

Appendix I. Statistics of granitic geochemistry from Stuart-Smith et al. (1993)

PLUTON	HP	SiO2	TiO2	Al2O3	Fe2O3	FeO	MnO	MgO	CaO	Na2O	K2O	P2O5	Ba	Li	Rb	Sr	Pb
PewA Average	5.99	70.65	0.30	13.78	0.39	1.56	0.05	0.64	1.61	2.99	5.46	0.08	853.15	14.00	215.77	179.62	32.08
PewA Count	13	13	13	8	8	8	13	13	13	13	13	13	13	13	13	13	13
PewA StdDev	1.82	4.00	0.21	0.77	0.20	0.54	0.03	0.60	0.98	0.44	0.74	0.07	553.44	14.27	46.38	71.03	16.62
PewA Var	3.30	16.04	0.04	0.60	0.04	0.29	0.00	0.36	0.96	0.19	0.55	0.00	306,295.97	203.50	2,151.19	5,045.59	276.08
PgaA Average	7.06	74.01	0.17	12.94	0.66	1.28	0.03	0.30	0.96	3.34	5.11	0.04	312.35	18.79	239.96	93.96	46.08
PgaA Count	26	26	26	26	26	25	26	26	26	26	26	26	26	24	26	26	26
PgaA StdDev	1.70	2.61	0.11	0.72	1.17	0.58	0.01	0.24	0.51	0.43	0.41	0.04	280.90	10.91	40.36	78.65	81.82
PgaA Var	2.88	6.83	0.01	0.52	1.36	0.34	0.00	0.06	0.26	0.18	0.17	0.00	78,902.56	118.95	1,629.24	6,185.96	6,694.23
PgaB Average	6.41	70.71	0.27	13.69	0.91	2.30	0.04	0.45	1.40	3.24	5.41	0.07	561.56	30.20	238.06	166.44	30.94
PgaB Count	16	16	16	16	16	13	16	16	16	16	16	16	16	15	16	16	16
PgaB StdDev	1.68	2.69	0.10	0.93	0.83	0.64	0.02	0.23	0.51	0.24	0.58	0.04	250.14	15.38	39.35	95.35	7.84
PgaB Var	2.82	7.26	0.01	0.87	0.69	0.41	0.00	0.05	0.26	0.06	0.34	0.00	62,570.66	236.46	1,548.46	9,091.60	61.53
PgaC Average	3.54	59.32	0.82	15.39	1.49	5.15	0.09	2.22	4.55	3.08	3.95	0.33	1,196.22	21.14	148.22	473.44	25.89
PgaC Count	9	8	9	9	9	8	9	9	9	9	9	9	9	7	9	9	9
PgaC StdDev	2.35	5.04	0.41	1.44	0.54	1.35	0.04	1.46	2.32	0.41	1.09	0.26	627.66	9.67	75.78	160.72	16.02
PgaC Var	5.51	25.39	0.16	2.07	0.29	1.82	0.00	2.12	5.37	0.17	1.18	0.07	393,952.44	93.48	5,741.94	25,832.28	256.61
PgaD Average	5.50	71.75	0.28	13.48	0.69	2.01	0.04	0.55	1.43	3.14	5.24	0.11	620.71	18.79	190.30	199.05	25.95
PgaD Count	21	21	21	21	21	20	21	21	21	21	21	21	21	19	21	21	21
PgaD StdDev	1.38	2.72	0.11	0.91	0.75	0.70	0.01	0.29	0.52	0.26	0.37	0.12	313.89	9.18	23.19	96.93	4.03
PgaD Var	1.89	7.42	0.01	0.82	0.56	0.49	0.00	0.08	0.27	0.07	0.14	0.02	98,527.21	84.29	537.91	9,395.84	16.25
PgaX Average	5.29	78.15	0.09	11.49	0.23	0.64	0.02	0.17	0.57	2.54	5.62	0.02	277.67	8.00	195.33	87.67	22.33
PgaX Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
PgaX StdDev	1.31	1.84	0.06	1.47	0.09	0.38	0.01	0.05	0.18	0.45	1.19	0.02	193.58	7.81	47.27	45.65	0.58
PgaX Var	1.72	3.37	0.00	2.17	0.01	0.14	0.00	0.00	0.03	0.20	1.43	0.00	37,472.33	61.00	2,234.33	2,084.33	0.33
PgaXPGQ Average	7.53	73.70	0.14	13.05	0.47	0.96	0.02	0.29	1.12	2.95	5.74	0.04	638.00	9.00	215.00	195.00	27.00
PgaXPGQ Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PgaXPGQ StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgaXPGQ Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pgba Average	7.48	73.79	0.17	13.34	1.62	0.51	0.04	0.27	0.94	3.42	5.10	0.03	389.40	79.47	370.20	65.27	52.00
Pgba Count	18	11	18	18	18	11	18	18	18	18	18	18	15	15	15	15	15
Pgba StdDev	2.69	0.82	0.05	0.40	0.70	0.71	0.01	0.12	0.18	0.19	0.27	0.01	119.43	27.48	51.68	25.06	11.89
Pgba Var	7.24	0.67	0.00	0.16	0.49	0.50	0.00	0.01	0.03	0.04	0.07	0.00	14,263.26	754.98	2,670.89	628.21	141.29
PgbyGA Average	3.84	71.75	0.30	14.98	2.36	1.46	0.03	0.65	1.40	3.65	5.13	0.10	921.35	22.00	282.60	487.05	51.00
PgbyGA Count	23	22	23	23	23	22	23	23	23	23	23	23	20	1	20	20	9
PgbyGA StdDev	4.65	1.42	0.12	6.78	0.93	1.32	0.02	0.68	0.58	0.26	0.58	0.08	629.21	N/A	29.72	336.15	37.47
PgbyGA Var	21.64	2.01	0.01	45.98	0.87	1.75	0.00	0.46	0.34	0.07	0.34	0.01	395,908.56	N/A	882.99	112,999.42	1,403.75
PgbyGAP Average	0.41	76.48	0.10	12.25	1.14		0.01	0.01	0.52	3.74	5.08	0.01	515.00	N/A	212.00	503.00	18.00
PgbyGAP Count	2	2	2	2	2	2	2	2	2	2	2	2	2	0	2	2	2
PgbyGAP StdDev	0.02	0.14	0.01	0.24	0.02		0.01		0.13	0.47	0.30		104.65	N/A	2.83	96.17	4.24
PgbyGAP Var	0.00	0.02	0.00	0.06	0.00		0.00		0.02	0.22	0.09		10,952.00	N/A	8.00	9,248.00	18.00
Pgbysy Average	3.86	60.12	0.70	14.28	5.28	0.29	0.08	3.15	3.38	3.56	6.45	0.56	3,326.36	36.00	244.86	2,583.14	39.40
Pgbysy Count	16	15	16	16	16	15	16	16	16	16	16	16	14	1	14	14	10
Pgbysy StdDev	3.96	2.86	0.28	1.44	1.38	0.81	0.02	1.46	1.22	0.70	0.97	0.36	1,660.99	N/A	28.30	2,689.85	34.01
Pgbysy Var	15.71	8.18	0.08	2.07	1.91	0.65	0.00	2.12	1.50	0.49	0.95	0.13	2,758,891.17	N/A	801.05	7,235,270.44	1,156.71



PLUTON	HP	SiO2	TiO2	Al2O3	Fe2O3	FeO	MnO	MgO	CaO	Na2O	K2O	P2O5	Ba	Li	Rb	Sr	Pb
PghA Average	7.47	69.78	0.28	13.51	1.79	2.52	0.05	0.55	1.56	4.11	4.64	0.09	751.00	26.50	313.00	134.00	47.50
PghA Count	2	1	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2
PghA StdDev	0.06	N/A	0.04	0.86	1.71	N/A	0.01	0.08	0.06	0.61	0.17	0.01	106.07	4.95	53.74	179.61	23.33
PghA Var	0.00	N/A	0.00	0.73	2.93	N/A	0.00	0.01	0.00	0.37	0.03	0.00	11,250.00	24.50	2,868.00	32,258.00	544.50
PghB Average	9.27	74.40	0.12	13.38	0.41	1.05	0.03	0.39	0.92	3.70	4.84	0.06	318.00	15.00	305.00	99.50	49.50
PghB Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PghB StdDev	3.29	1.90	0.09	0.56	0.16	0.25	0.01	0.06	0.48	0.28	0.23	0.01	356.38	11.31	21.21	98.29	13.44
PghB Var	10.83	3.62	0.01	0.31	0.03	0.06	0.00	0.00	0.23	0.08	0.05	0.00	127,008.00	128.00	450.00	9,660.50	180.50
PgiA Average	7.04	73.56	0.20	12.81	1.18	1.27	0.03	0.32	1.21	3.21	5.07	0.06	354.50	37.63	273.50	96.00	35.00
PgiA Count	8	8	8	8	8	6	8	8	8	8	8	8	8	8	8	8	8
PgiA StdDev	1.16	2.13	0.09	0.18	1.13	0.43	0.00	0.13	0.24	0.33	0.18	0.02	195.29	17.56	40.22	20.25	5.68
PgiA Var	1.34	4.54	0.01	0.03	1.28	0.19	0.00	0.02	0.06	0.11	0.03	0.00	38,138.57	308.27	1,617.71	410.00	32.29
PgiB Average	8.55	75.23	0.12	12.72	0.41	0.78	0.02	0.21	0.82	3.15	5.28	0.04	258.00	20.33	353.67	65.33	43.33
PgiB Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
PgiB StdDev	1.61	1.49	0.05	0.89	0.16	0.14	0.00	0.04	0.20	0.36	0.25	0.03	245.95	5.77	69.86	36.95	12.70
PgiB Var	2.60	2.21	0.00	0.80	0.03	0.02	0.00	0.00	0.04	0.13	0.06	0.00	60,492.00	33.33	4,880.33	1,365.33	161.33
PgiC Average	6.96	72.23	0.24	13.45	0.52	1.61	0.03	0.41	1.46	3.12	5.21	0.07	640.50	23.25	214.50	168.75	39.75
PgiC Count	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
PgiC StdDev	1.16	1.10	0.07	0.48	0.27	0.24	0.01	0.09	0.16	0.08	0.21	0.02	142.37	3.59	31.69	50.13	20.32
PgiC Var	1.35	1.21	0.00	0.23	0.08	0.06	0.00	0.01	0.03	0.01	0.04	0.00	20,269.67	12.92	1,004.33	2,512.92	412.92
PgiD Average	3.58	61.16	1.30	14.54	1.00	6.25	0.13	1.67	4.05	2.69	4.39	0.59	1,345.00	31.00	196.00	266.00	18.00
PgiD Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PgiD StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgiD Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgjA Average	0.35	68.41	0.33	17.46	1.32	2.15	0.05	0.96	0.56	3.31	4.37	0.09	N/A	N/A	N/A	N/A	N/A
PgjA Count	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0
PgjA StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgjA Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgkA Average	4.91	66.32	0.48	15.41	1.73	2.60	152.06	1.00	1.84	3.04	5.50	0.19	1,142.00	44.00	293.00	340.00	43.00
PgkA Count	3	3	3	3	3	2	3	3	3	3	3	3	1	1	1	1	1
PgkA StdDev	7.75	1.87	0.03	1.06	1.95	0.02	263.22	0.08	0.30	0.03	0.28	0.03	N/A	N/A	N/A	N/A	N/A
PgkA Var	60.13	3.49	0.00	1.13	3.80	0.00	69,283.12	0.01	0.09	0.00	0.08	0.00	N/A	N/A	N/A	N/A	N/A
PglA Average	5.04	73.96	0.21	12.97	0.63	1.56	0.03	0.37	1.16	2.84	5.28	0.06	228.67	41.00	269.50	77.83	37.67
PglA Count	6	6	6	6	6	5	6	6	6	6	6	6	6	6	6	6	6
PglA StdDev	0.66	1.14	0.08	0.40	0.87	0.49	0.01	0.14	0.48	0.22	0.83	0.02	140.27	18.28	31.93	21.65	6.80
PglA Var	0.43	1.31	0.01	0.16	0.76	0.24	0.00	0.02	0.24	0.05	0.69	0.00	19,674.67	334.00	1,019.50	468.57	46.27
PglX Average	5.03	72.26	0.42	12.29	0.55	2.94	0.06	0.91	1.59	2.34	4.57	0.12	506.00	30.00	222.50	124.50	23.50
PglX Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PglX StdDev	2.12	9.45	0.43	3.05	0.50	2.72	0.05	0.96	1.32	0.07	0.28	0.12	478.00	22.63	16.26	108.19	4.95
PglX Var	4.48	89.24	0.19	9.33	0.25	7.37	0.00	0.92	1.75	0.01	0.08	0.01	228,488.00	512.00	264.50	11,704.50	24.50
Pgma Average	4.02	68.88	0.52	14.18	1.12	2.93	0.05	0.90	2.05	2.99	5.00	0.16	868.33	33.67	174.11	185.44	25.00
Pgma Count	9	9	9	9	9	8	9	9	9	9	9	9	9	6	9	9	9
Pgma StdDev	1.18	4.10	0.23	0.82	1.24	1.35	0.02	0.45	0.78	0.26	0.50	0.09	260.60	13.23	64.00	49.27	5.98
Pgma Var	1.40	16.80	0.05	0.67	1.55	1.81	0.00	0.20	0.61	0.07	0.25	0.01	67,913.50	175.07	4,095.61	2,427.78	35.75

PLUTON	HP	SiO2	TiO2	Al2O3	Fe2O3	FeO	MnO	MgO	CaO	Na2O	K2O	P2O5	Ba	Li	Rb	Sr	Pb
PgmB Average	2.55	67.48	0.66	14.75	2.10	2.05	0.05	1.08	2.48	3.02	4.79	0.19	1,246.00	22.50	179.60	271.00	24.20
PgmB Count	5	5	5	5	5	5	5	5	5	5	5	5	5	4	5	5	5
PgmB StdDev	0.72	1.76	0.19	0.45	1.79	1.95	0.00	0.06	0.39	0.08	0.31	0.04	176.70	13.30	13.46	16.37	2.68
PgmB Var	0.52	3.09	0.04	0.20	3.22	3.81	0.00	0.00	0.16	0.01	0.10	0.00	31,224.00	177.00	181.30	268.00	7.20
PgmC Average	5.37	72.31	0.31	13.84	0.98	1.41	0.04	0.54	1.34	3.20	4.94	0.08	749.55	38.50	226.82	136.27	24.09
PgmC Count	12	12	12	12	12	12	12	12	12	12	12	12	11	4	11	11	11
PgmC StdDev	2.82	3.08	0.21	0.37	0.70	1.49	0.02	0.36	0.61	0.24	0.23	0.06	133.74	19.54	39.59	35.48	3.62
PgmC Var	7.94	9.48	0.05	0.14	0.49	2.23	0.00	0.13	0.37	0.06	0.05	0.00	17,886.47	381.67	1,567.56	1,258.82	13.09
PgmwGRSN Average	9.64	76.20	0.11	11.70	1.86	N/A	0.02	0.44	0.13	0.57	8.50	0.03	613.00	32.00	454.00	44.00	628.00
PgmwGRSN Count	1	1	1	1	1	0	1	1	1	1	1	1	1	1	1	1	1
PgmwGRSN StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgmwGRSN Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgnX Average	3.14	60.11	0.32	21.26	1.34	1.80	0.06	0.57	5.52	4.70	2.87	0.34	688.00	44.00	246.00	162.00	31.00
PgnX Count	2	2	2	2	2	2	2	2	2	2	2	2	1	1	1	1	1
PgnX StdDev	4.40	8.32	0.41	9.25	1.30	2.21	N/A	0.68	4.84	2.52	3.53	0.21	N/A	N/A	N/A	N/A	N/A
PgnX Var	19.33	69.15	0.17	85.54	1.69	4.90	N/A	0.46	23.46	6.34	12.45	0.05	N/A	N/A	N/A	N/A	N/A
PgnA Average	8.22	76.47	0.07	12.33	0.36	0.63	0.02	0.16	0.54	3.54	4.75	0.02	84.00	15.67	333.33	37.33	33.67
PgnA Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
PgnA StdDev	0.68	0.29	0.02	0.02	0.19	0.30	0.01	0.09	0.14	0.29	0.27	0.01	52.89	1.53	46.26	19.14	1.15
PgnA Var	0.46	0.09	0.00	0.00	0.03	0.09	0.00	0.01	0.02	0.08	0.07	0.00	2,797.00	2.33	2,140.33	366.33	1.33
PgnX Average	6.03	73.02	0.24	13.28	0.39	1.74	0.04	0.50	1.11	2.99	5.28	0.07	500.00	20.00	259.00	158.00	29.00
PgnX Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PgnX StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgnX Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgoA Average	5.84	76.31	0.05	12.49	0.42	0.48	0.01	0.20	0.71	3.87	4.45	0.01	66.00	5.00	167.00	57.00	25.00
PgoA Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PgoA StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgoA Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgpA Average	4.61	69.50	0.38	14.35	1.25	2.55	0.06	0.77	1.73	2.96	5.26	0.14	1,096.00	30.67	254.67	314.33	43.67
PgpA Count	6	6	6	6	6	5	6	6	6	6	6	6	3	3	3	3	3
PgpA StdDev	3.45	2.57	0.09	1.01	1.11	0.55	0.02	0.30	0.41	0.29	0.61	0.05	391.19	13.50	21.20	86.03	13.32
PgpA Var	11.87	6.62	0.01	1.03	1.23	0.30	0.00	0.09	0.17	0.08	0.38	0.00	153,028.00	182.33	449.33	7,400.33	177.33
PgpB Average	5.15	71.54	0.28	14.02	0.56	1.84	0.04	0.53	1.64	3.13	5.12	0.07	775.50	27.00	266.50	249.50	31.50
PgpB Count	3	3	3	3	3	3	3	3	3	3	3	3	2	2	2	2	2
PgpB StdDev	2.69	1.19	0.06	0.24	0.43	0.59	0.02	0.10	0.16	0.22	0.36	0.02	27.58	21.21	50.20	53.03	0.71
PgpB Var	7.23	1.42	0.00	0.06	0.18	0.35	0.00	0.01	0.03	0.05	0.13	0.00	760.50	450.00	2,520.50	2,812.50	0.50
PgqA Average	5.98	72.94	0.26	13.54	0.76	1.42	0.03	0.46	1.36	2.87	5.51	0.08	753.33	23.00	230.44	196.67	34.78
PgqA Count	9	8	9	9	9	8	9	9	9	9	9	9	9	7	9	9	9
PgqA StdDev	0.82	1.64	0.12	0.29	0.64	0.53	0.01	0.20	0.27	0.22	0.26	0.05	132.43	7.09	20.16	30.56	9.01
PgqA Var	0.68	2.68	0.01	0.09	0.41	0.28	0.00	0.04	0.07	0.05	0.07	0.00	17,538.00	50.33	406.53	933.75	81.19
PgRA Average	6.10	72.46	0.24	13.27	0.97	1.42	0.04	0.38	1.20	3.22	5.28	0.08	536.50	41.00	293.50	104.25	38.42
PgRA Count	12	12	12	12	12	9	12	12	12	12	12	12	12	12	12	12	12
PgRA StdDev	0.95	1.34	0.10	0.53	0.95	0.36	0.05	0.20	0.28	0.16	0.36	0.03	189.22	28.01	38.26	42.53	8.97
PgRA Var	0.91	1.79	0.01	0.28	0.90	0.13	0.00	0.04	0.08	0.02	0.13	0.00	35,805.91	784.36	1,463.91	1,808.93	80.45

PLUTON	HP	SiO2	TiO2	Al2O3	Fe2O3	FeO	MnO	MgO	CaO	Na2O	K2O	P2O5	Ba	Li	Rb	Sr	Pb
PgrX Average	9.99	76.08	0.16	11.52	0.36	1.52	0.02	0.12	0.92	2.83	5.05	0.04	155.00	18.00	213.00	56.00	29.00
PgrX Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PgrX StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgrX Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgsA Average	5.70	70.41	0.23	14.18	1.42	0.78	0.03	0.76	1.51	3.51	4.96	0.11	1,003.25	44.00	217.29	300.86	87.14
PgsA Count	8	6	8	8	8	6	8	8	8	8	8	8	4	4	7	7	7
PgsA StdDev	0.62	2.98	0.12	0.74	0.64	1.35	0.02	0.63	0.48	0.13	0.29	0.07	165.57	20.70	23.29	61.02	117.02
PgsA Var	0.39	8.91	0.01	0.55	0.40	1.83	0.00	0.39	0.23	0.02	0.09	0.01	27,412.92	428.67	542.57	3,723.81	13,693.48
PgsB Average	5.59	64.46	0.51	15.44	4.46		0.07	2.35	2.25	3.26	5.18	0.27	N/A	N/A	160.00	691.00	33.67
PgsB Count	3	3	3	3	3	3	3	3	3	3	3	3	0	0	3	3	3
PgsB StdDev	0.22	0.80	0.04	0.40	0.37		0.01	0.16	0.21	0.16	0.19	0.04	N/A	N/A	22.72	91.54	3.06
PgsB Var	0.05	0.64	0.00	0.16	0.14		0.00	0.03	0.04	0.03	0.03	0.00	N/A	N/A	516.00	8,379.00	9.33
PgsC Average	4.49	58.63	0.64	15.87	4.62	0.72	0.10	3.64	4.07	2.52	5.17	0.37	1,790.00	212.00	161.27	910.91	45.82
PgsC Count	11	11	11	11	5	5	11	11	11	11	11	11	1	1	11	11	11
PgsC StdDev	0.91	3.00	0.07	0.38	2.24	1.60	0.03	1.05	0.81	0.50	0.72	0.05	N/A	N/A	15.98	74.15	12.17
PgsC Var	0.82	9.03	0.00	0.15	5.02	2.56	0.00	1.10	0.65	0.25	0.52	0.00	N/A	N/A	255.22	5,498.29	148.16
PgsX Average	2.07	70.67	0.25	14.54	1.01	1.40	0.04	0.96	1.54	3.48	5.01	0.08	N/A	N/A	N/A	N/A	N/A
PgsX Count	3	3	3	3	3	3	3	3	3	3	3	3	0	0	0	0	0
PgsX StdDev	2.84	0.23	0.01	0.49	0.70	0.45	0.03	0.29	0.23	0.28	0.91	0.04	N/A	N/A	N/A	N/A	N/A
PgsX Var	8.08	0.05	0.00	0.24	0.49	0.20	0.00	0.08	0.05	0.08	0.82	0.00	N/A	N/A	N/A	N/A	N/A
PgtA Average	5.72	72.42	0.24	13.43	0.73	1.98	0.04	0.58	1.51	3.14	4.89	0.08	512.65	27.71	232.29	175.43	32.95
PgtA Count	21	20	21	21	21	19	21	21	21	21	21	21	20	21	21	21	21
PgtA StdDev	1.41	2.68	0.13	0.83	0.61	0.75	0.02	0.31	0.58	0.23	0.39	0.04	280.98	14.27	59.38	100.12	16.54
PgtA Var	1.99	7.19	0.02	0.68	0.37	0.56	0.00	0.10	0.34	0.05	0.15	0.00	78,948.03	203.61	3,526.11	10,024.26	273.45
PgtB Average	6.91	74.67	0.11	12.53	0.93	0.84	0.02	0.22	0.77	2.99	5.40	0.03	191.67	28.00	243.00	83.00	31.00
PgtB Count	3	3	3	3	3	2	3	3	3	3	3	3	3	3	3	3	3
PgtB StdDev	0.46	2.31	0.04	0.38	0.89	0.14	0.00	0.09	0.30	0.21	0.23	0.01	112.01	30.35	32.91	33.41	9.54
PgtB Var	0.22	5.35	0.00	0.14	0.79	0.02	0.00	0.01	0.09	0.05	0.05	0.00	12,546.33	921.00	1,083.00	1,116.00	91.00
PgtC Average	7.03	76.24	0.07	12.50	0.31	0.61	0.01	0.15	0.80	3.26	5.22	0.03	97.33	9.67	232.33	58.33	27.67
PgtC Count	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
PgtC StdDev	1.38	0.36	0.03	0.27	0.33	0.41	0.00	0.08	0.34	0.18	0.48	0.03	56.54	7.37	42.19	25.15	6.51
PgtC Var	1.90	0.13	0.00	0.07	0.11	0.17	0.00	0.01	0.12	0.03	0.23	0.00	3,196.33	54.33	1,780.33	632.33	42.33
PgtX Average	4.79	70.40	0.36	13.92	0.60	2.68	0.06	0.57	1.61	3.02	5.47	0.13	1,196.00	22.00	254.50	319.00	27.50
PgtX Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PgtX StdDev	2.36	11.41	0.44	3.56	0.40	2.68	0.05	0.67	1.51	0.16	0.89	0.17	1,630.59	2.83	30.41	400.22	12.02
PgtX Var	5.56	130.09	0.19	12.65	0.16	7.18	0.00	0.45	2.27	0.02	0.79	0.03	2,658,818.00	8.00	924.50	160,178.00	144.50
PguA Average	6.62	74.67	0.12	12.66	0.84	1.15	0.03	0.24	0.66	3.09	5.12	0.05	236.00	86.40	386.00	42.83	36.83
PguA Count	6	6	6	6	6	4	6	6	6	6	6	6	6	5	6	6	6
PguA StdDev	1.37	2.47	0.02	0.20	0.88	0.20	0.00	0.07	0.09	0.22	0.43	0.01	136.71	53.66	41.63	11.82	10.03
PguA Var	1.87	6.08	0.00	0.04	0.78	0.04	0.00	0.00	0.01	0.05	0.19	0.00	18,689.60	2,879.30	1,733.20	139.77	100.57
PgvA Average	5.31	69.48	0.38	13.98	0.66	3.15	0.03	0.81	2.05	3.27	4.44	0.13	759.00	22.50	218.00	215.50	25.00
PgvA Count	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2	2
PgvA StdDev	0.22	0.23	0.01	0.01	0.02	0.04		0.06	0.20	0.21	0.23	0.02	1.41	2.12	11.31	9.19	4.24
PgvA Var	0.05	0.05	0.00	0.00	0.00	0.00		0.00	0.04	0.04	0.05	0.00	2.00	4.50	128.00	84.50	18.00

Appendix I (continued)

PLUTON	HP	SiO2	TiO2	Al2O3	Fe2O3	FeO	MnO	MgO	CaO	Na2O	K2O	P2O5	Ba	Li	Rb	Sr	Pb
PgwA Average	7.09	74.77	0.10	12.53	0.27	1.56	0.02	0.11	0.75	3.26	5.33	0.02	112.00	30.00	258.00	60.00	24.00
PgwA Count	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
PgwA StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgwA Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgxA Average	5.01	68.51	0.37	14.46	1.30	2.84	0.05	1.48	2.98	3.17	4.25	0.12	796.54	23.00	166.54	286.85	25.93
PgxA Count	14	14	14	14	14	12	14	14	14	14	14	14	13	13	14	13	14
PgxA StdDev	0.82	2.56	0.08	0.58	1.25	0.43	0.02	0.38	0.75	0.21	0.33	0.03	232.82	10.96	15.90	69.42	4.68
PgxA Var	0.67	6.55	0.01	0.34	1.56	0.19	0.00	0.14	0.57	0.04	0.11	0.00	54,204.77	120.17	252.94	4,819.47	21.92
PgyA Average	5.77	75.23	0.05	12.46	1.33	1.71	0.03	0.18	0.60	2.79	5.43	0.05	75.50	28.00	410.00	20.00	40.00
PgyA Count	2	1	2	2	2	1	2	2	2	2	2	2	2	2	2	2	2
PgyA StdDev	0.86	N/A		0.35	1.37	N/A	0.00	0.01	0.08	0.01	0.46	0.01	6.36	15.56	72.12	2.83	28.28
PgyA Var	0.75	N/A		0.12	1.88	N/A	0.00	0.00	0.01	0.00	0.21	0.00	40.50	242.00	5,202.00	8.00	800.00
PgzA Average	1.81	54.75	0.72	14.78	1.95	6.35	0.12	6.53	7.89	2.33	2.66	0.27	1,116.50	24.38	113.38	453.13	12.63
PgzA Count	8	8	8	8	8	7	8	8	8	8	8	8	8	8	8	8	8
PgzA StdDev	1.16	5.11	0.24	1.61	1.53	1.47	0.04	3.04	2.87	0.72	1.36	0.13	725.99	19.46	61.26	198.30	8.14
PgzA Var	1.35	26.16	0.06	2.58	2.33	2.17	0.00	9.26	8.22	0.52	1.84	0.02	527,062.86	378.84	3,752.55	39,322.70	66.27

Appendix I (continued)

PLUTON	U	Th	Zr	Hf	Ta	Nb	Y	La	Ce	Nd	Sc	V	Cr	Co	Ni	Cu
PewA Average	9.46	42.77	206.77	N/A	N/A	11.54	25.77	71.23	128.85	48.50	2.88	32.54	6.88	7.31	5.69	5.46
PewA Count	13	13	13	0	0	13	13	13	13	8	8	13	8	13	13	13
PewA StdDev	5.08	10.96	59.56	N/A	N/A	1.81	4.42	28.73	47.83	20.42	2.23	34.56	2.17	4.23	3.66	4.29
PewA Var	25.77	120.19	3,547.69	N/A	N/A	3.27	19.53	825.53	2,287.31	417.14	4.98	1,194.10	4.70	17.90	13.40	18.44
PgaA Average	12.35	47.54	162.15	N/A	0.00	16.19	31.62	55.80	103.84	41.25	1.56	10.60	5.44	4.30	2.04	4.46
PgaA Count	26	26	26	0	1	26	26	25	25	16	16	25	16	23	25	26
PgaA StdDev	4.53	14.41	73.29	N/A	N/A	7.11	12.57	36.04	58.42	21.55	2.42	10.07	2.61	1.82	1.37	3.49
PgaA Var	20.56	207.54	5,371.90	N/A	N/A	50.48	158.09	1,298.83	3,413.06	464.33	5.86	101.33	6.80	3.31	1.87	12.18
PgaB Average	9.25	49.44	240.31	N/A	0.00	16.38	33.06	86.08	156.62	58.20	4.60	27.00	6.00	5.42	3.15	3.81
PgaB Count	16	16	16	0	3	16	16	13	13	5	5	12	5	12	13	16
PgaB StdDev	3.26	14.29	132.91	N/A	N/A	6.33	6.44	21.15	34.42	6.22	6.19	20.32	2.74	1.62	1.21	2.01
PgaB Var	10.60	204.26	17,664.10	N/A	N/A	40.12	41.53	447.41	1,184.59	38.70	38.30	412.73	7.50	2.63	1.47	4.03
PgaC Average	5.11	26.22	215.67	N/A	0.00	15.33	29.22	66.63	121.88	57.60	14.20	144.25	46.80	20.33	12.00	11.88
PgaC Count	9	9	9	0	1	9	9	8	8	5	5	8	5	6	8	8
PgaC StdDev	4.81	14.97	77.68	N/A	N/A	10.70	8.15	18.84	28.36	9.96	4.02	116.08	50.91	8.82	11.29	7.57
PgaC Var	23.11	224.19	6,034.50	N/A	N/A	114.50	66.44	355.13	804.41	99.30	16.20	13,474.50	2,591.70	77.87	127.43	57.27
PgaD Average	6.95	45.29	200.29	N/A	0.00	12.48	24.38	89.60	159.60	49.57	2.43	29.80	7.57	5.83	4.25	4.95
PgaD Count	21	21	21	0	1	21	21	20	20	7	7	20	7	18	20	21
PgaD StdDev	2.78	10.93	56.59	N/A	N/A	7.87	7.41	28.45	50.60	15.67	2.70	18.49	4.79	2.04	2.57	5.35
PgaD Var	7.75	119.41	3,202.41	N/A	N/A	61.86	54.95	809.52	2,560.78	245.62	7.28	341.96	22.95	4.15	6.62	28.65
PgaX Average	8.67	35.67	24.00	N/A	N/A	6.33	10.33	41.33	73.67	27.33	0.00	3.67	4.33	3.00	1.33	3.00
PgaX Count	3	3	3	0	0	3	3	3	3	3	3	3	3	3	3	3
PgaX StdDev	3.06	14.84	18.19	N/A	N/A	3.79	8.50	49.96	87.96	27.54		0.58	2.31	1.00	1.15	
PgaX Var	9.33	220.33	331.00	N/A	N/A	14.33	72.33	2,496.33	7,737.33	758.33		0.33	5.33	1.00	1.33	
PgaXPGQ Average	13.00	51.00	145.00	N/A	N/A	12.00	19.00	78.00	130.00	43.00	2.00	8.00	12.00	3.00	2.00	5.00
PgaXPGQ Count	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1
PgaXPGQ StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgaXPGQ Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgbA Average	15.35	48.24	185.33	N/A	0.00	43.38	52.67	86.00	155.13	44.00	4.00	9.00	0.00	N/A	0.00	5.14
PgbA Count	17	17	15	0	7	8	15	8	8	1	1	1	1	0	1	14
PgbA StdDev	7.18	7.02	23.48	N/A	N/A	9.15	12.20	15.00	25.61	N/A	N/A	N/A	N/A	N/A	N/A	3.59
PgbA Var	51.62	49.32	551.38	N/A	N/A	83.70	148.81	225.14	655.84	N/A	N/A	N/A	N/A	N/A	N/A	12.90
PgbyGA Average	14.90	79.29	270.25	9.70	2.73	41.37	17.06	95.50	153.59	44.81	4.35	17.38	24.00	6.88	29.25	2.63
PgbyGA Count	10	7	20	6	7	19	18	6	17	16	17	8	8	8	8	8
PgbyGA StdDev	4.86	33.34	126.65	4.20	1.53	33.65	4.90	24.49	54.36	14.48	2.21	6.93	22.43	3.04	2.55	2.97
PgbyGA Var	23.66	1,111.24	16,039.78	17.68	2.35	1,132.36	24.06	599.90	2,955.01	209.63	4.87	47.98	503.14	9.27	6.50	8.84
PgbyGAP Average	N/A	N/A	105.50	N/A	N/A	20.50	9.00	N/A	N/A	N/A	1.50	5.00	4.00	6.00	18.50	1.00
PgbyGAP Count	0	0	2	0	0	2	2	0	0	0	2	2	2	2	2	2
PgbyGAP StdDev	N/A	N/A	2.12	N/A	N/A	3.54	4.24	N/A	N/A	N/A	0.71	1.41	1.41	1.41	0.71	
PgbyGAP Var	N/A	N/A	4.50	N/A	N/A	12.50	18.00	N/A	N/A	N/A	0.50	2.00	2.00	2.00	0.50	
Pgbysy Average	13.13	60.17	652.93	19.58	2.30	42.33	21.77	172.60	320.11	116.56	12.75	91.56	127.67	25.67	92.67	32.22
Pgbysy Count	8	6	14	5	6	9	13	5	9	9	12	9	9	9	9	9
Pgbysy StdDev	4.67	27.37	384.77	4.75	1.21	11.91	4.46	21.73	52.54	21.62	6.89	37.62	75.39	17.36	43.32	6.24
Pgbysy Var	21.84	749.37	148,050.84	22.52	1.48	141.75	19.86	472.30	2,760.36	467.28	47.48	1,415.53	5,684.25	301.50	1,876.50	38.94





PLUTON	U	Th	Zr	Hf	Ta	Nb	Y	La	Ce	Nd	Sc	V	Cr	Co	Ni	Cu
PghA Average	16.00	40.50	184.50	N/A	0.00	14.00	55.50	67.00	122.00	N/A	N/A	34.00	N/A	4.00	4.00	5.00
PghA Count	2	2	2	0	1	2	2	1	1	0	0	1	0	1	1	1
PghA StdDev		0.71	38.89	N/A	N/A	2.83	30.41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PghA Var		0.50	1,512.50	N/A	N/A	8.00	924.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PghB Average	22.00	43.50	113.50	N/A	N/A	16.00	28.00	26.50	60.50	N/A	N/A	9.00	N/A	3.50	4.00	6.00
PghB Count	2	2	2	0	0	2	2	2	2	0	0	2	0	2	2	2
PghB StdDev	11.31	4.95	23.33	N/A	N/A	4.24	1.41	20.51	33.23	N/A	N/A	12.73	N/A	0.71		2.83
PghB Var	128.00	24.50	544.50	N/A	N/A	18.00	2.00	420.50	1,104.50	N/A	N/A	161.99	N/A	0.50		8.00
PgIA Average	11.88	49.00	156.50	N/A	0.00	20.50	30.50	59.83	114.00	38.00	3.00	18.17	4.00	28.17	2.67	3.88
PgIA Count	8	8	8	0	2	8	8	6	6	2	2	6	2	6	6	8
PgIA StdDev	2.95	8.91	51.77	N/A		13.24	8.99	13.79	24.22	2.83		9.89		35.79	1.21	2.75
PgIA Var	8.70	79.43	2,680.29	N/A		175.43	80.86	190.17	586.40	8.00		97.77		1,280.97	1.47	7.55
PgIB Average	16.67	52.33	112.33	N/A	N/A	22.33	38.67	39.33	79.00	30.33	2.00	4.00	1.33	76.00	1.33	0.00
PgIB Count	3	3	3	0	0	3	3	3	3	3	3	3	3	3	3	3
PgIB StdDev	4.93	4.62	24.83	N/A	N/A	6.35	7.51	10.97	19.05	5.77	1.73	1.73	2.31	12.12	0.58	
PgIB Var	24.33	21.33	616.33	N/A	N/A	40.33	56.33	120.33	363.00	33.33	3.00	3.00	5.33	147.00	0.33	
PgIC Average	9.75	55.50	185.25	N/A	N/A	13.50	21.00	100.00	171.00	74.50	4.50	24.25	6.00	43.00	3.25	2.25
PgIC Count	4	4	4	0	0	4	4	4	4	2	2	4	2	4	4	4
PgIC StdDev	0.96	17.25	64.02	N/A	N/A	4.43	4.83	52.69	84.70	26.16	0.71	11.24	1.41	42.73	1.71	2.63
PgIC Var	0.92	297.67	4,098.92	N/A	N/A	19.67	23.33	2,776.67	7,174.00	684.50	0.50	126.25	2.00	1,826.00	2.92	6.92
PgID Average	6.00	23.00	349.00	N/A	N/A	20.00	46.00	110.00	199.00	85.00	12.00	79.00	18.00	16.00	5.00	6.00
PgID Count	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1
PgID StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgID Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgIA Average	N/A	N/A	N/A	N/A	N/A	N/A	0	0	0	0	0	0	0	0	0	0
PgIA Count	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PgIA StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgIA Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgkA Average	48.00	12.00	253.00	N/A	0.00	49.00	32.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	5.00
PgkA Count	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	1
PgkA StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgkA Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgIA Average	9.00	31.50	124.00	N/A	0.00	12.17	35.67	50.40	100.00	41.25	3.00	14.00	7.75	4.60	4.40	3.83
PgIA Count	6	6	6	0	1	6	6	5	5	4	4	5	4	5	5	6
PgIA StdDev	2.19	4.04	48.34	N/A	N/A	5.71	10.44	25.56	46.91	21.41	2.16	8.09	1.71	0.89	1.34	1.72
PgIA Var	4.80	16.30	2,336.40	N/A	N/A	32.57	109.07	653.30	2,200.50	458.25	4.67	65.50	2.92	0.80	1.80	2.97
PgIX Average	7.50	37.50	172.00	N/A	N/A	11.00	24.50	53.00	102.00	42.00	5.50	35.00	27.00	9.00	13.00	6.00
PgIX Count	2	2	2	0	0	2	2	2	2	2	2	2	2	2	2	2
PgIX StdDev	3.54	16.26	89.10	N/A	N/A	5.66	6.36	1.41		4.24	7.78	42.43	31.11	7.07	12.73	1.41
PgIX Var	12.50	264.50	7,938.00	N/A	N/A	32.00	40.50	2.00		18.00	60.49	1,800.00	968.00	50.00	162.00	2.00
PgmA Average	5.67	29.67	231.67	N/A	0.00	14.44	25.33	75.25	131.25	39.75	2.75	39.63	10.50	11.00	4.75	5.00
PgmA Count	9	9	9	0	1	9	9	8	8	4	4	8	4	5	8	9
PgmA StdDev	3.16	5.81	63.71	N/A	N/A	2.65	4.50	23.19	40.95	19.55	2.50	25.59	7.05	2.35	3.24	3.39
PgmA Var	10.00	33.75	4,058.75	N/A	N/A	7.03	20.25	537.64	1,677.07	382.25	6.25	654.84	49.67	5.50	10.50	11.50

PLUTON	U	Th	Zr	Hf	Ta	Nb	Y	La	Ce	Nd	Sc	V	Cr	Co	Ni	Cu
PgmB Average	2.00	22.80	309.40	N/A	N/A	18.67	29.60	102.40	172.00	59.00	9.50	48.00	17.50	12.00	3.67	5.40
PgmB Count	5	5	5	0	0	3	5	5	5	2	2	3	2	1	3	5
PgmB StdDev	2.00	3.27	75.32	N/A	N/A	4.73	2.97	22.83	24.46	5.66	2.12	13.00	2.12	N/A	1.53	0.89
PgmB Var	4.00	10.70	5,673.80	N/A	N/A	22.33	8.80	521.30	598.50	32.00	4.50	169.00	4.50	N/A	2.33	0.80
PgmC Average	10.82	36.09	205.55	N/A	N/A	17.13	23.00	66.73	111.73	32.00	0.29	26.75	5.57	14.00	3.25	3.45
PgmC Count	11	11	11	0	0	8	11	11	11	7	7	8	7	1	8	11
PgmC StdDev	5.33	17.23	67.31	N/A	N/A	2.85	8.16	22.73	40.09	5.29	0.76	44.17	0.79	N/A	2.31	2.42
PgmC Var	28.36	296.89	4,531.27	N/A	N/A	8.13	66.60	516.62	1,607.42	28.00	0.57	1,951.36	0.62	N/A	5.36	5.87
PgmwGRSN Average	23.00	41.00	122.00	N/A	N/A	47.00	36.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	302.00
PgmwGRSN Count	1	1	1	0	1	1	1	0	0	0	0	0	0	0	0	1
PgmwGRSN StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgmwGRSN Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgmX Average	6.00	59.00	322.00	N/A	N/A	19.00	34.00	133.00	234.00	N/A	N/A	42.00	N/A	10.00	6.00	4.00
PgmX Count	1	1	1	0	0	1	1	1	1	0	0	1	0	1	1	1
PgmX StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgmX Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgnA Average	19.33	38.67	88.33	N/A	N/A	15.00	43.33	17.33	37.33	21.00	2.00	3.00	5.67	3.33	0.67	2.67
PgnA Count	3	3	3	0	0	3	3	3	3	3	3	3	3	3	3	3
PgnA StdDev	2.31	2.31	8.50	N/A	N/A	2.00	9.24	5.51	6.51	2.00	2.65	2.65	1.53	0.58	1.15	0.58
PgnA Var	5.33	5.33	72.33	N/A	N/A	4.00	85.33	30.33	42.33	4.00	7.00	7.00	2.33	0.33	1.33	0.33
PgnX Average	11.00	38.00	147.00	N/A	N/A	12.00	28.00	48.00	87.00	37.00	3.00	19.00	7.00	4.00	3.00	2.00
PgnX Count	1	1	1	0	0	1	1	1	1	1	1	1	1	1	1	1
PgnX StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgnX Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgoA Average	13.00	29.00	48.00	N/A	N/A	5.00	7.00	25.00	54.00	N/A	N/A	5.00	N/A	N/A	3.00	3.00
PgoA Count	1	1	1	0	0	1	1	1	1	0	0	1	0	0	1	1
PgoA StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgoA Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgpA Average	11.50	45.50	215.33	N/A	N/A	13.33	23.67	71.00	128.00	N/A	N/A	58.00	N/A	7.00	6.00	5.67
PgpA Count	4	4	3	0	1	3	3	2	2	0	0	2	0	2	2	3
PgpA StdDev	4.43	8.81	46.23	N/A	N/A	3.51	6.03	24.04	45.25	N/A	N/A	16.97	N/A	N/A	1.41	1.53
PgpA Var	19.67	77.67	2,137.33	N/A	N/A	12.33	36.33	578.00	2,048.00	N/A	N/A	288.00	N/A	N/A	2.00	2.33
PgpB Average	10.33	28.33	203.50	N/A	N/A	11.00	25.50	64.00	118.50	34.00	6.00	38.00	8.00	6.00	7.00	3.50
PgpB Count	3	3	2	0	0	2	2	2	2	1	1	2	1	1	2	2
PgpB StdDev	4.04	22.85	75.66	N/A	N/A	1.41	13.44	2.83	17.68	N/A	N/A	33.94	N/A	N/A	1.41	0.71
PgpB Var	16.33	522.33	5,724.50	N/A	N/A	2.00	180.50	8.00	312.50	N/A	N/A	1,152.00	N/A	N/A	2.00	0.50
PgqA Average	8.44	46.22	189.33	N/A	N/A	16.22	20.56	86.13	143.50	48.57	2.57	19.75	10.71	5.50	3.75	3.88
PgqA Count	9	9	9	0	1	9	9	8	8	7	7	8	7	6	8	8
PgqA StdDev	2.65	4.44	53.58	N/A	N/A	9.08	5.53	11.73	24.71	7.00	1.51	23.02	7.78	1.22	1.98	3.60
PgqA Var	7.03	19.69	2,870.75	N/A	N/A	82.44	30.53	137.55	610.57	48.95	2.29	529.93	60.57	1.50	3.93	12.98
PgqA Average	8.17	49.17	183.17	N/A	N/A	20.75	29.00	62.67	132.44	41.50	3.00	27.56	26.00	5.11	4.00	4.08
PgqA Count	12	12	12	0	3	12	12	9	9	2	2	9	2	9	9	12
PgqA StdDev	4.06	11.79	75.15	N/A	N/A	13.07	6.73	11.62	40.21	0.71	1.41	14.87	26.87	1.17	2.55	1.31
PgqA Var	16.52	139.06	5,647.61	N/A	N/A	170.93	45.27	135.00	1,616.78	0.50	2.00	221.03	722.00	1.36	6.50	1.72

PLUTON	U	Th	Zr	Hf	Ta	Nb	Y	La	Ce	Nd	Sc	V	Cr	Co	Ni	Cu
PgrX Average	21.00	57.00	181.00	N/A	N/A	7.00	28.00	169.00	302.00	N/A	N/A	16.00	N/A	2.00	4.00	3.00
PgrX Count	1	1	1	0	0	1	1	1	1	0	0	1	0	1	1	1
PgrX StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgrX Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgsA Average	11.75	31.00	153.29	N/A	0.00	13.50	12.29	64.00	100.50	25.00	5.00	17.00	12.00	N/A	5.00	4.00
PgsA Count	8	8	7	0	2	6	7	2	2	1	1	1	1	0	1	4
PgsA StdDev	1.75	8.96	37.71	N/A		7.58	6.90	8.49	0.71	N/A	N/A	N/A	N/A	N/A	N/A	2.71
PgsA Var	3.07	80.29	1,421.90	N/A		57.50	47.57	72.00	0.50	N/A	N/A	N/A	N/A	N/A	N/A	7.33
PgsB Average	9.33	38.00	280.00	N/A	N/A	20.33	14.67	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgsB Count	3	3	3	0	0	3	3	0	0	0	0	0	0	0	0	0
PgsB StdDev	0.58	1.73	8.89	N/A	N/A	0.58	0.58	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgsB Var	0.33	3.00	79.00	N/A	N/A	0.33	0.33	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgsC Average	7.64	28.91	253.27	N/A	N/A	15.27	18.64	111.00	198.00	N/A	16.00	68.00	N/A	15.00	17.00	5.00
PgsC Count	11	11	11	0	0	11	11	1	1	0	1	1	0	1	1	1
PgsC StdDev	1.69	7.54	37.02	N/A	N/A	2.65	2.29	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgsC Var	2.85	56.89	1,370.62	N/A	N/A	7.02	5.25	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgsX Average	10.00	33.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgsX Count	1	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0
PgsX StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgsX Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgtA Average	9.33	40.05	147.52	N/A	0.00	12.14	26.67	63.68	112.63	42.00	3.08	26.11	10.62	5.95	4.53	4.30
PgtA Count	21	21	21	0	2	21	21	19	19	13	13	19	13	19	19	20
PgtA StdDev	3.51	9.02	44.95	N/A		5.33	11.18	20.76	32.94	10.41	2.63	19.08	6.64	2.44	2.09	2.25
PgtA Var	12.33	81.35	2,020.56	N/A		28.43	124.93	430.89	1,084.80	108.33	6.91	364.10	44.09	5.94	4.37	5.06
PgtB Average	11.67	47.67	119.33	N/A	0.00	19.67	33.33	56.00	100.50	40.50	0.00	3.50	4.00	3.00	1.00	3.33
PgtB Count	3	3	3	0	1	3	3	2	2	2	2	2	2	2	2	3
PgtB StdDev	2.52	2.52	22.85	N/A	N/A	15.89	16.29	32.53	64.35	27.58		2.12			1.41	1.53
PgtB Var	6.33	6.33	522.33	N/A	N/A	252.33	265.33	1,058.00	4,140.50	760.50		4.50			2.00	2.33
PgtC Average	16.67	31.33	58.33	N/A	N/A	11.00	27.33	29.00	49.67	31.00	0.00	6.00	4.00	3.33	2.00	3.00
PgtC Count	3	3	3	0	0	3	3	3	3	2	2	3	2	3	3	3
PgtC StdDev	6.43	4.73	21.03	N/A	N/A	4.36	5.51	14.00	3.06	9.90		8.72	1.41	1.15	1.73	1.00
PgtC Var	41.33	22.33	442.33	N/A	N/A	19.00	30.33	196.00	9.33	98.00		76.00	2.00	1.33	3.00	1.00
PgtX Average	7.00	35.00	205.00	N/A	N/A	13.00	21.00	54.00	97.50	41.00	5.50	31.50	7.50	5.00	2.50	3.00
PgtX Count	2	2	2	0	0	2	2	2	2	2	2	2	2	2	2	2
PgtX StdDev	4.24	18.38	161.22	N/A	N/A	1.41	1.41	19.80	27.58	12.73	7.78	44.55	2.12	4.24	3.54	
PgtX Var	18.00	338.00	25,992.00	N/A	N/A	2.00	2.00	392.00	760.50	162.00	60.49	1,984.47	4.50	18.00	12.50	
PguA Average	15.00	31.83	87.33	N/A	0.00	10.50	47.33	31.00	64.50	27.00	0.67	6.00	4.33	4.00	2.25	8.17
PguA Count	6	6	6	0	2	6	6	4	4	3	3	4	3	3	4	6
PguA StdDev	5.62	4.92	30.42	N/A		8.60	13.92	9.83	14.01	4.58	1.15	2.16	2.08	1.73	1.71	12.72
PguA Var	31.60	24.17	925.47	N/A		73.90	193.87	96.67	196.33	21.00	1.33	4.67	4.33	3.00	2.92	161.77
PgvA Average	7.50	41.50	210.00	N/A	N/A	10.50	26.50	68.50	144.00	N/A	N/A	59.50	N/A	9.00	5.50	12.50
PgvA Count	2	2	2	0	0	2	2	2	2	0	0	2	0	2	2	2
PgvA StdDev	0.71	0.71	9.90	N/A	N/A	0.71	2.12	9.19	9.90	N/A	N/A	2.12	N/A	N/A	0.71	0.71
PgvA Var	0.50	0.50	98.00	N/A	N/A	0.50	4.50	84.50	98.00	N/A	N/A	4.50	N/A	N/A	0.50	0.50

Appendix I (continued)

PLUTON	U	Th	Zr	Hf	Ta	Nb	Y	La	Ce	Nd	Sc	V	Cr	Co	Ni	Cu
PgwA Average	12.00	49.00	138.00	N/A	N/A	10.00	31.00	77.00	148.00	N/A	N/A	10.00	N/A	0.00	4.00	85.00
PgwA Count	1	1	1	0	0	1	1	1	1	0	0	1	0	1	1	1
PgwA StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgwA Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgxA Average	8.50	33.93	144.21	N/A	0.00	11.93	17.86	54.83	101.08	38.00	6.50	67.50	36.50	11.73	14.25	9.57
PgxA Count	14	14	14	0	2	14	14	12	12	2	2	12	2	11	12	14
PgxA StdDev	2.31	4.20	21.26	N/A		9.45	3.03	9.87	14.95		0.71	14.46	7.78	2.65	2.99	10.75
PgxA Var	5.35	17.61	452.18	N/A		89.30	9.21	97.42	223.54		0.50	209.18	60.50	7.02	8.93	115.65
PgyA Average	12.00	30.50	73.50	N/A	0.00	20.50	38.50	22.00	62.00	N/A	N/A	8.00	N/A	4.00	5.00	6.00
PgyA Count	2	2	2	0	1	2	2	1	1	0	0	1	0	1	1	1
PgyA StdDev	1.41	6.36	10.61	N/A	N/A	17.68	13.44	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgyA Var	2.00	40.50	112.50	N/A	N/A	312.50	180.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgzA Average	2.38	13.50	167.38	N/A	0.00	8.25	19.50	40.86	71.43	33.57	24.14	167.71	559.86	35.57	57.43	20.25
PgzA Count	8	8	8	0	1	8	8	7	7	7	7	7	7	7	7	8
PgzA StdDev	1.77	8.43	71.08	N/A	N/A	5.01	7.35	23.28	46.26	18.47	7.90	58.41	983.34	8.40	46.75	21.20
PgzA Var	3.12	71.14	5,051.70	N/A	N/A	25.07	54.00	541.81	2,140.29	341.29	62.48	3,412.24	966,949.81	70.62	2,185.62	449.64

PLUTON	Zn	Sn	W	Mo	Ga	As	Au	S	B	F	Bi	Al <sup>2+</sup> -(Fe+Mg+4Ca+2NA-K)	Fe+Mg+Ti	K-(Na+Ca)
Pewa Average	36.54	2.23	3.78	2.33	12.44	1.14	N/A	150.00	N/A	500.00	N/A	316.74	35.94	(9.18)
Pewa Count	13	13	9	9	9	7	0	1	0	1	0	13	13	13
Pewa StdDev	23.88	2.65	1.64	5.15	5.15	1.07	N/A	N/A	N/A	N/A	N/A	65.20	17.99	34.46
Pewa Var	570.43	7.02	2.69	26.50	26.53	1.14	N/A	N/A	N/A	N/A	N/A	4,251.25	323.53	1,187.57
Pgaa Average	37.19	1.42	3.17	1.72	18.21	1.33	3.00	166.67	11.00	1,433.33	0.00	299.36	34.81	(16.42)
Pgaa Count	26	26	23	24	24	24	1	9	1	9	1	26	26	26
Pgaa StdDev	55.12	2.06	2.04	3.71	3.05	2.33	N/A	173.21	N/A	673.15	N/A	47.17	20.31	22.78
Pgaa Var	3,038.24	4.25	4.15	13.74	9.30	5.45	N/A	29,999.98	N/A	453,125.00	N/A	2,224.83	412.67	519.15
Pgab Average	30.94	1.19	2.58	3.83	18.33	1.33	0.01	157.14	3.33	1,565.00	0.00	294.23	51.90	(14.90)
Pgab Count	16	16	12	12	12	12	3	7	3	10	1	16	16	16
Pgab StdDev	8.13	1.47	2.61	4.28	1.44	1.50	0.00	53.45	5.77	330.87	N/A	56.58	17.53	21.24
Pgab Var	66.06	2.16	6.81	18.33	2.06	2.24	0.00	2,857.14	33.33	109,472.22	N/A	3,200.88	307.15	451.31
Pgac Average	65.44	1.11	2.33	3.00	19.43	17.14	N/A	250.00	17.00	1,800.00	0.00	27.39	147.63	(96.52)
Pgac Count	9	9	6	7	7	7	0	2	1	3	2	9	9	9
Pgac StdDev	20.62	2.67	3.50	3.46	3.51	39.34	N/A	70.71	N/A	781.02		181.65	68.82	51.05
Pgac Var	425.28	7.11	12.27	12.00	12.29	1,547.80	N/A	5,000.00	N/A	610,000.00		32,997.79	4,736.33	2,606.35
Pgad Average	29.29	1.20	1.63	4.70	16.65	0.58	0.01	130.77	0.00	1,193.57	0.00	286.82	52.32	(15.52)
Pgad Count	21	20	19	20	20	19	1	13	1	14	2	21	21	21
Pgad StdDev	10.73	1.64	1.74	5.37	4.04	1.02	N/A	48.04	N/A	551.52		42.17	19.21	20.24
Pgad Var	115.11	2.69	3.02	28.85	16.34	1.03	N/A	2,307.69	N/A	304,178.57		1,778.10	368.84	409.71
Pgax Average	11.67	0.00	4.33	0.00	15.00	0.00	N/A	N/A	N/A	N/A	N/A	350.24	17.01	27.44
Pgax Count	3	3	3	3	3	3	0	0	0	0	0	3	3	3
Pgax StdDev	3.06		0.58		1.00		N/A	N/A	N/A	N/A	N/A	93.69	6.07	31.62
Pgax Var	9.33		0.33		1.00		N/A	N/A	N/A	N/A	N/A	8,776.90	36.84	999.76
PgaxPGQ Average	14.00	0.00	4.00	0.00	19.00	2.00	N/A	N/A	N/A	N/A	N/A	337.23	28.19	6.71
PgaxPGQ Count	1	1	1	1	1	1	0	0	0	0	0	1	1	1
PgaxPGQ StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgaxPGQ Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pgba Average	46.07	1.71	N/A	4.00	24.00	0.00	0.58	1.00	5.29	1,575.00	0.00	313.12	33.43	(18.66)
Pgba Count	14	14	0	6	1	1	7	11	7	14	1	18	18	18
Pgba StdDev	12.39	2.46	N/A	2.19	N/A	N/A	1.51	3.32	5.56	725.03	N/A	17.43	4.67	9.08
Pgba Var	153.61	6.06	N/A	4.80	N/A	N/A	2.28	11.00	30.90	525,673.08	N/A	303.91	21.77	82.53
PgbyGA Average	32.67	0.00	N/A	N/A	N/A	2.67	0.20	N/A	16.00	1,152.22	N/A	295.94	68.78	(33.83)
PgbyGA Count	9	1	0	0	0	6	1	0	1	9	0	23	23	23
PgbyGA StdDev	13.86	N/A	N/A	N/A	N/A	1.51	N/A	N/A	N/A	478.32	N/A	277.60	37.87	14.35
PgbyGA Var	192.00	N/A	N/A	N/A	N/A	2.27	N/A	N/A	N/A	228,794.44	N/A	77,059.58	1,434.19	206.06
PgbyGap Average	1.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	675.00	N/A	295.97	15.71	(22.01)
PgbyGap Count	2	0	0	0	0	0	0	0	0	2	0	2	2	2
PgbyGap StdDev		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	120.21	N/A	36.31	0.09	23.76
PgbyGap Var		N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	14,450.00	N/A	1,318.17	0.01	564.54
Pgbysy Average	65.10	0.00	N/A	N/A	N/A	5.50	0.50	N/A	10.00	2,296.00	N/A	78.77	156.67	(38.11)
Pgbysy Count	10	1	0	0	0	4	2	0	1	10	0	16	16	16
Pgbysy StdDev	26.29	N/A	N/A	N/A	N/A	6.45	0.14	N/A	N/A	906.14	N/A	132.73	49.95	25.61
Pgbysy Var	691.21	N/A	N/A	N/A	N/A	41.67	0.02	N/A	N/A	821,093.33	N/A	17,616.23	2,494.64	655.70



PLUTON	Zn	Sn	W	Mo	Ga	As	Au	S	B	F	Bi	Al <sup>2</sup> -(Fe+Mg+4Ca+2Na-K)	Fe+Mg+Ti	K-(Na+Ca)
PghA Average	24.00	1.00	0.00	3.00	18.00	0.00	N/A	100.00	15.00	1,675.00	N/A	198.33	57.10	(61.92)
PghA Count	2	2	1	1	1	1	0	1	1	2	0	2	2	2
PghA StdDev	24.04	1.41	N/A	N/A	N/A	N/A	N/A	N/A	N/A	388.91	N/A	59.70	6.01	15.01
PghA Var	578.00	2.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	151,250.00	N/A	3,564.62	36.07	225.31
PghB Average	28.50	2.50	1.50	4.00	17.00	1.50	N/A	150.00	N/A	1,000.00	N/A	293.94	30.67	(33.03)
PghB Count	2	2	2	2	2	2	0	2	0	2	0	2	2	2
PghB StdDev	13.44	0.71	2.12	1.41	1.41	2.12	N/A	70.71	N/A	636.40	N/A	10.75	1.08	5.36
PghB Var	180.50	0.50	4.50	2.00	2.00	4.50	N/A	5,000.00	N/A	405,000.00	N/A	115.62	1.16	28.69
PgiA Average	25.00	0.50	2.50	6.17	16.33	1.00	3.00	66.67	0.00	1,171.67	0.00	280.61	38.54	(17.65)
PgiA Count	8	8	6	6	6	6	1	6	2	6	2	8	8	8
PgiA StdDev	14.06	0.93	2.07	7.36	1.51	1.10	N/A	51.64	N/A	292.60	N/A	14.32	11.92	10.67
PgiA Var	197.71	0.86	4.30	54.16	2.27	1.20	N/A	2,666.64	N/A	85,616.67	N/A	204.96	142.11	113.90
PgiB Average	15.33	0.00	4.00	0.00	18.33	2.00	N/A	0.00	N/A	N/A	0.00	328.67	22.70	(3.98)
PgiB Count	3	3	3	3	3	3	0	3	0	0	3	3	3	3
PgiB StdDev	7.51	N/A	N/A	N/A	1.15	N/A	N/A	N/A	N/A	N/A	N/A	21.71	3.29	15.35
PgiB Var	56.33	N/A	N/A	N/A	1.33	N/A	N/A	N/A	N/A	N/A	N/A	471.23	10.81	235.72
PgiC Average	23.50	0.50	1.75	2.00	16.00	1.00	N/A	50.00	N/A	550.00	0.00	294.12	42.10	(16.08)
PgiC Count	4	4	4	4	4	4	0	4	0	2	2	4	4	4
PgiC StdDev	5.92	1.00	2.06	2.45	1.41	1.15	N/A	57.73	N/A	42.43	N/A	20.93	6.75	7.25
PgiC Var	35.00	1.00	4.25	6.00	2.00	1.33	N/A	3,333.30	N/A	1,800.00	N/A	438.27	45.59	52.57
PgiD Average	123.00	9.00	5.00	0.00	24.00	2.00	N/A	N/A	N/A	N/A	N/A	60.34	157.20	(65.81)
PgiD Count	1	1	1	1	1	1	0	0	0	0	0	1	1	1
PgiD StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgiD Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pgja Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	N/A	N/A	N/A	454.07	74.39	(24.01)
Pgja Count	0	0	0	0	0	0	0	1	0	0	0	1	1	1
Pgja StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pgja Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pgka Average	50.00	0.00	N/A	N/A	N/A	N/A	3.00	0.00	6.00	1,500.00	N/A	323.30	76.47	(14.24)
Pgka Count	1	1	0	0	0	0	1	2	1	1	0	3	3	3
Pgka StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	48.65	5.73	5.32
Pgka Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	2,367.00	32.79	28.33
Pgia Average	26.83	1.50	4.20	2.40	14.20	0.80	0.01	100.00	8.00	1,075.00	N/A	319.88	37.73	(0.19)
Pgia Count	6	6	5	5	5	5	1	1	1	2	0	6	6	6
Pgia StdDev	9.00	1.76	3.03	3.29	3.42	1.10	N/A	N/A	N/A	247.49	N/A	53.44	11.15	27.51
Pgia Var	80.97	3.10	9.20	10.80	11.70	1.20	N/A	N/A	N/A	61,250.00	N/A	2,855.83	124.42	756.89
Pgix Average	49.50	2.50	4.50	0.00	13.00	0.00	N/A	N/A	N/A	N/A	N/A	244.89	75.51	(6.74)
Pgix Count	2	2	2	2	2	2	0	0	0	0	0	2	2	2
Pgix StdDev	45.96	3.54	0.71	N/A	4.24	N/A	N/A	N/A	N/A	N/A	N/A	52.95	73.33	31.87
Pgix Var	2,112.50	12.50	0.50	N/A	18.00	N/A	N/A	N/A	N/A	N/A	N/A	2,803.65	5,377.05	1,015.41
Pgma Average	48.89	2.00	2.40	2.88	19.13	1.25	5.00	225.00	12.00	1,300.00	0.00	251.14	78.99	(26.77)
Pgma Count	9	9	5	8	8	8	1	4	1	5	3	9	9	9
Pgma StdDev	19.46	2.40	1.52	3.18	1.46	1.16	N/A	95.74	N/A	322.10	N/A	53.76	34.51	18.83
Pgma Var	378.61	5.75	2.30	10.12	2.13	1.36	N/A	9,166.67	N/A	103,750.00	N/A	2,890.53	1,190.73	354.72

PLUTON	Zn	Sn	W	Mo	Ga	As	Au	S	B	F	Bi	Al*2-(Fe+Mg+4Ca+2NA-K)	Fe+Mg+Ti	K-(Na+Ca)
PgmB Average	63.00	0.80	0.00	2.00	19.00	0.75	N/A	23.67	N/A	875.00	0.00	227.41	90.01	(39.81)
PgmB Count	5	5	1	4	2	2	0	3	0	2	2	5	5	5
PgmB StdDev	11.42	1.10	N/A	2.31	1.41	0.35	N/A	40.99	N/A	106.07		29.72	10.07	14.36
PgmB Var	130.50	1.20	N/A	5.33	2.00	0.13	N/A	1,680.31	N/A	11,250.00		883.38	101.43	206.26
PgmC Average	36.64	4.00	0.00	2.64	18.63	1.50	N/A	40.00	N/A	937.50	0.00	300.42	48.97	(22.41)
PgmC Count	11	10	1	11	8	8	0	5	0	4	6	12	12	12
PgmC StdDev	17.69	2.11	N/A	5.80	1.06	0.76	N/A	89.44	N/A	716.30		55.81	31.38	14.10
PgmC Var	313.05	4.44	N/A	33.65	1.13	0.57	N/A	7,999.96	N/A	513,091.67		3,114.80	984.56	198.84
PgmwGRSN Average	860.00	0.00	N/A	N/A	N/A	N/A	19.00	N/A	10.00	650.00	N/A	559.30	35.58	159.76
PgmwGRSN Count	1	1	0	0	0	0	1	0	1	1	0	1	1	1
PgmwGRSN StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgmwGRSN Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgmX Average	53.00	3.00	3.00	9.00	23.00	2.00	N/A	100.00	N/A	2,550.00	N/A	142.46	59.91	(189.17)
PgmX Count	1	1	1	1	1	1	0	1	0	1	0	2	2	2
PgmX StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	156.00	69.07	242.51
PgmX Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	24,336.12	4,770.27	58,812.08
PgnA Average	12.33	1.00	3.00	0.00	15.00	0.67	N/A	N/A	N/A	N/A	N/A	300.44	18.16	(22.94)
PgnA Count	3	3	3	3	3	3	0	0	0	0	0	3	3	3
PgnA StdDev	1.53	1.73	2.65		2.00	1.15	N/A	N/A	N/A	N/A	N/A	16.36	4.01	13.43
PgnA Var	2.33	3.00	7.00		4.00	1.33	N/A	N/A	N/A	N/A	N/A	267.72	16.12	180.36
PgnX Average	20.00	2.00	4.00	3.00	15.00	0.00	N/A	N/A	N/A	N/A	N/A	319.56	44.51	(4.17)
PgnX Count	1	1	1	1	1	1	0	0	0	0	0	1	1	1
PgnX StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgnX Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgoA Average	6.00	0.00	3.00	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	267.28	17.53	(43.06)
PgoA Count	1	1	1	0	0	0	0	0	0	0	0	1	1	1
PgoA StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgoA Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgpA Average	38.67	2.67	2.00	10.50	19.00	0.00	0.01	60.00	0.00	1,200.00	N/A	295.50	69.15	(14.76)
PgpA Count	3	3	2	2	2	2	1	5	1	3	0	6	6	6
PgpA StdDev	11.93	2.52	2.83	7.78	1.41		N/A	89.44	N/A	360.56	N/A	24.99	13.94	15.53
PgpA Var	142.33	6.33	8.00	60.50	2.00		N/A	7,999.96	N/A	130,000.00	N/A	624.61	194.22	241.08
PgpB Average	31.00	1.00	3.00	2.00	16.00	4.00	N/A	200.00	N/A	1,500.00	N/A	294.81	49.14	(21.37)
PgpB Count	2	2	1	2	2	2	0	3	0	2	0	3	3	3
PgpB StdDev	1.41	1.41	N/A	2.83			N/A	173.20	N/A		N/A	4.48	15.20	11.52
PgpB Var	2.00	2.00	N/A	8.00			N/A	29,999.90	N/A		N/A	20.03	231.15	132.74
PgqA Average	19.44	0.44	2.50	0.38	16.25	0.88	N/A	100.00	18.00	1,275.00	0.00	327.41	41.65	0.20
PgqA Count	9	9	6	8	8	8	0	1	1	2	2	9	9	9
PgqA StdDev	7.89	0.88	2.95	1.06	2.60	1.25	N/A	N/A	N/A	530.33		33.32	14.64	12.81
PgqA Var	62.28	0.78	8.70	1.12	6.79	1.55	N/A	N/A	N/A	281,250.00		1,109.99	214.27	164.21
PgrA Average	25.42	1.58	2.33	4.22	16.67	0.56	1.34	114.29	0.00	933.00	N/A	303.08	39.37	(13.08)
PgrA Count	12	12	9	9	9	9	3	7	3	10	0	12	12	12
PgrA StdDev	9.75	1.73	2.29	4.94	2.60	1.13	1.53	37.80		505.37	N/A	29.71	9.84	11.45
PgrA Var	94.99	2.99	5.25	24.44	6.75	1.28	2.33	1,428.57		255,401.11	N/A	882.70	96.82	131.12



PLUTON	Zn	Sn	W	Mo	Ga	As	Au	S	B	F	Bi	Al <sup>2</sup> -(Fe+Mg+4Ca+2NA-K)	Fe+Mg+Ti	K-(Na+Ca)
PgrX Average	20.00	3.00	0.00	7.00	16.00	0.00	N/A	100.00	N/A	1,050.00	N/A	282.36	30.64	(0.50)
PgrX Count	1	1	1	1	1	1	0	1	0	1	0	1	1	1
PgrX StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgrX Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgsA Average	22.00	0.00	N/A	0.00	19.00	33.00	0.01	9.00	0.00	560.00	0.00	283.29	47.67	(34.69)
PgsA Count	4	4	0	2	1	1	2	6	2	3	1	8	8	8
PgsA StdDev	9.42		N/A		N/A	N/A		22.05		52.92	N/A	46.29	31.20	9.67
PgsA Var	88.67		N/A		N/A	N/A		485.99		2,800.00	N/A	2,143.16	973.62	93.46
PgsB Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	N/A	N/A	N/A	230.42	120.36	(35.57)
PgsB Count	0	0	0	0	0	0	0	3	0	0	0	3	3	3
PgsB StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	10.27	9.17	6.10
PgsB Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	105.43	84.15	37.18
PgsC Average	47.00	3.00	0.00	3.00	19.00	0.00	N/A	40.00	N/A	1,500.00	N/A	158.28	129.16	(44.12)
PgsC Count	1	1	1	1	1	1	0	5	0	1	0	11	11	11
PgsC StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	89.44	N/A	N/A	N/A	48.35	21.09	18.77
PgsC Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	7,999.96	N/A	N/A	N/A	2,338.06	444.89	352.22
PgsX Average	N/A	N/A	N/A	N/A	N/A	N/A	N/A	0.00	N/A	N/A	N/A	287.15	59.03	(33.14)
PgsX Count	0	0	0	0	0	0	0	3	0	0	0	3	3	3
PgsX StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	39.01	5.97	24.70
PgsX Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A		N/A	N/A	N/A	1,521.70	35.64	610.08
PgtA Average	27.19	1.48	3.11	5.26	15.42	0.32	6.00	116.67	11.00	1,092.50	N/A	272.07	51.56	(24.41)
PgtA Count	21	21	19	19	19	19	1	6	2	8	0	21	21	21
PgtA StdDev	11.90	1.69	2.58	9.19	3.17	0.75	N/A	40.82	7.07	447.56	N/A	40.64	21.93	17.14
PgtA Var	141.66	2.86	6.65	84.42	10.04	0.56	N/A	1,666.67	50.00	200,307.14	N/A	1,651.47	481.07	293.91
PgtB Average	19.67	0.00	3.50	0.00	13.50	0.00	0.01	N/A	0.00	950.00	N/A	333.62	26.44	4.55
PgtB Count	3	3	2	2	2	2	1	0	1	1	0	3	3	3
PgtB StdDev	9.29		0.71		0.71		N/A	N/A	N/A	N/A	N/A	36.96	7.17	15.12
PgtB Var	86.33		0.50		0.50		N/A	N/A	N/A	N/A	N/A	1,365.68	51.48	228.54
PgtC Average	9.33	0.00	4.00	1.00	15.33	0.00	N/A	400.00	N/A	320.00	N/A	317.63	16.84	(8.65)
PgtC Count	3	3	3	3	3	3	0	1	0	1	0	3	3	3
PgtC StdDev	0.58		1.73	1.73	3.21		N/A	N/A	N/A	N/A	N/A	38.65	6.58	20.86
PgtC Var	0.33		3.00	3.00	10.33		N/A	N/A	N/A	N/A	N/A	1,493.85	43.27	435.20
PgtX Average	35.50	4.00	4.50	0.00	13.00	0.00	N/A	N/A	N/A	N/A	N/A	294.01	63.26	(9.93)
PgtX Count	2	2	2	2	2	2	0	0	0	0	0	2	2	2
PgtX StdDev	27.58		0.71		2.83		N/A	N/A	N/A	N/A	N/A	2.17	64.41	2.92
PgtX Var	760.50		0.50		8.00		N/A	N/A	N/A	N/A	N/A	4.72	4,148.16	8.53
PguA Average	91.50	2.83	6.00	6.50	17.25	2.75	4.50	100.00	8.00	1,800.00	0.00	332.18	28.46	(2.72)
PguA Count	6	6	3	4	4	4	2	1	2	3	1	6	6	6
PguA StdDev	180.10	2.32	1.00	7.55	2.50	2.22	3.54	N/A		173.21	N/A	23.07	4.36	13.07
PguA Var	32,436.70	5.37	1.00	57.00	6.25	4.92	12.50	N/A		30,000.00	N/A	532.15	18.97	170.82
PgvA Average	27.50	4.00	3.50	6.00	16.50	0.00	N/A	350.00	N/A	1,250.00	N/A	213.32	76.82	(47.80)
PgvA Count	2	2	2	2	2	2	0	2	0	2	0	2	2	2
PgvA StdDev	0.71		2.12		0.71		N/A	70.71	N/A		N/A	31.72	1.35	15.18
PgvA Var	0.50		4.50		0.50		N/A	5,000.00	N/A		N/A	1,005.96	1.83	230.42

Appendix I (continued)

PLUTON	Zn	Sn	W	Mo	Ga	As	Au	S	B	F	Bi	Al <sup>2+</sup> -(Fe+Mg+4Ca+2NA-K)	Fe+Mg+Ti	K-(Na+Ca)
PgwA Average	20.00	2.00	5.00	19.00	15.00	0.00	N/A	200.00	N/A	1,600.00	N/A	313.13	29.07	(5.40)
PgwA Count	1	1	1	1	1	1	0	1	0	1	0	1	1	1
PgwA StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgwA Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgxA Average	31.79	1.79	1.73	13.55	16.55	0.18	6.00	144.44	8.00	774.55	0.00	153.44	91.34	(65.20)
PgxA Count	14	14	11	11	11	11	2	9	2	11	1	14	14	14
PgxA StdDev	11.34	1.76	2.41	24.44	2.02	0.60	5.66	72.65	11.31	117.33	N/A	59.34	18.56	20.50
PgxA Var	128.49	3.10	5.82	597.07	4.07	0.36	32.00	5,277.78	127.99	13,767.27	N/A	3,520.70	344.66	420.44
PgyA Average	14.00	1.50	6.00	4.00	18.00	7.00	N/A	100.00	0.00	2,800.00	N/A	348.15	33.52	14.46
PgyA Count	2	2	1	1	1	1	0	1	1	2	0	2	2	2
PgyA StdDev	8.49	2.12	N/A	N/A	N/A	N/A	N/A	N/A	N/A	141.42	N/A	18.04	0.18	8.70
PgyA Var	72.00	4.50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	20,000.00	N/A	325.40	0.03	75.72
PgZA Average	66.88	0.00	1.00	2.71	13.29	1.29	1.00	200.00	15.00	1,300.00	0.00	(339.74)	272.62	(159.11)
PgZA Count	8	8	7	7	7	7	1	1	1	1	1	8	8	8
PgZA StdDev	18.12		1.73	2.06	4.31	1.38	N/A	N/A	N/A	N/A	N/A	316.77	87.22	56.37
PgZA Var	328.41		3.00	4.24	18.57	1.90	N/A	N/A	N/A	N/A	N/A	100,341.05	7,607.03	3,178.12

Appendix I (continued)

PLUTON	K+Na/Ca	RB*100	ZR*100	Na+K	Q	Al-(Na+K+2Ca)	K2O*Rb/Mgo	NaO2*Zr*Y	Rb/Sr
PewA Average	9.43	20.04	17.77	212.43	160.36	0.52	3,626.36	16,259.95	1.45
PewA Count	13	13	13	13	13	13	13	13	13
PewA StdDev	4.23	8.57	5.51	16.61	22.40	12.96	3,112.35	6,079.82	0.86
PewA Var	17.90	73.49	30.35	275.96	501.81	167.99	9,686,700.48	36,964,159.73	0.74
PgaA Average	21.57	39.40	23.90	216.47	182.69	3.20	101,255.19	17,904.58	5.09
PgaA Count	26	26	26	26	26	26	26	26	26
PgaA StdDev	36.80	16.09	8.03	9.00	20.97	13.06	477,912.54	12,209.02	4.71
PgaA Var	1,354.43	258.97	64.46	80.91	439.57	170.67	228,400,392,507.14	149,060,078.90	22.18
PgaB Average	9.78	25.15	22.88	219.38	156.17	(0.78)	3,887.96	26,453.53	1.92
PgaB Count	16	16	16	16	16	16	16	16	16
PgaB StdDev	3.12	9.14	7.86	9.87	21.41	15.74	2,552.84	17,541.03	1.04
PgaB Var	9.73	83.50	61.80	97.51	458.43	247.75	6,517,004.27	307,687,692.81	1.08
PgaC Average	4.39	13.54	15.42	183.18	55.27	(43.40)	2,382.89	21,063.40	0.43
PgaC Count	9	9	9	9	9	9	9	9	9
PgaC StdDev	5.70	17.31	7.84	33.87	109.77	28.64	5,961.60	12,251.05	0.44
PgaC Var	32.54	299.48	61.46	1,147.15	12,050.02	819.97	35,540,660.62	150,088,346.97	0.20
PgaD Average	9.87	21.32	20.48	212.41	168.56	1.00	2,316.98	16,053.55	1.65
PgaD Count	20	21	21	21	21	21	21	20	21
PgaD StdDev	5.76	9.92	5.62	6.79	19.40	10.78	1,510.21	7,040.99	2.12
PgaD Var	33.15	98.49	31.57	46.14	376.36	116.15	2,280,739.68	49,575,550.42	4.49
PgaX Average	21.58	43.09	5.84	201.24	225.52	3.97	6,615.01	665.04	2.77
PgaX Count	3	3	3	3	3	3	3	3	3
PgaX StdDev	8.00	20.85	5.98	27.73	35.50	7.37	1,430.85	660.56	1.58
PgaX Var	64.07	434.60	35.81	769.03	1,260.30	54.26	2,047,326.40	436,339.29	2.49
PgaXPGQ Average	10.87	21.54	14.53	217.06	178.46	(0.97)	4,255.52	8,127.25	1.10
PgaXPGQ Count	1	1	1	1	1	1	1	1	1
PgaXPGQ StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgaXPGQ Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Pgba Average	13.57	39.76	19.84	218.62	20.38	9.73	8,272.26	33,325.70	6.54
Pgba Count	15	15	15	18	18	18	15	15	15
Pgba StdDev	3.02	7.09	3.16	7.67	202.37	8.02	2,743.50	9,377.50	2.68
Pgba Var	9.12	50.34	9.96	58.87	40,951.87	64.39	7,526,778.00	87,937,590.22	7.19
PgbyGA Average	11.22	22.02	20.40	226.88	137.16	16.99	162,266.49	18,549.57	0.71
PgbyGA Count	20	20	20	23	23	23	18	18	20
PgbyGA StdDev	5.78	9.25	10.86	18.60	100.28	137.76	617,421.53	11,463.81	0.28
PgbyGA Var	33.39	85.48	117.97	345.98	10,055.66	18,978.69	381,209,344,471.98	131,418,833.71	0.08
PgbyGAP Average	25.63	25.67	12.77	228.54	189.59	(6.56)	107,738.00	3,634.29	0.43
PgbyGAP Count	2	2	2	2	2	2	2	2	2
PgbyGAP StdDev	5.73	3.04	1.43	8.75	9.57	8.83	7,732.92	2,043.64	0.08
PgbyGAP Var	32.88	9.24	2.03	76.62	91.51	77.93	59,798,048.00	4,176,454.61	0.01
Pgbysy Average	5.44	7.03	16.98	251.83	20.68	(92.09)	912.39	49,620.84	0.17
Pgbysy Count	14	14	14	16	16	16	13	13	14
Pgbysy StdDev	4.78	4.53	13.85	29.47	76.77	50.77	1,098.82	22,837.86	0.19
Pgbysy Var	22.82	20.53	191.92	868.26	5,893.51	2,577.25	1,207,407.82	521,567,736.83	0.03



Appendix I (continued)

PLUTON	K+Na/Ca	RB*100	ZR*100	Na+K	Q	Al-(Na+K+2Ca)	K <sub>2</sub> O*Rb/Mgo	NaO <sub>2</sub> Zr*Y	Rb/Sr
PghA Average	8.33	25.29	14.70	231.13	(56.13)	(21.81)	2,723.71	40,704.75	25.60
PghA Count	2	2	2	2	2	2	2	2	2
PghA StdDev	1.14	6.15	2.04	23.23	296.26	37.99	970.16	20,052.57	34.71
PghA Var	1.29	37.85	4.16	539.41	87,772.35	1,443.56	941,204.85	402,105,664.15	1,204.88
PghB Average	15.76	47.70	17.08	222.15	179.60	7.45	3,931.08	11,704.55	5.78
PghB Count	2	2	2	2	2	2	2	2	2
PghB StdDev	8.50	23.08	6.13	4.32	11.95	1.87	1,095.73	2,107.81	5.50
PghB Var	72.28	532.85	37.56	18.68	142.68	3.48	1,200,635.17	4,442,882.41	30.21
PgiA Average	10.17	37.14	19.92	211.22	182.46	(3.01)	4,880.59	15,540.33	2.99
PgiA Count	8	8	8	8	8	8	8	8	8
PgiA StdDev	2.21	10.74	2.90	8.49	11.98	6.36	2,139.27	6,976.60	0.87
PgiA Var	4.88	115.33	8.42	72.13	143.60	40.47	4,576,486.23	48,673,000.25	0.76
PgiB Average	15.23	52.72	15.66	213.71	193.86	6.67	9,279.62	13,277.87	6.81
PgiB Count	3	3	3	3	3	3	3	3	3
PgiB StdDev	3.98	20.93	0.79	8.02	16.30	6.01	3,140.15	1,536.46	3.71
PgiB Var	15.81	437.93	0.63	64.37	265.65	36.09	9,860,572.82	2,360,698.39	13.77
PgiC Average	8.21	20.82	17.59	211.37	172.00	0.67	2,797.82	12,564.99	1.33
PgiC Count	4	4	4	4	4	4	4	4	4
PgiC StdDev	0.81	2.01	4.55	2.70	10.23	3.74	538.45	5,538.57	0.30
PgiC Var	0.66	4.05	20.69	7.30	104.68	13.97	289,923.81	30,675,753.86	0.09
PgiD Average	2.49	10.37	18.47	180.01	111.12	(39.18)	515.23	43,185.26	0.74
PgiD Count	1	1	1	1	1	1	1	1	1
PgiD StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgiD Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgIA Average	N/A	N/A	N/A	199.59	173.24	123.00	N/A	N/A	N/A
PgIA Count	0	0	0	1	1	1	0	0	0
PgIA StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgIA Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgkA Average	5.89	17.36	14.99	214.97	131.05	21.74	1,814.11	24,368.96	0.86
PgkA Count	1	1	1	3	3	3	1	1	1
PgkA StdDev	N/A	N/A	N/A	4.96	18.25	31.91	N/A	N/A	N/A
PgkA Var	N/A	N/A	N/A	24.62	332.92	1,018.39	N/A	N/A	N/A
PglA Average	12.27	45.64	20.13	203.56	192.93	9.43	4,691.96	12,940.87	3.80
PglA Count	6	6	6	6	6	6	6	6	6
PglA StdDev	7.80	12.95	8.30	18.02	13.17	6.82	2,664.81	5,486.90	1.53
PglA Var	60.77	167.71	68.88	324.65	173.53	46.54	7,101,228.28	30,106,091.21	2.35
PglX Average	9.45	30.53	20.12	172.53	209.47	12.06	2,509.54	10,640.03	2.78
PglX Count	2	2	2	2	2	2	2	2	2
PglX StdDev	8.01	17.97	3.14	3.72	64.40	16.50	2,639.51	7,987.23	2.29
PglX Var	64.21	322.98	9.85	13.86	4,147.36	272.17	6,966,989.17	63,795,854.46	5.22
PgmA Average	6.39	13.74	18.40	202.57	155.20	2.56	1,389.88	17,547.84	0.98
PgmA Count	9	9	9	9	9	9	9	9	9
PgmA StdDev	2.56	6.19	2.93	13.53	26.88	8.64	1,552.19	5,663.30	0.52
PgmA Var	6.54	38.35	8.57	183.14	722.60	74.63	2,409,288.80	32,072,929.09	0.27

Appendix I (continued)

PLUTON	K+Na/Ca	RB*100	ZR*100	Na+K	Q	Al-(Na+K+2Ca)	K2O*Rb/Mgo	NaO2*Zr*Y	Rb/Sr
PgmB Average	4.60	10.44	17.80	198.97	145.93	2.07	799.44	27,930.59	0.66
PgmB Count	5	5	5	5	5	5	5	5	5
PgmB StdDev	0.73	0.94	3.25	5.17	11.20	4.61	115.00	9,300.82	0.05
PgmB Var	0.53	0.89	10.57	26.69	125.53	21.26	13,225.88	86,505,278.36	0.00
PgmC Average	9.39	19.56	17.18	208.18	177.01	15.48	2,759.67	15,561.91	1.80
PgmC Count	11	11	11	12	12	12	11	11	11
PgmC StdDev	2.36	4.37	3.38	9.48	16.28	12.16	1,078.20	8,525.78	0.60
PgmC Var	5.56	19.12	11.39	89.88	265.15	147.75	1,162,510.11	72,688,872.05	0.36
PgmwGRSN Average	85.78	38.18	10.26	198.86	222.29	26.05	8,770.45	2,503.44	10.32
PgmwGRSN Count	1	1	1	1	1	1	1	1	1
PgmwGRSN StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgmwGRSN Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgmX Average	5.58	19.59	25.64	212.48	55.40	7.94	1,255.77	31,968.16	1.52
PgmX Count	1	1	1	2	2	2	1	1	1
PgmX StdDev	N/A	N/A	N/A	6.31	110.02	2.40	N/A	N/A	N/A
PgmX Var	N/A	N/A	N/A	39.85	12,104.75	5.78	N/A	N/A	N/A
PgnA Average	23.37	66.14	17.53	215.15	202.65	7.50	12,083.56	13,539.49	11.91
PgnA Count	3	3	3	3	3	3	3	3	3
PgnA StdDev	6.13	10.70	2.17	4.63	3.43	1.72	7,711.49	3,248.16	8.91
PgnA Var	37.52	114.57	4.71	21.42	11.78	2.96	59,467,113.91	10,550,535.63	79.34
PgnX Average	10.54	28.59	16.23	208.58	183.28	12.38	2,735.04	12,306.84	1.64
PgnX Count	1	1	1	1	1	1	1	1	1
PgnX StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgnX Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgoA Average	17.33	59.43	17.08	219.35	195.51	0.37	3,715.75	1,300.32	2.93
PgoA Count	1	1	1	1	1	1	1	1	1
PgoA StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgoA Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgpA Average	8.24	16.91	14.16	207.06	157.84	12.56	3,133.49	15,031.16	0.85
PgpA Count	3	3	3	6	6	6	3	3	3
PgpA StdDev	4.17	3.54	3.12	13.81	20.04	30.08	2,163.15	3,958.79	0.20
PgpA Var	17.41	12.54	9.70	190.65	401.68	904.96	4,679,222.59	15,672,036.27	0.04
PgpB Average	7.23	21.31	16.09	209.59	167.80	7.17	2,670.79	17,038.75	1.07
PgpB Count	2	2	2	3	3	3	2	2	2
PgpB StdDev	0.98	1.41	4.09	3.41	9.92	4.17	39.21	12,794.04	0.03
PgpB Var	0.95	1.98	16.75	11.64	98.49	17.36	1,537.15	163,687,371.13	0.00
PqqA Average	8.94	19.99	15.97	209.65	133.79	7.31	3,525.98	11,812.07	1.20
PqqA Count	9	9	9	9	9	9	9	9	9
PqqA StdDev	1.84	3.06	2.59	9.47	143.07	8.69	2,279.15	6,188.40	0.24
PqqA Var	3.37	9.38	6.70	89.61	20,468.32	75.59	5,194,547.16	38,296,281.62	0.06
PgrA Average	10.60	30.45	17.74	215.82	171.84	1.62	5,103.65	17,207.80	3.19
PgrA Count	12	12	12	12	12	12	12	12	12
PgrA StdDev	2.54	7.53	3.45	7.51	9.50	7.49	2,710.83	8,564.03	1.12
PgrA Var	6.44	56.75	11.88	56.47	90.30	56.08	7,348,621.01	73,342,529.95	1.25

Appendix I (continued)

PLUTON	K+Na/Ca	ZR*100	Na+K	Q	Al-(Na+K+2Ca)	K <sub>2</sub> O*Rb/Mgo	NaO <sup>2</sup> Zr*Y	Rb/Sr
PgrX Average	12.10	38.80	198.54	212.56	(5.33)	8,963.75	14,342.44	3.80
PgrX Count	1	1	1	1	1	1	1	1
PgrX StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgrX Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgsA Average	9.69	33.73	218.45	56.57	6.06	2,504.31	6,322.91	0.77
PgsA Count	7	7	8	8	8	7	7	7
PgsA StdDev	3.93	22.32	5.13	181.72	15.89	1,987.69	3,385.98	0.26
PgsA Var	15.42	498.08	26.31	33,022.75	252.47	3,950,903.29	11,464,871.53	0.07
PgsB Average	5.38	36.28	215.21	115.58	7.35	354.47	13,380.95	0.24
PgsB Count	3	3	3	3	3	3	3	3
PgsB StdDev	0.48	4.05	3.12	3.96	6.16	59.73	280.57	0.05
PgsB Var	0.23	16.44	9.72	15.68	37.98	3,567.75	78,720.58	0.00
PgsC Average	2.75	35.63	191.00	85.83	(24.93)	249.05	11,738.86	0.18
PgsC Count	11	11	11	11	11	11	11	11
PgsC StdDev	0.67	9.22	17.71	26.52	25.88	89.80	2,552.55	0.03
PgsC Var	0.45	84.98	313.74	703.13	669.60	8,063.84	6,515,530.10	0.00
PgsX Average	N/A	N/A	218.62	155.11	11.84	N/A	N/A	N/A
PgsX Count	0	0	3	3	3	0	0	0
PgsX StdDev	N/A	N/A	17.58	21.03	33.84	N/A	N/A	N/A
PgsX Var	N/A	N/A	309.20	442.29	1,145.24	N/A	N/A	N/A
PgtA Average	9.18	32.53	205.15	159.52	4.57	3,262.85	12,374.63	2.84
PgtA Count	21	21	21	21	21	21	21	21
PgtA StdDev	4.49	19.27	11.00	89.02	10.56	3,012.43	7,335.47	4.08
PgtA Var	20.15	371.29	121.01	7,924.88	111.51	9,074,722.91	53,809,106.28	16.62
PgtB Average	17.34	44.99	211.02	194.04	7.35	6,298.93	12,218.07	3.23
PgtB Count	3	3	3	3	3	3	3	3
PgtB StdDev	7.86	6.50	6.71	21.35	10.36	1,575.59	6,973.09	1.20
PgtB Var	61.82	42.20	44.99	456.01	107.41	2,482,484.04	48,623,961.72	1.44
PgtC Average	17.04	60.82	215.84	197.53	0.69	10,533.76	5,022.88	4.58
PgtC Count	3	3	3	3	3	3	3	3
PgtC StdDev	7.14	15.75	5.36	2.20	3.20	6,585.89	1,329.96	2.10
PgtC Var	51.03	248.19	28.71	4.86	10.27	43,373,913.80	1,768,796.28	4.42
PgtX Average	12.93	37.67	213.58	157.83	2.18	8,104.65	13,059.49	4.03
PgtX Count	2	2	2	2	2	2	2	2
PgtX StdDev	11.64	41.92	13.90	95.07	2.17	9,528.99	10,412.70	5.15
PgtX Var	135.60	1,757.38	193.12	9,038.49	4.71	90,801,719.92	108,424,298.30	26.50
PguA Average	18.11	56.57	208.54	197.82	16.43	9,032.56	12,661.31	9.61
PguA Count	6	6	6	6	6	6	6	6
PguA StdDev	2.93	11.67	11.88	10.32	8.47	2,934.59	5,708.73	2.68
PguA Var	8.59	136.08	141.10	106.58	71.81	8,611,800.80	32,589,627.48	7.16
Pgva Average	5.49	18.36	199.78	161.24	1.29	1,195.17	18,182.64	1.01
Pgva Count	2	2	2	2	2	2	2	2
Pgva StdDev	0.47	0.60	2.04	5.69	9.24	39.45	1,777.16	0.10
Pgva Var	0.22	0.36	4.17	32.36	85.39	1,556.04	3,158,288.18	0.01

Appendix I (continued)

PLUTON	K+Na/Ca	RB*100	ZR*100	Na+K	Q	Al-(Na+K+2Ca)	K <sub>2</sub> O*Rb/Mgo	NaO <sub>2</sub> *Zr*Y	Rb/Sr
PgWA Average	16.33	50.79	27.17	218.36	187.50	0.73	12,501.27	13,946.28	4.30
PgWA Count	1	1	1	1	1	1	1	1	1
PgWA StdDev	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgWA Var	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
PgxA Average	3.94	18.70	15.84	192.63	151.97	(15.36)	553.55	8,284.30	0.65
PgxA Count	13	14	14	14	14	14	14	13	14
PgxA StdDev	1.44	11.07	9.92	10.06	14.56	17.03	296.12	2,484.56	0.35
PgxA Var	2.07	122.60	98.31	101.23	211.97	290.07	87,686.69	6,173,016.50	0.12
PgYA Average	19.31	73.25	13.16	205.21	(3.68)	17.75	12,882.16	7,700.31	20.45
PgYA Count	2	2	2	2	2	2	2	2	2
PgYA StdDev	1.86	1.23	0.20	9.30	305.40	5.53	3,833.21	1,654.76	0.71
PgYA Var	3.47	1.51	0.04	86.53	93,268.84	30.89	14,693,514.21	2,738,221.22	0.51
PgZA Average	1.15	9.39	14.30	131.58	78.34	(122.87)	94.67	9,470.88	0.27
PgZA Count	8	8	8	8	8	8	8	8	8
PgZA StdDev	0.77	4.61	5.37	47.81	27.18	86.69	116.71	7,869.64	0.13
PgZA Var	0.60	21.30	28.80	2,285.34	738.80	7,514.34	13,621.54	61,931,209.69	0.02



Appendix II. Petrographic classification of granites in individual plutons of the Cullen Batholith

Granite suite	No sam.	This report	Stuart-Smith et al. (1993)	Pluton	Petrographic definition
T	10	PgaA	6+9	Allamber Springs granite	pink, coarse-medium-grained, equigranular biotite granite
E	14	PgaB	2+5	Allamber Springs granite	contaminated, coarse-grained, porphyritic bi-hornblende granite
BM	8	PgaC	-	Allamber Springs granite	medium-grained, bi-hornblende quartz monzonite, monzodiorite
E	20	PgaD	2	Allamber Springs granite	coarse-grained, hornblende biotite granite
BM	7	Pgz	-	Bludells monzonite	medium-fine-grained diorite
T	3	PgnA	9	Bonrook granite	pink-grey, medium-grained, equigranular biotite granite
Y	10	PgbA	6	Burnside granite	pink-grey, medium-grained, equigranular biotite granite
Y	6	PglA	8	Douglas leucogranite	light-grey, coarse-grained, porphyritic biotite leucogranite
T	4	PgdA	2+6	Driffield granite	coarse-grained, biotite granite
Y	7	PgfA	9	Fenton granite	fine-grained, biotite granite
E	12	PgxA	1	Fingerpost granodiorite	coarse-grained, porphyritic hornblende-biotite granite
Y	1	PgoA	9	Foelsche leucogranite	fine/medium-grained, equigranular leucogranite
Y	9	PgrA	9	Frances Creek leucogranite	fine/even-grained, biotite granite
IS	13	Pew	-	Lewin Springs syenite	coarse-grained, porphyritic syenite
E	1	PggA	2	Margaret granite	coarse-grained, porphyritic biotite granite
E	4	PgcA	2	McCarthys granite	pink-green, coarse-grained, porphyritic biotite granite
		PgcB	2	McCarthys granite	fine-grained, porphyritic biotite-hornblende granite
BM	6	PgcC	-	McCarthys granite	coarse-grained, porphyritic quartz monzonite
E	8	PgmA	2+3	McMinns Bluff granite	grey, coarse-grained, porphyritic biotite-hornblende granite
		PgmB	9	McMinns Bluff granite	fine/medium-grained, biotite granite
		PgmC	4+5	McMinns Bluff granite	coarse-grained (sheared), biotite granite
T	6	PgiA	2	Mingo granite	coarse-grained, biotite granite
		PgiB	9	Mingo granite	fine-grained granite
E	4	PgiC	5+2	Mingo granite	coarse-grained, porphyritic biotite granite
BM	1	PgiD	-	Mingo granite	medium-grained, quartz monzonite
T	2	PgvA	3	Mount Davis granite	coarse-grained, porphyritic biotite granite
E	1	PghA	2	Mount Porter granite	coarse-grained, biotite-hornblende granite
	2	PghB	2	Mount Porter granite	coarse-grained, biotite granite
E	3	PgpA	2	Prices Springs granite	coarse-grained, biotite-hornblende granite
		PgpB	9	Prices Springs granite	fine-grained, biotite granite

Granite suite	No sam.	This report	Stuart-Smith et al. (1993)	Pluton	Petrographic definition
Y	8	PgqA	7	Saunders Leuc-granite	medium-grained, equigranular, biotite leucogranite
Y	6	PgsA		Shoobridge granite	fine/medium-grained, biotite granite
		PgsB		Shoobridge granite	fine-grained, porphyritic biotite granodiorite
BM	11	PgsC		Shoobridge granite	fine-medium-grained, hornblende biotite tonalite
E	19	PgtA	2+4+5	Tabletop granite	pink-green, coarse-grained, porphyritic hornblende-biotite granite
T	3	PgtB	3+6	Tabletop granite	medium/coarse-grained, equigranular biotite granite
		PgtC	9	Tabletop granite	fine/medium-grained, equigranular leucogranite
T	5	PgeA	2+5	Tennysons leucogranite	coarse-grained, porphyritic biotite granite
		PgeB	8	Tennysons leucogranite	fine-grained, porphyritic biotite granite
T	4	PguA	8	Umbrawarra leucogranite	light-grey, coarse-grained, biotite monzonite leucogranite
T	1	Pgw	7	Wandie granite	coarse-grained, biotite granite
T	1	Pgj	-	Wolfram Hill granite	porphyritic adamellite
T	1	Pgy	6	Yemberrie leucogranite	fine-grained, biotite-muscovite granite
T	5	Pgbg	-	Mount Bundey granite	coarse-grained, biotite granite
E	4	Pgbs	-	Mount Goyder syenite	red, medium-grained, porphyritic biotite-hornblende syenite

E = Early Igneous Suite (EIS)

T = Transitional Igneous Suite (TIS)

Y = Young Igneous Suite (YIS)

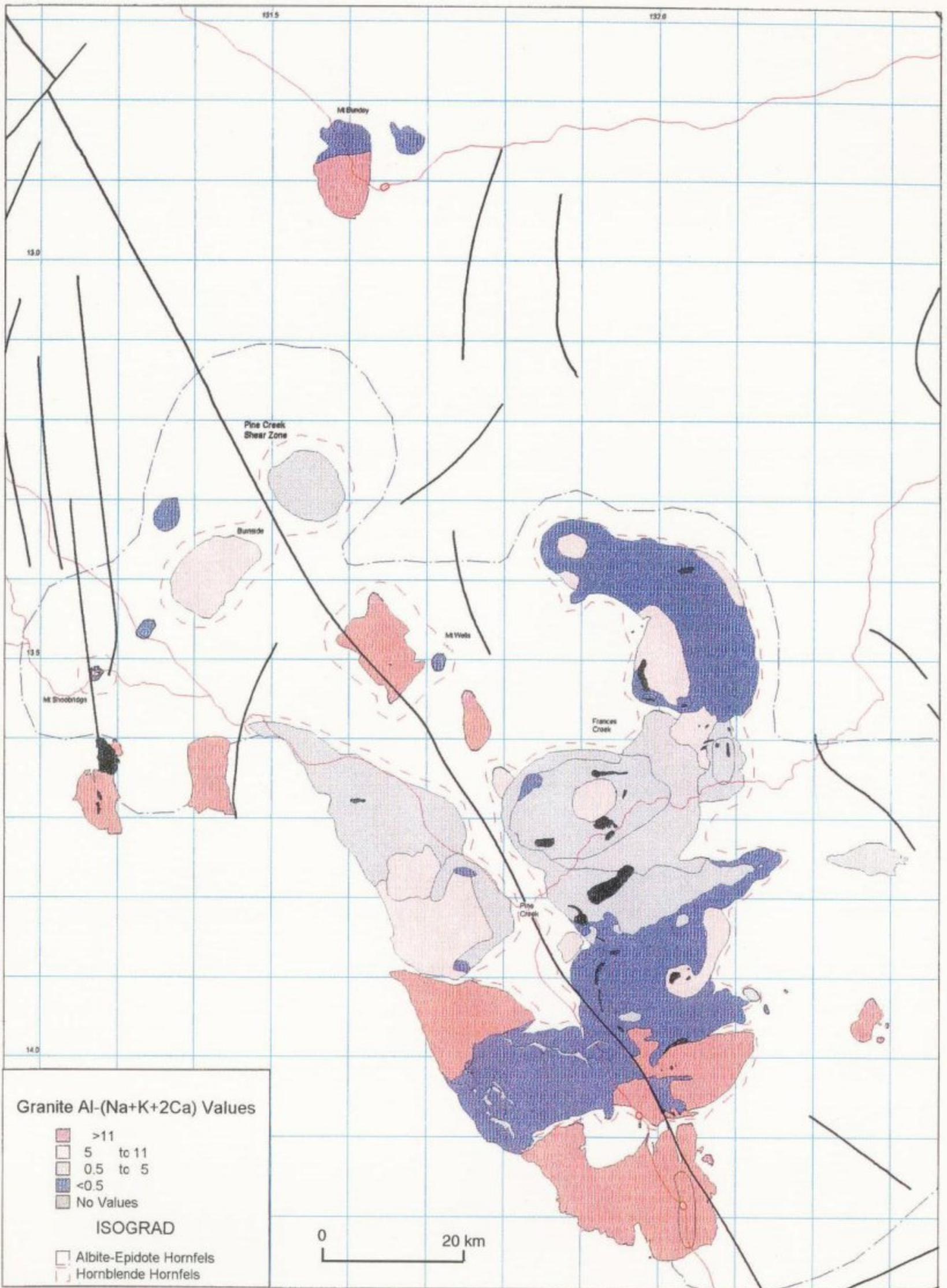
BM = Bludells monzonite

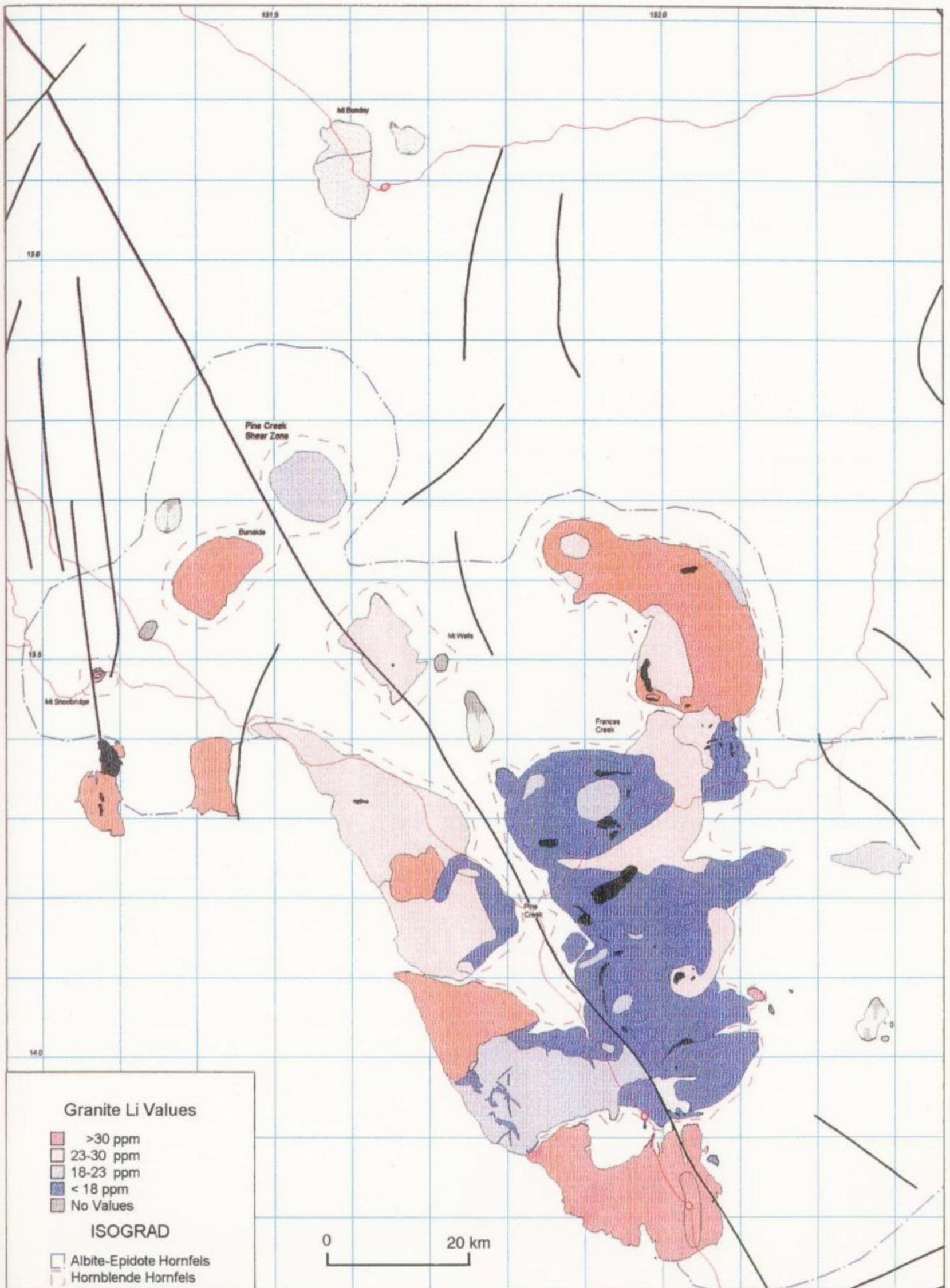
IS = Intrusive Syenite Dykes

Appendix IV. Granite geochemistry from this study (see locality map in Appendix III)

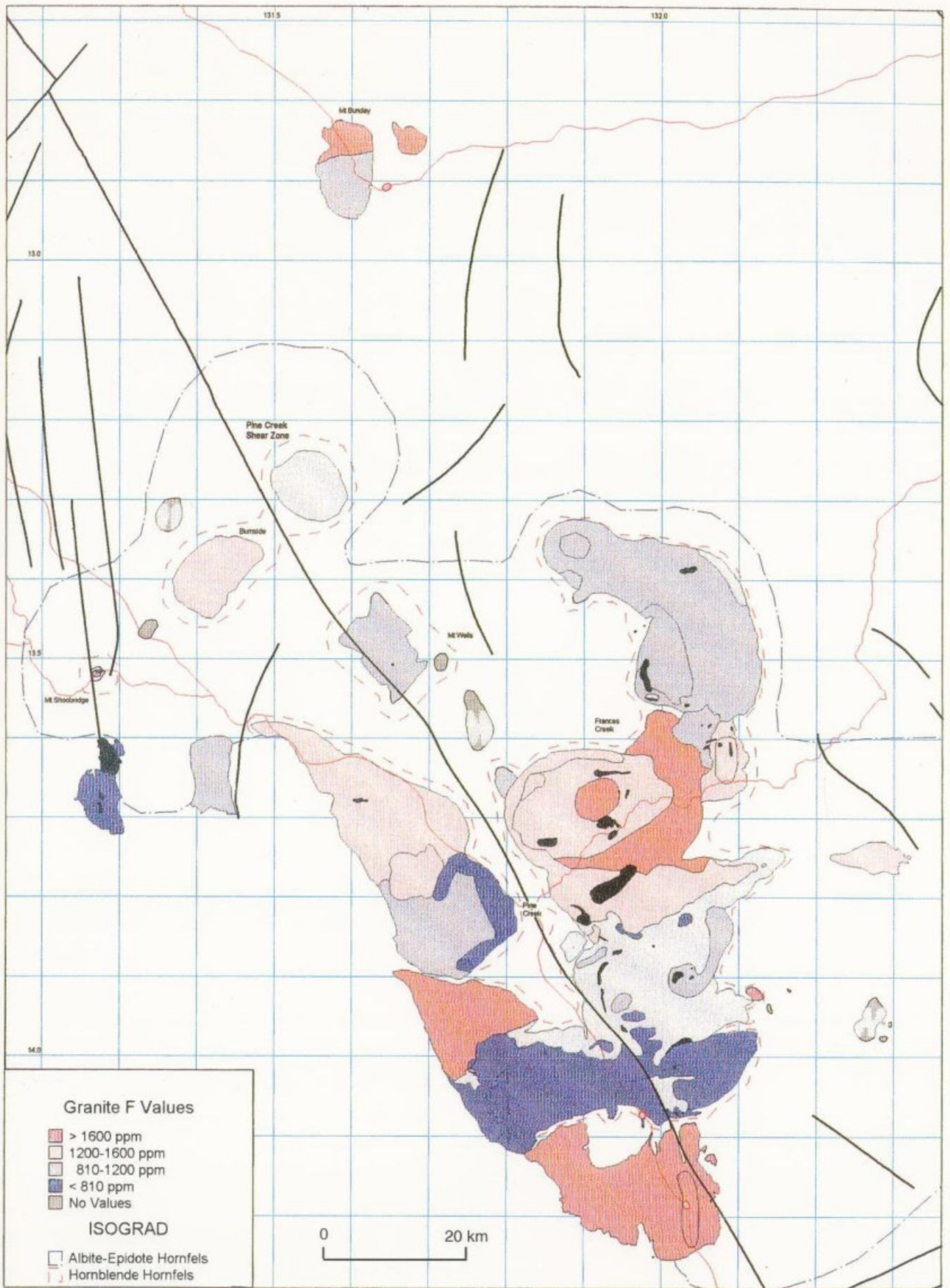
SAMPLE #	GRANITE	AGE	Au ppb	Cu	Pb	Zn	Sn	B	SiO <sub>2</sub>	TiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Fe <sub>2</sub> O <sub>3</sub>	Mn	MgO	CaO	Na <sub>2</sub> O	K <sub>2</sub> O	P <sub>2</sub> O <sub>5</sub>	Ba	Li
G-4	Pgz	HYB	1	14	26	65	L	15	64.8	0.6	15.4	5.6	0.0589	2.3	4.12	3.56	4.06	0.219	1114	61
G-1	Pgt	TIS	0.005	7	47	32	L	8	73.04	0.24	13.2	2.4	0.0207	0.44	1.3	2.99	5.21	0.064	307	69
G-2	Pgt	TIS	0.005	5	40	30	L	L	72	0.15	12.9	1.96	0.026	0.33	1.04	3.23	5.34	0.041	321	63
G-3	Pga	TIS	0.005	7	45	34	L	10	70.1	0.25	13.9	2.68	0.027	0.26	1.36	3.09	6.19	0.056	551	60
G-5	Pga	TIS	3	8	39	60	L	11	65.2	0.52	15.5	6.25	0.0547	1.08	2.77	3.89	5.02	0.195	1297	48
G-6	Pgt	TIS	6	10	88	26	L	6	72.4	0.12	13.4	1.68	0.0164	0.33	1.17	3.31	5.5	0.035	301	49
G-8	Pgu	TIS	7	34	45	459	L	8	76.2	0.12	12.6	2.07	0.0299	0.28	0.7	3.1	5.18	0.046	470	132
G-9	Pgu	TIS	2	5	51	26	L	8	69.8	0.11	12.6	1.87	0.0257	0.26	0.82	3.06	4.27	0.042	181	149
G-14	Pga	TIS	0.005	8	53	23	L	L	70.1	0.1	12	1.41	0.015	0.18	0.92	3.6	5.14	0.023	308	49
G-15	Pga	TIS	0.005	6	35	41	L	L	68.5	0.32	12.9	2.99	0.0322	0.58	2	3.13	4.99	0.101	783	58
G-20	Pga	TIS	0.005	3	27	41	L	L	69.8	0.38	13.1	3.84	366	0.79	1.96	3.37	4.82	0.124	819	49
G-26	Pga	TIS			54	23	L	17		0.04	12.1	1.68	0.0128	0.08	0.66	3.89	4.5	0.0059	29	42
G-29	Pgd	TIS			44	11	L	22		0.25	13.6	2.72	0.029	0.75	1.81	3.8	4.66	0.0891	954	28
G-30	Pgc TIS			65	23	10	12		0.28	12.9	3.01	0.035	0.5	1.08	2.84	5.91	0.0932	515	55	
G-33	Pgt	TIS			70	14	L	16		0.17	12.8	2.71	0.0265	0.45	0.86	3.23	0.51	0.0854	516	69
G-7	Pgm	EIS	5	8	37	59	L	12	70.1	0.58	14.4	4.13	0.0397	1.33	1.58	3.13	5.44	0.189	982	59
G-10	Pgx	EIS	2	7	34	36	L	L	68.9	0.25	14.6	3.21	0.0387	1.05	2.22	3.58	4.91	0.086	573	55
G-11	Pgx	EIS	10	9	28	29	L	16	74.8	0.43	15.2	4.86	0.0351	1.95	4.83	3.36	4.04	0.139	872	30
G-13	Pgp	EIS	0.005	6	59	52	L	L	66.3	0.42	14	3.46	0.0448	0.88	2.07	2.87	6.07	0.153	1494	44
G-21	Pgk	EIS	3	5	43	50	L	6	64.2	0.45	14.3	3.95	456	0.94	2.1	3.01	5.82	0.156	1142	44
G-23	Pgi	EIS	3	5	36	41	L	L	68.9	0.22	12.8	2.49	270	0.34	1.4	2.87	5.11	0.052	151	55
G-27	Pgh	EIS			64	7	L	15		0.25	12.9	3	0.039	0.49	1.52	4.54	4.76	0.0852	676	23
G-32	Pgc	EIS			57	17	L	12		0.2	14.8	2.8	0.0262	0.58	1.46	3.57	6.35	0.0586	1012	29
G-34	PgbyG	EIS			77	47	L	16		0.73	13.4	5.18	0.0594	3.02	3.3	4.15	6.73	0.1173	3121	22
G-35	PgbyS	EIS			52	16	L	10		0.26	13.2	2.74	0.0323	0.59	1.62	3.98	4.84	0.0678	909	36
G-16	Pgr	YIS	1	6	48	L	L	71.1	0.3	13.4	2.5	264	0.48	1.34	3.19	5.66	0.09	767	71	
G-17	Pgr	YIS	3	2	52	41	L	L	70.7	0.42	12.9	2.63	246	0.41	1.24	3.05	5.72	0.142	787	107
G-18	Pgr	YIS	0.005	6	47	37	L	L	72.3	0.19	12	2.4	274	0.36	1.13	3.42	4.48	0.05	421	66
G-19	Pgi	YIS			40	52	L	L	72.3	0.41	12.9	3.42	300	0.6	1.62	2.82	5.46	0.098	783	66
G-24	Pgf	YIS	9	6	65	26	L	7	71.4	0.17	13.9	1.87	362	0.55	1.54	2.87	5.33	0.036	845	38
G-25	Pgf	YIS	3	10	60	33	L	11	73	0.21	14.6	1.26	113	0.34	0.29	3.09	5.51	0.0215	799	49
G-28	Pgq	YIS			54	8	L	18		0.26	13.6	2.38	0.027	0.51	0.39	3.31	5.8	0.0737	903	34
G-31	Pgy	YIS			60	8	L	L		0.05	12.7	2.3	0.0262	0.17	0.66	2.78	5.75	0.0419	80	39
PGB-1	Pgb-A	YIS	0.005	6	46	50	L	L		0.23	14.2	2.44	0.0343	0.34	1.27	3.27	5.53	0.044	555	102
PGB-2	Pgb-A	YIS	0.005	6	36	31	L	14		0.16	12.7	1.83	0.0318	0.27	1.22	3.29	4.94	0.03	434	99
PGB-3	Pgb	YIS	0.005	4	63	40	L	10		0.15	13	1.9	0.0262	0.24	0.62	3.27	5.12	0.028	420	66
PGB-4	Pgb	YIS	0.005	5	60	50	L	6		0.11	12.9	1.74	0.0283	0.24	0.71	3.37	5.41	0.022	211	71
PGB-5	Pgb	YIS	0.005	4	51	53	L	7		0.11	12.9	1.74	0.0281	0.24	0.7	3.25	5.29	0.034	242	118
PGB-6	Pgb	YIS	4	7	46	53	L	L		0.11	13.8	2.29	0.0265	0.32	1.08	3.14	4.84	0.04	483	115
PGB-7	Pgb	YIS	0.005	4	56	41	L	L		0.19	13.1	2.19	0.0289	0.3	1.14	3.13	5.03	0.032	496	94
PGS-1	Pgs	YIS	0.005	5	49	32	L	L		0.22	13.1	2	0.0191	0.69	1.62	3.48	4.94	0.075	1093	67
PGS-2	Pgs	YIS	0.005	5	54	15	L	L		0.14	13.1	1.61	0.0149	0.53	1.33	3.4	5.21	0.064	756	56
G-22	Pgmw	YIS	19	302	628	860	L	10	76.2	0.11	11.7	1.86	222	0.44	0.13	0.57	8.5	0.029	613	32
DETECTION			1 PPB	1 PPM	2 PPM	1 PPM	10 PPM	5 PPM	0.10 %	0.01 %	0.10 %	0.01 %	10 PPM	0.01 %	0.05 %	0.01 %	0.05 %	20 PPM	20 PPM	2 PPM



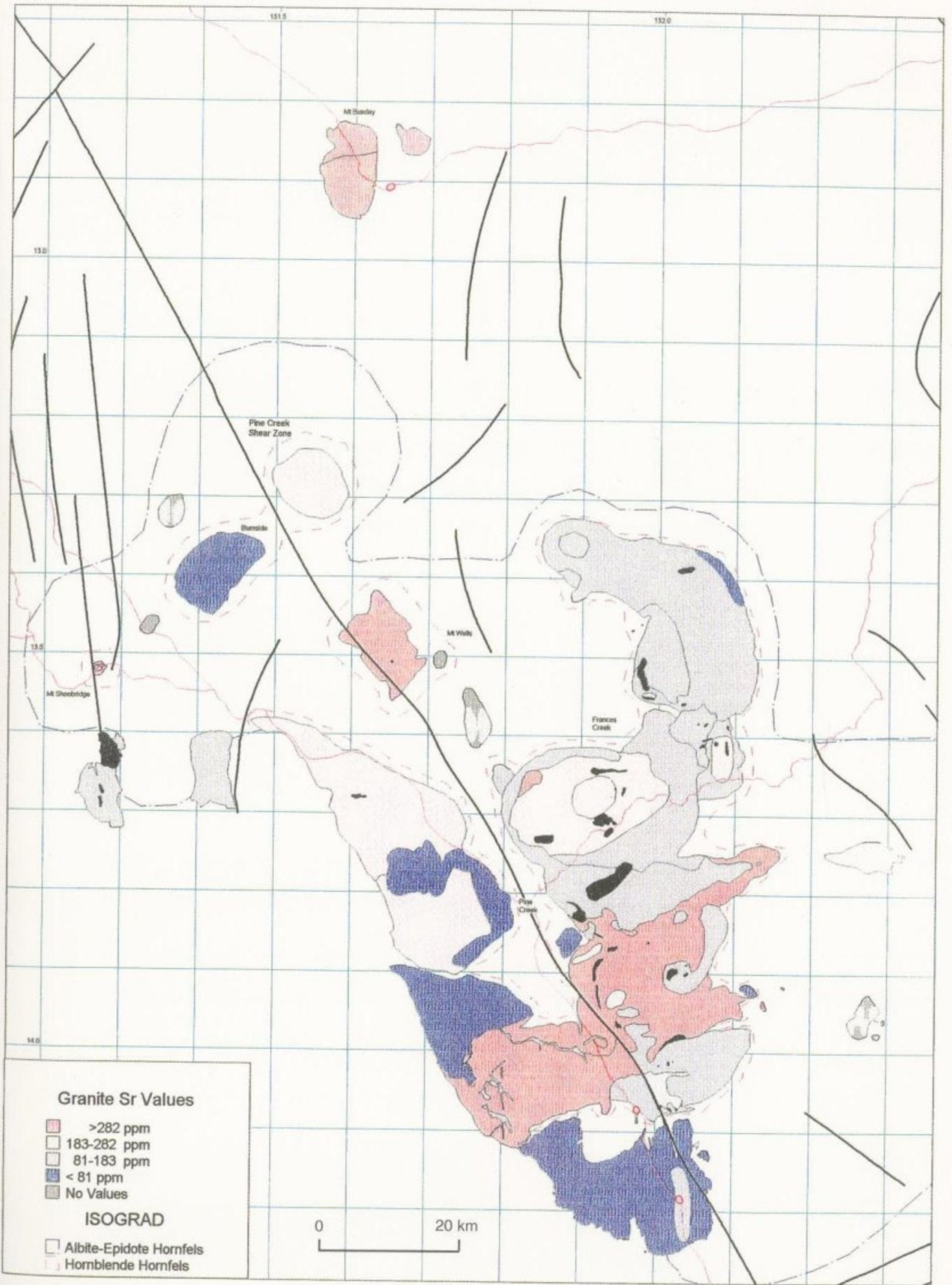


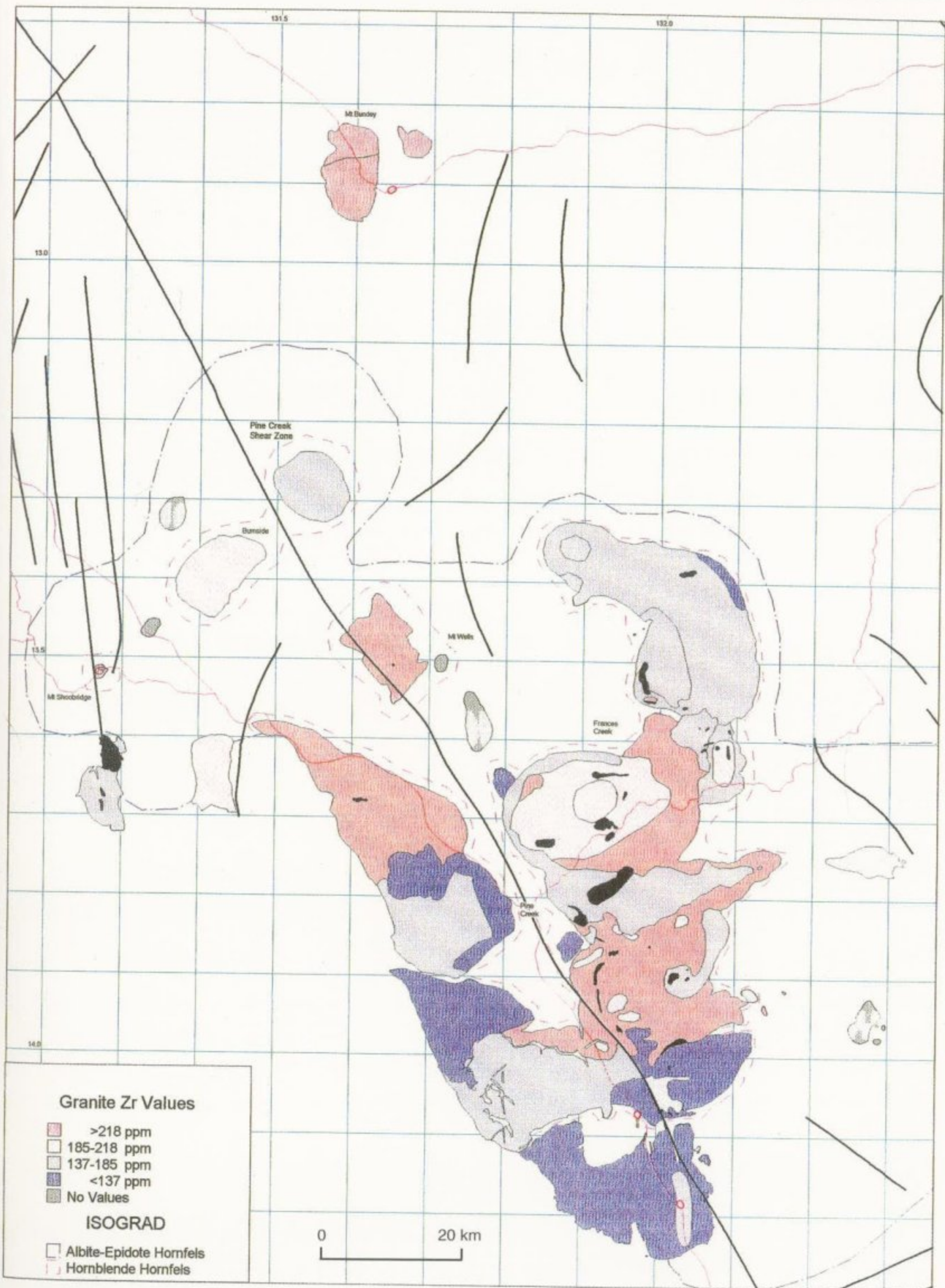


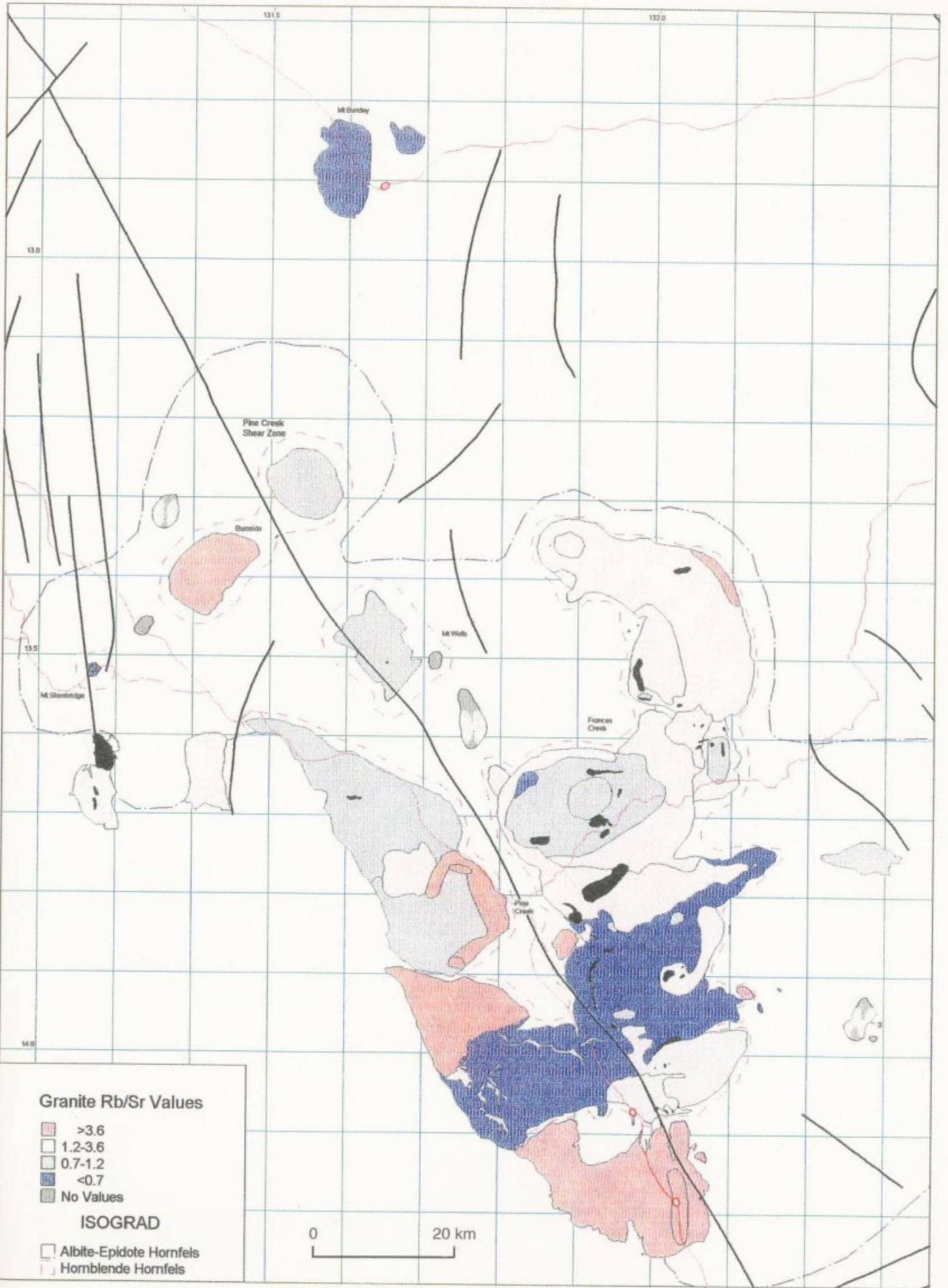


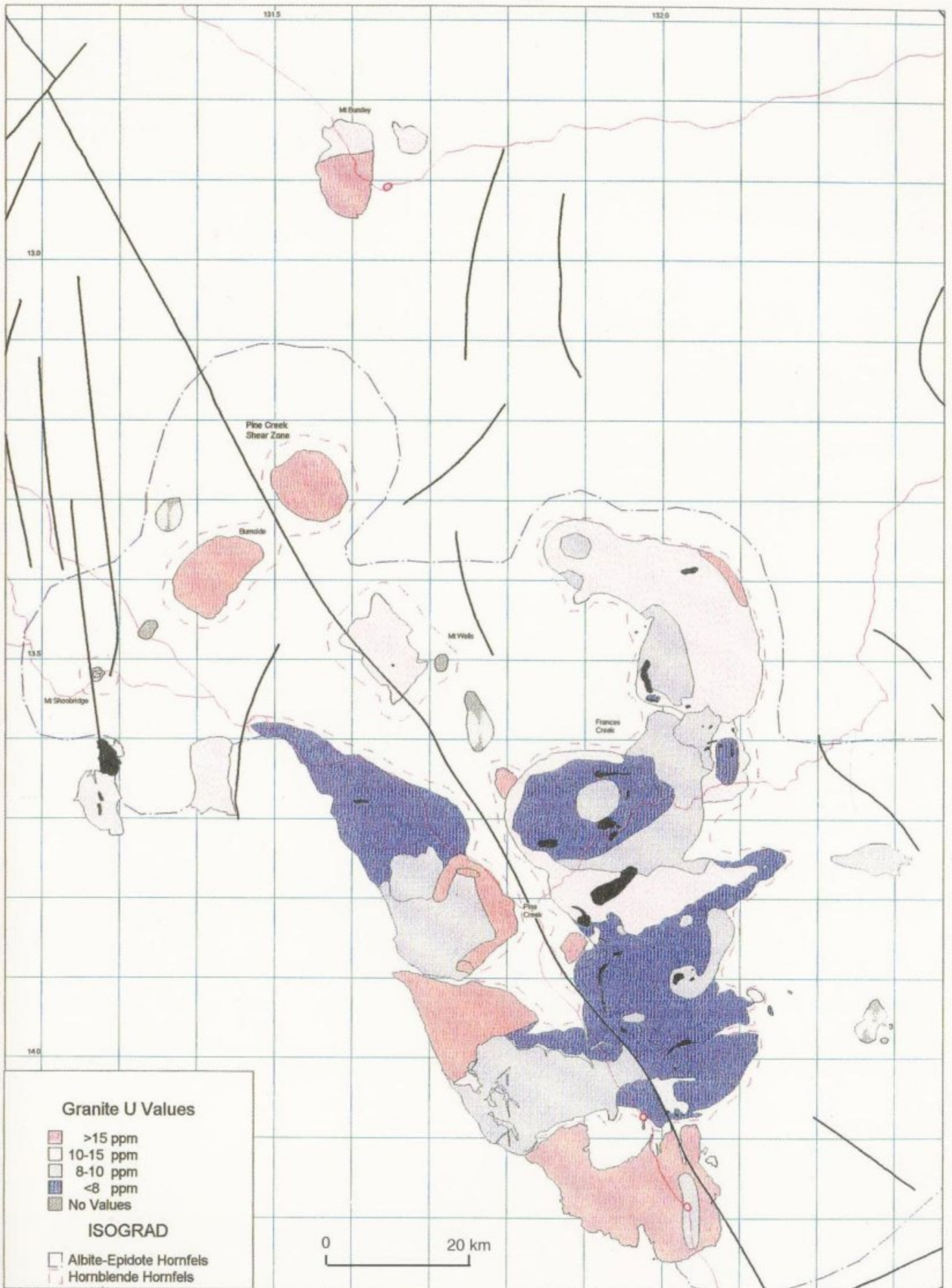


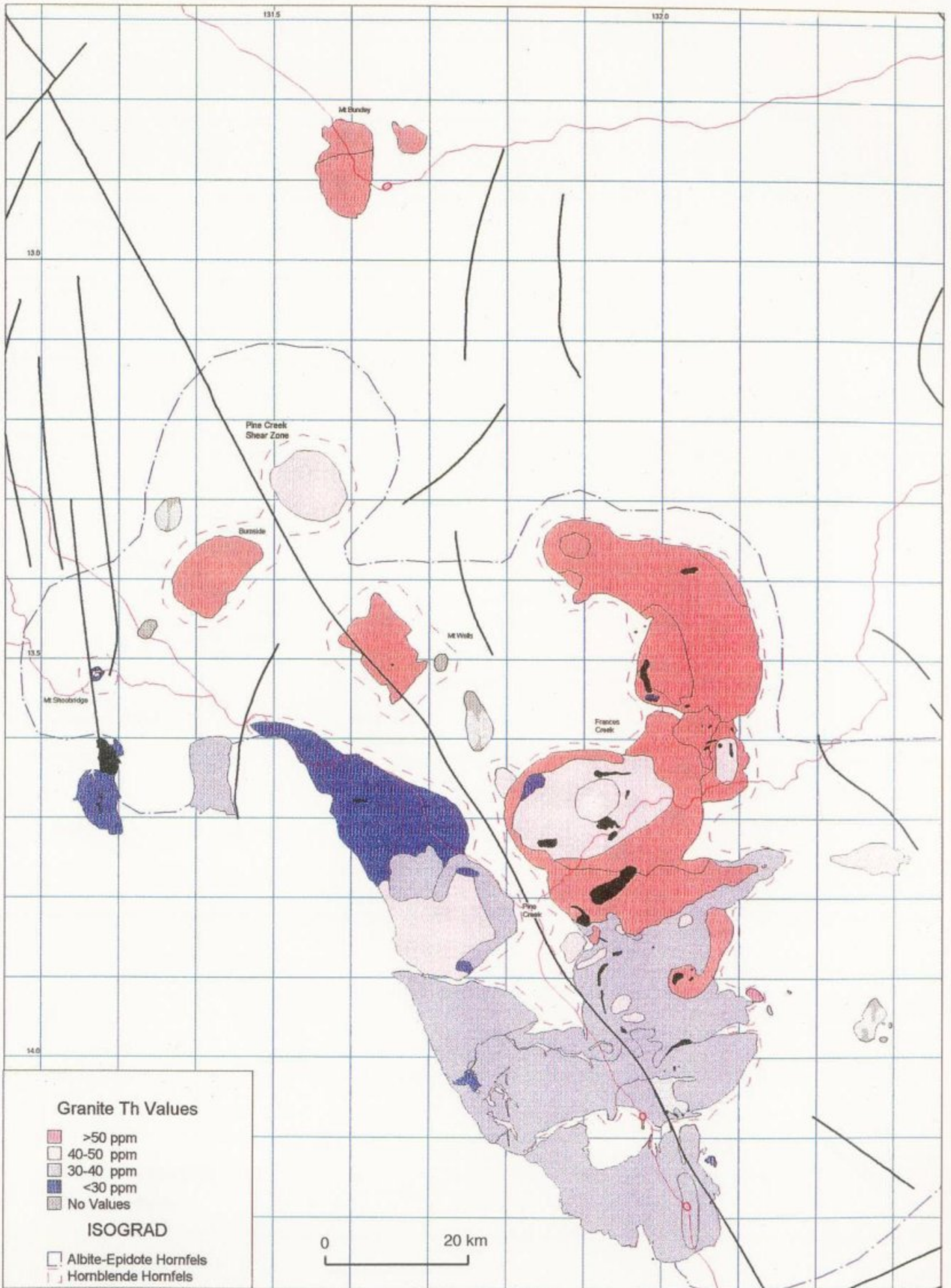






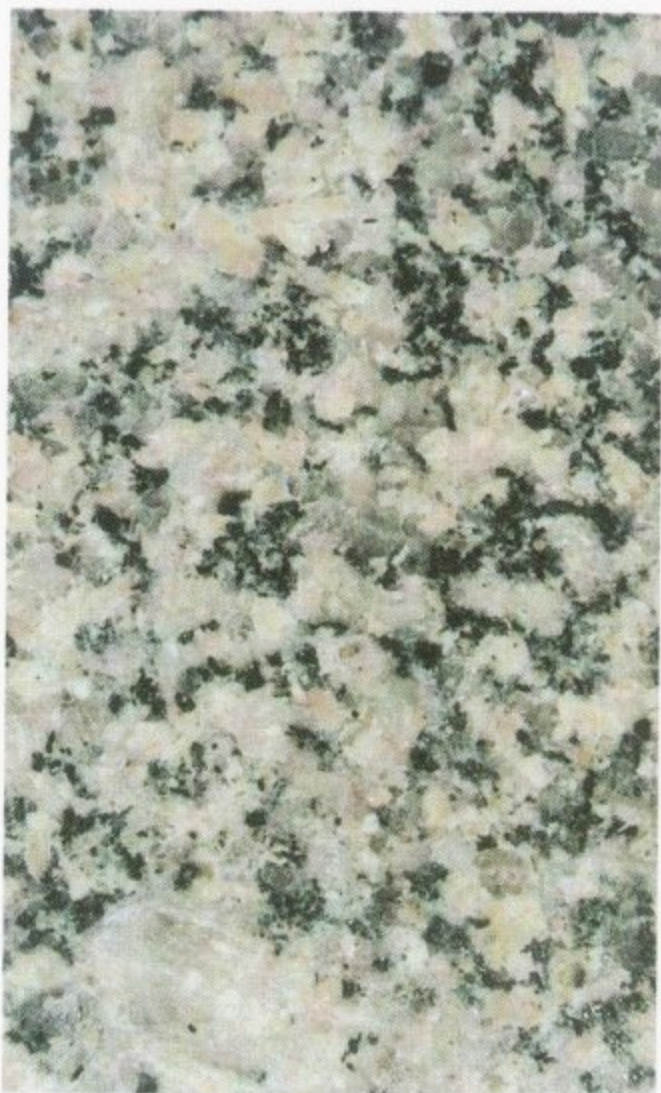




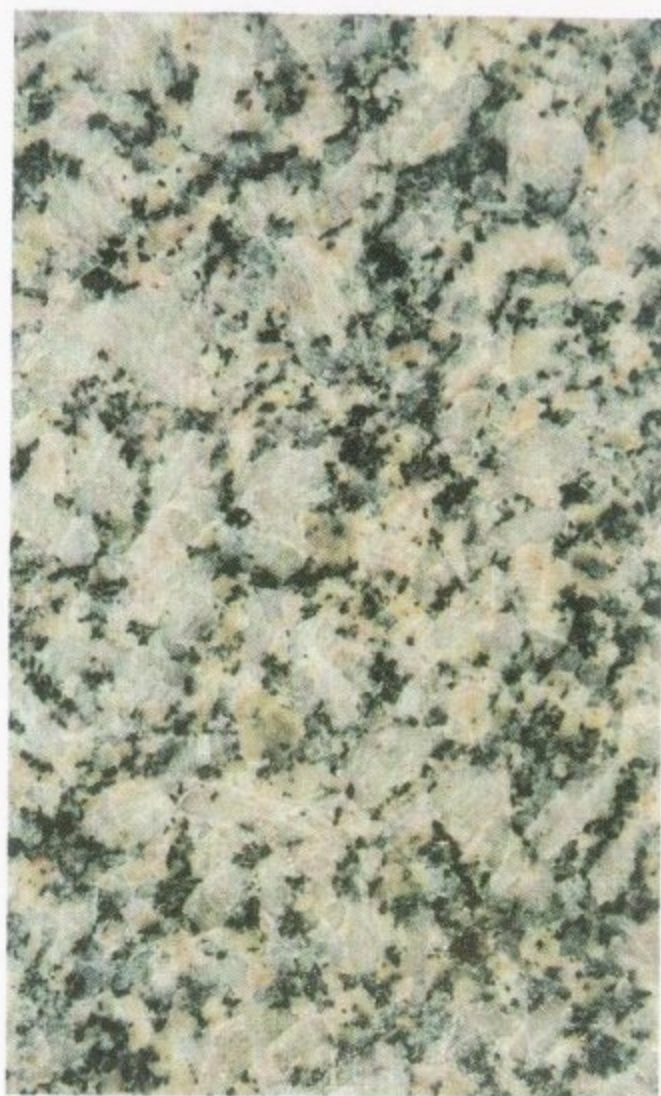




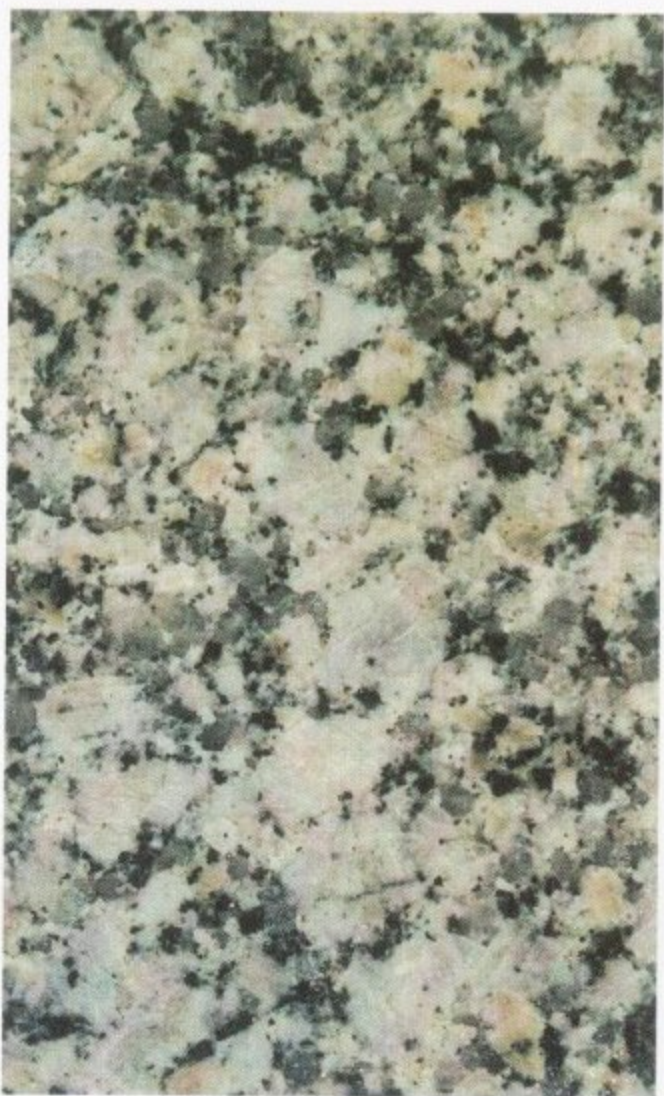
SAMPLE #	Rb	Sr	Th	U	Y	Zr	Ta	Nb	F	LITHOLOGY/MINERAL ASSEMBLAGE DESCRIPTION
G-4	200	425	5	23	32	177	L	18	1300	MEDIUM GRAINED HORNBLENDE-BIOTITE TONALITE
G-1	289	88	13	33	46	131	L	23	900	PORPHYRITIC MEDIUM GRAINED BIOTITE GRANITE
G-2	280	113	12	48	26	131	L	38	950	MEDIUM GRAINED BIOTITE GRANITE
G-3	274	110	11	60	45	210	L	33	1800	SLIGHTLY PORPHYRITIC MEDIUM GRAINED GRANITE
G-5	217	394	7	40	43	295	L	33	1700	SLIGHTLY PORPHYRITIC COARSE GRAINED HORNBLENDE BIOTITE GRANODIORITE
G-6	287	122	19	60	31	115	L	30	450	PORPHYRITIC MEDIUM GRAINED GRANITE
G-8	434	37	7	34	56	100	L	L	1900	COARSE GRAINED BIOTITE GRANITE
G-9	430	42	24	32	55	91	L	25	1600	SLIGHTLY PORPHYRITIC COARSE GRAINED BIOTITE GRANITE
G-14	339	95	18	56	30	104	L	26	900	PORPHYRITIC FINE GRAINED BIOTITE GRANITE
G-15	214	242	9	38	37	216	L	24	1300	PORPHYRITIC MEDIUM GRAINED BIOTITE GRANITE
G-20	200	223	6	45	39	230	L	43	1300	PORPHYRITIC COARSE GRAINED HORNBLENDE BIOTITE GRANITE
G-26	324	215	17	58	45	194	L	42	2700	MEDIUM GRAINED EQUIGRANULAR GRANITE
G-29	243	235	12	39	21	166	L	40	950	PORPHYRITIC MEDIUM GRAINED BIOTITE GRANITE
G-30	344	84	11	48	50	270	L	15	1600	COARSE GRAINED BIOTITE GRANITE
G-33	409	83	14	35	64	174	L	22	1900	PORPHYRITIC COARSE GRAINED BIOTITE GRANITE
G-7	203	193	6	28	35	206	L	20	1300	PORPHYRITIC COARSE GRAINED BIOTITE GRANITE
G-10	195	227	8	35	23	134	L	34	600	MEDIUM GRAINED HORNBLENDE-BIOTITE GRANODIORITE
G-11	176	360	10	35	22	164	L	34	900	PORPHYRITIC MEDIUM GRAINED HORNBLENDE-BIOTITE GRANODIORITE
G-13	274	364	17	40	30	210	L	17	1300	PORPHYRITIC MEDIUM GRAINED HORNBLENDE BIOTITE GRANITE
G-21	293	340	12	48	32	253	L	49	1500	MEDIUM GRAINED BIOTITE GRANITE
G-23	293	108	12	43	39	159	L	49	1300	COARSE GRAINED EQUIGRANULAR BIOTITE GRANITE
G-27	351	7	16	41	77	157	L	12	1400	COARSE GRAINED BIOTITE GRANITE
G-32	230	175	6	34	28	150	L	29	700	COARSE GRAINED BIOTITE GRANITE
G-34	256	1847	16	74	27	382	L	62	2100	MEDIUM GRAINED HORNBLENDE SYENITE
G-35	309	387	14	49	21	204	L	46	900	COARSE GRAINED BIOTITE GRANITE
G-16	298	126	5	45	26	227	L	32	1000	MEDIUM - FINE GRAINED BIOTITE EQUIGRANULAR GRANITE
G-17	335	110	L	68	33	291	L	34	1800	FINE GRAINED BIOTITE EQUIGRANULAR GRANITE
G-18	332	75	12	34	45	137	L	54	850	MEDIUM GRAINED EQUIGRANULAR BIOTITE GRANITE
G-19	251	130	6	40	35	271	L	29	1300	COARSE GRAINED EQUIGRANULAR BIOTITE GRANITE
G-24	163	140	9	41	18	145	L	23	200	MEDIUM GRAINED EQUIGRANULAR GARNET BIOTITE GRANITE
G-25	202	103	5	34	29	98	L	48	1500	FINE GRAINED EQUIGRANULAR BI-GRANITE
G-28	270	200	10	46	28	205	L	40	900	MEDIUM GRAINED EQUIGRANULAR BIOTITE GRANITE
G-31	461	22	13	35	29	81	L	33	2700	MEDIUM GRAINED BIOTITE GRANITE
PGB-1	353	119	12	54	49	188	L	51	1600	MEDIUM GRAINED BIOTITE GRANITE
PGB-2	514	55	14	40	79	168	L	41	3900	F-MEDIUM GRAINED BIOTITE GRANITE
PGB-3	349	65	8	48	46	169	L	34	1200	MEDIUM GRAINED EQUIGRANULAR BIOTITE GRANITE
PGB-4	413	35	21	56	67	136	L	43	1100	MEDIUM GRAINED EQUIGRANULAR BIOTITE GRANITE
PGB-5	311	41	9	43	46	150	L	46	1300	MEDIUM GRAINED EQUIGRANULAR BIOTITE GRANITE
PGB-6	320	74	7	39	52	176	L	60	1200	MEDIUM GRAINED EQUIGRANULAR BIOTITE GRANITE
PGB-7	329	84	18	54	43	176	L	42	1100	MEDIUM GRAINED EQUIGRANULAR BIOTITE GRANITE
PGS-1	193	341	12	34	26	151	L	14	600	FINE GRAINED BIOTITE GRANITE
PGS-2	254	261	14	23	16	96	L	L	500	MEDIUM GRAINED BIOTITE GRANITE
G-22	454	44	23	41	36	122	L	47	650	MEDIUM GRAINED EQUIGRANULAR MU-BI GRANITE GREISENISED
DETECTION	10 PPM	5 PPM	5 PPM	5 PPM	5 PPM	5 PPM	1 PPM	10 PPM	5 PPM	



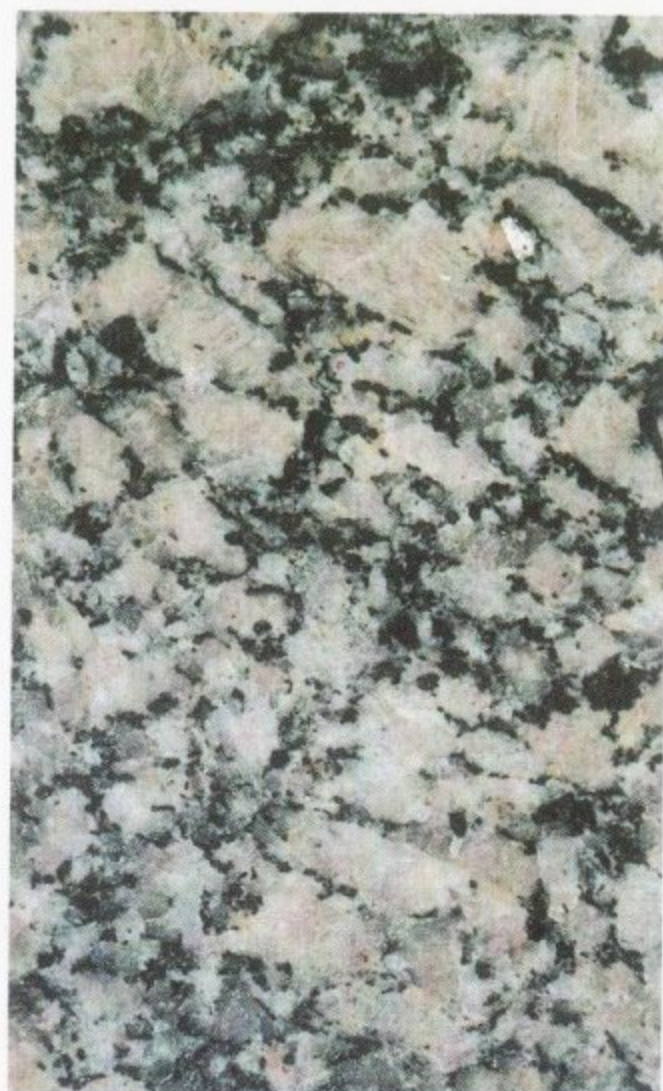
MOUNT PORTER GRANITE Pgh 27



PRICES SPRINGS GRANITE Pgp 13



ALLAMBER SPRINGS GRANITE Pga 3



ALLAMBER SPRINGS GRANITE Pga 5

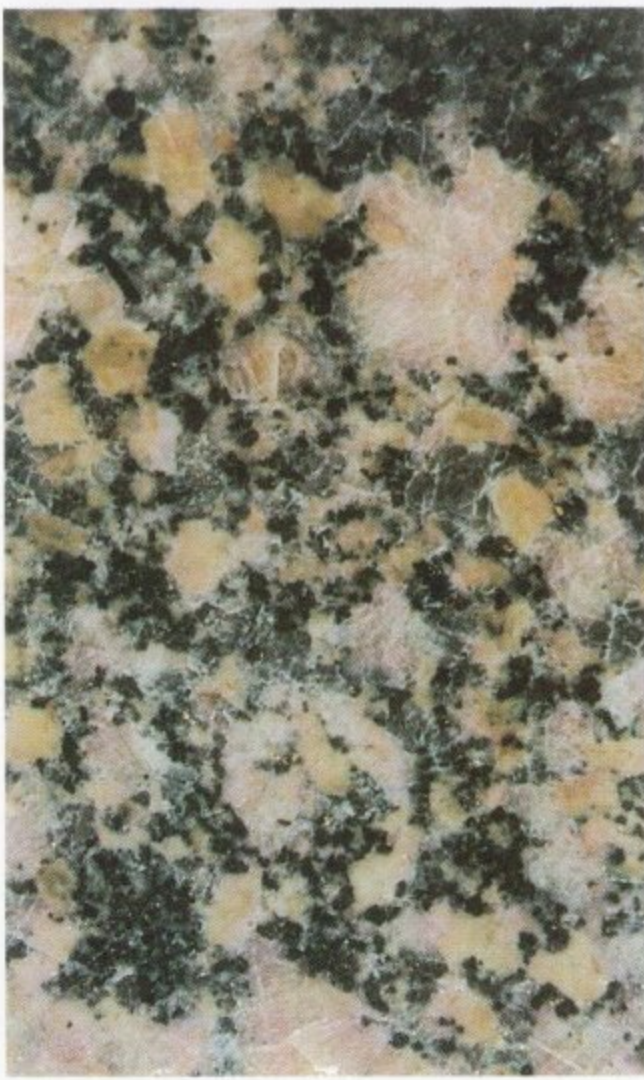




BLUELLE'S MONZONITE Pgz 4



FINGERPOST GRANODIORITE Pgx 11



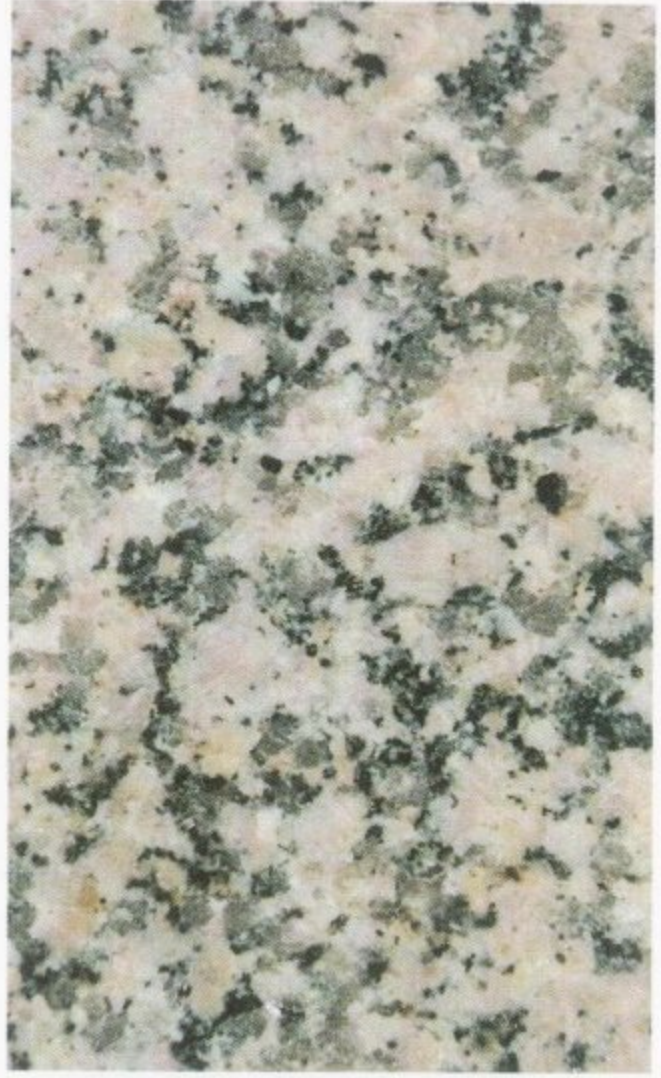
MCMINNS BLUFF GRANITE Pgm 7



FINGERPOST GRANODIORITE Pgx 10



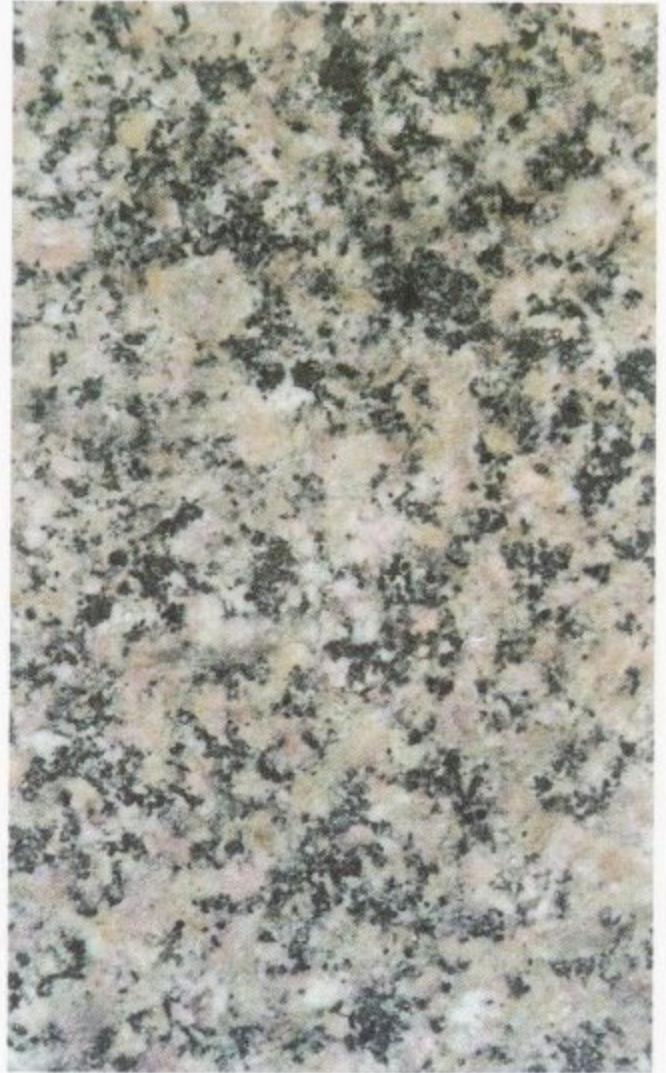
MOUNT GOYDER SYENITE 34



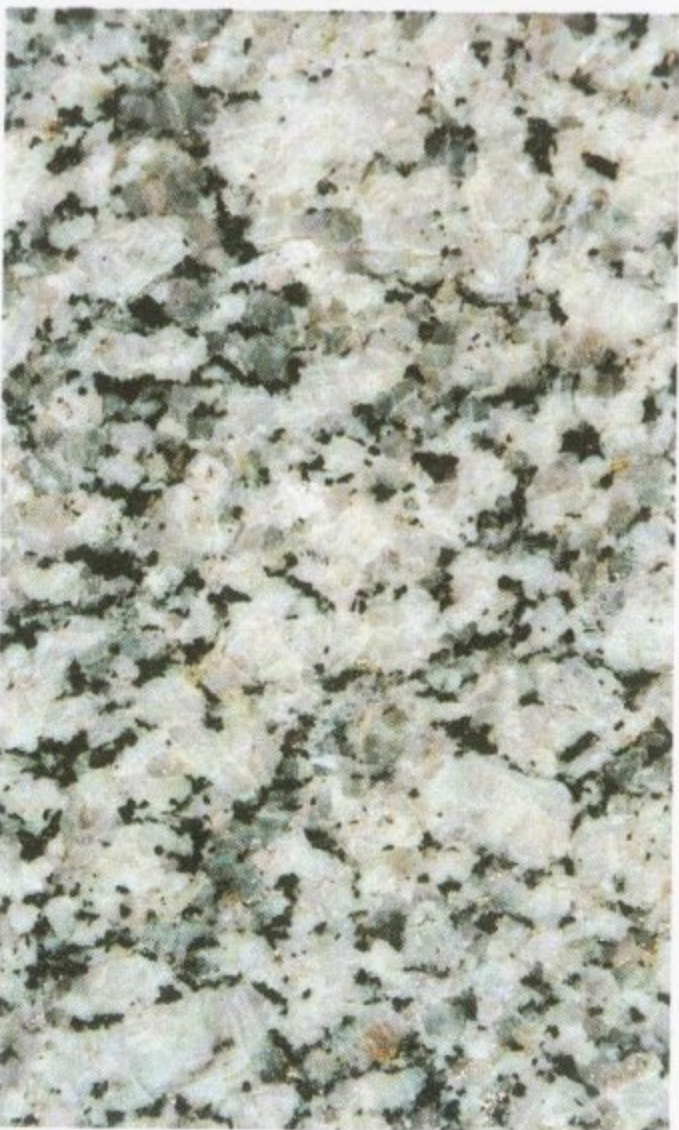
MINGLO GRANITE Pgi 23



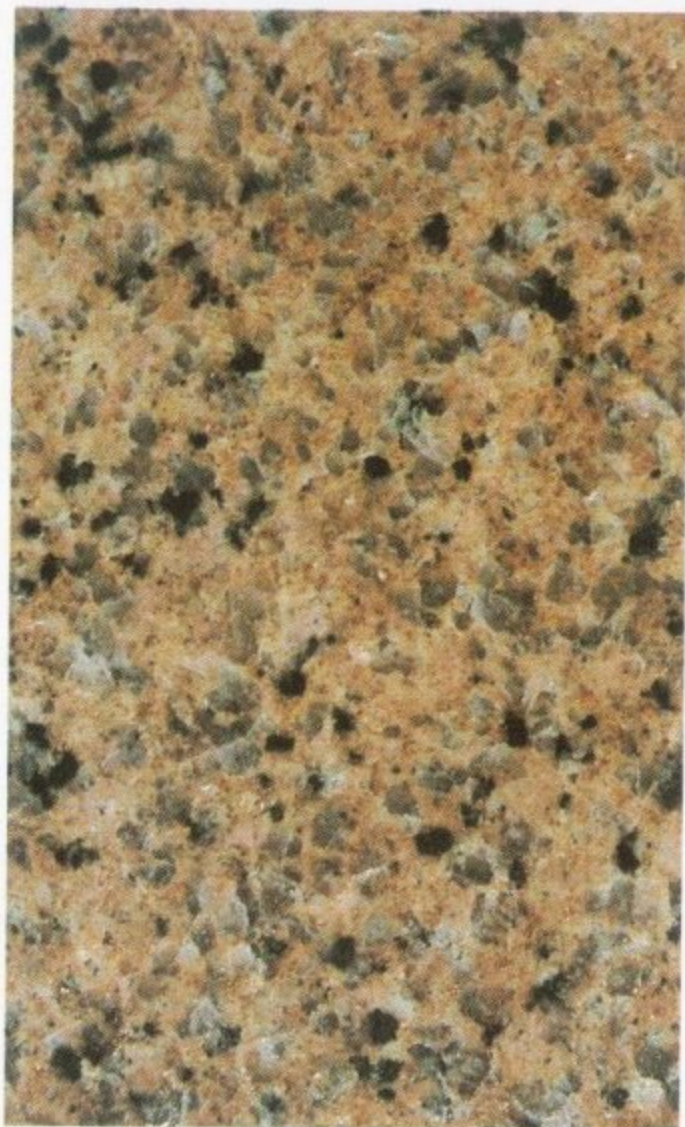
MOUNT BUNDEY GRANITE 35



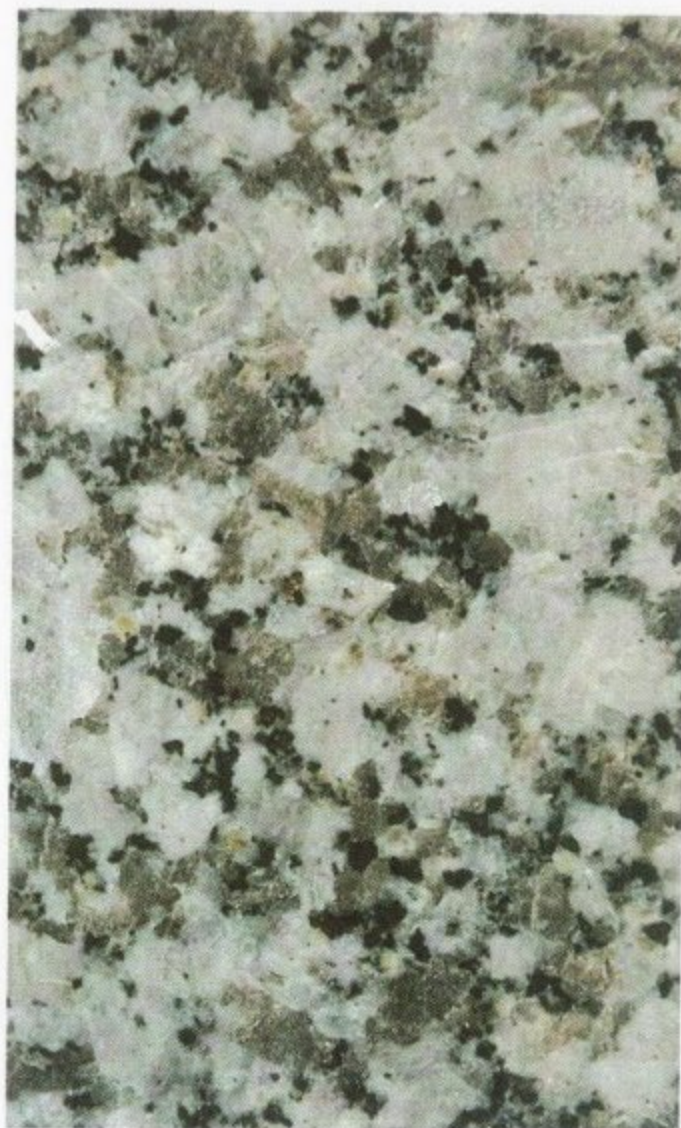
MCKINLAY GRANITE Pgi 21



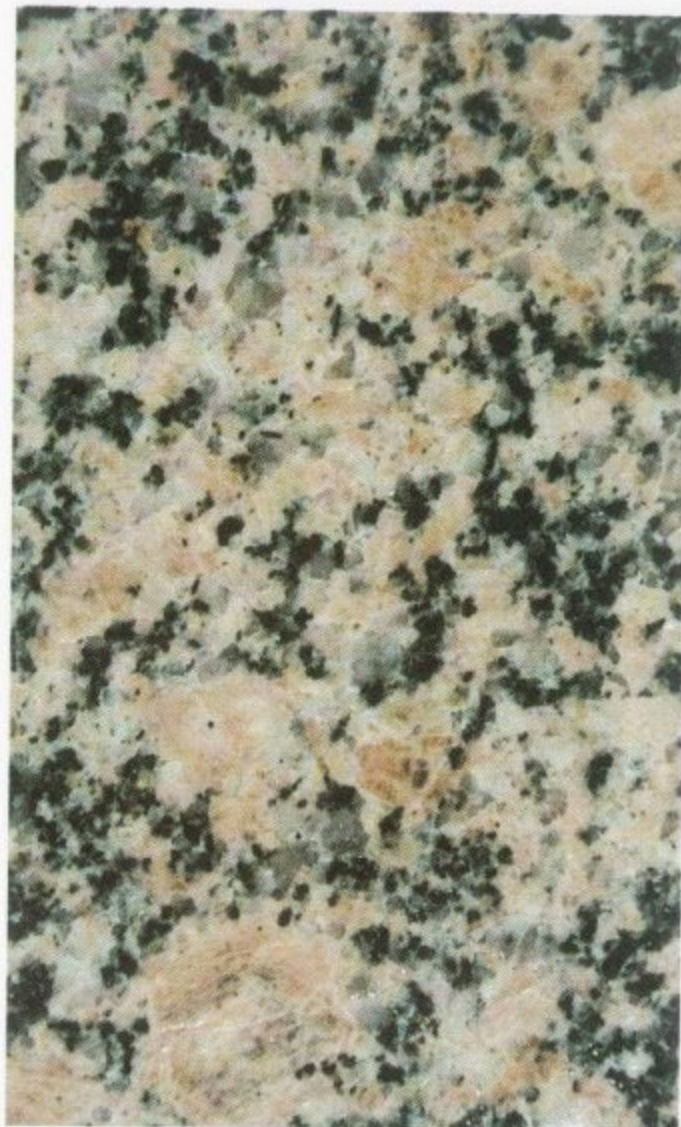
MINGLO GRANITE Pgi 19



ALLAMBER SPRINGS GRANITE Pga 26



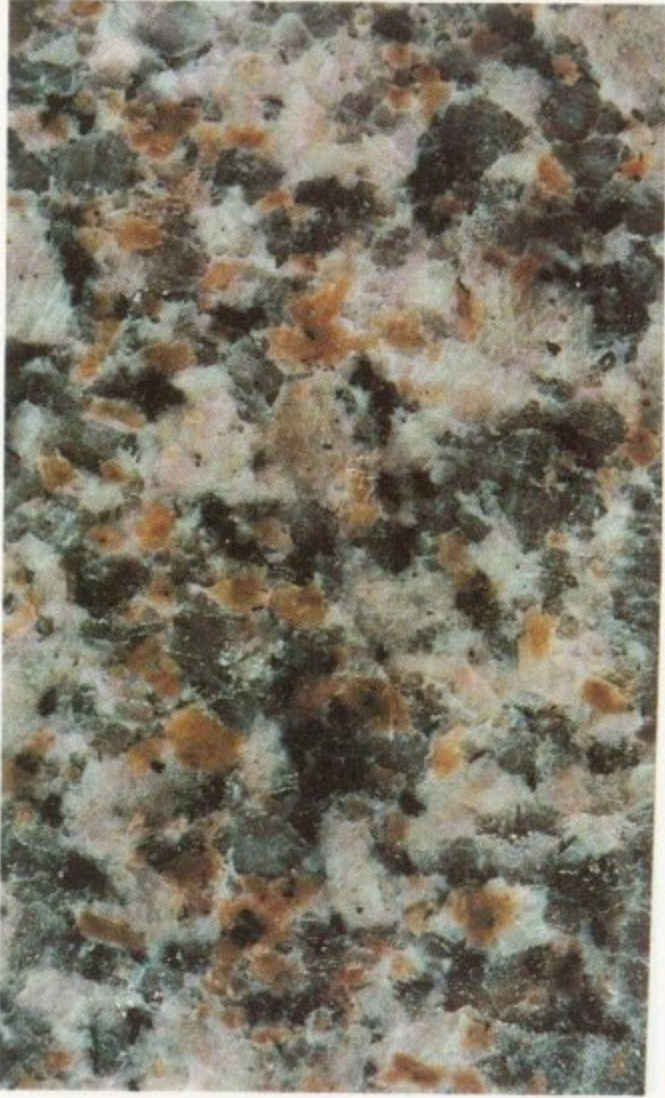
ALLAMBER SPRINGS GRANITE Pga 15



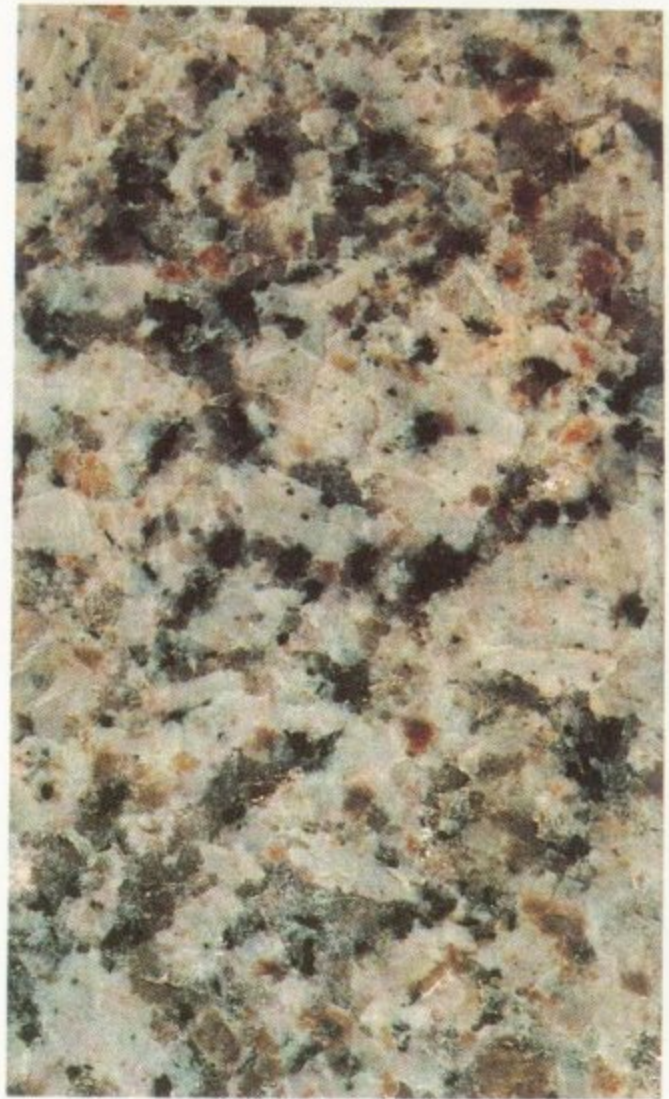
ALLAMBER SPRINGS GRANITE Pga 20



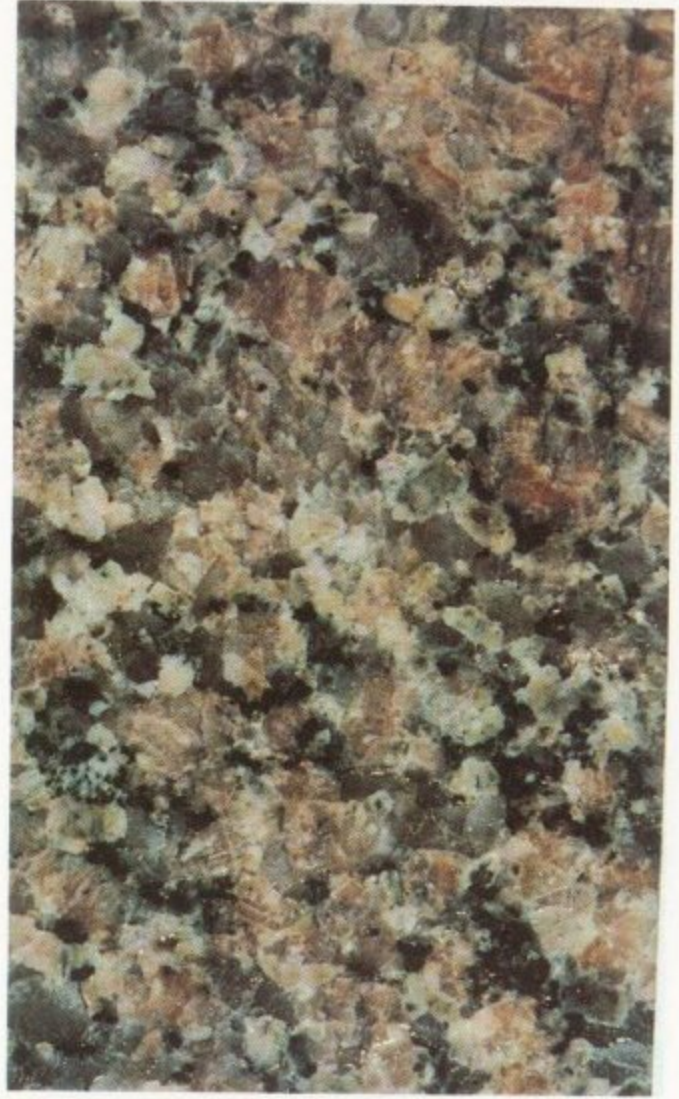
TENNYSONS LEUCOGRANITE Pge 30



TENNYSONS LEUCOGRANITE Pge 33



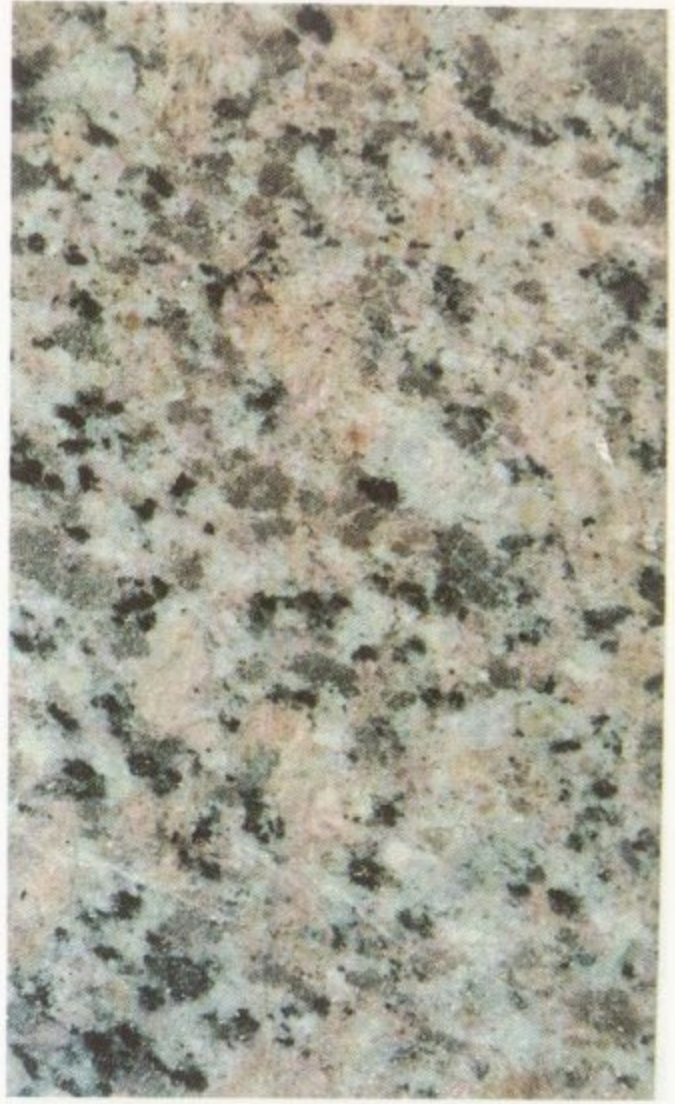
UMBRAWARRA LEUCOGRANITE Pgu 8



MCCARTHYS GRANITE Pgc 32



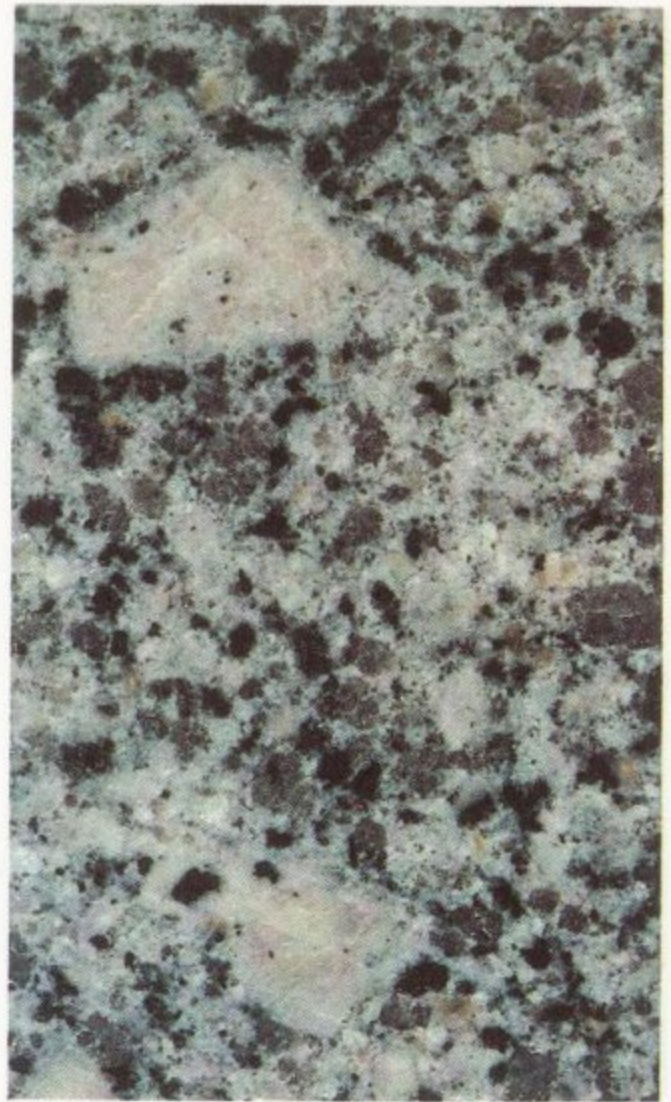
TABLETOP GRANITE Pgt 2



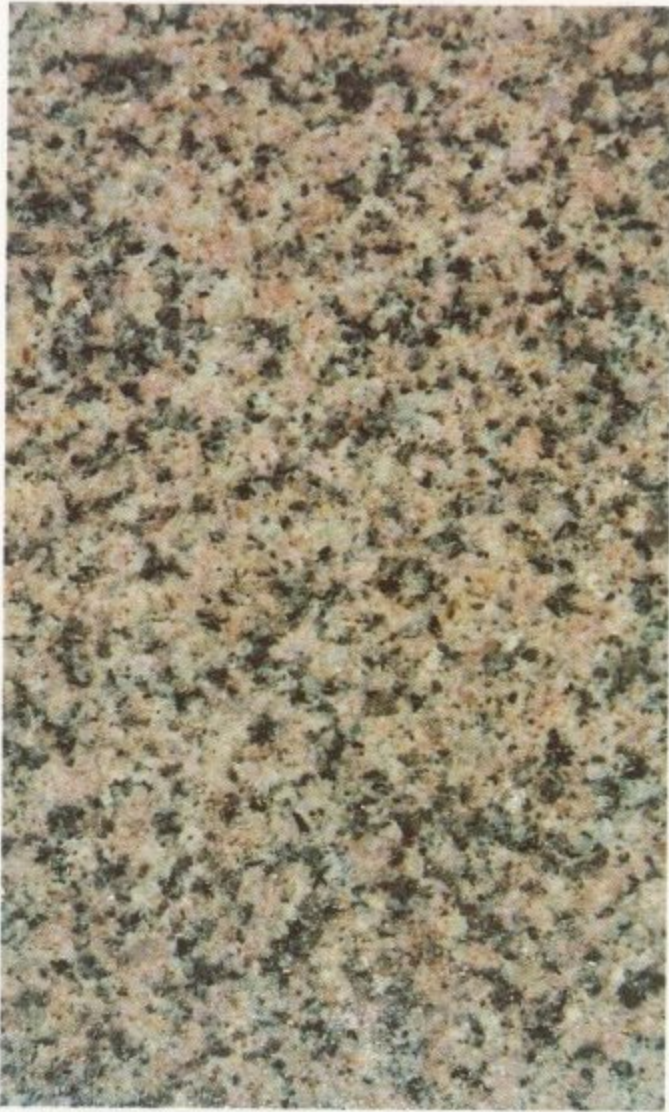
TABLETOP GRANITE Pgt 6



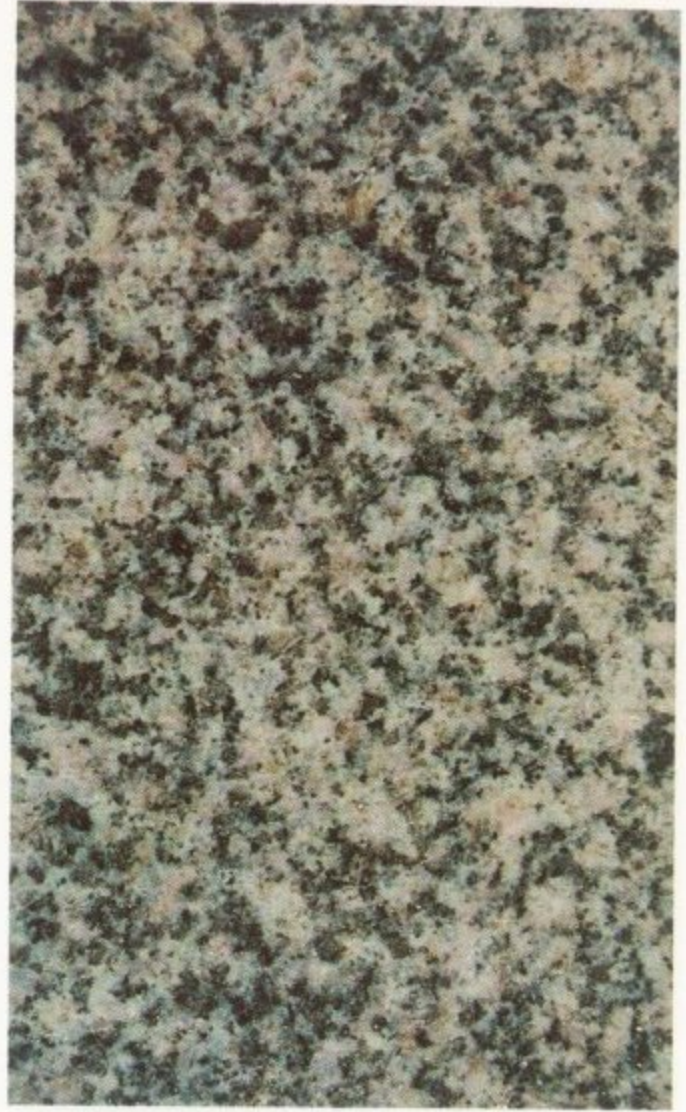
UMBRAWARRA LEUCOGRANITE Pgu 9



DOUGLAS LEUCOGRANITE Pgl 1



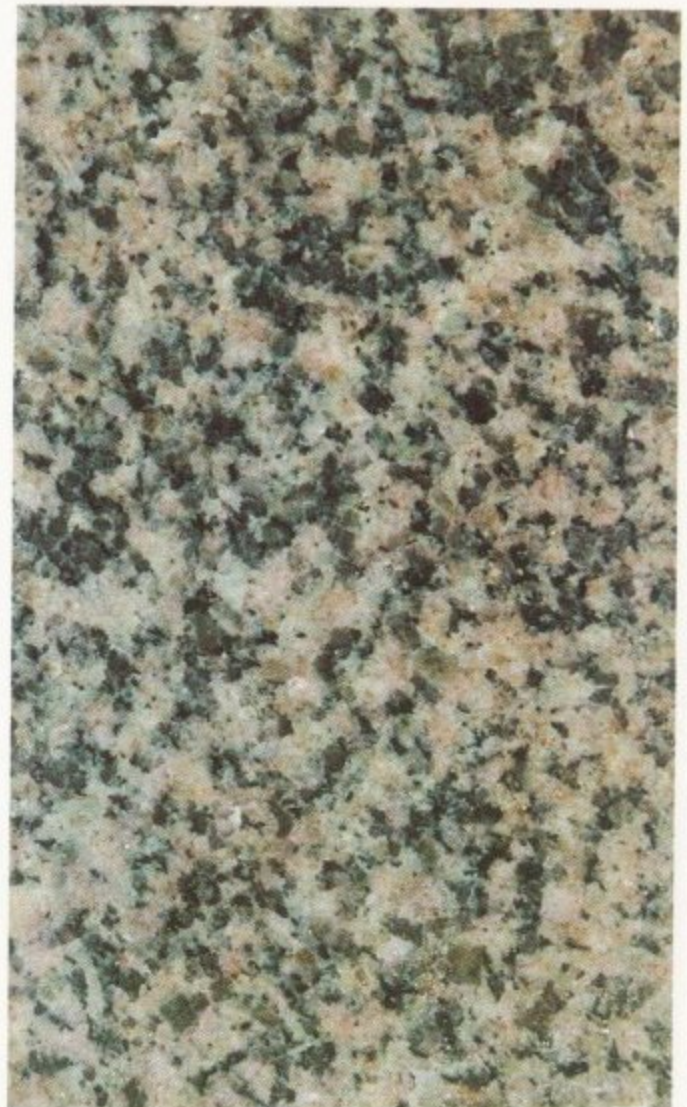
BURNSIDE GRANITE Pgb 4



BURNSIDE GRANITE Pgb 5



BURNSIDE GRANITE Pgb 6



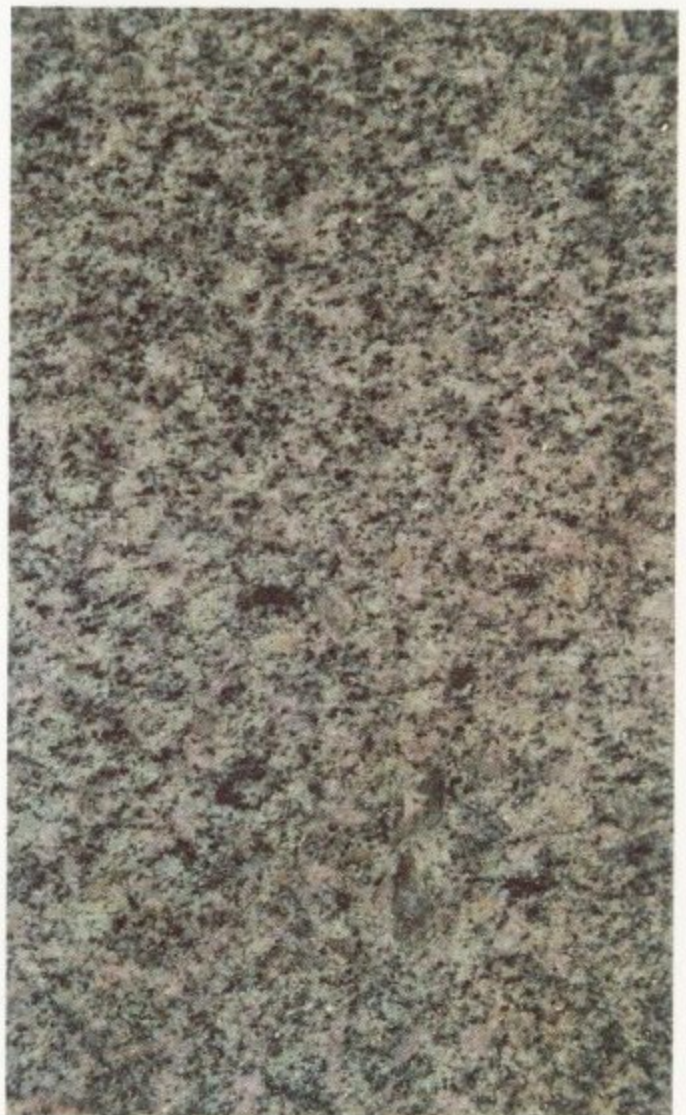
BURNSIDE GRANITE Pgb 7



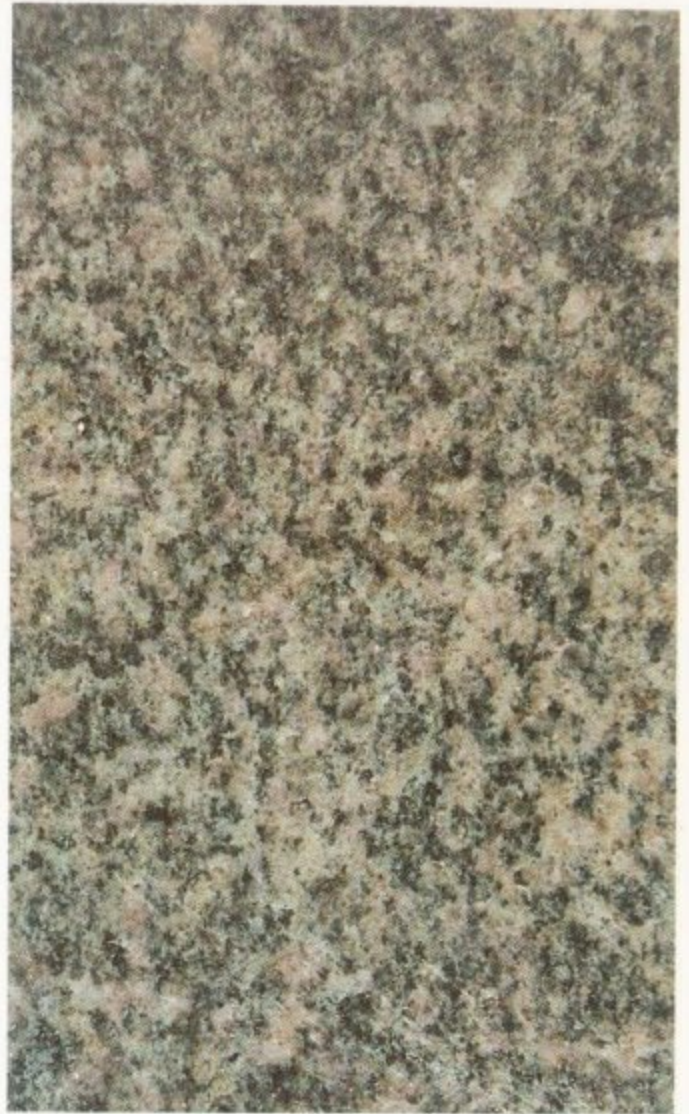
SHOOBRIDGE GRANITE Pgs 2



BURNSIDE GRANITE Pgb 1



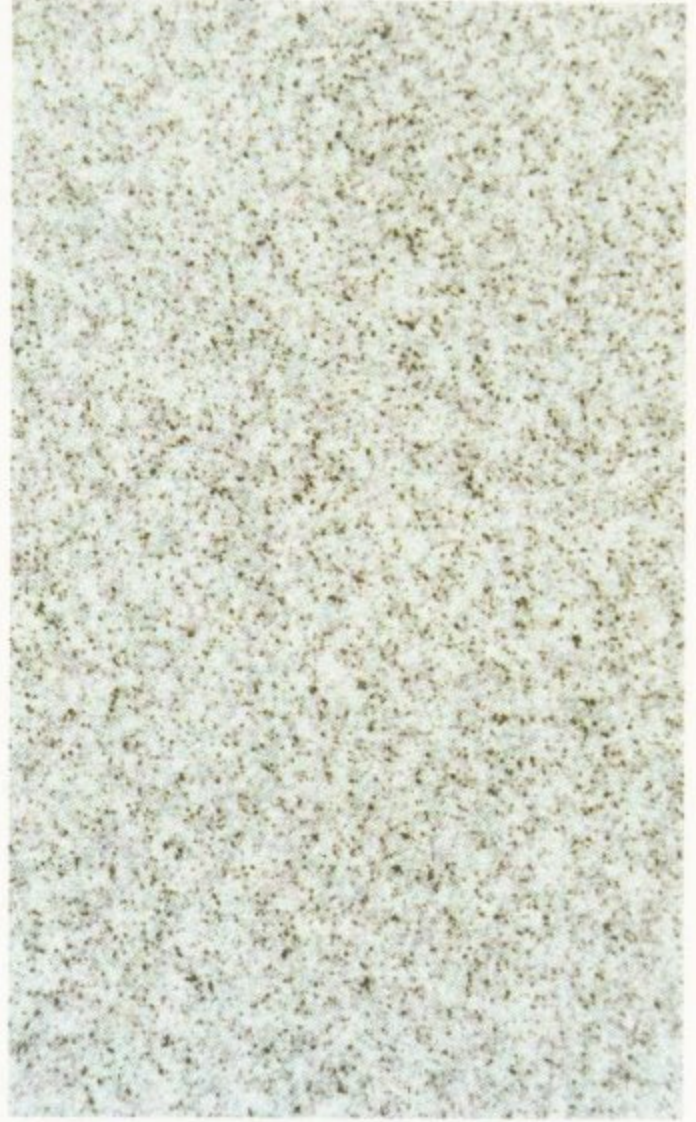
SHOOBRIDGE GRANITE Pgs 1



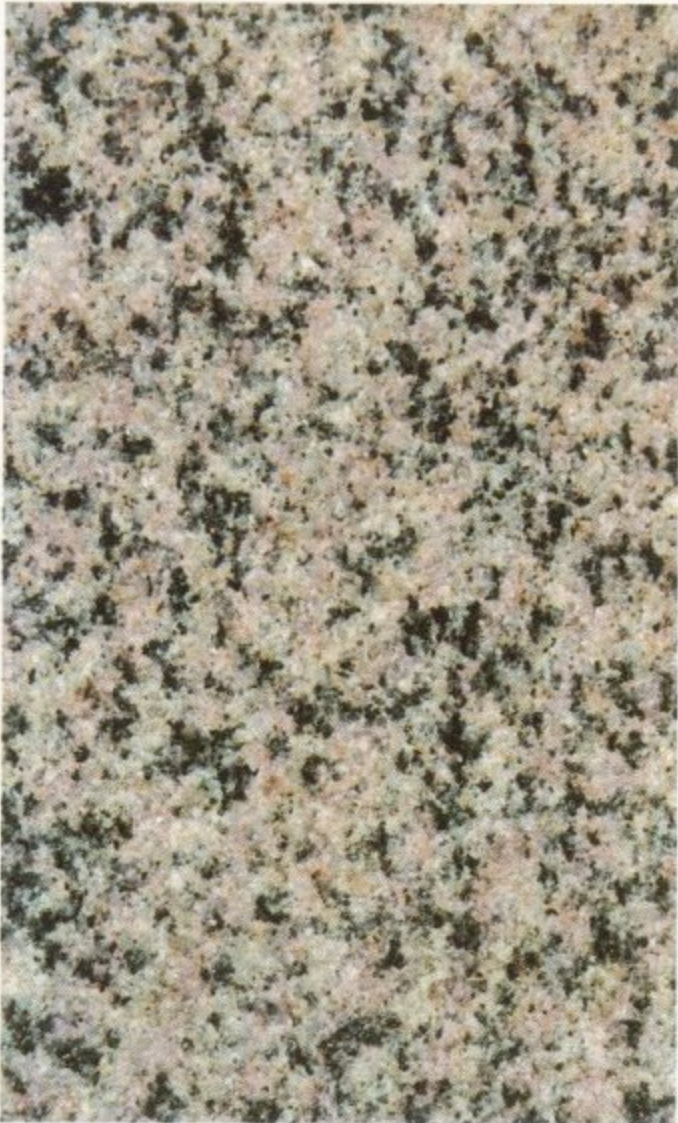
BURNSIDE GRANITE Pgb 2



FRANCES CREEK LEUCOGRANITE Pgr 16



FRANCES CREEK LEUCOGRANITE Pgr 17



FRANCES CREEK LEUCOGRANITE Pgr 18



SAUNDERS LEUCOGRANITE Pgg 28

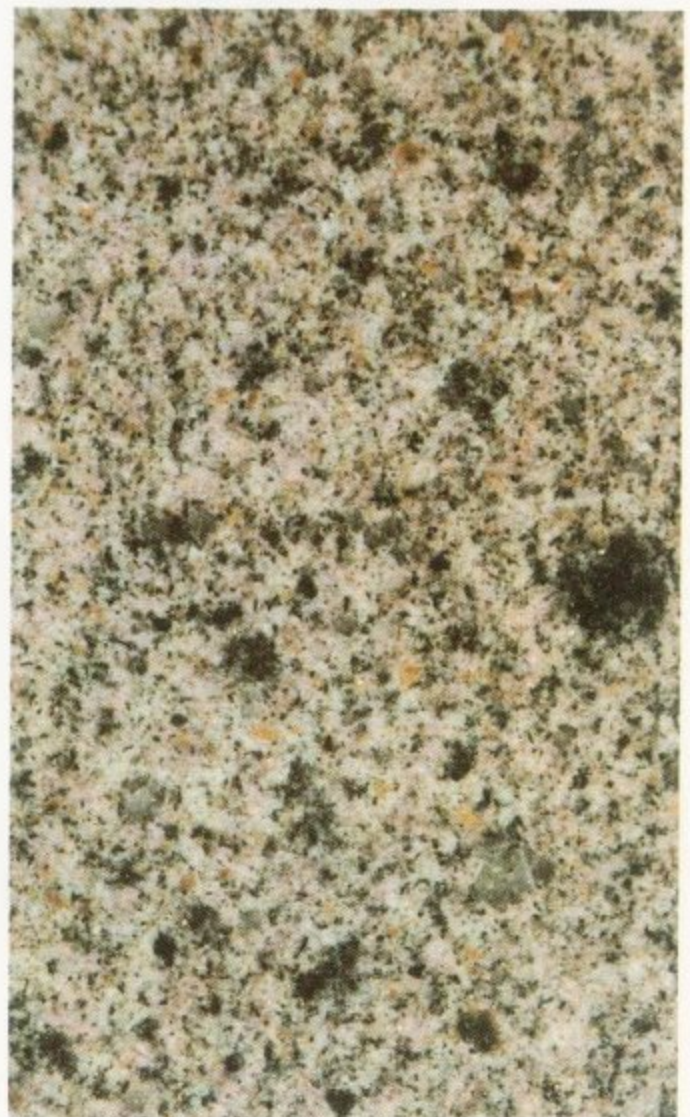




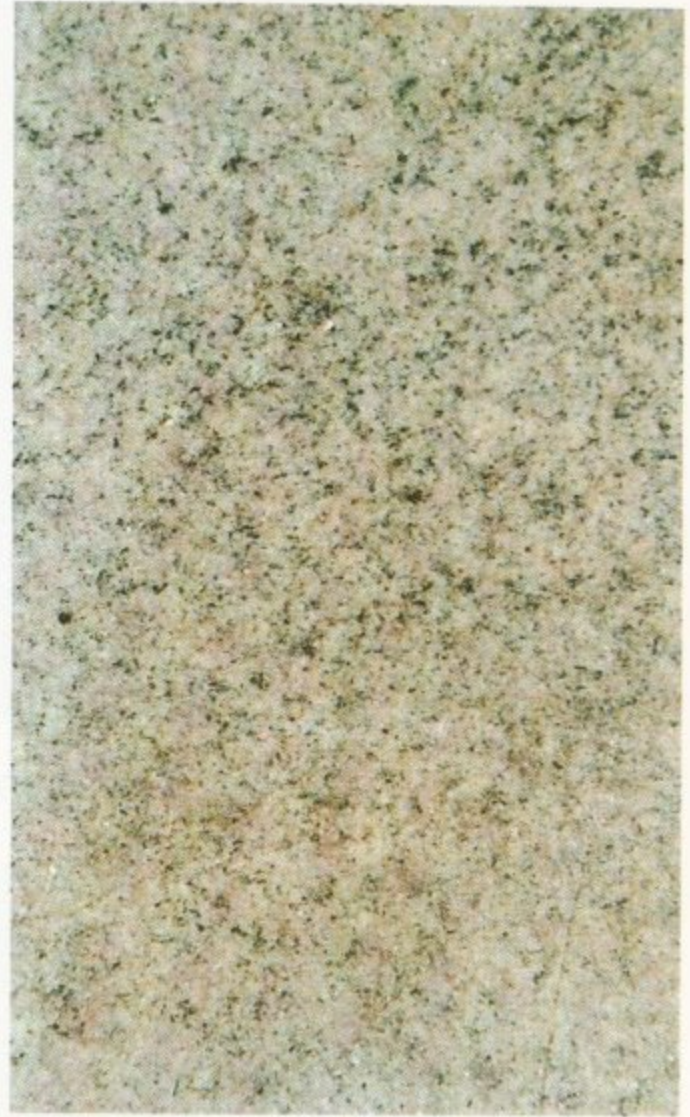
ALLAMBER SPRINGS GRANITE Pga 14



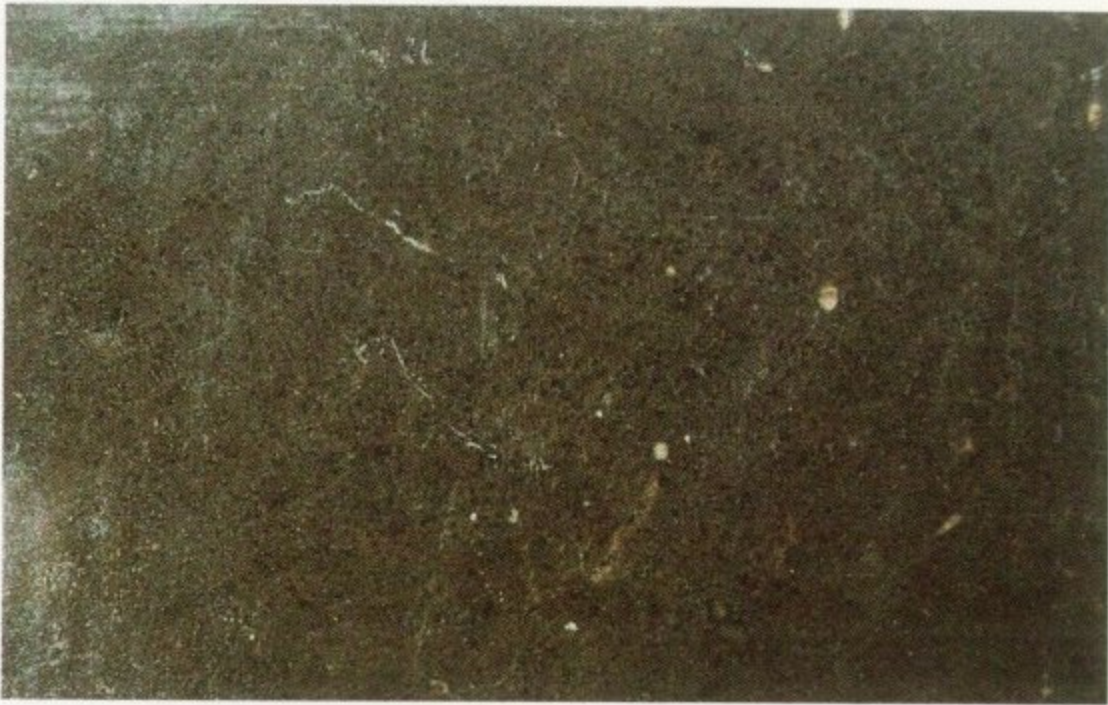
DRIFFIELD GRANITE Pgd 29



YENBERRIE LEUCOGRANITE Pgy 31



FENTON GRANITE Pgf 25



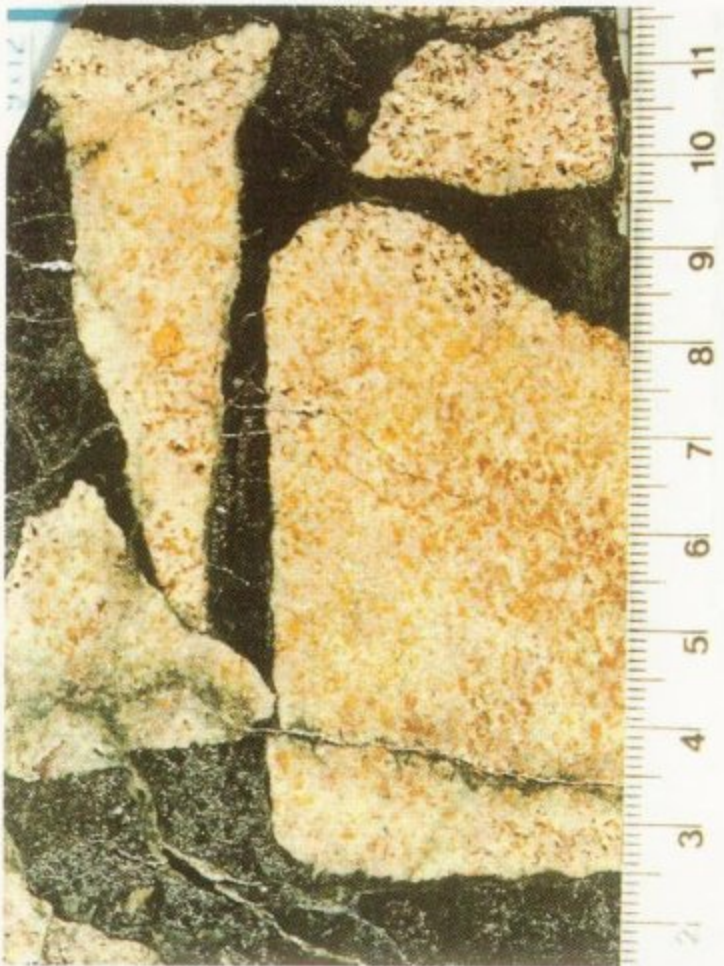
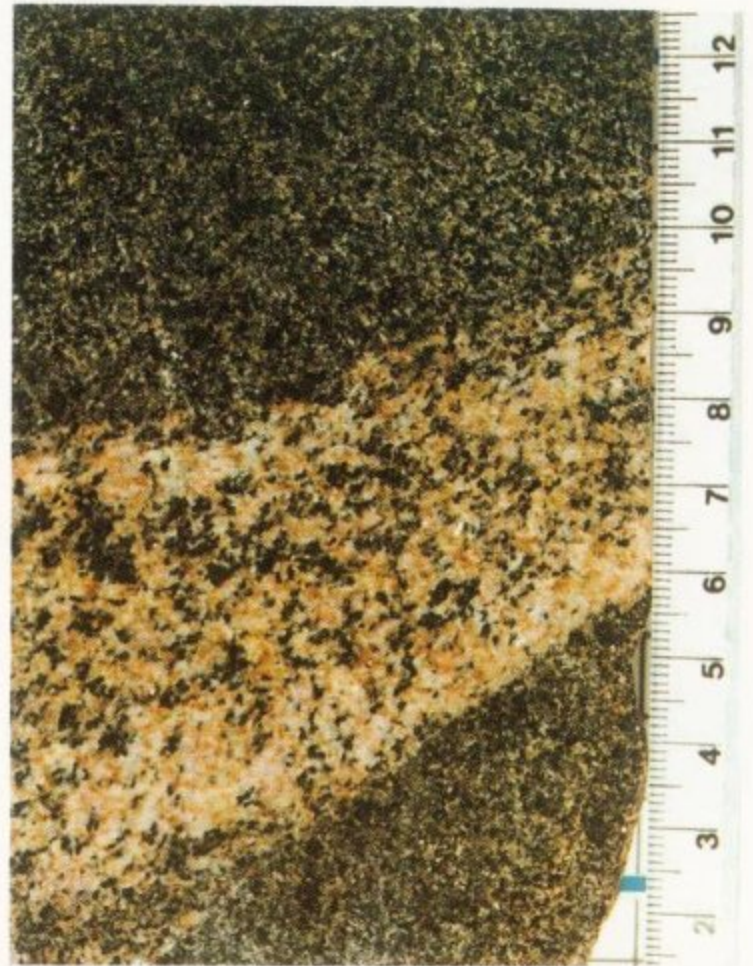
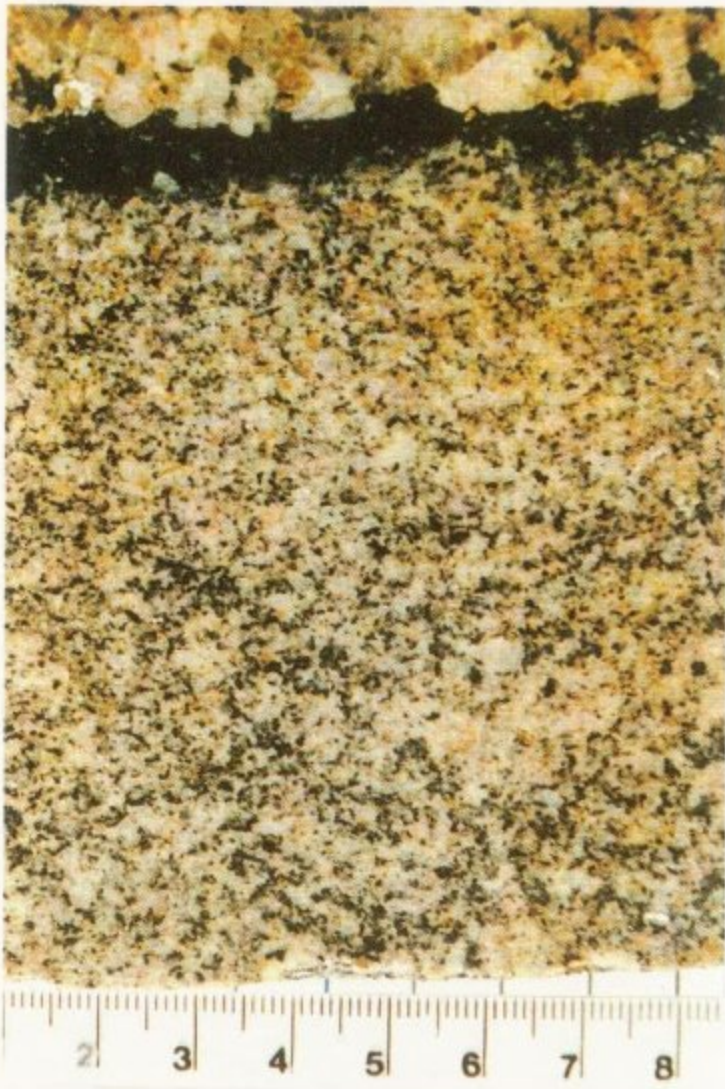
LAMPROPHYRE 34A



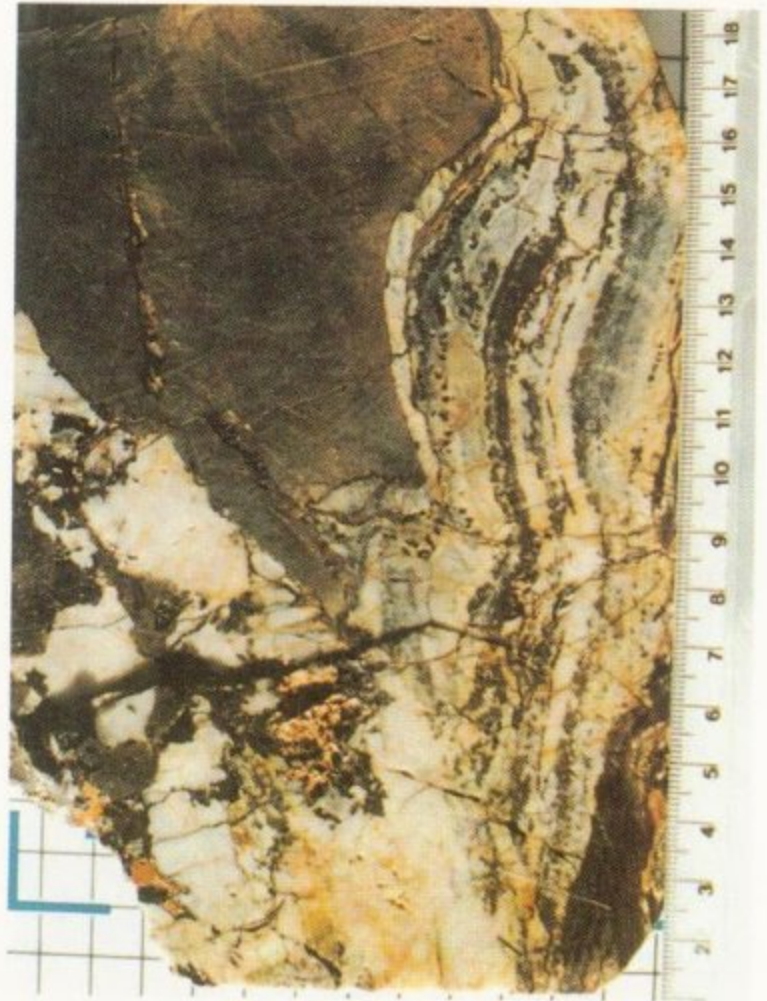
LEWIN SPRINGS SYENITE Pew 12



MOUNT WELLS GRANITE 22



A. Contact between Frances Creek Granite (YIS) and Minglo Granite in the sample locality G-16 (see Appendix III). Biotite rich margin of the younger granite (Frances Creek Granite). B. Biotite granite of the core zone of the Mount Shoobridge pluton intrudes into the marginal biotite-hornblende monzonite. C. Tourmaline breccia with fragments of sandstone from the contact of Allamber Springs Granite (TIS) in sample locality G-26 (see Appendix III). D. Greisenisation of the Yemberrie Granite (YIS) in sample locality G-31 (see Appendix III).



A. Tantalum-bearing cassiterite (black) in muscovite-quartz pegmatite. Barrets Mine in Mount Shoobridge area (see Figure 13). B. Mica pegmatite in contact with gold-bearing quartz vein. The vein is cutting the pegmatite. Barrets Mine in Mount Shoobridge area (see Figure 13). C. Tourmaline vein cutting the Burnside Granite (YIS) in Pgb-2 sample locality (see Figure 11). D. Milky quartz vein with coarse-grained cassiterite (black) is cutting folded quartz rich layer in tourmalinised shales of Koolpin Formation. Snaddens Creek old tin workings.



A. Quartz-pyrite-cassiterite vein and intensive wall-rock alteration in Mount Wells Tin Mine (see Figure 2). B. Gold-bearing quartz vein cutting hydrothermal alteration in the hinge of anticline. Spring Hill Gold Mine – main shaft (see Figure 2). C. Folded and dislocated quartz veins within the bedding of Koolpin Formation. Spring Hill Gold Mine – old tin workings 700 m from the main shaft (see Figure 2). D. Stockwork of quartz veinlets cutting sediments of the Koolpin Formation. Spring Hill Gold Mine – old tin workings 700 m from the main shaft (see Figure 2).



A. Gold-bearing quartz stockwork in Gerrowie Tuff, Big Howley Gold Mine (see Figure 2). B. Tourmaline-quartz stockwork is cut by gold-bearing quartz-pyrite-tourmaline vein, Goodall Gold Mine (see Figure 2). C. Gold-bearing quartz boudine (deformed quartz vein) in a marble, Ewelline Lead Mine (see Figure 2). D. Brecciated quartz (grey) with sphalerite (brown) in fractures, Ewelline Lead Mine (see Figure 2).



A. Quartz perimorphs after calcite (barite ?). Epithermal quartz vein in the Lead Prospect, Mount Shoobridge area (see Figure 13). B. Zonal crystals of smoky quartz in the margin of the epithermal quartz vein. Lead Prospect – Mount Shoobridge area. C. Quartz crystals and galena in epithermal quartz vein from Lead Prospect – Mount Shoobridge area. D. Perimorphs of quartz after calcite (barite ?) in epithermal quartz vein in the Lead Prospect (Mount Shoobridge area).

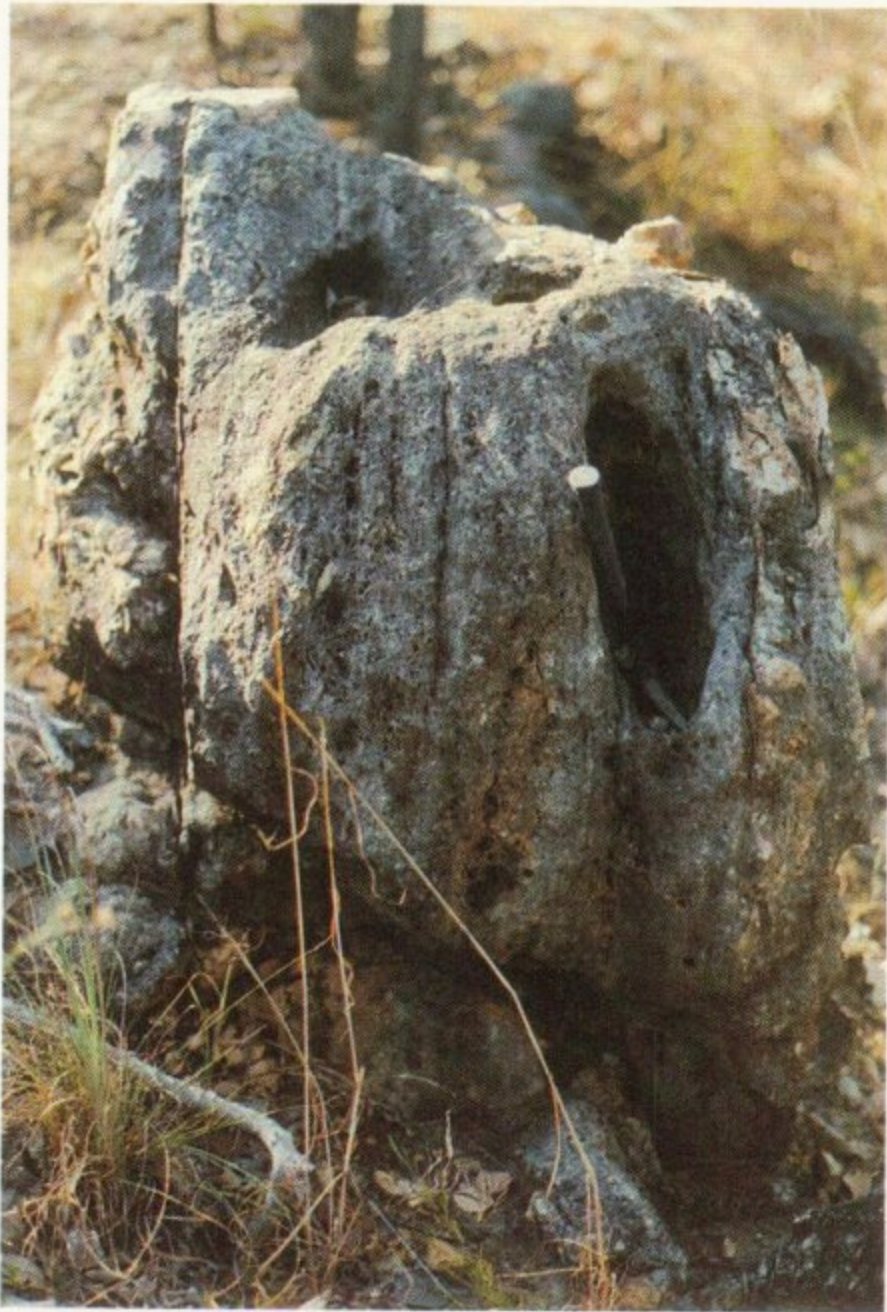


A. Quartz breccia with grains of galena in tourmalinised sediments. Old Company Tin Mine – Mount Shoobridge area (see Figure 13). B. Barite breccia from Copper Prospect - Mount Shoobridge area. C. Granite breccia cemented by galena from epithermal vein in the Burnside Pluton. Lead Prospect – Burnside Pluton (see Figure 11). D. Quartz breccia with galena, sphalerite paramorphism after wurtzite and chalcocite from quartz vein in Rising Tide Prospect – exocontact of the Burnside Pluton (see Figure 11).





A. Douglas Hot Springs – sample locality of mineral water and carbonate precipitate (see Figure 31). B. Douglas Hot Springs – detail of the hot spring in the main pool.



A. Douglas Hot Springs outlet of water from the main pool into Douglas River. Notice a low dam consisting from the discharged carbonate (see Figure 31). B. Structure of the epithermal vein in Lead Prospect – Mount Shoobridge area.