

APPENDIX IV  
TABLE I  
PHYSICAL CHARACTERISTICS AND NOMENCLATURE  
OF DISSEMINATED SPINELS

ROCK TYPE	COLOUR	SHAPE	DIMENSIONS	OCCURRENCE	INCLUSIONS	ALTERATION	NOMENCLATURE*
TROCTOLITE	opaque		0.2-0.3mm.	at grain boundary of plagioclase crystals. Also enclosed in olivine.	none	oxidized edges	picotite and chrom-pleonaste
OLIVINE-CABBRO	opaque	mainly subhedral also anhedral and subrounded	0.2-0.3mm.	interstitial to silicates. Common as inclusion in cpx. Rare as inclusion in plagioclase.	none	oxidized edges	picotite
WEHLITE-CLINOPYROXEN.	dark reddish brown to opaque. Light brown in Lewis Hills.	subhedral to anhedral. Anhedral in Lewis Hills.	0.2-0.3mm	interstitial to silicates. Common as inclusion in cpx. In Lewis Hills interstitial to silicates.	none	oxidized edges	picotite except ceylonite in Lewis Hills.
DUNITE CUMULATE	dark reddish brown to opaque. In Lewis Hills dark brown to opaque.	anhedral	0.2-0.4mm	interstitial to olivine grains. Micro cpx and plagioclase are present occurs an inclusion in cpx and plagioclase or minor embayments of altered plagioclase.	rare subrounded serpenitized olivine.	to opaque secondary picotite spinel along fractures and grain edges. Chlorite rims	
HARZBURGITE-DUNITE	reddish with brown or orangy shades	anhedral; rarely subhedral	0.2-0.7mm. rarely more than 1mm.	interstitial to silicates. Common as inclusion in cpx. Rare as inclusion in olivine or cpx.	small serpenitized subrounded olivine grains	to opaque secondary picotite spinel along fractures and grain edges. Chlorite rims	
SPINEL WEHLITE ARIEGITE	light-green, green or light brown	anhedral; elongated parallel to mineral foliation in ariegite	1mm.	interstitial to silicates.	serpenitized olivine	to opaque secondary spinel spinel along fractures and grain edges. Chlorite rims	
LHERZOLITE	dark to light yellowish brown	anhedral	average 0.5 maximum 5mm.	interstitial to silicates. Also as inclusion in cpx.	serpenitized olivines.	to opaque secondary spinel spinel along fractures and grain edges. Chlorite rims. Large spinels separated from olivine by a chlorite rim.	

\* (after Winchell and Winchell, 1956)

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TABLE 1

PHYSICAL CHARACTERISTICS AND NOMENCLATURE  
OF DISSEMINATED SPINELS

ROCK TYPE	COLOUR	SHAPE	DIMENSIONS	OCCURRENCE	INCLUSIONS	ALTERATION	NOMENCLATURE*
TROCTOLITE	opaque		0.2-0.3mm.	at grain boundary of plagioclase crystals. Also enclosed in olivine.	none	oxydized edges	picotite and chrom-pleonaste
OLIVINE-GABBRO	opaque	mainly subhedral also anhedral and subrounded	0.2-0.3mm.	interstitial to silicates. Common as inclusion in cpx. Rare as inclusion in plagioclase.	none	oxydized edges	picotite
NEPHELINE-CLINOPYROXEN.	dark reddish brown to opaque. Light brown in Lewis Hills.	subhedral to anhedral. Anhedral in Lewis Hills.	0.2-0.3mm	interstitial to silicates. Common as inclusion in cpx. In Lewis Hills interstitial to silicates.	none	oxydized edges	picotite except ceylonite in Lewis Hills.
DUNITE CUNULATE	dark reddish brown to opaque. In Lewis Hills dark brown to opaque.	anhedral	0.2-0.4mm	interstitial to olivine grains. Micro cpx and plagioclase are present occurs as inclusion in cpx and plagioclase or along embayments of altered plagioclase.	rare subrounded serpentized olivine.	to opaque secondary picotite spinel along fractures and grain edges. Chlorite rims	
HANBURGITE-DUNITE	reddish with brown or orangy shades	anhedral; rarely subhedral	0.2-0.7mm. rarely more than 1mm.	interstitial to silicates. Common as inclusion in cpx. Rare as inclusion in olivine or cpx.	small serpentized subrounded olivine grains		
SPINEL WEHRLITE AREGITE	light-green, green or light brown	anhedral; elongated parallel to mineral foliation in ariegite	1mm.	interstitial to silicates.	serpentized olivines	to opaque secondary spinel spinel along fractures and grain edges. Chlorite rims	
HERCOLITE	dark to light yellowish brown	anhedral	average 0.5 maximum 5mm.	interstitial to silicates. Also as inclusion in cpx.	serpentized olivines.	to opaque secondary spinel spinel along fractures and grain edges. Chlorite rims separated from olivine by a chlorite rim.	

\* (after Winchell and Winchell, 1956)

APPENDIX IV  
TABLE 2

SAMPLE NUMBER AND OCCURRENCE	SHAPE & THICKNESS OF SEGREGATION	Z AND COMPOSITION OF INTERSTITIAL SILICATES	COLOUR	SHAPE	SIZE	INCLUSIONS	NOMENCLATURE*
SAMPLE 47 CHROMITE AT BASE OF FELDSPATHIC DUNITE-ORTHOSITE SEQUENCE	5-10cm. layer	20% fine grained chromite after plagioclase sub- ordinate serpentine cut by veins of well crystallized prehnite.	very deep brown to opaque; opaque where interstitial material is serpentine.	anhedral	less than 1mm.	none	spinel
SAMPLE 31 DUNITE CUMULATE WITH SUBORDINATE OPX BANDS	stringers of spinel and silicates containing dis- seminated spinels, defining a spinel layer 10cm. thick	serpentine and opx.	opaque	anhedral	1mm.	none	beresovskite
SAMPLE 33 DUNITE CUMULATE	1cm. thick layer	30% white mica; minor chlorite and serpentine.	opaque; few grains deep reddish- brown.	anhedral	maximum 2mm.	subrounded serpentinized olivine.	chrom-spinel
SAMPLE 30 DUNITE TECTONITE	podiform segregation 15cm. thick	20-30% chlorite matrix.	red	large grains anhedral; small grains in chlorite matrix euhedral.	maximum 4mm.	subrounded serpentinized olivine.	picotite to chrom-picotite
SAMPLE 25 DUNITE TECTONITE BAND PARALLEL TO HAZEBURGITZ	discontinuous thin spinel layer at centre of dunite band locally forming lenses up to 1cm. thick.	50% interstitial serpentine; white mica along fractures.	red	anhedral	2-3mm.	subrounded serpentinized olivine.	picotite
SAMPLE 22 IRREGULAR DUNITE BODY IN HAZEBURGITZ	irregular podiform segregation, 10-15cm. thick	30% chlorite matrix.	orange red	large grains anhedral; small grains subhedral to euhedral.	maximum 3mm.	subrounded serpentinized olivine.	chrom-picotite
SAMPLE 32 DUNITE CUMULATE	2cm. thick layer	30-50% serpentinized olivine.	pale green	subhedral to anhedral embayed against olivine.	up to 4mm.	subrounded serpentinized olivine.	spinel

\* (after Winchell and Winchell, 1956)



APPENDIX IV  
TABLE 2  
MASSIVE SPINELS

SAMPLE NUMBER AND OCCURRENCE	SHAPE & THICKNESS OF SEGREGATION	% AND COMPOSITION OF INTERSTITIAL SILICATES	COLOUR	SHAPE	SIZE	INCLUSIONS
SAMPLE 47 CHROMITITE AT BASE OF FELDSPATHIC DUNITE-ANORTHOSSITE SEQUENCE	5-10cm. layer	20% fine grained prophinite after plagioclase sub- ordinate serpentine cut by veins of well crystallized prophinite.	very deep brown	anhedral	less than 1mm.	none
SAMPLE 31 DUNITE CUMULATE WITH SUBORDINATE OPX BANDS	strings of spinel and silicates containing dis- seminated spinels, defining a spinel layer 10cm. thick	serpentine and opx.	opaque	anhedral	1mm.	none
SAMPLE 33 DUNITE CUMULATE	1cm. thick layer	30% white mica; minor chlorite and serpentine.	opaque; few grains deep reddish- brown.	anhedral	maximum 2mm.	subrounded serpentinized olivine.
SAMPLE 30 DUNITE TECTONITE	podiform segregation 15cm. thick matrix.	20-30% chlorite matrix.	red	large grains anhedral; small grains in chlorite matrix anhedral.	maximum 4mm.	subrounded serpentinized olivine.
SAMPLE 25 DUNITE TECTONITE BAND PARALLEL TO HARZBURGITE	discontinuous thin spinel layer at centre of dunite band locally forming lenses up to 1cm. thick.	50% interstitial serpentine/ white mica along fractures.	red	anhedral	2-3mm.	subrounded serpentinized olivine.
SAMPLE 22 IRREGULAR DUNITE BODY IN HARZBURGITE	irregular podiform segregation, 10-15cm. thick	30% chlorite matrix.	orange	large grains anhedral; small grains subhedral to euhedral.	maximum 3mm.	subrounded serpentinized olivine.
SAMPLE 22 DUNITE CUMULATE	2cm. thick layer	30-50% serpentinized olivine.	pale green	anhedral to subrounded against olivine.	up to 4mm.	subrounded serpentinized olivine.

\* (after Winchell and Winchell, 1956)