

Table 3.1 Mineralogy of the major lithostratigraphic zones present in the lower manganese orebody as determined by petrographic studies and XRD. Unaltered (REX44), weakly (REX70) and strongly supergene altered ore (REX2).

Mineralogy		Diagenetic mineral assemblage									Supergene mineral assemblage				
		Oxides				Carbonates				Others	Oxides			Others	Supergene alteration
Borehole	Zone	Brnte	Hem	Jacob	Haus	Kutn	Calc	Mn-Calc	Rhodo	Serp	Cryp	Todo	Pyr	Quartz	
REX2	M	xx	xx		xx		xxx			xx	xxx	xxx			Strongly altered
	C	xx			xx	xx					xxxx	xxx	xx		Strongly altered
	N	xx			xxx					xxx	xx	xxx	xx		Strongly altered
	B		xx	xxx								xx	xx	x	Strongly altered
	L		xxxx	xx								xx		xx	Strongly altered
REX70	Y	xxx	xx		x	xxx	xx				x	x			Weakly altered
	Z	xx	x		xx	xxx		x			x	x			Weakly altered
	M	xxx	xx			xxx	xx				x	x			Weakly altered
	C1	xxx	xx		x	xx	xx								Unaltered
	C2	xxx	x		xx	xx	xx								Unaltered
	N	xx	xx	xx	xx	xxx	xx								Unaltered
	B	xx	xx			xxx	xx	x		xx					Unaltered
L		xxx	xx	xx	xxx	xx		xxx						Unaltered	
REX44	V	xxx	xxx		xx	xx	x								Unaltered
	W	xxx	xx	x	x	xx	x		x						Unaltered
	X1	xxx	xx		xx	xxx	xx								Unaltered
	X2	xxx	xx		xx	xxx	xxx								Unaltered
	X3	xxx	x		xx	xx	xx								Unaltered
	Y	xxx	xx		xx	xxx	xx								Unaltered
	Z	xxx	xx		xx	xx	xx								Unaltered
	M1	xxx	xx		xx	xx	xx								Unaltered
	M2	xxx	xx		x	xxx	xx								Unaltered
	M3	xxx			xx	xxx	x								Unaltered
	M4	xxx	xx		xx	xx	x								Unaltered
	C1	xxx	xx		xxx	xx	x								Unaltered
	C2	xxx	xx		xx	xx	x								Unaltered
	N	xxx	xx	xx	x	xxx	xx								Unaltered
	B	xxx	xx	xx	xx	xxx	xxx								Unaltered
L		xxxx		xx	xxx				xxx	xx				Unaltered	

KEY:
 Brnte - Braunite Haus - Hausmannite Calc - Calcite Serp - Serpentine
 Hem - Hematite Pyr - Pyrolusite Mn-Calc - Mangano-calcite Cryp - Cryptomelane
 Jacob - Jacobsite Kutn - Kutnahorite Rhodo - Rhodochrosite Todo - Todorokite

xxxx - Dominant (> 50%); xxx - Major (20 - 50%); xx - Minor (5 - 20%); x - Trace (<5%)