



Australian Laboratory Services Pty. Ltd.
32 Shand Street
Stafford
Brisbane QLD 4053
Phone: +61 (7) 3243 7222 Fax: +61 (7) 3243 7218
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CERTIFICATE PH10173276

Project: COPPERADO

P.O. No.: REDEX - 26

This report is for 170 Pulp samples submitted to our lab in Perth, WA, Australia on 23-NOV-2010.

The following have access to data associated with this certificate:

RUSSELL BIRRELL

CRAIG HALL

SAMPLE PREPARATION

ALS CODE	DESCRIPTION
LEV-01	Waste Disposal Levy
LOG-22	Sample login - Rcd w/o BarCode
WEI-21	Received Sample Weight

ANALYTICAL PROCEDURES

ALS CODE	DESCRIPTION
pH-MS23	MS23 Leach pH
ME-MS23	IONIC Leach - Complete PKG. ICP-MS

To: REDBANK COPPER LTD
ATTN: RUSSELL BIRRELL
PO BOX 8116
SUBIACO EAST WA 6008

This is the Final Report and supersedes any preliminary report with this certificate number. Results apply to samples as submitted. All pages of this report have been checked and approved for release.

Signature:

Wayne Abbott, Operations Manager, Western Australia



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 Stafford
 Brisbane QLD 4053
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CERTIFICATE OF ANALYSIS PH10173276

Sample Description	Method Analyte Units LOR	pH-MS23 Final pH Unity 0.1	ME-MS23 Ag ppb 0.1	ME-MS23 As ppb 2	ME-MS23 Au ppb 0.02	ME-MS23 Ba ppb 10	ME-MS23 Be ppb 0.2	ME-MS23 Bi ppb 3	ME-MS23 Br ppm 0.05	ME-MS23 Ca ppm 0.2	ME-MS23 Cd ppb 1	ME-MS23 Ce ppb 0.1	ME-MS23 Co ppb 0.3	ME-MS23 Cr ppb 1	ME-MS23 Cs ppb 0.1	ME-MS23 Cu ppb 1
CPS1		9.0	0.4	8	0.06	1600	0.3	<3	0.12	27.6	<1	136.0	90.0	13	1.1	1590
CPS2		8.9	1.6	14	0.07	1570	6.1	<3	0.16	8.0	1	1885	99.9	140	3.8	1140
CPS3		9.0	0.2	6	0.04	950	<0.2	<3	0.15	8.9	<1	1010	124.0	2	1.4	531
CPS4		9.0	1.4	9	0.05	840	0.3	<3	0.35	31.7	1	265	444	4	7.6	776
CPS5		9.0	0.6	7	0.05	660	<0.2	<3	0.16	16.3	<1	114.0	121.0	1	4.1	361
CPS6		9.0	1.2	5	0.03	2260	0.2	<3	0.16	42.7	1	288	227	<1	2.0	764
CPS7		9.0	0.4	6	0.02	1490	<0.2	<3	0.16	58.0	<1	193.0	107.5	<1	0.9	1010
CPS8		9.0	0.7	5	0.03	790	<0.2	<3	0.15	24.3	<1	59.0	243	<1	3.9	624
CPS9		9.0	1.3	11	0.04	930	<0.2	<3	0.23	30.6	1	64.4	403	<1	4.4	576
CPS10		8.5	0.8	6	0.03	680	<0.2	<3	0.15	21.2	<1	125.0	207	<1	2.7	536
CPS11		6.5	1.4	13	0.03	1930	8.3	<3	0.22	35.0	3	1445	1685	19	3.2	765
CPS12		9.0	0.2	5	0.02	1780	<0.2	<3	0.09	35.1	<1	122.0	114.0	<1	0.9	216
CPS13		9.0	0.4	<2	<0.02	680	0.2	<3	0.10	23.6	<1	171.5	230	2	3.3	482
CPS14		9.0	0.9	2	0.05	670	0.2	<3	0.09	22.6	1	189.5	359	2	5.3	665
CPS15		8.5	1.1	<2	0.06	2480	<0.2	<3	0.13	164.0	1	24.4	148.0	<1	0.6	536
CPS16		8.5	0.7	2	0.08	2540	<0.2	<3	0.10	160.5	1	23.5	148.0	5	0.6	477
CPS17		9.0	1.0	<2	0.04	2530	<0.2	<3	0.10	91.6	<1	33.0	74.6	1	0.3	1550
CPS18		9.0	2.2	7	0.14	2380	<0.2	<3	0.11	181.5	2	60.7	243	1	0.8	1870
CPS19		9.0	1.2	<2	0.07	2480	<0.2	<3	0.08	71.8	<1	60.2	119.0	<1	3.1	577
CPS20		9.0	1.3	<2	0.05	1130	<0.2	<3	0.07	34.8	1	184.0	176.5	<1	4.6	711
CPS21		9.0	1.1	<2	0.04	1590	0.3	<3	0.13	36.6	1	176.5	299	6	4.4	936
CPS22		9.0	1.1	9	0.03	780	<0.2	<3	0.16	72.0	1	24.8	212	1	2.0	1020
CPS23																
CPS24																
CPS25																
CPS26		9.0	0.4	5	0.04	2220	<0.2	<3	0.07	92.5	1	150.5	204	<1	0.6	456
CPS27		9.0	0.4	6	0.03	2410	<0.2	<3	0.12	61.5	<1	106.5	181.5	<1	1.5	603
CPS28		9.0	0.7	3	0.06	2270	<0.2	<3	0.13	48.1	1	159.5	282	2	1.8	462
CPS29		9.0	1.1	3	0.31	1690	<0.2	<3	0.09	70.6	1	107.0	241	1	2.4	428
CPS30		9.0	0.3	6	0.09	1110	0.2	<3	0.13	9.2	<1	266	156.5	4	2.7	246
CPS31		9.0	0.3	5	0.04	1950	<0.2	<3	0.06	64.1	<1	122.5	48.0	<1	1.3	326
CPS32		9.0	0.2	2	0.06	1160	<0.2	<3	0.05	12.3	<1	239	128.0	3	3.2	194
CPS33		9.0	0.3	4	0.02	1910	<0.2	<3	0.10	25.5	<1	125.0	102.5	1	2.6	267
CPS34		8.3	0.7	4	0.04	2670	0.2	<3	0.12	40.0	1	325	211	2	2.6	563
CPS35		9.0	0.3	2	0.02	1650	<0.2	<3	0.09	38.9	<1	112.0	69.7	3	2.7	267
CPS36		9.0	0.2	<2	0.02	1800	<0.2	<3	0.09	24.9	<1	106.0	93.2	<1	1.2	198
CPS37		9.0	0.2	3	<0.02	1240	<0.2	<3	0.09	18.1	<1	158.0	62.9	2	2.8	161
CPS38		9.0	0.3	3	0.03	2100	<0.2	<3	0.11	17.6	<1	255	45.3	4	2.6	272
CPS39		9.0	0.2	5	0.03	1580	<0.2	<3	0.06	25.5	<1	187.5	38.1	3	2.3	216
CPS40		9.0	0.3	<2	0.06	1100	<0.2	<3	0.05	11.8	<1	225	141.0	4	3.2	209



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Sample Description	Method Analyte Units LOR	ME-MS23 Dy ppb 0.1	ME-MS23 Er ppb 0.1	ME-MS23 Eu ppb 0.1	ME-MS23 Fe ppm 0.1	ME-MS23 Ga ppb 0.5	ME-MS23 Gd ppb 0.1	ME-MS23 Ge ppb 0.1	ME-MS23 Hf ppm 0.5	ME-MS23 Hg ppb 0.1	ME-MS23 Ho ppb 0.1	ME-MS23 I ppm 0.01	ME-MS23 In ppb 0.1	ME-MS23 La ppb 0.1	ME-MS23 Li ppb 0.2	ME-MS23 Lu ppb 0.1
CPS1		11.2	4.9	4.7	14.6	41.5	17.8	0.5	0.7	0.1	2.0	0.01	<0.1	34.0	1.8	0.4
CPS2		150.0	71.7	56.0	67.1	46.4	213	5.6	3.5	0.3	27.3	0.02	0.2	504	9.7	6.6
CPS3		43.0	18.1	20.0	5.6	21.5	80.0	2.2	<0.5	0.1	7.3	0.05	<0.1	216	1.9	1.4
CPS4		34.9	14.9	16.0	8.1	21.0	56.4	1.1	0.5	0.2	6.2	0.73	<0.1	53.5	2.7	1.3
CPS5		14.2	5.8	7.6	2.3	16.3	26.6	0.7	<0.5	0.4	2.4	0.35	<0.1	45.0	1.5	0.4
CPS6		23.2	9.4	19.5	1.5	52.6	74.3	2.4	<0.5	0.2	3.8	0.09	<0.1	168.5	1.5	0.6
CPS7		14.0	5.8	7.8	3.7	35.7	30.6	0.7	<0.5	0.1	2.4	0.03	<0.1	54.3	1.2	0.4
CPS8		12.0	5.5	5.4	2.9	18.3	19.1	0.4	<0.5	0.1	2.2	0.16	<0.1	23.3	1.5	0.4
CPS9		14.3	6.9	6.3	4.8	23.6	21.8	0.5	<0.5	0.1	2.7	0.31	<0.1	20.6	1.8	0.6
CPS10		11.8	5.2	6.5	2.7	17.6	22.6	0.6	<0.5	0.1	2.1	0.11	<0.1	17.8	1.1	0.5
CPS11		71.8	41.1	24.2	85.4	48.6	100.0	2.3	2.3	0.1	14.6	0.13	0.2	251	3.0	4.3
CPS12		6.0	2.6	3.8	2.8	43.1	13.4	0.4	<0.5	0.1	1.1	0.02	<0.1	24.2	1.2	0.2
CPS13		16.4	7.5	7.3	8.2	16.2	27.0	0.6	<0.5	0.2	3.0	0.09	<0.1	44.5	1.9	0.6
CPS14		26.8	12.1	12.2	5.8	16.7	42.9	0.9	0.5	0.1	4.9	0.16	<0.1	61.9	2.2	1.0
CPS15		3.6	1.6	2.7	1.7	60.8	8.4	0.2	<0.5	0.1	0.7	0.09	<0.1	7.4	1.9	0.2
CPS16		3.6	1.6	2.7	1.7	60.9	7.8	0.1	<0.5	0.1	0.7	0.09	<0.1	7.7	1.6	0.1
CPS17		5.5	2.3	3.4	3.5	59.3	11.5	0.3	<0.5	<0.1	1.0	0.09	<0.1	14.9	2.3	0.2
CPS18		10.9	4.7	7.0	2.8	58.6	24.5	0.5	<0.5	0.3	2.0	0.10	<0.1	25.8	2.2	0.4
CPS19		10.5	4.1	7.8	1.6	62.1	28.6	0.8	<0.5	0.1	1.8	0.15	<0.1	62.9	0.9	0.3
CPS20		24.7	9.9	14.5	3.2	28.2	59.3	1.7	<0.5	0.1	4.1	0.11	<0.1	130.5	0.7	0.7
CPS21		13.6	5.7	7.3	6.9	38.0	27.3	0.8	<0.5	<0.1	2.4	0.19	<0.1	46.0	1.4	0.5
CPS22		3.6	1.8	2.0	5.4	19.0	7.5	0.3	<0.5	0.1	0.7	0.29	<0.1	9.1	1.1	0.2
CPS23																
CPS24																
CPS25																
CPS26		6.4	3.0	3.9	5.7	55.8	14.4	0.4	<0.5	0.1	1.2	0.03	<0.1	31.1	1.0	0.3
CPS27		5.4	2.4	4.2	3.1	60.7	13.5	0.4	<0.5	0.1	1.0	0.05	<0.1	21.4	0.5	0.2
CPS28		8.9	3.9	5.2	4.7	57.2	17.9	0.5	<0.5	0.1	1.6	0.07	<0.1	26.7	1.1	0.3
CPS29		9.4	4.2	5.5	4.2	39.6	19.5	0.6	<0.5	0.1	1.7	0.13	<0.1	31.7	0.7	0.4
CPS30		20.0	9.7	10.1	6.9	28.6	39.9	1.2	0.5	0.1	3.6	0.10	<0.1	74.5	0.4	0.9
CPS31		10.5	4.4	6.8	1.4	48.9	27.1	0.9	<0.5	0.1	1.7	0.04	<0.1	62.3	0.3	0.3
CPS32		14.2	6.7	7.2	4.9	29.3	29.1	0.9	<0.5	0.1	2.6	0.11	<0.1	65.8	0.4	0.6
CPS33		7.8	3.3	5.1	3.1	46.9	19.2	0.5	<0.5	0.1	1.4	0.11	<0.1	32.6	<0.2	0.2
CPS34		18.8	8.6	12.1	4.5	67.2	50.4	1.6	<0.5	0.2	3.3	0.21	<0.1	110.0	0.7	0.7
CPS35		7.5	3.3	4.5	5.8	41.6	17.4	0.6	<0.5	0.1	1.3	0.07	<0.1	30.9	<0.2	0.3
CPS36		5.6	2.4	3.7	2.1	46.2	13.9	0.4	<0.5	0.1	1.0	0.04	<0.1	24.4	<0.2	0.2
CPS37		7.1	3.6	4.0	5.8	31.6	16.9	0.5	<0.5	<0.1	1.3	0.07	<0.1	36.7	<0.2	0.3
CPS38		12.5	5.6	7.0	5.3	51.9	29.1	0.9	<0.5	0.1	2.1	0.06	<0.1	63.5	0.7	0.5
CPS39		7.5	3.5	4.7	6.6	40.9	20.2	0.6	<0.5	<0.1	1.3	0.04	<0.1	49.2	<0.2	0.3
CPS40		14.4	6.7	7.3	4.9	27.3	29.1	0.8	<0.5	<0.1	2.6	0.11	<0.1	61.4	0.2	0.6



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Sample Description	Method Analyte Units LOR	ME-MS23 Mg ppm 0.01	ME-MS23 Mn ppm 0.01	ME-MS23 Mo ppb 0.5	ME-MS23 Nb ppb 0.1	ME-MS23 Nd ppb 0.1	ME-MS23 Ni ppb 1	ME-MS23 Pb ppb 1	ME-MS23 Pb 206 ppb 1	ME-MS23 Pb 207 ppb 1	ME-MS23 Pb 208 ppb 1	ME-MS23 Pd ppb 0.1	ME-MS23 Pr ppb 0.1	ME-MS23 Rb ppb 0.1	ME-MS23 Re ppb 0.1	ME-MS23 Sb ppb 0.5
CPS1		21.0	1.91	0.7	0.3	85.0	59	59	15	12	32	1.3	16.1	86.1	<0.1	<0.5
CPS2		9.69	6.25	1.7	3.2	1075	158	283	71	57	151	8.1	221	183.0	<0.1	<0.5
CPS3		25.5	5.63	1.3	0.1	475	43	116	29	23	63	1.1	101.5	94.0	<0.1	<0.5
CPS4		48.7	10.70	2.6	0.2	222	173	29	7	6	15	1.1	34.3	316	<0.1	<0.5
CPS5		22.6	4.84	2.8	0.1	136.5	34	50	12	10	27	0.4	23.7	289	<0.1	<0.5
CPS6		74.9	6.44	3.3	<0.1	503	79	28	7	5	15	0.7	87.5	190.0	<0.1	<0.5
CPS7		44.0	5.66	1.4	0.1	158.5	39	11	3	2	6	0.6	26.6	131.0	<0.1	<0.5
CPS8		40.2	10.20	2.1	<0.1	77.8	52	20	5	4	11	0.4	12.9	386	<0.1	<0.5
CPS9		64.4	11.80	2.3	<0.1	80.3	76	28	7	6	15	0.5	12.7	487	<0.1	<0.5
CPS10		41.5	3.21	1.7	<0.1	96.3	67	131	33	26	70	0.5	13.8	366	<0.1	<0.5
CPS11		27.2	76.0	1.3	0.2	467	475	38	10	8	20	5.5	97.6	323	<0.1	<0.5
CPS12		22.7	6.02	2.8	<0.1	70.5	29	18	4	4	10	0.3	12.3	125.0	<0.1	<0.5
CPS13		26.4	8.78	2.2	0.1	125.5	72	36	9	7	19	0.7	22.5	307	<0.1	<0.5
CPS14		39.7	14.20	2.1	0.1	182.5	73	47	12	10	25	1.1	31.4	424	<0.1	<0.5
CPS15		177.0	1.98	1.5	<0.1	31.9	92	23	6	5	12	0.2	4.4	182.0	<0.1	<0.5
CPS16		179.0	1.87	1.1	<0.1	30.2	90	20	5	4	11	0.2	4.2	172.0	<0.1	<0.5
CPS17		86.1	2.22	1.9	<0.1	50.6	44	10	2	2	5	0.3	8.2	66.1	<0.1	<0.5
CPS18		92.1	7.51	7.2	<0.1	103.5	149	22	5	4	12	0.7	15.3	177.5	<0.1	<0.5
CPS19		56.1	5.49	2.2	<0.1	167.0	56	26	6	5	14	0.4	28.1	216	<0.1	<0.5
CPS20		33.3	12.20	3.3	0.1	325	86	19	5	4	10	0.9	59.3	250	<0.1	<0.5
CPS21		33.0	10.80	3.8	0.2	127.0	88	39	10	8	21	0.9	21.8	265	<0.1	<0.5
CPS22		52.8	21.8	6.1	<0.1	28.3	103	7	2	1	4	0.2	4.5	223	<0.1	<0.5
CPS23																
CPS24																
CPS25																
CPS26		64.4	9.96	1.9	0.1	67.3	80	11	3	2	6	0.4	12.2	85.8	<0.1	<0.5
CPS27		60.8	4.14	2.3	<0.1	68.4	60	21	5	4	11	0.3	11.3	253	<0.1	<0.5
CPS28		42.9	15.10	2.3	0.1	80.3	79	23	6	5	12	0.6	13.3	259	<0.1	<0.5
CPS29		54.6	8.49	1.3	0.1	87.3	73	14	3	3	8	0.6	15.1	357	<0.1	<0.5
CPS30		19.25	12.80	1.6	0.1	224	42	36	9	7	19	1.1	41.0	261	<0.1	<0.5
CPS31		88.7	2.23	1.5	<0.1	161.5	28	22	5	4	12	0.4	29.3	161.5	<0.1	<0.5
CPS32		13.30	7.47	1.7	0.1	164.0	40	33	8	7	18	0.9	32.4	186.0	<0.1	<0.5
CPS33		46.4	7.03	1.0	0.1	101.0	36	22	5	4	12	0.5	17.2	306	<0.1	<0.5
CPS34		86.5	9.62	1.3	0.1	284	86	44	11	9	24	1.0	51.0	441	<0.1	<0.5
CPS35		37.4	4.80	1.4	0.1	91.4	25	22	5	4	12	0.8	15.6	240	<0.1	<0.5
CPS36		35.3	5.00	1.6	<0.1	72.9	29	16	4	3	9	0.4	12.6	197.0	<0.1	<0.5
CPS37		23.1	3.99	1.0	<0.1	96.7	17	36	8	7	19	0.3	19.0	140.0	<0.1	<0.5
CPS38		23.1	2.23	1.4	<0.1	165.0	22	81	20	16	44	0.7	32.1	244	<0.1	<0.5
CPS39		24.9	2.30	1.2	0.3	119.0	19	49	12	10	26	0.5	23.1	154.0	<0.1	<0.5
CPS40		11.95	7.73	1.7	0.1	159.5	43	47	11	10	25	0.7	30.5	189.5	<0.1	<0.5



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Sample Description	Method Analyte Units LOR	ME-MS23 Sc ppb 1	ME-MS23 Se ppb 2	ME-MS23 Sm ppb 0.1	ME-MS23 Sn ppb 0.2	ME-MS23 Sr ppb 1	ME-MS23 Ta ppb 1	ME-MS23 Tb ppb 0.1	ME-MS23 Te ppb 1	ME-MS23 Th ppb 0.02	ME-MS23 Ti ppb 5	ME-MS23 Tl ppb 0.5	ME-MS23 Tm ppb 0.1	ME-MS23 U ppb 0.1	ME-MS23 W ppb 1	ME-MS23 Y ppb 0.1
CPS1		11	13	18.3	150.5	170	<1	2.5	<1	16.20	267	0.6	0.5	8.4	<1	44.0
CPS2		149	27	233	71.5	124	<1	31.3	<1	243	2010	0.5	8.3	96.2	1	582
CPS3		17	9	90.9	8.4	61	<1	10.2	1	19.95	100	<0.5	1.7	18.9	<1	170.5
CPS4		21	9	60.4	3.1	278	<1	7.8	1	13.55	138	0.7	1.5	17.7	<1	143.0
CPS5		13	7	30.5	13.5	121	<1	3.4	<1	5.25	77	0.7	0.5	8.1	<1	55.7
CPS6		4	6	95.7	2.1	505	<1	7.2	<1	10.00	43	1.0	0.7	11.9	<1	108.0
CPS7		4	11	35.1	28.4	199	<1	3.7	<1	5.57	64	<0.5	0.5	4.5	<1	67.1
CPS8		13	12	19.7	24.1	129	<1	2.6	<1	4.20	46	0.6	0.5	6.2	<1	56.2
CPS9		17	18	22.3	10.7	168	<1	3.1	<1	3.72	57	0.8	0.7	6.1	<1	68.1
CPS10		17	20	25.3	5.8	90	<1	2.9	<1	5.69	42	<0.5	0.5	10.3	<1	52.5
CPS11		193	43	97.3	1.7	155	<1	14.3	<1	69.9	165	2.8	5.0	43.1	<1	325
CPS12		4	17	15.2	2.9	154	<1	1.6	<1	3.39	28	<0.5	0.2	3.9	<1	27.3
CPS13		19	13	28.5	4.6	130	<1	3.7	<1	7.48	141	1.3	0.8	6.5	<1	79.3
CPS14		31	3	45.2	4.9	101	<1	6.0	<1	15.10	119	0.5	1.2	11.6	<1	115.5
CPS15		4	<2	8.6	0.5	696	<1	1.0	<1	0.81	24	<0.5	0.2	2.4	<1	21.9
CPS16		4	<2	8.3	0.5	678	<1	0.9	<1	0.83	27	<0.5	0.2	2.2	<1	20.9
CPS17		6	<2	12.5	8.5	266	<1	1.5	<1	2.13	50	<0.5	0.2	3.1	<1	31.9
CPS18		7	20	27.0	1.0	401	<1	2.9	1	5.07	28	0.5	0.4	9.8	<1	61.0
CPS19		5	<2	33.5	3.9	562	<1	3.1	<1	7.19	30	0.6	0.3	12.5	<1	52.9
CPS20		9	<2	66.3	3.8	374	<1	6.8	<1	22.8	48	1.2	0.8	16.4	<1	104.5
CPS21		11	7	30.7	2.5	219	<1	3.4	<1	17.20	88	0.5	0.6	22.6	<1	55.3
CPS22		4	8	8.1	4.4	127	<1	1.0	<1	2.82	32	<0.5	0.2	9.3	<1	20.1
CPS23																
CPS24																
CPS25																
CPS26		3	11	14.8	0.2	291	<1	1.6	1	6.26	45	0.9	0.3	2.4	<1	34.5
CPS27		4	11	15.4	12.2	284	<1	1.5	1	3.46	41	0.6	0.2	5.3	<1	27.5
CPS28		8	<2	19.7	5.2	185	<1	2.2	<1	8.70	54	0.9	0.4	9.4	<1	38.5
CPS29		7	10	21.0	2.1	226	<1	2.4	<1	7.36	72	0.6	0.4	6.9	<1	44.7
CPS30		20	7	47.1	13.4	59	<1	5.0	<1	22.6	58	0.6	1.0	9.2	<1	84.0
CPS31		2	15	31.6	3.4	226	<1	3.0	<1	4.26	29	0.7	0.3	2.5	<1	47.7
CPS32		10	10	33.6	11.7	105	<1	3.5	<1	11.85	56	0.6	0.7	8.2	<1	61.3
CPS33		4	2	22.7	6.1	161	<1	2.2	<1	8.02	47	0.8	0.3	5.4	<1	31.6
CPS34		10	17	62.0	3.1	253	<1	5.3	<1	15.75	52	1.3	0.8	10.6	<1	82.9
CPS35		3	<2	20.9	10.9	142	<1	2.1	<1	11.10	31	0.7	0.3	6.4	<1	29.0
CPS36		3	<2	15.7	6.5	141	<1	1.6	<1	4.12	26	0.5	0.2	3.8	<1	26.2
CPS37		3	9	19.8	12.5	87	<1	1.9	<1	7.45	31	0.8	0.4	4.0	<1	30.2
CPS38		7	17	34.4	24.1	96	<1	3.3	<1	17.75	29	0.7	0.5	7.3	<1	49.4
CPS39		3	15	24.4	10.7	114	<1	2.2	<1	11.75	33	<0.5	0.3	4.5	<1	32.3
CPS40		9	4	34.0	7.7	100	<1	3.6	<1	11.35	48	0.5	0.7	8.4	<1	60.9



Australian Laboratory Services Pty. Ltd.
 32 Shand Street
 Stafford
 Brisbane QLD 4053
 Phone: +61 (7) 3243 7222 Fax: +61 (7) 3243 7218
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Sample Description	Method Analyte Units LOR	ME-MS23 Yb ppb 0.1	ME-MS23 Zn ppb 10	ME-MS23 Zr ppb 0.1	WEI-21 Recvd Wt. kg 0.02
CPS1		2.6	60	13.2	
CPS2		48.2	60	61.9	
CPS3		9.6	20	4.0	
CPS4		8.7	90	5.3	
CPS5		2.9	40	1.7	
CPS6		4.3	40	1.5	
CPS7		2.9	40	2.7	
CPS8		3.1	50	1.6	
CPS9		4.3	60	2.7	
CPS10		3.4	280	2.3	
CPS11		29.3	170	46.1	
CPS12		1.3	70	1.9	
CPS13		4.5	50	4.3	
CPS14		7.2	170	6.4	
CPS15		1.0	130	0.7	
CPS16		0.9	110	0.7	
CPS17		1.3	70	2.0	
CPS18		2.6	100	2.1	
CPS19		1.9	80	1.1	
CPS20		4.7	60	3.1	
CPS21		3.4	90	7.3	
CPS22		1.2	70	1.2	
CPS23					Not Recvd
CPS24					Not Recvd
CPS25					Not Recvd
CPS26		1.8	30	2.2	
CPS27		1.3	50	1.7	
CPS28		2.3	70	3.6	
CPS29		2.4	60	3.2	
CPS30		5.9	60	5.6	
CPS31		2.2	40	1.3	
CPS32		4.1	40	3.2	
CPS33		1.8	50	3.2	
CPS34		5.1	80	4.8	
CPS35		1.8	50	4.4	
CPS36		1.2	90	1.5	
CPS37		2.1	60	1.9	
CPS38		3.4	70	4.1	
CPS39		1.8	70	3.8	
CPS40		4.0	60	3.2	



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 Brisbane QLD 4053
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Sample Description	Method Analyte Units LOR	pH-MS23 Final pH Unity 0.1	ME-MS23 Ag ppb 0.1	ME-MS23 As ppb 2	ME-MS23 Au ppb 0.02	ME-MS23 Ba ppb 10	ME-MS23 Be ppb 0.2	ME-MS23 Bi ppb 3	ME-MS23 Br ppm 0.05	ME-MS23 Ca ppm 0.2	ME-MS23 Cd ppb 1	ME-MS23 Ce ppb 0.1	ME-MS23 Co ppb 0.3	ME-MS23 Cr ppb 1	ME-MS23 Cs ppb 0.1	ME-MS23 Cu ppb 1
CPS41		9.0	0.2	<2	0.04	2070	<0.2	<3	0.06	28.6	<1	106.0	65.6	1	0.9	214
CPS42		9.0	0.3	4	0.04	1770	0.2	<3	0.06	33.9	1	192.5	77.8	3	1.2	319
CPS43		9.0	0.5	<2	0.03	1790	<0.2	<3	0.14	23.6	<1	134.0	104.5	2	2.4	196
CPS44		9.0	0.2	<2	0.02	1390	0.2	<3	0.05	18.1	<1	294	30.5	4	2.2	182
CPS45		9.0	0.6	<2	<0.02	1280	1.7	<3	0.15	10.2	<1	611	16.9	14	6.9	233
CPS46		9.0	0.1	<2	<0.02	1080	<0.2	<3	<0.05	14.4	<1	317	17.1	5	1.8	128
CPS47		9.0	0.1	<2	0.02	1200	<0.2	<3	0.06	7.2	<1	188.0	17.4	2	1.6	226
CPS48		9.0	0.4	10	<0.02	1340	0.7	<3	0.09	34.1	1	280	33.5	9	1.9	283
CPS49		9.0	1.4	13	0.04	1510	0.9	<3	0.32	61.7	1	372	76.6	15	3.7	631
CPS50		9.0	0.2	8	<0.02	700	0.3	<3	0.10	11.5	<1	206	38.7	6	1.8	182
CPS51		8.3	0.6	19	0.03	1700	8.7	<3	0.26	6.3	<1	898	11.4	39	2.6	280
CPS52		9.0	0.5	13	<0.02	820	1.0	<3	0.11	41.8	1	371	90.0	10	2.2	205
CPS53		9.0	0.6	13	<0.02	1450	0.7	<3	0.14	48.3	1	259	34.6	10	1.0	214
CPS54		9.0	0.4	7	0.02	1320	0.3	<3	0.13	29.0	<1	184.0	93.5	5	1.0	182
CPS55		9.0	0.9	20	0.03	1810	4.5	<3	0.22	20.7	2	4660	22.6	24	6.5	168
CPS56		9.0	0.6	11	0.02	1100	0.2	<3	0.17	38.8	<1	79.3	101.5	5	0.8	190
CPS57		9.0	0.3	8	0.02	1530	0.6	<3	0.09	33.5	1	82.6	127.5	4	0.8	176
CPS58		6.3	0.4	18	0.04	2190	12.2	<3	0.22	4.4	1	1000	31.9	36	5.0	253
CPS59		7.9	2.4	18	0.09	2210	1.4	<3	0.21	11.3	2	723	420	8	1.0	1110
CPS60		9.0	0.4	14	<0.02	2000	1.2	<3	0.16	18.2	1	792	40.4	9	4.2	188
CPS61		9.0	0.3	7	0.02	1490	0.2	<3	0.08	42.6	<1	46.1	77.7	3	0.7	201
CPS62		8.3	6.3	21	0.13	1920	0.5	<3	0.23	133.0	2	74.4	465	3	0.8	1060
CPS63		9.0	0.4	11	0.04	1620	0.2	<3	0.08	45.2	<1	46.8	86.2	2	0.7	258
CPS64		9.0	2.2	15	0.05	2020	0.3	<3	0.28	115.5	2	37.3	433	2	1.0	1260
CPS65		9.0	0.4	5	<0.02	1470	0.6	<3	0.18	13.1	<1	280	49.0	4	2.8	176
CPS66		9.0	0.4	6	<0.02	1450	0.3	<3	0.13	23.1	<1	339	61.0	5	3.2	157
CPS67		9.0	1.1	3	0.09	1890	0.3	<3	0.18	89.5	2	76.6	310	2	1.3	453
CPS68		9.0	0.5	8	0.06	1830	0.2	<3	0.11	53.5	1	44.2	97.2	2	0.7	244
CPS69		9.0	4.6	11	0.09	2410	0.5	<3	0.28	82.4	1	82.6	508	2	2.0	782
CPS70		9.0	0.4	4	0.03	1850	0.2	<3	0.08	34.7	1	55.0	81.1	2	0.7	220
CPS71		9.0	0.4	<2	0.07	1820	0.2	<3	0.06	32.3	<1	49.5	81.1	2	0.7	212
CPS72		9.0	0.4	9	0.03	2010	0.7	<3	0.12	40.7	1	474	139.5	7	2.2	295
CPS73		9.0	0.3	8	<0.02	1320	0.3	<3	0.07	30.4	<1	32.3	119.0	2	0.6	188
CPS74		9.0	0.3	2	0.03	1490	0.2	<3	0.07	39.1	1	55.3	89.8	2	0.6	241
CPS75		9.0	0.3	<2	0.02	1300	<0.2	<3	0.05	35.8	<1	41.0	104.5	2	0.6	235
CPS76		9.0	0.5	9	0.09	3320	0.2	<3	0.09	91.0	1	23.5	122.0	2	0.6	324
CPS77		8.3	2.0	7	0.11	2480	0.2	<3	0.17	49.2	2	77.9	653	1	1.4	872
CPS78		8.3	1.3	17	0.10	1640	1.9	<3	0.21	36.7	2	1060	233	9	4.1	934
CPS79		9.0	1.8	7	0.10	1840	0.2	<3	0.14	72.5	1	93.9	351	2	0.9	510
CPS80		9.0	1.4	9	0.09	1120	0.5	<3	0.22	35.8	1	125.5	251	3	2.6	748



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 Brisbane QLD 4053
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Sample Description	Method Analyte Units LOR	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23
		Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Hg	Ho	I	In	La	Li	Lu
		ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb
		0.1	0.1	0.1	0.1	0.5	0.1	0.1	0.5	0.1	0.1	0.01	0.1	0.1	0.2	0.1
CPS41		8.1	3.3	4.6	3.1	51.1	17.9	0.5	<0.5	0.1	1.4	0.04	<0.1	30.4	0.2	0.2
CPS42		12.0	5.3	7.1	10.6	45.6	28.5	0.9	<0.5	<0.1	2.1	0.03	<0.1	60.2	0.3	0.4
CPS43		8.5	3.9	5.2	4.7	45.9	20.3	0.6	<0.5	0.1	1.5	0.18	<0.1	38.8	0.7	0.3
CPS44		12.0	5.5	6.7	6.3	33.4	30.4	1.0	0.5	0.1	2.1	0.05	<0.1	97.6	0.5	0.5
CPS45		31.6	16.0	14.6	13.4	34.2	63.4	1.9	0.6	<0.1	5.8	0.20	<0.1	195.0	0.2	1.6
CPS46		12.6	6.0	6.7	4.9	25.8	31.4	0.9	<0.5	<0.1	2.2	0.03	<0.1	109.0	<0.2	0.5
CPS47		8.4	4.5	3.9	4.9	29.9	17.7	0.6	<0.5	<0.1	1.6	0.06	<0.1	69.2	0.8	0.4
CPS48		21.5	10.2	10.8	18.5	44.4	47.6	1.6	0.6	0.1	3.9	0.02	<0.1	98.9	0.5	1.0
CPS49		42.7	18.3	22.7	16.5	48.7	94.3	2.8	1.4	0.1	7.2	0.25	<0.1	151.0	0.9	1.5
CPS50		9.6	4.6	4.8	4.1	23.1	22.2	0.8	<0.5	0.1	1.8	0.03	<0.1	63.8	0.3	0.4
CPS51		38.2	15.8	19.0	41.7	64.8	92.3	3.4	1.8	0.2	6.2	0.10	0.2	372	4.5	1.2
CPS52		29.5	13.7	13.7	9.2	26.7	56.9	1.7	1.2	0.2	5.3	0.08	<0.1	102.5	0.8	1.2
CPS53		10.5	4.4	6.3	17.2	45.2	28.3	1.0	0.5	0.3	1.7	0.11	<0.1	92.5	0.2	0.3
CPS54		16.3	7.1	8.1	3.6	41.2	33.4	0.9	0.5	0.2	2.9	0.06	<0.1	59.9	0.5	0.6
CPS55		203	80.7	105.0	22.2	62.5	556	19.9	2.4	0.2	31.6	0.24	0.1	2200	0.6	5.1
CPS56		8.9	3.8	4.1	4.0	34.8	16.3	0.5	<0.5	0.1	1.6	0.06	<0.1	23.0	0.9	0.3
CPS57		8.5	3.9	4.3	4.0	47.6	16.3	0.5	<0.5	0.1	1.5	0.04	<0.1	24.2	0.7	0.3
CPS58		90.7	48.3	35.6	87.2	93.6	163.5	5.7	3.5	0.3	17.1	0.05	0.5	361	6.7	5.3
CPS59		147.0	69.4	60.1	29.0	71.7	241	6.0	1.4	0.2	27.1	0.02	<0.1	229	3.8	6.7
CPS60		33.2	14.9	19.4	9.7	67.4	94.6	3.6	0.6	0.1	5.3	0.14	<0.1	300	0.4	1.2
CPS61		5.1	2.3	2.8	2.3	47.3	10.2	0.3	<0.5	0.2	0.9	0.03	<0.1	13.9	0.9	0.2
CPS62		25.3	10.2	12.0	3.4	60.8	46.5	0.9	0.5	0.4	4.5	0.21	<0.1	31.1	2.8	0.8
CPS63		5.8	2.5	3.1	2.4	51.0	11.4	0.3	<0.5	0.2	1.0	0.04	<0.1	15.3	1.3	0.2
CPS64		6.4	2.8	3.7	2.8	67.0	12.5	0.4	<0.5	0.2	1.2	0.12	<0.1	10.4	3.6	0.2
CPS65		12.9	6.4	7.9	6.4	49.5	36.8	1.5	<0.5	0.2	2.3	0.25	<0.1	114.0	0.2	0.6
CPS66		13.6	6.0	8.6	5.7	46.6	40.5	1.6	<0.5	0.1	2.2	0.09	<0.1	95.2	0.2	0.4
CPS67		14.8	6.6	8.4	2.2	61.0	30.8	0.8	<0.5	0.1	2.7	0.19	<0.1	26.1	2.0	0.5
CPS68		6.0	2.5	3.3	2.7	58.4	11.6	0.3	<0.5	0.1	1.1	0.06	<0.1	13.5	1.1	0.2
CPS69		19.8	8.7	10.5	2.8	79.1	36.9	0.8	<0.5	0.3	3.6	0.21	<0.1	38.7	2.9	0.7
CPS70		5.7	2.5	3.1	2.2	57.8	11.0	0.3	<0.5	0.1	1.0	0.04	<0.1	14.7	0.7	0.2
CPS71		5.0	2.3	2.8	2.1	57.2	10.0	0.3	<0.5	<0.1	0.9	0.04	<0.1	13.4	0.7	0.2
CPS72		21.7	9.4	12.0	21.7	67.0	53.2	1.6	0.6	0.1	3.6	0.05	<0.1	112.0	1.4	0.8
CPS73		3.8	1.7	1.9	2.7	42.9	6.9	0.2	<0.5	0.2	0.7	0.04	<0.1	7.9	1.1	0.2
CPS74		5.8	2.5	3.0	3.0	48.4	11.0	0.3	<0.5	<0.1	1.1	0.04	<0.1	13.9	0.7	0.2
CPS75		4.3	2.0	2.2	2.6	40.6	8.1	0.3	<0.5	0.1	0.8	0.03	<0.1	10.6	0.6	0.2
CPS76		3.4	1.5	2.5	2.2	109.0	7.1	0.2	<0.5	0.2	0.6	0.05	<0.1	6.7	1.2	0.1
CPS77		13.4	5.9	8.1	2.0	81.4	26.4	0.6	<0.5	0.2	2.5	0.18	<0.1	19.6	2.4	0.5
CPS78		123.0	59.1	58.4	10.8	55.7	244	7.8	2.0	0.2	22.5	0.49	<0.1	360	1.8	5.3
CPS79		9.7	4.3	5.4	2.3	60.9	19.7	0.5	<0.5	0.2	1.8	0.11	<0.1	21.0	1.8	0.4
CPS80		17.0	7.2	9.6	3.4	38.1	33.8	0.9	<0.5	0.2	3.0	0.18	<0.1	44.8	1.3	0.6



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 Brisbane QLD 4053
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Sample Description	Method Analyte Units LOR	ME-MS23 Mg ppm 0.01	ME-MS23 Mn ppm 0.01	ME-MS23 Mo ppb 0.5	ME-MS23 Nb ppb 0.1	ME-MS23 Nd ppb 0.1	ME-MS23 Ni ppb 1	ME-MS23 Pb ppb 1	ME-MS23 Pb 206 ppb 1	ME-MS23 Pb 207 ppb 1	ME-MS23 Pb 208 ppb 1	ME-MS23 Pd ppb 0.1	ME-MS23 Pr ppb 0.1	ME-MS23 Rb ppb 0.1	ME-MS23 Re ppb 0.1	ME-MS23 Sb ppb 0.5
CPS41		41.3	4.22	1.0	<0.1	89.0	35	49	12	10	26	0.4	15.4	183.0	<0.1	<0.5
CPS42		40.1	3.33	1.5	<0.1	159.5	37	61	14	13	33	0.7	28.9	201	<0.1	<0.5
CPS43		32.9	6.89	1.1	0.1	111.5	26	66	15	14	35	0.5	20.0	224	<0.1	<0.5
CPS44		18.45	1.99	1.1	0.1	190.5	16	73	18	15	39	1.0	40.8	130.5	<0.1	<0.5
CPS45		17.65	0.45	1.2	0.1	372	23	79	19	16	43	1.5	80.5	205	<0.1	<0.5
CPS46		15.30	0.63	0.9	0.1	197.0	10	35	9	7	19	0.7	43.8	119.0	<0.1	<0.5
CPS47		8.12	0.57	<0.5	<0.1	102.0	15	73	17	16	40	0.4	23.2	72.3	<0.1	<0.5
CPS48		26.0	1.18	1.8	0.2	257	29	72	18	14	40	1.2	47.9	179.5	<0.1	<0.5
CPS49		61.0	2.52	2.4	0.1	452	70	42	10	8	23	2.3	78.6	308	<0.1	<0.5
CPS50		10.55	1.91	1.1	0.1	125.5	15	37	9	7	20	0.6	27.2	126.5	<0.1	<0.5
CPS51		9.53	0.68	1.4	1.4	526	30	155	37	29	87	3.2	124.0	135.5	<0.1	<0.5
CPS52		14.60	5.57	1.1	0.2	280	33	20	5	4	11	1.9	51.5	159.0	<0.1	<0.5
CPS53		25.2	2.95	1.7	0.2	160.0	30	60	15	12	33	0.8	32.9	104.0	<0.1	<0.5
CPS54		22.5	5.49	1.0	0.1	167.0	23	15	4	3	8	0.8	30.2	108.5	<0.1	<0.5
CPS55		29.1	0.23	2.1	0.3	2970	39	146	35	27	82	4.7	688	285	<0.1	<0.5
CPS56		37.7	4.25	1.4	0.1	74.3	35	9	2	2	5	0.4	12.6	71.0	<0.1	<0.5
CPS57		32.1	8.73	1.4	<0.1	73.9	35	10	2	2	5	0.4	12.9	88.8	<0.1	<0.5
CPS58		6.66	0.38	0.9	3.3	840	51	343	84	65	190	6.3	167.5	223	<0.1	<0.5
CPS59		156.0	3.40	0.7	0.3	956	292	54	13	10	29	3.3	147.5	73.1	<0.1	<0.5
CPS60		21.4	1.49	1.1	0.1	609	17	65	16	12	37	1.1	130.0	255	<0.1	<0.5
CPS61		35.5	4.22	1.1	<0.1	43.7	27	6	1	1	3	0.2	7.4	102.0	<0.1	<0.5
CPS62		198.0	12.10	1.6	<0.1	134.0	149	7	2	1	4	0.9	18.7	220	<0.1	<0.5
CPS63		37.3	4.96	1.3	<0.1	48.7	25	8	2	2	4	0.4	8.2	113.5	<0.1	<0.5
CPS64		193.0	9.82	2.6	<0.1	40.5	127	6	2	1	3	0.3	6.0	322	<0.1	<0.5
CPS65		19.95	2.79	1.0	0.1	230	14	29	7	5	16	0.5	48.8	171.0	<0.1	<0.5
CPS66		23.9	4.09	1.5	0.2	247	15	33	8	6	18	0.7	48.1	264	<0.1	<0.5
CPS67		162.0	8.12	1.1	<0.1	109.5	67	9	2	2	5	0.7	16.0	362	<0.1	<0.5
CPS68		52.6	5.31	1.3	<0.1	47.5	35	6	1	1	3	0.4	7.6	139.5	<0.1	<0.5
CPS69		151.5	13.95	1.1	<0.1	133.0	133	10	3	2	6	0.8	20.8	356	<0.1	<0.5
CPS70		33.6	5.52	1.4	<0.1	47.9	29	8	2	2	4	0.3	8.2	113.0	<0.1	<0.5
CPS71		31.3	5.00	1.3	<0.1	41.6	25	7	2	1	4	0.3	7.1	113.0	<0.1	<0.5
CPS72		21.1	7.93	2.0	0.2	277	56	28	7	5	16	1.6	51.9	237	<0.1	<0.5
CPS73		29.6	9.81	1.2	<0.1	27.8	26	7	2	1	4	0.3	4.5	101.5	<0.1	<0.5
CPS74		36.8	4.50	1.4	<0.1	48.7	27	13	3	3	7	0.3	8.3	111.5	<0.1	<0.5
CPS75		31.8	4.82	1.3	<0.1	35.6	23	11	3	2	6	0.2	6.0	113.5	<0.1	<0.5
CPS76		103.0	5.21	1.9	<0.1	25.5	38	9	2	2	5	0.2	3.9	192.5	<0.1	<0.5
CPS77		186.0	10.70	0.9	<0.1	95.4	101	19	5	4	10	0.5	13.5	400	<0.1	<0.5
CPS78		67.3	5.59	1.9	0.4	1195	95	76	19	14	42	4.1	211	579	<0.1	<0.5
CPS79		122.0	9.56	1.5	<0.1	72.0	71	20	5	4	11	0.5	11.2	275	<0.1	<0.5
CPS80		73.3	8.04	1.7	<0.1	143.0	79	10	3	2	6	0.9	23.6	324	<0.1	<0.5



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Sample Description	Method Analyte Units LOR	ME-MS23 Sc ppb 1	ME-MS23 Se ppb 2	ME-MS23 Sm ppb 0.1	ME-MS23 Sn ppb 0.2	ME-MS23 Sr ppb 1	ME-MS23 Ta ppb 1	ME-MS23 Tb ppb 0.1	ME-MS23 Te ppb 1	ME-MS23 Th ppb 0.02	ME-MS23 Ti ppb 5	ME-MS23 Tl ppb 0.5	ME-MS23 Tm ppb 0.1	ME-MS23 U ppb 0.1	ME-MS23 W ppb 1	ME-MS23 Y ppb 0.1
CPS41		3	<2	20.3	9.3	148	<1	2.2	<1	7.37	31	<0.5	0.3	6.0	<1	33.0
CPS42		5	15	34.8	6.2	150	<1	3.3	<1	13.45	36	<0.5	0.5	7.0	<1	49.2
CPS43		5	<2	24.6	9.9	128	<1	2.4	1	9.13	47	1.1	0.4	6.4	<1	34.7
CPS44		7	15	36.3	11.5	103	<1	3.3	<1	24.1	54	<0.5	0.5	6.1	<1	49.4
CPS45		25	14	74.2	17.1	97	<1	7.7	<1	39.1	79	<0.5	1.8	12.9	<1	130.5
CPS46		6	6	36.4	23.5	65	<1	3.4	<1	18.30	40	<0.5	0.6	5.0	<1	52.9
CPS47		6	14	18.8	60.4	44	<1	2.1	<1	8.80	33	<0.5	0.5	2.9	<1	39.8
CPS48		9	7	57.3	1.0	99	<1	5.5	<1	20.9	64	<0.5	1.1	8.7	<1	92.4
CPS49		18	19	114.5	4.0	132	<1	11.1	<1	58.6	67	0.6	1.7	26.8	<1	168.5
CPS50		9	15	25.9	21.5	51	<1	2.5	<1	12.85	33	<0.5	0.5	4.5	<1	42.1
CPS51		37	46	104.0	75.7	37	<1	10.2	<1	150.0	487	0.6	1.6	12.4	<1	139.0
CPS52		27	49	66.1	4.2	122	<1	7.0	<1	44.8	99	<0.5	1.5	9.8	<1	125.5
CPS53		6	13	34.2	3.3	143	<1	3.0	<1	31.8	40	<0.5	0.4	4.9	<1	39.0
CPS54		6	19	37.9	4.8	118	<1	4.0	<1	11.20	51	<0.5	0.7	6.4	<1	71.9
CPS55		41	81	644	3.9	46	<1	57.8	1	186.5	78	0.9	7.1	47.5	1	698
CPS56		6	43	18.3	4.3	178	<1	2.1	<1	4.62	50	<0.5	0.4	5.6	<1	42.3
CPS57		7	22	17.7	7.2	137	<1	2.1	<1	4.96	31	<0.5	0.4	6.9	<1	40.5
CPS58		63	40	191.5	2.5	27	<1	20.3	<1	132.5	911	0.9	5.9	13.9	1	335
CPS59		75	80	261	0.3	42	<1	32.4	<1	15.55	219	<0.5	7.5	41.2	1	653
CPS60		14	37	120.0	8.7	81	<1	9.6	<1	46.7	52	1.0	1.4	9.6	<1	116.0
CPS61		5	16	10.9	11.8	124	<1	1.3	<1	2.70	24	<0.5	0.2	4.5	<1	25.0
CPS62		13	32	45.4	0.4	205	<1	5.9	3	5.83	36	<0.5	1.0	11.1	<1	126.5
CPS63		6	19	11.9	11.2	132	<1	1.4	2	3.16	29	<0.5	0.2	5.6	<1	28.2
CPS64		7	5	12.5	0.7	221	<1	1.6	1	2.52	25	0.6	0.3	4.2	<1	33.9
CPS65		7	7	45.8	27.8	55	<1	3.7	<1	14.75	29	1.5	0.6	6.7	<1	54.3
CPS66		6	4	50.9	15.1	74	<1	4.0	<1	22.3	28	0.9	0.5	8.3	<1	50.9
CPS67		11	13	33.6	1.3	168	<1	3.7	1	4.98	33	0.6	0.6	9.3	<1	74.9
CPS68		6	24	12.6	9.5	174	<1	1.5	1	3.09	24	<0.5	0.2	6.2	<1	29.3
CPS69		15	29	38.6	0.5	240	<1	4.8	1	6.31	39	0.6	0.9	11.1	<1	99.0
CPS70		5	17	11.9	9.8	102	<1	1.4	<1	3.12	20	<0.5	0.3	5.3	<1	27.3
CPS71		5	3	10.7	10.7	94	<1	1.2	1	2.70	27	<0.5	0.2	4.9	<1	24.5
CPS72		13	24	63.5	4.4	116	<1	5.8	<1	25.7	89	0.8	0.9	11.5	<1	85.5
CPS73		5	25	7.4	11.5	82	<1	0.9	<1	2.28	22	<0.5	0.2	4.9	<1	18.8
CPS74		6	<2	12.0	12.0	104	<1	1.4	<1	2.95	24	<0.5	0.2	4.8	<1	27.7
CPS75		5	7	8.6	7.8	98	<1	1.0	<1	2.41	21	<0.5	0.2	4.8	<1	21.2
CPS76		5	26	7.3	6.5	277	<1	0.9	<1	1.67	19	<0.5	0.1	5.2	<1	17.4
CPS77		14	33	29.1	1.3	151	<1	3.2	1	3.65	30	0.5	0.6	6.7	<1	66.5
CPS78		56	84	288	3.8	166	<1	29.2	<1	62.8	156	0.8	6.0	38.4	1	501
CPS79		9	18	20.4	1.9	156	<1	2.4	<1	4.60	30	0.6	0.4	7.2	<1	48.2
CPS80		16	40	37.4	2.8	104	<1	4.2	1	8.86	50	0.5	0.7	12.1	<1	77.5



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 Stafford
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Sample Description	Method Analyte Units LOR	ME-MS23 Yb ppb 0.1	ME-MS23 Zn ppb 10	ME-MS23 Zr ppb 0.1	WEI-21 Recvd Wt. kg 0.02
CPS41		1.7	60	2.7	
CPS42		3.2	60	4.5	
CPS43		2.3	70	2.9	
CPS44		3.1	50	6.9	
CPS45		11.4	20	7.6	
CPS46		3.6	20	4.1	
CPS47		3.0	50	1.9	
CPS48		6.8	60	7.1	
CPS49		10.8	50	16.6	
CPS50		2.9	30	4.2	
CPS51		9.2	30	28.5	
CPS52		8.6	30	15.1	
CPS53		2.5	30	6.5	
CPS54		4.1	30	6.0	
CPS55		41.8	50	16.7	
CPS56		2.4	90	2.6	
CPS57		2.3	80	2.5	
CPS58		37.1	20	49.9	
CPS59		45.1	60	8.4	
CPS60		9.0	70	6.6	
CPS61		1.2	60	1.5	
CPS62		5.6	210	3.9	
CPS63		1.4	60	2.0	
CPS64		1.6	90	2.8	
CPS65		3.8	50	3.4	
CPS66		3.3	60	5.4	
CPS67		3.8	140	2.5	
CPS68		1.5	70	2.3	
CPS69		5.0	200	4.8	
CPS70		1.4	60	1.9	
CPS71		1.4	50	2.0	
CPS72		5.8	60	9.3	
CPS73		1.0	110	2.0	
CPS74		1.4	120	1.9	
CPS75		1.1	130	1.5	
CPS76		0.8	60	1.5	
CPS77		3.5	230	2.1	
CPS78		35.7	110	20.4	
CPS79		2.6	120	4.2	
CPS80		4.0	110	4.4	



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 Brisbane QLD 4053
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Sample Description	Method Analyte Units LOR	pH-MS23 Final pH Unity 0.1	ME-MS23 Ag ppb 0.1	ME-MS23 As ppb 2	ME-MS23 Au ppb 0.02	ME-MS23 Ba ppb 10	ME-MS23 Be ppb 0.2	ME-MS23 Bi ppb 3	ME-MS23 Br ppm 0.05	ME-MS23 Ca ppm 0.2	ME-MS23 Cd ppb 1	ME-MS23 Ce ppb 0.1	ME-MS23 Co ppb 0.3	ME-MS23 Cr ppb 1	ME-MS23 Cs ppb 0.1	ME-MS23 Cu ppb 1
CPS81		7.4	3.2	12	0.04	2120	5.0	<3	0.14	39.5	3	1360	1235	19	1.6	1820
CPS82		9.0	0.3	4	0.03	1140	<0.2	<3	0.05	37.5	1	46.4	90.0	2	0.7	232
CPS83		9.0	1.8	8	0.07	2860	0.4	<3	0.18	151.5	2	18.8	300	1	0.4	360
CPS84		8.3	1.8	7	0.04	2750	0.3	<3	0.15	223	5	14.4	300	1	0.3	444
CPS85		7.3	3.4	19	0.06	2130	6.3	<3	0.16	38.9	3	1380	1305	24	2.0	1860
CPS86		9.0	0.3	8	0.05	1160	<0.2	<3	<0.05	38.9	1	44.9	92.3	2	0.7	238
CPS87		8.3	2.1	12	0.05	3100	0.3	<3	0.19	169.0	3	18.3	397	2	0.5	416
CPS88		9.0	2.6	12	0.04	1900	0.2	<3	0.25	118.5	1	25.2	208	1	1.5	771
CPS89		9.0	0.7	6	0.07	1440	0.3	<3	0.12	81.2	1	84.3	122.5	2	1.4	329
CPS90		9.0	0.6	3	0.07	1720	<0.2	<3	0.08	53.3	1	100.0	151.0	2	1.1	347
CPS91		9.0	0.8	7	0.08	1600	0.5	<3	0.18	58.0	1	244	351	3	2.6	423
CPS92		8.5	2.9	<2	0.11	1390	<0.2	<3	0.21	80.2	1	56.6	317	1	1.0	782
CPS93		8.3	1.5	<2	0.08	1580	<0.2	<3	0.14	75.9	1	41.3	319	<1	1.0	599
CPS94		8.5	1.0	3	0.09	1120	0.3	<3	0.17	42.4	1	66.7	273	3	2.9	820
CPS95		8.5	0.9	3	0.03	1450	1.1	<3	0.12	40.3	2	231	526	7	0.9	1010
CPS96		8.7	2.6	3	0.07	1580	<0.2	<3	0.19	114.5	2	7.4	122.0	1	0.6	881
CPS97		7.9	1.2	6	0.05	1390	0.8	<3	0.23	101.5	3	423	367	3	2.7	501
CPS98		8.1	3.2	6	0.12	1940	0.2	<3	0.24	76.2	4	100.0	527	1	1.6	586
CPS99		8.1	2.2	6	0.09	2150	<0.2	<3	0.17	121.5	3	50.0	459	1	1.2	668
CPS100		9.0	0.9	<2	0.08	1370	0.4	<3	0.11	44.1	1	98.0	317	3	2.4	810
CPS101		8.3	1.5	3	0.06	1250	<0.2	<3	0.11	61.7	1	39.0	300	1	0.9	475
CPS102		9.0	1.0	2	0.11	1350	0.5	<3	0.14	41.7	1	96.1	281	3	2.4	699
CPS103		9.0	0.3	<2	0.04	1160	0.2	<3	0.05	31.9	<1	56.5	64.8	2	0.9	298
CPS104		8.7	2.3	<2	0.15	1120	0.3	<3	0.13	79.1	2	86.2	385	2	1.6	1330
CPS105		9.0	0.9	<2	0.10	1660	0.3	<3	0.17	61.0	1	74.8	123.5	1	3.5	441
CPS106		8.7	2.1	4	0.12	1360	0.4	<3	0.16	57.2	1	111.0	314	2	1.8	693
CPS107		8.7	1.8	3	0.12	2070	0.2	<3	0.21	69.4	1	56.7	542	1	1.2	821
CPS108		9.0	2.3	2	0.06	1620	0.3	<3	0.11	114.0	2	32.3	86.9	2	3.2	1460
CPS109		8.1	3.2	5	0.20	1740	0.3	<3	0.30	99.8	2	98.5	438	2	1.6	1670
CPS110		8.1	1.0	5	0.06	2010	<0.2	<3	0.31	81.4	1	18.6	353	1	1.3	709
CPS111		9.0	0.2	<2	0.07	840	<0.2	<3	<0.05	22.3	<1	55.4	63.6	1	0.9	193
CPS112		8.5	0.6	3	0.04	1810	2.2	<3	0.21	28.6	1	683	58.0	11	6.2	269
CPS113		7.9	0.8	2	0.05	1600	4.8	<3	0.22	29.9	2	892	77.9	10	7.6	323
CPS114		7.7	1.3	5	0.12	1750	14.5	<3	0.23	33.4	3	1290	122.0	22	6.5	622
CPS115		7.9	1.1	9	0.05	2470	0.2	<3	0.22	96.6	2	29.6	522	1	1.1	830
CPS116		9.0	1.8	6	0.04	2130	0.2	<3	0.20	103.0	3	84.8	396	1	1.0	1040
CPS117		9.0	0.4	4	0.03	280	<0.2	<3	0.18	9.8	<1	83.2	50.1	4	1.0	190
CPS118		8.5	1.8	3	0.08	2300	0.3	<3	0.11	162.5	3	54.1	461	1	0.6	1350
CPS119		8.3	3.9	2	0.10	3890	<0.2	<3	0.22	137.5	4	104.5	794	1	1.1	2270
CPS120		8.5	1.3	3	0.05	1190	0.2	<3	0.14	50.9	2	106.0	428	1	2.7	788



Australian Laboratory Services Pty. Ltd.

32 Shand Street

Stafford

Brisbane QLD 4053

Phone: +61 (7) 3243 7222 Fax: +61 (7) 3243 7218

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CERTIFICATE OF ANALYSIS PH10173276

Sample Description	Method Analyte Units LOR	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23
		Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Hg	Ho	I	In	La	Li
		ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
		0.1	0.1	0.1	0.1	0.5	0.1	0.1	0.5	0.1	0.1	0.01	0.1	0.1	0.2
CPS81		100.5	55.1	32.2	54.8	72.9	138.0	3.4	2.0	0.1	20.2	0.04	0.1	184.0	9.6
CPS82		4.8	2.1	2.6	2.7	36.5	9.5	0.3	<0.5	0.1	0.9	0.03	<0.1	11.0	1.0
CPS83		4.0	1.7	2.9	1.7	92.2	8.5	0.2	<0.5	0.2	0.7	0.12	<0.1	7.6	2.6
CPS84		3.9	1.7	2.6	2.0	89.3	7.6	0.2	<0.5	0.3	0.7	0.11	<0.1	4.9	4.6
CPS85		107.0	59.4	32.5	66.2	77.2	144.0	3.6	2.3	0.2	21.7	0.04	0.2	191.5	15.6
CPS86		5.0	2.1	2.6	2.8	38.2	9.5	0.2	<0.5	0.1	0.9	0.03	<0.1	10.8	1.0
CPS87		4.7	2.0	3.5	2.4	99.4	10.4	0.3	<0.5	0.3	0.9	0.14	<0.1	7.1	2.7
CPS88		4.0	1.8	2.6	2.5	62.3	7.9	0.2	<0.5	0.1	0.8	0.10	<0.1	7.6	3.0
CPS89		12.3	5.0	6.9	2.7	48.1	29.2	0.8	<0.5	0.3	2.1	0.13	<0.1	36.1	0.5
CPS90		11.1	4.6	6.4	2.8	57.2	26.0	0.8	<0.5	0.1	1.9	0.11	<0.1	33.4	0.7
CPS91		27.8	11.9	15.1	4.6	53.2	63.9	1.8	0.8	0.1	4.8	0.18	<0.1	118.0	1.4
CPS92		9.1	4.4	5.6	2.1	46.4	17.9	0.4	<0.5	0.1	1.9	0.19	<0.1	16.6	2.0
CPS93		4.7	2.4	3.4	2.3	53.5	10.0	0.3	<0.5	0.2	1.0	0.11	<0.1	10.4	2.8
CPS94		8.0	3.8	5.4	3.0	37.9	17.2	0.5	<0.5	0.1	1.6	0.15	<0.1	25.0	1.8
CPS95		19.2	10.6	8.4	24.1	49.5	30.7	1.0	0.6	0.2	4.0	0.05	<0.1	60.8	3.1
CPS96		1.6	1.0	1.5	1.2	52.9	3.7	0.1	<0.5	0.1	0.4	0.22	<0.1	2.0	4.5
CPS97		46.1	23.8	22.8	8.3	48.5	87.9	2.7	0.9	0.2	9.2	0.16	<0.1	168.0	1.3
CPS98		13.5	6.9	8.1	3.2	67.9	26.5	0.7	<0.5	0.2	2.8	0.21	<0.1	37.1	4.8
CPS99		6.5	3.2	4.4	2.7	74.1	12.9	0.4	<0.5	0.3	1.3	0.11	<0.1	15.3	3.2
CPS100		8.2	4.2	5.0	5.5	47.6	16.2	0.5	0.5	0.2	1.6	0.08	<0.1	30.0	2.1
CPS101		4.5	2.1	3.2	2.2	42.7	9.7	0.2	<0.5	0.2	0.9	0.10	<0.1	10.8	1.8
CPS102		7.9	4.1	4.9	5.2	46.8	15.5	0.6	<0.5	0.2	1.6	0.07	<0.1	29.3	2.2
CPS103		5.5	2.7	3.3	2.9	40.2	10.8	0.4	<0.5	0.1	1.1	0.02	<0.1	17.5	1.3
CPS104		12.8	6.3	7.0	5.0	37.5	23.7	0.6	<0.5	0.1	2.6	0.12	<0.1	31.3	2.2
CPS105		7.1	3.0	5.2	2.5	57.5	17.2	0.6	<0.5	0.2	1.4	0.11	<0.1	27.4	0.6
CPS106		14.7	6.6	9.0	3.8	46.4	31.4	0.8	0.5	0.3	2.8	0.15	<0.1	39.3	1.4
CPS107		5.7	2.6	4.1	3.2	71.1	12.7	0.3	<0.5	0.1	1.1	0.14	<0.1	12.8	1.5
CPS108		5.4	2.8	3.3	2.6	53.2	10.6	0.2	<0.5	0.2	1.1	0.16	<0.1	17.7	2.9
CPS109		14.8	7.1	8.5	3.7	60.0	30.3	0.8	<0.5	0.2	2.9	0.24	<0.1	45.1	3.2
CPS110		2.3	1.4	2.1	1.6	68.9	5.2	0.2	<0.5	0.1	0.6	0.13	<0.1	5.1	2.5
CPS111		4.7	2.5	2.4	2.5	28.5	8.2	0.3	<0.5	0.1	1.0	0.03	<0.1	14.4	1.2
CPS112		37.9	18.8	21.0	16.0	65.8	87.3	3.5	1.4	0.1	7.0	0.15	0.1	256	0.9
CPS113		51.5	25.3	29.4	29.1	60.3	122.0	4.5	1.5	0.1	9.3	0.21	0.1	329	0.7
CPS114		83.4	42.4	38.7	55.6	65.1	179.0	6.6	2.6	0.2	15.3	0.15	0.4	460	1.4
CPS115		3.4	2.0	3.0	1.9	86.8	7.5	0.2	<0.5	0.2	0.8	0.10	<0.1	7.5	3.7
CPS116		6.7	3.6	4.6	2.6	73.0	14.2	0.4	<0.5	0.1	1.4	0.10	<0.1	30.7	2.8
CPS117		7.9	4.4	3.2	4.8	9.5	11.8	0.4	<0.5	<0.1	1.7	0.05	<0.1	20.4	1.2
CPS118		8.4	4.3	5.1	4.7	78.4	16.0	0.4	<0.5	0.1	1.8	0.11	<0.1	19.8	3.3
CPS119		9.6	4.8	7.4	4.4	151.5	21.5	0.6	<0.5	0.3	1.9	0.12	<0.1	33.9	4.0
CPS120		11.1	5.4	6.2	3.8	41.8	20.7	0.7	<0.5	0.2	2.3	0.11	<0.1	29.3	3.0



Australian Laboratory Services Pty. Ltd.
 32 Shand Street
 Stafford
 Brisbane QLD 4053
 Phone: +61 (7) 3243 7222 Fax: +61 (7) 3243 7218
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CERTIFICATE OF ANALYSIS PH10173276

Sample Description	Method Analyte Units LOR	ME-MS23 Mg ppm 0.01	ME-MS23 Mn ppm 0.01	ME-MS23 Mo ppb 0.5	ME-MS23 Nb ppb 0.1	ME-MS23 Nd ppb 0.1	ME-MS23 Ni ppb 1	ME-MS23 Pb ppb 1	ME-MS23 Pb 206 ppb 1	ME-MS23 Pb 207 ppb 1	ME-MS23 Pb 208 ppb 1	ME-MS23 Pd ppb 0.1	ME-MS23 Pr ppb 0.1	ME-MS23 Rb ppb 0.1	ME-MS23 Re ppb 0.1	ME-MS23 Sb ppb 0.5
CPS81		57.7	31.8	2.1	0.4	489	570	60	15	12	33	4.8	91.5	193.5	<0.1	<0.5
CPS82		28.7	4.08	1.5	<0.1	40.8	24	16	4	3	8	0.3	7.0	110.5	<0.1	<0.5
CPS83		230	4.89	1.3	<0.1	30.8	83	19	4	4	10	0.3	4.4	164.5	<0.1	<0.5
CPS84		281	4.27	1.2	<0.1	22.9	107	27	7	6	15	0.3	3.1	160.5	<0.1	<0.5
CPS85		59.6	33.1	2.4	0.9	499	585	66	16	13	36	5.9	92.9	207	<0.1	<0.5
CPS86		29.7	4.15	1.6	<0.1	41.8	25	17	4	3	9	0.3	6.9	114.5	<0.1	<0.5
CPS87		258	6.01	1.5	<0.1	33.0	97	24	6	5	13	0.3	4.5	182.0	<0.1	<0.5
CPS88		159.0	5.78	2.8	<0.1	29.2	118	2	1	<1	1	0.2	4.4	273	<0.1	<0.5
CPS89		101.0	4.73	1.8	0.1	121.0	98	9	2	2	5	0.6	19.3	388	<0.1	<0.5
CPS90		82.2	4.65	1.9	<0.1	113.5	94	43	10	9	23	0.5	18.0	326	<0.1	<0.5
CPS91		84.3	11.00	1.4	0.2	301	93	26	6	5	14	1.3	53.6	379	<0.1	<0.5
CPS92		159.5	6.48	1.4	<0.1	62.3	104	16	4	3	9	0.6	10.9	310	<0.1	<0.5
CPS93		104.5	6.28	1.3	<0.1	36.6	73	30	7	6	16	0.3	6.1	330	<0.1	<0.5
CPS94		74.6	10.70	2.1	<0.1	67.7	116	12	3	2	6	0.7	13.4	426	<0.1	<0.5
CPS95		24.4	19.70	1.5	0.1	118.5	159	29	7	6	16	1.5	26.7	124.5	<0.1	<0.5
CPS96		283	2.45	1.6	<0.1	11.5	94	6	1	1	3	0.2	1.2	251	<0.1	<0.5
CPS97		83.6	20.7	1.8	0.1	361	152	25	6	5	14	2.3	83.2	506	<0.1	<0.5
CPS98		114.0	13.95	1.0	0.1	95.6	120	61	14	13	33	1.0	19.3	357	<0.1	<0.5
CPS99		144.0	8.20	1.2	<0.1	46.2	118	57	13	12	31	0.5	8.3	334	<0.1	<0.5
CPS100		45.6	16.05	2.8	0.1	66.0	94	9	2	2	5	1.1	13.5	309	<0.1	<0.5
CPS101		89.1	5.14	0.9	<0.1	36.2	64	22	5	4	12	0.3	6.2	288	<0.1	<0.5
CPS102		41.4	14.45	2.5	0.1	65.3	83	10	3	2	6	0.9	13.4	288	<0.1	<0.5
CPS103		18.85	4.00	1.5	<0.1	47.4	32	14	3	3	8	0.4	9.8	89.8	<0.1	<0.5
CPS104		128.5	10.55	2.0	<0.1	83.8	159	13	3	3	7	0.8	16.5	348	<0.1	<0.5
CPS105		83.9	6.22	1.7	<0.1	76.3	64	7	2	1	4	0.6	14.8	460	<0.1	<0.5
CPS106		97.2	11.40	2.2	0.1	113.5	87	10	2	2	5	0.9	21.5	361	<0.1	<0.5
CPS107		109.5	16.90	3.0	<0.1	40.5	90	13	3	3	7	0.6	7.0	449	<0.1	<0.5
CPS108		74.6	6.16	2.8	<0.1	41.2	101	26	6	5	14	0.4	7.9	195.0	<0.1	<0.5
CPS109		149.5	15.90	2.3	<0.1	107.5	151	9	2	2	5	1.1	21.4	484	<0.1	<0.5
CPS110		160.5	6.44	1.2	<0.1	20.2	81	33	8	7	18	0.2	3.0	323	<0.1	<0.5
CPS111		17.70	4.32	0.8	<0.1	36.5	25	13	3	3	7	0.4	7.8	77.5	<0.1	<0.5
CPS112		32.9	5.21	1.7	0.4	459	30	96	23	17	55	3.1	117.5	613	<0.1	<0.5
CPS113		24.0	7.28	1.7	0.5	633	28	132	32	24	75	4.0	158.0	659	<0.1	<0.5
CPS114		29.3	8.84	2.0	0.5	881	65	221	54	40	124	6.1	230	601	<0.1	<0.5
CPS115		142.5	7.44	1.8	<0.1	27.4	118	43	11	9	23	0.2	4.2	332	<0.1	<0.5
CPS116		83.0	12.50	3.1	<0.1	62.3	140	21	5	4	11	0.5	12.7	198.0	<0.1	<0.5
CPS117		30.9	2.21	1.0	<0.1	48.3	29	20	5	4	11	0.5	11.1	56.5	<0.1	<0.5
CPS118		130.5	10.95	1.8	<0.1	51.9	152	13	3	3	7	0.7	9.4	203	<0.1	<0.5
CPS119		132.5	14.55	3.0	<0.1	81.7	308	33	8	7	18	0.6	15.4	179.0	<0.1	<0.5
CPS120		64.2	16.10	2.0	0.1	78.6	98	19	5	4	10	0.8	15.6	315	<0.1	<0.5

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CERTIFICATE OF ANALYSIS PH10173276

Sample Description	Method Analyte Units LOR	ME-MS23 Sc ppb 1	ME-MS23 Se ppb 2	ME-MS23 Sm ppb 0.1	ME-MS23 Sn ppb 0.2	ME-MS23 Sr ppb 1	ME-MS23 Ta ppb 1	ME-MS23 Tb ppb 0.1	ME-MS23 Te ppb 1	ME-MS23 Th ppb 0.02	ME-MS23 Ti ppb 5	ME-MS23 Tl ppb 0.5	ME-MS23 Tm ppb 0.1	ME-MS23 U ppb 0.1	ME-MS23 W ppb 1	ME-MS23 Y ppb 0.1
CPS81		248	28	127.0	1.7	68	<1	19.5	<1	56.2	313	0.5	6.6	31.5	1	416
CPS82		6	16	9.9	10.5	91	<1	1.2	1	2.35	33	<0.5	0.2	4.6	<1	23.8
CPS83		6	3	9.3	0.4	376	<1	1.0	1	1.11	18	<0.5	0.2	1.9	<1	22.2
CPS84		7	11	7.6	0.2	470	<1	0.9	2	0.68	21	<0.5	0.2	1.3	<1	22.5
CPS85		258	40	130.0	2.7	71	<1	20.6	<1	60.9	549	0.5	7.2	33.6	1	444
CPS86		6	20	10.6	11.1	94	<1	1.3	<1	2.35	25	<0.5	0.2	4.9	<1	23.9
CPS87		6	38	10.8	1.7	417	<1	1.2	<1	1.17	48	<0.5	0.2	2.2	<1	25.7
CPS88		6	25	8.2	1.8	165	<1	1.0	1	1.46	30	0.5	0.2	2.2	<1	24.1
CPS89		5	22	32.5	4.0	196	<1	3.3	1	8.86	28	0.7	0.5	8.5	<1	53.6
CPS90		6	20	29.0	1.4	183	<1	3.0	<1	6.64	42	0.5	0.4	6.9	<1	50.3
CPS91		14	41	72.9	2.1	193	<1	7.2	1	28.1	123	0.8	1.1	14.8	<1	124.0
CPS92		10	8	18.5	1.4	212	<1	2.5	1	3.20	28	<0.5	0.5	6.8	<1	46.2
CPS93		8	4	10.5	3.0	202	<1	1.4	1	1.78	36	<0.5	0.2	5.2	<1	24.6
CPS94		9	<2	18.7	4.3	140	<1	2.3	1	6.12	38	0.6	0.4	15.4	<1	37.1
CPS95		28	9	29.7	1.9	117	<1	4.6	1	12.60	105	<0.5	1.2	15.9	<1	95.1
CPS96		4	9	3.6	0.2	288	<1	0.6	1	0.05	20	<0.5	0.1	0.9	<1	12.1
CPS97		15	45	94.1	1.1	292	<1	12.0	1	25.6	60	0.8	2.5	19.7	<1	193.0
CPS98		15	25	26.3	0.9	242	<1	3.6	1	7.02	66	<0.5	0.7	11.7	<1	66.5
CPS99		8	15	13.3	0.6	354	<1	1.8	2	2.58	37	<0.5	0.3	4.6	<1	32.8
CPS100		12	8	17.3	2.8	137	<1	2.2	<1	11.70	71	0.6	0.4	17.3	<1	38.0
CPS101		6	23	10.0	1.6	166	<1	1.3	<1	1.42	41	<0.5	0.2	4.0	<1	22.9
CPS102		11	<2	17.0	3.8	129	<1	2.2	1	10.45	70	0.7	0.4	14.9	<1	36.9
CPS103		6	36	11.1	9.1	98	<1	1.6	<1	2.85	37	<0.5	0.3	4.6	<1	27.4
CPS104		10	29	24.3	0.9	221	<1	3.4	1	5.58	38	0.5	0.7	9.0	<1	62.2
CPS105		6	4	20.7	2.1	216	<1	2.3	1	7.52	30	1.0	0.3	10.4	<1	29.3
CPS106		10	21	33.3	1.3	177	<1	4.2	1	9.87	52	0.6	0.6	12.3	<1	67.2
CPS107		7	23	12.6	2.5	195	<1	1.7	1	4.75	34	0.8	0.3	8.6	<1	25.2
CPS108		4	29	10.9	1.9	95	<1	1.5	<1	2.97	42	0.7	0.3	2.0	<1	30.2
CPS109		12	28	30.7	0.3	312	<1	4.1	3	9.13	57	0.5	0.7	16.7	<1	69.5
CPS110		5	13	5.5	0.7	398	<1	0.8	4	0.38	33	<0.5	0.1	3.2	<1	13.3
CPS111		5	<2	8.2	9.0	73	<1	1.3	1	2.45	43	<0.5	0.3	3.2	<1	24.3
CPS112		28	27	104.0	10.1	175	<1	11.1	1	100.0	131	0.8	1.9	18.8	<1	137.0
CPS113		39	35	147.0	15.4	171	<1	15.2	<1	137.0	132	0.8	2.7	21.5	<1	174.5
CPS114		67	35	211	4.9	89	<1	23.4	1	172.0	147	0.8	4.6	32.0	1	306
CPS115		6	20	7.6	1.1	297	<1	1.0	8	0.59	28	<0.5	0.2	4.8	<1	18.4
CPS116		8	15	14.7	1.0	345	<1	1.9	8	3.77	42	0.5	0.4	9.1	<1	36.7
CPS117		10	21	11.1	7.9	30	<1	1.9	<1	4.33	47	<0.5	0.5	4.5	<1	38.3
CPS118		11	25	15.1	1.9	518	<1	2.3	<1	3.74	50	<0.5	0.4	7.4	<1	45.9
CPS119		12	38	22.4	<0.2	517	<1	2.8	1	3.15	21	1.0	0.5	12.2	<1	51.0
CPS120		14	42	21.1	4.0	193	<1	2.9	2	6.58	63	<0.5	0.6	9.7	<1	51.2



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 Stafford
 Brisbane QLD 4053
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Sample Description	Method Analyte Units LOR	ME-MS23 Yb ppb 0.1	ME-MS23 Zn ppb 10	ME-MS23 Zr ppb 0.1	WEI-21 Recvd Wt. kg 0.02
CPS81		39.1	460	30.0	
CPS82		1.2	180	1.7	
CPS83		1.0	230	1.3	
CPS84		1.1	340	1.0	
CPS85		42.8	480	37.5	
CPS86		1.1	180	6.9	
CPS87		1.2	250	2.0	
CPS88		1.2	70	0.9	
CPS89		2.6	120	3.8	
CPS90		2.6	120	2.3	
CPS91		6.5	90	8.8	
CPS92		2.6	170	1.8	
CPS93		1.5	240	1.5	
CPS94		2.2	130	2.4	
CPS95		7.4	150	5.9	
CPS96		0.7	260	0.4	
CPS97		14.6	350	6.7	
CPS98		4.3	490	3.4	
CPS99		1.9	430	1.8	
CPS100		2.6	120	5.4	
CPS101		1.4	190	1.3	
CPS102		2.5	120	4.6	
CPS103		1.5	160	1.7	
CPS104		3.6	310	2.9	
CPS105		1.7	170	2.9	
CPS106		3.7	240	4.3	
CPS107		1.5	200	2.5	
CPS108		1.7	140	1.5	
CPS109		4.2	220	4.9	
CPS110		0.8	220	0.6	
CPS111		1.4	120	1.5	
CPS112		11.6	160	17.0	
CPS113		17.0	170	18.7	
CPS114		27.8	210	30.9	
CPS115		1.1	240	1.0	
CPS116		2.2	210	1.9	
CPS117		3.1	100	1.9	
CPS118		2.6	330	2.5	
CPS119		2.7	140	1.6	
CPS120		3.3	360	3.5	



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Sample Description	Method Analyte Units LOR	pH-MS23 Final pH Unity 0.1	ME-MS23 Ag ppb 0.1	ME-MS23 As ppb 2	ME-MS23 Au ppb 0.02	ME-MS23 Ba ppb 10	ME-MS23 Be ppb 0.2	ME-MS23 Bi ppb 3	ME-MS23 Br ppm 0.05	ME-MS23 Ca ppm 0.2	ME-MS23 Cd ppb 1	ME-MS23 Ce ppb 0.1	ME-MS23 Co ppb 0.3	ME-MS23 Cr ppb 1	ME-MS23 Cs ppb 0.1	ME-MS23 Cu ppb 1
CPS121		7.7	5.1	6	0.08	1750	0.3	<3	0.25	110.5	2	56.4	616	1	1.2	1190
CPS122		9.0	0.5	<2	0.08	1710	0.4	<3	0.13	20.7	1	452	56.7	3	6.2	194
CPS123		9.0	1.0	2	0.11	1870	0.6	<3	0.16	51.1	1	265	259	4	3.6	643
CPS124		9.0	0.6	<2	0.04	2230	<0.2	<3	<0.05	80.8	2	41.3	187.0	1	1.0	805
CPS125		9.0	0.6	<2	0.06	2540	0.4	<3	0.08	91.7	2	41.1	168.0	2	1.0	820
CPS126		8.3	1.5	5	0.09	1780	0.2	<3	0.13	98.0	1	50.2	400	1	0.6	696
CPS127		8.7	1.7	<2	0.09	1200	0.6	<3	0.11	45.8	2	298	280	4	2.8	629
CPS128		7.7	0.8	4	0.06	2790	5.5	<3	0.17	62.8	2	1545	99.4	10	8.1	336
CPS129		8.7	0.7	3	0.10	1980	0.6	<3	0.18	34.1	1	411	86.4	6	6.5	247
CPS130		8.7	1.2	<2	0.08	2030	0.4	<3	0.19	55.2	1	286	283	5	3.9	724
CPS131		9.0	0.5	<2	0.03	2500	<0.2	<3	0.10	111.0	2	18.4	193.5	1	0.8	663
CPS132		9.0	0.8	3	0.08	2180	<0.2	<3	0.11	70.5	1	59.1	101.5	2	1.2	466
CPS133		9.0	0.8	<2	0.04	1850	0.3	<3	0.14	32.2	1	299	111.5	6	5.4	319
CPS134		9.0	1.1	3	0.10	2390	<0.2	<3	0.22	110.0	1	34.0	154.0	1	0.5	678
CPS135		9.0	1.0	4	0.05	3330	0.3	<3	0.10	88.8	1	19.5	133.5	2	0.5	574
CPS136		9.0	1.5	14	0.04	2190	0.3	<3	0.40	181.0	1	10.7	94.9	2	0.5	761
CPS137		9.0	3.5	14	0.08	2660	0.3	<3	0.49	194.0	2	19.6	261	3	0.8	1560
CPS138		9.0	0.4	4	0.05	1350	0.6	<3	0.19	38.2	1	157.0	78.3	4	5.1	267
CPS139		9.0	0.4	4	0.06	1190	1.2	<3	0.13	4.8	<1	582	25.5	6	7.0	157
CPS140		9.0	0.6	<2	0.02	480	0.3	<3	0.11	47.7	<1	70.4	119.0	1	4.2	647
CPS141		9.0	0.6	8	0.07	2360	0.4	<3	0.09	125.0	2	14.5	99.5	1	0.6	769
CPS142		9.0	2.2	2	0.12	1220	0.7	<3	0.13	48.1	2	440	438	4	2.8	1780
CPS143		9.0	2.1	5	0.44	680	0.2	<3	0.14	116.0	3	59.5	269	1	2.6	1890
CPS144		9.0	0.6	3	0.03	1720	0.3	<3	0.06	135.0	1	21.6	98.9	<1	0.6	769
CPS145		9.0	0.5	5	0.03	1980	0.4	<3	0.09	107.5	2	23.2	136.0	1	0.9	567
CPS146		9.0	0.9	3	0.04	2250	0.4	<3	0.09	131.5	2	32.0	177.0	1	1.1	746
CPS147		9.0	2.1	8	0.08	1180	0.4	<3	0.10	127.5	2	37.0	96.8	2	3.6	1330
CPS148		9.0	7.2	8	0.06	1430	0.5	<3	0.16	149.5	6	60.6	555	1	1.6	2570
CPS149		9.0	1.0	<2	0.03	1130	0.3	<3	0.09	65.2	1	119.5	289	1	1.5	1180
CPS150		9.0	1.4	6	0.08	1080	0.4	<3	0.14	53.3	2	124.0	434	3	2.1	625
CPS151		9.0	0.8	4	0.04	1630	0.3	<3	0.06	77.5	1	116.0	231	1	1.0	789
CPS152		7.7	5.1	6	0.08	1100	0.4	<3	0.17	76.1	2	175.0	480	<1	1.9	1340
CPS153		7.9	5.2	4	0.06	760	0.6	<3	0.16	57.9	2	235	474	1	2.3	1810
CPS154		9.0	0.7	6	0.05	960	0.4	<3	0.12	51.4	1	60.0	219	1	1.5	821
CPS155		8.3	3.0	4	0.03	1000	0.2	<3	0.16	69.7	3	109.0	825	2	2.1	848
CPS156		9.0	0.7	<2	0.07	870	0.5	<3	0.10	49.3	1	241	85.8	2	4.6	351
CPS157		7.9	3.1	4	0.13	980	0.2	<3	0.20	52.8	2	103.0	536	<1	1.6	927
CPS158		9.0	1.9	4	0.04	780	0.5	<3	0.16	71.5	1	84.0	348	2	2.4	1690
CPS159		8.3	3.0	8	0.23	790	0.9	<3	0.21	65.8	5	187.0	293	2	2.9	2740
CPS160		8.5	3.3	3	0.09	1210	0.3	<3	0.14	81.7	2	103.0	615	1	1.2	998

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Sample Description	Method Analyte Units LOR	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23
		Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Hg	Ho	I	In	La	Li
		ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb
		0.1	0.1	0.1	0.1	0.5	0.1	0.1	0.5	0.1	0.1	0.01	0.1	0.1	0.2
CPS121		13.4	6.6	8.1	2.2	61.3	25.9	0.6	<0.5	0.3	2.8	0.24	<0.1	22.4	3.9
CPS122		28.7	13.6	16.9	9.6	60.6	67.6	2.4	0.7	0.2	5.2	0.10	<0.1	155.0	<0.2
CPS123		17.9	8.6	11.0	7.6	63.9	41.0	1.5	0.7	0.1	3.4	0.13	<0.1	95.5	0.8
CPS124		4.6	2.4	3.1	4.0	75.5	9.1	0.2	<0.5	0.1	1.0	0.03	<0.1	14.7	4.0
CPS125		5.0	2.3	3.6	4.3	89.5	10.2	0.3	<0.5	0.1	1.0	0.05	<0.1	15.0	3.4
CPS126		5.9	3.0	3.9	3.8	63.1	12.4	0.4	<0.5	0.1	1.2	0.11	<0.1	13.5	1.8
CPS127		27.4	12.2	14.5	8.5	42.0	53.5	1.6	0.7	0.2	5.1	0.10	<0.1	78.5	1.1
CPS128		87.6	44.0	46.2	23.2	101.0	195.0	7.1	1.8	0.2	16.3	0.16	0.1	515	0.7
CPS129		25.4	11.7	16.8	8.2	70.4	66.3	2.5	1.0	0.2	4.6	0.23	<0.1	160.5	0.4
CPS130		18.4	9.1	11.0	8.0	72.0	41.8	1.3	0.7	0.2	3.5	0.14	<0.1	101.5	1.1
CPS131		1.9	1.1	2.0	2.2	89.2	4.4	0.1	<0.5	0.1	0.4	0.04	<0.1	4.8	2.0
CPS132		4.1	2.1	3.4	2.3	77.3	10.9	0.4	<0.5	0.2	0.8	0.10	<0.1	24.0	1.7
CPS133		20.5	9.3	14.2	6.6	67.9	52.5	2.0	0.8	0.1	3.7	0.15	<0.1	120.0	0.6
CPS134		5.5	2.6	3.8	2.7	85.9	11.6	0.4	<0.5	0.1	1.1	0.16	<0.1	16.5	1.7
CPS135		2.6	1.5	2.5	2.5	118.0	5.3	0.2	<0.5	<0.1	0.6	0.11	<0.1	6.9	3.6
CPS136		2.7	1.4	2.0	2.1	82.0	5.3	0.1	<0.5	0.2	0.6	0.25	<0.1	4.4	3.4
CPS137		3.2	1.7	2.3	4.0	99.7	5.8	0.2	<0.5	0.3	0.7	0.41	<0.1	4.7	3.2
CPS138		9.2	4.1	5.6	9.7	53.1	23.1	0.8	0.5	0.1	1.6	0.08	<0.1	45.8	0.3
CPS139		20.5	10.0	11.5	11.7	50.0	54.9	2.1	0.7	0.2	3.5	0.15	0.1	189.0	0.2
CPS140		14.5	6.1	7.6	2.2	17.6	28.3	0.8	<0.5	0.3	2.5	0.10	<0.1	57.6	0.2
CPS141		2.0	1.1	2.0	2.0	90.7	4.7	0.1	<0.5	0.3	0.5	0.03	<0.1	5.4	2.0
CPS142		24.6	10.7	13.6	6.9	46.7	65.3	1.9	0.6	0.2	4.2	0.09	<0.1	141.0	1.6
CPS143		9.7	4.3	5.3	3.6	25.6	20.7	0.6	<0.5	0.3	1.8	0.17	<0.1	23.0	0.5
CPS144		2.6	1.4	1.9	2.9	64.9	5.0	0.2	<0.5	0.3	0.5	0.02	<0.1	5.5	0.9
CPS145		3.0	1.4	2.4	2.5	75.3	6.4	0.2	<0.5	0.1	0.6	0.04	<0.1	8.1	3.1
CPS146		4.9	2.3	3.2	3.4	88.5	9.6	0.3	<0.5	0.2	1.0	0.05	<0.1	12.4	4.3
CPS147		6.8	3.1	3.4	3.3	44.3	12.4	0.4	<0.5	0.3	1.3	0.17	<0.1	18.3	1.6
CPS148		12.0	5.4	6.2	3.7	53.3	21.7	0.5	<0.5	0.3	2.2	0.12	<0.1	18.6	1.8
CPS149		11.6	5.0	5.8	3.2	44.2	22.6	0.6	<0.5	0.2	2.0	0.06	<0.1	33.4	0.7
CPS150		13.5	6.0	6.6	5.1	40.2	26.2	0.6	<0.5	0.2	2.5	0.12	<0.1	35.3	0.6
CPS151		17.6	7.8	7.6	3.8	61.7	31.8	0.7	<0.5	0.1	3.3	0.09	<0.1	40.3	0.4
CPS152		42.2	19.2	18.5	4.2	41.2	70.8	1.4	0.7	0.4	7.7	0.22	<0.1	55.4	1.5
CPS153		62.7	28.4	28.6	4.9	27.9	102.0	2.2	0.8	0.4	11.4	0.23	<0.1	85.1	0.9
CPS154		9.1	3.8	4.6	2.4	35.5	17.5	0.4	<0.5	0.2	1.7	0.12	<0.1	16.8	0.6
CPS155		21.5	10.8	9.4	7.3	37.8	35.0	0.8	0.5	0.3	4.3	0.22	<0.1	38.1	1.8
CPS156		31.1	13.3	14.6	4.3	33.0	63.1	1.8	0.7	0.2	5.4	0.17	<0.1	97.2	<0.2
CPS157		21.3	10.3	10.3	2.6	37.4	38.8	0.8	<0.5	0.3	4.1	0.26	<0.1	31.9	1.9
CPS158		17.4	8.0	8.9	3.3	29.3	32.7	0.9	<0.5	0.1	3.2	0.26	<0.1	43.9	0.6
CPS159		59.1	27.3	24.6	5.4	31.0	96.1	2.1	0.8	0.5	11.0	0.24	<0.1	84.0	1.6
CPS160		12.8	6.2	6.2	4.3	45.5	22.5	0.6	<0.5	0.5	2.5	0.13	<0.1	26.3	1.8



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 32 Shand Street
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 Brisbane QLD 4053
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Sample Description	Method Analyte Units LOR	ME-MS23 Mg ppm 0.01	ME-MS23 Mn ppm 0.01	ME-MS23 Mo ppb 0.5	ME-MS23 Nb ppb 0.1	ME-MS23 Nd ppb 0.1	ME-MS23 Ni ppb 1	ME-MS23 Pb ppb 1	ME-MS23 Pb 206 ppb 1	ME-MS23 Pb 207 ppb 1	ME-MS23 Pb 208 ppb 1	ME-MS23 Pd ppb 0.1	ME-MS23 Pr ppb 0.1	ME-MS23 Rb ppb 0.1	ME-MS23 Re ppb 0.1	ME-MS23 Sb ppb 0.5
CPS121		169.5	11.00	1.4	<0.1	81.1	125	32	8	6	17	0.8	13.9	358	<0.1	<0.5
CPS122		20.3	7.05	1.6	0.2	359	14	57	14	10	32	1.8	83.3	652	<0.1	0.5
CPS123		45.1	15.25	1.9	0.1	185.5	78	14	4	3	8	1.7	41.8	525	<0.1	<0.5
CPS124		50.3	6.17	2.3	<0.1	36.1	59	18	4	4	10	0.4	6.7	188.5	<0.1	<0.5
CPS125		57.8	5.41	2.1	0.1	39.2	64	14	3	3	8	0.5	7.3	220	<0.1	<0.5
CPS126		130.0	9.49	2.2	<0.1	42.5	113	18	4	4	10	0.5	7.3	258	<0.1	<0.5
CPS127		60.5	7.98	2.5	0.1	211	77	32	8	6	18	1.7	43.1	320	<0.1	<0.5
CPS128		41.4	10.00	1.2	0.5	951	56	134	33	25	75	4.2	247	782	<0.1	<0.5
CPS129		35.9	5.89	1.7	0.3	340	64	32	8	6	18	2.1	79.1	618	<0.1	<0.5
CPS130		50.2	16.35	1.9	0.2	190.5	87	15	4	3	8	1.8	44.4	585	<0.1	<0.5
CPS131		77.0	4.98	3.5	<0.1	16.3	61	15	4	3	8	0.3	2.5	199.0	<0.1	<0.5
CPS132		69.4	3.02	2.0	0.1	51.1	40	11	3	2	6	0.4	10.7	219	<0.1	<0.5
CPS133		39.9	6.48	1.7	0.3	273	36	28	7	5	16	1.8	60.8	583	<0.1	<0.5
CPS134		101.0	7.11	2.4	<0.1	45.8	74	7	2	1	4	0.3	8.3	185.0	<0.1	<0.5
CPS135		69.0	7.18	2.4	<0.1	20.2	51	10	2	2	5	0.3	3.3	138.5	<0.1	<0.5
CPS136		116.5	2.85	6.9	<0.1	17.2	71	11	3	2	6	0.3	2.4	146.0	<0.1	<0.5
CPS137		149.0	13.80	5.6	0.1	16.7	141	10	2	2	5	0.3	2.3	201	<0.1	<0.5
CPS138		32.4	8.15	2.2	0.5	118.5	25	26	6	5	15	1.4	22.9	399	<0.1	<0.5
CPS139		13.40	1.09	1.6	0.4	324	16	135	34	26	74	2.1	80.5	545	<0.1	<0.5
CPS140		22.3	4.35	3.3	0.1	125.5	48	20	5	4	11	0.9	24.8	324	<0.1	<0.5
CPS141		70.0	3.23	3.8	<0.1	18.5	68	19	5	4	10	0.2	2.8	174.0	<0.1	<0.5
CPS142		129.5	9.67	4.3	0.2	308	247	57	14	11	32	1.8	61.8	346	<0.1	<0.5
CPS143		83.9	6.64	2.7	<0.1	75.8	132	8	2	2	4	0.9	13.0	471	<0.1	<0.5
CPS144		113.5	5.09	2.7	<0.1	18.6	71	12	3	2	6	0.3	3.0	163.0	<0.1	<0.5
CPS145		66.3	4.56	2.2	<0.1	25.1	63	19	5	4	10	0.3	4.1	175.5	<0.1	<0.5
CPS146		71.6	6.72	2.9	<0.1	35.3	90	20	5	4	11	0.5	5.9	193.0	<0.1	<0.5
CPS147		71.0	9.43	3.1	0.1	47.4	120	15	4	3	8	0.6	8.4	181.0	<0.1	<0.5
CPS148		200	13.10	6.6	<0.1	66.7	338	17	4	4	9	0.8	10.5	267	<0.1	<0.5
CPS149		78.5	9.12	2.9	<0.1	91.8	117	22	5	5	12	1.0	16.8	237	<0.1	<0.5
CPS150		72.8	19.40	2.6	0.1	94.9	108	16	4	3	8	1.2	17.3	370	<0.1	<0.5
CPS151		102.0	7.40	1.7	<0.1	114.0	114	32	8	7	17	1.1	20.6	209	<0.1	<0.5
CPS152		173.0	16.10	1.8	<0.1	214	192	19	5	4	10	2.3	35.5	383	<0.1	<0.5
CPS153		147.5	16.15	1.4	0.1	330	252	14	4	3	8	2.8	57.3	405	<0.1	<0.5
CPS154		120.0	3.83	1.3	<0.1	61.2	78	10	3	2	5	0.7	10.1	282	<0.1	<0.5
CPS155		139.0	27.4	2.3	0.1	111.0	195	8	2	2	4	1.5	20.0	351	<0.1	<0.5
CPS156		50.9	5.41	1.5	0.1	278	56	16	4	3	9	1.8	52.4	422	<0.1	<0.5
CPS157		208	14.50	1.3	<0.1	123.5	128	13	3	3	7	1.3	20.3	371	<0.1	<0.5
CPS158		118.5	10.85	2.4	<0.1	130.0	120	7	2	2	4	1.1	23.6	284	<0.1	<0.5
CPS159		151.0	12.95	2.5	0.1	292	386	31	8	7	17	2.9	50.3	497	<0.1	<0.5
CPS160		124.5	17.90	2.0	<0.1	76.4	163	22	5	5	12	1.2	13.4	301	<0.1	<0.5



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Sample Description	Method Analyte Units LOR	ME-MS23 Sc ppb 1	ME-MS23 Se ppb 2	ME-MS23 Sm ppb 0.1	ME-MS23 Sn ppb 0.2	ME-MS23 Sr ppb 1	ME-MS23 Ta ppb 1	ME-MS23 Tb ppb 0.1	ME-MS23 Te ppb 1	ME-MS23 Th ppb 0.02	ME-MS23 Ti ppb 5	ME-MS23 Tl ppb 0.5	ME-MS23 Tm ppb 0.1	ME-MS23 U ppb 0.1	ME-MS23 W ppb 1	ME-MS23 Y ppb 0.1
CPS121		13	31	25.9	0.4	365	<1	3.5	2	2.92	32	<0.5	0.7	8.2	<1	70.5
CPS122		13	16	83.1	9.9	145	<1	8.4	<1	40.3	54	1.3	1.3	15.3	<1	100.0
CPS123		12	10	46.7	2.0	156	<1	5.2	1	23.8	54	1.0	0.8	20.0	<1	73.6
CPS124		6	<2	9.2	3.5	168	<1	1.3	2	2.69	38	<0.5	0.2	10.2	<1	23.6
CPS125		6	10	10.4	2.9	208	<1	1.4	<1	3.61	39	<0.5	0.2	11.5	<1	25.3
CPS126		6	34	12.0	0.3	267	<1	1.7	2	2.22	35	<0.5	0.3	3.7	<1	32.0
CPS127		15	27	58.5	2.4	61	<1	7.3	1	18.80	63	0.6	1.2	16.2	<1	111.0
CPS128		49	38	224	4.0	352	<1	24.7	1	101.5	143	0.9	4.6	24.7	1	315
CPS129		9	12	80.5	9.4	225	<1	8.0	1	33.2	64	1.5	1.1	20.0	<1	92.9
CPS130		12	11	48.0	2.1	169	<1	5.3	<1	24.3	83	1.1	0.9	21.3	<1	75.7
CPS131		4	8	4.3	7.9	188	<1	0.6	1	1.26	29	<0.5	0.1	5.5	<1	11.2
CPS132		5	12	11.7	3.5	165	<1	1.4	1	3.69	34	<0.5	0.2	6.7	<1	20.2
CPS133		12	11	63.7	4.1	185	<1	6.4	1	23.4	99	0.9	0.8	19.4	<1	78.5
CPS134		6	10	12.2	0.7	277	<1	1.5	2	1.94	33	<0.5	0.3	5.3	<1	30.4
CPS135		4	18	5.3	4.1	152	<1	0.8	<1	1.06	48	<0.5	0.2	6.6	<1	16.4
CPS136		4	20	4.7	2.3	211	<1	0.7	<1	0.47	34	<0.5	0.1	7.0	<1	15.4
CPS137		4	20	5.1	0.2	149	<1	0.8	1	0.61	36	0.5	0.2	5.0	<1	18.6
CPS138		6	3	25.2	12.3	148	<1	2.6	<1	19.85	51	<0.5	0.4	10.4	<1	33.1
CPS139		20	19	60.4	42.7	31	<1	5.8	<1	60.5	79	0.7	1.1	12.9	<1	65.9
CPS140		12	<2	26.2	11.5	93	<1	3.6	<1	5.25	58	1.0	0.6	8.6	<1	61.3
CPS141		3	20	4.5	4.7	105	<1	0.6	<1	0.08	18	<0.5	0.1	6.0	<1	11.3
CPS142		8	<2	68.2	1.5	79	<1	7.0	<1	32.0	72	0.5	1.0	21.0	<1	89.9
CPS143		8	<2	20.4	2.3	75	<1	2.5	<1	5.17	52	0.6	0.4	16.6	<1	40.8
CPS144		4	<2	4.6	<0.2	122	<1	0.7	<1	0.56	25	<0.5	0.1	1.9	<1	14.3
CPS145		4	<2	6.2	4.2	126	<1	0.8	<1	0.74	20	<0.5	0.1	6.9	<1	15.5
CPS146		5	<2	9.0	2.3	151	<1	1.2	<1	1.60	32	<0.5	0.2	9.1	<1	24.9
CPS147		4	16	11.7	1.8	56	<1	1.6	<1	3.16	24	0.6	0.3	2.3	<1	32.5
CPS148		10	34	19.7	<0.2	149	<1	2.8	1	3.85	24	0.6	0.5	10.8	<1	57.7
CPS149		9	<2	21.7	2.7	123	<1	2.9	<1	6.09	35	<0.5	0.5	9.5	<1	47.7
CPS150		11	8	24.1	4.7	90	<1	3.3	<1	10.10	38	0.7	0.6	12.0	<1	53.4
CPS151		14	21	28.0	3.5	192	<1	4.1	<1	4.35	35	<0.5	0.8	7.7	<1	77.3
CPS152		19	22	63.8	1.5	159	<1	9.4	<1	7.81	42	<0.5	1.9	14.8	<1	172.0
CPS153		22	21	94.3	0.5	114	<1	13.8	<1	11.05	59	<0.5	3.0	20.3	<1	239
CPS154		8	10	16.5	2.3	99	<1	2.2	<1	2.46	30	<0.5	0.4	5.7	<1	40.7
CPS155		17	12	29.8	0.6	111	<1	4.7	<1	6.94	52	<0.5	1.1	13.1	<1	96.4
CPS156		11	28	65.0	4.0	60	<1	7.7	<1	18.95	52	0.7	1.2	18.7	<1	112.0
CPS157		16	14	35.3	<0.2	118	<1	5.0	1	6.67	30	<0.5	1.1	13.0	<1	95.2
CPS158		13	<2	31.3	1.0	145	<1	4.1	<1	6.11	45	<0.5	0.8	7.0	<1	79.4
CPS159		17	34	83.7	1.1	120	<1	12.8	<1	11.20	46	0.6	2.7	33.8	<1	238
CPS160		12	16	20.0	1.2	133	<1	3.0	<1	5.82	39	<0.5	0.6	11.5	<1	58.2



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Sample Description	Method Analyte Units LOR	ME-MS23 Yb ppb 0.1	ME-MS23 Zn ppb 10	ME-MS23 Zr ppb 0.1	WEI-21 Recvd Wt. kg 0.02
CPS121		3.8	570	2.4	
CPS122		7.9	90	7.1	
CPS123		5.0	120	8.6	
CPS124		1.4	210	1.7	
CPS125		1.5	230	2.3	
CPS126		1.7	180	1.6	
CPS127		7.1	240	7.1	
CPS128		27.9	240	16.5	
CPS129		6.5	140	10.7	
CPS130		5.3	130	8.7	
CPS131		0.6	240	0.9	
CPS132		1.2	90	1.5	
CPS133		5.2	80	7.7	
CPS134		1.7	120	1.4	
CPS135		0.9	100	0.9	
CPS136		0.8	130	0.9	
CPS137		1.1	120	1.3	
CPS138		2.4	70	7.8	
CPS139		6.7	70	10.8	
CPS140		3.3	30	2.2	
CPS141		0.6	140	0.5	
CPS142		5.7	200	8.0	
CPS143		2.5	80	3.7	
CPS144		0.8	100	1.0	
CPS145		0.9	250	1.0	
CPS146		1.4	300	1.6	
CPS147		1.9	120	2.1	
CPS148		3.2	140	2.3	
CPS149		2.8	210	3.2	
CPS150		3.5	200	5.1	
CPS151		4.5	220	3.2	
CPS152		11.2	380	5.0	
CPS153		16.3	710	6.1	
CPS154		2.1	150	2.0	
CPS155		6.4	290	5.7	
CPS156		7.4	60	6.5	
CPS157		6.1	300	3.8	
CPS158		4.8	150	2.9	
CPS159		14.9	450	5.6	
CPS160		3.9	190	4.5	



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Sample Description	Method Analyte Units LOR	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23	ME-MS23
		Dy	Er	Eu	Fe	Ga	Gd	Ge	Hf	Hg	Ho	I	In	La	Li	Lu
		ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppm	ppb	ppb	ppb	ppb
		0.1	0.1	0.1	0.1	0.5	0.1	0.1	0.5	0.1	0.1	0.01	0.1	0.1	0.2	0.1
CPS161		13.1	5.6	6.5	2.0	60.0	23.6	0.4	<0.5	0.4	2.3	0.20	<0.1	12.5	1.7	0.4
CPS162		22.0	9.8	11.3	3.4	26.0	38.9	1.1	<0.5	0.2	3.9	0.18	<0.1	42.5	0.8	0.8
CPS163		4.6	2.2	2.5	1.9	53.5	8.4	0.2	<0.5	0.2	0.9	0.10	<0.1	6.2	3.2	0.2
CPS164		18.3	8.5	7.7	4.6	53.0	28.7	0.6	<0.5	0.3	3.5	0.24	<0.1	23.4	2.1	0.7
CPS165		12.1	5.2	6.2	1.7	54.3	22.6	0.5	<0.5	0.9	2.2	0.19	<0.1	14.0	1.2	0.4
CPS166		9.9	4.5	4.7	1.9	32.1	17.0	0.3	<0.5	0.3	1.9	0.14	<0.1	11.1	2.0	0.4
CPS167		19.5	8.1	9.9	4.5	34.4	39.0	1.0	0.6	0.3	3.4	0.19	<0.1	41.6	0.5	0.6
CPS168		25.9	11.4	12.7	4.5	43.5	47.0	1.3	0.5	0.2	4.6	0.17	<0.1	50.6	1.4	0.9
CPS169		44.9	21.6	17.5	4.9	43.3	67.2	1.4	0.7	0.3	8.7	0.35	<0.1	54.4	2.5	1.8
CPS170		16.3	6.7	8.5	3.9	32.7	33.2	0.9	0.5	0.2	2.9	0.16	<0.1	37.2	<0.2	0.5



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		Mg	Mn	Mo	Nb	Nd	Ni	Pb	Pb 206	Pb 207	Pb 208	Pd	Pr	Rb	Re	Sb
		ppm	ppm	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
		0.01	0.01	0.5	0.1	0.1	1	1	1	1	1	0.1	0.1	0.1	0.1	0.5
CPS161		287	7.85	1.8	<0.1	60.6	278	4	1	1	2	0.8	8.5	263	<0.1	<0.5
CPS162		76.3	6.35	1.2	0.1	148.5	81	25	6	5	13	1.3	26.7	395	<0.1	<0.5
CPS163		264	3.24	1.6	<0.1	25.5	138	18	4	4	10	0.4	3.7	126.0	<0.1	<0.5
CPS164		169.0	18.25	2.8	0.1	78.5	303	4	1	1	2	1.5	12.7	222	<0.1	<0.5
CPS165		251	7.05	1.8	<0.1	62.5	254	5	1	1	3	0.8	9.2	256	<0.1	<0.5
CPS166		183.5	6.21	1.4	<0.1	49.7	98	11	3	2	6	0.6	7.6	235	<0.1	<0.5
CPS167		68.9	6.28	1.9	<0.1	152.0	71	11	3	2	6	1.7	25.7	213	<0.1	<0.5
CPS168		97.7	7.52	1.5	0.1	168.0	135	14	3	3	7	1.6	29.7	368	<0.1	<0.5
CPS169		152.5	18.20	1.4	0.1	195.5	219	31	8	7	17	2.6	33.6	399	<0.1	<0.5
CPS170		60.0	5.44	1.7	0.1	133.0	59	7	2	1	4	1.4	22.9	191.5	<0.1	<0.5



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		Sc	Se	Sm	Sn	Sr	Ta	Tb	Te	Th	Ti	Tl	Tm	U	W	Y
		ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb	ppb
		1	2	0.1	0.2	1	1	0.1	1	0.02	5	0.5	0.1	0.1	1	0.1
CPS161		7	20	20.5	<0.2	156	<1	3.1	2	1.32	26	<0.5	0.5	7.7	<1	64.0
CPS162		18	15	37.4	5.4	56	<1	5.1	<1	6.52	52	0.5	1.0	11.0	<1	88.6
CPS163		6	<2	7.4	<0.2	356	<1	1.1	1	0.13	25	<0.5	0.2	1.3	<1	25.4
CPS164		9	14	23.1	<0.2	198	<1	4.0	1	5.03	57	<0.5	0.9	11.2	<1	86.5
CPS165		7	29	19.3	<0.2	143	<1	2.9	<1	1.39	19	<0.5	0.5	7.3	<1	59.1
CPS166		7	<2	14.8	1.0	134	<1	2.3	1	1.01	25	<0.5	0.5	4.0	<1	49.8
CPS167		7	14	38.7	4.2	78	<1	4.9	1	12.10	50	0.6	0.7	12.1	<1	81.4
CPS168		17	22	42.8	1.5	117	<1	6.1	<1	10.40	69	<0.5	1.2	14.9	<1	102.5
CPS169		18	34	56.6	1.4	165	<1	9.3	1	6.29	85	0.5	2.3	14.3	<1	199.5
CPS170		6	7	33.3	22.3	69	<1	4.1	<1	9.84	46	0.6	0.7	10.0	<1	68.2



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		Yb	Zn	Zr	Recvd Wt.
		ppb	ppb	ppb	kg
		0.1	10	0.1	0.02
CPS161		3.2	140	1.6	
CPS162		5.6	200	4.0	
CPS163		1.4	340	0.9	
CPS164		4.8	220	4.9	
CPS165		2.9	130	1.7	
CPS166		2.6	540	1.8	
CPS167		4.3	100	7.2	
CPS168		6.5	190	5.1	
CPS169		12.3	490	5.5	
CPS170		3.6	60	6.3	