	15	0.11	3	< 2	< 10	48	< 10	3	4
MAN3	0.08	12	0.27	0.027	0.021	0.02	< 2	2	16	0.13	< 1	< 2	< 10	45	< 10	4	5
MAN4	0.05	26	0.26	0.036	0.013	< 0.01	< 2	3	17	0.10	< 1	< 2	< 10	25	< 10	10	4
MAN5	0.04	< 10	0.21	0.024	0.007	< 0.01	< 2	1	11	0.14	1	< 2	< 10	37	< 10	2	4
MAN6	0.04	< 10	0.51	0.030	0.008	< 0.01	< 2	2	7	0.14	< 1	< 2	< 10	42	< 10	2	3
MAN7	0.03	10	0.15	0.032	0.008	< 0.01	< 2	1	11	0.10	2	< 2	< 10	40	< 10	2	5
MAN8	0.04	14	0.15	0.020	0.011	0.01	< 2	2	11	0.09	< 1	< 2	< 10	28	< 10	4	8
MAN9	0.06	20	0.28	0.035	0.036	0.03	< 2	3	19	0.09	2	< 2	< 10	24	< 10	8	3
MAN10	0.04	17	0.27	0.038	0.053	0.05	< 2	3	17	0.07	< 1	< 2	< 10	28	< 10	8	1
MAN11	0.05	12	0.26	0.031	0.017	0.02	< 2	3	12	0.15	< 1	< 2	< 10	50	< 10	4	5
MAN12	0.04	12	0.14	0.027	0.008	< 0.01	< 2	2	13	0.19	1	< 2	< 10	36	< 10	4	4
MAN13	0.04	< 10	0.19	0.043	0.008	< 0.01	< 2	2	10	0.17	2	< 2	< 10	30	< 10	5	2
MAN14	0.06	20	0.26	0.030	0.049	0.02	< 2	2	20	0.09	< 1	< 2	< 10	28	< 10	8	2
MAN15	0.04	11	0.09	0.033	0.006	0.01	< 2	1	12	0.10	< 1	< 2	< 10	23	< 10	2	5
MAN16	0.06	11	0.15	0.020	0.028	0.02	< 2	2	14	0.11	< 1	< 2	< 10	38	< 10	3	5
MAN17	0.03	13	0.05	0.018	0.005	< 0.01	< 2	< 1	11	0.08	< 1	< 2	< 10	20	< 10	2	4
MAN18	0.03	12	0.06	0.019	0.011	< 0.01	< 2	< 1	12	0.06	1	< 2	< 10	19	< 10	2	2
MAN19	0.03	13	0.07	0.023	0.011	0.01	< 2	1	10	0.10	< 1	< 2	< 10	24	< 10	3	1
MAN20	0.05	12	0.13	0.023	0.015	0.01	< 2	2	14	0.11	1	< 2	< 10	39	< 10	2	3
MAN21	0.03	12	0.07	0.022	0.005	< 0.01	< 2	1	12	0.09	< 1	< 2	< 10	21	< 10	2	3
MAN22	0.04	14	0.07	0.021	0.016	0.02	< 2	< 1	10	0.04	< 1	< 2	< 10	16	< 10	2	< 1
MAN23	0.05	12	0.16	0.025	0.018	0.01	< 2	2	13	0.10	< 1	< 2	< 10	34	< 10	3	4
MAN24	0.04	14	0.17	0.026	0.009	< 0.01	< 2	2	15	0.10	< 1	< 2	< 10	28	< 10	4	5
MAN25	0.03	10	0.16	0.020	0.017	0.02	< 2	2	10	0.11	< 1	< 2	< 10	42	< 10	3	4
MAN26	0.02	12	0.08	0.020	0.007	< 0.01	< 2	1	9	0.11	1	< 2	< 10	34	< 10	3	3
MAN27	0.04	12	0.15	0.023	0.006	< 0.01	< 2	2	14	0.10	< 1	< 2	< 10	26	< 10	3	6
MAN28	0.04	13	0.14	0.021	0.007	< 0.01	< 2	2	14	0.10	< 1	< 2	< 10	28	< 10	3	5
MAN29	0.04	13	0.17	0.029	0.033	0.02	< 2	1	13	0.08	< 1	< 2	< 10	29	< 10	4	2
MAN30	0.04	14	0.19	0.032	0.050	0.01	< 2	2	14	0.08	< 1	< 2	< 10	27	< 10	5	3
MAN31	0.03	11	0.08	0.025	0.008	< 0.01	< 2	1	11	0.07	1	< 2	< 10	21	< 10	2	< 1
MAN32	0.04	12	0.20	0.027	0.024	0.01	< 2	2	14	0.09	< 1	< 2	< 10	29	< 10	4	3
MAN33	0.06	12	0.25	0.031	0.029	0.01	< 2	2	16	0.10	< 1	< 2	< 10	34	< 10	4	3
MAN34	0.05	14	0.23	0.027	0.035	0.02	< 2	2	13	0.09	< 1	< 2	< 10	28	< 10	5	4
MAN35	0.04	12	0.14	0.023	0.015	0.02	< 2	2	11	0.10	2	< 2	< 10	33	< 10	3	3
MAN36	0.03	< 10	0.28	0.025	0.074	0.35	< 2	< 1	33	0.02	5	3	< 10	7	< 10	4	2
MAN37	0.04	< 10	0.21	0.030	0.017	0.02	< 2	2	11	0.09	< 1	< 2	< 10	37	< 10	3	4
MAN38	0.04	13	0.10	0.021	0.009	< 0.01	< 2	1	14	0.08	< 1	< 2	< 10	20	< 10	3	3
MAN39	0.05	18	0.34	0.033	0.038	0.04	< 2	3	17	0.11	< 1	< 2	< 10	39	< 10	7	3
MAN40	0.04	12	0.22	0.026	0.010	< 0.01	< 2	2	13	0.11	< 1	< 2	< 10	33	< 10	4	8
MAN41	0.06	12	0.24	0.024	0.024	0.01	< 2	2	13	0.11	< 1	< 2	< 10	35	< 10	4	5
MAN42	0.02	12	0.06	0.021	0.007	< 0.01	< 2	< 1	9	0.05	< 1	< 2	< 10	11	< 10	2	1
MAN43	0.05	13	0.30	0.028	0.016	< 0.01	< 2	2	14	0.10	< 1	< 2	< 10	26	< 10	4	6
MAN44	0.03	23	0.36	0.032	0.055	0.07	< 2	2	25	0.05	< 1	< 2	< 10	30	< 10	9	2
MAN45	0.05	14	0.25	0.031	0.018	< 0.01	< 2	2	16	0.10	2	< 2	< 10	28	< 10	5	3
MAN46	0.03	< 10	0.19	0.030	0.005	< 0.01	< 2	2	12	0.10	< 1	< 2	< 10	22	< 10	3	3
MAN47	0.07	13	0.31	0.031	0.023	0.01	< 2	3	15	0.15	1	< 2	< 10	44	< 10	4	6
MAN48	0.06	15	0.27	0.034	0.018	0.01	< 2	2	18	0.09	< 1	< 2	< 10	27	< 10	5	2
MAN49	0.07	19	0.34	0.039	0.023	0.02	< 2	3	19	0.09	1	< 2	< 10	27	< 10	6	2

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN50	0.05	15	0.23	0.028	0.028	0.01	< 2	2	16	0.10	1	< 2	< 10	31	< 10	5	5
MAN51	0.05	14	0.25	0.031	0.030	0.03	< 2	2	13	0.10	< 1	< 2	< 10	38	< 10	3	3
MAN52	0.06	11	0.22	0.027	0.013	0.01	< 2	2	15	0.10	< 1	< 2	< 10	32	< 10	3	2
MAN53	0.04	12	0.15	0.031	0.011	0.01	< 2	2	13	0.09	< 1	< 2	< 10	29	< 10	2	1
MAN54	0.05	10	0.29	0.025	0.024	0.02	< 2	2	12	0.11	< 1	< 2	< 10	42	< 10	3	4
MAN55	0.04	11	0.48	0.035	0.016	0.02	< 2	2	14	0.07	1	< 2	< 10	22	< 10	4	2
MAN56	0.04	21	0.23	0.030	0.100	0.15	< 2	< 1	31	0.02	4	< 2	< 10	16	< 10	10	1
MAN57	0.03	< 10	0.08	0.026	0.021	0.03	< 2	< 1	11	0.02	< 1	< 2	< 10	12	< 10	2	< 1
MAN58	0.02	18	0.22	0.023	0.161	0.28	< 2	< 1	41	< 0.01	< 1	< 2	< 10	8	< 10	8	3
MAN59	0.04	< 10	0.12	0.023	0.060	0.16	< 2	< 1	24	< 0.01	< 1	< 2	< 10	7	< 10	2	2
MAN60	0.07	17	0.38	0.034	0.029	< 0.01	< 2	2	15	0.12	< 1	< 2	< 10	30	< 10	5	3
MAN61	0.07	11	0.23	0.028	0.015	0.01	< 2	2	13	0.12	2	< 2	< 10	39	< 10	3	5
MAN62	0.05	12	0.11	0.035	0.008	< 0.01	< 2	1	14	0.11	2	< 2	< 10	30	< 10	3	4
MAN63	0.06	71	0.41	0.049	0.078	0.08	< 2	3	28	0.04	< 1	< 2	< 10	29	< 10	23	4
MAN64	0.06	32	0.26	0.030	0.074	0.07	< 2	2	27	0.04	1	< 2	< 10	19	< 10	17	2
MAN65	0.02	< 10	0.30	0.022	0.091	0.23	< 2	< 1	45	< 0.01	4	< 2	< 10	11	< 10	4	2
MAN66	0.06	13	0.17	0.022	0.019	0.01	< 2	2	14	0.12	1	< 2	< 10	37	< 10	4	5
MAN67	0.07	< 10	0.29	0.059	0.020	0.04	2	3	12	0.22	< 1	< 2	< 10	103	< 10	2	3
MAN68	0.04	10	0.22	0.038	0.064	0.04	< 2	3	10	0.09	< 1	< 2	< 10	42	< 10	3	7
MAN69	0.04	< 10	0.19	0.033	0.013	< 0.01	< 2	2	12	0.09	< 1	< 2	< 10	32	< 10	2	3
MAN70	0.01	< 10	0.25	0.024	0.038	0.10	< 2	< 1	38	< 0.01	< 1	< 2	< 10	9	< 10	1	< 1
MAN71	0.02	< 10	0.36	0.030	0.064	0.19	< 2	< 1	55	< 0.01	< 1	< 2	< 10	8	< 10	2	2
MAN72	0.03	< 10	0.32	0.029	0.055	0.19	< 2	< 1	47	< 0.01	2	< 2	< 10	9	< 10	1	1
MAN73	0.03	20	0.33	0.024	0.151	0.19	< 2	< 1	49	< 0.01	< 1	< 2	< 10	6	< 10	10	3
MAN74	0.08	23	0.23	0.023	0.036	0.03	< 2	2	19	0.06	< 1	< 2	< 10	20	< 10	7	1
MAN75	0.06	12	0.13	0.022	0.012	< 0.01	< 2	1	12	0.09	< 1	< 2	< 10	29	< 10	3	3
MAN76	0.03	< 10	0.04	0.020	0.006	< 0.01	< 2	< 1	9	0.06	< 1	< 2	< 10	17	< 10	2	< 1
MAN77	0.05	12	0.12	0.022	0.006	< 0.01	< 2	2	14	0.09	< 1	< 2	< 10	26	< 10	3	5
MAN78	0.06	13	0.25	0.040	0.011	< 0.01	< 2	2	15	0.09	2	< 2	< 10	27	< 10	4	5
MAN79	0.06	17	0.30	0.034	0.024	< 0.01	< 2	2	18	0.11	< 1	< 2	< 10	28	< 10	6	6
MAN80	0.04	< 10	0.19	0.029	0.016	0.01	< 2	2	10	0.14	1	< 2	< 10	41	< 10	3	2
MAN81	0.04	14	0.15	0.025	0.014	0.02	< 2	2	15	0.11	2	< 2	< 10	33	< 10	4	4
MAN82	0.04	13	0.25	0.033	0.036	0.02	< 2	2	12	0.08	< 1	< 2	< 10	32	< 10	4	3
MAN83	0.04	12	0.14	0.031	0.030	0.03	< 2	1	10	0.08	< 1	< 2	< 10	40	< 10	3	2
MAN84	0.05	15	0.19	0.028	0.012	0.01	< 2	2	15	0.11	< 1	< 2	< 10	31	< 10	4	3
MAN85	0.03	< 10	0.06	0.029	0.029	0.05	< 2	< 1	8	0.04	< 1	< 2	< 10	12	< 10	2	< 1
MAN86	0.05	15	0.21	0.025	0.009	< 0.01	< 2	2	15	0.13	< 1	< 2	< 10	30	< 10	4	4
MAN87	0.05	13	0.22	0.032	0.008	< 0.01	< 2	2	15	0.13	< 1	< 2	< 10	27	< 10	3	3
MAN88	0.04	12	0.08	0.022	0.011	< 0.01	< 2	1	14	0.08	< 1	< 2	< 10	22	< 10	3	2
MAN89	0.04	13	0.15	0.021	0.008	< 0.01	< 2	2	15	0.10	< 1	< 2	< 10	21	< 10	4	4
MAN90	0.04	13	0.07	0.021	0.008	< 0.01	< 2	1	14	0.08	< 1	< 2	< 10	17	< 10	3	1
MAN91	0.03	14	0.06	0.021	0.011	< 0.01	< 2	< 1	13	0.06	< 1	< 2	< 10	17	< 10	2	< 1
MAN92	0.06	16	0.23	0.028	0.040	< 0.01	< 2	3	14	0.09	< 1	< 2	< 10	24	< 10	7	6
MAN93	0.03	< 10	0.07	0.025	0.007	< 0.01	< 2	1	13	0.13	2	< 2	< 10	22	< 10	3	5
MAN94	0.03	12	0.04	0.021	0.007	< 0.01	< 2	< 1	10	0.05	< 1	< 2	< 10	12	< 10	2	1
MAN95	0.11	13	0.33	0.035	0.021	0.01	< 2	2	17	0.13	3	< 2	< 10	47	< 10	3	3
MAN96	0.04	12	0.05	0.020	0.006	< 0.01	< 2	1	10	0.09	< 1	< 2	< 10	25	< 10	2	5
MAN97	0.09	21	0.34	0.027	0.036	0.04	< 2	3	20	0.07	< 1	< 2	< 10	39	< 10	8	2
MAN98	0.05	11	0.07	0.020	0.014	< 0.01	< 2	1	11	0.09	< 1	< 2	< 10	31	< 10	2	3
MAN99	0.08	15	0.15	0.025	0.034	< 0.01	< 2	2	13	0.15	< 1	< 2	< 10	57	< 10	3	8

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN100	0.07	14	0.23	0.024	0.043	< 0.01	< 2	2	12	0.10	1	< 2	< 10	42	< 10	4	4
MAN101	0.09	15	0.27	0.027	0.059	0.01	< 2	3	12	0.12	< 1	< 2	< 10	50	< 10	4	5
MAN102	0.07	11	0.21	0.026	0.021	< 0.01	< 2	2	13	0.12	1	< 2	< 10	52	< 10	3	6
MAN103	0.07	12	0.21	0.025	0.025	0.01	< 2	2	12	0.12	< 1	< 2	< 10	46	< 10	3	5
MAN104	0.04	< 10	0.12	0.026	0.008	< 0.01	< 2	1	14	0.07	< 1	< 2	< 10	20	< 10	2	3
MAN105	0.09	45	0.35	0.028	0.039	0.06	< 2	3	16	0.09	< 1	< 2	< 10	36	< 10	13	3
MAN106	0.04	14	0.24	0.028	0.085	0.38	< 2	2	24	0.03	3	< 2	< 10	16	< 10	7	5
MAN107	0.05	18	0.29	0.027	0.077	0.17	< 2	2	19	0.05	< 1	< 2	< 10	26	< 10	8	2
MAN108	0.06	21	0.33	0.028	0.090	0.16	< 2	2	16	0.04	3	< 2	< 10	33	< 10	10	2
MAN109	0.05	26	0.25	0.039	0.138	0.36	< 2	2	21	0.03	5	< 2	< 10	33	< 10	14	5
MAN110	0.05	27	0.23	0.032	0.152	0.36	< 2	1	23	0.02	4	< 2	< 10	46	< 10	13	4
MAN111	0.05	26	0.27	0.027	0.116	0.32	< 2	2	20	0.03	2	< 2	< 10	37	< 10	12	4
MAN112	0.08	22	0.37	0.031	0.094	0.08	< 2	2	18	0.04	< 1	< 2	< 10	41	< 10	11	2
MAN113	0.02	< 10	0.22	0.041	0.065	0.28	< 2	< 1	35	< 0.01	6	< 2	< 10	4	< 10	1	2
MAN114	0.07	13	0.25	0.030	0.079	0.11	< 2	2	23	0.05	3	< 2	< 10	20	< 10	5	< 1
MAN115	0.02	< 10	0.24	0.039	0.046	0.23	< 2	< 1	33	< 0.01	3	< 2	< 10	5	< 10	2	2
MAN116	0.04	12	0.33	0.032	0.023	0.03	< 2	3	20	0.13	3	< 2	< 10	45	< 10	5	4
MAN117	0.02	< 10	0.18	0.039	0.075	0.25	< 2	< 1	49	< 0.01	3	< 2	< 10	10	< 10	3	3
MAN118	0.05	< 10	0.10	0.041	0.054	0.12	< 2	< 1	37	0.02	< 1	< 2	< 10	11	< 10	3	2
MAN119	0.06	11	0.25	0.043	0.028	0.02	< 2	3	14	0.10	< 1	< 2	< 10	50	< 10	3	4
MAN120	0.05	11	0.19	0.029	0.023	0.02	< 2	2	12	0.10	< 1	< 2	< 10	40	< 10	3	3
MAN121	0.04	19	0.25	0.031	0.031	0.03	< 2	3	8	0.14	< 1	2	< 10	73	< 10	6	5
MAN122	0.05	12	0.14	0.026	0.018	0.01	< 2	2	14	0.11	< 1	< 2	< 10	40	< 10	3	3
MAN123	0.05	11	0.16	0.024	0.040	0.02	< 2	3	11	0.11	< 1	< 2	< 10	41	< 10	4	5
MAN124	0.05	12	0.15	0.025	0.025	0.01	< 2	2	14	0.11	< 1	< 2	< 10	39	< 10	3	4
MAN125	0.06	< 10	0.17	0.021	0.052	0.01	< 2	2	13	0.09	< 1	< 2	< 10	34	< 10	2	3
MAN126	0.04	12	0.13	0.019	0.023	0.01	< 2	2	12	0.09	1	< 2	< 10	34	< 10	3	3
MAN127	0.05	13	0.19	0.024	0.031	0.03	< 2	2	10	0.08	< 1	< 2	< 10	34	< 10	3	6
MAN128	0.05	14	0.17	0.024	0.027	0.02	< 2	2	12	0.10	< 1	< 2	< 10	42	< 10	3	7
MAN129	0.06	15	0.22	0.024	0.039	0.02	< 2	3	11	0.09	< 1	< 2	< 10	33	< 10	4	4
MAN130	0.03	< 10	0.07	0.034	0.042	0.14	< 2	< 1	25	< 0.01	4	< 2	< 10	3	< 10	< 1	< 1
MAN131	0.03	< 10	0.24	0.039	0.075	0.21	< 2	< 1	47	< 0.01	3	< 2	< 10	3	< 10	< 1	2
MAN132	0.01	< 10	0.28	0.038	0.044	0.32	< 2	< 1	50	< 0.01	1	< 2	< 10	2	< 10	< 1	2
MAN133	0.01	< 10	0.25	0.040	0.049	0.28	< 2	< 1	42	< 0.01	< 1	< 2	< 10	4	< 10	1	2
MAN134	0.02	16	0.23	0.043	0.110	0.28	< 2	< 1	50	< 0.01	6	< 2	< 10	14	< 10	6	4
MAN135	0.04	< 10	0.10	0.020	0.008	< 0.01	< 2	1	10	0.09	< 1	< 2	< 10	34	< 10	2	4
MAN136	0.05	12	0.21	0.025	0.023	0.02	< 2	2	11	0.10	2	< 2	< 10	43	< 10	3	7
MAN137	0.06	17	0.28	0.027	0.019	< 0.01	< 2	2	14	0.09	< 1	< 2	< 10	35	< 10	4	4
MAN138	0.02	18	0.34	0.030	0.065	0.18	< 2	< 1	61	< 0.01	< 1	< 2	< 10	5	< 10	10	2
MAN139	0.03	< 10	0.25	0.025	0.050	0.16	< 2	< 1	34	< 0.01	2	< 2	< 10	4	< 10	1	1
MAN140	0.04	< 10	0.28	0.033	0.063	0.24	< 2	< 1	55	< 0.01	< 1	< 2	< 10	8	< 10	2	1
MAN141	0.02	67	0.18	0.024	0.154	0.26	< 2	2	39	< 0.01	6	< 2	< 10	15	< 10	22	6
MAN142	0.05	23	0.21	0.024	0.024	0.02	< 2	2	14	0.05	< 1	< 2	< 10	20	< 10	8	1
MAN143	0.04	< 10	0.09	0.019	0.010	< 0.01	< 2	< 1	8	0.08	< 1	< 2	< 10	28	< 10	1	2
MAN144	0.05	12	0.78	0.025	0.039	0.02	< 2	1	23	0.05	1	< 2	< 10	19	< 10	4	2
MAN145	0.05	13	0.22	0.030	0.022	0.02	< 2	2	12	0.04	3	< 2	< 10	22	< 10	3	< 1
MAN146	0.06	14	0.25	0.042	0.034	0.03	< 2	2	12	0.08	< 1	< 2	< 10	44	< 10	4	2
MAN147	0.04	< 10	0.17	0.106	0.026	0.03	< 2	< 1	14	0.02	2	2	< 10	19	< 10	2	< 1
MAN148	0.04	18	0.20	0.024	0.018	0.02	< 2	2	12	0.10	2	< 2	< 10	38	< 10	5	3
MAN149	0.04	11	0.14	0.034	0.017	0.02	< 2	2	9	0.06	1	< 2	< 10	24	< 10	3	< 1

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN150	0.03	11	0.05	0.018	0.007	< 0.01	< 2	< 1	9	0.05	< 1	< 2	< 10	21	< 10	2	< 1
MAN151	0.04	13	0.09	0.019	0.021	< 0.01	< 2	1	9	0.08	< 1	< 2	< 10	31	< 10	2	2
MAN152	0.06	< 10	0.12	0.027	0.052	0.05	< 2	< 1	10	0.01	< 1	< 2	< 10	20	< 10	3	< 1
MAN153	0.05	15	0.22	0.028	0.019	< 0.01	< 2	2	12	0.12	2	< 2	< 10	30	< 10	5	4
MAN154	0.04	< 10	0.09	0.029	0.013	0.01	< 2	2	4	0.13	< 1	< 2	< 10	35	< 10	2	1
MAN155	0.03	10	0.12	0.022	0.009	< 0.01	< 2	< 1	7	0.07	< 1	< 2	< 10	16	< 10	2	1
MAN156	0.02	< 10	0.10	0.040	0.037	0.16	< 2	< 1	20	< 0.01	2	2	< 10	3	< 10	< 1	< 1
MAN158	0.05	11	0.17	0.022	0.019	0.02	< 2	2	9	0.11	< 1	< 2	< 10	43	< 10	3	4
MAN159	0.02	< 10	0.07	0.021	0.020	< 0.01	< 2	< 1	4	0.04	2	< 2	< 10	19	< 10	1	1
MAN160	0.03	14	0.09	0.020	0.010	0.01	< 2	1	14	0.06	< 1	< 2	< 10	14	< 10	3	< 1
MAN161	0.02	23	0.17	0.026	0.065	0.27	< 2	1	36	< 0.01	1	< 2	< 10	8	< 10	6	3
MAN162	0.02	< 10	0.21	0.036	0.099	0.29	< 2	< 1	44	< 0.01	5	< 2	< 10	4	< 10	2	3
MAN164	0.02	< 10	0.25	0.031	0.060	0.44	< 2	< 1	38	< 0.01	3	< 2	< 10	2	< 10	< 1	1
MAN165	0.02	< 10	0.26	0.031	0.073	0.42	< 2	< 1	44	< 0.01	2	< 2	< 10	2	< 10	< 1	2
MAN166	0.02	< 10	0.26	0.080	0.058	0.41	< 2	< 1	35	< 0.01	< 1	< 2	< 10	2	< 10	< 1	< 1
MAN167	0.02	< 10	0.30	0.026	0.072	0.37	< 2	< 1	41	< 0.01	< 1	< 2	< 10	1	< 10	< 1	< 1
MAN168	0.02	< 10	0.30	0.028	0.057	0.29	< 2	< 1	45	< 0.01	< 1	< 2	< 10	2	< 10	< 1	1
MAN169	0.02	< 10	0.26	0.037	0.091	0.49	< 2	< 1	38	< 0.01	< 1	< 2	< 10	1	< 10	< 1	< 1
MAN170	0.02	< 10	0.25	0.036	0.082	0.47	< 2	< 1	36	< 0.01	< 1	< 2	< 10	2	< 10	< 1	< 1
MAN171	0.01	< 10	0.26	0.022	0.055	0.46	< 2	< 1	41	< 0.01	< 1	< 2	< 10	2	< 10	< 1	2
MAN172	0.02	< 10	0.26	0.033	0.080	0.57	< 2	< 1	36	< 0.01	1	< 2	< 10	1	< 10	< 1	1
MAN173	0.04	< 10	0.22	0.024	0.091	0.19	4	< 1	98	< 0.01	4	9	< 10	2	< 10	1	5
MAN174	0.02	< 10	0.28	0.034	0.067	0.20	< 2	< 1	42	< 0.01	< 1	< 2	< 10	2	< 10	< 1	< 1
MAN191	0.02	< 10	0.26	0.032	0.044	0.21	< 2	< 1	37	< 0.01	< 1	< 2	< 10	2	< 10	< 1	1
MAN192	0.03	< 10	0.27	0.027	0.059	0.19	< 2	< 1	38	< 0.01	2	< 2	< 10	3	< 10	< 1	< 1
MAN193	0.02	< 10	0.25	0.024	0.064	0.23	< 2	< 1	36	< 0.01	< 1	< 2	< 10	2	< 10	< 1	< 1
MAN194	0.01	< 10	0.23	0.026	0.060	0.27	< 2	< 1	34	< 0.01	< 1	< 2	< 10	2	< 10	< 1	1
MAN195	0.01	< 10	0.24	0.020	0.077	0.30	< 2	< 1	32	< 0.01	2	< 2	< 10	2	< 10	< 1	< 1
MAN196	0.02	< 10	0.28	0.033	0.080	0.29	< 2	< 1	35	< 0.01	< 1	< 2	< 10	3	< 10	< 1	1
MAN197	< 0.01	< 10	0.29	0.023	0.047	0.27	< 2	< 1	40	< 0.01	3	< 2	< 10	2	< 10	1	1
MAN198	0.02	< 10	0.19	0.022	0.076	0.23	< 2	< 1	32	< 0.01	1	< 2	< 10	4	< 10	1	1
MAN199	0.02	< 10	0.29	0.020	0.078	0.22	< 2	< 1	39	< 0.01	5	< 2	< 10	2	< 10	< 1	2
MAN201	0.02	< 10	0.23	0.020	0.070	0.21	< 2	< 1	33	< 0.01	< 1	< 2	< 10	4	< 10	1	1
MAN202	0.03	< 10	0.20	0.026	0.091	0.24	< 2	< 1	35	< 0.01	2	< 2	< 10	8	< 10	2	2
MAN203	0.02	< 10	0.18	0.026	0.098	0.28	< 2	< 1	34	< 0.01	1	< 2	< 10	5	< 10	3	2
MAN204	0.02	12	0.18	0.027	0.067	0.27	< 2	< 1	45	< 0.01	2	< 2	< 10	6	< 10	5	2
MAN205	0.01	14	0.20	0.022	0.064	0.23	< 2	< 1	46	< 0.01	< 1	< 2	< 10	10	< 10	7	3
MAN206	0.03	12	0.21	0.022	0.047	0.04	< 2	1	22	0.04	1	< 2	< 10	13	< 10	6	1
MAN207	0.04	11	0.17	0.022	0.015	< 0.01	< 2	2	13	0.06	1	< 2	< 10	17	< 10	4	1
MAN208	0.03	13	0.06	0.019	0.008	< 0.01	< 2	1	9	0.07	< 1	< 2	< 10	14	< 10	3	2
MAN209	0.02	< 10	0.26	0.031	0.044	0.15	< 2	< 1	39	< 0.01	5	< 2	< 10	3	< 10	< 1	1
MAN210	< 0.01	< 10	0.24	0.021	0.033	0.15	< 2	< 1	43	< 0.01	2	< 2	< 10	7	< 10	2	2
MAN211	< 0.01	< 10	0.21	0.022	0.028	0.16	< 2	< 1	40	< 0.01	3	< 2	< 10	2	< 10	< 1	1
MAN212	< 0.01	< 10	0.20	0.023	0.038	0.18	< 2	< 1	37	< 0.01	1	< 2	< 10	2	< 10	< 1	< 1
MAN213	0.03	< 10	0.16	0.022	0.059	0.17	< 2	< 1	41	< 0.01	< 1	< 2	< 10	5	< 10	2	4
MAN214	0.04	14	0.13	0.020	0.022	0.02	< 2	1	11	0.06	< 1	< 2	< 10	23	< 10	4	1
MAN215	0.02	< 10	0.18	0.026	0.070	0.20	< 2	< 1	32	< 0.01	< 1	< 2	< 10	8	< 10	2	2
MAN216	0.03	< 10	0.36	0.025	0.071	0.15	< 2	< 1	17	0.05	2	< 2	< 10	16	< 10	1	2
MAN217	0.03	< 10	0.33	0.030	0.078	0.13	< 2	< 1	39	< 0.01	2	3	< 10	3	< 10	1	< 1
MAN218	0.03	< 10	0.28	0.056	0.059	0.31	< 2	< 1	35	< 0.01	5	< 2	< 10	3	< 10	< 1	< 1

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN219	0.02	< 10	0.23	0.024	0.044	0.20	< 2	< 1	35	< 0.01	< 1	< 2	< 10	3	< 10	< 1	1
MAN220	0.02	< 10	0.26	0.062	0.055	0.26	< 2	< 1	38	< 0.01	3	< 2	< 10	4	< 10	1	2
MAN221	0.02	< 10	0.29	0.025	0.053	0.27	< 2	< 1	43	< 0.01	7	< 2	< 10	2	< 10	< 1	2
MAN222	0.01	< 10	0.28	0.025	0.053	0.26	< 2	< 1	41	< 0.01	2	< 2	< 10	2	< 10	< 1	1
MAN223	< 0.01	< 10	0.21	0.026	0.031	0.16	< 2	< 1	29	< 0.01	3	< 2	< 10	1	< 10	< 1	< 1
MAN224	0.02	< 10	0.24	0.036	0.056	0.24	< 2	< 1	39	< 0.01	< 1	< 2	< 10	2	< 10	< 1	2
MAN225	0.01	< 10	0.21	0.028	0.050	0.21	< 2	< 1	29	< 0.01	2	< 2	< 10	2	< 10	< 1	< 1
MAN226	0.02	< 10	0.27	0.023	0.049	0.20	< 2	< 1	34	< 0.01	< 1	< 2	< 10	2	< 10	< 1	1
MAN227	0.02	< 10	0.19	0.023	0.072	0.23	< 2	< 1	25	< 0.01	2	< 2	< 10	2	< 10	1	1
MAN228	0.03	< 10	0.25	0.038	0.075	0.14	< 2	< 1	30	< 0.01	1	< 2	< 10	3	< 10	< 1	< 1
MAN229	0.03	< 10	0.11	0.027	0.091	0.23	< 2	< 1	33	< 0.01	< 1	< 2	< 10	7	< 10	3	2
MAN230	< 0.01	< 10	0.18	0.028	0.021	0.16	< 2	< 1	45	< 0.01	3	< 2	< 10	2	< 10	< 1	< 1
MAN231	0.01	< 10	0.16	0.031	0.055	0.20	< 2	< 1	36	< 0.01	2	< 2	< 10	10	< 10	2	1
MAN232	0.02	< 10	0.23	0.029	0.095	0.27	< 2	< 1	35	< 0.01	3	< 2	< 10	3	< 10	1	1
MAN233	0.02	< 10	0.24	0.028	0.057	0.21	< 2	< 1	37	< 0.01	2	< 2	< 10	2	< 10	< 1	1
MAN234	0.01	< 10	0.24	0.025	0.042	0.18	< 2	< 1	31	< 0.01	< 1	< 2	< 10	2	< 10	< 1	< 1
MAN235	0.02	< 10	0.29	0.027	0.042	0.16	< 2	< 1	43	< 0.01	< 1	< 2	< 10	3	< 10	< 1	1
MAN236	0.01	< 10	0.26	0.023	0.040	0.29	< 2	< 1	38	< 0.01	< 1	< 2	< 10	4	< 10	2	2
MAN237	0.01	< 10	0.25	0.025	0.058	0.38	< 2	< 1	36	< 0.01	< 1	< 2	< 10	2	< 10	< 1	2
MAN238	0.02	< 10	0.24	0.033	0.056	0.33	< 2	< 1	37	< 0.01	< 1	< 2	< 10	2	< 10	< 1	1
MAN239	0.02	< 10	0.30	0.048	0.049	0.31	< 2	< 1	45	< 0.01	< 1	< 2	< 10	2	< 10	1	2
MAN240	< 0.01	< 10	0.25	0.024	0.028	0.18	< 2	< 1	38	< 0.01	3	< 2	< 10	1	< 10	< 1	< 1
MAN241	0.01	< 10	0.26	0.029	0.052	0.27	< 2	< 1	41	< 0.01	5	< 2	< 10	2	< 10	< 1	1
MAN242	0.01	< 10	0.28	0.030	0.050	0.19	< 2	< 1	44	< 0.01	4	< 2	< 10	2	< 10	< 1	1
MAN243	0.01	< 10	0.21	0.025	0.057	0.19	< 2	< 1	27	< 0.01	1	< 2	< 10	3	< 10	< 1	< 1
MAN244	0.01	< 10	0.24	0.042	0.036	0.18	< 2	< 1	31	< 0.01	4	2	< 10	2	< 10	< 1	< 1
MAN245	0.01	< 10	0.25	0.032	0.037	0.18	< 2	< 1	34	< 0.01	< 1	3	< 10	2	< 10	< 1	1
MAN246	0.01	< 10	0.30	0.029	0.036	0.21	< 2	< 1	39	< 0.01	3	< 2	< 10	2	< 10	< 1	1
MAN247	0.05	17	0.20	0.023	0.033	0.01	< 2	2	12	0.08	< 1	< 2	< 10	25	< 10	6	4
MAN248	0.04	12	0.14	0.018	0.018	< 0.01	< 2	2	11	0.11	1	< 2	< 10	29	< 10	3	4
MAN249	0.05	12	0.16	0.023	0.021	0.01	< 2	2	11	0.09	< 1	< 2	< 10	31	< 10	3	3
MAN250	0.05	12	0.13	0.020	0.014	< 0.01	< 2	2	11	0.10	3	< 2	< 10	37	< 10	3	4
MAN251	0.04	< 10	0.10	0.020	0.029	< 0.01	< 2	1	8	0.09	2	< 2	< 10	28	< 10	3	3
MAN252	0.05	10	0.24	0.027	0.056	0.03	< 2	2	10	0.09	< 1	< 2	< 10	32	< 10	4	6
MAN253	0.06	12	0.29	0.035	0.034	0.03	< 2	3	10	0.11	1	< 2	< 10	36	< 10	4	5
MAN254	0.04	< 10	0.26	0.024	0.012	0.01	< 2	1	11	0.16	3	< 2	< 10	42	< 10	3	3
MAN255	< 0.01	< 10	0.14	0.023	0.048	0.30	< 2	< 1	42	< 0.01	2	< 2	< 10	5	< 10	3	2
MAN256	< 0.01	< 10	0.19	0.023	0.031	0.27	< 2	< 1	40	< 0.01	< 1	< 2	< 10	2	< 10	1	1
MAN257	< 0.01	< 10	0.21	0.022	0.025	0.20	< 2	< 1	38	< 0.01	2	< 2	< 10	2	< 10	< 1	< 1
MAN258	0.01	< 10	0.24	0.020	0.043	0.17	< 2	< 1	40	< 0.01	2	< 2	< 10	2	< 10	< 1	< 1
MAN259	0.04	< 10	0.20	0.023	0.081	0.20	< 2	< 1	36	< 0.01	5	< 2	< 10	3	< 10	< 1	< 1
MAN260	0.01	< 10	0.19	0.025	0.042	0.22	< 2	< 1	36	< 0.01	2	< 2	< 10	2	< 10	< 1	< 1
MAN261	< 0.01	< 10	0.17	0.019	0.026	0.21	< 2	< 1	29	< 0.01	2	< 2	< 10	1	< 10	< 1	< 1
MAN262	0.01	< 10	0.18	0.021	0.035	0.20	< 2	< 1	30	< 0.01	1	< 2	< 10	2	< 10	< 1	< 1
MAN263	< 0.01	< 10	0.19	0.022	0.050	0.22	< 2	< 1	36	< 0.01	2	< 2	< 10	2	< 10	< 1	1
MAN264	0.01	< 10	0.16	0.023	0.041	0.18	< 2	< 1	28	< 0.01	4	< 2	< 10	3	< 10	< 1	2
MAN265	0.01	< 10	0.15	0.018	0.043	0.16	< 2	< 1	29	< 0.01	3	< 2	< 10	2	< 10	< 1	1
MAN266	< 0.01	< 10	0.16	0.018	0.028	0.16	< 2	< 1	31	< 0.01	2	< 2	< 10	2	< 10	< 1	< 1
MAN267	0.01	< 10	0.15	0.032	0.053	0.18	< 2	< 1	31	< 0.01	< 1	< 2	< 10	2	< 10	< 1	< 1
MAN268	0.04	16	0.43	0.023	0.020	< 0.01	< 2	2	13	0.11	3	< 2	< 10	40	< 10	6	4

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN269	0.01	< 10	0.20	0.022	0.078	0.25	< 2	< 1	53	< 0.01	1	< 2	< 10	5	< 10	2	2
MAN270	< 0.01	< 10	0.24	0.020	0.036	0.15	< 2	< 1	46	< 0.01	< 1	< 2	< 10	2	< 10	< 1	< 1
MAN271	0.01	< 10	0.25	0.032	0.039	0.21	< 2	< 1	45	< 0.01	< 1	< 2	< 10	2	< 10	< 1	< 1
MAN272	0.02	< 10	0.23	0.026	0.048	0.14	< 2	< 1	37	< 0.01	< 1	< 2	< 10	2	< 10	< 1	< 1
MAN273	0.02	< 10	0.25	0.018	0.057	0.17	< 2	< 1	39	< 0.01	3	< 2	< 10	2	< 10	< 1	< 1
MAN274	0.02	< 10	0.27	0.019	0.051	0.17	< 2	< 1	39	< 0.01	1	< 2	< 10	2	< 10	< 1	< 1
MAN275	0.01	< 10	0.18	0.022	0.060	0.22	< 2	< 1	31	< 0.01	< 1	< 2	< 10	2	< 10	< 1	1
MAN276	0.03	< 10	0.24	0.022	0.074	0.22	< 2	< 1	37	< 0.01	< 1	< 2	< 10	5	< 10	1	3
MAN277	0.01	< 10	0.24	0.028	0.066	0.20	< 2	< 1	42	< 0.01	2	< 2	< 10	4	< 10	< 1	2
MAN278	0.02	< 10	0.17	0.031	0.074	0.24	< 2	< 1	28	< 0.01	2	< 2	< 10	5	< 10	1	2
MAN279	0.04	16	0.22	0.024	0.066	0.16	< 2	2	35	0.02	4	< 2	< 10	22	< 10	8	4
MAN280	0.04	16	0.22	0.021	0.065	0.16	< 2	2	35	0.02	< 1	< 2	< 10	21	< 10	8	4
MAN281	0.02	< 10	0.21	0.021	0.041	0.12	< 2	< 1	37	< 0.01	2	< 2	< 10	< 1	< 10	< 1	< 1
MAN282	0.01	< 10	0.22	0.024	0.056	0.17	< 2	< 1	41	< 0.01	3	< 2	< 10	5	< 10	1	1
MAN283	0.02	< 10	0.21	0.021	0.046	0.14	< 2	< 1	33	< 0.01	3	< 2	< 10	2	< 10	< 1	< 1
MAN284	< 0.01	< 10	0.24	0.025	0.041	0.19	< 2	< 1	45	< 0.01	2	< 2	< 10	3	< 10	1	2
MAN285	0.02	< 10	0.15	0.028	0.063	0.21	< 2	< 1	47	< 0.01	< 1	< 2	< 10	4	< 10	2	4
MAN286	< 0.01	13	0.12	0.018	0.055	0.17	< 2	1	29	0.01	1	< 2	< 10	22	< 10	8	6
MAN287	0.06	13	0.15	0.020	0.013	0.02	< 2	2	13	0.12	2	< 2	< 10	30	< 10	3	4
MAN288	0.01	< 10	0.11	0.023	0.046	0.16	< 2	< 1	26	< 0.01	6	< 2	< 10	5	< 10	3	3
MAN289	< 0.01	< 10	0.11	0.022	0.073	0.19	< 2	< 1	23	< 0.01	2	< 2	< 10	15	< 10	5	4
MAN290	0.01	< 10	0.16	0.019	0.084	0.23	< 2	< 1	38	< 0.01	3	< 2	< 10	4	< 10	1	1
MAN291	0.01	< 10	0.17	0.024	0.062	0.21	< 2	< 1	31	< 0.01	1	< 2	< 10	3	< 10	< 1	< 1
MAN292	0.01	< 10	0.17	0.020	0.042	0.19	< 2	< 1	29	< 0.01	1	< 2	< 10	2	< 10	< 1	< 1
MAN293	0.01	< 10	0.17	0.018	0.048	0.19	< 2	< 1	32	< 0.01	2	< 2	< 10	3	< 10	< 1	1
MAN294	0.03	< 10	0.12	0.020	0.034	0.05	< 2	1	13	0.05	2	< 2	< 10	18	< 10	3	1
MAN295	0.04	26	0.51	0.021	0.037	0.02	< 2	2	12	0.12	2	< 2	< 10	34	< 10	6	2
MAN296	0.01	< 10	0.13	0.031	0.036	0.15	< 2	< 1	34	< 0.01	< 1	< 2	< 10	2	< 10	< 1	< 1
MAN297	< 0.01	< 10	0.16	0.023	0.035	0.18	< 2	< 1	44	< 0.01	3	< 2	< 10	3	< 10	< 1	1
MAN298	0.01	< 10	0.19	0.026	0.046	0.19	< 2	< 1	41	< 0.01	5	< 2	< 10	4	< 10	1	1
MAN299	0.02	< 10	0.17	0.035	0.051	0.20	< 2	< 1	39	< 0.01	1	< 2	< 10	2	< 10	< 1	< 1
MAN300	0.03	13	0.08	0.018	0.007	< 0.01	< 2	1	11	0.09	< 1	< 2	< 10	20	< 10	2	2
MAN301	0.08	17	0.27	0.026	0.027	0.03	< 2	3	20	0.07	2	< 2	< 10	27	< 10	6	2
MAN302	0.03	< 10	0.25	0.033	0.120	0.32	< 2	< 1	37	< 0.01	< 1	< 2	< 10	6	< 10	3	3
MAN303	0.06	16	0.42	0.027	0.059	0.08	< 2	1	23	0.05	2	< 2	< 10	18	< 10	6	2
MAN304	0.04	37	0.28	0.031	0.143	0.19	< 2	1	33	0.02	3	< 2	< 10	13	< 10	15	3
MAN305	0.04	16	0.19	0.025	0.017	< 0.01	< 2	2	14	0.10	2	< 2	< 10	25	< 10	5	3
MAN306	0.05	12	0.19	0.025	0.015	0.01	< 2	2	12	0.12	2	< 2	< 10	34	< 10	4	4
MAN307	0.05	14	0.20	0.021	0.010	< 0.01	< 2	2	11	0.10	< 1	< 2	< 10	32	< 10	3	3
MAN308	0.05	13	0.21	0.022	0.015	0.01	< 2	2	12	0.11	2	< 2	< 10	45	< 10	3	3
MAN309	0.06	11	0.24	0.023	0.017	0.02	< 2	2	12	0.09	< 1	< 2	< 10	32	< 10	3	4
MAN310	0.02	13	0.05	0.018	0.007	< 0.01	< 2	< 1	9	0.06	1	< 2	< 10	13	< 10	2	2
MAN311	0.02	< 10	0.18	0.051	0.008	< 0.01	< 2	2	6	0.18	2	< 2	< 10	44	< 10	6	1
MAN312	0.03	12	0.06	0.018	0.009	0.01	< 2	1	10	0.09	< 1	< 2	< 10	27	< 10	2	4
MAN313	0.05	14	0.16	0.022	0.014	0.01	< 2	2	12	0.08	1	< 2	< 10	30	< 10	5	3
MAN314	0.03	< 10	0.05	0.022	0.031	0.06	< 2	< 1	24	0.04	< 1	< 2	< 10	13	< 10	1	1
MAN315	0.04	13	0.15	0.021	0.018	< 0.01	< 2	2	12	0.10	4	< 2	< 10	30	< 10	3	5
MAN316	0.06	15	0.23	0.020	0.019	< 0.01	< 2	2	13	0.10	2	< 2	< 10	29	< 10	4	6
MAN317	0.04	13	0.14	0.021	0.017	0.02	< 2	2	11	0.09	2	< 2	< 10	30	< 10	3	3
MAN318	0.05	14	0.21	0.027	0.018	0.01	< 2	2	12	0.09	2	< 2	< 10	27	< 10	4	3

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN319	0.04	24	0.20	0.034	0.029	0.07	< 2	1	17	0.04	< 1	< 2	< 10	12	< 10	7	1
MAN320	0.04	12	0.08	0.019	0.011	< 0.01	< 2	1	10	0.07	2	< 2	< 10	21	< 10	2	2
MAN321	0.06	14	0.20	0.026	0.034	0.01	< 2	2	14	0.11	1	< 2	< 10	39	< 10	4	4
MAN322	0.04	10	0.14	0.022	0.032	0.03	< 2	2	9	0.07	< 1	< 2	< 10	36	< 10	3	5
MAN323	0.04	13	0.13	0.020	0.009	0.01	< 2	2	11	0.10	1	< 2	< 10	29	< 10	3	3
MAN324	0.03	< 10	0.10	0.027	0.016	0.02	< 2	2	9	0.11	< 1	< 2	< 10	20	< 10	4	< 1
MAN325	0.03	11	0.14	0.023	0.016	0.02	< 2	2	8	0.11	2	< 2	< 10	47	< 10	3	3
MAN326	0.04	12	0.14	0.022	0.034	0.04	< 2	3	8	0.08	< 1	< 2	< 10	48	< 10	4	6
MAN327	0.04	11	0.11	0.030	0.010	0.01	< 2	2	10	0.19	2	< 2	< 10	46	< 10	4	3
MAN328	0.08	< 10	0.08	0.035	0.097	0.13	< 2	< 1	17	< 0.01	< 1	< 2	< 10	10	< 10	1	< 1
MAN329	0.06	14	0.25	0.024	0.019	0.02	< 2	2	12	0.13	< 1	< 2	< 10	51	< 10	4	3
MAN330	0.03	< 10	0.13	0.035	0.022	0.03	< 2	2	6	0.06	< 1	< 2	< 10	17	< 10	2	< 1
MAN331	0.07	16	0.22	0.030	0.045	0.05	< 2	2	15	0.08	1	< 2	< 10	40	< 10	5	2
MAN332	0.04	14	0.17	0.022	0.014	0.02	< 2	2	15	0.10	< 1	< 2	< 10	36	< 10	4	7
MAN333	0.02	< 10	0.05	0.019	0.006	< 0.01	< 2	< 1	6	0.11	< 1	< 2	< 10	20	< 10	3	2
MAN334	0.03	12	0.09	0.019	0.009	0.01	< 2	2	10	0.10	1	< 2	< 10	33	< 10	3	3
MAN335	0.04	13	0.13	0.028	0.009	0.01	< 2	2	11	0.09	< 1	< 2	< 10	25	< 10	3	3
MAN336	0.04	11	0.12	0.020	0.012	0.01	< 2	2	11	0.09	< 1	< 2	< 10	25	< 10	3	3
MAN337	0.03	11	0.11	0.023	0.014	0.01	< 2	2	8	0.11	< 1	< 2	< 10	30	< 10	4	1
MAN338	0.04	14	0.14	0.019	0.013	0.02	< 2	2	10	0.09	2	< 2	< 10	32	< 10	3	4
MAN339	0.04	29	0.26	0.027	0.087	0.16	< 2	2	30	0.03	< 1	< 2	< 10	20	< 10	12	1
MAN340	0.04	< 10	0.11	0.036	0.055	0.10	< 2	< 1	16	< 0.01	< 1	< 2	< 10	7	< 10	2	< 1
MAN341	0.04	14	0.19	0.022	0.009	< 0.01	< 2	2	13	0.10	2	< 2	< 10	24	< 10	4	7
MAN342	0.02	< 10	0.09	0.026	0.018	0.02	< 2	< 1	4	0.03	1	< 2	< 10	22	< 10	2	< 1
MAN343	0.02	< 10	0.10	0.030	0.010	0.02	< 2	1	6	0.05	< 1	< 2	< 10	16	< 10	1	< 1
MAN344	0.05	13	0.21	0.022	0.016	0.01	< 2	3	11	0.10	< 1	< 2	< 10	34	< 10	4	7
MAN345	0.04	< 10	0.11	0.024	0.018	0.02	< 2	1	9	0.12	1	< 2	< 10	64	< 10	2	3
MAN346	0.05	15	0.09	0.020	0.010	< 0.01	< 2	1	10	0.14	2	< 2	< 10	73	< 10	2	4
MAN347	0.01	31	0.29	0.028	0.094	0.39	< 2	1	42	< 0.01	8	< 2	13	13	< 10	14	6
MAN348	0.02	< 10	0.34	0.032	0.083	0.19	< 2	< 1	51	< 0.01	3	3	< 10	4	< 10	2	1
MAN349	0.05	12	0.14	0.020	0.013	0.01	< 2	1	14	0.07	< 1	< 2	< 10	20	< 10	3	1
MAN350	0.09	13	0.27	0.025	0.037	< 0.01	< 2	3	15	0.09	< 1	< 2	< 10	30	< 10	5	7
MAN351	0.07	16	0.36	0.023	0.038	0.02	< 2	3	17	0.09	2	< 2	< 10	33	< 10	5	2
MAN352	0.07	13	0.17	0.021	0.017	0.01	< 2	2	14	0.09	1	< 2	< 10	30	< 10	3	3
MAN353	0.07	15	0.19	0.023	0.034	0.02	< 2	2	16	0.09	2	2	< 10	22	< 10	5	2
MAN354	0.07	17	0.41	0.026	0.027	0.01	< 2	3	17	0.09	< 1	< 2	< 10	25	< 10	6	3
MAN355	0.06	13	0.17	0.020	0.010	< 0.01	< 2	2	14	0.11	1	2	< 10	29	< 10	4	3
MAN356	0.08	13	0.20	0.019	0.022	0.01	< 2	2	13	0.12	< 1	< 2	< 10	38	< 10	3	3
MAN357	0.04	11	0.11	0.018	0.018	< 0.01	< 2	1	8	0.09	< 1	< 2	< 10	40	< 10	2	4
MAN358	0.03	< 10	0.06	0.017	0.022	< 0.01	< 2	< 1	8	0.06	< 1	< 2	< 10	22	< 10	1	3
MAN359	0.04	< 10	0.11	0.020	0.031	< 0.01	< 2	1	8	0.07	< 1	< 2	< 10	27	< 10	2	3
MAN360	0.04	10	0.10	0.020	0.020	0.02	2	2	8	0.07	< 1	< 2	< 10	27	< 10	3	4
MAN361	0.02	< 10	0.04	0.019	0.005	< 0.01	< 2	< 1	8	0.04	1	< 2	< 10	14	< 10	1	< 1
MAN362	0.04	< 10	0.09	0.021	0.014	< 0.01	< 2	1	8	0.07	< 1	< 2	< 10	28	< 10	2	4
MAN363	0.04	17	0.22	0.036	0.125	0.30	< 2	< 1	42	< 0.01	2	< 2	< 10	12	< 10	7	2
MAN364	0.04	13	0.20	0.023	0.031	0.04	< 2	1	24	0.04	3	< 2	< 10	19	< 10	4	1
MAN365	0.05	14	0.17	0.021	0.016	< 0.01	< 2	1	12	0.10	< 1	< 2	< 10	45	< 10	3	6
MAN366	0.04	15	0.10	0.020	0.027	0.01	< 2	1	10	0.06	< 1	< 2	< 10	34	< 10	3	2
MAN367	0.05	13	0.11	0.019	0.016	< 0.01	< 2	1	10	0.09	< 1	3	< 10	45	< 10	2	2
MAN368	0.05	27	0.17	0.021	0.012	< 0.01	< 2	3	13	0.08	2	< 2	< 10	29	< 10	8	4

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN369	0.05	15	0.17	0.022	0.025	< 0.01	< 2	2	14	0.07	1	< 2	< 10	27	< 10	5	2
MAN370	0.02	49	0.26	0.043	0.096	0.24	< 2	< 1	49	< 0.01	9	< 2	< 10	5	< 10	17	4
MAN371	0.03	30	0.27	0.029	0.118	0.23	< 2	< 1	42	0.02	4	< 2	< 10	17	< 10	12	2
MAN372	0.07	23	0.19	0.020	0.023	< 0.01	< 2	2	14	0.14	< 1	< 2	< 10	84	< 10	4	6
MAN373	0.04	14	0.12	0.019	0.029	< 0.01	< 2	2	10	0.08	< 1	< 2	< 10	32	< 10	3	3
MAN374	0.04	12	0.16	0.021	0.036	< 0.01	< 2	2	9	0.07	< 1	< 2	< 10	24	< 10	3	5
MAN375	0.04	11	0.07	0.020	0.008	0.01	< 2	< 1	12	0.06	< 1	< 2	< 10	25	< 10	2	3
MAN376	0.03	< 10	0.29	0.042	0.048	0.17	< 2	< 1	45	< 0.01	2	< 2	< 10	4	< 10	1	2
MAN377	0.02	14	0.25	0.045	0.066	0.25	< 2	< 1	51	< 0.01	2	< 2	< 10	9	< 10	8	4
MAN378	0.08	21	0.32	0.028	0.055	0.04	< 2	2	25	0.06	2	< 2	< 10	25	< 10	9	3
MAN379	0.02	< 10	0.33	0.028	0.050	0.14	< 2	< 1	46	< 0.01	< 1	< 2	< 10	9	< 10	3	2
MAN380	0.03	< 10	0.28	0.027	0.050	0.14	< 2	< 1	45	< 0.01	< 1	< 2	< 10	7	< 10	3	3
MAN381	0.02	23	0.23	0.028	0.064	0.20	< 2	< 1	47	< 0.01	8	< 2	< 10	14	< 10	12	7
MAN382	0.08	14	0.42	0.025	0.091	0.14	< 2	2	34	0.05	3	< 2	< 10	28	< 10	8	3
MAN383	0.04	18	0.16	0.021	0.043	0.02	< 2	1	14	0.06	2	< 2	< 10	25	< 10	6	2
MAN384	0.09	25	0.31	0.027	0.060	0.04	< 2	3	26	0.07	1	< 2	< 10	32	< 10	12	5
MAN385	0.02	< 10	0.20	0.036	0.066	0.32	< 2	< 1	34	< 0.01	5	< 2	< 10	13	< 10	4	4
MAN386	0.02	< 10	0.20	0.032	0.048	0.26	< 2	< 1	28	< 0.01	2	< 2	< 10	16	< 10	3	2
MAN387	0.05	25	0.24	0.025	0.017	0.01	< 2	2	12	0.11	< 1	< 2	< 10	34	< 10	5	4
MAN388	0.02	21	0.16	0.038	0.063	0.29	< 2	2	32	< 0.01	< 1	< 2	< 10	22	< 10	18	7
MAN389	0.04	10	0.11	0.019	0.015	0.01	< 2	2	10	0.09	< 1	< 2	< 10	39	< 10	2	2
MAN390	0.02	< 10	0.22	0.029	0.056	0.19	< 2	< 1	39	< 0.01	< 1	< 2	< 10	5	< 10	4	3
MAN391	0.02	< 10	0.26	0.038	0.081	0.25	< 2	< 1	40	< 0.01	< 1	< 2	< 10	4	< 10	3	2
MAN392	0.02	< 10	0.29	0.032	0.075	0.29	< 2	< 1	40	< 0.01	5	< 2	< 10	4	< 10	3	3
MAN393	0.02	< 10	0.28	0.026	0.088	0.38	< 2	< 1	41	< 0.01	2	< 2	< 10	6	< 10	3	4
MAN394	0.02	< 10	0.30	0.021	0.065	0.37	< 2	< 1	41	< 0.01	3	< 2	< 10	5	< 10	3	4
MAN395	0.05	< 10	0.18	0.021	0.036	< 0.01	< 2	2	9	0.07	< 1	< 2	< 10	22	< 10	3	6
MAN396	0.05	18	0.14	0.019	0.028	< 0.01	2	2	10	0.10	< 1	< 2	< 10	44	< 10	3	5
MAN397	0.04	11	0.11	0.019	0.024	0.01	< 2	2	9	0.08	< 1	< 2	< 10	36	< 10	3	5
MAN398	0.04	15	0.11	0.021	0.010	< 0.01	< 2	2	9	0.08	3	< 2	< 10	35	< 10	3	6
MAN399	0.03	11	0.03	0.016	0.004	< 0.01	< 2	< 1	6	0.05	1	< 2	< 10	22	< 10	1	2
MAN400	0.07	15	0.23	0.023	0.017	0.02	< 2	2	12	0.10	2	2	< 10	27	< 10	3	5
MAN401	0.05	< 10	0.15	0.019	0.022	< 0.01	< 2	2	9	0.09	2	< 2	< 10	40	< 10	3	6
MAN402	0.02	< 10	0.13	0.028	0.017	0.07	< 2	< 1	27	0.01	< 1	< 2	< 10	3	< 10	1	2
MAN403	0.03	10	0.06	0.018	0.007	< 0.01	< 2	< 1	8	0.05	1	< 2	< 10	16	< 10	1	2
MAN404	0.04	19	0.15	0.022	0.033	0.01	< 2	2	10	0.08	< 1	< 2	< 10	38	< 10	4	2
MAN405	0.04	14	0.16	0.024	0.036	0.02	< 2	2	11	0.07	< 1	< 2	< 10	24	< 10	4	3
MAN406	0.04	19	0.29	0.022	0.036	< 0.01	< 2	2	15	0.07	< 1	< 2	< 10	32	< 10	5	6
MAN407	0.04	14	0.15	0.019	0.041	< 0.01	< 2	2	9	0.09	< 1	< 2	< 10	38	< 10	3	3
MAN408	0.06	17	0.20	0.020	0.044	0.01	< 2	2	11	0.12	< 1	< 2	< 10	49	< 10	4	7
MAN409	0.04	12	0.18	0.021	0.053	0.01	< 2	2	9	0.07	< 1	< 2	< 10	29	< 10	4	6
MAN410	0.07	13	0.26	0.021	0.048	0.01	< 2	3	11	0.11	3	< 2	< 10	46	< 10	4	6
MAN411	0.03	12	0.09	0.018	0.017	< 0.01	< 2	1	8	0.07	< 1	< 2	< 10	28	< 10	2	3
MAN412	0.05	13	0.14	0.027	0.036	0.01	< 2	2	10	0.09	1	< 2	< 10	39	< 10	3	4
MAN413	0.05	11	0.16	0.021	0.048	< 0.01	< 2	2	10	0.10	< 1	< 2	< 10	47	< 10	3	5
MAN414	0.05	14	0.13	0.020	0.038	< 0.01	< 2	2	10	0.09	1	< 2	< 10	38	< 10	3	3
MAN415	0.05	11	0.14	0.020	0.029	< 0.01	< 2	2	10	0.08	< 1	< 2	< 10	31	< 10	3	3
MAN416	0.04	11	0.12	0.018	0.042	< 0.01	< 2	1	9	0.08	< 1	< 2	< 10	38	< 10	3	3
MAN417	0.04	15	0.19	0.020	0.032	< 0.01	< 2	2	10	0.07	< 1	< 2	< 10	26	< 10	4	6
MAN418	0.05	14	0.19	0.021	0.038	< 0.01	< 2	2	11	0.08	< 1	< 2	< 10	38	< 10	4	3

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN419	0.02	< 10	0.26	0.032	0.079	0.32	< 2	< 1	37	< 0.01	8	< 2	< 10	3	< 10	< 1	1
MAN420	0.02	< 10	0.26	0.036	0.052	0.29	< 2	< 1	36	< 0.01	< 1	< 2	< 10	2	< 10	< 1	< 1
MAN421	0.03	< 10	0.25	0.042	0.075	0.37	< 2	< 1	32	< 0.01	< 1	< 2	< 10	2	< 10	< 1	< 1
MAN422	0.03	< 10	0.26	0.056	0.070	0.32	< 2	< 1	34	< 0.01	3	< 2	< 10	2	< 10	< 1	< 1
MAN423	0.03	< 10	0.31	0.050	0.073	0.33	< 2	< 1	40	< 0.01	3	< 2	< 10	2	< 10	< 1	< 1
MAN424	0.02	< 10	0.30	0.039	0.057	0.29	< 2	< 1	39	< 0.01	2	< 2	< 10	2	< 10	< 1	< 1
MAN425	0.02	< 10	0.30	0.045	0.047	0.25	< 2	< 1	33	< 0.01	1	< 2	< 10	2	< 10	< 1	< 1
MAN426	0.02	< 10	0.30	0.050	0.051	0.16	< 2	< 1	35	< 0.01	1	< 2	< 10	2	< 10	< 1	< 1
MAN427	0.02	< 10	0.29	0.055	0.061	0.29	< 2	< 1	37	< 0.01	3	< 2	< 10	2	< 10	< 1	< 1
MAN428	0.02	< 10	0.29	0.041	0.050	0.24	< 2	< 1	35	< 0.01	10	< 2	< 10	2	< 10	< 1	< 1
MAN429	0.02	< 10	0.30	0.036	0.059	0.25	< 2	< 1	42	< 0.01	1	< 2	< 10	11	< 10	< 1	1
MAN430	0.08	20	0.28	0.027	0.022	< 0.01	< 2	3	17	0.10	1	< 2	< 10	29	< 10	7	3
MAN431	0.06	12	0.16	0.022	0.016	< 0.01	< 2	2	12	0.10	< 1	< 2	< 10	30	< 10	4	6
MAN432	0.09	17	0.24	0.021	0.039	0.01	< 2	2	13	0.12	< 1	< 2	< 10	43	< 10	4	4
MAN433	0.06	13	0.15	0.020	0.022	0.01	< 2	2	13	0.09	2	< 2	< 10	29	< 10	3	3
MAN434	0.08	14	0.22	0.022	0.030	< 0.01	< 2	2	17	0.10	2	< 2	< 10	36	< 10	4	3
MAN435	0.07	15	0.19	0.025	0.035	< 0.01	2	2	15	0.09	2	< 2	< 10	27	< 10	4	3
MAN436	0.09	15	0.24	0.025	0.046	< 0.01	< 2	2	15	0.10	2	< 2	< 10	31	< 10	5	3
MAN437	0.07	12	0.18	0.024	0.021	< 0.01	< 2	2	16	0.10	2	< 2	< 10	35	< 10	3	4
MAN438	0.06	14	0.15	0.023	0.017	< 0.01	< 2	2	14	0.10	< 1	< 2	< 10	27	< 10	3	5
MAN439	0.05	13	0.11	0.020	0.010	< 0.01	< 2	2	13	0.10	< 1	< 2	< 10	29	< 10	3	5
MAN440	0.07	13	0.18	0.022	0.022	0.01	< 2	2	11	0.11	< 1	< 2	< 10	38	< 10	4	6
MAN441	0.05	13	0.12	0.020	0.017	0.01	< 2	2	10	0.09	< 1	< 2	< 10	29	< 10	3	3
MAN442	0.01	< 10	0.24	0.029	0.033	0.11	< 2	< 1	33	< 0.01	2	< 2	< 10	6	< 10	< 1	< 1
MAN443	0.02	< 10	0.32	0.030	0.079	0.24	< 2	< 1	44	< 0.01	4	< 2	< 10	9	< 10	1	1
MAN444	0.02	< 10	0.26	0.035	0.104	0.37	< 2	< 1	35	< 0.01	3	< 2	< 10	2	< 10	< 1	1
MAN445	0.03	12	0.23	0.026	0.050	0.15	< 2	< 1	34	0.02	< 1	< 2	< 10	15	< 10	5	2
MAN446	0.08	14	0.24	0.026	0.035	< 0.01	< 2	3	14	0.09	2	< 2	< 10	28	< 10	5	7
MAN447	0.09	13	0.25	0.024	0.039	0.01	2	2	15	0.10	1	< 2	< 10	32	< 10	5	6
MAN448	0.09	15	0.26	0.023	0.032	< 0.01	< 2	3	14	0.09	1	< 2	< 10	29	< 10	6	7
MAN449	0.07	19	0.24	0.025	0.051	< 0.01	< 2	3	17	0.08	< 1	< 2	< 10	23	< 10	8	2
MAN450	0.03	< 10	0.31	0.036	0.071	0.18	< 2	< 1	41	< 0.01	2	< 2	< 10	4	< 10	1	2
MAN451	0.05	13	2.29	0.029	0.041	< 0.01	< 2	2	39	0.06	1	< 2	< 10	15	< 10	6	5
MAN452	0.03	< 10	0.05	0.024	0.035	0.08	< 2	< 1	22	< 0.01	4	< 2	< 10	3	< 10	< 1	< 1
MAN453	0.08	27	0.37	0.033	0.066	0.07	< 2	3	31	0.06	< 1	< 2	< 10	31	< 10	11	3
MAN454	0.05	37	0.44	0.025	0.047	0.08	< 2	3	32	0.06	1	< 2	< 10	24	< 10	13	5
MAN455	0.05	15	0.23	0.027	0.029	0.02	< 2	2	16	0.07	2	< 2	< 10	20	< 10	6	3
MAN456	0.04	23	0.21	0.028	0.047	0.06	< 2	2	25	0.04	< 1	< 2	< 10	20	< 10	10	2
MAN457	0.03	13	0.06	0.018	0.006	< 0.01	< 2	< 1	10	0.07	< 1	< 2	< 10	21	< 10	2	3
MAN458	0.06	15	0.21	0.023	0.025	0.01	2	2	13	0.10	2	< 2	< 10	32	< 10	5	4
MAN459	0.03	< 10	0.09	0.020	0.014	< 0.01	< 2	1	10	0.09	< 1	< 2	< 10	34	< 10	2	3
MAN460	0.05	18	0.26	0.024	0.019	0.01	< 2	4	14	0.09	< 1	< 2	< 10	34	< 10	6	5
MAN461	0.05	< 10	0.14	0.021	0.019	0.02	< 2	1	9	0.10	3	< 2	< 10	60	< 10	2	3
MAN462	0.04	12	0.26	0.025	0.081	0.17	< 2	< 1	35	0.02	3	< 2	< 10	12	< 10	6	2
MAN463	0.08	23	0.41	0.023	0.063	0.05	< 2	3	21	0.07	2	< 2	< 10	33	< 10	9	2
MAN464	0.03	11	0.06	0.016	0.004	< 0.01	< 2	1	11	0.08	1	< 2	< 10	23	< 10	2	4
MAN465	0.05	< 10	0.12	0.019	0.027	0.01	< 2	1	9	0.08	< 1	< 2	< 10	31	< 10	3	3
MAN466	0.03	13	0.05	0.018	0.008	< 0.01	< 2	< 1	11	0.07	< 1	< 2	< 10	20	< 10	2	2
MAN467	0.09	12	0.24	0.023	0.040	0.01	< 2	2	16	0.11	< 1	< 2	< 10	39	< 10	4	4
MAN468	0.07	11	0.17	0.022	0.020	< 0.01	< 2	2	13	0.09	< 1	< 2	< 10	29	< 10	3	3

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN469	0.05	13	0.12	0.019	0.011	< 0.01	< 2	2	14	0.09	2	< 2	< 10	25	< 10	3	3
MAN470	0.06	13	0.21	0.023	0.020	< 0.01	< 2	2	14	0.10	< 1	< 2	< 10	24	< 10	4	5
MAN471	0.03	12	0.07	0.016	0.006	< 0.01	< 2	1	11	0.08	1	< 2	< 10	17	< 10	2	2
MAN472	0.02	11	0.03	0.016	0.004	< 0.01	< 2	< 1	9	0.05	< 1	< 2	< 10	11	< 10	2	3
MAN473	0.06	13	0.27	0.021	0.019	0.02	< 2	2	11	0.14	2	< 2	< 10	46	< 10	3	4
MAN474	0.07	12	0.18	0.021	0.019	0.02	< 2	2	13	0.11	2	< 2	< 10	39	< 10	3	4
MAN475	0.06	11	0.16	0.024	0.015	< 0.01	< 2	2	15	0.09	2	< 2	< 10	22	< 10	3	4
MAN476	0.09	21	0.55	0.034	0.050	0.02	< 2	3	18	0.11	3	< 2	< 10	35	< 10	8	3
MAN477	0.05	18	0.19	0.024	0.028	< 0.01	< 2	2	14	0.07	< 1	< 2	< 10	22	< 10	7	2
MAN479	0.07	17	0.24	0.023	0.027	0.01	< 2	2	14	0.11	< 1	< 2	< 10	35	< 10	5	4
MAN480	0.06	13	0.30	0.025	0.017	< 0.01	< 2	2	14	0.13	2	< 2	< 10	35	< 10	4	4
MAN481	0.03	13	0.04	0.016	0.004	< 0.01	< 2	< 1	11	0.08	< 1	< 2	< 10	13	< 10	3	3
MAN482	0.03	11	0.10	0.018	0.021	< 0.01	< 2	1	10	0.08	2	< 2	< 10	27	< 10	3	4
MAN483	0.04	15	0.19	0.022	0.034	< 0.01	< 2	2	14	0.07	< 1	< 2	< 10	22	< 10	6	2
MAN484	0.04	19	0.17	0.020	0.049	< 0.01	< 2	2	13	0.07	2	< 2	< 10	21	< 10	6	2
MAN485	0.07	13	0.24	0.025	0.042	0.01	< 2	2	14	0.08	< 1	< 2	< 10	26	< 10	5	5
MAN486	0.10	12	0.24	0.024	0.029	< 0.01	< 2	2	16	0.11	< 1	< 2	< 10	34	< 10	4	4
MAN487	0.04	14	0.05	0.018	0.007	< 0.01	< 2	< 1	12	0.07	2	3	< 10	14	< 10	2	2
MAN488	0.07	14	0.23	0.021	0.025	0.01	< 2	2	14	0.10	3	< 2	< 10	32	< 10	4	4
MAN489	0.08	26	1.21	0.024	0.062	0.03	< 2	3	22	0.07	1	< 2	< 10	34	< 10	9	2
MAN490	0.07	14	0.35	0.022	0.044	0.06	< 2	2	19	0.06	< 1	< 2	< 10	21	< 10	5	1
MAN491	0.08	19	1.37	0.025	0.035	0.02	< 2	3	26	0.08	3	3	< 10	26	< 10	7	2
MAN492	0.07	< 10	0.11	0.023	0.055	0.14	< 2	< 1	17	< 0.01	1	< 2	< 10	5	< 10	1	1
MAN493	0.04	17	0.27	0.023	0.161	0.17	4	< 1	35	0.01	6	< 2	< 10	71	< 10	6	4
MAN494	0.07	24	0.31	0.025	0.059	0.07	< 2	2	25	0.06	< 1	< 2	< 10	23	< 10	9	2
MAN495	0.04	36	0.23	0.028	0.070	0.11	< 2	1	37	0.02	< 1	< 2	< 10	13	< 10	13	2
MAN496	0.05	16	0.22	0.023	0.027	< 0.01	< 2	2	13	0.09	< 1	< 2	< 10	28	< 10	5	6
MAN497	0.03	< 10	0.05	0.021	0.012	0.01	< 2	< 1	9	0.08	< 1	< 2	< 10	20	< 10	2	1
MAN498	0.02	13	0.04	0.017	0.006	< 0.01	< 2	< 1	10	0.06	1	< 2	< 10	15	< 10	2	2
MAN499	0.05	13	0.22	0.019	0.018	0.01	< 2	2	12	0.11	< 1	< 2	< 10	40	< 10	3	4
MAN500	0.03	12	0.13	0.025	0.012	0.01	< 2	1	9	0.08	< 1	< 2	< 10	21	< 10	3	2
MAN501	0.05	14	0.24	0.024	0.020	< 0.01	< 2	2	15	0.09	< 1	< 2	< 10	26	< 10	4	2
MAN502	0.06	13	0.17	0.021	0.031	0.02	< 2	2	11	0.10	< 1	< 2	< 10	40	< 10	4	6
MAN503	0.03	< 10	0.07	0.021	0.009	0.02	< 2	1	11	0.06	2	< 2	< 10	17	< 10	2	3
MAN504	0.03	< 10	0.38	0.035	0.078	0.17	< 2	< 1	42	< 0.01	2	< 2	< 10	8	< 10	4	2
MAN505	0.07	49	0.27	0.028	0.047	0.05	< 2	3	21	0.06	< 1	< 2	< 10	21	< 10	16	2
MAN506	0.10	17	2.30	0.027	0.038	0.02	< 2	3	40	0.09	14	< 2	< 10	29	< 10	6	3
MAN507	0.17	17	1.82	0.035	0.041	< 0.01	< 2	3	41	0.09	4	< 2	< 10	28	< 10	7	10
MAN508	0.06	14	0.18	0.022	0.028	0.01	< 2	2	15	0.10	< 1	< 2	< 10	32	< 10	4	4
MAN509	0.06	14	0.24	0.025	0.062	0.01	< 2	2	15	0.09	< 1	< 2	< 10	32	< 10	4	3
MAN510	0.05	11	0.44	0.026	0.042	0.03	< 2	2	12	0.11	< 1	< 2	< 10	36	< 10	3	2
MAN511	0.04	13	0.12	0.021	0.011	< 0.01	< 2	2	12	0.10	< 1	< 2	< 10	29	< 10	3	5
MAN512	0.07	20	0.32	0.029	0.033	0.02	< 2	4	18	0.10	< 1	< 2	< 10	35	< 10	8	4
MAN513	0.05	17	0.18	0.021	0.019	0.02	< 2	2	10	0.12	2	< 2	< 10	53	< 10	3	5
MAN514	0.03	< 10	0.12	0.027	0.014	0.02	< 2	2	6	0.09	1	< 2	< 10	41	< 10	3	3
MAN515	0.03	10	0.06	0.019	0.006	< 0.01	< 2	< 1	8	0.07	< 1	< 2	< 10	13	< 10	2	2
MAN516	0.04	16	0.21	0.054	0.035	0.04	< 2	3	9	0.07	< 1	< 2	< 10	44	< 10	4	7
MAN517	0.04	< 10	0.08	0.023	0.014	0.02	< 2	1	9	0.09	2	< 2	< 10	15	< 10	3	< 1
MAN518	0.04	< 10	0.13	0.094	0.014	0.01	< 2	2	15	0.05	1	< 2	< 10	18	< 10	2	< 1
MAN519	0.04	< 10	0.22	0.063	0.007	< 0.01	< 2	2	7	0.13	< 1	< 2	< 10	27	< 10	4	< 1

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN520	0.04	10	0.20	0.118	0.009	< 0.01	< 2	2	24	0.08	< 1	< 2	< 10	20	< 10	3	2
MAN521	0.04	15	0.17	0.038	0.017	0.01	< 2	2	11	0.08	2	< 2	< 10	21	< 10	5	1
MAN522	0.04	< 10	0.14	0.030	0.018	0.01	< 2	2	11	0.08	< 1	< 2	< 10	31	< 10	2	1
MAN523	0.05	11	0.14	0.024	0.021	0.02	< 2	1	10	0.08	1	< 2	< 10	30	< 10	3	1
MAN524	0.06	< 10	0.14	0.019	0.025	0.01	< 2	1	12	0.08	< 1	< 2	< 10	28	< 10	2	1
MAN525	0.06	14	0.20	0.023	0.037	0.01	< 2	2	12	0.09	< 1	< 2	< 10	27	< 10	4	2
MAN526	0.06	13	0.19	0.022	0.037	< 0.01	< 2	2	13	0.08	< 1	< 2	< 10	24	< 10	5	4
MAN527	0.06	14	0.24	0.020	0.018	0.01	< 2	2	13	0.08	1	< 2	< 10	26	< 10	4	1
MAN528	0.04	< 10	0.11	0.021	0.016	0.02	< 2	1	8	0.08	< 1	< 2	< 10	30	< 10	2	< 1
MAN529	0.05	15	0.55	0.021	0.019	0.01	< 2	3	15	0.09	< 1	< 2	< 10	29	< 10	5	3
MAN530	0.04	11	0.17	0.019	0.014	0.01	< 2	2	11	0.11	< 1	< 2	< 10	32	< 10	3	2
MAN531	0.07	22	0.32	0.029	0.064	0.10	< 2	1	20	0.05	< 1	< 2	< 10	23	< 10	7	2
MAN532	0.04	< 10	0.16	0.029	0.063	0.17	< 2	< 1	27	< 0.01	1	< 2	< 10	4	< 10	2	1
MAN533	0.11	18	1.93	0.030	0.039	0.02	< 2	3	35	0.07	2	< 2	< 10	20	< 10	7	5
MAN534	0.05	20	0.22	0.022	0.030	0.01	< 2	2	15	0.07	< 1	< 2	< 10	21	< 10	7	1
MAN535	0.05	12	0.14	0.018	0.024	0.01	< 2	2	10	0.09	< 1	< 2	< 10	34	< 10	3	3
MAN536	0.03	12	0.09	0.017	0.007	< 0.01	< 2	1	11	0.08	< 1	< 2	< 10	20	< 10	3	5
MAN537	0.04	< 10	0.04	0.028	0.049	0.09	< 2	< 1	11	0.02	2	< 2	< 10	10	< 10	< 1	1
MAN538	0.05	12	0.18	0.021	0.013	0.01	< 2	2	12	0.11	1	< 2	< 10	32	< 10	3	2
MAN539	0.05	10	0.16	0.021	0.014	< 0.01	< 2	2	11	0.09	< 1	< 2	< 10	26	< 10	3	5
MAN540	0.04	11	0.19	0.022	0.013	< 0.01	< 2	2	12	0.10	< 1	< 2	< 10	30	< 10	3	3
MAN541	0.03	< 10	0.08	0.018	0.007	< 0.01	< 2	1	10	0.06	< 1	< 2	< 10	16	< 10	2	2
MAN542	0.04	< 10	0.13	0.020	0.014	0.01	< 2	1	9	0.11	1	< 2	< 10	39	< 10	2	2
MAN543	0.06	15	0.30	0.021	0.016	0.02	< 2	3	15	0.09	< 1	< 2	< 10	28	< 10	5	2
MAN544	0.05	11	0.20	0.022	0.016	< 0.01	< 2	2	14	0.09	< 1	< 2	< 10	26	< 10	3	3
MAN545	0.05	25	0.24	0.025	0.084	0.09	< 2	2	23	0.04	3	< 2	< 10	21	< 10	11	< 1
MAN546	0.04	32	0.25	0.024	0.095	0.10	< 2	2	20	0.04	4	< 2	< 10	27	< 10	14	1
MAN547	0.04	11	0.17	0.022	0.015	< 0.01	< 2	2	12	0.09	< 1	< 2	< 10	23	< 10	4	6
MAN548	0.03	12	0.07	0.022	0.009	< 0.01	< 2	1	10	0.08	< 1	< 2	< 10	23	< 10	2	< 1
MAN549	0.05	11	0.27	0.034	0.015	0.01	< 2	2	9	0.10	2	< 2	< 10	36	< 10	3	1
MAN550	0.04	12	0.07	0.019	0.016	0.01	< 2	1	10	0.06	< 1	< 2	< 10	21	< 10	2	< 1
MAN551	0.04	< 10	0.10	0.026	0.025	0.03	< 2	1	10	0.05	< 1	< 2	< 10	20	< 10	2	< 1
MAN552	0.06	< 10	0.31	0.027	0.019	0.02	< 2	2	9	0.10	8	< 2	< 10	46	< 10	3	2
MAN553	0.04	< 10	0.14	0.026	0.012	0.01	< 2	2	10	0.09	1	< 2	< 10	29	< 10	2	1
MAN554	0.03	< 10	0.07	0.022	0.011	< 0.01	< 2	1	7	0.13	2	< 2	< 10	24	< 10	3	1
MAN555	0.04	< 10	0.08	0.022	0.009	< 0.01	< 2	1	9	0.15	2	< 2	< 10	29	< 10	3	2
MAN556	0.05	< 10	0.17	0.019	0.017	0.01	< 2	2	11	0.11	< 1	< 2	< 10	39	< 10	2	4
MAN557	0.04	11	0.08	0.028	0.015	0.02	< 2	1	12	0.05	< 1	< 2	< 10	15	< 10	2	< 1
MAN558	0.06	18	0.20	0.022	0.025	0.02	< 2	2	15	0.08	< 1	< 2	< 10	24	< 10	5	1
MAN559	0.05	13	0.23	0.022	0.010	< 0.01	2	2	14	0.10	2	< 2	< 10	24	< 10	4	2
MAN560	0.06	14	0.25	0.023	0.020	0.02	< 2	2	16	0.08	< 1	< 2	< 10	26	< 10	5	< 1
MAN561	0.04	10	0.24	0.023	0.040	0.10	< 2	1	18	0.05	< 1	< 2	< 10	21	< 10	3	1
MAN562	0.03	< 10	0.21	0.033	0.079	0.45	< 2	< 1	36	< 0.01	1	< 2	< 10	11	< 10	2	2
MAN563	0.03	< 10	0.22	0.044	0.082	0.28	< 2	< 1	35	< 0.01	2	< 2	< 10	3	< 10	< 1	< 1
MAN564	0.06	14	0.21	0.029	0.030	0.03	< 2	4	12	0.11	< 1	< 2	< 10	39	< 10	4	8
MAN565	0.03	< 10	0.15	0.040	0.009	< 0.01	< 2	2	9	0.07	< 1	< 2	< 10	26	< 10	2	1
MAN566	0.03	14	0.07	0.019	0.013	0.01	< 2	1	8	0.09	< 1	< 2	< 10	31	< 10	2	2
MAN567	0.04	< 10	0.23	0.063	0.023	0.02	< 2	1	6	0.01	< 1	< 2	< 10	18	< 10	1	< 1
MAN568	0.04	< 10	0.06	0.047	0.039	0.07	< 2	< 1	20	0.02	< 1	< 2	< 10	8	< 10	1	1
MAN569	0.03	< 10	0.28	0.077	0.016	0.02	< 2	1	18	0.08	< 1	< 2	< 10	27	< 10	2	2

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN570	0.04	< 10	0.16	0.048	0.011	0.02	< 2	2	14	0.09	< 1	< 2	< 10	29	< 10	2	3
MAN571	0.04	12	0.19	0.022	0.011	0.01	< 2	2	11	0.09	< 1	< 2	< 10	25	< 10	4	4
MAN572	0.03	< 10	0.10	0.033	0.023	0.02	< 2	< 1	6	0.05	< 1	< 2	< 10	17	< 10	3	< 1
MAN573	0.07	< 10	0.06	0.033	0.103	0.12	< 2	< 1	20	0.01	< 1	< 2	< 10	6	< 10	3	< 1
MAN574	0.03	13	0.10	0.025	0.014	0.01	< 2	1	11	0.06	1	< 2	< 10	16	< 10	3	< 1
MAN575	0.04	13	0.16	0.025	0.010	< 0.01	< 2	2	12	0.09	< 1	< 2	< 10	25	< 10	4	2
MAN576	0.02	< 10	0.07	0.022	0.011	0.01	< 2	< 1	6	0.14	2	< 2	< 10	33	< 10	5	2
MAN577	0.03	11	0.14	0.022	0.030	0.01	< 2	2	9	0.10	< 1	< 2	< 10	23	< 10	5	3
MAN578	0.03	< 10	0.07	0.025	0.022	0.03	< 2	< 1	5	0.04	< 1	< 2	< 10	13	< 10	1	< 1
MAN579	0.04	12	0.24	0.027	0.027	0.02	< 2	2	9	0.10	< 1	< 2	< 10	32	< 10	3	< 1
MAN580	0.03	< 10	1.02	0.043	0.029	0.03	< 2	1	10	0.06	2	< 2	< 10	18	< 10	2	< 1
MR1	0.05	13	0.09	0.017	0.010	< 0.01	< 2	2	11	0.10	< 1	< 2	< 10	34	< 10	2	3
MR2	0.07	12	0.17	0.020	0.034	0.01	< 2	2	11	0.13	1	< 2	< 10	46	< 10	3	5
MR3	0.09	11	0.24	0.021	0.031	< 0.01	< 2	2	16	0.13	< 1	< 2	< 10	45	< 10	3	6
MR4	0.04	13	0.17	0.024	0.022	0.01	< 2	1	12	0.08	< 1	< 2	< 10	26	< 10	3	2
MR5	0.05	14	0.15	0.024	0.028	0.02	< 2	2	11	0.10	1	< 2	< 10	33	< 10	4	3
MR6	0.07	14	0.23	0.026	0.029	0.01	< 2	3	13	0.11	1	< 2	< 10	31	< 10	4	10
MR7	0.03	11	0.06	0.022	0.028	< 0.01	< 2	1	11	0.09	< 1	< 2	< 10	26	< 10	2	1
MR8	0.04	11	0.09	0.019	0.024	< 0.01	< 2	2	10	0.10	1	< 2	< 10	28	< 10	3	1
MR9	0.06	14	0.27	0.028	0.023	< 0.01	< 2	2	17	0.11	< 1	< 2	< 10	29	< 10	5	4

QC

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas				29.6	3.2	1130	779	14	31	637	676	0.37	376	< 10	294	0.7	1500	0.73	6	7	22.2	< 10	2
GXR-1 Cert				31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90
GXR-1 Meas				28.6	1.5	1100	756	14	33	602	648	0.35	364	< 10	150	0.7	1460	0.70	5	6	21.8	< 10	2
GXR-1 Cert				31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90
GXR-1 Meas				29.0	2.3	1190	816	14	19	650	692	0.37	390	< 10	402	0.7	1480	0.74	6	5	21.9	< 10	4
GXR-1 Cert				31.0	3.30	1110	852	18.0	41.0	730	760	3.52	427	15.0	750	1.22	1380	0.960	8.20	12.0	23.6	13.8	3.90
GXR-4 Meas				3.5	< 0.5	6050	136	313	36	42	67	2.81	96	< 10	32	1.2	19	0.83	12	52	2.89	10	< 1
GXR-4 Cert				4.0	0.860	6520	155	310	42.0	52.0	73.0	7.20	98.0	4.50	1640	1.90	19.0	1.01	14.6	64.0	3.09	20.0	0.110
GXR-4 Meas				3.5	< 0.5	6400	139	320	37	43	68	2.93	98	< 10	20	1.3	16	0.88	12	55	3.04	10	< 1
GXR-4 Cert				4.0	0.860	6520	155	310	42.0	52.0	73.0	7.20	98.0	4.50	1640	1.90	19.0	1.01	14.6	64.0	3.09	20.0	0.110
GXR-4 Meas				3.5	< 0.5	6690	142	318	38	41	69	2.90	99	< 10	54	1.3	2	0.85	12	53	2.96	10	< 1
GXR-4 Cert				4.0	0.860	6520	155	310	42.0	52.0	73.0	7.20	98.0	4.50	1640	1.90	19.0	1.01	14.6	64.0	3.09	20.0	0.110
GXR-6 Meas				0.3	< 0.5	69	1050	2	20	94	124	7.53	216	< 10	770	0.9	< 2	0.14	13	80	5.63	20	1
GXR-6 Cert				1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680
GXR-6 Meas				0.2	< 0.5	65	1000	1	19	90	119	7.17	213	< 10	741	0.8	< 2	0.13	11	77	5.40	20	< 1
GXR-6 Cert				1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680
GXR-6 Meas				0.2	< 0.5	70	1060	1	18	91	123	7.35	217	< 10	745	0.8	< 2	0.13	12	78	5.42	20	< 1
GXR-6 Cert				1.30	1.00	66.0	1010	2.40	27.0	101	118	17.7	330	9.80	1300	1.40	0.290	0.180	13.8	96.0	5.58	35.0	0.0680
SAR-M (U.S.G.S.) Meas				3.2	5.2	321	4480	12	42	992	944	1.13	34		169	0.9	< 2	0.27	10	87	2.65	< 10	
SAR-M (U.S.G.S.) Cert				3.64	5.27	331.0000	5220	13.1	41.5	982	930.0	6.30	38.8		801	2.20	1.94	0.61	10.70	79.7	2.99	17	
SAR-M (U.S.G.S.) Meas				3.2	5.5	339	4680	13	45	1060	1030	1.09	35		166	0.9	< 2	0.28	10	93	2.78	< 10	
SAR-M (U.S.G.S.) Cert				3.64	5.27	331.0000	5220	13.1	41.5	982	930.0	6.30	38.8		801	2.20	1.94	0.61	10.70	79.7	2.99	17	
SAR-M (U.S.G.S.) Meas				3.3	5.2	330	4720	13	42	996	956	1.18	35		166	0.9	< 2	0.28	9	88	2.67	< 10	
SAR-M (U.S.G.S.) Cert				3.64	5.27	331.0000	5220	13.1	41.5	982	930.0	6.30	38.8		801	2.20	1.94	0.61	10.70	79.7	2.99	17	
SAR-M (U.S.G.S.) Meas				4.2	5.4	330	4650	13	43	1050	1010	1.17	35		171	1.0	< 2	0.28	10	89	2.81	< 10	
SAR-M (U.S.G.S.) Cert				3.64	5.27	331.0000	5220	13.1	41.5	982	930.0	6.30	38.8		801	2.20	1.94	0.61	10.70	79.7	2.99	17	
SAR-M (U.S.G.S.) Meas				3.1	5.3	330	4750	13	45	1050	1030	1.20	36		175	1.0	< 2	0.29	10	90	2.81	< 10	
SAR-M (U.S.G.S.) Cert				3.64	5.27	331.0000	5220	13.1	41.5	982	930.0	6.30	38.8		801	2.20	1.94	0.61	10.70	79.7	2.99	17	
PK2 Meas	5260	6240	5110																				
PK2 Cert	4785.000	5918.000	4749.000																				
PK2 Meas	5140	6170	4930																				
PK2 Cert	4785.000	5918.000	4749.000																				
PK2 Meas	5240	6180	4910																				
PK2 Cert	4785.000	5918.000	4749.000																				
PK2 Meas	4690	5570	4500																				
PK2 Cert	4785.000	5918.000	4749.000																				
PK2 Meas	4970	5930	4780																				
PK2 Cert																							

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
	4785.000	5918.000	4749.000																				
PK2 Meas	4950	5850	4690																				
PK2 Cert	4785.000	5918.000	4749.000																				
PK2 Meas	4980	5960	4770																				
PK2 Cert	4785.000	5918.000	4749.000																				
PK2 Meas	5300	6350	4980																				
PK2 Cert	4785.000	5918.000	4749.000																				
PK2 Meas	5240	6200	5010																				
PK2 Cert	4785.000	5918.000	4749.000																				
PK2 Meas	5080	6200	4840																				
PK2 Cert	4785.000	5918.000	4749.000																				
PK2 Meas	4500	5470	4450																				
PK2 Cert	4785.000	5918.000	4749.000																				
PK2 Meas	4870	5670	4560																				
PK2 Cert	4785.000	5918.000	4749.000																				
PK2 Meas	4600	5490	4440																				
PK2 Cert	4785.000	5918.000	4749.000																				
PK2 Meas	5100	6070	4950																				
PK2 Cert	4785.000	5918.000	4749.000																				
CDN-PGMS-25 Meas	446	1800	378																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	521	1840	424																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	496	1690	384																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	513	1950	438																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	434	1710	368																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	513	1730	364																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	525	1940	421																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	443	1700	366																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	422	1760	398																				
CDN-PGMS-25 Cert	483	1830	400																				

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
CDN-PGMS-25 Meas	449	1710	361																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	449	1710	366																				
CDN-PGMS-25 Cert	483	1830	400																				
CDN-PGMS-25 Meas	482	1730	401																				
CDN-PGMS-25 Cert	483	1830	400																				
MAN9 Orig	< 2	< 5	< 5																				
MAN9 Dup	< 2	< 5	< 5																				
MAN13 Orig				< 0.2	< 0.5	14	70	4	12	6	9	0.88	< 2	< 10	20	< 0.5	< 2	0.38	3	16	0.64	< 10	< 1
MAN13 Dup				< 0.2	< 0.5	14	73	4	13	7	10	0.93	< 2	< 10	20	< 0.5	< 2	0.40	3	17	0.66	< 10	< 1
MAN27 Orig	< 2	< 5	< 5	< 0.2	< 0.5	2	71	< 1	5	4	9	0.93	< 2	< 10	26	< 0.5	< 2	0.18	2	16	0.93	< 10	< 1
MAN27 Dup	< 2	< 5	< 5	< 0.2	< 0.5	2	75	< 1	5	< 2	10	0.95	< 2	< 10	26	< 0.5	< 2	0.18	2	16	0.93	< 10	< 1
MAN32 Orig	< 2	< 5	< 5																				
MAN32 Dup	< 2	< 5	< 5																				
MAN40 Orig				< 0.2	< 0.5	4	83	< 1	12	3	14	1.22	< 2	< 10	25	< 0.5	< 2	0.25	5	23	1.25	< 10	< 1
MAN40 Dup				< 0.2	< 0.5	4	80	< 1	14	4	14	1.20	< 2	< 10	25	< 0.5	< 2	0.23	5	24	1.25	< 10	< 1
MAN46 Orig	< 2	< 5	< 5																				
MAN46 Dup	< 2	< 5	< 5																				
MAN54 Orig				< 0.2	< 0.5	32	73	2	46	6	15	2.09	< 2	< 10	32	< 0.5	< 2	0.24	5	51	2.19	< 10	< 1
MAN54 Dup				< 0.2	< 0.5	31	74	2	44	6	15	2.03	2	< 10	31	< 0.5	< 2	0.25	5	51	2.14	< 10	< 1
MAN77 Orig				< 0.2	< 0.5	1	65	1	2	3	8	0.58	< 2	< 10	22	< 0.5	< 2	0.17	1	13	0.68	< 10	< 1
MAN77 Dup				< 0.2	< 0.5	1	68	1	4	< 2	8	0.63	< 2	< 10	22	< 0.5	< 2	0.18	1	13	0.72	< 10	< 1
MAN81 Orig	< 2	< 5	< 5																				
MAN81 Dup	< 2	< 5	< 5																				
MAN89 Orig	< 2	< 5	< 5																				
MAN89 Dup	< 2	< 5	< 5																				
MAN91 Orig				< 0.2	< 0.5	1	47	< 1	1	6	11	0.48	< 2	< 10	27	< 0.5	< 2	0.15	< 1	9	0.39	< 10	< 1
MAN91 Dup				< 0.2	< 0.5	1	47	< 1	< 1	3	10	0.48	< 2	< 10	26	< 0.5	< 2	0.14	< 1	8	0.39	< 10	< 1
MAN104 Orig				< 0.2	< 0.5	2	64	< 1	3	4	12	0.67	< 2	< 10	23	< 0.5	< 2	0.53	1	14	0.69	< 10	< 1
MAN104 Dup				< 0.2	< 0.5	2	59	< 1	2	4	11	0.61	< 2	< 10	21	< 0.5	< 2	0.48	1	13	0.64	< 10	< 1
MAN118 Orig				< 0.2	1.0	22	66	< 1	10	19	24	0.66	4	< 10	60	< 0.5	< 2	1.17	6	7	0.61	< 10	< 1
MAN118 Dup				< 0.2	1.0	21	58	< 1	10	22	22	0.60	4	< 10	60	< 0.5	< 2	1.14	5	7	0.55	< 10	< 1
MAN133 Orig				< 0.2	< 0.5	13	393	2	8	< 2	6	0.19	2	< 10	71	< 0.5	< 2	4.22	2	2	0.99	< 10	< 1
MAN133 Dup				< 0.2	< 0.5	13	372	2	6	< 2	5	0.18	2	< 10	69	< 0.5	< 2	4.08	2	2	0.98	< 10	< 1
MAN137 Orig				< 0.2	< 0.5	94	161	< 1	65	7	22	1.47	< 2	< 10	40	< 0.5	< 2	0.38	14	26	1.60	< 10	< 1
MAN137 Dup				< 0.2	< 0.5	95	164	1	69	6	22	1.52	3	< 10	41	< 0.5	< 2	0.39	14	27	1.65	< 10	< 1
MAN151 Orig				< 0.2	< 0.5	2	48	< 1	3	5	10	0.64	3	< 10	18	< 0.5	< 2	0.09	1	14	0.96	< 10	< 1
MAN151 Dup				< 0.2	< 0.5	2	48	< 1	3	4	9	0.65	< 2	< 10	17	< 0.5	< 2	0.09	1	13	0.95	< 10	< 1
MAN166 Orig				< 0.2	< 0.5	8	403	2	2	6	20	0.10	< 2	19	37	< 0.5	< 2	3.97	< 1	2	0.22	< 10	< 1
MAN166 Dup				< 0.2	< 0.5	7	386	1	3	7	18	0.08	3	19	36	< 0.5	< 2	3.92	< 1	2	0.20	< 10	< 1
MAN191 Orig				< 0.2	< 0.5	5	563	< 1	4	4	25	0.14	< 2	13	51	< 0.5	< 2	3.91	< 1	2	0.09	< 10	< 1
MAN191 Dup				< 0.2	< 0.5	5	574	1	5	2	26	0.15	< 2	14	53	< 0.5	< 2	3.93	< 1	2	0.09	< 10	< 1
MAN207 Orig	< 2	< 5	< 5																				
MAN207 Dup	< 2	< 5	< 5																				
MAN214 Orig	< 2	< 5	< 5																				
MAN214 Dup	3	< 5	< 5																				
MAN215 Orig				< 0.2	< 0.5	11	1630	< 1	5	8	27	0.28	5	< 10	63	< 0.5	< 2	2.16	7	6	1.07	< 10	< 1
MAN215 Dup				< 0.2	< 0.5	11	1600	< 1	4	9	26	0.27	4	< 10	62	< 0.5	< 2	2.14	7	6	1.05	< 10	< 1

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN234 Orig				< 0.2	< 0.5	4	152	1	3	6	11	0.10	< 2	12	27	< 0.5	< 2	3.28	1	1	0.11	< 10	< 1
MAN234 Dup				< 0.2	< 0.5	4	150	2	2	5	11	0.11	< 2	11	26	< 0.5	< 2	3.03	< 1	2	0.12	< 10	< 1
MAN238 Orig				< 0.2	< 0.5	17	423	< 1	4	14	16	0.10	4	18	47	< 0.5	< 2	3.72	1	2	0.49	< 10	< 1
MAN238 Dup				< 0.2	< 0.5	18	431	< 1	4	12	19	0.10	3	17	48	< 0.5	< 2	3.75	1	2	0.51	< 10	< 1
MAN247 Orig	< 2	< 5	< 5	< 0.2	< 0.5	7	91	< 1	7	4	12	1.06	< 2	< 10	26	< 0.5	< 2	0.22	4	20	1.13	< 10	< 1
MAN247 Dup	< 2	< 5	< 5	< 0.2	< 0.5	7	90	< 1	8	4	13	1.08	< 2	< 10	27	< 0.5	< 2	0.22	5	20	1.13	< 10	< 1
MAN250 Orig	< 2	< 5	< 5																				
MAN250 Dup	< 2	< 5	< 5																				
MAN261 Orig				< 0.2	< 0.5	3	122	1	4	< 2	5	0.09	< 2	< 10	36	< 0.5	< 2	2.55	< 1	1	0.10	< 10	< 1
MAN261 Dup				< 0.2	< 0.5	3	117	< 1	3	3	5	0.08	< 2	< 10	36	< 0.5	< 2	2.40	< 1	1	0.10	< 10	< 1
MAN268 Orig	< 2	< 5	< 5																				
MAN268 Dup	< 2	< 5	< 5																				
MAN294 Orig				< 0.2	< 0.5	3	90	< 1	10	6	12	0.85	< 2	< 10	32	< 0.5	< 2	0.44	4	14	0.71	< 10	< 1
MAN294 Dup				< 0.2	< 0.5	3	91	< 1	11	5	12	0.86	< 2	< 10	32	< 0.5	< 2	0.44	5	14	0.72	< 10	< 1
MAN295 Orig	< 2	< 5	< 5																				
MAN295 Dup	< 2	< 5	< 5																				
MAN302 Orig				< 0.2	0.9	16	450	< 1	4	6	21	0.28	< 2	16	54	< 0.5	< 2	4.13	2	5	0.24	< 10	< 1
MAN302 Dup				< 0.2	0.8	16	433	< 1	3	6	20	0.26	< 2	15	53	< 0.5	< 2	3.98	2	5	0.22	< 10	< 1
MAN307 Orig				< 0.2	< 0.5	12	81	1	6	6	13	0.86	< 2	< 10	20	< 0.5	< 2	0.16	3	18	1.04	< 10	< 1
MAN307 Dup				< 0.2	< 0.5	11	78	< 1	6	5	13	0.82	< 2	< 10	19	< 0.5	< 2	0.15	3	18	1.00	< 10	< 1
MAN310 Orig	2	< 5	< 5																				
MAN310 Dup	< 2	< 5	< 5																				
MAN320 Orig	< 2	< 5	< 5																				
MAN320 Dup	< 2	< 5	< 5																				
MAN321 Orig				< 0.2	< 0.5	12	91	< 1	19	5	18	1.40	< 2	< 10	46	< 0.5	< 2	0.24	9	21	1.58	< 10	< 1
MAN321 Dup				< 0.2	< 0.5	12	93	< 1	18	5	17	1.39	< 2	< 10	46	< 0.5	< 2	0.25	9	21	1.56	< 10	< 1
MAN334 Orig	< 2	< 5	< 5																				
MAN334 Dup	< 2	< 5	< 5																				
MAN344 Orig	< 2	< 5	< 5	< 0.2	< 0.5	7	90	< 1	12	5	14	1.87	< 2	< 10	31	< 0.5	< 2	0.15	5	26	1.73	< 10	< 1
MAN344 Dup	< 2	< 5	< 5	< 0.2	< 0.5	7	89	1	12	4	14	1.79	6	< 10	31	< 0.5	< 2	0.14	5	27	1.67	< 10	< 1
MAN354 Orig	< 2	< 5	< 5																				
MAN354 Dup	< 2	< 5	< 5																				
MAN358 Orig				< 0.2	< 0.5	< 1	35	< 1	1	< 2	7	0.50	< 2	< 10	14	< 0.5	< 2	0.13	< 1	12	0.75	< 10	< 1
MAN358 Dup				< 0.2	< 0.5	1	33	< 1	1	3	7	0.51	< 2	< 10	14	< 0.5	< 2	0.13	< 1	11	0.70	< 10	< 1
MAN362 Orig	< 2	< 5	< 5																				
MAN362 Dup	< 2	< 5	< 5																				
MAN371 Orig				< 0.2	< 0.5	137	667	< 1	52	10	91	0.86	2	< 10	86	< 0.5	< 2	3.28	33	15	1.12	< 10	< 1
MAN371 Dup				< 0.2	< 0.5	132	628	< 1	50	10	84	0.83	3	< 10	79	< 0.5	< 2	3.11	31	14	1.06	< 10	< 1
MAN375 Orig	< 2	< 5	< 5																				
MAN375 Dup	< 2	< 5	< 5																				
MAN385 Orig				< 0.2	< 0.5	18	1080	2	1	3	36	0.23	3	11	130	< 0.5	< 2	3.38	2	6	1.27	< 10	< 1
MAN385 Dup				< 0.2	< 0.5	18	1090	1	2	4	36	0.23	4	10	130	< 0.5	< 2	3.42	2	6	1.29	< 10	< 1
MAN389 Orig	< 2	< 5	< 5																				
MAN389 Dup	< 2	< 5	< 5																				
MAN399 Orig	< 2	< 5	< 5																				
MAN399 Dup	< 2	< 5	< 5																				
MAN404 Orig				< 0.2	< 0.5	2	94	< 1	8	7	20	1.26	3	< 10	33	< 0.5	< 2	0.17	4	26	1.70	< 10	< 1
MAN404 Dup				< 0.2	< 0.5	3	95	1	7	7	18	1.24	3	< 10	32	< 0.5	< 2	0.17	3	24	1.60	< 10	< 1
MAN416 Orig	< 2	< 5	< 5																				
MAN416 Dup	< 2	< 5	< 5																				

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN418 Orig				< 0.2	< 0.5	3	101	< 1	6	6	20	1.32	3	< 10	31	< 0.5	< 2	0.33	4	24	1.58	< 10	< 1
MAN418 Dup				< 0.2	< 0.5	3	102	< 1	8	4	20	1.35	2	< 10	32	< 0.5	< 2	0.34	4	25	1.62	< 10	< 1
MAN430 Orig	< 2	< 5	< 5																				
MAN430 Dup	< 2	< 5	< 5																				
MAN431 Orig				< 0.2	< 0.5	2	71	< 1	8	4	12	1.31	2	< 10	28	< 0.5	< 2	0.18	4	21	1.40	< 10	< 1
MAN431 Dup				< 0.2	< 0.5	1	71	< 1	7	6	12	1.28	< 2	< 10	27	< 0.5	< 2	0.17	4	21	1.37	< 10	< 1
MAN436 Orig	< 2	< 5	< 5																				
MAN436 Dup	< 2	< 5	< 5																				
MAN445 Orig				< 0.2	< 0.5	9	359	< 1	7	5	5	0.66	< 2	< 10	48	< 0.5	< 2	3.90	3	11	0.74	< 10	< 1
MAN445 Dup				< 0.2	< 0.5	9	358	1	6	5	6	0.67	< 2	< 10	47	< 0.5	< 2	3.85	3	12	0.74	< 10	< 1
MAN451 Orig	< 2	< 5	< 5																				
MAN451 Dup	< 2	< 5	< 5																				
MAN460 Orig	< 2	< 5	< 5																				
MAN460 Dup	< 2	< 5	< 5																				
MAN468 Orig				< 0.2	< 0.5	1	83	< 1	6	4	14	0.97	2	< 10	37	< 0.5	< 2	0.17	2	18	1.25	< 10	< 1
MAN468 Dup				< 0.2	< 0.5	2	83	< 1	5	3	14	0.96	< 2	< 10	38	< 0.5	< 2	0.17	2	18	1.24	< 10	< 1
MAN471 Orig	< 2	< 5	< 5																				
MAN471 Dup	< 2	< 5	< 5																				
MAN483 Orig				< 0.2	< 0.5	< 1	111	< 1	3	3	10	0.74	< 2	< 10	25	< 0.5	< 2	0.34	3	17	0.91	< 10	< 1
MAN483 Dup				< 0.2	< 0.5	< 1	111	1	4	3	10	0.72	< 2	< 10	24	< 0.5	< 2	0.34	3	16	0.90	< 10	< 1
MAN485 Orig	< 2	< 5	< 5																				
MAN485 Dup	< 2	< 5	< 5																				
MAN496 Orig	< 2	< 5	< 5	< 0.2	< 0.5	6	90	< 1	10	4	13	1.31	< 2	< 10	34	< 0.5	< 2	0.22	5	23	1.34	< 10	< 1
MAN496 Dup	< 2	< 5	< 5	< 0.2	< 0.5	5	89	< 1	9	4	14	1.27	< 2	< 10	33	< 0.5	< 2	0.21	5	23	1.33	< 10	< 1
MAN508 Orig	< 2	< 5	< 5																				
MAN508 Dup	< 2	< 5	< 5																				
MAN510 Orig				< 0.2	< 0.5	23	64	< 1	21	10	17	1.34	< 2	< 10	45	< 0.5	< 2	0.27	6	27	1.27	< 10	< 1
MAN510 Dup				< 0.2	< 0.5	24	66	< 1	22	8	17	1.36	< 2	< 10	47	< 0.5	< 2	0.29	6	28	1.31	< 10	< 1
MAN521 Orig	< 2	< 5	< 5																				
MAN521 Dup	< 2	< 5	< 5																				
MAN529 Orig				< 0.2	< 0.5	7	145	< 1	11	6	23	1.45	2	< 10	36	< 0.5	< 2	0.90	5	24	1.17	< 10	< 1
MAN529 Dup				< 0.2	< 0.5	7	147	< 1	12	6	23	1.51	2	< 10	37	< 0.5	< 2	0.90	5	26	1.24	< 10	< 1
MAN530 Orig	< 2	< 5	< 5																				
MAN530 Dup	< 2	< 5	< 5																				
MAN543 Orig				< 0.2	< 0.5	4	267	< 1	8	5	20	1.21	< 2	< 10	43	< 0.5	< 2	0.51	4	23	1.18	< 10	< 1
MAN543 Dup				< 0.2	< 0.5	4	278	1	8	6	20	1.20	< 2	< 10	43	< 0.5	< 2	0.52	4	23	1.17	< 10	< 1
MAN544 Orig	< 2	< 5	< 5																				
MAN544 Dup	< 2	< 5	< 5																				
MAN556 Orig	< 2	< 5	< 5	< 0.2	< 0.5	3	76	1	6	5	16	1.16	2	< 10	30	< 0.5	< 2	0.15	2	20	1.70	< 10	< 1
MAN556 Dup	< 2	< 5	< 5	< 0.2	< 0.5	3	72	1	5	5	15	1.12	3	< 10	29	< 0.5	< 2	0.14	2	19	1.65	< 10	< 1
MAN566 Orig	< 2	< 5	< 5																				
MAN566 Dup	< 2	< 5	< 5																				
MAN570 Orig				< 0.2	< 0.5	101	52	6	20	18	21	1.13	< 2	< 10	25	< 0.5	< 2	0.22	6	10	0.94	< 10	< 1
MAN570 Dup				< 0.2	< 0.5	105	50	5	19	18	20	1.12	< 2	< 10	24	< 0.5	< 2	0.22	6	10	0.92	< 10	< 1
MAN577 Orig	< 2	< 5	< 5																				
MAN577 Dup	< 2	< 5	< 5																				
MR5 Orig	< 2	< 5	< 5																				
MR5 Dup	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				

Analyte Symbol	Au	Pd	Pt	Ag	Cd	Cu	Mn	Mo	Ni	Pb	Zn	Al	As	B	Ba	Be	Bi	Ca	Co	Cr	Fe	Ga	Hg
Unit Symbol	ppb	ppb	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	%	ppm	ppm	%	ppm	ppm
Lower Limit	2	5	5	0.2	0.5	1	5	1	1	2	2	0.01	2	10	10	0.5	2	0.01	1	1	0.01	10	1
Method Code	FA-ICP	FA-ICP	FA-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	5	7	< 1	< 1	< 2	2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank	< 2	< 5	< 5																				
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank	< 2	< 5	< 5																				
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Method Blank	< 2	< 5	< 5																				
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	< 2	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1
Method Blank				< 0.2	< 0.5	< 1	< 5	< 1	< 1	< 2	8	< 0.01	< 2	< 10	< 10	< 0.5	< 2	< 0.01	< 1	< 1	< 0.01	< 10	< 1

QC

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-1 Meas	0.03	< 10	0.13	0.053	0.044	0.20	87	1	172	< 0.01	16	< 2	31	76	141	24	16
GXR-1 Cert	0.050	7.50	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-1 Meas	0.03	< 10	0.13	0.048	0.041	0.19	82	1	168	< 0.01	18	5	29	74	135	23	16
GXR-1 Cert	0.050	7.50	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-1 Meas	0.03	< 10	0.13	0.052	0.045	0.20	89	1	183	< 0.01	17	< 2	29	76	139	23	17
GXR-1 Cert	0.050	7.50	0.217	0.0520	0.0650	0.257	122	1.58	275	0.036	13.0	0.390	34.9	80.0	164	32.0	38.0
GXR-4 Meas	1.67	45	1.56	0.139	0.118	1.69	5	7	68	0.13	< 1	< 2	< 10	75	13	11	11

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
GXR-4 Cert	4.01	64.5	1.66	0.564	0.120	1.77	4.80	7.70	221	0.29	0.970	3.20	6.20	87.0	30.8	14.0	186
GXR-4 Meas	1.75	48	1.59	0.147	0.122	1.75	2	7	72	0.13	2	< 2	< 10	79	11	12	11
GXR-4 Cert	4.01	64.5	1.66	0.564	0.120	1.77	4.80	7.70	221	0.29	0.970	3.20	6.20	87.0	30.8	14.0	186
GXR-4 Meas	1.73	49	1.57	0.142	0.121	1.74	5	7	71	0.13	3	< 2	< 10	78	11	11	11
GXR-4 Cert	4.01	64.5	1.66	0.564	0.120	1.77	4.80	7.70	221	0.29	0.970	3.20	6.20	87.0	30.8	14.0	186
GXR-6 Meas	1.20	11	0.41	0.076	0.035	0.01	7	22	30		< 1	< 2	< 10	166	< 10	6	9
GXR-6 Cert	1.87	13.9	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		0.0180	2.20	1.54	186	1.90	14.0	110
GXR-6 Meas	1.14	< 10	0.38	0.073	0.032	0.01	4	20	26		< 1	< 2	< 10	161	< 10	5	10
GXR-6 Cert	1.87	13.9	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		0.0180	2.20	1.54	186	1.90	14.0	110
GXR-6 Meas	1.17	10	0.40	0.073	0.033	0.01	6	21	28		< 1	< 2	< 10	166	< 10	5	12
GXR-6 Cert	1.87	13.9	0.609	0.104	0.0350	0.0160	3.60	27.6	35.0		0.0180	2.20	1.54	186	1.90	14.0	110
SAR-M (U.S.G.S.) Meas	0.27	47	0.33	0.034	0.062		5	3	27	0.05	2	< 2	< 10	33	< 10	18	
SAR-M (U.S.G.S.) Cert	2.94	57.4	0.50	1.140	0.07		6.0	7.83	151	0.38	0.96	2.7	3.57	67.2	9.78	28.00	
SAR-M (U.S.G.S.) Meas	0.25	47	0.34	0.034	0.064		4	3	28	0.04	7	< 2	< 10	33	< 10	19	
SAR-M (U.S.G.S.) Cert	2.94	57.4	0.50	1.140	0.07		6.0	7.83	151	0.38	0.96	2.7	3.57	67.2	9.78	28.00	
SAR-M (U.S.G.S.) Meas	0.29	46	0.34	0.034	0.060		5	3	28	0.05	9	< 2	< 10	34	< 10	19	
SAR-M (U.S.G.S.) Cert	2.94	57.4	0.50	1.140	0.07		6.0	7.83	151	0.38	0.96	2.7	3.57	67.2	9.78	28.00	
SAR-M (U.S.G.S.) Meas	0.28	47	0.35	0.034	0.064		5	3	29	0.05	< 1	< 2	< 10	34	< 10	19	
SAR-M (U.S.G.S.) Cert	2.94	57.4	0.50	1.140	0.07		6.0	7.83	151	0.38	0.96	2.7	3.57	67.2	9.78	28.00	
SAR-M (U.S.G.S.) Meas	0.29	49	0.35	0.036	0.066		5	3	30	0.05	5	< 2	< 10	35	< 10	20	
SAR-M (U.S.G.S.) Cert	2.94	57.4	0.50	1.140	0.07		6.0	7.83	151	0.38	0.96	2.7	3.57	67.2	9.78	28.00	
PK2 Meas																	
PK2 Cert																	
PK2 Meas																	
PK2 Cert																	
PK2 Meas																	
PK2 Cert																	
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PK2 Meas																	
PK2 Cert																	

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
PK2 Meas																	
PK2 Cert																	
PK2 Meas																	
PK2 Cert																	
PK2 Meas																	
PK2 Cert																	
PK2 Meas																	
PK2 Cert																	
CDN-PGMS-25 Meas																	
CDN-PGMS-25 Cert																	
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CDN-PGMS-25 Meas																	
CDN-PGMS-25 Cert																	
CDN-PGMS-25 Meas																	
CDN-PGMS-25 Cert																	
MAN9 Orig																	
MAN9 Dup																	
MAN13 Orig	0.04	< 10	0.19	0.042	0.008	0.01	< 2	2	10	0.16	2	< 2	< 10	29	< 10	5	2
MAN13 Dup	0.04	< 10	0.20	0.043	0.009	< 0.01	< 2	2	10	0.17	2	< 2	< 10	30	< 10	5	2
MAN27 Orig	0.04	12	0.15	0.023	0.007	< 0.01	< 2	2	14	0.10	< 1	< 2	< 10	26	< 10	3	6
MAN27 Dup	0.04	12	0.15	0.023	0.006	< 0.01	< 2	2	15	0.10	< 1	< 2	< 10	26	< 10	3	6
MAN32 Orig																	

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN32 Dup																	
MAN40 Orig	0.04	13	0.22	0.027	0.011	< 0.01	< 2	2	14	0.11	< 1	< 2	< 10	33	< 10	4	7
MAN40 Dup	0.04	11	0.22	0.024	0.010	< 0.01	< 2	2	13	0.11	< 1	< 2	< 10	33	< 10	4	8
MAN46 Orig																	
MAN46 Dup																	
MAN54 Orig	0.05	10	0.28	0.025	0.024	0.02	< 2	2	12	0.10	< 1	< 2	< 10	42	< 10	2	5
MAN54 Dup	0.04	11	0.29	0.025	0.023	0.02	2	2	12	0.11	< 1	< 2	< 10	42	< 10	3	4
MAN77 Orig	0.05	12	0.12	0.022	0.006	< 0.01	< 2	1	14	0.09	< 1	< 2	< 10	26	< 10	3	5
MAN77 Dup	0.05	13	0.12	0.022	0.006	< 0.01	< 2	2	14	0.09	< 1	< 2	< 10	27	< 10	3	5
MAN81 Orig																	
MAN81 Dup																	
MAN89 Orig																	
MAN89 Dup																	
MAN91 Orig	0.03	14	0.06	0.021	0.011	< 0.01	< 2	< 1	13	0.06	< 1	< 2	< 10	17	< 10	2	< 1
MAN91 Dup	0.03	14	0.06	0.022	0.011	< 0.01	< 2	< 1	12	0.06	< 1	< 2	< 10	16	< 10	2	< 1
MAN104 Orig	0.05	< 10	0.12	0.028	0.008	< 0.01	< 2	1	15	0.07	< 1	< 2	< 10	20	< 10	2	3
MAN104 Dup	0.04	< 10	0.11	0.023	0.008	< 0.01	< 2	1	14	0.07	5	< 2	< 10	19	< 10	2	3
MAN118 Orig	0.05	< 10	0.10	0.041	0.054	0.12	< 2	1	38	0.02	< 1	< 2	< 10	12	< 10	3	2
MAN118 Dup	0.05	< 10	0.09	0.041	0.053	0.12	< 2	< 1	36	0.02	< 1	< 2	< 10	10	< 10	3	2
MAN133 Orig	0.01	< 10	0.26	0.040	0.049	0.29	< 2	< 1	43	< 0.01	< 1	< 2	< 10	4	< 10	1	2
MAN133 Dup	0.01	< 10	0.25	0.040	0.048	0.28	< 2	< 1	42	< 0.01	2	< 2	< 10	4	< 10	1	2
MAN137 Orig	0.06	16	0.28	0.027	0.018	< 0.01	< 2	2	14	0.09	< 1	< 2	< 10	34	< 10	4	4
MAN137 Dup	0.06	19	0.28	0.027	0.019	0.01	< 2	2	15	0.09	1	< 2	< 10	35	< 10	4	4
MAN151 Orig	0.04	14	0.09	0.020	0.021	< 0.01	< 2	1	9	0.08	< 1	< 2	< 10	32	< 10	2	2
MAN151 Dup	0.04	11	0.09	0.019	0.021	< 0.01	< 2	1	9	0.08	< 1	< 2	< 10	31	< 10	2	2
MAN166 Orig	0.02	< 10	0.26	0.082	0.063	0.44	< 2	< 1	36	< 0.01	1	< 2	< 10	2	< 10	< 1	1
MAN166 Dup	0.02	< 10	0.25	0.078	0.053	0.38	< 2	< 1	34	< 0.01	< 1	< 2	< 10	1	< 10	< 1	< 1
MAN191 Orig	0.02	< 10	0.26	0.032	0.044	0.21	< 2	< 1	37	< 0.01	2	< 2	< 10	2	< 10	< 1	1
MAN191 Dup	0.02	< 10	0.26	0.032	0.045	0.22	< 2	< 1	38	< 0.01	< 1	< 2	< 10	2	< 10	< 1	1
MAN207 Orig																	
MAN207 Dup																	
MAN214 Orig																	
MAN214 Dup																	
MAN215 Orig	0.02	< 10	0.18	0.027	0.071	0.20	< 2	< 1	33	< 0.01	< 1	< 2	< 10	8	< 10	2	2
MAN215 Dup	0.02	< 10	0.18	0.025	0.069	0.20	< 2	< 1	31	< 0.01	< 1	< 2	< 10	8	< 10	2	2
MAN234 Orig	0.01	< 10	0.24	0.026	0.041	0.18	< 2	< 1	31	< 0.01	< 1	2	< 10	2	< 10	< 1	< 1
MAN234 Dup	0.01	< 10	0.24	0.024	0.043	0.18	< 2	< 1	31	< 0.01	2	< 2	< 10	2	< 10	< 1	< 1
MAN238 Orig	0.02	< 10	0.24	0.033	0.055	0.33	< 2	< 1	38	< 0.01	< 1	< 2	< 10	2	< 10	< 1	1
MAN238 Dup	0.02	< 10	0.25	0.033	0.057	0.34	< 2	< 1	37	< 0.01	2	< 2	< 10	2	< 10	< 1	1
MAN247 Orig	0.05	16	0.19	0.023	0.033	0.01	< 2	2	12	0.08	< 1	< 2	< 10	25	< 10	6	4
MAN247 Dup	0.05	17	0.20	0.023	0.034	0.01	< 2	2	11	0.08	2	< 2	< 10	25	< 10	6	4
MAN250 Orig																	
MAN250 Dup																	
MAN261 Orig	< 0.01	< 10	0.17	0.019	0.026	0.21	< 2	< 1	30	< 0.01	2	< 2	< 10	1	< 10	< 1	< 1
MAN261 Dup	< 0.01	< 10	0.17	0.019	0.026	0.21	< 2	< 1	28	< 0.01	2	< 2	< 10	1	< 10	< 1	< 1
MAN268 Orig																	
MAN268 Dup																	
MAN294 Orig	0.03	< 10	0.12	0.020	0.034	0.05	< 2	1	13	0.05	2	< 2	< 10	18	< 10	3	1

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN294 Dup	0.03	< 10	0.12	0.019	0.034	0.06	< 2	1	13	0.05	2	< 2	< 10	18	< 10	3	2
MAN295 Orig																	
MAN295 Dup																	
MAN302 Orig	0.03	< 10	0.26	0.033	0.124	0.32	< 2	< 1	38	< 0.01	< 1	< 2	< 10	7	< 10	3	3
MAN302 Dup	0.03	< 10	0.24	0.034	0.116	0.31	< 2	< 1	36	< 0.01	5	< 2	< 10	6	< 10	3	3
MAN307 Orig	0.05	14	0.20	0.022	0.010	0.01	< 2	2	12	0.11	3	< 2	< 10	33	< 10	3	3
MAN307 Dup	0.05	14	0.19	0.020	0.010	< 0.01	< 2	2	11	0.10	< 1	< 2	< 10	32	< 10	3	3
MAN310 Orig																	
MAN310 Dup																	
MAN320 Orig																	
MAN320 Dup																	
MAN321 Orig	0.06	14	0.21	0.025	0.034	0.01	< 2	2	14	0.10	1	< 2	< 10	39	< 10	4	4
MAN321 Dup	0.06	14	0.20	0.026	0.035	0.01	< 2	2	14	0.11	1	< 2	< 10	39	< 10	4	4
MAN334 Orig																	
MAN334 Dup																	
MAN344 Orig	0.05	13	0.21	0.022	0.016	0.01	< 2	3	11	0.10	< 1	< 2	< 10	34	< 10	4	7
MAN344 Dup	0.05	13	0.21	0.022	0.016	0.01	< 2	3	11	0.09	2	< 2	< 10	33	< 10	4	7
MAN354 Orig																	
MAN354 Dup																	
MAN358 Orig	0.03	< 10	0.06	0.018	0.022	< 0.01	< 2	< 1	8	0.06	< 1	< 2	< 10	23	< 10	1	3
MAN358 Dup	0.03	< 10	0.06	0.017	0.022	< 0.01	< 2	< 1	8	0.06	< 1	< 2	< 10	21	< 10	1	3
MAN362 Orig																	
MAN362 Dup																	
MAN371 Orig	0.03	31	0.28	0.031	0.121	0.24	< 2	1	43	0.02	1	< 2	< 10	17	< 10	13	3
MAN371 Dup	0.03	29	0.27	0.026	0.114	0.22	< 2	< 1	40	0.02	7	< 2	< 10	16	< 10	12	2
MAN375 Orig																	
MAN375 Dup																	
MAN385 Orig	0.02	< 10	0.20	0.036	0.065	0.32	< 2	< 1	33	< 0.01	4	< 2	< 10	13	< 10	4	3
MAN385 Dup	0.02	< 10	0.20	0.036	0.066	0.32	< 2	< 1	35	< 0.01	6	< 2	< 10	14	< 10	4	4
MAN389 Orig																	
MAN389 Dup																	
MAN399 Orig																	
MAN399 Dup																	
MAN404 Orig	0.04	22	0.15	0.022	0.033	0.01	< 2	2	10	0.08	< 1	< 2	< 10	39	< 10	4	2
MAN404 Dup	0.04	15	0.15	0.021	0.032	0.01	< 2	2	11	0.08	1	< 2	< 10	37	< 10	3	2
MAN416 Orig																	
MAN416 Dup																	
MAN418 Orig	0.05	14	0.19	0.021	0.038	< 0.01	< 2	2	12	0.08	< 1	< 2	< 10	37	< 10	4	3
MAN418 Dup	0.05	13	0.19	0.021	0.038	< 0.01	< 2	2	11	0.08	< 1	< 2	< 10	38	< 10	4	3
MAN430 Orig																	
MAN430 Dup																	
MAN431 Orig	0.06	12	0.17	0.023	0.017	< 0.01	< 2	2	12	0.10	< 1	< 2	< 10	30	< 10	4	6
MAN431 Dup	0.06	12	0.16	0.021	0.015	< 0.01	< 2	2	11	0.09	2	< 2	< 10	29	< 10	3	6
MAN436 Orig																	
MAN436 Dup																	
MAN445 Orig	0.03	12	0.23	0.027	0.051	0.15	< 2	< 1	34	0.02	< 1	< 2	< 10	15	< 10	5	2
MAN445 Dup	0.03	12	0.23	0.026	0.050	0.14	< 2	< 1	34	0.02	1	< 2	< 10	15	< 10	5	2
MAN451 Orig																	

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
MAN451 Dup																	
MAN460 Orig																	
MAN460 Dup																	
MAN468 Orig	0.07	10	0.17	0.022	0.020	< 0.01	< 2	2	13	0.09	< 1	< 2	< 10	29	< 10	3	3
MAN468 Dup	0.07	11	0.17	0.022	0.020	< 0.01	< 2	2	13	0.09	< 1	< 2	< 10	28	< 10	3	3
MAN471 Orig																	
MAN471 Dup																	
MAN483 Orig	0.04	16	0.19	0.023	0.034	< 0.01	< 2	2	13	0.07	< 1	< 2	< 10	22	< 10	6	2
MAN483 Dup	0.04	14	0.19	0.022	0.033	< 0.01	< 2	2	14	0.08	1	< 2	< 10	22	< 10	6	2
MAN485 Orig																	
MAN485 Dup																	
MAN496 Orig	0.05	15	0.21	0.023	0.026	< 0.01	< 2	2	14	0.09	1	< 2	< 10	28	< 10	5	6
MAN496 Dup	0.05	17	0.22	0.023	0.027	< 0.01	< 2	2	13	0.09	< 1	< 2	< 10	28	< 10	5	6
MAN508 Orig																	
MAN508 Dup																	
MAN510 Orig	0.05	11	0.43	0.026	0.040	0.02	< 2	2	11	0.11	3	< 2	< 10	35	< 10	3	2
MAN510 Dup	0.05	12	0.45	0.027	0.044	0.03	< 2	2	12	0.11	< 1	< 2	< 10	36	< 10	3	2
MAN521 Orig																	
MAN521 Dup																	
MAN529 Orig	0.05	15	0.54	0.021	0.018	0.01	< 2	3	15	0.09	< 1	< 2	< 10	28	< 10	5	3
MAN529 Dup	0.05	15	0.55	0.022	0.020	0.01	< 2	3	16	0.09	< 1	< 2	< 10	30	< 10	5	3
MAN530 Orig																	
MAN530 Dup																	
MAN543 Orig	0.05	15	0.29	0.021	0.016	0.02	< 2	3	15	0.09	< 1	< 2	< 10	28	< 10	5	2
MAN543 Dup	0.06	15	0.30	0.022	0.016	0.02	< 2	3	15	0.09	2	< 2	< 10	28	< 10	5	2
MAN544 Orig																	
MAN544 Dup																	
MAN556 Orig	0.05	10	0.17	0.021	0.017	0.01	< 2	2	12	0.11	1	< 2	< 10	40	< 10	2	4
MAN556 Dup	0.05	< 10	0.17	0.018	0.017	0.01	< 2	2	11	0.10	< 1	< 2	< 10	38	< 10	2	4
MAN566 Orig																	
MAN566 Dup																	
MAN570 Orig	0.04	< 10	0.16	0.048	0.011	0.01	< 2	2	14	0.09	1	< 2	< 10	29	< 10	2	3
MAN570 Dup	0.04	< 10	0.16	0.048	0.011	0.02	< 2	2	13	0.09	< 1	< 2	< 10	29	< 10	2	2
MAN577 Orig																	
MAN577 Dup																	
MR5 Orig																	
MR5 Dup																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank	< 0.01	< 10	< 0.01	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	0.012	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 1	< 2	< 10	< 1	< 10	< 1	< 1

Analyte Symbol	K	La	Mg	Na	P	S	Sb	Sc	Sr	Ti	Te	Tl	U	V	W	Y	Zr
Unit Symbol	%	ppm	%	%	%	%	ppm	ppm	ppm	%	ppm	ppm	ppm	ppm	ppm	ppm	ppm
Lower Limit	0.01	10	0.01	0.001	0.001	0.01	2	1	1	0.01	1	2	10	1	10	1	1
Method Code	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP	AR-ICP
Method Blank	< 0.01	< 10	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank																	
Method Blank	< 0.01	< 10	< 0.01	0.011	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	0.013	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank																	
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Method Blank	< 0.01	< 10	< 0.01	0.010	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	< 0.001	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 1	< 2	< 10	< 1	< 10	< 1	< 1
Method Blank	< 0.01	< 10	< 0.01	0.014	< 0.001	< 0.01	< 2	< 1	< 1	< 0.01	< 1	< 2	< 10	< 1	< 10	< 1	< 1

Appendix 5
Beep Mat Description

PREFACE

With the Beep Mat, you can efficiently and cheaply examine conductors detected by airborne surveys in the many regions of Canada where the overburden is thin. Not only are the readings taken while a prospector is walking in the woods (no more lines!), but the Beep Mat also signals the position and depth of the conductor (the maximum being of less than 2 meters) by a sound signal and a red light. Sites closer to the surface can therefore be sampled with only a shovel, a hammer, and if possible, a few dynamite sticks. One can therefore concentrate on the best showings and avoid investing on barren conductors.

Under moss, the Beep Mat also detects conductive and magnetic boulders. It is then possible to map the scattering of a trail of floats and find its source.

Moreover, the Beep Mat is the only instrument capable of detecting sulphide veinlets in suboutcropping ore that otherwise responds badly or not at all to geophysics. For example, the Beep Mat detected chalcopyrite and pyrite veinlets in suboutcropping ores of Silidor and New Pascalis mines and led to their discovery (or other similar mines) simply with a man walking in the woods before trenching or drilling.

We are convinced that the Beep Mat should relaunch exploration of usual and precious metals on a large scale throughout Canada, just as the scintillometer did for uranium in Saskatchewan.

1. INTRODUCTION

This manual is directed at geologists and prospectors. It concerns model BM-IV, but should also be useful in order to operate model BM-II, the former model.

1.1 Brief Description of the Beep Mat

The Beep Mat is a simple and efficient electromagnetic prospection instrument adapted to the search of outcrops and/or boulders containing conductive and/or magnetic minerals. It basically consists of a sleigh-shaped short probe and a reading unit. For prospecting, you put the probe on the ground and you pull it to cover the ground to be explored. The Beep Mat takes continuous readings during prospection on lines and out of lines in the woods. It sends out a distinctive audible signal when detecting a conductive or magnetic object in a radius of up to 2 meters (6 feet). The Beep Mat directly detects and signals the presence of ores, even slightly conductive, containing chalcopyrite, galena, pentlandite, bornite and chalcocine. It also detects native metals (copper, silver, gold) as well as generally barren conductive bodies (pyrite, graphite and pyrrhotine), but which may contain precious ores such as gold or zinc (sphalerite), which are themselves non-conductive. Besides detecting conductors, the Beep Mat can measure their intrinsic conductivity and their magnetic susceptibility (magnetite content). This helps geologists and geophysicists to better interpret the other geophysical and geological surveys.

1.2 Beep Mat Components

When you receive your Beep Mat, check if it contains all components shown at illustration 1. Please notice the terminology used on that illustration since it will be used next in this manual.

The following optional components may also be included:
- a solar battery with a recharging battery
- a dumping cable

Make sure there are no apparent breakings and if you have all components shown at illustration 1. Contact Instrumentation GDD Inc. if necessary.

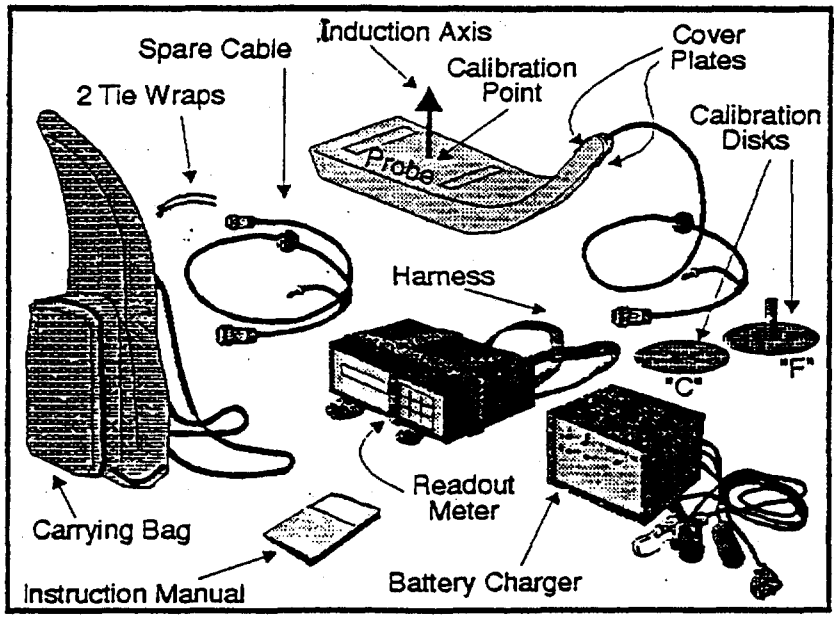


Illustration 1: Beep Mat components

1.3 Specifications

Power supply:		2 rechargeable 6-V batteries
Battery life:		over 10 hours
Storage capacity:		3,000 readings
Size:	Reading unit:	18 x 20 x 6.4 cm
	Probe:	30 x 91 x 7.6 cm
Weight:	Reading unit:	1.9 kg
	Probe:	3.8 kg
Operating temperature:		from -10 °C to 40 °C
Humidity:		can be operated on rainy, foggy or snowy days

Appendix to the Beep Mat model BM-IV prospecting manual

NEW!

An important improvement was made to the 1995 model BM-IV of the Beep Mat. The latest version of the instrument reacts faster to weak conductors and most important, it can now operate in an automatic configuration.

Faster reaction

The alarm of the Beep Mat now reacts faster to any conductor. You can walk and even slowly drag the Beep Mat behind a VTT and still detect a weak signal that may correspond to a smaller float or a deeper weakly conductive suboutcrop.

Automatic configuration

When you first initialize, for example, the instrument will be in the AUTO-BM configuration. In this new configuration, the Beep Mat combines the best characteristics of the BM-II and BM-IV configurations. If the terrain contains more than 0,2 % of magnetite, the instrument operates as a BM-IV and is able to detect even a weak conductor that would, for a BM-II, be hidden by magnetite. When the terrain contains less magnetite, it operates as a BM-II to maximize its sensitivity. The change over of the configuration is automatically made in 1/10 second. The operator can thus concentrate on the traverse and the instrument will always be in the most efficient configuration. As before, the mode of display is controlled by the MODE key. While cruising, we suggest to use the mode without display and to work with the display only when one wants to measure the characteristics of the terrain or before digging down to a conductor.

After an initialization, by pressing on the [IV↔II] key, the operator can select one of the three following configurations: AUTO-BM, BM-II or BM-IV. According to the configuration chosen, the display will show the corresponding message:

BM-IV:	**PLEASE INITIALIZE IN BM-IV**
AUTO-BM:	**PLEASE INITIALIZE AUTO-BM**
BM-II:	**PLEASE INITIALIZE IN BM-II**

This list of choices is cyclic. The operator can go back to the first choice by pressing again on [IV↔II].

BM-IV USER'S GUIDE

1. CHARGING THE BATTERIES

Upon receipt, charge the batteries: connect the charger to the Round Jack located at the back of the reading unit (see illustration 3). The BM-IV should be recharged every night from a 110-V outlet or from a 12-V battery. When not in use, it is recommended to keep the instrument on charge (110 V or 12 V). It will take between 6 to 10 hours before it is fully charged. Two reading units can be charged at the same time. Once the batteries are fully charged, the lights under A and B on the charger will dim. If the batteries are too weak, the reading unit will produce a continuous signal associated with the appearance of "low battery" on the reading unit. Shortly afterwards, the readings become meaningless, so recharge immediately.

2. BEGINNING THE SURVEY

To begin the survey, connect the probe to the Round Jack at the back of the reading unit and attach the cable strap to the leather case.

3. FUNCTIONS OF THE 9 KEYS ON THE READING UNIT

3.1 [ON]

This key has 3 functions:

A) Standby mode

On the reading unit, press down the "ON" key, keep it down until the first alarm signal stops (about 3 seconds), and release the key. Then, *BM-IV GDD INC* or *STANDBY* will be displayed. If not, repeat the operation. This message indicates that the probe is connected and warming up. It is recommended to warm up the instrument at least one hour before beginning a survey.

B) Operating mode (initialization)

To begin the survey, stand away from any conductive material and lift the probe vertically above your head so as to avoid ground effects (see illustration 2). Initialize the reading unit by pumping the "ON" key once. Keep the probe in the air until the screen displays σL (conductivity), dH (high frequency delta), MAG (magnetite), MEM (# of readings stored) and BM-II or BM-IV (Beep Mat mode). All readings should be close to zero. If not, initialize again. Then put the probe on the ground in order to begin your survey.

After each 15 minutes of use, the instrument will signal by an alarm that the instrument needs to be reinitialized in the air so that its maximum efficiency is always obtained: simply reinitialize as explained in 3.1-B.

C) Shut off mode

To shut off the instrument, press down the "ON" key and keep it down 5 seconds until the two signals are not audible anymore. "OFF" will appear on the display after these 5 seconds. Release the key to obtain a blank screen. If necessary, repeat the operation until you get a blank screen. When the instrument is in the operating mode but not in use, it will automatically shut itself off after two hours.

N.B. No special sequence is necessary in passing from ON to OFF to STAND-BY modes.

3.2 [■] , [□]

Pump one or the other to increase (■) or diminish (▭) the contrast of the display.

3.3 [LEVEL] , [↑] , [↓]

By default, treasholds of the BM-IV are the following:

	Thresholds	Range
σL (conductivity):	20 Hz (temporarily 150)	10, **20**, 30...100, 150, 200, 400, 800, 1600...25,600 Hz
MAG (magnetite):	800 Hz	10, 20, 30...100, 150, 200, 400, **800**, 1600...25,600 Hz
dH (high frequency delta):	10 Hz	**10**, 20, 30...100, 150, 200, 400, 800, 1600...25,600 Hz
M.C.(magnetite coefficient):	100 %	**100**-98-96-94...84-82-80-70-60-50%

The BM-IV comes back to the above values after it has been turned off (blank screen) and turned on again. However, the values will not change after an initialization. In order to reduce false alarms when in presence of conductive overburden, a reduction of the sensivity of the probe may be desired. To do so, you have to modify one or several of the 4 thresholds: first pump on LEVEL to scroll, choose the one(s) to be modified and make the modification, but one threshold at a time. Then pump ↑ or ↓ to reach the desired threshold. Once finished, the unit automatically comes back to the operating mode after 3 seconds. By increasing the thresholds, one drastically reduces the sampling depth and the sensibility of the Beep Mat. You may reduce the magnetite coefficient (M.C.) in presence of a highly magnetic environment where sulfides are to be detected (ex.: skarn formation in Alaska). By testing different thresholds, experience will guide you to the proper thresholds to be used, especially in magnetic environments.

3.4 [MODE]

The results of the survey can be read on 3 different displays. Choose the one which is more convenient for you by pressing the MODE key to scroll.

1. σL (conductivity), dH (high frequency delta) and MAG (magnetite) values will be displayed by default
2. Bar graph
3. No display "Sound only - no display"

3.5 [IV↔II]

Pump once to pass from BM-IV mode to BM-II mode and vice versa. Each time you pass from one mode to the other, you must reinitialize the reading unit (see 3.1-B). The major difference between BM-IV mode and BM-II mode is that with the BM-II mode, only the dH is displayed.

A positive value means that there is a conductor, but there might still be a little bit of magnetite.
A negative value means that there is magnetite, but there might still be a small conductor.

The stronger value (+ or -) prevails over the other. The BM-II mode may be used to follow/find boulder trains because it is faster.

3.6 [MEM]

This key is used to record data. It is possible to record up to 1,000 values and afterwards dump them into a computer with the help of a special cable. The precise function of this key will be explained in the more detailed version of the user's guide coming soon. For the time being, simply avoid to use this key since you do not have the special cable and the information on how to use it.

4. HOW TO INTERPRET BEEP MAT SIGNALS IN CLAY AREAS

First of all, reinitialize the instrument (see 3.1-B) and place the Beep Mat where it reacted the most in order to localize the conductor. In clay areas, even after reinitialization, the Beep Mat tends to indicate a positive value ranging between +25 and +80. A uniform signal is usually obtained over large clay areas. In hilly areas, it may be worthwhile to check the site by digging a 30 cm-deep trench measuring some 30 cm x 60 cm. By placing the Beep Mat into such a trench, readings will not fluctuate and will remain stable in clay areas, while they will increase when getting closer to a real conductor.

5. TROUBLESHOOTING GUIDE

Breakdowns are generally due to a broken wire into the cable. Before changing the cable, make sure that it is not due to one of the following problems:

Problems	Solutions
1) If there are no "beeps" nor readings on the display, it may be due to a bad connection between the probe cable and the Round Jack.	Make sure you have correctly connected the probe to the reading unit, recharge the battery and test the instrument after.
2) If the Beep Mat "beeps" but nothing appears on the screen when you push the "ON" key, it may simply be because there is not enough contrast on the display	Pump the [■] key
3) Broken cable	Remove the broken cable and install the spare cable. Send the broken cable for repairs to our office immediately.
4) "Low frequency problem" or/and "High frequency problem" messages	Shut off the reading unit (see 3.1-C), unplug the cable from the reading unit, reconnect the cable and restart (see 3.1-A). Try a few times. If the problem persists, change the cable.
5) "Low battery" message	Put the reading unit on charge for 6 to 10 hours. Once the batteries are fully charged, the lights under A and B on the charger will dim.
6) High numbers on the display (ex.: σL = 99999)	Shut off the reading unit and reinitialize until it works.

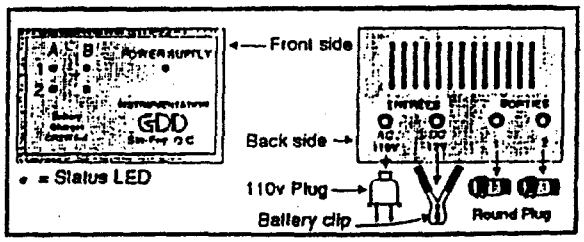
6. INTERPRETATION OF VALUES

Due to magnetite and water in the ground, the readings generally range from -50 to -200 (MAG, dH) while oL = 0 up to 100 (not significant under 150). One has to remember that in presence of a conductor, the Beep Mat will "beep" (low-pitched alarm), the red light will flash and positive values (oL, dH) will be displayed. The oL/dH ratio will give a relative value of how conductive is the conductor. Be aware that pyrrhotite and graphite can be as good conductors as a metal can with a oL/dH ratio close to 1. N.B. Do not forget that the frequency is increased when going over a conductor, and reduced when in presence of magnetite.

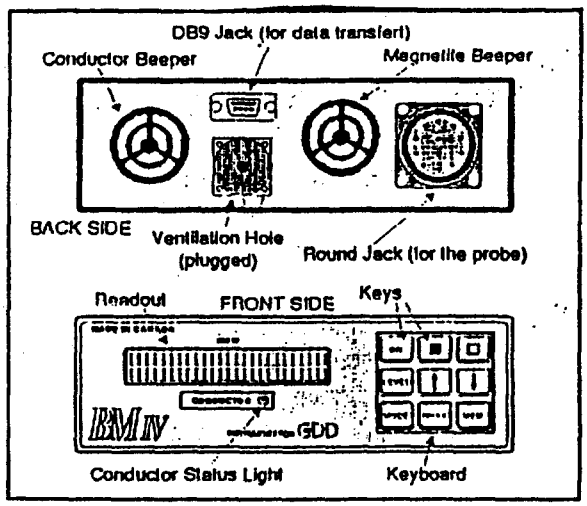
On the contrary, in presence of magnetite, the high-pitched alarm will be heard, and a negative value will be displayed, but the red light will not flash. For example, a value of -1000 at MAG means that there is approximately 1 % of magnetite.

In BM-IV mode, magnetite and conductors can be detected at the same time. The high-pitched and low-pitched alarms will be heard with respectively negative (dH, MAG) and positive (oL) values, and the red light will flash, confirming the presence of a conductor.

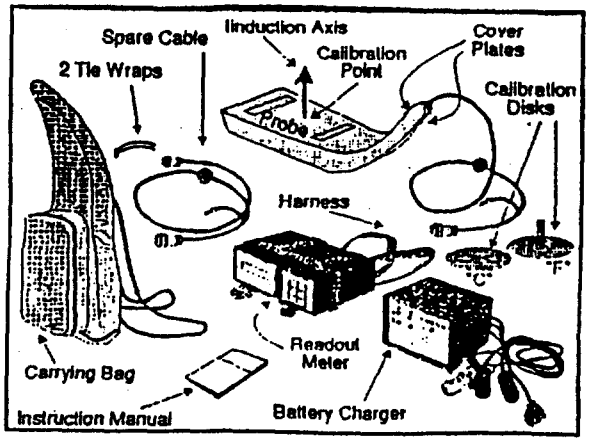
-2-



-1-



-3-



-4-

3.1 Reading Unit Elements

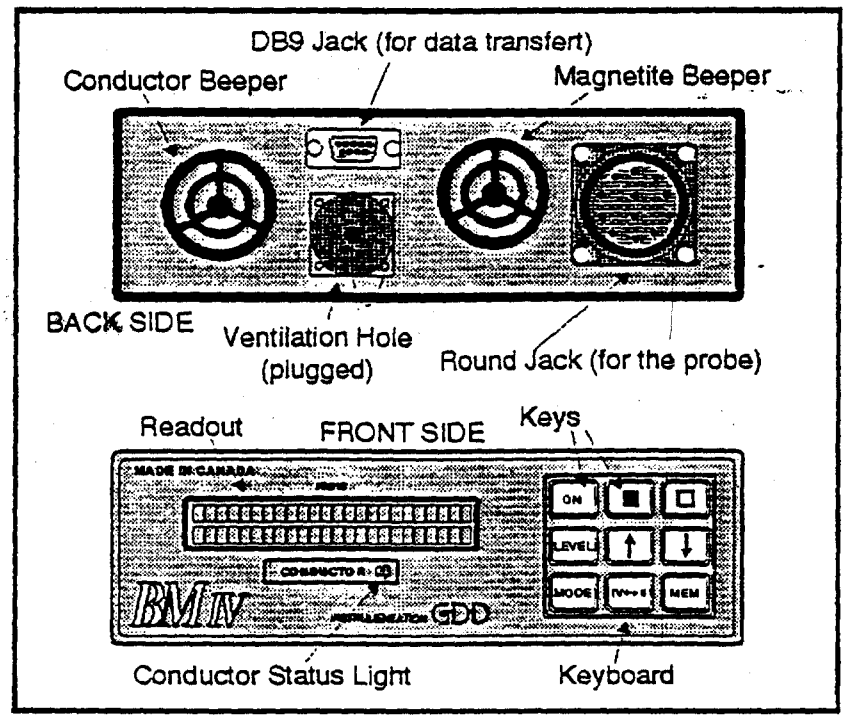


Illustration 4: Reading unit

Illustration 4 shows the various visible parts of the reading unit. Here is a short description of the function of each one.

- The **display** has two lines of 24 characters each. Values, parameters or messages generated by the Beep Mat can be read on it.
- The **conductor light** lights up when the conductor value or delta value exceeds a specified threshold when in presence of a conductor.
- The **conductivity buzzer** (low-pitched sound) is activated under the same conditions as the conductor light.
- The **magnetite buzzer** (high-pitched sound) is activated when the magnetite value exceeds a specified threshold. **N.B.**: the buzzers and the conductor light react quicker than the display.
- The **cylindrical receptacle** links the reading unit to the probe or to the battery charger.

- The **ventilation cap** covers the ventilation hole. When there is an accumulation of humidity in the reading unit, you must open the cap while the batteries are charging to let humidity go out. If possible, do that in a warm and dry place.

- The **DB9 receptacle** links the reading unit to a computer for the transfert of memorized data.

- The **keyboard keys** are to get to the various functions of the Beep Mat; each one is identified at its center. In this manual, a word or a symbol in brackets represents the key so identified: for example, [ON] or [↑], or [▯]. Here are their specific functions:

[ON]	=	to change the ***state*** of the Beep Mat
[▯], [▯]	=	to increase or diminish the contrast of the display
[LEVEL]	=	to activate the display of an ***operation parameter***
[↑], [↓]	=	to increase or reduce the value of the displayed parameter
[MODE]	=	to change the display mode
[IV ↔ II]	=	to change the configuration
[MEM]	=	to store the displayed reading

2.16279

The expressions in ***bold-italic*** will be explained in the next sections. The [MEM] key will be explained at section 3.7 (Readings Storage) and at chapter 10 (Data Transfer).

3.2 Configuration

The BM-IV can operate on two frequencies (BM-IV mode) or on one frequency (BM-II mode). The chosen configuration can be recognized by the appearing of BM-IV or BM-II on the display (see illustration 5). To pass from one configuration to the other, press [IV↔II]. The instrument requires an initialization at every change of configuration. Please note that in this manual, instead of always repeating "in BM-II or BM-IV configuration", you will just read "in BM-II or in BM-IV".

It is recommended to use the BM-II configuration when the rock is little or not magnetic, because its detection capacity is greater.

In **BM-II**, the Beep Mat gives a reading of the delta value (dH).

In **BM-IV**, the Beep Mat gives a more detailed reading made up from the three values presented at the end of chapter 4:

dH	delta
σL	conductor
MAG	magnetite

3.3 Display Modes

The reading unit has three display modes:

- numerical mode (normal)
- graph mode
- no-display mode

Illustration 5 graphically shows these three display modes for both configuration. You choose the mode you prefer. However, you may prefer the no-display mode since the Beep Mat does not display any readings but signals the presence of conductors or magnetite concentrations more rapidly. To pass from one mode to the other, press [MODE].

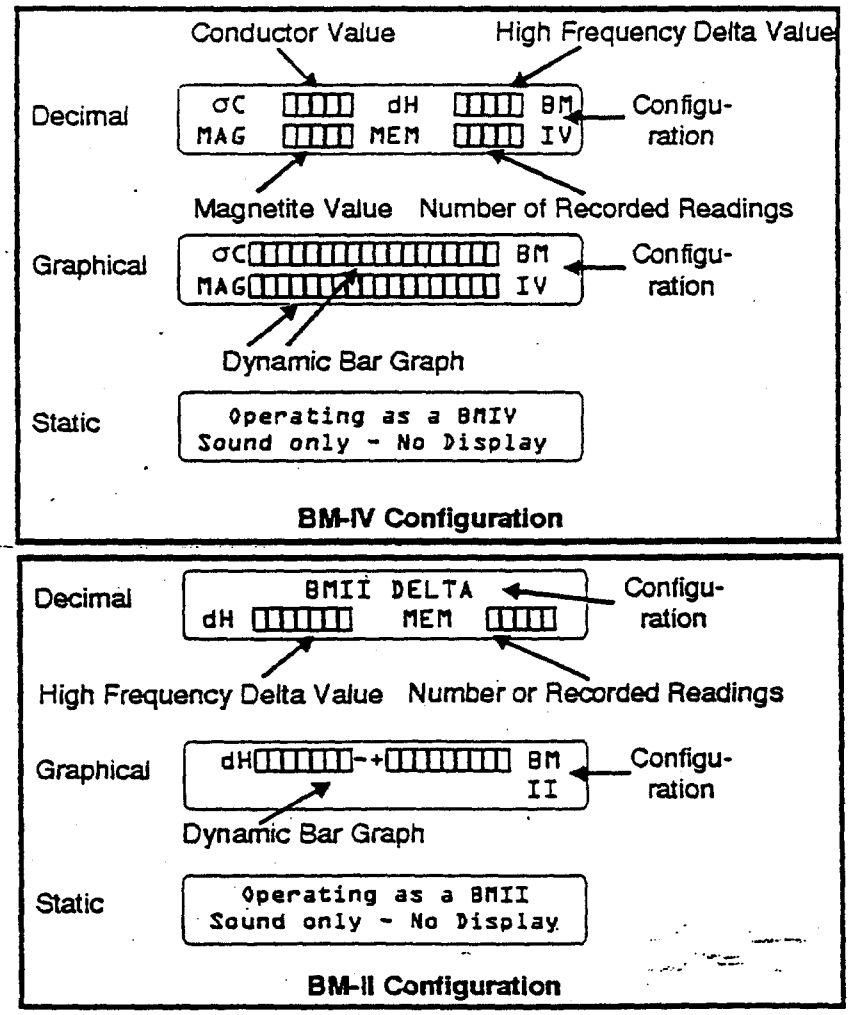


Illustration 5: Display Modes

3.4 Beep Mat States

The reading unit can be in one of the following four states:

Off
Standby (or preheating)
Initialization
On (in reading process)

Off: The Beep Mat stops its electric consumption and functions.

Standby: The Beep Mat only warms up to stabilize its frequency. The minimal preheating period suggested before beginning a survey is 30 minutes, and outside if possible.

Initialization: The Beep Mat ajusts its signals in order to display zero values when there are no conductors. Initialization automatically ends a few seconds after one pressed [ON].

On: The Beep Mat measures the probe reactions, interprets them in terms of values, then displays these values every second. However, the buzzers react instantly, in less than 0,15 second. Therefore, the buzzer might signal something while the reading unit does not display anything. When the Beep Mat is ***on***, a message on the display and a sound signal remind the operator to initialize the Beep Mat every 15 minutes.

3.5 How to Pass From One State to the Other With [ON]

[ON] is not only used to turn on the Beep Mat; it is also used to put the Beep Mat in one of the states described on next page. By connecting the probe to the reading unit, the Beep Mat is ***off***. Everytime you momentarely press [ON], the Beep Mat passes to ***initialization***. After 5 seconds, it passes to ***on***. If nobody uses the keyboard for more than two hours, the Beep Mat automatically passes to ***off***.

If you keep [ON] pressed longer, the display indicates the following available states in this order (a few seconds by choice):

Initialization:	(sound signal) 2 seconds
Standby:	(silence) 3 seconds
Off:	(second sound signal) 5 seconds

The Beep Mat will put itself in the displayed state if you release [ON] at the precise moment when the state you selected is displayed.

3.6 Operating Parameters and Their Thresholds

The operating parameters of the Beep Mat as well as their values when turning the instrument on are, in order of appearance:

	Threshold	Scale
σL (conductivity):	150 Hz	10-20-30...100-**150**-200-400-800...25,600 Hz
MAG (magnetite):	400 Hz	10-20-30...100-150-200-**400**-800...25,600 Hz
dH (delta):	10 Hz	**10**-20-30...100-150-200-400-800...25,600 Hz
M.C. (magnetite coefficient):	100 %	**100**-98-96-94...84-82-80-70-60-50 %

To display one of these parameters, press [LEVEL]. The displayed parameter only stays a few seconds and then returns to the operating mode. By pressing [LEVEL] again during these few seconds, the next parameter is displayed, according to a cyclic sequence. It is possible to modify the displayed parameter by pressing [↑] and [↓].

It is important to repeat that when a value exceeds its threshold, an alarm (sound signal) will ring. Reduction of a value threshold will result in an increased detection sensitivity of the Beep Mat. However, this may cause an increase of false alarms. On the other side, an increase of a value threshold will result in a diminution of the Beep Mat detection sensitivity and of the number of false alarms. Usually, it is not recommended to increase the thresholds because less true conductors will be found in a day.

Table 1 shows the readings variations of a Beep Mat in relation with the variations of a conductor depth located under the probe. With this table, you are now able to evaluate the consequences of a modification of the thresholds.

Depth in cm	σL value conductor	dH value delta	MAG value magnetite
30	32	68	0
25	66	124	0
20	176	240	0
15	407	530	0
10	1082	1329	0
5	2716	3312	0
0	7532	9233	0

Table 1: Value versus depth of a 15-cm diameter pyrrhotite gossen

The % of magnetite subtraction (M.C.), a correction coefficient for the effect of magnetite, enables the Beep Mat, in BM-IV, to adjust the effect of magnetite versus the effect of a conductor. If you reduce that coefficient, the σL value will be diminished by the presence of magnetite. The σL value would therefore become non significant with a too small magnetite coefficient. It is for that reason that one must be very experienced before modifying that coefficient. The magnetite coefficient must normally be at 100. It is sometimes possible to reduce it lightly (ex. 96) if the ground is highly magnetic and irregular and if, at 100, that causes several false alarms. It is strongly recommended not to modify the operating parameters, unless there are false alarms in repetition.

3.7 Record Data

When ***on***, the Beep Mat renews its display every second. You can store the values of the last reading by pressing [MEM]. The displayed figure right of MEM represents the sequence number of the last entry. Following that operation, this figure increases by one. Notice that this number also increases by one at every initialization. The memory contains memorized readings data and initializations. The maximum sequence number of the memory is 3,000.

In your notebook, note that number and the conditions in which the reading was taken (for example, the location of the site, digging depth, values before and after digging, etc.). Later, you may transfer these data to a computer in order to draw a map of the discovered showings or for geophysical survey purposes (see chapter 10 - Data Transfer).

3.8 Troubleshooting

If the instrument does not display anything or is incoherent, one of the following components might be defective:

- batteries
- battery charger
- probe cable
- probe
- reading unit

First check if the probe cable is correctly screwed on to the reading unit. Then check if the batteries are correctly charged by using either the other cylindrical connector of the charger or another charger (see section 2.1 for a description of the charger). If the problem persists, replace the probe cable, it might be damaged inside. To replace it, unscrew the screws of the cover plates (see illustration 1). Then, unscrew the connector located there with a pair of pliers and cut the tie wraps. Connect the spare cable to the same place where the defective cable was and test it. If if works, put the tie wraps back (it is essentiel), then put the coverplates back in place. The Beep Mat can also display the presence of a problem such as a low battery or non-working elements.

If you are not sure what the problem is, repeat the test described in chapter 2 (Instrument Testing). If the Beep Mat still does not work, call Instrumentation GDD Inc., so that arrangements can be made to ship another unit without delay during repairs, and return the instrument entirely to GDD.

4. OPERATING PRINCIPLE

The probe contains an inductive coil within its shell. When the probe is in normal position on the ground, as shown at illustration 6, the axis of the inductive electromagnetic field transmitted by the coil is in vertical position.

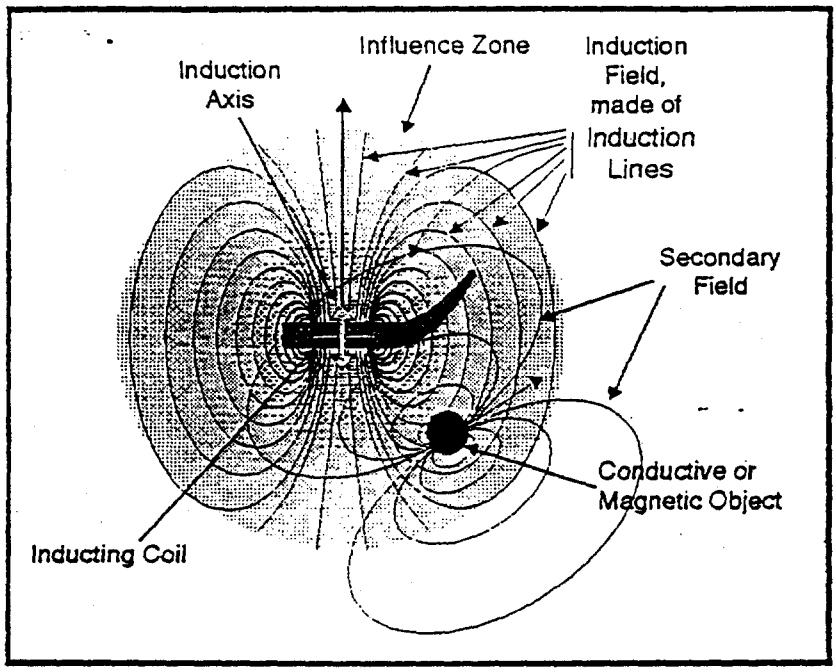


Illustration 6: Operating principle

The influence zone of its inductive field has an average radius (called "range") of about 2 meters. This inductive field is similar to the field of a magnet. Any conductive or magnetic object within the zone reacts by sending out again a secondary field (or "induced field"). The secondary field is weaker and has distinctive features. The probe reacts on the part of this field that goes through its inductive coil. That reaction is then displayed on the reading unit in terms of σL, dH and MAG values.

Imagine that inductive field as being composed of several induction lines crossing the inductive coil and which density increases towards the center of the coil. To illustrate that, only a few induction lines are presented at illustration 6. Therefore, the more of these lines are crossing the conductive or magnetic object, the higher the displayed values on the reading unit will be. For further details, report to chapter 6.

Following is the significance of σL, dH and MAG values.

- The **delta value** (dH) represents the change of frequency of the inductive coil, in hertz, since its initialization.

- The **conductor value** (σL) represents a specific reaction to the presence of a conductor near the probe, in hertz.

- The **magnetite value** (MAG) represents a specific reaction of the probe (in hertz) to the presence of a magnetic body, in particular one containing magnetite.

5. IN-FIELD USE

This chapter describes a typical sequence for a Beep Mat survey.

5.1 Getting Ready

Prepare all the necessary stuff you need on the field: Beep Mat, a GPS if possible to localize yourself and maybe a VLF electromagnetometer (EM-16) to localize the axe of the airborne conductors, radio, sample bags, small shovel, hammer, flag tape, maps, photos, dynamiting kit, marker, compass, etc.

Make sure that the batteries are charged. At least half an hour before a survey, connect the probe to the receptacle of the reading unit, then put the instrument on ***standby*** by keeping [ON] pressed until the end of the first sound signal (3 seconds). The message STANDBY will appear. You can carry the instrument when in ***standby*** on condition that you keep the probe at least 6 inches away from any large metallic surfaces (i.e., the floor of a truck). In such a situation, it is recommended to put the probe upside down.

It is better that the probe be preheated before beginning a survey. However, even if the probe has not been sufficiently preheated, you can start the survey anyway once on the field to be explored, but you will probably have to reinitialize the Beep Mat more often during the first hour of use. Put the probe on the ground, place the reading unit on yourself and attach the cable strap to the leather case. You can then pull the probe as shown at illustration 7.

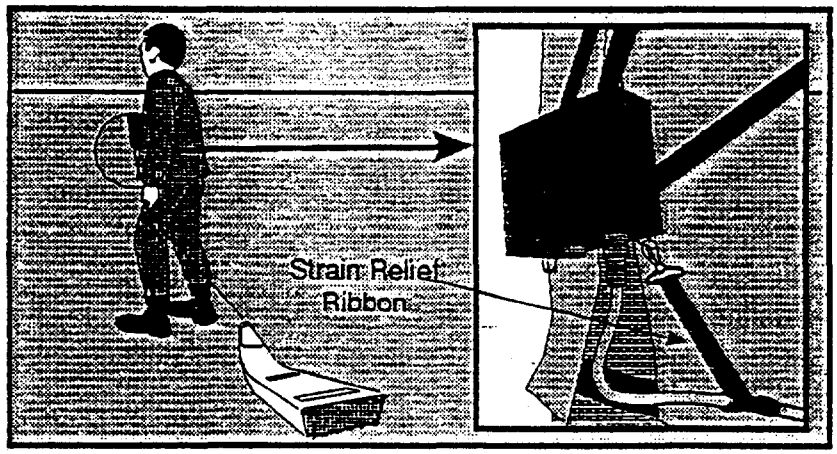


Illustration 7: Typical use of the Beep Mat

5.2 Initialization

Make sure you do not wear any metal helmut. Lift the probe vertically above your head, as shown at illustration 8, so that it is not affected by the ground, and initialize the Beep Mat by pressing [ON]. After a few seconds, a sound signal will announce that the Beep Mat is initialized. Put the probe on the ground. You can now pull it again. Remember that every 15 minutes, the Beep Mat will signal to the operator that it needs to be reinitialized again. It is possible to initialize the Beep Mat anytime on condition that you lift the probe vertically in the air (see illustration 8).

5.3 Exploration

Cover all grounds that you think may offer an interesting potential of discovery. A distinctive signal will indicate that you just passed near a conductor or a magnetite concentration. Stop and confirm the signal position. Mark that position immediately with flag tape, posts or branches etc. Before digging, reinitialize the probe in the air, then use the Beep Mat to delimite the nearby surface giving abnormal readings. Dig at the place where the readings are the highest, therefore where there seem to be the most sulphides in the rock. Make sure that it is not caused by human source, such as the presence of visible scrap-iron at this place (near a former drilling site for example). Dig with a shovel and examine the samples. Try to find the geological cause. You can also use the Beep Mat to delimite a conductive or magnetic outcrop.

Such exploration enables you to make discoveries, but to increase your chances of success, plan a strategy and use different tactics. This aspect will be treated further in this manual.

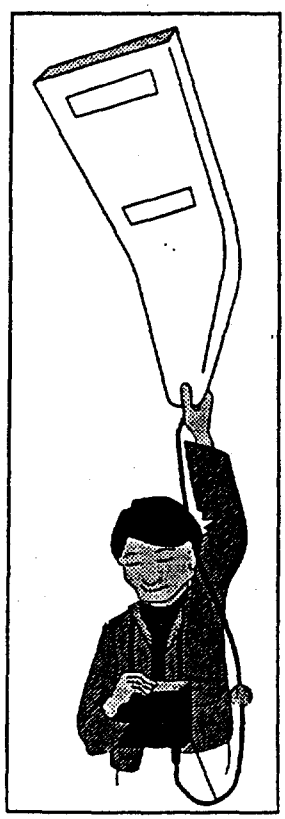


Illustration 8: Beep Mat initialization

6. READINGS INTERPRETATION

This chapter explains how to interpret the values on a target and the profiles of these values.

6.1 Data on a Target

The delta value (dH), no matter what configuration is used, is influenced by the conductivity of an object and its magnetite content. A negative value indicates that the object is more magnetic than conductive, while a positive value indicates the opposite. A conductive and magnetic block could give positive, negative or zero values according to the proportion of conductivity and magnetite. The bigger the object is or the closer it is to the probe, the more the value increases. The presence of humidity in the ground causes the addition of an offset of 0 to -100 to the delta value (see illustration 9). It is for that reason that in the absence of conductors, the readings are generally lightly negative.

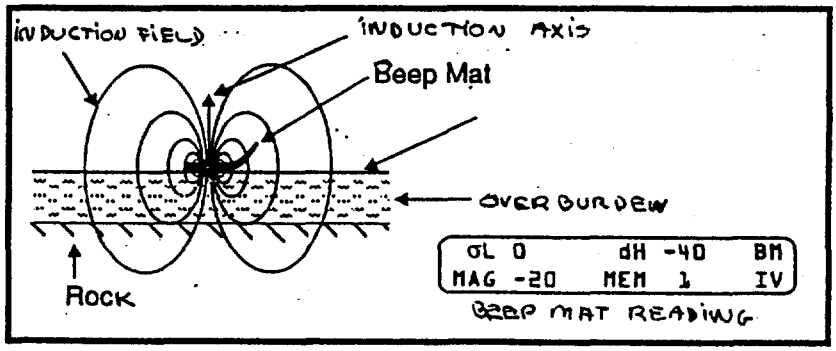


Illustration 9: Typical reading without any anomaly

In BM-IV, the delta value corresponds to the variation of **high** frequency only and reacts exactly as in BM-II. When approaching a magnetite block (for example: a vein), the delta value (dH) and the magnetite value (MAG) increase in negative value and the conductor value (σL) should stay at zero or very low (see illustration 10, case "b"). When approaching a conductive block, the dH and σL values increase in positive value while the MAG value remains low (see illustration 10, case "a"). If both values are close, it means that the conductivity of the body is high and that the body could turn out to be metal. Note the similarity of these reactions with those observed during the instrument testing (chapter 2). The weaker the block conductivity is, the weaker will the relation be between σL and dH. The dH value is therefore more sensitive to clayey grounds. By approaching a conductive block containing also magnetite, σL will positively increase, MAG will negatively increase and dH could be positive or negative (see illustration 10, case "c"), as it is the case in BM-II. The BM-IV configuration is therefore recommended since it clearly distinguishes the electric or magnetic nature of the present materials.

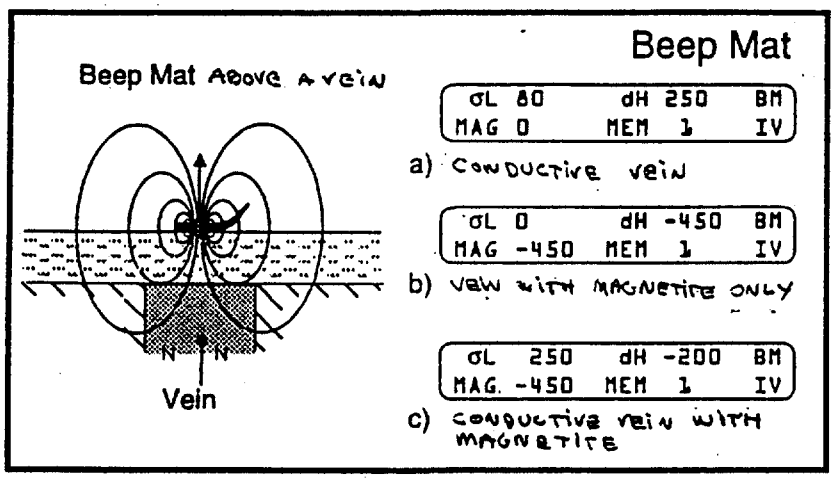


Illustration 10: Examples of Beep Mat readings in presence of: a) a conductive vein, b) a magnetite vein, c) a conductive body containing magnetite

6.2 Profiles on Targets

It is possible to draw a profile of the readings values displayed by the Beep Mat along a traverse, but it is rather suggested to just make an image of it in your mind. Illustration 11 shows two simplified but typical examples. Compare it to illustrations 9, 10 and 12. By studying these illustrations, the profiles should be easy to interpret.

Here is how to interpret illustration 11.

- Anomaly "A" is strong and wide, and the ratio σL/dH is high. That indicates the presence of a good wide conductor. Compare with illustration 10.

- Anomaly "B", however, is weak and uniform, and the ratio σL/dH is low; it is the effect of clayey ground.

- Examine anomalies "C" and "D" of example 2, at illustration 11. These two anomalies forming a doublet are due to the effect of an almost vertical veinlet. Compare with cases "a" and "b" of illustration 12. There are no anomalies above the veinlet because the induction lines do not cross it (see also illustrations 12 and 15).

- Anomaly "E" is rather narrow and reacts mostly in dH. In this example, it is due to the presence of a gossen in the till.

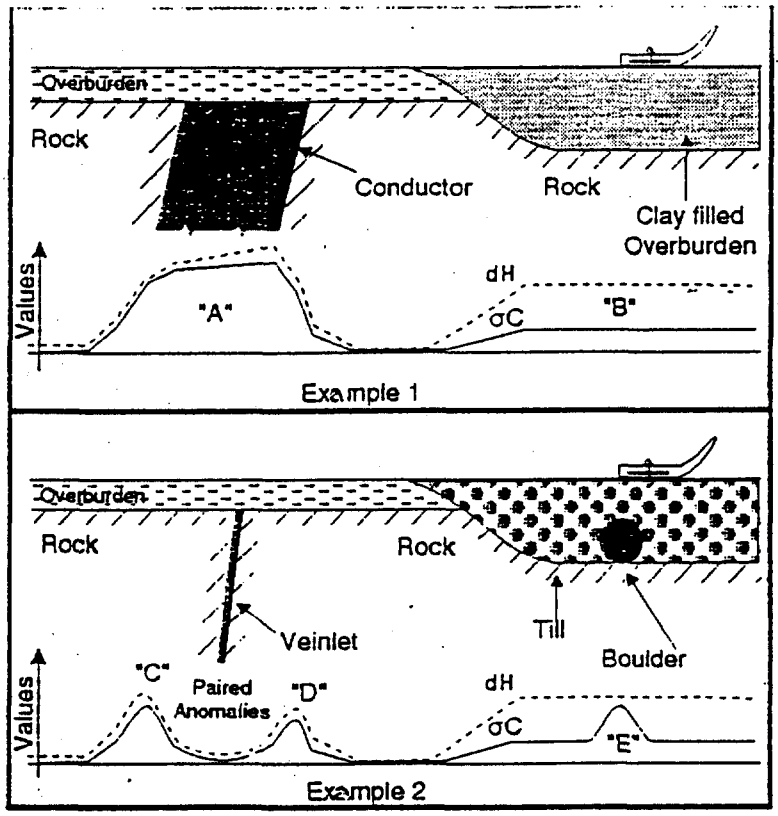


Illustration 11: Examples of typical profiles of the Beep Mat

Do not attach too much importance to the exact shape of these profiles. When you will pass the Beep Mat again, the profile should change in its details. This is due to one or several of the following factors:

- The probe is not pulled exactly on the same line
- The surface is bumpy
- The surface condition has changed (for example, before and after rain)

The Beep Mat is adapted to do the job quickly. With experience, you will be able to visualize these profiles by memory while deliminating an interesting target. It is faster and more efficient to pass the Beep Mat again and delimit the target with flag tape, then dig and sample, than to draw a survey profile on paper once back at the office.

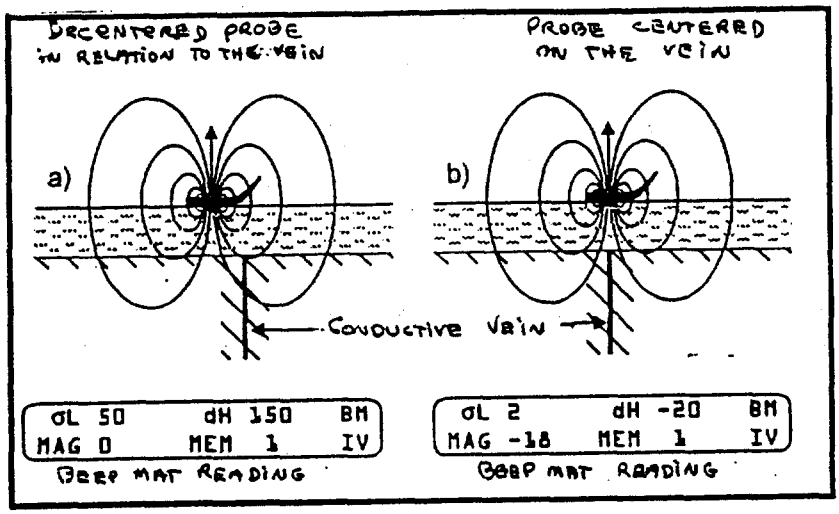


Illustration 12: Explanation of typical Beep Mat anomalies

7. PRACTICAL APPLICATIONS

As mentioned previously, it is better to have a strategy in order to maximize chances of discovery with the Beep Mat. When a Beep Mat anomaly appears in the field, you must then use appropriated tactics.

7.1 Strategy

Look for a favourable ground for Beep Mat survey, such as rusty ground and/or an area where overburden is not very deep (less than 2 meters) and contains, if possible, electromagnetic anomalies. Use the following published maps:

- Overburden maps (M.N.R. in Quebec - Tel.: 418-646-5549)
- Quaternary geology maps (Geological Survey of Canada)
- Geology maps for outcrops
- Electromagnetic and magnetic airborne survey maps
- Topographic maps (at 1:20 000 or 1:50 000)
- Aerial photos
- Compilation of previous works

Prepare a strategic map for your survey. Illustration 13 is an example. You can use the overburden map as a starting point. Report all pertinent information on that strategic map. Mark all outcrops, boulders, conductors (electromagnetic anomalies) and/or magnetite concentrations (not very deep magnetic anomalies), known geological directions, etc, as well as areas where overburden is less than two meters thick and areas covered with till rather than with river deposits (sand, clay). Make sure that the elements coordinates are as precise as possible.

Finally, delimit target areas to be explored and estimate the direction of the survey lines, keeping in mind that you will zigzag along the axis of the conductor.

Here is what former prospectors have taught us: lake shores and swamp edges (former lakes) very often represent favourable areas for prospecting because waves have washed the till and bare rocks are often hidden just under a thin layer of moss.

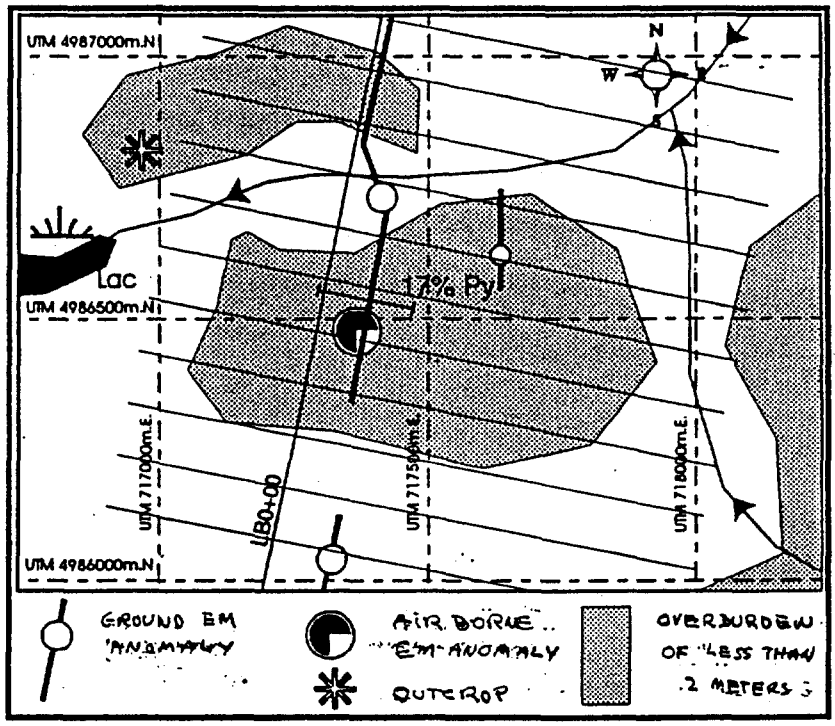


Illustration 13: Simplified example of a strategic map

Once in the field, at the beginning of the survey, try to evaluate the operating parameters of the Beep Mat and choose if you are going to work in BM-II or BM-IV. If ground conditions change, modify the parameters again. If necessary, modify these parameters in order to reduce the frequency of sound alarms to a satisfactory level. Cover target zones according to your strategic map. Use the Beep Mat to localize known conductors, to discover new conductors or to detect mineralized boulders.

7.2 Advanced Tactics

You detect an anomaly, reinitialize the Beep Mat and pass again on this anomaly. With a post, flag tape, etc., mark the spot with the highest value. Keep that value in mind. Zigzag

around this spot taking into account the conductor direction or the geological direction (see illustration below). With colored flag tape, delimit the anomaly contour, its size and other spots having high values. Verify if this anomaly appears again farther in the same geological direction. If you do not find the conductor, use a VLF to localize its axis, then zigzag over the known axis with the Beep Mat to try to pinpoint where the conductor may come closer to the surface.

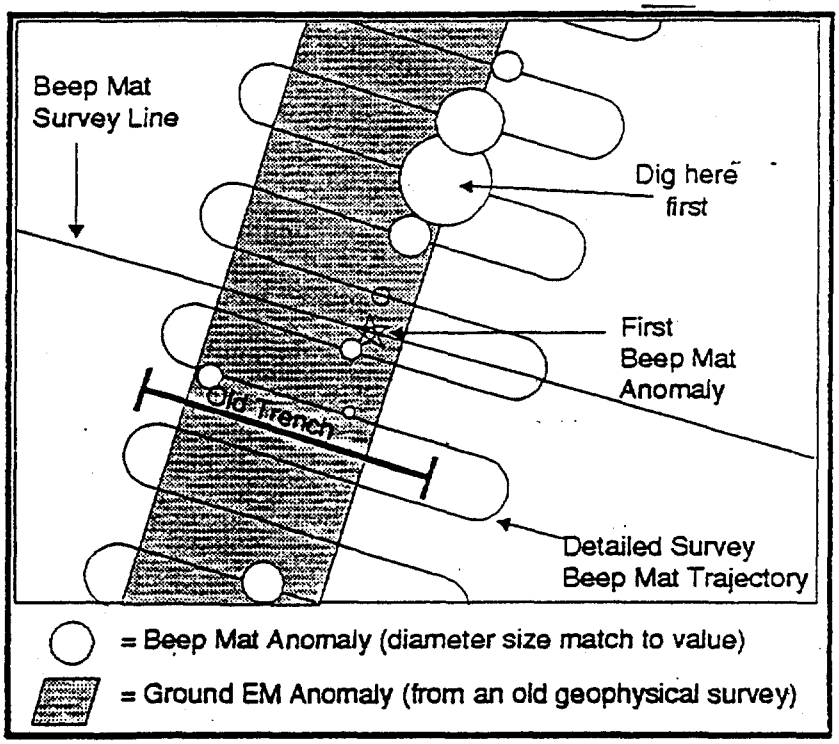


Illustration 14: Practical approach with a Beep Mat to localize a conductor

By concentrating your attention on the spots which have the highest values, you will have to dig less deeper. Dig until you can identify the source of the anomaly (graphite, sulphures or even native metal). If the conductor seems to be deep, dig and often verify if the readings increase when you insert the probe into the hole. If the readings increase, it means you are really getting close to the conductor. Take 10-pound samples containing sulphides for assays (Cu, Zn, Pb, Au, Ag, Ni, etc.).

Repeat these steps for each conductor discovered with the Beep Mat.

7.3 Case of Anomalies Forming a Doublet

If you find two Beep Mat anomalies along your route and they are in a doublet (about 1 meter), it is possible that you may be dealing with only one veinlet located in the middle rather than with two (see illustration 11, anomalies "C" and "D"). Determine the conductor axis. Then

grab the probe and put it on its side as illustrated below. Its induction axis should therefore be horizontal and perpendicular to the geological orientation. Cross the anomalies with the probe thus oriented. You may find only one anomaly in the middle. That is where you must dig. If both anomalies persist, dig at each place.

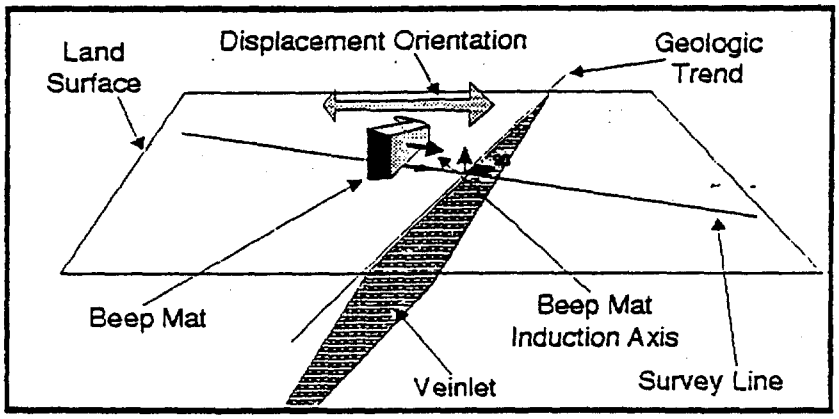


Illustration 15: Confirming double anomalies

7.4 Sampling

We suggest to our own crews to take samples (and have them assayed) on a same conductive strike at every 300 or 400 meters since even a barren pyrrhotine strike may become a mineralized strike (ex: Thompson Mine in Manitoba). However, on parallel strikes, we suggest to sample as soon as the conductor's nature changes (graphite to pyrite) and wherever the geological environment is favourable (fine pyrite in quartz veinlets). Beep Mat users will make their discoveries by cleverly choosing their samples. In 1991, thanks to the Beep Mat, a massive sphalerite strike at some ten meters from a sterile pyrite trench was discovered.

7.5 Clayed Grounds

On a target, if you suspect that the ground is particularly conductive (clayey ground), dig a small 30-cm deep trench that is big enough to insert the probe in it. Put the probe into the hole and rotate it to find out from what direction comes the stronger signal. If the displayed readings do not vary much, it is due to the clayey nature of the ground. On the contrary, if the values increase, it means the conductive rock is deeper. If the readings keep increasing when the probe is in the hole, keep digging up to one and a half meter. Usually, clayey grounds are uniformly flat and give a relatively uniform dH value (between +25 and +80) on a large surface.

8. TRUE AND FALSE SIGNALS

Here are a few examples of true and false signals that you will learn to recognize. They are easier to recognize in BM-IV, but experience should make it as easy in BM-II.

8.1 Probe Frequency Drift

When the probe frequency drifts, as during the preheating period, the dH value may increase and the sound signal might become audible. Before digging, reinitialize to correct the drift. It the sound signal stops once the probe is back on the ground, continue your survey. If it still beeps, dig.

8.2 Drifting

If the probe started to drift and is on humid ground, the water effect (negative) on dH may prevent it from ringing. However, as soon as the probe moves away from the ground (ex: when passing over a log), the reading unit will ring. Then lift the probe in the air and if it still rings, reinitialize. In both cases, pass the probe again at the place where it rang to verify if there really was a conductor located at that place.

8.3 How to Interpret Beep Mat Signals in Clay Areas

Clay layers may be deposit in brackish water during the deglaciation period and are sometimes a little conductive. On these clay layers charged with water, the dH value displayed by a probe laid on the ground will be close to zero (the effect of clay conductivity (+100) being cancelled by the effect of water (-100)) and the reading unit will probably not ring. On the other hand, if you pass over a log lying on the ground while walking with the probe, the probe will quit the ground, the effect of water will rapidly diminish, but the clay conductivity, which slowly diminishes with distance, will make the dH value rise to 80, and the Beep Mat will signal a conductor. It is important to keep in mind that conductive clays exist and that it is not necessary to dig every time you cross a clay valley. Remember that on clayey ground, the conductor value (σL) does not vary because it is not very conductive.

8.4 Conductors Hidden by Magnetite

In BM-II, the probe may signal a conductor when it leaves the ground (over a log). It may also happen when a conductor is associated with a high quantity of magnetite. On the ground indeed, in BM-II, magnetite cancels the conductor signal, but by lifting the probe, the effect of magnetite rapidly diminishes and the conductor is detected. In BM-II, you must verify if you are on clay or on rocks; in BM-IV, there is no ambiguity because this new model signals conductors anytime, even in presence of a lot of magnetite.

8.5 Salt in the Ground

Salt water is strongly conductive. It is possible that you detect conductors caused by salt next to roads which have been salted during winter and also next to salt blocks that farmers give to the livestock or that hunters place in a clearing to attract deer or moose.

9. INTERPRETATION OF VALUES

The Beep Mat quantitatively gives a measure of the apparent conductivity and/or the average magnetite content of the underlying rock. In BM-IV, it also gives an estimate of the intrinsic conductivity.

9.1 Magnetite Content

The magnetite content is measured on a 1-meter^3 volume under the probe. Our calibrations indicate that a MAG value of -1 000 corresponds to 1 % magnetite under the probe, which is equivalent to about 1 000 gammas for a volume of a few meters^3. This equivalence exists up to a magnetic value of -20 000, which is equivalent to 20 000 gammas, or 20 % magnetite.

9.2 Apparent Conductivity

Up to now, the apparent conductivity has been calibrated only in BM-II and in the absence of magnetite. The graph presented at illustration 16 (curve "a") shows the apparent conductivity according to the positive dH value and in the absence of magnetite. Be aware! A veinlet or a coin will suggest a bad conductivity, because the instrument measures the average conductivity of the area surrounding the probe. On the other hand, the instrument gives a real measure of the conductivity of a clay layer. The closeness of water creates a negative signal (a value of about -100). The estimate of the conductivity of a clay layer filled with water is a little bit more right if one lift the probe above the ground by 10 centimeters because the influence of water, such as the influence of magnetite, diminishes more rapidly that the effect of the conductor (see curves "b" and "c" of illustration 16).

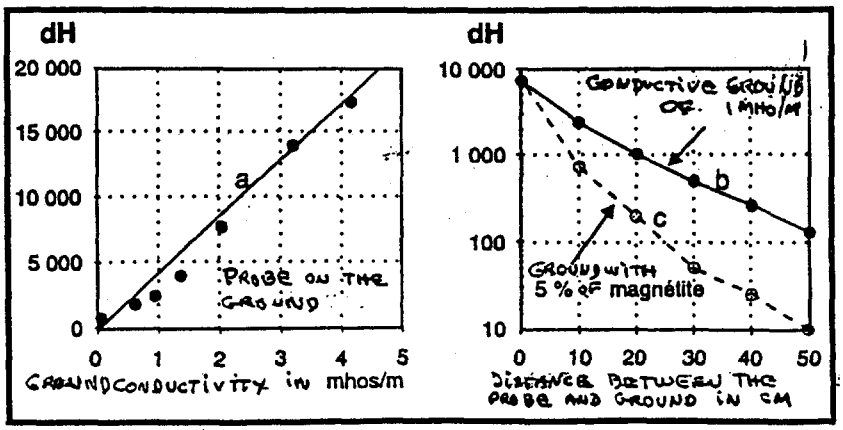


Illustration 16: Factors influencing the dH value

9.3 Intrisic Conductivity

In the absence of magnetite (verify with a magnet), the ratio between σL and dH gives a measure of the intrinsic conductivity of the conductor and this ratio is not influenced by the size of the conductor. Therefore, a quarter placed on the calibration point (the first "D" of "GDD") will give values ranging from +70 to +80 at dH and at σL, while a typical Abitibi clay layer will also give a value of +80 on dH, but zero on σL.

9.4 Variation of Sulphides Conductivity

As mentioned before, let us mention that galena and compact massive pyrite are not always conductives. We do not know why these variations exist, but since these sulphides are semiconductors, this could depend on the impurities incorporated in the crystals structure, as for transistors! Fortunately for the Beep Mat and prospectors, pyrite veinlets, which are often present in gold-bearing quartz veins, are generally good conductors. We have noticed it in particular on gold-bearing quartz veins that do not react to any other geophysical instrument and that can be discovered under moss only by the Beep Mat or a trench.

10. DATA TRANSFER

To understand this chapter, one must be quite familiar with microcomputers (in particular PC compatibles), communication softwares and serial ports (or modems).

Connect the reading unit to a computer as shown below.

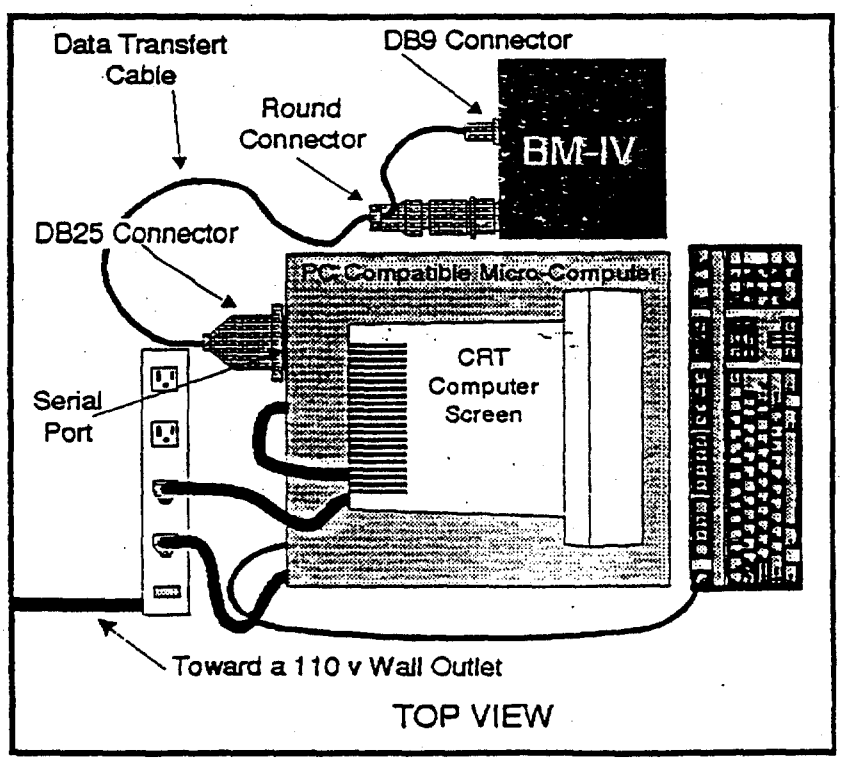


Illustration 17: Connections for data transfer

Turn your communication software on and press [ON]. Note the directions on the screen. Here is an example:

```
Baud=9600  Parity=N  MEM
Length=7 Stop bit=1   12
```

Illustration 18: Reading unit display for data transfer

Make sure that the communication software be according to the directions on the screen and verify the serial port used (ex.: COM1). The [carriage return] (CR character) must be added by the communication software. Note that in the example shown at illustration 18, there has been 12 storings (the figure under the word MEM).

Press **"Enter"** or **"CR"** depending on your computer keyboard. The following message should appear on the screen:

```
BM-IV by Instrumentation GDD Inc.

MENU ->  DUMP(memory_start, memory_end)
         Set your software in capture mode,
         then send the DUMP command

         CLEAR
         Clear all memory of the BM-IV

GDD >
```

Illustration 19: Message displayed on the screen by the BM-IV

This menu presents two choices: data transfer (DUMP) and memory clearing of the Beep Mat (CLEAR).

In this example, you have stored 12 readings including initializations. If you want to transfer these data, put the communication software on "capture" than type:

DUMP(0,12) then press **"Enter"** or **"CR"**.

In this example, a sequence of 13 data are transferred (data #0 to #12). Note that there is no spacing between the characters typed. A message similar to the one shown at illustration 20 should appear on the screen. Note: Characters in ***bold-italic*** indicate the ones you must type on your keyboard.

Transfer these data in a file with the appropriated commands of your communication software.

At illustration 20, the second column indicates the memory number. As you can see, that number increases from one row to the other. The last line contains only zero values, confirming the end of the sequence. The first column indicates if it is a memorized reading or an initialization. A "0" indicates an initialization while a "1" indicates a reading. The two other columns contain raw data of a reading or of an initialization. These are frequency values of the probe in hertz. You can observe that there are two frequencies and that they vary from a reading to the other.

```
GDD> DUMP(0,12)
0 0 2103818 656650
1 1 2103015 657485
1 2 2103256 657525
1 3 2103143 657612
1 4 2103201 657903
1 5 2103034 657721
0 6 2103820 656650
1 7 2103011 657512
1 8 2103054 657621
1 9 2103230 657790
1 10 2104105 658204
0 11 2103730 656762
0 0 0 0
```

Illustration 20: Typical display following DUMP

After the data transfer, you will eventually want to clear the BM-IV memory to leave space for other readings. In order to do that, use CLEAR to see the dialogue shown at illustration 21. Following this command, in the case of the previous example, you will be able to store 12 extra readings for the next surveys. Therefore, at the beginning of the next use of your Beep Mat, the MEM value should be at 0 or at 1.

```
GDD > CLEAR

WARNING !!!   ALL DATA WILL BE LOST...
              CONFIRM WITH (9999) ? 9999

PLEASE WAIT...
CLEAR MEMORY COMPLETED ...
GDD >
```

Illustration 21: Dialogue for the memory clearing of the Beep Mat

Beep Mat, model BM-IV

Trademark

Beep Mat is a trademark by Instrumentation GDD Inc.

Copyright

Warranty

Duration of warranty: 1 year. All repairs will be done free of charge at our office in Sainte-Foy (taxes, transportation and customs fees are extra). The warranty is void if the instrument has been the object of an abusive use, has been opened or modified without authorization, or if the serial number of the instrument has been altered, erased or removed.

Instrumentation GDD Inc. is not responsible for eventual damages and/or losses that may result from the use of the Beep Mat.

Repairs

If the Beep Mat requires repairs, please contact Instrumentation GDD Inc. at the numbers below in order to receive proper instructions for shipping:

Tel.: 1-418-877-4249
Fax: 1-418-877-4054

Printed in Canada in February 1995.

POCKET

MAP 1a and 1b

Rock Sample, Soil/Humus and Traverse Locations

Scale 1:5000

MAP 2a and 2b

Soil/Humus Copper Values and Profiles

Scale 1:5000

MAP 3a and 3b

Soil/Humus Nickel Values and Profiles

Scale 1:5000

600,000 mE
601,000 mE
602,000 mE
603,000 mE
5,442,000 mN
5,441,000 mN
5,440,000 mN
5,439,000 mN

N
W
E
S

Macutagon Ponds
Rawluk Lake

991158
(0.11,0.01)
10/07/14
Traverse #8
1022625
L131N
991155
(0.02,0.0)
L128N
1195462
1187401
1187403
991156
(0.1,0.12)
10/07/14
Traverse #7
4274181
4274190
1192225
L121N
10/07/14
Traverse #6
09/07/14
Traverse #4
1192223
L116N
4274182
09/07/14
Traverse #3
L115N
L112N
09/07/14
Traverse #5
L110N
L111N
L108N
09/07/14
Traverse #2
L106N
4262778

LEGEND
- Line Label, flagged line Humus/Soils, GPS controlled (e.g. L 94)
- 2014 prospecting traverse Date (day[dd]/month[mm]/year[yy]) Traverse Number (e.g. 09/14 Traverse #2)
- 2014 Prospecting Samples Sample Number, (Copper, Nickel percent %)
- Soil, Humus Sample, sample number & location
- Forest Access Road
- Beep mat anomaly
- Claim Boundary

Manitouwadge PGE

Prospecting Sample Locations, Beep mat traverses and Soil/Humus lines and sample numbers

Date: 8/12/2014
Author: Michael Stares
Office:
Drawing: 1a
Scale: 1:5000
Projection: UTM Zone 16 (NAD 83)

0 150 300
metres

600,000 mE
601,000 mE
602,000 mE
603,000 mE
5,438,000 mN
5,437,000 mN
5,436,000 mN

1192223
4274182
4262778
CECIL
1214872
1192124
1214873
ROBERTA

L106N
L104N
L102N
L 97N
L 94N
L 92N
L 90N
L 86N
L 82N

09/07/14
Traverse #2

09/07/14
Traverse #1

1320060
(0.69,0.15)

Beep Mat Anomaly
-3500

1320059
(0.04,0.1)

991153
(0.06,0.17)

1320063
(0.08,0.16)

1320061
(0.08,0.1)

1320062
(0.14,0.05)

991152
(0.15,0.17)

991154
(0.18,0.15)

Faries Lake

McGraw Lake

N
W
E
S

LEGEND

- Line Label, Ragged line Humus/Soils, GPS controlled
- L 94
- 2014 prospecting traverse Date (day)dd/(month)mm/(year)yy)) Traverse Number
- Traverse #2
- 2014 Prospecting Samples Sample Number, (Copper, Nickel percent %)
- Soil, Humus Sample, sample number number & location
- Forest Access Road
- Beep mat anomaly
- Claim Boundary

Manitouwadge PGE

Date: 8/12/2014	Prospecting Sample Locations, Beep mat traverses and Soil/Humus lines and sample numbers
Author: Michael Stares	
Office:	
Drawing: 1b	
Scale: 1:5000	Projection: UTM Zone 16 (NAD 83)

0 150 300
metres

600,000 mE
601,000 mE
602,000 mE
603,000 mE
5,442,000 mN
5,441,000 mN
5,440,000 mN
5,439,000 mN

N
W
E
S

Macutagon Ponds
Rawluk Lake

1022625
1195462
1187401
1187403
1192225
4274181
4274190
1192223
4274182
4262778

L131N
L128N
L121N
L121N
L116N
L115N
L112N
L111N
L110N
L108N
L106N

Manitouwadge PGE

Date: 12/12/2014	**Soil/Humus lines and sample numbers Copper Profiles**
Author: Michael Stares	
Office:	
Drawing: 2a	
Scale: 1:5000	Projection: UTM Zone 16 (NAD 83)

0 150 300
metres

600,000 mE
601,000 mE
602,000 mE
603,000 mE
5,438,000 mN
5,437,000 mN
5,436,000 mN

1192223
4274182
4262778
1214872
1214873
1192124

CECIL
ROBERTA
Faries Lake
McGraw Lake

L106N
L104N
L102N
L 97N
L 94N
L 92N
L 90N
L 86N
L 82N

N
W
E
S

LEGEND
L 94 — Line Label, flagged line Humus/Soils, GPS controlled
Copper profile 1cm=50 ppm @ 1:5000 map scale
MAN144 — Soil, Humus Sample, Copper ppm / sample number
Forest Access Road
Claim Boundary

Manitouwadge PGE

Soil/Humus
lines and sample numbers
Copper Profiles

Date: 8/12/2014
Author: Michael Stares
Office:
Drawing: 2b
Scale: 1:5000
Projection: UTM Zone 16 (NAD 83)

0 150 300
metres

600,000 mE
601,000 mE
602,000 mE
603,000 mE
5,442,000 mN
5,441,000 mN
5,440,000 mN
5,439,000 mN

N
W
E
S

Macutagon Ponds

1022625

1195462

1187401

1187403

1192225

4274181

Rawfuk Lake

4274190

1192223

4274182

4262778

L131N

MAN580 MAN579 MAN578 MAN577 MAN576 MAN575 MAN574 MAN573 MAN572 MAN571 MAN570 MAN569 MAN568 MAN567 MAN566 MAN565 MAN564 MAN563 MAN562 MAN561 MAN560 MAN559 MAN558 MAN557 MAN556 MAN555 MAN553 MAN552 MAN551 MAN550 MAN549 MAN548 MAN547 MAN546 MAN545

L128N

MAN504 MAN505 MAN506 MAN507 MAN508 MAN509 MAN510 MAN511 MAN512 MAN513 MAN514 MAN516 MAN517 MAN518 MAN519 MAN520 MAN521 MAN522 MAN523 MAN524 MAN525 MAN526 MAN527 MAN528 MAN529 MAN530 MAN531 MAN532 MAN533 MAN534 MAN535 MAN536 MAN537 MAN538 MAN539 MAN540 MAN541 MAN542 MAN543 MAN544

L121N

MAN450 MAN451 MAN452 MAN454 MAN455 MAN456 MAN457 MAN458 MAN459 MAN460 MAN461 MAN462 MAN463 MAN464 MAN465 MAN466 MAN467 MAN468 MAN469 MAN470 MAN471 MAN472 MAN473 MAN474 MAN475 MAN476 MAN477 MAN478 MAN479 MAN480 MAN481 MAN482 MAN483 MAN484 MAN485 MAN486 MAN487 MAN488 MAN489 MAN490 MAN491 MAN492 MAN493 MAN494 MAN495 MAN496 MAN497 MAN498 MAN499 MAN500 MAN501 MAN502 MAN503

L116N

MAN445 MAN446 MAN447 MAN448 MAN449 MAN450 MAN451 MAN452 MAN453 MAN454 MAN455 MAN456 MAN457 MAN458 MAN459 MAN460 MAN461 MAN462 MAN463 MAN464 MAN465 MAN466 MAN467 MAN468 MAN469 MAN470 MAN471 MAN472 MAN473 MAN474 MAN475 MAN476 MAN477 MAN478 MAN479 MAN480 MAN481 MAN482 MAN483 MAN484 MAN485 MAN486 MAN487 MAN488 MAN489 MAN490 MAN491 MAN492 MAN493 MAN494 MAN495 MAN496 MAN497 MAN498 MAN499 MAN500 MAN501 MAN502 MAN503

L115N

MAN320 MAN321 MAN322 MAN323 MAN324 MAN325 MAN326 MAN327 MAN328 MAN329 MAN330 MAN331 MAN332 MAN333 MAN334 MAN335 MAN336 MAN337 MAN338 MAN339 MAN340 MAN341 MAN342 MAN343 MAN344 MAN346 MAN347 MAN348 MAN349 MAN350 MAN351 MAN352 MAN353 MAN354 MAN355 MAN356

L112N

MAN174 MAN173 MAN172 MAN171 MAN170 MAN169 MAN168 MAN167 MAN166 MAN165 MAN164 MAN162 MAN161 MAN160 MAN159 MAN158 MAN155 MAN135

L111N

MAN218 MAN217 MAN216 MAN215 MAN214 MAN213 MAN212 MAN211 MAN210 MAN209 MAN208 MAN207 MAN206 MAN205 MAN204 MAN203 MAN202 MAN201 MAN200

L110N

MAN268 MAN269 MAN270 MAN271 MAN272 MAN273 MAN274 MAN275 MAN277 MAN278 MAN279 MAN280 MAN281 MAN282 MAN283 MAN284 MAN285 MAN286 MAN287 MAN288 MAN289 MAN290 MAN291 MAN292 MAN293 MAN294 MAN295 MAN296 MAN297 MAN298 MAN299 MAN152 MAN153 MAN154

L108N

MAN267 MAN266 MAN265 MAN264 MAN263 MAN262 MAN261 MAN260 MAN259 MAN258 MAN257 MAN256 MAN255 MAN254 MAN253 MAN252 MAN251 MAN250 MAN248 MAN246 MAN247

L106N

MAN246 MAN245 MAN244 MAN243 MAN242 MAN241 MAN240 MAN239 MAN238 MAN237 MAN236 MAN235 MAN234 MAN233 MAN232 MAN231 MAN230 MAN229

LEGEND

- L 94 — Line Label, flagged line Humus/Soils, GPS controlled
- Nickel profile 1cm=20 ppm @ 1:5000 map scale
- Soil, Humus Sample, Nickel ppm / sample number
- Forest Access Road
- Claim Boundary

Manitouwadge PGE

Date: 8/12/2014	**Soil/Humus lines and sample numbers Nickel Profiles**
Author: Michael Stares	
Office:	
Drawing: 3a	
Scale: 1:5000	Projection: UTM Zone 16 (NAD 83)

0 150 300
metres

600,000 mE
601,000 mE
602,000 mE
603,000 mE
5,438,000 mN
5,437,000 mN
5,436,000 mN

1192223
4274182
4262778
CECIL
1214872
1214873
1192124
ROBERTA
Faries Lake
McGraw Lake

L106N
L104N
L102N
L 97N
L 94N
L 92N
L 90N
L 86N
L 82N

N
W
E
S

LEGEND
L 94
Line Label, flagged line
Humus/Soils, GPS controlled
Nickel profile
1cm=20 ppm @ 1:5000 map scale
Soil, Humus Sample,
Nickel ppm / sample number
Forest Access Road
Claim Boundary

Manitouwadge PGE

Soil/Humus
lines and sample numbers
Nickel Profiles

Date: 8/12/2014
Author: Michael Stares
Office:
Drawing: 3b
Scale: 1:5000
Projection: UTM Zone 16 (NAD 83)

0 150 300
metres