Lead Isotope Mine Tailings
Klondyke Site
Dr John Chesley

K4
description- less weathered mine tailings, high sulfide
pH= 2.42

only 1000 ng avalible
not enough lead to measure

Samples	vial number	lead extracted ug/L	ppb/ml	ml needed for 2000 ng	Actual wt (mg) in vial	extraction conditions	target species
# 1-3	101	228.89	229	4.3689	4.3460	nanopure water	gypsum, metal salts
# 2-3	113	1487.63	1488	1.3444	1.3727	1M ammonium acetate pH=4.5	exchangable fraction
# 3-3	103	473.37	473	4.2250	4.2209	0.2M ammonium oxalate	poorly crystaline iron oxides
# 4-3	114	7247.15	7247	0.2760	0.2943	0.2M ammonium oxalate	more crystaline iron oxides
# 5-3	115	5291.04	5291	0.3780	0.3762	30% H2O2, 1M NH4OAc pH=4.5	secondary sulfides, organics
# 6-3	116	26615.44	26615	0.0751	0.0796	12M HCl, 4M HNO3	primary sulfides
total lead		41344					

K6
description- weathered mine tailings, lower sulfides, more iron oxides
pH= 7.13

Samples	vial number	lead extracted ug/L	ppb/ml	ml needed for 2000 ng	Actual wt (mg) in vial	extraction conditions	target species
# 1-25		0.85	1	294.12		nanopure water	gypsum, metal salts
# 2-25	107	2354.83	2355	0.8493	0.8761	1M ammonium acetate pH=4.5	exchangable fraction
# 3-25	117	4544.67	4545	0.4401	0.4402	0.2M ammonium oxalate	poorly crystaline iron oxides
# 4-25	118	8074.60	8075	0.2477	0.2436	0.2M ammonium oxalate	more crystaline iron oxides
# 5-26	119	18484.80	18485	0.1082	0.1110	30% H2O2, 1M NH4OAc pH=4.5	secondary sulfides, organics
# 6-26	120	8801.93	8802	0.2272	0.2433	12M HCl, 4M HNO3	primary sulfides
total lead		42262					

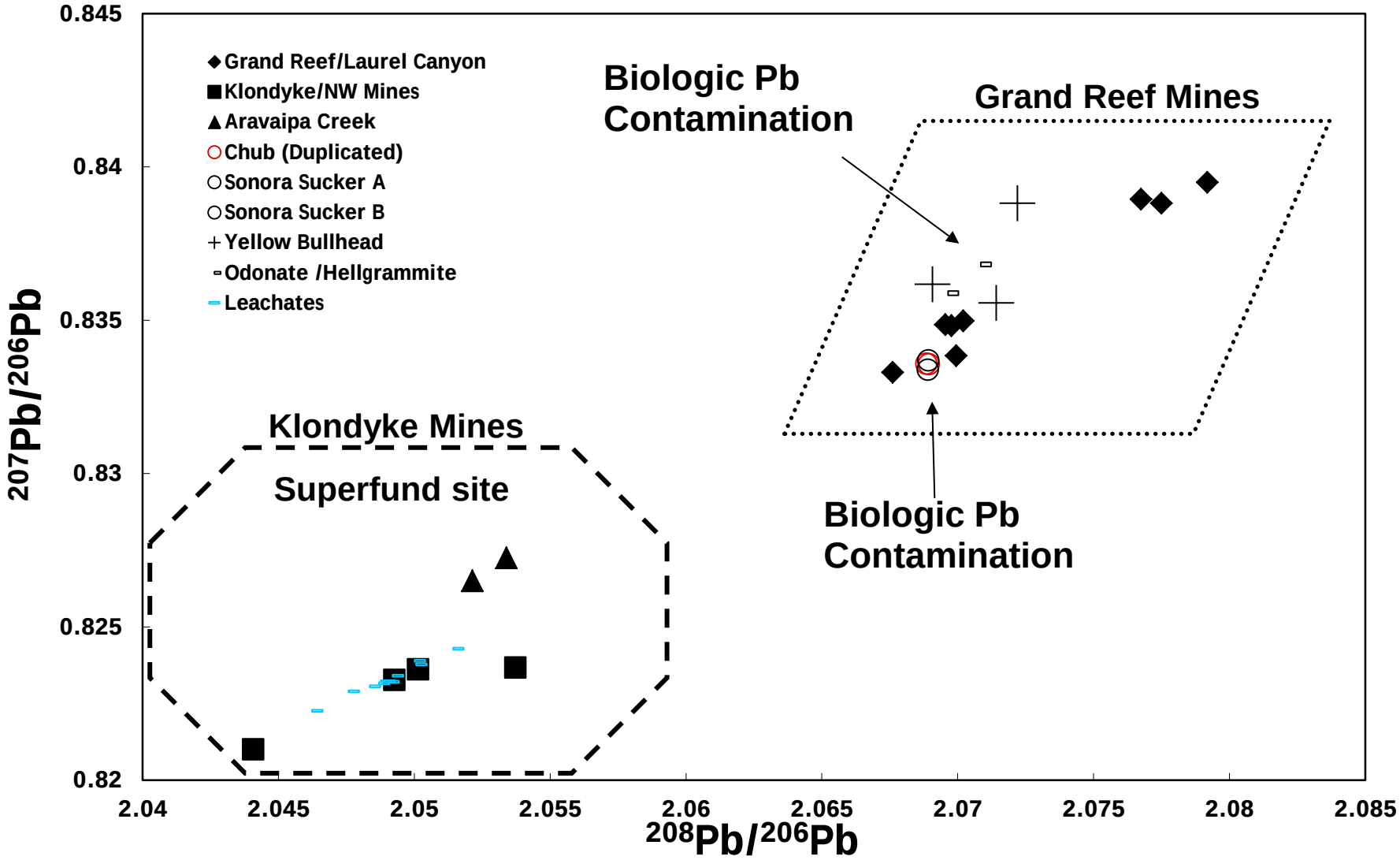
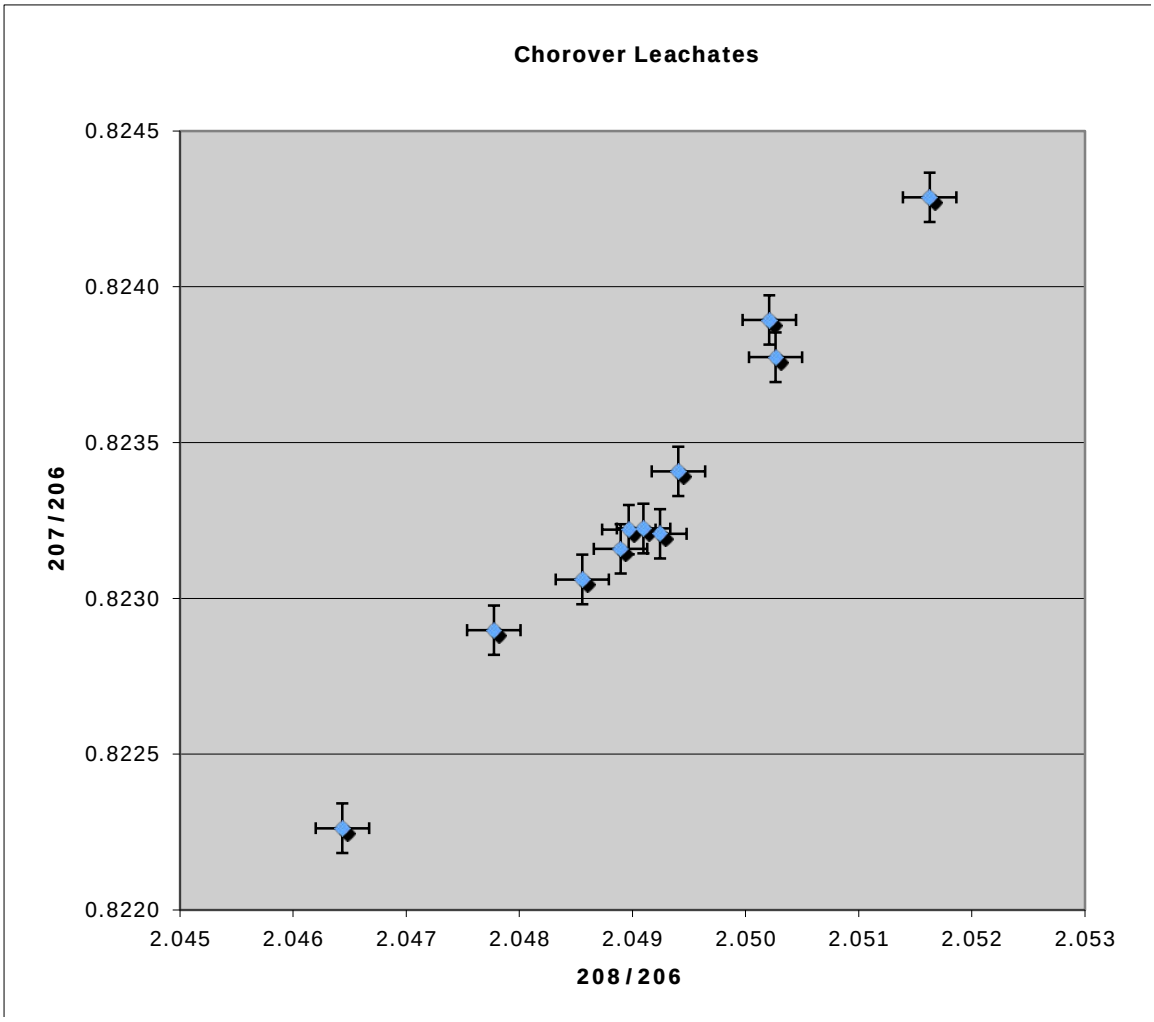
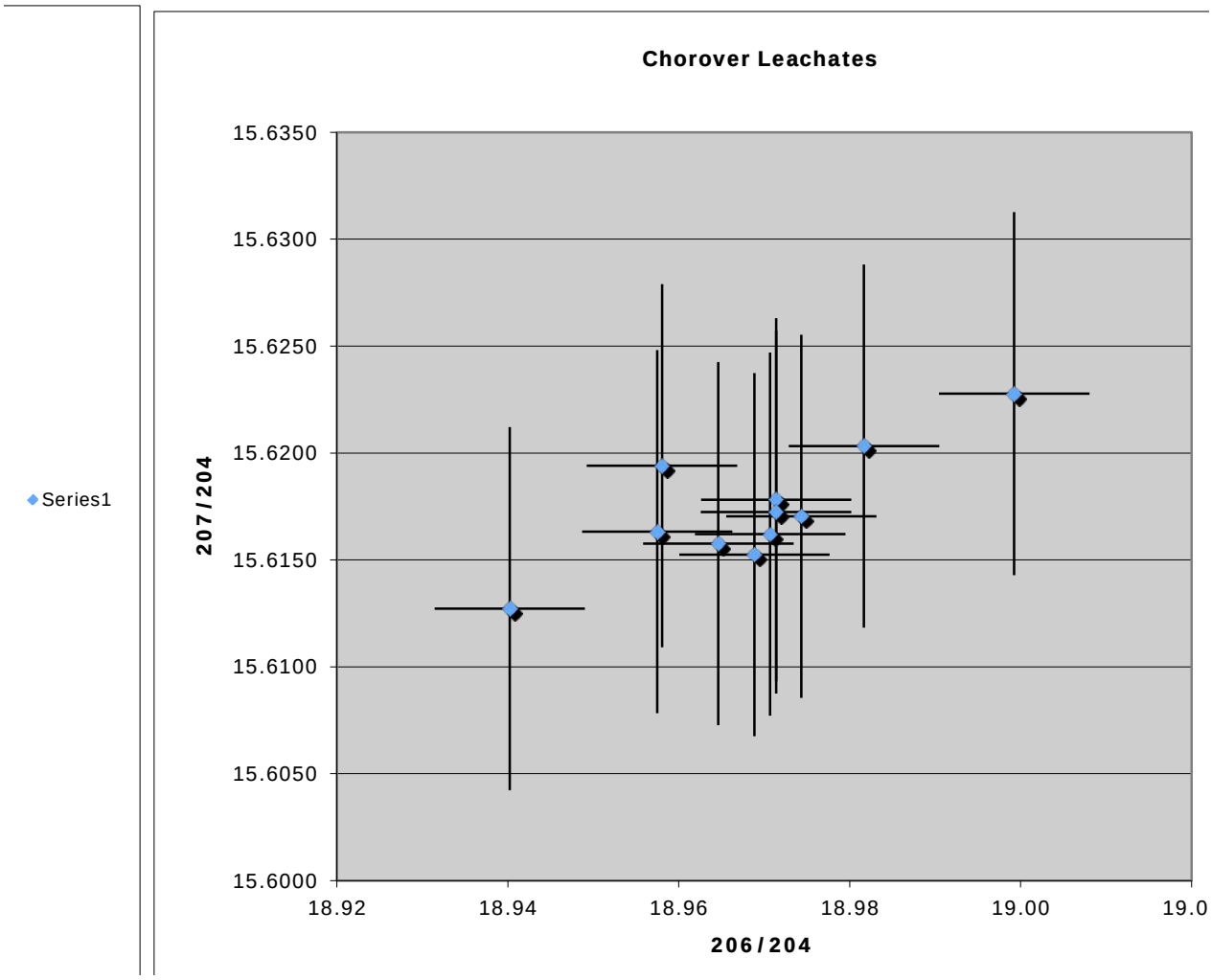
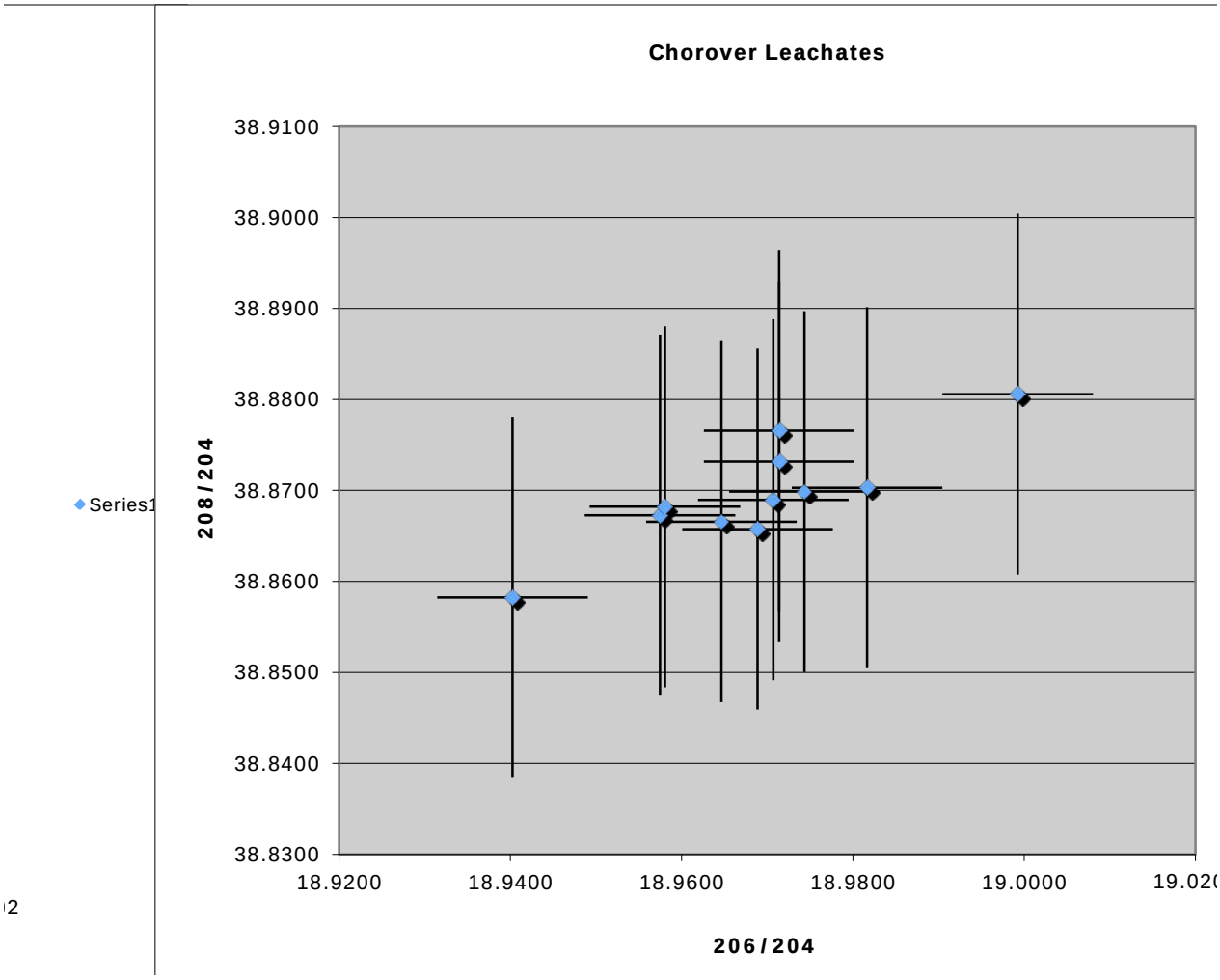

Grand Reef/Laurel Canyon
Klondyke/NW Mines
Aravaipa Creek
Chub (Duplicated)
Sonora Sucker A
Sonora Sucker B
Yellow Bullhead
Odonate /Hellgrammite
Leachates
Biologic Pb Contamination
Grand Reef Mines
Klondyke Mines
Superfund site
Biologic Pb Contamination
0.845
0.84
0.835
0.83
0.825
0.82
207Pb/206Pb
2.04
2.045
2.05
2.055
2.06
2.065
2.07
2.075
2.08
2.085
208Pb/206Pb

Table Ready		208/206	207/206	206/204	207/204	208/204
Sample Name	Date					
981 2 s External Error		0.0002	0.0001	0.0088	0.0085	0.0198
176 JTC (2-18) Aravaipa 101-		2.0464	0.8223	18.9993	15.6228	38.8806
177 JTC (2-18) Aravaipa 103-		2.0478	0.8229	18.9817	15.6203	38.8703
178 JTC (2-18) Aravaipa 107-		2.0503	0.8238	18.9575	15.6163	38.8673
179 JTC (2-18) Aravaipa 113-		2.0502	0.8239	18.9580	15.6194	38.8682
180 JTC (2-18) Aravaipa 114-		2.0491	0.8232	18.9714	15.6178	38.8732
181 JTC (2-18) Aravaipa 115-		2.0490	0.8232	18.9689	15.6153	38.8657
182 JTC (2-18) Aravaipa 116-		2.0494	0.8234	18.9646	15.6158	38.8666
183 JTC (2-18) Aravaipa 117-		2.0516	0.8243	18.9402	15.6127	38.8583
184 JTC (2-18) Aravaipa 118-		2.0486	0.8231	18.9743	15.6170	38.8699
185 JTC (2-18) Aravaipa 119-		2.0489	0.8232	18.9707	15.6162	38.8690
186 JTC (2-18) Aravaipa 120-		2.0492	0.8232	18.9714	15.6172	38.8766



		206/204				
	208 v	8/6 Norm				50
		7.5877E-05				
	3.2540574		158.730159	5.2	1.82	260
	3.3677503		158.730159	5.2	1.82	260
	3.3810205		158.730159	5.2	1.82	260
	3.28312155		158.730159	5.2	1.82	260
	3.28754212		158.730159	5.2	1.82	260
	2.84884825		158.730159	5.2	1.82	260
	4.16782639		158.730159	5.2	1.82	260
	3.51753724		158.730159	5.2	1.82	260
	0.99729796		158.730159	5.2	1.82	260
	3.20122808		158.730159	5.2	1.82	260
	3.46052069		158.730159	5.2	1.82	260




Chorover Leachates
38.9100
38.9000
38.8900
38.8800
38.8700
38.8600
38.8500
38.8400
38.8300
208/204
Series1
18.9200
18.9400
18.9600
18.9800
19.0000
206/204

Series1
00