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Appendix 2.

Sample name, location and description

Mary Kathleen Field Trip Notes

Soil samples	Easting	Northing	Location	Comments
MKS1	397202	7704984	pit, 1080 bench	Site R13, sulphidic waste dump
MKS2	397273	7705284	pit, 1080 bench	Site R9, below MKPW1 sulphidic zone
MKS3	397273	7705284	pit, 1080 bench	Site R9, wash below MKPW1
MKS4	397203	7705681	pit, 1080 bench	Site R1, background
MKS5	396925	7705508	pit, 1000 bench	site R33, background
MKS6	397096	7705269	pit, 1000 bench	site R51, high rad, near site of MKPW3
MKS7	396670	7706737	NE side of mill area	mod rad area (1500 cps), minor veg only
MKS8	396724	7706663	E side of mill area	sulphur heap zone, no veg
MKS9	396636	7706860	N side of mill area	mod rad area (2000 cps), wash into dried pool, no veg
MKS10	396384	7706640	W side of mill area	W end of W-E line, "warm area" 1500 cps
MKS11	397086	7706995	North waste dump	"warm" zone 1500 cps, soil marginal for plant growth
MKS12	397006	7706932	North waste dump	"hot" zone 2000 cps, soil marginal for plant growth
MKS13	394195	7703990	ridge between headwaters of Cameron Ck, NW of town site	90 cps on amphibolite
MKS14	394668	7707288	hillside between Cameron Ck and large W trib	200 cps on metafelsics
MKS15	395351	7709169	hillside between Cameron Ck and large W trib	220 cps on metafelsics
MKS16	396957	7705304	pit, 944 level	about 1200 cps, general site of veg samples V42-49
MKS20	396066	7709563	Cameron Creek	Trav 1 large rxs, dead trees
MKS21	396066	7709563	Cameron Creek	Trav 1 sub surface 20cm
MKS22	396077	7709552	Cameron Creek	Trav 1 large rxs, dead trees
MKS23	"" ""	"" ""	Cameron Creek	Trav 1 sub surface 20cm
MKS24	396204	7709647	Cameron Creek	rocky sub soil 2m profile, photo taken,
MKS25			30cm deep same site	tran 2,
MKS26	396154	7709693	Cameron Creek	tran 2, surfical sample
MKS27			30cm deep same site	from channel bed
MKS28	396552	7709780	Cameron Creek	Trav 3 very rocky, photo taken, near W21

Soil samples	Easting	Northing	Location	Comments
MKS29	396477	7709753	Cameron Creek	Trav 3 very rocky, photo taken, near W21
MKS30	396683	7709834	Cameron Creek	Trav 4 top
MKS31	""	""	Cameron Creek	Trav 4 20cm depth
MKS32	396585	7709809	Cameron Creek	trav 4 near tree
MKS33	""	""	Cameron Creek	Trav 4 sub surface 20cm near tree
MKS37	396416	7707333	creek - lunch near bore 28	in creek bed near tree, soil built up
MKS51	393355	7702231	drunk tree'	sample taken and photo
MKS50	394010	7701658	Creek Crossing area C	in creek bed
MKS52	393985	7701580		
Stream sediments	Easting	Northing	Location	Comments
MKSS1	397043	7704687	creek draining South waste dump	
MKSS2	396578	7706494	creek draining mill area, waste dump	900 cps
MKSS3	396338	7705713	seepage area below West waste dump	much efflorescences
MKSS4	396471	7706554	creek on W side of mill area	below MKSS2, 500 cps
MKSS5	396833	7706669	wash below waste dump, E of mill	1200 cps
MKSS6	396341	7706484	E Cameron Ck, down from mill	300 cps
MKSS7	396147	7706471	Background Ck, W of mill	
MKSS8	396322	7706769	E Cameron Ck, just down from mill	350 cps
MKSS9	396452	7707330	E Cameron Ck, 550 m down from SS8	450 cps
MKSS10	395640	7708195	gully near NW corner of tailings dam	450 cps
MKSS11	395696	7708390	ponded area, near NW corner of tailings dam	about 200 m down from SS10, much efflorescences, 400 cps

Stream sediments	Easting	Northing	Location	Comments
MKSS12	396317	7709224	seepage pond, N part of evap. ponds area	much algal mat material
MKSS13	"	"	seepage zone, N part of evap. ponds area	reed bank zone, reduced sediment
MKSS14	396207	7708810	creek 500m N of tailings dam	algal mats, nearby reeds, efflorescences, fish!
MKSS15	395970	7708524	creek 250 m below tailings dam	some Fe ox ppt, nearby reed bank
MKSS16	395902	7708410	creek 100 m below tailings dam	Fe ox rich ppt, 600 cps
MKSS17	395878	7708353	creek at tailings dam outfall	Fe ox rich ppt 2 m from orifice, 500 cps
MKSS18	"	"	"	Fe ox ppt at orifice, 1300 cps
MKSS19	396496	7707969	E Cameron Ck E of evap. ponds	800 cps
MKSS20	396510	7709455	E Cameron Ck, 300m above confluence with Cameron Ck	150 cps
MKSS21	394234	7704053	headwater gully of Cameron Ck, NW of town site	150 cps
MKSS22	394250	7703960	", more southerly than SS21	120 cps
MKSS23	394531	7707430	large W trib of Cameron Ck, W of tailings dam	120 cps
MKSS24	394782	7707324	Cameron Ck just upstream of large W trib	180 cps
MKSS25	396444	7707696	E Cameron Ck between SS9 and SS19	500 cps
MKSS26	396436	7709725	Cameron Ck, just upstream from E Cameron Ck	180 cps, creek saline, much efflorescences
MKSS27	395316	7708382	Cameron Ck, W of small evap pond sites	170 cps, first major efflorescences in creek
MKSS28	395363	7709142	Cameron Ck, 800 m downstream of SS27	160 cps
MKSS29	395320	7709300	Large W trib of Cameron Ck	170 cps
MKSS30	395883	7709371	Cameron Ck, where major saline seepage enters	170 cps, much efflorescences
MKSS31	397410	7716154	Cameron Ck, 12 km downstream, just above Cameron R	110 cps, still minor efflorescences
MKSS32	397962	7717382	Cameron R, 2 km down from Cameron Ck jun	130 cps
MKSS33	396417	7710415	Cameron Ck, about 1 km below SS26	170 cps, much efflorescences
MKSS34	396714	7709525	E trib of Cameron Ck, above SS20 on Cameron Ck	120 cps
MKSS36	395801	7709391	Cameron Creek and stream junction	white salts in creek, photos taken '0'
MKSS37			up stream	" +10m"
MKSS38			up stream	" +20m"
MKSS39	395773	7709253	up stream	" +30m"
MKSS39a	395809	7709364	Cameron Creek	at fence, white crusts
MKSS40			Cameron Creek	"clean sample"

Stream sediments	Easting	Northing	Location	Comments
MKSS41	395773	7709253	Cameron Creek, backwash area	shiny material
MKSS42			Cameron Creek	photo with geoff in it
MKSS43	395926	7709382		orange sediment and algal mats
				40cm deep, 1m x 1.5m
MKSS44	395952	7709446	Cameron Creek	3m x 1m 20cm deep rocky stream bed
				red algae x 3 pools photo taken
MKSS45	396077	7709563	Cameron Creek	Trav 1 top
MKSS46	" "	" "	Cameron Creek	Trav 1 sub surface 50cm down
MKSS47	395992	7711535	small seasonal stream off left road	north west of cameron creek
MKSS48	396176	7711563	5m wide sandy and silty red clean	no E
MKSS49	396330	7710266	near P2CC1	dirty, red, algal long term lagoon
				water source near trees lots of white salt
MKSS50	396187	7709642	Cameron Creek	Tran 2 mid stream, vegetated ridges
MKSS51			same site 40 cm deep	in stream samples from bed
MKSS52	396787	7710690	down Cameron Creek 1km	sediment after light shower o/n still grey salt
MKSS53	396466	7709677	Cameron Creek	Trav 3 no sub, too rocky, near W21
MKSS55	396665	7709828	Cameron Creek	T4 narrow water course
MKSS56a	" "	" "	Cameron Creek	T4 at depth 20cm
MKSS56	396177	7709683	Cameron Creek	water course T2
MKSS57	396177	7709683	Cameron Creek	water course T2
MKSS58	396574	7707877	between bore 28 and sump	creek bed lush vegetation
MKSS59	396463	7707777	closer to sump near bore 28	grassy, photos
MKSS60	396501	7709710	Cameron Creek and sm ck	from evap pond x3 samples, photo
MKSS61	396484	7709686	Cameron Creek up sm ck	up from cam creek
MKSS62	396503	7709650	Cameron Creek up sm ck	furthest up creek, surface
MKSS65	396485	7707990	Sump out	
MKSS66			Sump in	

Pit wall samples	Easting	Northing	Location	Comments
MKPW1	397273	7705284	pit, 1080 bench	Site R9, rock fall composite
MKPW2	397189	7705234	pit, 1048 bench	site R24, ore zone, rock fall composite
MKPW3	397096	7705269	pit, 1000 bench	site R51, ore zone, rock fall composite
MKPW4	397205	7705363	pit, 1000 bench	site R49, ore zone, rock fall composite
MKPW5	397282	7705318	pit, 960 bench	site R65, ore zone, rock fall composite
MKPW6	396997	7705374	pit, 960 bench	site R62, ore zone, rock fall composite
MKPW7	397105	7705527	pit, 1000 bench	site R44, ore zone, rock fall composite
Waste Dump samples	Easting	Northing	Location	Comments
MKWD1	396579	7705566	West waste dump, E end of E-W line	"hot" zone 3000 cps, composite
MKWD2	396435	7705514	West waste dump, E-W traverse	"hot" zone 2500 cps composite
MKWD3	396506	7705662	West waste dump, S-N traverse	"hot" zone 3500 cps composite
MKWD4	396833	7706669	Waste dump E of mill	"hot" zone 3500 cps composite
MKWD5	397006	7706932	North waste dump	"hot" zone 4000 cps composite
MKWD8	396460	7705611	Waste pile W of Pit su (ss samples from surface)	lemon scented grass, acacia chisholmii
MKWD9	396460	7705611	Waste pile W of Pit ss 9cm (su samples from subsurface -9cm deep)	nerva javanica - introduced little scrub
MKWD10	396513	7705665	Waste pile W of Pit su	Photos taken and sketch drawn
MKWD11	396485	7705623	Waste pile W of Pit ss 10cm	
MKWD12	396485	7705623	Waste pile W of Pit ss 10cm	
MKWD13	396471	7705648	Waste pile W of Pit su	
MKWD14	396471	7705648	Waste pile W of Pit ss 10cm	
MKWD15	396489	7705650	Waste pile W of Pit chip	
MKWD16	396504	7705656	Waste pile W of Pit chip	
MKWD17	397055	7706886	Area near manganese dump su (10-30cm deep)	discrete area lacking in vegetation
MKWD18	397055	7706886	Area near manganese dump ss	
MKWD19	397000	7706968	Area near manganese dump su (10-30cm deep)	
MKWD20	396982	7706966	Area near manganese dump su (10-30cm deep)	

Waste Dump samples	Easting	Northing	Location	Comments
MKWD21	396982	7706966	Area near manganese dump ss	
MKWD22	397037	7706998	Area near manganese dump su	
MKWD23	397037	7706998	Area near manganese dump ss	
MKWD24	397005	7706921	Area near manganese dump su	
MKWD25	397005	7706921	Area near manganese dump ss	
MKWD26	396799	7706718	Dump near crusher and plant su	Base Rx chip soil sampling at 15m intervals
MKWD27	396828	7706716	Dump near crusher and plant su	Base Rx chip soil sampling at 15m intervals
MKWD28	396847	7706722	Dump near crusher and plant su	Base Rx chip soil sampling at 15m intervals
MKWD29	396836	7706699	Dump near crusher and plant su	Base Rx chip soil sampling at 15m intervals
MKWD30	396833	7706684	Dump near crusher and plant su	Base Rx chip soil sampling at 15m intervals
MKWD31			Dump near crusher and plant su	Sediment sampling 2m
MKWD32			Dump near crusher and plant su	Sediment sampling 10m
MKWD33			Dump near crusher and plant su	Sediment sampling 50m
MKWD34			Dump near crusher and plant su	Sediment sampling 100m
MKWD35				
MKWD36			Dump near crusher and plant su	sulphur
Tailings	Easting	Northing	Location	Comments
MKT1	395806	7708073	Tailings dam, N-S traverse	exposed tailings 2000 cps at piezometer site
MKT2	395824	7707836	Tailings dam, N-S traverse	exposed tailings 2500 cps at piezometer site
MKT3	395577	7708102	gully near NW corner of tailings dam	escaped tailings in gully, 2500 cps
Efflorescences	Easting	Northing	Location	Comments
MKE1	397273	7705284	pit, 1080 bench	site R9, at MKPW1
MKE2	"	"	"	"
MKE3	"	"	"	"
MKE4	"	"	"	"
MKE5	"	"	"	"

Efflorescences	Easting	Northing	Location	Comments
MKE6	397273	7705284	pit, 1080 bench	site R9, at MKPW1
MKE7	"	"	"	"
MKE8	397240	7705310	pit, 1048 bench	site R22
MKE9	"	"	"	"
MKE10	397280	7705280	pit, 1000 bench	site R51
MKE11	"	"	"	"
MKE12	"	"	"	"
MKE13	397282	7705318	pit, 960 bench	site R65
MKE14	"	"	"	"
MKE15	"	"	"	"
MKE16	"	"	"	"
MKE17	397168	7705390	pit, 960 bench	site R63
MKE18	396338	7705713	seepage below West waste dump	site of MKSS3
MKE19	396317	7709224	seepage zone in N part of evap. ponds area	site of MKSS12
MKE20	395878	7708353	seepage at toe of tailings dam	site of MKSS17
MKE21			pit, bench 984 under R43	Brecciated area metasediment white sulfurous white crystalline powder, photo
MKE22			pit, bench 984 under R44	Green tinge, photo taken
MKE23			pit, bench 984 under R44-45 (mid)	Fe Oxide crusts
MKE24			pit, bench 984 under R44-45 (3/4)	Yellow staining crusts
MKE25			pit, bench 984 under R45	cemented yellow and white crud
MKE26			pit, bench 984 under R45	" " "
MKE27			pit, bench 984 under R46	Dark green staining on dark rock
MKE28			pit, bench 984 under R46	soft fluffy light green
MKE29			pit, bench 984 under R47-48 (mid)	Red staining
MKE30			pit, bench 984 under R48-49 (mid)	
MKE31			pit, bench 984 under R49	soft fluffy light apricot (photos)
MKE32			pit, bench 984 under R49-50 (mid)	ore zone, bright yellow crystalline

Efflorescences	Easting	Northing	Location	Comments
MKE33			pit, bench 984 under R50	Brown fluffy crystals
MKE34			pit, bench 984 over R65	bright fluffy yellow extensive
MKE35			pit bench 984 under R51	white crusty on wall
MKE36			same area as MKE23	Base of wall, white crystals
MKE36a			tailings seepage area at source	photos taken
MKE37			tailings seepage area 20cm from source dryer	
MKE38	395878	7708353	tailings seepage at source	
MKE39			tailings 1m from seepage point	
MKE40			5m from seepage source	crusty
MKE41			10m from seepage source	muddy
MKE42			25m from seepage source	red terraces and sludge
MKE43			75m from seepage source	red terraces and sludge
MKE44			100m from source	red sludge
MKE45	395809	7709364	Cameron Creek	at fence white crusts
MKE46	395949	7709465	Cameron Creek	Crystal growth up to 10cm - algal mats
				white/yellow 2mx1m depression, photo
MKE47	396741	7716547	Down Stream Cameron Creek	white algal salts
MKE50	396468	7705643	west of pit on waste pile	salty crusts
Vegetation	Easting	Northing	Location	Comments
MKV1	397202	7704984	pit, 1080 bench	Site R13, sulphidic waste dump; spear grass
MKV2	"	"	"	" grass, spheroidal flower head
MKV3	"	"	"	" "giant lemon grass"
MKV4	"	"	"	" grass with 3-winged seed
MKV5	"	"	"	" abundant, pale leaf flowering shrub
MKV6	397273	7705284	pit, 1080 bench	Site R9, sulphidic zone, same as V5
MKV7	"	"	"	" same as V4
MKV8	397203	7705681	pit, 1080 bench	Site R1, background, same as V2

Vegetation	Easting	Northing	Location	Comments
MKV9	"	"	"	" same as V1
MKV10	"	"	"	" same as V3
MKV11	"	"	"	" broad-leaf rough bark small tree, milky sap, with seed pod (kapok)
MKV12	"	"	"	" same as V4
MKV13	"	"	"	" same as V5
MKV14	397189	7705234	pit, 1048 bench	site R24, ore zone, same as V5
MKV15	396925	7705508	pit, 1000 bench	site R33, background, grass, mod broad, sl. curly leaf; common in area
MKV16	"	"	"	" small tree, fig-like, leathery leaves
MKV17	396874	7705716	pit, main haul road entry	near site R28, weak radiation, acacia in flower; turpentine
MKV18	"	"	"	" thorny acacia in flower
MKV19	397096	7705269	pit, 1000 bench	site R51, ore zone, small tussocky grass, possibly V2
MKV20	"	"	"	" same as V3
MKV21	"	"	"	" same as V5
MKV22	"	"	"	" same as V4
MKV23	"	"	"	" possibly same as V15, or maybe V3
MKV24	396579	7705566	West waste dump, E-W traverse	same as MKV4, edge of hot area 3500 cps
MKV25	"	"	"	similar to V4, but thinner stems, same location
MKV26	"	"	"	same as V5, same location
MKV27	396435	7705514	"	acacia V17 edge of hot area 2500 cps site of MKWD2
MKV28	396506	7705662	West waste dump, S-N traverse	same as V3, edge of hot area 3500 cps
MKV29	"	"	"	nearby smooth-barked white trunk eucalypt ?snappy gum
MKV30	"	"	"	nearby rough-barked eucalypt
MKV31	396578	7706494	creek draining dumps just S of mill	flowering rush
MKV32	396338	7705713	swamp area below West waste dump	tea-tree
MKV33	395806	7708073	tailings dam, N-S traverse	site of MKT1, shrub V5
MKV34	"	"	"	" grass V2
MKV35	"	"	"	" spear grass
MKV36	"	"	"	" grass V4
MKV37	396317	7709224	seepage in N part of evap. pond area	reed in seepage zone

Vegetation	Easting	Northing	Location	Comments
MKV38	"	"	"	flowering grass adjacent to seepage zone associated with efflorescences
MKV39	"	"	"	couch grass associated with efflorescences
MKV40	396957	7705304	pit, 944 level	large reed growing in spring/wetland zone, cf. V 37
MKV41	"	"	"	small bushy tree; lantana-like leaves, black seeds
MKV42	"	"	"	shrub V5, note V42-50 growing in area with 600-1500 cps
MKV43	"	"	"	grass, cf V15
MKV44	"	"	"	spear grass, cf. V1
MKV45	"	"	"	acacia
MKV46	"	"	"	grass, cf. V2
MKV47	"	"	"	grass cf. V4
MKV48	"	"	"	grass cf. V3
MKV49	"	"	"	flowering acacia, cf. V17
Slimc/algae samples	Easting	Northing	Location	Comments
MKSL1	396957	7705304	pit, 944 level	filamentous green slime (?Kleb) in spring/wetland zone
MKSL2	396317	7709224	seepage pond, N part of evap. ponds area	site of MKSS13, near MKW6, green filamentous slime (?Kleb)
MKSL3	"	"	pond just below MKSL2,"	site of MKW6, near MKSS12, brown-green algal mat
Water samples	Easting	Northing	Location	Comments
MKW1	400770	7695446	E side of Corella Dam	
MKW2	396957	7705304	pit at 942 level	blue pool
MKW3	"	"	pit, 944 level from spring/wetland zone	
MKW4	395878	7708353	orifice of main seepage below tailings dam, of SS18	
MKW5	395902	7708410	seepage stream 100 m below tailings dam, cf SS16	
MKW6	396317	7709224	site of MKSS12	site of MKSS12, pond in N part of evap ponds area
MKW7	395957	7709450	Cameron Ck, just below site of SS30	
MKW8	396417	7710415	Cameron Ck, site of MKSS33	

Water samples	Easting	Northing	Location	Comments
			tailings seepage and drainage samples	
MKW9			tailings seepage point at source	
MKW10			down stream 10m	20cm deep stagnant pond
MKW11			down stream 30m from source	
MKW12			down stream 70m from source	sm falls 5cm
MKW13			down stream 100m near back flow area	photos taken
			Cameron Creek water ponds	
MKW14	395869	7709344	Cameron Creek	salty creek deep soil profile on creek sides
				20m wide, photo (with geoff in it), ss42
				shallow water, 10 cm near fence
MKW15	395926	7709382	Cameron Creek	SS43 taken algal mats live, orange sediment
MKW16	395952	7709446	Cameron Creek	SS44, rocky stream bed, sandy x3 pools
				3mx1m 20cm deep, photo
MKW17			Cameron Creek	bedrock lagoon photo, grassy lenses,
				20m wide, x3 pools
MKW18	396330	7710266	near PZCC1 long term lagoon	
				stale, dirty red and algal white salt
MKW19	396177	7709683	deeper long term lagoon, Cameron Creek	photo, 10cm
MKW20	3m away		Cameron Creek	50 cm taken as for MKW19
MKW21	396436	7709749	Cameron Creek	1m deep white crusty salts on rxs

Water samples	Easting	Northing	Location	Comments				
				pH	Cond ms/cm	DO mg/l	Temp °C	Sal%
MKW1	400770	7695446	E side of Corella Dam	8.04	0.2	677	17.3	<0.01
MKW2	396957	7705304	blue pool, pit at 942 level	6.58	3.1	6.80	18.6	0.15
MKW3	"	"	pit, 944 level from spring/wetland zone	7.32	2.4	2.65	16.4	0.11
MKW4	395878	7708353	orifice of main seepage below tailings dam, cf SS18	5.71	5.9	2.60	25.7	0.31
MKW5	395902	7708410	seepage stream 100 m below tailings dam, cf SS16	6.6	5.5	5.00	26.2	0.29
MKW6	396317	7709224	site of MKSS12, pond in N part of evap ponds area	8.1	16.9	7.80	23.6	1.0
MKW7	395957	7709450	Cameron Ck, just below site of SS30	8.42	27.6	15.10	27	1.71
MKW8	396417	7710415	Cameron Ck, site of MKSS33	8.17	16.1	14.30	19.6	0.94
			tailings seepage and drainage samples					
MKW9			tailings seepage point at source	5.75	5.9	0.08	28.7	0.31
MKW10			down stream 10m (20cm deep stagnant pond	5.92	6.0	3.30	34.0	0.31
MKW11			down stream 30m from source	6.37	5.8	3.40	32.5	0.30
MKW12			down stream 70m from source sm falls 5cm	6.57	5.6	3.63	30.8	0.29
MKW13			down stream 100m near back flow area	6.95	5.6	6.24	32.5	0.29
			photos taken					
			Cameron Creek water ponds					
MKW14	395869	7709344	salty creek deep soil profile on creek sides	8.34	54.2	8.11	32	3.63
			20m wide, photo (with geoff in it), ss42					
			shallow water, 10 cm near fence					
MKW15	395926	7709382	SS43 taken algal mats live, orange sediment	7.82	21.7	3.50	31.3	1.31
MKW16	395952	7709446	SS44, rocky stream bed, sandy x3 pools	8.24	21.8	5.75	32.6	1.32
			3mx1m 20cm deep, photo					
MKW17			bedrock lagoon photo, grassy lenses,	8.41	17.9	11.50	30	1.03
			20m wide, x3 pools					
MKW18	396330	7710266	near PZCC1 long term lagoon	8.11	46.4	7.66	31.4	3.06
			stale, dirty red and algal white salt					
MKW19	396177	7709683	deeper long term lagoon, Cam C photo, 10cm	8.24	7	2.12	30	0.49
MKW20	3m away		50 cm taken as for MKW19	8.67	7.9	1.10	28.5	0.41
MKW21	396436	7709749	1m deep white crusty salts on rxs	8.2	16	6.02	30.5	0.94