



SGS Canada Inc.

P.O. Box 4300 - 185 Concession St.

Lakefield - Ontario - KOL 2HO

Phone: 705-652-2000 FAX: 705-652-6365

SFE -24hr 4:1 L/S ratio

LR Report :

CA15169-AUG15

Sample ID	NO3 as N mg/L	Cr(VI) µg/L	Tot.Reactive P mg/L	Hg mg/L	Ag mg/L	Al mg/L	As mg/L	Ba mg/L	B mg/L	Be mg/L	Bi mg/L	Ca mg/L	Cd mg/L
115: AMQ-ENV15-052	< 0.6	0.4	< 0.03	< 0.00001	< 0.000002	0.213	0.171	0.0352	0.0218	< 0.000007	< 0.000007	2.16	< 0.000003
116: AMQ-ENV15-060	< 0.6	< 0.2	0.05	< 0.00001	0.000005	1.34	0.136	0.00666	0.0178	0.000007	0.000012	1.97	< 0.000003
117: AMQ-ENV15-062	< 0.6	0.4	0.16	< 0.00001	0.000003	0.025	1.15	0.0145	0.0405	< 0.000007	< 0.000007	10.4	< 0.000003
118: AMQ-ENV15-063	< 0.6	< 0.2	0.07	< 0.00001	< 0.000002	1.57	0.164	0.00661	0.0291	< 0.000007	< 0.000007	1.80	< 0.000003
119: AMQ-ENV15-114	< 0.6	< 0.2	0.10	< 0.00001	< 0.000002	0.905	0.0170	0.0101	0.0191	< 0.000007	< 0.000007	2.64	< 0.000003
120: AMQ-ENV15-078	< 0.6	< 0.2	< 0.03	< 0.00001	0.000008	0.626	0.0164	0.00930	0.0167	< 0.000007	< 0.000007	5.55	0.000003
121: AMQ-ENV15-043	< 0.6	< 0.2	< 0.03	0.00032	0.000009	0.030	0.0122	0.0121	0.0136	< 0.000007	0.000010	11.8	< 0.000003
122: AMQ-ENV15-067	< 0.6	< 0.2	< 0.03	< 0.00001	< 0.000002	0.032	0.0093	0.00759	0.0179	< 0.000007	0.000008	6.88	< 0.000003
123: AMQ-ENV15-061	< 0.6	< 0.2	< 0.03	< 0.00001	< 0.000002	0.944	0.0145	0.00624	0.0209	< 0.000007	< 0.000007	3.29	< 0.000003
124-DUP: AMQ-ENV15-086	< 0.6	4.6	2.18	< 0.00001	0.000032	0.039	5.77	0.00988	0.0177	< 0.000007	< 0.000007	4.68	< 0.000003
125-DUP: AMQ-ENV15-009	< 0.6	< 0.2	< 0.03	< 0.00001	0.000189	0.055	0.171	0.00175	0.0169	< 0.000007	0.000045	9.70	< 0.000003
126-DUP: AMQ-ENV15-049	< 0.6	0.4	< 0.03	< 0.00001	0.000002	0.075	0.0070	0.0102	0.0168	< 0.000007	< 0.000007	3.91	< 0.000003
127-DUP: AMQ-ENV15-058	< 0.6	< 0.2	< 0.03	< 0.00001	0.000029	0.060	0.0117	0.0154	0.0305	< 0.000007	0.000018	18.3	0.000004
128-DUP: AMQ-ENV15-068	< 0.6	0.8	0.34	< 0.00001	< 0.000002	0.036	1.37	0.0198	0.0579	< 0.000007	< 0.000007	5.27	< 0.000003
129-DUP: AMQ-ENV15-061	< 0.6	< 0.2	< 0.03	< 0.00001	< 0.000002	0.983	0.0267	0.00645	0.0210	< 0.000007	< 0.000007	3.34	< 0.000003

Sample ID	Co mg/L	Cr mg/L	Cu mg/L	Fe mg/L	K mg/L	Li mg/L	Mg mg/L	Mn mg/L	Mo mg/L	Na mg/L	Ni mg/L	P mg/L	Pb mg/L
3: Analysis Approval Date	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15
4: Analysis Approval Time	15:09	15:09	15:10	15:10	15:10	15:11	15:11	15:11	15:11	15:11	15:12	15:12	15:12
5: AMQ-ENV15-028	0.000043	0.00043	0.00013	0.010	12.6	0.000864	1.21	0.00041	0.00021	0.82	0.0006	< 0.003	< 0.00001
6: AMQ-ENV15-029	0.000034	< 0.00003	0.00013	0.009	5.11	0.000199	2.07	0.00010	0.00006	0.66	0.0003	< 0.003	0.00001
7: AMQ-ENV15-030	0.000029	< 0.00003	0.00041	0.007	3.24	0.000039	2.21	0.00007	0.00004	1.26	0.0004	< 0.003	0.00001
8: AMQ-ENV15-016	0.000094	0.00013	0.00038	0.024	24.9	0.00151	3.90	0.00310	0.00041	1.90	0.0067	< 0.003	< 0.00001
9: AMQ-ENV15-011	0.000054	0.00158	0.00010	0.023	16.2	0.00282	0.625	0.00061	0.00011	1.18	0.0008	< 0.003	< 0.00001
10: AMQ-ENV15-014	0.000033	< 0.00003	0.00038	0.008	14.0	0.000213	1.79	0.00007	0.00006	0.41	0.0002	< 0.003	< 0.00001
11: AMQ-ENV15-090	0.000052	0.00114	0.00032	0.011	14.6	0.000399	0.875	0.00032	0.00024	0.60	0.0012	< 0.003	0.00001
12: AMQ-ENV15-026	0.000048	0.00064	0.00012	0.009	6.34	0.000046	1.83	0.00017	0.00004	0.90	0.0020	< 0.003	< 0.00001
13: AMQ-ENV15-055	0.000034	< 0.00003	0.00010	< 0.007	7.79	0.000027	1.59	0.00005	0.00006	0.46	0.0002	< 0.003	< 0.00001
14: AMQ-ENV15-021	0.000034	0.00031	0.00261	0.008	11.9	0.000264	1.02	0.00014	0.00010	1.16	0.0006	< 0.003	0.00004
15: AMQ-ENV15-027	0.000053	0.00036	0.00014	0.031	12.7	0.00110	0.792	0.00160	0.00015	0.91	0.0019	< 0.003	< 0.00001
16: AMQ-ENV15-040	0.000020	< 0.00003	0.00020	< 0.007	7.68	0.000088	1.79	0.00011	0.00006	0.39	0.0001	< 0.003	< 0.00001
17: AMQ-ENV15-041	0.000024	< 0.00003	0.00011	< 0.007	8.17	0.000097	1.60	0.00004	0.00007	0.66	0.0002	< 0.003	< 0.00001
18: AMQ-ENV15-034	0.000042	0.00009	0.00015	0.019	8.45	0.000215	0.803	0.00095	0.00025	1.21	0.0015	< 0.003	< 0.00001
19: AMQ-ENV15-045	0.000059	0.00033	0.00012	0.008	9.88	0.000588	1.29	0.00041	0.00009	3.41	0.0013	< 0.003	< 0.00001
20: AMQ-ENV15-038	0.000073	0.00014	0.00245	0.020	18.1	0.00199	2.29	0.00200	0.00015	1.24	0.0021	< 0.003	0.00005



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LR Report :

CA15169-AUG15

Sample ID	Co mg/L	Cr mg/L	Cu mg/L	Fe mg/L	K mg/L	Li mg/L	Mg mg/L	Mn mg/L	Mo mg/L	Na mg/L	Ni mg/L	P mg/L	Pb mg/L
21: AMQ-ENV15-039	0.000046	0.00082	0.00010	< 0.007	12.4	0.000322	1.55	0.00008	0.00003	0.43	0.0018	< 0.003	< 0.00001
22: AMQ-ENV15-035	0.000054	0.00031	0.00041	0.051	7.18	0.000927	1.05	0.00257	0.00009	0.74	0.0009	< 0.003	0.00001
23: AMQ-ENV15-010	0.000079	0.00055	0.00024	0.031	18.4	0.00313	0.832	0.00170	0.00021	1.32	0.0020	< 0.003	0.00002
24: AMQ-ENV15-086	0.000119	0.00456	0.00041	0.034	28.1	0.000110	0.724	0.00070	0.00008	1.38	0.0016	0.003	0.00002
25: AMQ-ENV15-099	0.000057	0.00038	0.00018	0.010	4.74	0.000031	4.80	0.00022	0.00002	0.39	0.0019	< 0.003	< 0.00001
26: AMQ-ENV15-089	0.000145	0.00017	0.00010	0.025	33.9	0.00206	1.91	0.00261	0.00034	1.87	0.0080	< 0.003	< 0.00001
27: AMQ-ENV15-020	0.000036	0.00012	0.00046	0.015	22.7	0.00134	2.56	0.00041	0.00051	2.02	0.0007	0.009	0.00002
28: AMQ-ENV15-033	0.000061	0.00027	0.00017	0.008	30.4	0.00217	2.22	0.00046	0.00058	3.39	0.0003	< 0.003	< 0.00001
29: AMQ-ENV15-109	0.000072	0.00022	0.00017	< 0.007	27.9	0.00169	3.26	0.00062	0.00031	1.83	0.0007	< 0.003	< 0.00001
30: AMQ-ENV15-081	0.000040	0.00024	0.00012	0.019	12.4	0.000419	0.515	0.00027	0.00307	3.46	0.0002	0.013	< 0.00001
31: AMQ-ENV15-076	0.000776	0.00020	0.00037	0.037	27.9	0.00872	14.0	0.0255	0.00788	2.05	0.0196	< 0.003	0.00001
32: AMQ-ENV15-104	0.000099	0.00112	0.00044	0.038	20.6	0.000111	0.457	0.00071	0.00295	2.17	0.0025	0.015	0.00142
33: AMQ-ENV15-094	0.000069	0.00096	0.00023	0.040	17.2	0.000069	0.379	0.00070	0.00061	2.67	0.0005	0.018	0.00005
34: AMQ-ENV15-024	0.000076	0.00155	0.00025	0.073	10.7	0.000374	0.523	0.00120	0.00101	3.71	0.0004	0.039	0.00007
35: AMQ-ENV15-023	0.000091	0.00188	0.00027	0.120	17.4	0.000658	0.362	0.00170	0.00071	3.91	0.0004	0.051	0.00007
36: AMQ-ENV15-022	0.000065	0.00140	0.00040	0.050	22.4	0.000156	0.330	0.00078	0.00048	3.38	0.0004	0.023	0.00004
37: AMQ-ENV15-042	0.000062	0.00021	0.00034	0.082	39.4	0.000683	0.237	0.00141	0.00136	5.02	0.0003	0.036	0.00006
38: AMQ-ENV15-032	0.000076	0.00152	0.00027	0.075	17.7	0.000258	0.342	0.00127	0.00069	3.95	0.0004	0.030	0.00002
39: AMQ-ENV15-003	0.000044	0.00067	0.00030	0.026	14.9	0.000085	0.366	0.00046	0.00066	2.90	0.0002	0.013	0.00006
40: AMQ-ENV15-001	0.000084	0.00134	0.00036	0.087	16.2	0.000809	0.616	0.00116	0.00186	3.85	0.0006	0.026	0.00003
41: AMQ-ENV15-047	0.000064	0.00134	0.00090	0.050	25.7	0.000541	0.745	0.00075	0.00048	0.97	0.0007	0.007	0.00008
42: AMQ-ENV15-006	0.000050	0.00071	0.00038	0.033	18.5	0.000848	1.15	0.00053	0.00028	1.81	0.0005	0.011	0.00007
43: AMQ-ENV15-008	0.000052	< 0.00003	0.00015	0.022	6.01	0.00126	1.30	0.00262	0.00239	9.11	0.0004	< 0.003	0.00002
44: AMQ-ENV15-009	0.000032	0.00004	0.00016	0.026	10.1	0.00145	2.33	0.00398	0.00355	9.09	0.0003	< 0.003	< 0.00001
45: AMQ-ENV15-012	0.000116	0.00074	0.00072	0.104	7.63	0.00159	0.578	0.00195	0.00222	13.8	0.0005	0.070	0.00107
46: AMQ-ENV15-013	0.000099	0.00298	0.00059	0.092	22.9	0.000596	0.238	0.00131	0.00051	20.3	0.0008	0.016	0.00006
47: AMQ-ENV15-004	0.000064	0.00148	0.00198	0.043	12.9	0.000658	0.488	0.00070	0.00057	15.5	0.0004	0.022	0.00009
48: AMQ-ENV15-005	0.000053	0.00054	0.00074	0.016	18.0	0.000845	0.895	0.00029	0.00036	8.47	0.0003	< 0.003	0.00001
49: AMQ-ENV15-091	0.000042	0.00012	0.00021	0.054	22.6	0.00397	2.69	0.00844	0.00229	8.67	0.0003	< 0.003	0.00001
50: AMQ-ENV15-101	0.000024	< 0.00003	0.00018	0.007	15.4	0.000164	0.514	0.00103	0.00267	3.85	< 0.0001	< 0.003	0.00003
51: AMQ-ENV15-102	0.000085	0.00098	0.00018	0.131	8.16	0.000347	0.202	0.00170	0.00109	14.0	0.0003	0.037	0.00005
52: AMQ-ENV15-103	0.000140	0.00216	0.00040	0.150	13.8	0.000235	0.428	0.00241	0.00128	7.77	0.0010	0.019	0.00009
53: AMQ-ENV15-098	0.000084	0.00013	0.00053	0.189	7.62	0.00248	0.280	0.00448	0.00055	10.4	0.0002	0.029	0.00011
54: AMQ-ENV15-093	0.000070	< 0.00003	0.00010	0.011	8.73	0.000617	2.45	0.00042	0.00392	3.75	0.0008	< 0.003	0.00002
55: AMQ-ENV15-097	0.000044	< 0.00003	0.00010	0.032	9.40	0.00187	0.202	0.00071	0.00039	9.33	0.0002	0.018	0.00006
56: AMQ-ENV15-110	0.000041	0.00009	0.00011	0.043	5.63	0.000762	0.361	0.00049	0.00107	9.20	0.0001	< 0.003	0.00003
57: AMQ-ENV15-106	0.000037	0.00053	0.00058	0.041	6.26	0.00141	0.143	0.00104	0.00110	17.5	< 0.0001	0.008	0.00007



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58: AMQ-ENV15-107	0.000022	0.00020	0.00012	0.034	6.50	0.00103	0.136	0.00060	0.00048	12.9	< 0.0001	0.018	0.00004
59: AMQ-ENV15-108	0.000066	0.00029	0.00019	0.073	7.18	0.00159	0.174	0.00105	0.00056	12.5	0.0001	0.025	0.00010
60: AMQ-ENV15-064	0.000061	0.00014	0.00032	0.070	7.23	0.00296	0.405	0.00111	0.00100	13.9	0.0002	0.026	0.00004
61: AMQ-ENV15-065	0.000125	0.00036	0.00014	0.202	6.92	0.00193	0.251	0.00361	0.00054	10.9	0.0004	0.030	0.00018
62: AMQ-ENV15-066	0.000173	0.00023	0.00030	0.212	11.5	0.00267	0.424	0.00309	0.00134	9.44	0.0006	0.019	0.00016
63: AMQ-ENV15-112	0.000054	0.00072	0.00020	0.139	4.93	0.00243	0.128	0.00213	0.00055	19.4	< 0.0001	0.023	0.00009
64: AMQ-ENV15-049	0.000091	0.00110	0.00012	0.068	10.4	0.000177	0.418	0.00131	0.00062	8.28	0.0003	0.010	0.00002
65: AMQ-ENV15-048	0.000028	0.00003	0.00021	0.028	9.52	0.000719	0.249	0.00035	0.00050	8.79	< 0.0001	< 0.003	< 0.00001
66: AMQ-ENV15-025	0.000052	< 0.00003	0.00009	0.069	5.75	0.000739	0.772	0.00073	0.00080	14.1	< 0.0001	< 0.003	< 0.00001
67: AMQ-ENV15-054	0.000076	< 0.00003	0.00013	0.059	14.3	0.00947	4.33	0.05324	0.00095	2.44	0.0009	< 0.003	< 0.00001
68: AMQ-ENV15-073	0.000090	0.00011	0.00015	0.214	7.05	0.00261	0.316	0.00410	0.00036	9.67	0.0003	0.016	0.00018
69: AMQ-ENV15-075	0.000058	0.00012	0.00009	0.068	7.04	0.00353	0.407	0.00139	0.00066	11.9	0.0002	0.017	0.00003
70: AMQ-ENV15-074	0.000057	0.00015	0.00020	0.076	7.08	0.000802	0.181	0.00117	0.00031	11.5	0.0001	0.026	0.00006
71: AMQ-ENV15-002	0.000057	0.00004	0.00020	0.036	11.2	0.00171	0.668	0.00038	0.00354	9.91	0.0001	0.039	0.00010
72: AMQ-ENV15-100	0.000061	0.00019	0.00011	0.138	14.2	0.000724	0.316	0.00103	0.00233	8.62	0.0001	0.049	0.00035
73: AMQ-ENV15-077	0.000050	0.00006	0.00028	0.045	9.50	0.000802	0.209	0.00043	0.00351	9.73	< 0.0001	0.029	0.00003
74: AMQ-ENV15-019	0.000059	0.00007	0.00161	0.068	30.4	0.00363	4.00	0.00561	0.00382	8.55	0.0012	< 0.003	0.00004
75: AMQ-ENV15-046	0.000046	0.00004	0.00017	0.033	15.6	0.000965	3.05	0.00286	0.00089	14.9	0.0002	< 0.003	< 0.00001
76: AMQ-ENV15-037	0.006029	< 0.00003	0.00031	0.178	19.6	0.00903	4.13	0.790	0.00004	6.23	0.0182	< 0.003	< 0.00001
77: AMQ-ENV15-007	0.000079	0.00010	0.00022	0.039	28.9	0.00171	1.65	0.00264	0.00089	10.0	0.0006	0.003	0.00002
78: AMQ-ENV15-092	0.000286	0.00014	0.00033	0.096	16.1	0.00120	3.23	0.00702	0.00060	8.87	0.0065	< 0.003	0.00002
79: AMQ-ENV15-122	0.000124	0.00048	0.00018	< 0.007	33.7	0.000465	0.333	0.00019	0.00007	1.82	0.0008	< 0.003	0.00001
80: AMQ-ENV15-088	0.000050	0.00005	0.00033	0.039	16.7	0.00182	2.01	0.00447	0.00349	7.89	0.0002	< 0.003	0.00002
81: AMQ-ENV15-095	0.000066	0.00004	0.00018	0.042	11.3	0.00324	0.797	0.00362	0.00207	10.9	0.0002	0.005	0.00004
82: AMQ-ENV15-096	0.000057	0.00016	0.00017	0.272	14.0	0.000557	0.207	0.00324	0.00168	13.3	0.0001	0.003	0.00006
83: AMQ-ENV15-085	0.000101	< 0.00003	0.00036	0.049	8.13	0.00150	1.51	0.00596	0.00164	7.57	0.0003	< 0.003	0.00014
84: AMQ-ENV15-058	0.000062	0.00006	0.00021	0.042	23.0	0.00733	2.58	0.0113	0.00478	8.44	0.0004	< 0.003	< 0.00001
85: AMQ-ENV15-056	0.000162	0.00033	0.00025	0.178	9.43	0.00262	0.558	0.00337	0.00104	10.8	0.0006	0.014	0.00046
86: AMQ-ENV15-115	0.000036	0.00004	0.00062	0.045	2.32	0.000220	0.136	0.00060	0.00077	25.5	< 0.0001	0.007	0.00002
87: AMQ-ENV15-111	0.000057	0.00032	0.00041	0.009	6.52	0.000035	2.79	0.00010	0.00017	0.54	0.0011	< 0.003	< 0.00001
88: AMQ-ENV15-124	0.000136	0.00404	0.00007	0.044	26.0	0.000333	0.675	0.00107	0.00013	9.75	0.0019	< 0.003	0.00002
89: AMQ-ENV15-123	0.000120	0.00058	0.00018	0.008	27.9	0.00153	3.30	0.00050	0.00026	2.04	0.0018	< 0.003	0.00002
90: AMQ-ENV15-116	0.000445	0.00130	0.00195	0.561	1.18	0.00210	0.132	0.00638	0.00016	10.0	0.0010	0.037	0.00037
91: AMQ-ENV15-130	0.001053	0.00358	0.01106	0.748	0.554	0.00186	0.817	0.0187	0.00015	11.2	0.0070	0.064	0.00080
92: AMQ-ENV15-131	0.000313	0.00117	0.00339	0.386	0.288	0.000904	0.086	0.00541	0.00011	8.62	0.0011	0.018	0.00034
93: AMQ-ENV15-132	0.000392	0.00112	0.00160	0.508	0.240	0.000731	0.136	0.01355	0.00044	8.21	0.0017	0.011	0.00050
94: AMQ-ENV15-117	0.001122	0.00218	0.00188	1.11	0.482	0.000614	0.303	0.0207	0.00061	9.20	0.0027	0.055	0.00057



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SFE -24hr 4:1 L/S ratio

LR Report :

CA15169-AUG15

Sample ID	Co mg/L	Cr mg/L	Cu mg/L	Fe mg/L	K mg/L	Li mg/L	Mg mg/L	Mn mg/L	Mo mg/L	Na mg/L	Ni mg/L	P mg/L	Pb mg/L
95: AMQ-ENV15-118	0.000966	0.00793	0.00820	0.673	0.546	0.00209	0.452	0.0299	0.00010	8.50	0.0028	0.043	0.00055
96: AMQ-ENV15-119	0.000784	0.00366	0.00247	1.08	0.367	0.00172	0.214	0.0168	0.00022	7.55	0.0019	0.054	0.00066
97: AMQ-ENV15-125	0.000917	0.00212	0.00484	0.791	0.569	0.00108	0.694	0.0248	0.00009	8.57	0.0032	0.022	0.00084
98: AMQ-ENV15-126	0.000309	0.00078	0.00170	0.377	0.321	0.000497	0.098	0.00959	0.00135	7.28	0.0015	0.010	0.00039
99: AMQ-ENV15-127	0.000538	0.00125	0.00199	0.588	0.442	0.000624	0.232	0.0147	0.00046	7.77	0.0020	0.010	0.00077
100: AMQ-ENV15-128	0.000822	0.00220	0.00219	0.995	0.533	0.00103	0.248	0.0238	0.00031	7.43	0.0021	0.035	0.00086
101: AMQ-ENV15-129	0.000524	0.00125	0.00283	0.471	0.383	0.000766	0.139	0.0138	0.00006	9.59	0.0015	0.020	0.00051
102: AMQ-ENV15-105	0.000091	0.00175	0.00012	0.043	12.2	0.000073	0.818	0.00101	0.00007	6.81	0.0008	< 0.003	0.00001
103: AMQ-ENV15-121	0.000069	0.00022	0.00012	0.009	19.6	0.000180	2.75	0.00023	0.00004	2.45	0.0010	< 0.003	< 0.00001
104: AMQ-ENV15-068	0.000059	0.00066	0.00017	0.008	14.6	0.000048	0.968	0.00010	0.00008	2.96	0.0005	< 0.003	< 0.00001
105: AMQ-ENV15-051	0.000216	0.00083	0.00009	0.009	23.9	0.000224	3.28	0.00093	0.00006	1.93	0.0059	< 0.003	0.00002
106: AMQ-ENV15-071	0.000263	0.00014	0.00008	0.009	17.6	0.000027	1.35	0.00033	0.00002	2.14	0.0019	< 0.003	0.00002
107: AMQ-ENV15-084	0.000053	0.00013	0.00009	0.015	4.77	0.000042	3.81	0.00011	< 0.00001	1.83	0.0005	< 0.003	< 0.00001
108: AMQ-ENV15-083	0.000046	0.00059	0.00007	< 0.007	33.0	0.000088	0.340	0.00007	< 0.00001	2.16	0.0002	< 0.003	< 0.00001
109: AMQ-ENV15-050	0.000041	0.00130	0.00020	0.007	21.9	0.000031	0.259	0.00009	0.00021	4.01	0.0006	0.004	< 0.00001
110: AMQ-ENV15-044	0.000074	0.00128	0.00014	0.048	14.1	0.000077	0.265	0.00119	0.00008	7.67	0.0003	0.005	< 0.00001
111: AMQ-ENV15-070	0.000100	0.00172	0.00010	0.062	21.9	0.000136	0.173	0.00114	0.00111	9.38	0.0006	0.008	0.00010
112: AMQ-ENV15-072	0.000107	0.00263	0.00011	0.047	21.0	0.000115	0.245	0.00102	0.00058	8.62	0.0006	0.018	0.00003
113: AMQ-ENV15-120	0.000106	0.00025	0.00015	0.138	14.0	0.00257	0.205	0.00317	0.00040	8.83	0.0002	0.015	0.00019
114: AMQ-ENV15-113	0.000130	0.00031	0.00057	0.155	10.2	0.00232	0.196	0.00330	0.00032	10.1	0.0002	0.029	0.00059
115: AMQ-ENV15-052	0.000046	0.00033	0.00012	< 0.007	30.0	0.000068	0.122	0.00008	0.00011	2.14	0.0001	0.003	< 0.00001
116: AMQ-ENV15-060	0.000158	0.00022	0.00032	0.174	8.67	0.00144	0.163	0.00354	0.00024	11.5	0.0003	0.035	0.00042
117: AMQ-ENV15-062	0.000090	0.00040	0.00017	0.017	8.27	0.000069	4.73	0.00024	0.00005	1.67	0.0022	< 0.003	< 0.00001
118: AMQ-ENV15-063	0.000114	0.00031	0.00030	0.193	13.9	0.00173	0.166	0.00296	0.00038	10.6	0.0002	0.030	0.00008
119: AMQ-ENV15-114	0.000169	0.00036	0.00036	0.316	7.79	0.00112	0.223	0.00341	0.00508	10.2	0.0002	0.098	0.00006
120: AMQ-ENV15-078	0.000050	0.00007	0.00015	0.042	8.41	0.000719	0.452	0.00044	0.01199	11.0	0.0003	0.027	0.00007
121: AMQ-ENV15-043	0.000045	< 0.00003	0.00013	0.057	7.43	0.00136	1.21	0.00292	0.00176	10.1	0.0002	< 0.003	0.00001
122: AMQ-ENV15-067	0.000039	< 0.00003	0.00031	0.032	2.15	0.000812	1.18	0.00125	0.00141	24.3	0.0001	< 0.003	< 0.00001
123: AMQ-ENV15-061	0.000092	0.00016	0.00105	0.183	5.52	0.000438	0.204	0.00276	0.00027	11.1	0.0002	0.009	0.00013
124-DUP: AMQ-ENV15-086	0.000171	0.00515	0.00019	0.040	29.6	0.000111	0.788	0.00082	0.00014	1.23	0.0017	0.003	0.00001
125-DUP: AMQ-ENV15-009	0.000059	< 0.00003	0.00012	0.027	8.90	0.00137	2.14	0.00535	0.00243	7.56	0.0003	< 0.003	< 0.00001
126-DUP: AMQ-ENV15-049	0.000092	0.00119	0.00025	0.072	11.5	0.000180	0.385	0.00139	0.00065	8.72	0.0003	0.011	0.00003
127-DUP: AMQ-ENV15-058	0.000069	0.00010	0.00011	0.042	22.6	0.00764	2.23	0.00765	0.00561	8.93	0.0005	< 0.003	0.00002
128-DUP: AMQ-ENV15-068	0.000062	0.00064	0.00016	< 0.007	13.1	0.000055	1.19	0.00011	0.00026	2.70	0.0006	< 0.003	< 0.00001
129-DUP: AMQ-ENV15-061	0.000108	0.00013	0.00019	0.193	5.60	0.000427	0.217	0.00301	0.00023	10.1	0.0002	0.008	0.00015



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LR Report :

CA15169-AUG15

Sample ID	Sb mg/L	Se mg/L	Si mg/L	Sn mg/L	Sr mg/L	Ti mg/L	Tl mg/L	U mg/L	V mg/L	Zn mg/L
3: Analysis Approval Date	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15	27-Aug-15
4: Analysis Approval Time	15:12	15:13	15:13	15:13	15:13	15:14	15:14	15:16	15:16	15:16
5: AMQ-ENV15-028	0.0125	0.00018	5.35	< 0.00001	0.0413	< 0.00005	0.000027	< 0.000002	0.0118	< 0.002
6: AMQ-ENV15-029	0.0015	< 0.00004	2.68	< 0.00001	0.0750	< 0.00005	0.000023	< 0.000002	0.00111	< 0.002
7: AMQ-ENV15-030	0.0033	0.00009	2.74	0.00014	0.0761	< 0.00005	0.000007	0.000003	0.00211	< 0.002
8: AMQ-ENV15-016	0.0189	0.00232	3.19	< 0.00001	0.113	0.00021	0.000025	0.000008	0.00549	< 0.002
9: AMQ-ENV15-011	0.0124	0.00013	7.46	< 0.00001	0.0393	0.00037	< 0.000005	< 0.000002	0.0148	< 0.002
10: AMQ-ENV15-014	0.0021	< 0.00004	2.72	< 0.00001	0.0627	< 0.00005	0.000020	< 0.000002	0.00155	< 0.002
11: AMQ-ENV15-090	0.0264	0.00008	5.93	0.00001	0.0238	0.00013	< 0.000005	< 0.000002	0.0111	< 0.002
12: AMQ-ENV15-026	0.0108	< 0.00004	3.90	< 0.00001	0.0785	< 0.00005	0.000011	< 0.000002	0.00547	< 0.002
13: AMQ-ENV15-055	0.0041	< 0.00004	3.51	< 0.00001	0.0570	< 0.00005	0.000035	< 0.000002	0.00278	< 0.002
14: AMQ-ENV15-021	0.0096	0.00012	5.38	0.00060	0.117	< 0.00005	0.000011	< 0.000002	0.00542	0.002
15: AMQ-ENV15-027	0.0195	0.00008	3.00	< 0.00001	0.0210	0.00024	< 0.000005	0.000008	0.00552	< 0.002
16: AMQ-ENV15-040	0.0051	0.00015	3.28	< 0.00001	0.0432	< 0.00005	0.000035	< 0.000002	0.00323	< 0.002
17: AMQ-ENV15-041	0.0032	0.00013	3.08	< 0.00001	0.0510	< 0.00005	0.000021	< 0.000002	0.00191	< 0.002
18: AMQ-ENV15-034	0.0093	0.00007	2.21	< 0.00001	0.0248	0.00011	< 0.000005	< 0.000002	0.00219	< 0.002
19: AMQ-ENV15-045	0.0157	0.00006	4.23	< 0.00001	0.0251	0.00005	< 0.000005	< 0.000002	0.00720	< 0.002
20: AMQ-ENV15-038	0.0145	0.00012	2.95	0.00023	0.0262	0.00009	< 0.000005	0.000002	0.00330	< 0.002
21: AMQ-ENV15-039	0.0132	< 0.00004	7.20	< 0.00001	0.0409	< 0.00005	< 0.000005	< 0.000002	0.00620	< 0.002
22: AMQ-ENV15-035	0.0058	0.00006	3.82	0.00002	0.0160	0.00035	< 0.000005	0.000006	0.00346	< 0.002
23: AMQ-ENV15-010	0.0102	0.00013	3.41	0.00004	0.0216	0.00031	< 0.000005	0.000009	0.00619	< 0.002
24: AMQ-ENV15-086	0.0274	0.00037	12.6	0.00008	0.0456	0.00086	< 0.000005	< 0.000002	0.0268	< 0.002
25: AMQ-ENV15-099	0.0140	< 0.00004	3.92	< 0.00001	0.0732	< 0.00005	0.000014	< 0.000002	0.00433	< 0.002
26: AMQ-ENV15-089	0.0232	0.00012	3.78	< 0.00001	0.0343	0.00055	< 0.000005	0.000027	0.00497	< 0.002
27: AMQ-ENV15-020	0.0065	0.00092	5.41	0.00033	0.0656	0.00024	< 0.000005	0.000009	0.00501	< 0.002
28: AMQ-ENV15-033	0.0038	0.00012	5.75	< 0.00001	0.0890	< 0.00005	0.000015	0.000009	0.00501	< 0.002
29: AMQ-ENV15-109	0.0033	< 0.00004	4.69	< 0.00001	0.0908	< 0.00005	0.000020	0.000004	0.00395	< 0.002
30: AMQ-ENV15-081	0.0026	0.00039	4.86	< 0.00001	0.0374	0.00060	< 0.000005	0.000161	0.0153	< 0.002
31: AMQ-ENV15-076	0.0071	0.00052	3.51	< 0.00001	0.234	0.00076	0.000034	0.000109	0.00061	< 0.002
32: AMQ-ENV15-104	0.0049	0.00011	9.98	0.00007	0.0419	0.00141	< 0.000005	0.000009	0.0236	< 0.002
33: AMQ-ENV15-094	0.0032	0.00020	11.1	< 0.00001	0.0307	0.00118	< 0.000005	0.000008	0.0202	< 0.002
34: AMQ-ENV15-024	0.0018	0.00018	11.3	< 0.00001	0.0251	0.00221	< 0.000005	0.000110	0.0223	< 0.002
35: AMQ-ENV15-023	0.0019	0.00072	10.3	< 0.00001	0.0202	0.00424	< 0.000005	0.000277	0.0270	< 0.002
36: AMQ-ENV15-022	0.0046	0.00013	13.5	< 0.00001	0.0569	0.00245	< 0.000005	0.000023	0.0187	< 0.002
37: AMQ-ENV15-042	0.0045	0.00038	3.57	< 0.00001	0.0115	0.00906	< 0.000005	0.00138	0.0121	< 0.002
38: AMQ-ENV15-032	0.0037	0.00023	9.52	< 0.00001	0.0252	0.00338	< 0.000005	0.000145	0.0261	< 0.002
39: AMQ-ENV15-003	0.0020	0.00016	10.1	< 0.00001	0.0299	0.00082	< 0.000005	0.000038	0.0195	< 0.002



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LR Report :

CA15169-AUG15

Sample ID	Sb mg/L	Se mg/L	Si mg/L	Sn mg/L	Sr mg/L	Ti mg/L	Tl mg/L	U mg/L	V mg/L	Zn mg/L
40: AMQ-ENV15-001	0.0031	0.00062	6.51	< 0.00001	0.0498	0.00278	< 0.000005	0.000102	0.0160	< 0.002
41: AMQ-ENV15-047	0.0059	0.00022	8.46	< 0.00001	0.0270	0.00228	0.000006	0.000010	0.0130	< 0.002
42: AMQ-ENV15-006	0.0025	0.00065	8.43	0.00006	0.0304	0.00128	< 0.000005	0.000007	0.0203	< 0.002
43: AMQ-ENV15-008	0.0047	< 0.00004	1.73	< 0.00001	0.0191	0.00021	< 0.000005	0.000046	0.00023	< 0.002
44: AMQ-ENV15-009	0.0030	0.00025	3.61	0.00003	0.0327	0.00029	< 0.000005	0.000079	0.00032	< 0.002
45: AMQ-ENV15-012	0.0019	0.00061	6.35	0.00002	0.0175	0.00331	< 0.000005	0.000133	0.0180	< 0.002
46: AMQ-ENV15-013	0.0037	0.00033	16.3	0.00001	0.0217	0.00486	< 0.000005	0.000030	0.0208	< 0.002
47: AMQ-ENV15-004	0.0031	0.00035	15.2	0.00070	0.0224	0.00173	< 0.000005	0.000021	0.0218	< 0.002
48: AMQ-ENV15-005	0.0032	0.00024	7.78	0.00002	0.0293	0.00053	< 0.000005	0.000006	0.00775	< 0.002
49: AMQ-ENV15-091	0.0021	0.00092	3.03	< 0.00001	0.0269	0.00055	< 0.000005	0.000139	0.00016	< 0.002
50: AMQ-ENV15-101	0.0014	< 0.00004	1.90	< 0.00001	0.0477	0.00013	< 0.000005	0.000016	0.00317	< 0.002
51: AMQ-ENV15-102	0.0023	0.00025	5.70	< 0.00001	0.0198	0.00671	< 0.000005	0.000092	0.0164	< 0.002
52: AMQ-ENV15-103	0.0017	0.00031	11.0	0.00001	0.0212	0.00593	< 0.000005	0.000008	0.0271	< 0.002
53: AMQ-ENV15-098	0.0024	< 0.00004	3.40	0.00005	0.00681	0.00607	< 0.000005	0.000855	0.00958	< 0.002
54: AMQ-ENV15-093	0.0014	0.00014	3.81	< 0.00001	0.0433	0.00014	< 0.000005	0.000073	0.00576	< 0.002
55: AMQ-ENV15-097	0.0027	0.00009	3.94	< 0.00001	0.00693	0.00144	< 0.000005	0.000750	0.00819	< 0.002
56: AMQ-ENV15-110	0.0017	0.00009	3.74	< 0.00001	0.0189	0.00145	< 0.000005	0.000435	0.00792	< 0.002
57: AMQ-ENV15-106	0.0020	< 0.00004	4.31	< 0.00001	0.00732	0.00169	< 0.000005	0.000966	0.00555	< 0.002
58: AMQ-ENV15-107	0.0024	0.00011	4.06	< 0.00001	0.00442	0.00142	< 0.000005	0.000776	0.00877	< 0.002
59: AMQ-ENV15-108	0.0017	< 0.00004	4.26	< 0.00001	0.00518	0.00390	< 0.000005	0.000606	0.00973	< 0.002
60: AMQ-ENV15-064	0.0026	0.00025	3.29	0.00003	0.00811	0.00278	< 0.000005	0.000688	0.00842	< 0.002
61: AMQ-ENV15-065	0.0021	0.00012	4.16	< 0.00001	0.00550	0.00849	< 0.000005	0.000773	0.0108	< 0.002
62: AMQ-ENV15-066	0.0025	0.00014	2.80	0.00001	0.0113	0.00624	< 0.000005	0.000426	0.00828	< 0.002
63: AMQ-ENV15-112	0.0027	< 0.00004	4.81	< 0.00001	0.00215	0.00311	< 0.000005	0.000087	0.00369	< 0.002
64: AMQ-ENV15-049	0.0023	0.00017	10.8	< 0.00001	0.0241	0.00193	< 0.000005	0.000024	0.0179	< 0.002
65: AMQ-ENV15-048	0.0027	< 0.00004	2.14	0.00003	0.00902	0.00029	< 0.000005	0.000211	0.00131	< 0.002
66: AMQ-ENV15-025	0.0022	0.00018	4.44	< 0.00001	0.0171	0.00027	< 0.000005	0.000057	0.00100	< 0.002
67: AMQ-ENV15-054	0.0024	< 0.00004	1.90	< 0.00001	0.0339	0.00053	< 0.000005	0.000435	0.00010	< 0.002
68: AMQ-ENV15-073	0.0032	< 0.00004	3.88	< 0.00001	0.00704	0.00591	< 0.000005	0.00103	0.00472	< 0.002
69: AMQ-ENV15-075	0.0027	0.00012	2.97	< 0.00001	0.00730	0.00201	< 0.000005	0.000321	0.00316	< 0.002
70: AMQ-ENV15-074	0.0028	< 0.00004	3.96	0.00002	0.00595	0.00344	< 0.000005	0.000948	0.0112	< 0.002
71: AMQ-ENV15-002	0.0022	0.00160	2.45	0.00003	0.0235	0.00175	< 0.000005	0.000274	0.00648	< 0.002
72: AMQ-ENV15-100	0.0015	0.00006	2.06	< 0.00001	0.00898	0.00639	< 0.000005	0.000233	0.00717	< 0.002
73: AMQ-ENV15-077	0.0024	0.00019	2.86	0.00002	0.0115	0.00263	< 0.000005	0.000521	0.0121	< 0.002
74: AMQ-ENV15-019	0.0058	0.00032	3.50	0.00026	0.0316	0.00054	< 0.000005	0.000608	0.00017	< 0.002
75: AMQ-ENV15-046	0.0017	0.00014	2.22	< 0.00001	0.0375	0.00039	< 0.000005	0.000135	0.00006	< 0.002
76: AMQ-ENV15-037	0.0010	0.00113	6.27	< 0.00001	0.0497	0.00023	0.000014	0.000030	< 0.00001	< 0.002



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SFE -24hr 4:1 L/S ratio

LR Report :

CA15169-AUG15

Sample ID	Sb mg/L	Se mg/L	Si mg/L	Sn mg/L	Sr mg/L	Ti mg/L	Tl mg/L	U mg/L	V mg/L	Zn mg/L
77: AMQ-ENV15-007	0.0032	0.00037	3.49	0.00018	0.104	0.00079	< 0.000005	0.000076	0.00148	< 0.002
78: AMQ-ENV15-092	0.0066	0.00012	3.44	< 0.00001	0.0263	0.00057	< 0.000005	0.000035	0.00032	< 0.002
79: AMQ-ENV15-122	0.0129	0.00008	6.35	< 0.00001	0.0257	0.00006	< 0.000005	< 0.000002	0.0134	< 0.002
80: AMQ-ENV15-088	0.0021	0.00013	1.55	0.00002	0.0316	0.00046	< 0.000005	0.000038	0.00010	< 0.002
81: AMQ-ENV15-095	0.0024	0.00014	2.72	< 0.00001	0.0198	0.00169	< 0.000005	0.000559	0.00254	< 0.002
82: AMQ-ENV15-096	0.0044	0.00006	1.70	0.00002	0.00691	0.00494	< 0.000005	0.000093	0.00176	< 0.002
83: AMQ-ENV15-085	0.0016	< 0.00004	1.65	0.00004	0.0208	0.00080	< 0.000005	0.000029	0.00047	< 0.002
84: AMQ-ENV15-058	0.0020	0.00031	2.77	0.00002	0.0422	0.00042	< 0.000005	0.00100	0.00018	< 0.002
85: AMQ-ENV15-056	0.0044	0.00018	3.09	0.00004	0.0111	0.00751	< 0.000005	0.000725	0.00540	< 0.002
86: AMQ-ENV15-115	0.0040	0.00012	4.92	0.00031	0.00564	0.00020	< 0.000005	0.000035	0.00194	< 0.002
87: AMQ-ENV15-111	0.0243	< 0.00004	6.06	0.00004	0.0674	< 0.00005	< 0.000005	< 0.000002	0.00819	< 0.002
88: AMQ-ENV15-124	0.0183	0.00031	12.7	< 0.00001	0.0731	0.00087	< 0.000005	0.000007	0.0183	< 0.002
89: AMQ-ENV15-123	0.0107	0.00012	5.04	< 0.00001	0.160	< 0.00005	0.000020	0.000010	0.00598	< 0.002
90: AMQ-ENV15-116	0.0005	0.00018	5.48	0.00012	0.00221	0.0329	< 0.000005	0.000163	0.00113	< 0.002
91: AMQ-ENV15-130	0.0004	0.00041	6.43	0.00003	0.00896	0.0169	< 0.000005	0.00232	0.00088	< 0.002
92: AMQ-ENV15-131	0.0004	< 0.00004	3.98	0.00005	0.00089	0.0117	< 0.000005	0.000476	0.00062	< 0.002
93: AMQ-ENV15-132	0.0004	< 0.00004	4.43	< 0.00001	0.00114	0.0132	< 0.000005	0.000477	0.00067	< 0.002
94: AMQ-ENV15-117	0.0005	0.00005	6.40	0.00004	0.00182	0.0492	< 0.000005	0.000191	0.00234	0.003
95: AMQ-ENV15-118	0.0004	0.00017	4.02	0.00019	0.00408	0.0286	< 0.000005	0.000550	0.00150	< 0.002
96: AMQ-ENV15-119	0.0005	< 0.00004	3.78	0.00004	0.00124	0.0311	< 0.000005	0.000232	0.00152	0.002
97: AMQ-ENV15-125	0.0003	0.00030	4.33	0.00002	0.00548	0.0189	< 0.000005	0.000875	0.00119	< 0.002
98: AMQ-ENV15-126	0.0004	0.00024	3.88	0.00002	0.00080	0.00941	< 0.000005	0.000457	0.00079	< 0.002
99: AMQ-ENV15-127	0.0004	0.00012	3.80	< 0.00001	0.00201	0.0126	< 0.000005	0.000419	0.00081	< 0.002
100: AMQ-ENV15-128	0.0004	0.00013	5.14	0.00005	0.00197	0.0337	< 0.000005	0.000484	0.00121	0.002
101: AMQ-ENV15-129	0.0003	0.00021	4.19	< 0.00001	0.00126	0.0106	< 0.000005	0.000587	0.00056	< 0.002
102: AMQ-ENV15-105	0.0086	< 0.00004	9.78	< 0.00001	0.0471	0.00093	< 0.000005	0.000009	0.0215	< 0.002
103: AMQ-ENV15-121	0.0072	< 0.00004	4.23	< 0.00001	0.151	< 0.00005	0.000005	< 0.000002	0.00690	< 0.002
104: AMQ-ENV15-068	0.0264	0.00005	7.00	< 0.00001	0.0524	< 0.00005	< 0.000005	< 0.000002	0.0120	< 0.002
105: AMQ-ENV15-051	0.0182	0.00026	4.78	< 0.00001	0.145	< 0.00005	0.000013	< 0.000002	0.00834	< 0.002
106: AMQ-ENV15-071	0.0029	0.00013	3.36	< 0.00001	0.0984	< 0.00005	0.000018	< 0.000002	0.00330	< 0.002
107: AMQ-ENV15-084	0.0038	< 0.00004	3.46	< 0.00001	0.145	< 0.00005	0.000012	0.000004	0.00186	< 0.002
108: AMQ-ENV15-083	0.0081	< 0.00004	6.84	< 0.00001	0.0443	< 0.00005	< 0.000005	< 0.000002	0.0129	< 0.002
109: AMQ-ENV15-050	0.0156	0.00021	8.88	< 0.00001	0.0631	0.00015	< 0.000005	0.000008	0.0217	< 0.002
110: AMQ-ENV15-044	0.0024	0.00015	13.6	< 0.00001	0.0724	0.00140	< 0.000005	0.000008	0.0195	< 0.002
111: AMQ-ENV15-070	0.0020	0.00006	10.7	< 0.00001	0.0246	0.00259	< 0.000005	0.000013	0.0160	< 0.002
112: AMQ-ENV15-072	0.0070	< 0.00004	12.4	< 0.00001	0.0484	0.00168	< 0.000005	0.000016	0.0212	< 0.002
113: AMQ-ENV15-120	0.0036	0.00010	3.39	< 0.00001	0.00778	0.00803	< 0.000005	0.000901	0.0129	< 0.002



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SFE -24hr 4:1 L/S ratio

LR Report :

CA15169-AUG15

Sample ID	Sb mg/L	Se mg/L	Si mg/L	Sn mg/L	Sr mg/L	Ti mg/L	Tl mg/L	U mg/L	V mg/L	Zn mg/L
114: AMQ-ENV15-113	0.0030	0.00015	4.25	0.00003	0.0104	0.00915	< 0.000005	0.000804	0.0116	< 0.002
115: AMQ-ENV15-052	0.0036	< 0.00004	5.42	0.00002	0.0710	0.00013	0.000005	0.000011	0.0126	< 0.002
116: AMQ-ENV15-060	0.0025	0.00006	4.74	< 0.00001	0.00691	0.00906	< 0.000005	0.000616	0.0111	< 0.002
117: AMQ-ENV15-062	0.0065	0.00015	3.91	0.00001	0.199	0.00009	0.000028	0.000009	0.00371	< 0.002
118: AMQ-ENV15-063	0.0043	< 0.00004	3.77	< 0.00001	0.0105	0.0107	< 0.000005	0.000896	0.0140	< 0.002
119: AMQ-ENV15-114	0.0018	< 0.00004	3.00	< 0.00001	0.00740	0.0255	< 0.000005	0.000230	0.0176	< 0.002
120: AMQ-ENV15-078	0.0027	0.00012	2.19	< 0.00001	0.0152	0.00232	< 0.000005	0.000369	0.00701	< 0.002
121: AMQ-ENV15-043	0.0031	0.00004	2.63	< 0.00001	0.0408	0.00050	< 0.000005	0.000046	0.00015	< 0.002
122: AMQ-ENV15-067	0.0015	< 0.00004	3.04	< 0.00001	0.0487	0.00025	< 0.000005	0.000029	0.00024	< 0.002
123: AMQ-ENV15-061	0.0027	< 0.00004	4.47	0.00006	0.0102	0.00655	< 0.000005	0.000488	0.00803	< 0.002
124-DUP: AMQ-ENV15-086	0.0305	0.00029	11.7	< 0.00001	0.0431	0.00101	< 0.000005	< 0.000002	0.0287	< 0.002
125-DUP: AMQ-ENV15-009	0.0029	< 0.00004	3.91	< 0.00001	0.0331	0.00021	< 0.000005	0.000100	0.00044	< 0.002
126-DUP: AMQ-ENV15-049	0.0027	< 0.00004	10.2	< 0.00001	0.0214	0.00276	< 0.000005	0.000023	0.0186	< 0.002
127-DUP: AMQ-ENV15-058	0.0021	0.00018	2.83	< 0.00001	0.0375	0.00043	< 0.000005	0.000992	0.00023	< 0.002
128-DUP: AMQ-ENV15-068	0.0298	< 0.00004	7.15	< 0.00001	0.0606	< 0.00005	< 0.000005	0.000018	0.0111	< 0.002
129-DUP: AMQ-ENV15-061	0.0028	< 0.00004	4.23	< 0.00001	0.0120	0.00703	< 0.000005	0.000533	0.00796	< 0.002

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SFE -24hr 4:1 L/S ratio

31-December-2015

Date Rec. : 22 December 2015

LR Report: CA15279-DEC15

Reference: Project number 1520817

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	3: Approval Date	4: Approval Date	5: AMQ15-433-01	6: AMQ15-433-02	7: AMQ15-433-03	8: AMQ15-438-01	9: AMQ15-438-02	10: AMQ15-438-03	11: AMQ15-438-04	12: AMQ15-481-01	13: AMQ15-481-02	14: AMQ15-481-03	15: AMQ15-481-04	16: AMQ15-481-05
Sample Date & Time			Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A
Sample weight [g]	24-Dec-15	09:34	200	200	200	200	200	200	200	200	200	200	200	200
Volume D.I. Water [mL]	24-Dec-15	09:34	800	800	800	800	800	800	800	800	800	800	800	800
Initial pH	24-Dec-15	09:34	9.35	9.28	9.83	9.55	9.43	9.81	9.85	9.91	9.99	9.82	9.94	9.93
Final pH	24-Dec-15	09:34	8.29	8.48	9.61	9.71	9.34	8.57	9.24	9.72	9.83	9.61	9.69	8.93
pH [no unit]	29-Dec-15	10:58	9.03	9.05	9.56	9.57	9.36	8.88	9.28	9.56	9.67	9.49	9.61	9.12
Alkalinity [mg/L as CaCO3]	29-Dec-15	10:58	75	70	65	70	70	57	62	59	66	50	56	66
Conductivity [uS/cm]	29-Dec-15	10:58	295	304	201	174	177	210	184	134	155	112	129	238
Fluoride [mg/L]	24-Dec-15	13:28	0.23	0.24	0.22	0.28	0.22	0.18	0.26	0.26	0.26	0.33	0.65	0.25
Chloride [mg/L]	29-Dec-15	16:33	42	53	8	3	5	36	18	1	8	2	1	40
Sulphate [mg/L]	29-Dec-15	16:33	22	17	8	3	4	2	2	2	< 1	1	2	< 1
Bromide [mg/L]	29-Dec-15	11:34	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3	< 3
Nitrite (as N) [mg/L]	29-Dec-15	11:34	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3	< 0.3
Nitrate (as N) [mg/L]	29-Dec-15	11:34	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6	< 0.6
Chromium VI [ug/L]	31-Dec-15	08:08	0.3	0.3	4.0	0.7	0.6	0.2	0.3	0.4	0.3	0.3	0.4	0.4
Phosphorus (total reactive) [mg/L]	29-Dec-15	16:14	< 0.03	< 0.03	2.16	0.04	0.11	< 0.03	< 0.03	0.06	< 0.03	< 0.03	< 0.03	0.10
Mercury [mg/L]	29-Dec-15	08:46	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001	< 0.00001
Silver [mg/L]	29-Dec-15	13:56	0.000013	0.000010	0.000003	< 0.000002	< 0.000002	0.000005	0.000002	< 0.000002	0.000764	0.000288	0.000041	0.001195
Aluminum [mg/L]	29-Dec-15	13:56	0.012	0.035	0.055	0.115	0.004	0.026	0.230	0.967	0.327	0.797	0.968	0.156
Arsenic [mg/L]	29-Dec-15	13:56	0.0562	0.0191	7.55	0.177	0.883	0.0530	0.222	0.217	0.175	0.0198	0.0214	0.903



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SFE -24hr 4:1 L/S ratio

LR Report :

CA15279-DEC15

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: AMQ15-433- 01	6: AMQ15-433- 02	7: AMQ15-433- 03	8: AMQ15-438- 01	9: AMQ15-438- 02	10: AMQ15-438- 03	11: AMQ15-438- 04	12: AMQ15-481- 01	13: AMQ15-481- 02	14: AMQ15-481- 03	15: AMQ15-481- 04	16: AMQ15-481- 05
Barium [mg/L]	29-Dec-15	13:56	0.0208	0.0130	0.00914	0.0127	0.0391	0.0104	0.00645	0.00737	0.00240	0.00273	0.00352	0.00856
Boron [mg/L]	29-Dec-15	13:56	0.944	0.390	0.244	0.202	0.203	0.128	0.123	0.119	0.117	0.0718	0.0805	0.111
Beryllium [mg/L]	29-Dec-15	13:56	0.000714	0.000189	0.000106	0.000096	0.000111	0.000140	0.000114	0.000102	0.000040	0.000031	0.000029	0.000024
Bismuth [mg/L]	29-Dec-15	13:56	0.0913	0.0226	0.00663	0.00245	0.00416	0.00381	0.00266	0.00155	0.000437	0.000372	0.000297	0.000295
Calcium [mg/L]	29-Dec-15	13:56	17.0	10.9	4.73	2.68	7.78	18.9	4.17	2.16	1.75	3.77	2.75	8.06
Cadmium [mg/L]	29-Dec-15	13:56	0.00323	0.00117	0.000992	0.000812	0.000738	0.00127	0.00100	0.000867	0.000286	0.000248	0.000193	0.000158
Cobalt [mg/L]	29-Dec-15	13:56	0.00325	0.00121	0.00136	0.00108	0.000741	0.00121	0.00103	0.000944	0.000278	0.000227	0.000199	0.000203
Chromium [mg/L]	29-Dec-15	13:56	0.00390	0.00172	0.00870	0.00342	0.00152	0.00148	0.00141	0.00179	0.00070	0.00058	0.00067	0.00081
Copper [mg/L]	29-Dec-15	13:56	0.00490	0.00214	0.00193	0.00251	0.00144	0.00144	0.00122	0.00157	0.00052	0.00059	0.00063	0.00028
Iron [mg/L]	29-Dec-15	13:56	0.064	0.153	0.174	0.116	0.014	0.028	0.283	0.140	0.307	0.010	0.057	0.040
Potassium [mg/L]	29-Dec-15	13:56	28.3	43.6	31.5	29.3	22.9	14.3	20.6	14.6	4.80	9.62	10.4	25.1
Lithium [mg/L]	29-Dec-15	13:56	0.0141	0.00673	0.00281	0.00507	0.00405	0.00329	0.00253	0.00356	0.00123	0.00172	0.00135	0.00269
Magnesium [mg/L]	29-Dec-15	13:56	5.01	2.37	1.24	0.610	2.34	2.14	0.647	0.230	0.188	0.288	0.169	0.896
Manganese [mg/L]	29-Dec-15	13:56	0.0105	0.00604	0.00532	0.00196	0.00089	0.00277	0.00521	0.00299	0.00530	0.00051	0.00100	0.00125
Molybdenum [mg/L]	29-Dec-15	13:56	0.0812	0.0310	0.00649	0.00394	0.00312	0.00939	0.00453	0.00203	0.00203	0.00071	0.00103	0.00387
Sodium [mg/L]	29-Dec-15	13:56	13.6	14.7	12.9	13.2	12.9	12.0	19.5	15.5	31.2	14.3	18.0	22.5
Nickel [mg/L]	29-Dec-15	13:56	0.0056	0.0019	0.0060	0.0024	0.0019	0.0014	0.0012	0.0010	0.0004	0.0003	0.0004	0.0033
Phosphorus [mg/L]	29-Dec-15	13:56	0.026	0.004	0.011	0.030	0.006	< 0.003	0.011	0.013	0.018	0.005	0.009	0.004
Lead [mg/L]	29-Dec-15	13:56	0.00806	0.00236	0.00126	0.00106	0.00118	0.00138	0.00119	0.00113	0.00035	0.00029	0.00032	0.00023
Antimony [mg/L]	29-Dec-15	13:56	0.0042	0.0049	0.0349	0.0048	0.0084	0.0049	0.0047	0.0048	0.0168	0.0042	0.0074	0.0232
Selenium [mg/L]	29-Dec-15	13:56	0.151	0.0158	0.00673	0.00474	0.00416	0.00435	0.00264	0.00217	0.00087	0.00066	0.00062	0.00065
Silicon [mg/L]	29-Dec-15	13:56	4.01	3.62	15.3	10.9	6.03	3.12	3.24	6.00	6.22	4.84	5.43	2.82
Tin [mg/L]	29-Dec-15	13:56	0.00005	0.00004	0.00006	0.00004	0.00004	0.00004	0.00004	0.00005	0.00006	0.00003	0.00009	0.00005
Strontium [mg/L]	29-Dec-15	13:56	0.0299	0.0173	0.0194	0.0125	0.0457	0.0357	0.00941	0.00491	0.00291	0.0158	0.00803	0.0403
Titanium [mg/L]	29-Dec-15	13:56	< 0.00005	0.00070	0.00297	0.00715	0.00037	< 0.00005	0.00188	0.00645	0.00101	0.00039	0.00209	0.00043
Thallium [mg/L]	29-Dec-15	13:56	0.0111	0.00327	0.00230	0.00163	0.00132	0.00141	0.00118	0.00101	0.000353	0.000287	0.000240	0.000195
Uranium [mg/L]	29-Dec-15	13:56	0.0204	0.00396	0.00148	0.00129	0.00124	0.00145	0.00118	0.00155	0.000363	0.000769	0.000835	0.000262
Vanadium [mg/L]	29-Dec-15	13:56	0.0088	0.00214	0.0347	0.0319	0.01067	0.00151	0.00203	0.0160	0.00362	0.00701	0.0117	0.00177
Zinc [mg/L]	29-Dec-15	13:56	0.004	< 0.002	0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	< 0.002	0.005	< 0.002



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SFE -24hr 4:1 L/S ratio

LR Report :

CA15279-DEC15

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30-December-2015

Date Rec. : 22 December 2015

LR Report: CA15281-DEC15

Reference: Project Number 1520817

Copy: #1

CERTIFICATE OF ANALYSIS

Final Report

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: AMQ15-433-0 1	6: AMQ15-433-0 2	7: AMQ15-433-0 3	8: AMQ15-438-0 1	9: AMQ15-438-0 2	10: AMQ15-438-0 3	11: AMQ15-438-0 4	12: AMQ15-481-0 1	13: AMQ15-481-0 2	14: AMQ15-481-0 3	15: AMQ15-481-0 4	16: AMQ15-481-0 5
Sample Date & Time			Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A	Date:N/A
Fluoride [µg/g]	30-Dec-15	13:44	107	170	78	162	103	125	177	223	135	2630	201	106
Mercury [µg/g]	24-Dec-15	11:47	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05	< 0.05
Aluminum [µg/g]	24-Dec-15	10:17	14000	12000	23000	30000	25000	9100	19000	20000	13000	15000	20000	15000
Silver [µg/g]	24-Dec-15	11:56	0.76	0.81	0.30	0.08	0.05	0.66	0.18	0.19	0.08	0.13	0.84	1.1
Arsenic [µg/g]	24-Dec-15	11:56	970	290	1000	17	340	830	450	76	100	11	16	1100
Boron [µg/g]	24-Dec-15	11:56	19	6	1	5	3	3	2	4	4	4	3	2
Barium [µg/g]	24-Dec-15	11:56	23	32	50	590	160	25	44	130	20	65	78	84
Beryllium [µg/g]	24-Dec-15	11:56	0.40	0.72	0.19	1.0	0.62	0.57	0.59	0.45	0.83	0.40	0.27	0.31
Bismuth [µg/g]	24-Dec-15	11:56	< 0.09	< 0.09	< 0.09	< 0.09	< 0.09	0.15	< 0.09	< 0.09	< 0.09	< 0.09	1.6	0.43
Calcium [µg/g]	24-Dec-15	10:17	5000	4300	8300	9900	30000	9400	9200	13000	13000	16000	12000	18000
Cadmium [µg/g]	24-Dec-15	11:56	0.10	1.1	0.05	0.11	0.09	0.21	0.02	0.21	0.05	0.22	0.07	4.1
Cobalt [µg/g]	24-Dec-15	11:56	4.7	4.3	64	25	45	4.7	5.6	13	3.3	8.8	12	50
Chromium [µg/g]	24-Dec-15	11:56	100	94	1200	610	990	120	63	94	77	49	49	650
Copper [µg/g]	24-Dec-15	11:56	22	19	6.1	60	14	23	10	27	5.8	20	22	50
Iron [µg/g]	24-Dec-15	10:19	98000	100000	30000	47000	40000	83000	90000	32000	62000	34000	40000	77000
Potassium [µg/g]	24-Dec-15	10:19	3800	6300	9300	29000	9900	3600	11000	15000	5300	6600	8400	9000
Lithium [µg/g]	24-Dec-15	11:56	6	8	18	27	18	4	5	24	8	12	13	13
Magnesium [µg/g]	24-Dec-15	10:19	7800	6200	36000	45000	50000	5500	8800	15000	5100	8500	9700	9100
Manganese [µg/g]	24-Dec-15	11:56	1900	1600	540	440	840	1000	1100	520	920	630	460	1700
Molybdenum [µg/g]	24-Dec-15	11:56	4.7	2.8	0.4	1.7	0.7	3.0	1.6	1.6	1.8	1.3	2.0	1.4



SGS Canada Inc.

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LR Report :

CA15281-DEC15

Analysis	3: Analysis Approval Date	4: Analysis Approval Time	5: AMQ15-433-0 1	6: AMQ15-433-0 2	7: AMQ15-433-0 3	8: AMQ15-438-0 1	9: AMQ15-438-0 2	10: AMQ15-438-0 3	11: AMQ15-438-0 4	12: AMQ15-481-0 1	13: AMQ15-481-0 2	14: AMQ15-481-0 3	15: AMQ15-481-0 4	16: AMQ15-481-0 5
Sodium [µg/g]	24-Dec-15	10:19	85	65	50	190	56	84	210	420	470	400	610	200
Nickel [µg/g]	24-Dec-15	11:56	25	37	730	220	380	20	24	37	11	19	26	580
Phosphorus [µg/g]	24-Dec-15	10:19	610	940	94	1300	700	420	810	740	570	970	840	260
Lead [µg/g]	24-Dec-15	11:56	9.3	19	0.97	1.4	1.8	4.0	1.4	20	3.4	15	110	45
Antimony [µg/g]	24-Dec-15	11:56	1.5	2.0	1.9	< 0.8	< 0.8	1.7	1.5	< 0.8	1.1	< 0.8	0.8	4.1
Selenium [µg/g]	24-Dec-15	11:56	< 0.7	< 0.7	< 0.7	< 0.7	< 0.7	1.0	< 0.7	< 0.7	< 0.7	< 0.7	0.8	1.0
Silicon [µg/g]	24-Dec-15	10:19	4400	4500	4400	5100	3100	2900	4300	2800	4600	3600	4900	3200
Tin [µg/g]	24-Dec-15	11:56	1.6	0.8	< 0.5	0.6	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5	< 0.5
Strontium [µg/g]	24-Dec-15	11:56	8.3	9.8	38	28	100	16	9.7	26	14	43	29	38
Titanium [µg/g]	24-Dec-15	11:56	310	360	630	2400	910	250	510	1200	370	570	670	860
Thallium [µg/g]	24-Dec-15	11:56	0.07	0.11	0.19	1.2	0.38	0.16	0.26	0.47	0.16	0.44	0.48	0.33
Uranium [µg/g]	24-Dec-15	11:56	0.65	1.0	0.004	1.2	0.55	0.39	0.53	3.4	1.3	4.0	3.1	1.1
Vanadium [µg/g]	24-Dec-15	11:56	21	11	53	87	45	10	15	36	9	19	24	26
Zinc [µg/g]	24-Dec-15	11:56	31	110	32	45	39	36	18	63	19	51	50	150

Brian Graham B.Sc.
Project Specialist
Environmental Services, Analytical



Quantitative X-Ray Diffraction by Rietveld Refinement

Report Prepared for: *Environmental -Analytical*

Project Number/ LIMS No. *Custom XRD/MI4503-DEC15*

Sample Receipt: *December 3, 2015*

Sample Analysis: *December 9, 2015*

Reporting Date: *December 18, 2015*

Instrument: BRUKER AXS D8 Advance Diffractometer

Test Conditions: Co radiation, 40 kV, 35 mA
Regular Scanning: Step: 0.02°, Step time: 1s, 2θ range: 3-80°

Interpretations: PDF2/PDF4 powder diffraction databases issued by the International Center for Diffraction Data (ICDD). DiffracPlus Eva and Topas software.

Detection Limit: 0.5-2%. Strongly dependent on crystallinity.

Contents:

- 1) Method Summary
- 2) Summary of Mineral Assemblages
- 3) Quantitative XRD Results
- 4) XRD Pattern(s)

Kim Gibbs, H.B.Sc., P.Geo.
Senior Mineralogist

Huiyun Zhou, Ph.D., P.Geo.
Senior Mineralogist

ACCREDITATION: SGS Minerals Services Lakefield is accredited to the requirements of ISO/IEC 17025 for specific tests as listed on our scope of accreditation, including geochemical, mineralogical and trade mineral tests. To view a list of the accredited methods, please visit the following website and search SGS Canada - Minerals Services - Lakefield: <http://palcan.scc.ca/SpecsSearch/GLSearchForm.do>.



Method Summary

The Rietveld Method of Mineral Identification by XRD (ME-LR-MIN-MET-MN-D05) method used by SGS Minerals Services is accredited to the requirements of ISO/IEC 17025.

Mineral Identification and Interpretation:

Mineral identification and interpretation involves matching the diffraction pattern of an unknown material to patterns of single-phase reference materials. The reference patterns are compiled by the Joint Committee on Powder Diffraction Standards - International Center for Diffraction Data (JCPDS-ICDD) database and released on software as Powder Diffraction Files (PDF).

Interpretations do not reflect the presence of non-crystalline and/or amorphous compounds, except when internal standards have been added by request. Mineral proportions may be strongly influenced by crystallinity, crystal structure and preferred orientations. Mineral or compound identification and quantitative analysis results should be accompanied by supporting chemical assay data or other additional tests.

Quantitative Rietveld Analysis:

Quantitative Rietveld Analysis is performed by using Topas 4.2 (Bruker AXS), a graphics based profile analysis program built around a non-linear least squares fitting system, to determine the amount of different phases present in a multicomponent sample. Whole pattern analyses are predicated by the fact that the X-ray diffraction pattern is a total sum of both instrumental and specimen factors. Unlike other peak intensity-based methods, the Rietveld method uses a least squares approach to refine a theoretical line profile until it matches the obtained experimental patterns.

Rietveld refinement is completed with a set of minerals specifically identified for the sample. Zero values indicate that the mineral was included in the refinement calculations, but the calculated concentration was less than 0.05wt%. Minerals not identified by the analyst are not included in refinement calculations for specific samples and are indicated with a dash.

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WARNING: The sample(s) to which the findings recorded herein (the "Findings") relate was(were) drawn and / or provided by the Client or by a third party acting at the Client's direction. The Findings constitute no warranty of the sample's representativeness of any goods and strictly relate to the sample(s). The Company accepts no liability with regard to the origin or source from which the sample(s) is/are said to be extracted.

Summary of Rietveld Quantitative Analysis X-ray Diffraction Results

Quantitative X-ray Diffraction Results

Mineral/Compound	AMQ-ENV15-007 DEC4503-01 (wt %)	AMQ-ENV15-008 DEC4503-02 (wt %)	AMQ-ENV15-008 Dup DEC4503-03 (wt %)	AMQ-ENV15-025 DEC4503-04 (wt %)	AMQ-ENV15-025 Dup DEC4503-05 (wt %)	AMQ-ENV15-107 DEC4503-06 (wt %)	AMQ-ENV15-107 Dup DEC4503-07 (wt %)	AMQ-ENV-50 DEC4503-08 (wt %)	AMQ-ENV-63 DEC4503-09 (wt %)	AMQ-ENV15-096 DEC4503-10 (wt %)
Quartz	25.0	73.4	73.0	52.9	51.1	31.5	32.6	18.0	21.3	46.6
Chlorite	14.8	6.1	6.2	1.7	2.7	10.0	9.8	26.2	20.4	11.3
Stilpnomelane	3.5	0.7	0.9	6.4	6.3	-	-	-	-	2.0
Magnesiohornblende	4.1	-	-	2.4	2.5	-	-	-	-	-
Talc	5.2	-	-	0.8	1.0	-	-	3.0	0.4	-
Pyrite	2.4	-	-	-	-	-	-	-	-	-
Phlogopite	18.1	-	-	2.7	1.8	-	-	-	-	4.4
Siderite	3.1	-	-	-	-	-	-	-	-	0.3
Calcite	5.5	1.0	0.8	6.5	6.5	1.2	1.0	6.1	7.2	2.7
Albite	13.0	1.5	1.2	-	-	28.2	26.8	22.3	24.0	3.3
Orthoclase	2.7	-	-	-	-	1.5	1.8	1.1	1.0	0.7
Biotite	2.7	-	-	2.7	3.5	6.0	5.9	16.4	17.3	13.3
Muscovite	-	2.9	3.1	-	-	21.5	22.1	-	-	7.5
Almandine	-	3.9	3.9	2.0	2.5	-	-	-	-	-
Cummingtonite	-	3.2	3.5	14.7	14.9	-	-	-	-	2.4
Actinolite	-	1.8	1.9	-	-	-	-	-	5.2	-
Pyrrhotite	-	5.6	5.6	3.7	3.7	-	-	-	-	2.1
Diopside	-	-	-	3.5	3.5	-	-	-	-	-
Sphalerite	-	-	-	-	-	-	-	0.2	-	-
Anorthite	-	-	-	-	-	-	-	5.5	3.1	2.2
Ankerite	-	-	-	-	-	-	-	1.2	-	-
Richterite	-	-	-	-	-	-	-	-	-	1.4
TOTAL	100	100	100	100	100	100	100	100	100	100

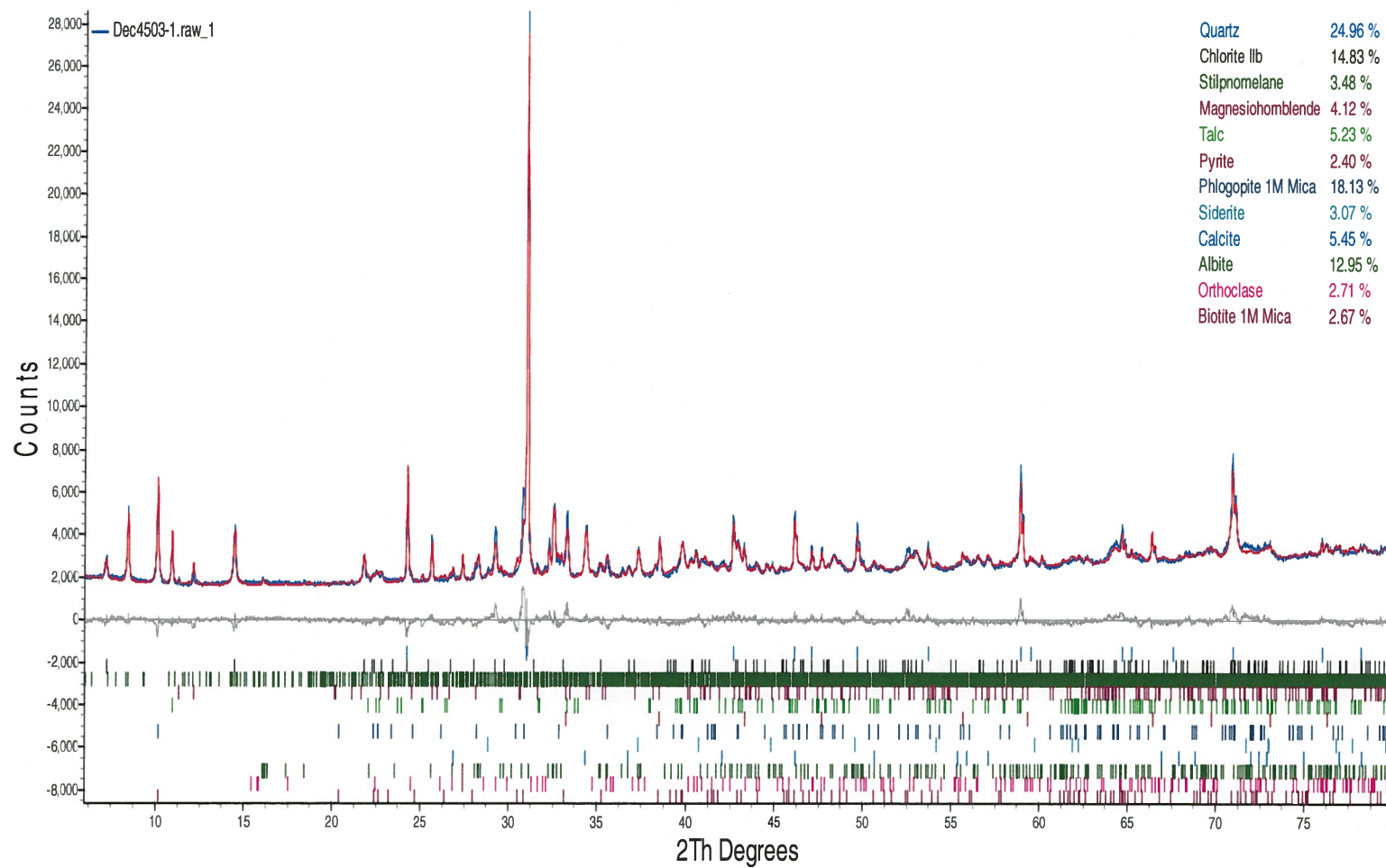
Zero values indicate that the mineral was included in the refinement, but the calculated concentration is below a measurable value.

Dashes indicate that the mineral was not identified by the analyst and not included in the refinement calculation for the sample.

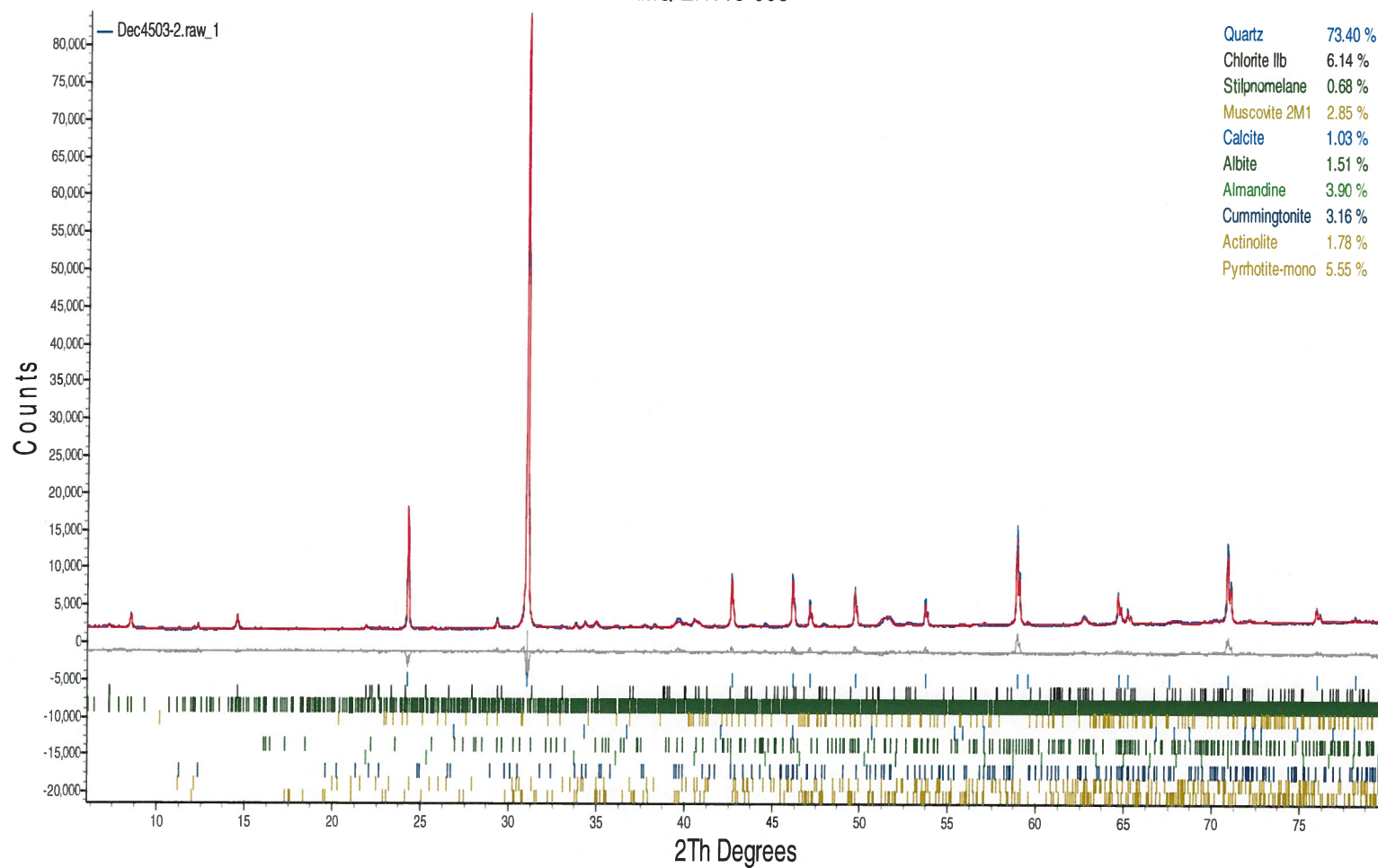
Mineral List

Mineral/Compound	Formula
Quartz	SiO_2
Chlorite	$(\text{Fe}, (\text{Mg}, \text{Mn})_5, \text{Al})(\text{Si}_3\text{Al})\text{O}_{10}(\text{OH})_8$
Stilpnomelane	$\text{K}(\text{Fe}^{2+}, \text{Mg}, \text{Fe}^{3+})_8(\text{Si}, \text{Al})_{12}(\text{O}, \text{OH})_{27} \cdot n(\text{H}_2\text{O})$
Magnesiohornblende	$\text{Ca}_2[\text{Mg}_4(\text{Al}, \text{Fe}^{3+})]\text{Si}_7\text{AlO}_{22}(\text{OH})_2$
Talc	$\text{Mg}_3\text{Si}_4\text{O}_{10}(\text{OH})_2$
Pyrite	FeS_2
Phlogopite	$\text{KMg}_3(\text{AlSi}_3\text{O}_{10})(\text{OH})$
Siderite	FeCO_3
Calcite	CaCO_3
Albite	$\text{NaAlSi}_3\text{O}_8$
Orthoclase	KAlSi_3O_8
Biotite	$\text{K}(\text{Mg}, \text{Fe})_3(\text{AlSi}_3\text{O}_{10})(\text{OH})_2$
Muscovite	$\text{KAl}_2(\text{AlSi}_3\text{O}_{10})(\text{OH})_2$
Almandine	$\text{Fe}_3\text{Al}_2\text{Si}_3\text{O}_{12}$
Cummingtonite	$(\text{Mg}, \text{Fe})_7\text{Si}_8\text{O}_{22}(\text{OH})_2$
Actinolite	$\text{Ca}_2(\text{Mg}, \text{Fe})_5\text{Si}_8\text{O}_{22}(\text{OH})_2$
Pyrrhotite	$\text{Fe}_{(1-x)}\text{S}$
Diopside	$\text{CaMgSi}_2\text{O}_6$
Sphalerite	ZnS
Anorthite	$\text{CaAl}_2\text{Si}_2\text{O}_8$
Ankerite	$\text{CaFe}(\text{CO}_3)_2$
Richterite	$\text{Na}(\text{CaNa})(\text{Mg}, \text{Fe}^{2+})_5[\text{Si}_8\text{O}_{22}](\text{OH})_2$

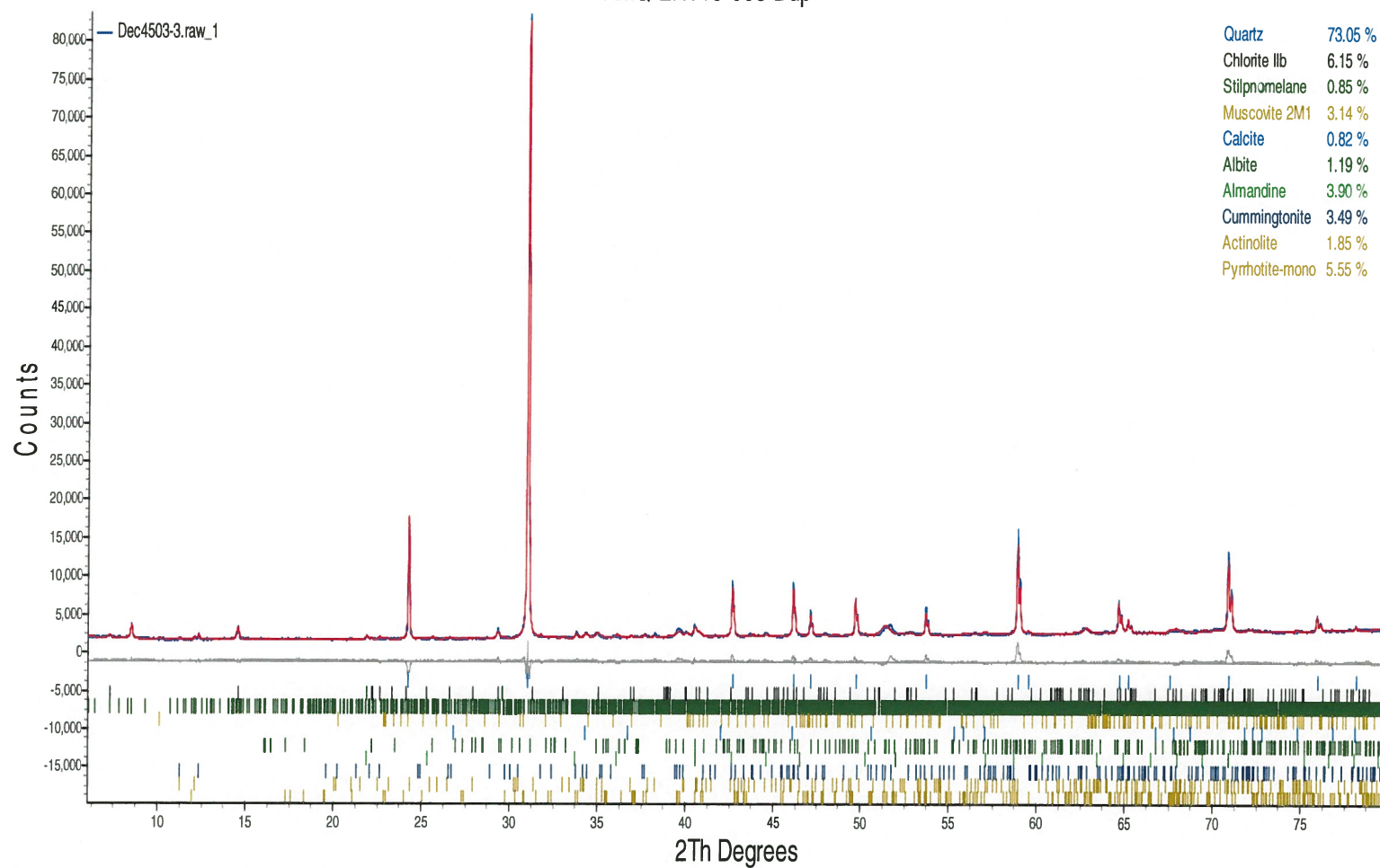
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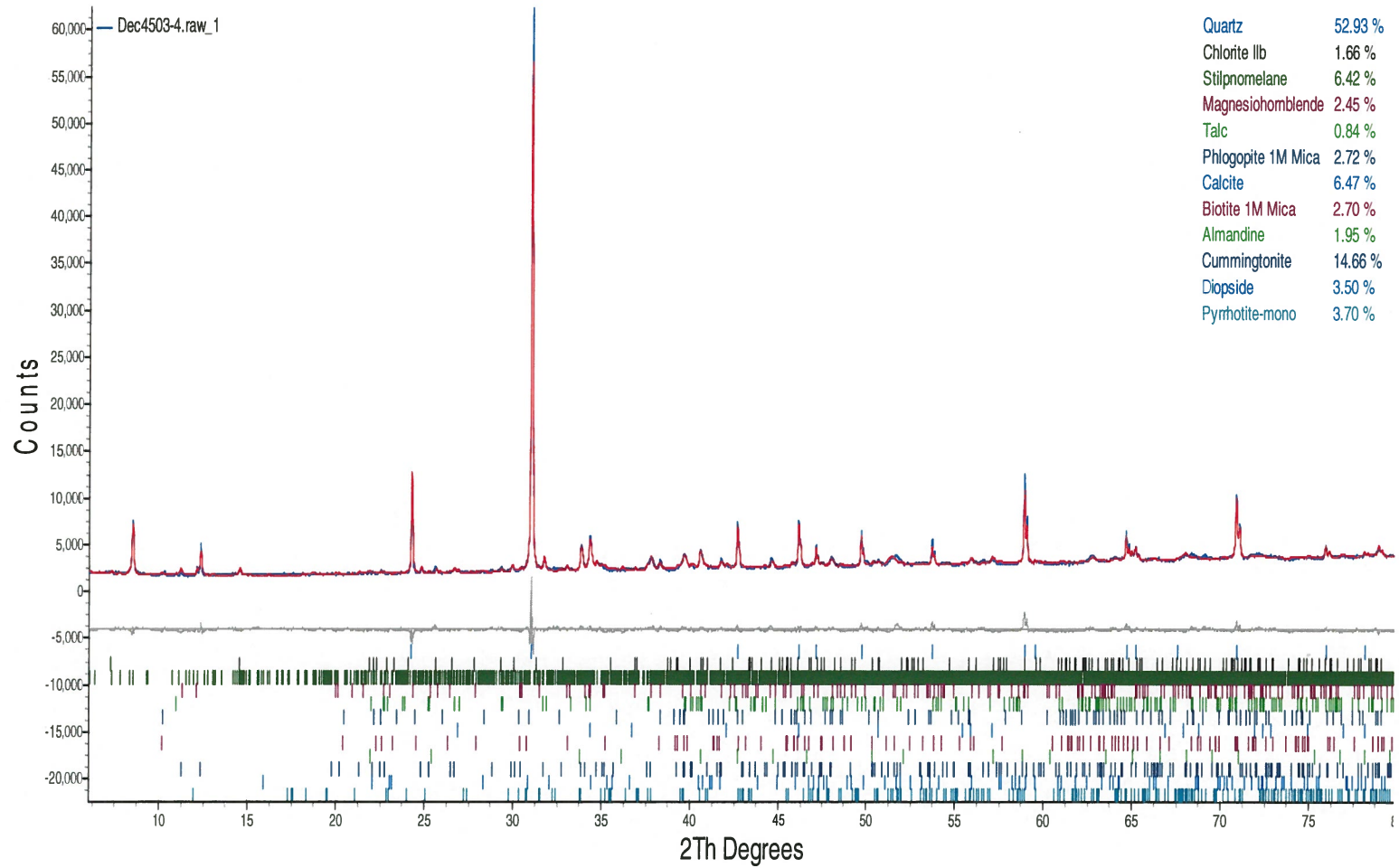
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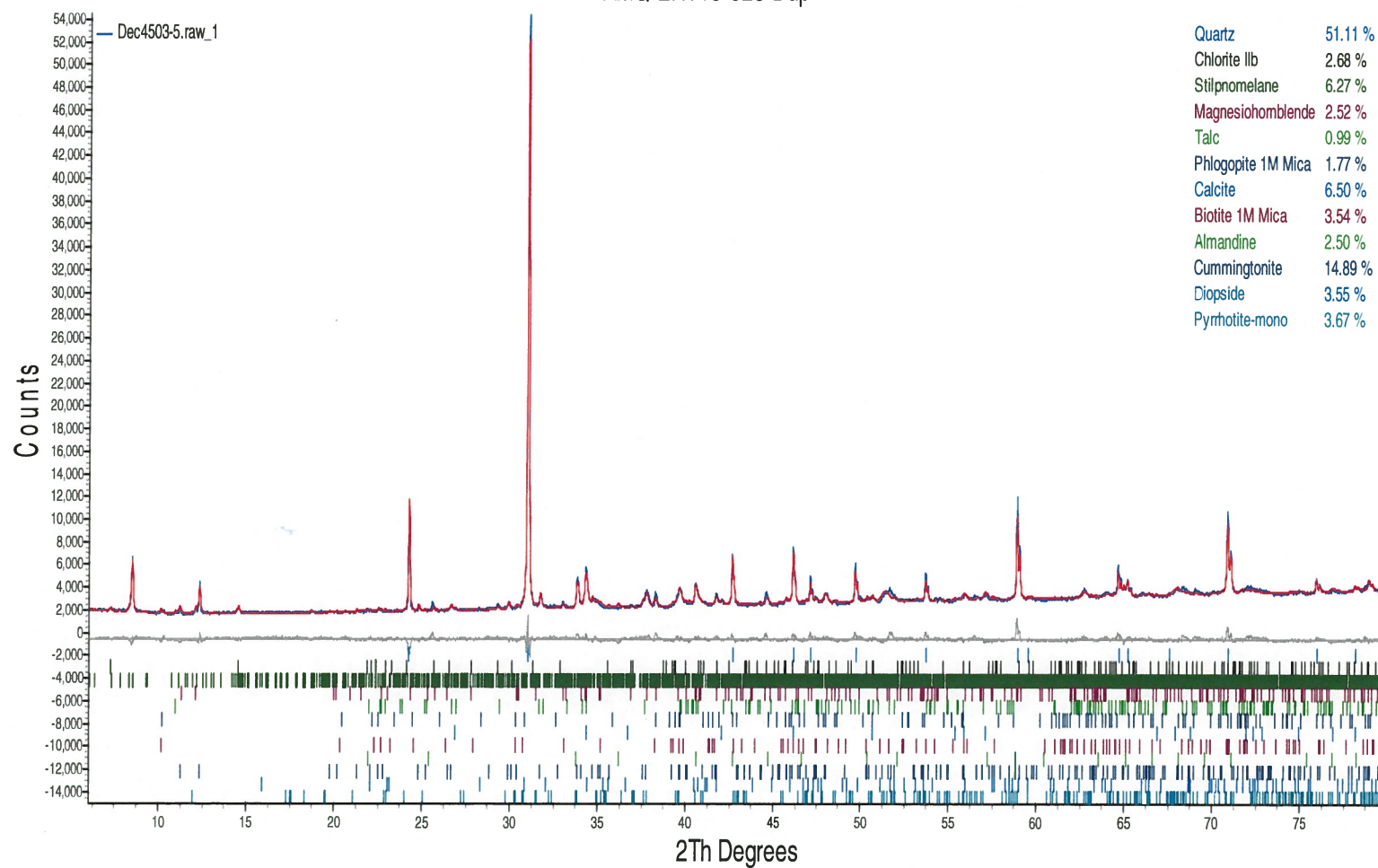
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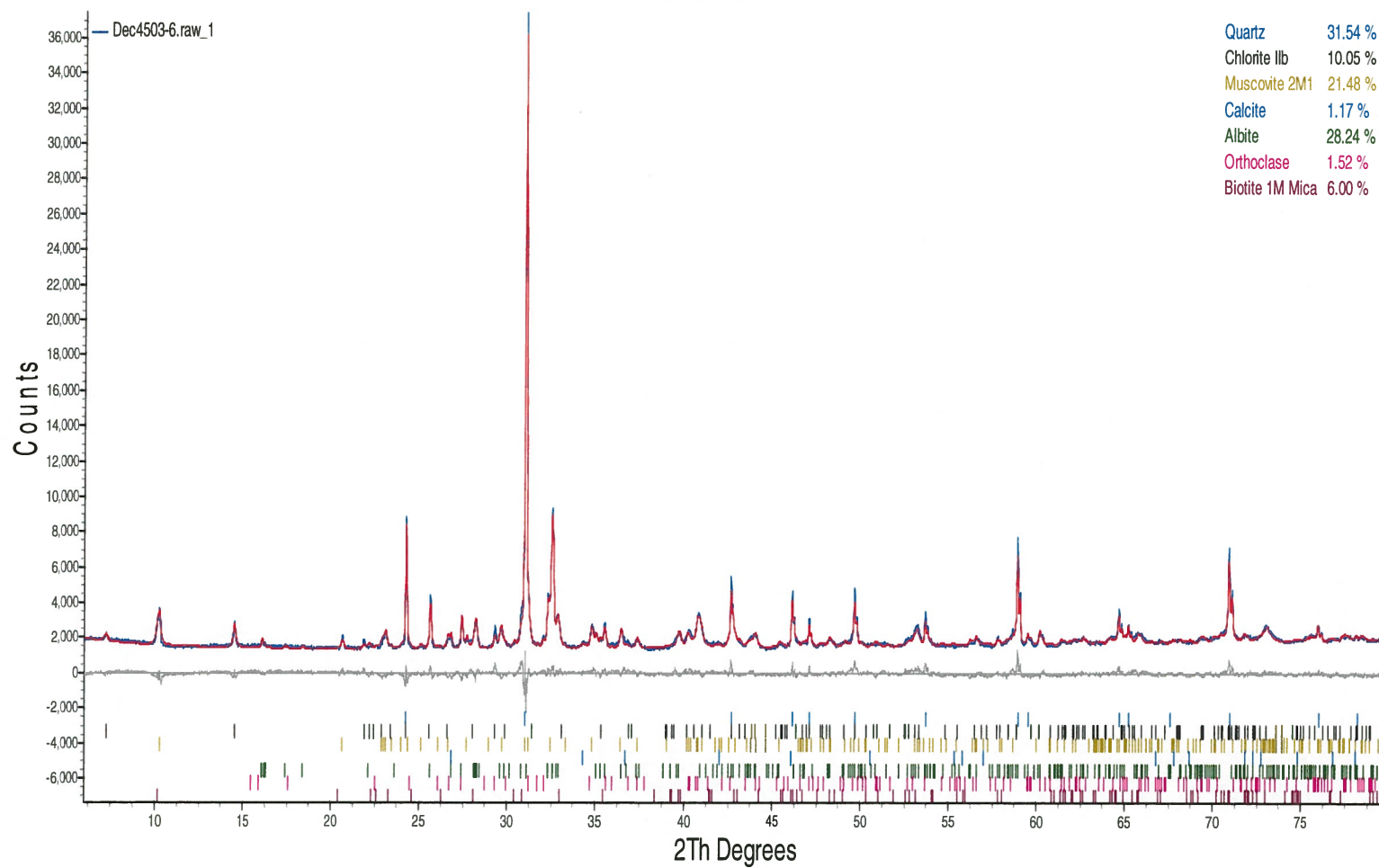
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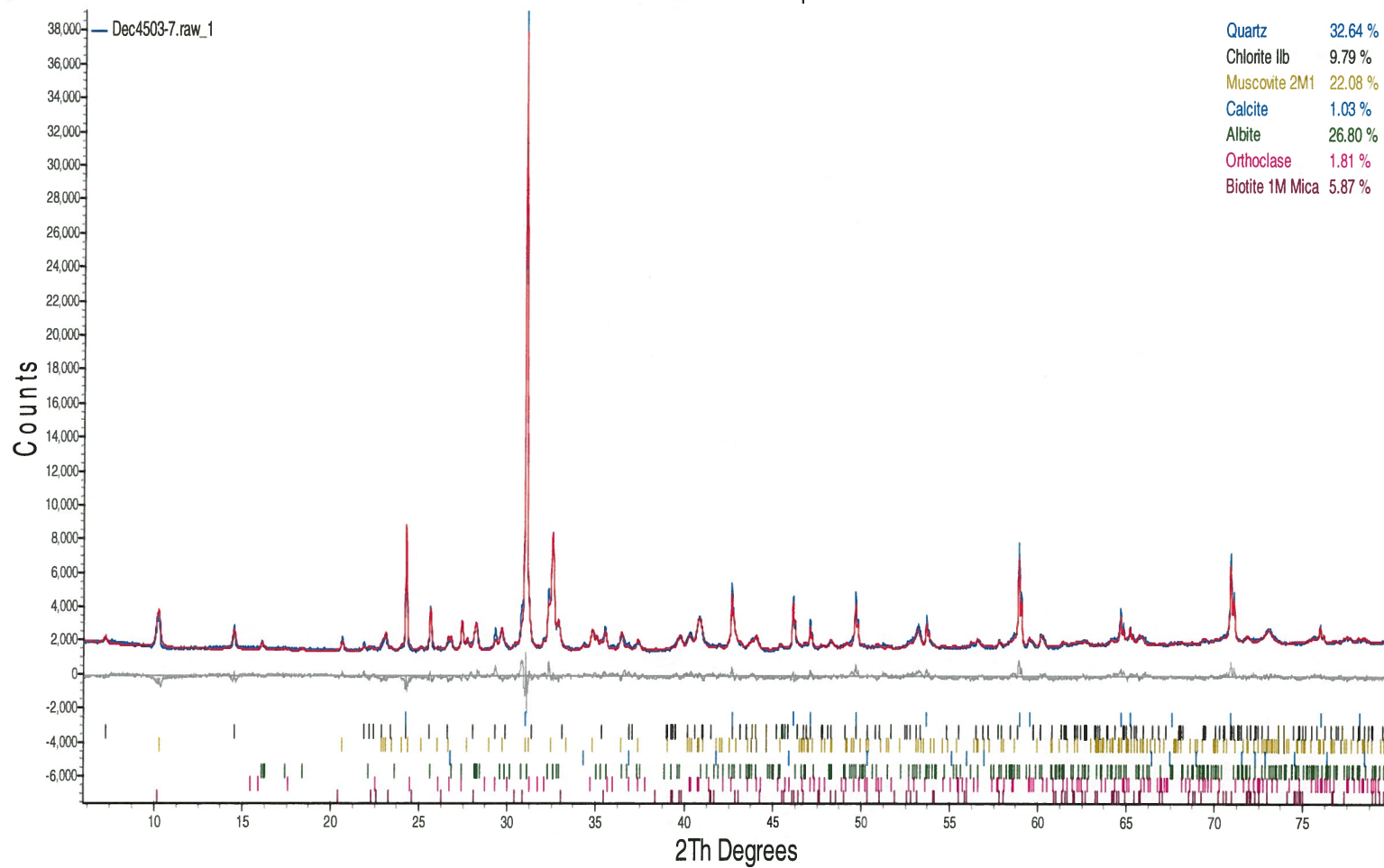
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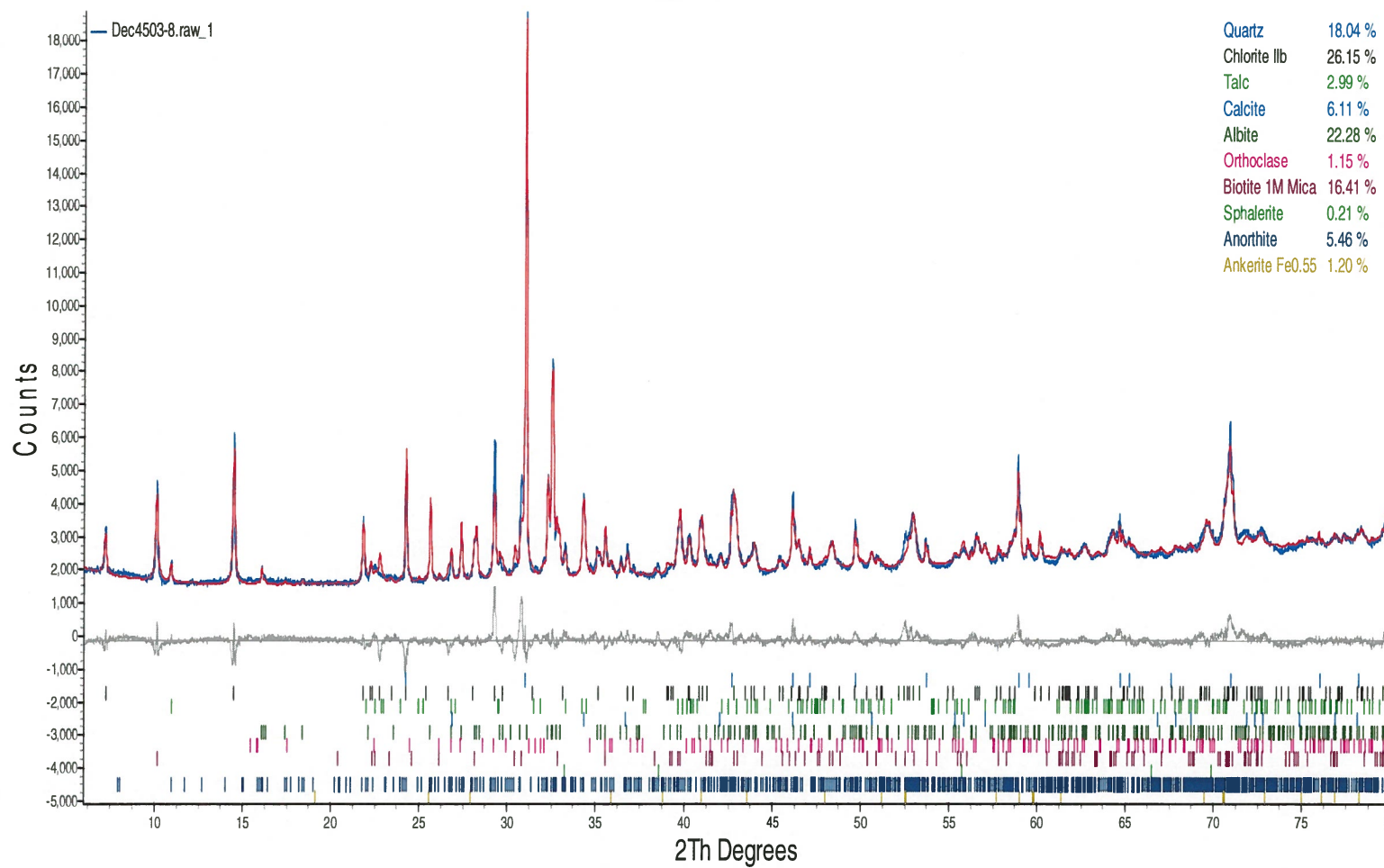
AMQ-ENV15-107



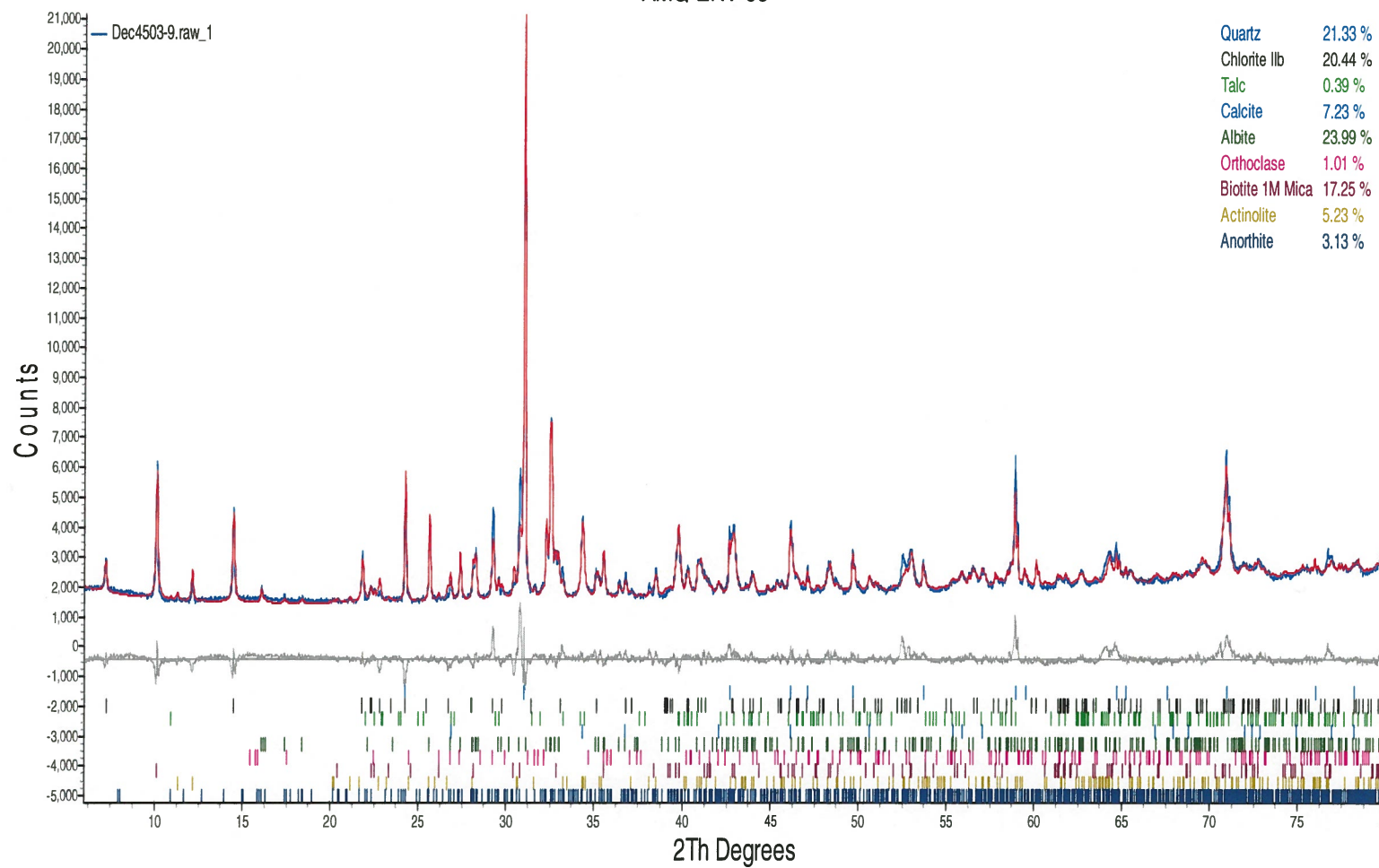
AMQ-ENV15-107 Dup



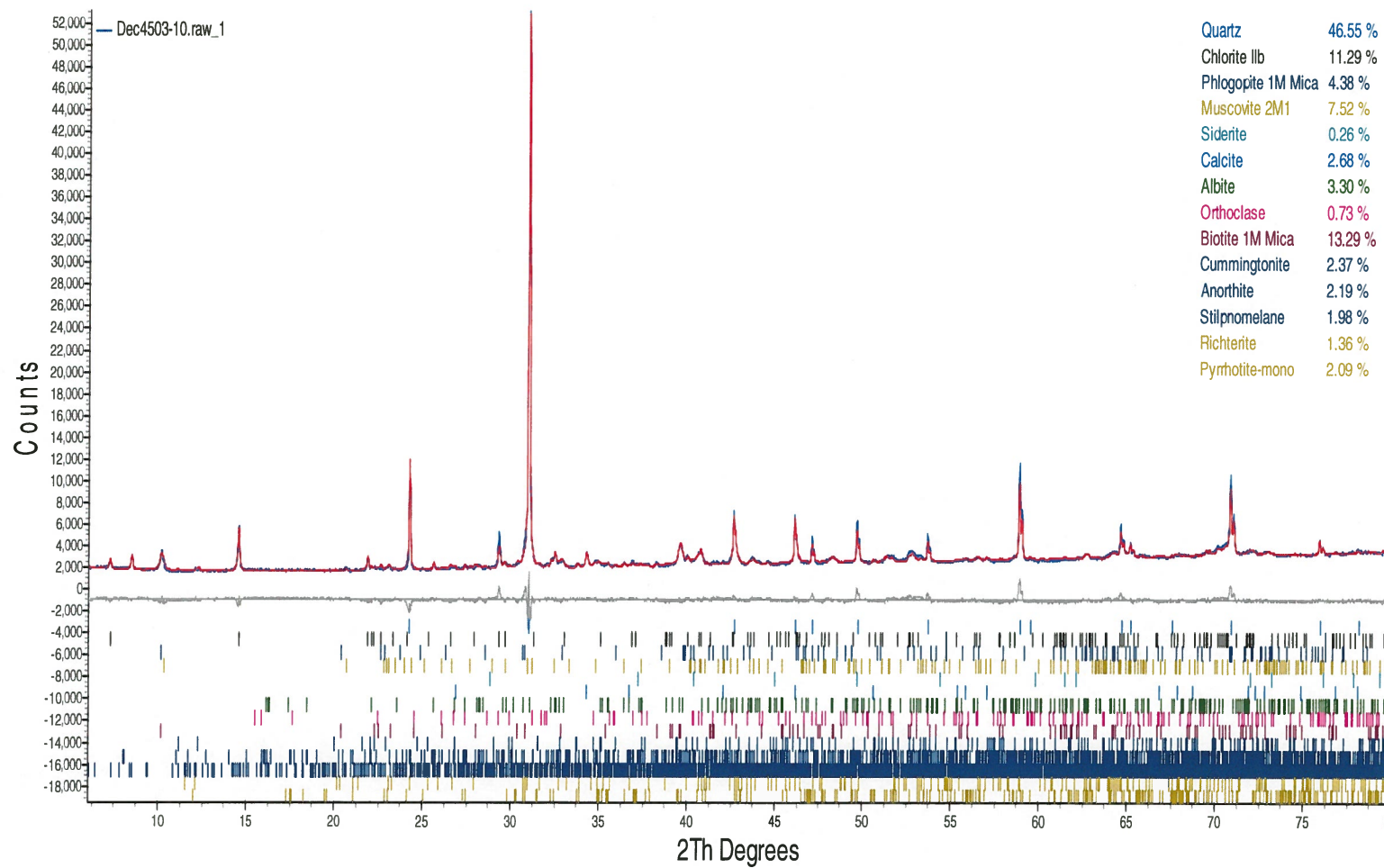
AMQ-ENV-50



AMQ-ENV-63



AMQ-ENV15-096





APPENDIX H

Laboratory Certificates of Analysis – Kinetic