

TABLE I

MINERAL	VICKERS MICROHARDNESS <sup>1</sup>			REFLECTIVITY <sup>2</sup>		
	Mean	Range	References	Mean	Range	References
Aikinite	198	165-246	24,39	44.1	40.0-45.8	11,18
Alabandite	213	150-266	2,3,26	23.6	23.4-23.9	2,11
Algodonite	251	248-255	3	64.0	63.6-65.0	11,18
Allanite	875	646-1105	39	9.7	18	
Altaite	49	39-60	2,3,23	64.3	63.2-65.5	2,11
Andorite	183	140-206	27,39	35.7	33.3-37.5	11,18
Antimony	72	45-101	2,3,26,27,39	74.4	72.0-77.1	2,11
Argentite	42	20-91	2,3,26,27,39	32.4	29.0-36.0	2,11,35,38
Argyrodite	163	154-172	39	25.3	23.9-26.6	11,18
Arsenic	96	57-137	2,3,23,39	52.5	47.2-58.7	2,11,28,35,38
Arsenopyrite	1010	890-1283	2,3,17,23,26,27,36	54.2	51.7-55.0	2,11,17,28,32,35,39
Awaruite	311	220-420	8,39	63.0	58.0-68.0	11,18
Baumhauerite	164	128-182	17,27	35.2	34.0-39.0	9,17
Berryite	151	131-171	21	42.4	41.8-43.0	21
Berthierite	152	102-235	2,3,39	34.7	30.0-40.0	2,11
Berzelianite	89	79-99	23	28.5	27.0-29.0	30,37
Betafite	472	350-560	2,23	14.5	14.0-14.9	2
Bismuth	13	9-19	2,3,26,27,39	67.3	67.0-68.0	2,35,38
Bismuthinite	127	92-172	2,23,26,27	45.9	42.0-50.0	11,35,38
Bixbyite	993	920-1033	2,3	23.4	23.0-23.7	2,18
Bornite	103	84-124	2,3,23,26,36,39	22.7	21.0-23.9	2,11,28,35,38
Boulangerite	148	116-217	2,3,17,23,39	40.2	37.0-44.1	2,11,17
Bournonite	188	158-213	2,3,23,27,39	36.2	35.0-38.2	2,11,32
Brannerite	720	710-730	2	14.8	13.7-16.0	2
Braunite	967	662-1187	3,26,39	19.4	17.8-20.1	2,11
Brauvite	1197	1003-1425	2,3,39	46.0	45.5-46.5	2,18
Breithauptite	553	527-644	2,3,39	48.8	45.3-54.6	2,11
Bröggerite	539	242-835	39	18.2	17.5-19.0	18
Calaverite	215	198-237	2,23,39	64.0	63.0-66.5	11,18
Carrollite	503	351-566	2,3	44.5	44.0-44.9	2,11
Cassiterite	1201	992-1491	2,23,26,28,36,39	12.0	11.0-12.9	2,11,28,35,38
Chalcocite	74	58-98	2,3,23,26,27,36,39	29.0	18.0-33.5	2,11,32,35,38
Chalcophanite	104	71-178	18	18.4	10.2-26.0	2,11
Chalcopyrite	203	174-245	2,3,23,26,27,36,39	49.2	42.5-44.0	2,11,28,35
Chalcosite	253	193-285	39	39.6	37.1-43.0	2,11
Chalcothallite	75	61-90	31	30.6	31	
Chromite	1305	1036-1600	2,3,23,27,33,36,39	12.7	12.0-14.0	2,35,38
Cinnabar	77	61-99	2,3,23,26,36	25.7	24.0-29.0	11,28,35,38
Clausthalite	52	43-63	3,23	48.0	43.1-50.4	11,18
Cobaltite	1179	948-1367	2,3,23,26,27,39	53.2	52.0-54.7	2,11,28,35,38
Coffinite	258	236-333	2	9.9	2	
Coloradoite	26	23-28	3,39	37.0	36.2-37.7	11,18
Columbite-Tantalite	792	361-967	2,3,23,36,39	17.5	16.3-18.0	2,11,28,35
Colusite	371	296-407	3,39	31.7	18	
Copper	92	48-143	2,3,23,36,39	75.8	71.2-81.2	2,11,28,35,38
Coronadite	659	468-813	2,3	29.0	26.0-32.0	2
Cosalite	158	102-194	23,27	43.8	42.7-46.5	11,18
Covelite	82	68-110	2,3,23,27	14.2	7.0-24.3	2,11,12,28,32
Crookesite	121	101-141	23	35.0	30	
Cubanite	218	150-260	2,3,27,28	40.5	39.2-42.5	2,11,28
Cuprite	204	179-249	2,3,23,36,39	27.7	27.1-28.5	2,11,28,35
Cylindrite	72	31-128	23,28,39	33.1	33.0-33.3	11,28
Davidite	773	693-960	2,3,23,39	17.5	17.3-17.8	18
Diaphorite	222	197-242	39	35.5	34.2-36.8	18
Digenite	73	56-95	2,3,36,39	23.5	22.0-25.0	2,18
Domeykite	234	201-257	3,39	53.0	51.6-56.0	11,18
Dufrenoyite	151	145-156	17	42.1	36.5-45.8	11,17
Dyscrasite	160	130-266	2,3,26,39	63.2	62.0-64.2	2
Electrum						
(30 to 45 % Ag)	57	34-82	2,23	87.0	86.0-88.0	10
Empleitite	205	158-249	2,23,39	38.8	36.0-41.5	2,11
Enargite	192	133-358	2,3,23,27,36	26.4	24.7-28.1	2,11,28
Eskebornite	153	141-165	23	37.5	35.0-40.0	5,30
Eskolaitite	2233	2077-2390	3	20.8	19.3-22.5	18
Eucalrite	56	23-94	23,39	49.9	11	
Euxenite	687	530-782	2,23,39	14.2	13.5-15.0	2,18
Famatinitite	342	315-397	2,3,23	26.5	25.1-28.7	2,11
Ferberite	402	387-418	3	17.9	17.9-18.0	11,30
Fergusonite	756	683-897	23,39	15.4	18	
Ferrite	283	233-360	39	61.5	18	
Franckeite	33	13-108	23,39	34.8	33.3-36.0	11,18
Franklinite	744	720-824	23,39	19.0	18.5-20.0	11,18
Freibergite	318	272-375	2,3,39	34.0	29.8-30.9	2,11,18
Freislebenite	112	85-140	23	35.9	11	
Gahnite	1297	861-1605	28,39	8.0	18	
Galena	79	56-116	2,3,23,26,27,36,39	43.0	42.4-43.2	2,11,28
Galenobismutite	95	88-113	27	26.8	11	
Geocronite	131	95-173	23,27,39	40.9	11	
Germanite	406	372-458	2,23,27,39	55.2	23.1-27.4	11,18
Gersdorffite	688	520-907	2,3,23,39	20.2	47.5-53.0	2,11
Giesseinite	65	50-96	17	34.0	33.0-35.0	17
Glaucodot	1061	841-1277	2,23,36,39	51.3	50.0-52.5	2,11,28
Gold	659	525-824	2,26	16.7	16.1-18.5	2,11
Goethite	65	41-102	2,3,9,23,26,27,28,36,39	73.5	64.0-74.0	2,10,11,35
Graphite	9	4-12	2,3,23,39	14.0	6.0-17.0	2,15
Gratonite	142	123-156	3,39	40.4	40.2-40.7	18
Greenockite	72	52-91	23	19.5	28	
Guajuanite	70	42-98	23	50.6	46.2-55.0	11,30
Gudmundite	871	588-1221	3,23	55.0	30	
Guettardite	187	180-197	20	38.0	34.8-42.0	20
Hauerite	539	485-623	39	24.6	23.8-25.4	11,18
Hausmannite	569	466-733	2,3,26,39	18.5	16.0-19.6	2,11
Heazlewoodite	275	221-321	6,22	52.4	51.6-55.0	5,22,30
Hematite	948	739-1097	2,3,23,27,39	27.3	24.0-30.6	2,11,14,28,35
Hercynite	1484	1378-1547	39	7.6	18	
Hessite	31	24-41	2,39	38.5	37.2-39.6	2,11,18
Hetaerolite	791	609-985	39	17.5	16.7-18.3	18
Hollandite	631	274-1048	2,3,39	28.2	26.0-32.5	2,11
Hutchinsonite	170	170-171	17	30.5	30.0-31.0	17
Idaite	238	216-260	23	22.0	21.0-23.3	25
Ilmenite	629	519-739	2,3,23	19.2	17.0-21.1	2,11,14,28,35,38
Ilmenorutile	903	803-1018	23,39	21.4	19.5-23.3	18
Ilvaite	737	703-772	39	8.4	6.4-10.7	18,28
Irsartite	976	16		46.0	16	
Iron	159	116-198	3,9,23	58.0	11	
Jacobsite	796	724-870	2,3,39	19.1	18.5-19.7	2,18
Jalpaite	39	23-55	39	27.5	25.3-29.7	18
Jarositite	119	84-156	2,3,26,27,28	38.0	36.0-40.0	2,11,28
Jordanite	193	172-204	3,39	38.4	37.3-39.7	11,18
Kermesite	61	33-99	39	26.3	23.9-28.1	11,18
Klockmannite	72	57-86	23	23.9	18.0-30.5	30,37
Kobellite	130	69-173	2,3,39	41.4	38.7-43.2	2,18
Krennerite	116	105-130	39	58.8	52.3-61.0	11,18
Launayite	179	171-197	20	40.3	36.9-43.8	20
Laurite	1886	1605-2167	39	42.7	18	
Lautite	145	142-147	23	31.5	30.0-32.0	30,37
Lead	5	4-6	3,27,39	62.1	29	
Lengenbachite	35	29-40	17	36.1	34.0-37.0	11,17
Lepidocrocite	517	276-782	2,3	20.4	15.9-25.0	2
Linnæite	530	450-613	3,36,39	47.2	46.4-47.5	11,18
Livingstonite	100	74-131	3,39	32.0	30.0-34.7	11,18
Löllingite	742	421-963	2,3,23,26,28	53.8	53.0-54.7	2,11
Lorandite	48	40-57	23	29.8	11	
Luzonite	334	257-412	23	33.0	22.0-44.0	9,15
Mackinawite	65	58-72	20	42.3	20	
Madocite	155	141-171	2,9	25.0	2	
Maghemite	942	886-988	2,9	20.7	20.0-21.1	2,11,18,35,38
Magnetite	581	480-734	2,3,23,27,39	17.5	14.0-22.0	2,18
Manganite	565	367-766	2,3,26	51.8	48.9-55.5	2,11
Marcasite	1121	824-1298	2,3,23,27	32.7	31.5-34.0	17
Marriite	168	602-752	2,3,39	53.8	51.2-56.6	2,18
Maucherite	667	602-752	2,3,39	65.0	64.7-65.3	9
Melonite	117	63-220	3,23	39.3	34.0-45.6	11,18
Menghinite	144	113-183	3,39	37.1	34.7-38.5	11,18
Metacinnabar	77	73-86	2,23	26.8	11	
Miargyrite	116	104-130	2,3,39	33.7	28.2-38.2	2,11,18
Microcline	736	540-933	23	13.0	11.0-14.0	30
Millerite	281	192-383	2,3,9,26,39	55.4	51.8-60.0	2,11,18
Molybdenite	32	16-74	2,17,27,28,36,39	32.4	15.0-44.9	2,11,17,24,28
Nagyagite	82	48-129	2,3,39	38.6	36.5-39.7	11,18
Naumannite	148	115-185	2	32.6	31.0-34.2	2
Nicolite	419	308-533	2,3,23,27,28,36,39	55.3	52.0-58.3	2,11,28,38
Orpiment	30	21-52	2,23,28,39	22.5	20.0-26.0	2,11,28,35,38
Osmiridium	535	396-645	23,39	70.6	69.2-72.0	18
Owyheite	52	29-75	23,28	46.0	28	
Paraguanajuatite	102	44-160	23	40.1	30	
Pararammelsbergite	761	673-824	2,3,39	61.0	60.5-62.0	2
Patronite	496	401-592	39	20.9	19.5-22.3	18
Pearceite	152	142-164	2,39	30.5	30.1-31.2	2,11,18
Penroseite	478	407-550	23	45.2	11	
Pentlandite	220	195-238	2,3,9,23,39	51.0	49.6-52.0	2,18,28
Perovskite	1023	925-1131	23,39	16.6	16.5-16.8	18
Petzite	54	43-74	3,23	15.0	2	
Pitchblende	720	673-803	2	46.0	1	
Plagionite	161	147-165	27	37.1	11	
Platinum	128	114-146	2,23	70.0	2,35,38	
Playfairite	154	150-171	20	51.8	40.3-63.0	20
Polybasite	122	108-150	2,3,39	33.1	29.9-34.9	11,18
Polydymite	422	362-449	3,23	50.4	11	
Proustite	119	90-143	2,3,26	27.3	25.0-28.4	2,35,38
Psilomelane	677	503-813	2,3	23.9	23.0-24.4	2,18
Pyrrargyrite	100	50-127	2,3,23,26	30.2	28.4-30.8	2,11
Pyrite	1377	1027-1836	2,23,36,39	14.5	14.1-54.8	2,11,19
Pyrochlore	611	420-764	2,23,39	54.3	53.0-54.8	2,11
Pyrolusite	266	225-405				