

**Table 4.1 Major element geochemistry of representative drill core samples illustrating characteristic changes in concentration that are associated with increasing degree of supergene alteration (all data in wt%).**

Alteration	Zone	SiO <sub>2</sub>	Fe <sub>2</sub> O <sub>3</sub>	Mn <sub>3</sub> O <sub>4</sub>	MgO	CaO	Na <sub>2</sub> O	K <sub>2</sub> O	Mn/Fe
Strongly alt.	M	7.63	8.26	58.8	1.98	1.91	0.53	1.22	7.11
Weakly alt.		5.57	5.91	49.1	3.82	13.8	0.03	0.01	8.31
Unaltered		5.32	5.71	50.2	3.42	14.3	0.06	0.02	8.79
Strongly alt.	C	9.82	6.73	59.8	1.96	1.38	0.38	1.23	8.88
Weakly alt.		4.73	4.97	49.8	2.26	16.9	0.03	0.02	10.02
Unaltered		4.91	4.88	51.9	2.12	16.2	0.08	0.04	10.64
Strongly alt.	N	11.8	9.36	54.7	1.83	1.81	0.45	0.8	5.84
Weakly alt.		5.28	8.6	47.1	2.88	14.5	0.03	0.03	5.48
Unaltered		5.12	7.61	49.8	2.99	14.7	0.06	0.04	6.54

**Table 4.2 Trace element geochemistry of representative drill core samples illustrating characteristic variations in with increasing degree of supergene alteration (all data in ppm).**

Sample	Zone	P	Ti	V	Cr	Co	Ni	Cu	Zn	Rb	Sr	Y	Li	Ba	B	Pb
Strongly alt.	M	238	90	549	32	58	23	9.1	269	7.3	2900	7	5.8	8400	39	44
Weakly alt.		207	68	0.05	17	65	28	4.2	0.05	0.6	97	6	3.7	180	618	0.05
Unaltered		177	61	12	13	46	26	2.2	13	1.5	305	6	4.0	375	650	0.05
Strongly alt.	C	196	142	600	36	52	33	9.6	243	5.6	2600	6	3.9	7400	49	27
Weakly alt.		208	53	0.05	10	44	18	0.7	30	1.3	482	5	3.3	339	561	0.05
Unaltered		166	59	13	7.6	45	19	0.2	13	2.2	427	5	7.9	368	500	0.05
Strongly alt.	N	258	72	979	29	58	33	19	81	6.2	3500	6	4.4	974	13	82
Weakly alt.		217	66	0.05	10	48	23	0.05	0.05	2.4	377	5	3.9	360	580	0.05
Unaltered		196	74	16	8.1	49	17	0.05	15	2.5	384	5	8.1	229	450	1.00

Note: Drill core Rex 85 was selected to represent unaltered braunite luteite, Rex 70 for weakly supergene altered and Rex 2 for strongly supergene altered ore.

It is important to note that data for Mn<sub>3</sub>O<sub>4</sub> and Fe<sub>2</sub>O<sub>3</sub> supplied by MINTEK are well comparable with the data obtained from the SAMANCOR Laboratory at Hotazel. Where trace element data were < 1ppm, 0.05 ppm were used.

Analytical techniques used:

ICP-OES: SiO<sub>2</sub>, Fe<sub>2</sub>O<sub>3</sub>, MgO, CaO, MnO

AAS: K<sub>2</sub>O, Na<sub>2</sub>O

Leco: S

Wet chem: P

ICP-MS: Ti, V, Cr, Co, Ni, Cu, Zn, Rb, Sr, Y, Ba, Pb, Li, B