

Papua New Guinea – Mineral resources and ore reserves

Geology: Papua New Guinea (PNG) lies at the northern end of the Australian Plate and has three major components: a continental cratonic platform, an arc of volcanic islands and a central collisional fold belt, consisting of Mesozoic sediments, ophiolite sequences, tertiary sediments and diorite intrusions. During collision, the Wau Graben, the host of major gold and silver deposits, was formed in the fold belt. It coincided with a phase of volcanic activity, resulting in precious and base metals deposits being formed. These include epithermal gold deposits at Hidden Valley, Hamata, Kerimenge and Wafi and porphyry-style copper deposits such as Golpu. Numerous other gold and copper-gold prospects, which are at various stages of exploration and evaluation, occur on Harmony's lease areas.

Note: The mineral resources and ore reserves detailed in the following tables represent Harmony's 50% equity portion of the Morobe Mining Joint Ventures.

Gold – Mineral resources

Gold Operations	Measured				Indicated				Inferred				Total			
	Tonnes (Mt)	g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	g/t	Gold (000kg)	Gold (000oz)
Hidden Valley & Kaveroi	2.8	2.16	6	195	23.1	1.89	44	1 409	14.8	1.53	23	730	40.7	1.78	73	2 334
Hamata	0.2	2.20	–	12	3.9	2.34	9	291	0.6	2.58	2	50	4.7	2.37	11	353
Wafi	–	–	–	–	31.9	1.97	63	2 017	19.8	1.73	34	1 099	51.7	1.88	97	3 116
Golpu	–	–	–	–	43.8	0.63	28	887	37.7	0.49	18	595	81.5	0.57	46	1 482
Nambonga	–	–	–	–	–	–	–	–	19.9	0.79	16	505	19.9	0.79	16	505
GRAND TOTAL	3.0	2.16	6	207	102.7	1.40	144	4 604	92.8	1.00	93	2 979	198.5	1.22	243	7 790

Modifying factors

Operations	MCF (%)	PRF (%)
Hidden Valley & Kaveroi	95	93
Hamata	95	93
Golpu	100	56

MCF = Mine call factor

PRF = Plant recovery factor

Gold – Ore reserves

Operations	Proven				Probable				Total			
	Tonnes (Mt)	g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	g/t	Gold (000kg)	Gold (000oz)	Tonnes (Mt)	g/t	Gold (000kg)	Gold (000oz)
Hidden Valley & Kaveroi	1.4	2.34	3	105	17.6	1.99	35	1 126	19.0	2.02	38	1 231
Hamata	0.1	2.05	0	7	1.9	2.69	5	164	2.0	2.66	5	171
Golpu	–	–	–	–	35.4	0.61	22	694	35.4	0.61	22	694
GRAND TOTAL	1.5	2.32	3	112	54.9	1.12	62	1 984	56.4	1.16	65	2 096

Silver – Mineral resources

Silver Operations	Measured				Indicated				Inferred				Total			
	Tonnes (Mt)	g/t	Silver (000kg)	Silver (000oz)	Tonnes (Mt)	g/t	Silver (000kg)	Silver (000oz)	Tonnes (Mt)	g/t	Silver (000kg)	Silver (000oz)	Tonnes (Mt)	g/t	Silver (000kg)	Silver (000oz)
Hidden Valley & Kaveroi	2.8	40.52	114	3 668	23.1	33.95	785	25 246	14.8	27.38	406	13 054	40.7	32.01	1 305	41 968
GRAND TOTAL	2.8	40.52	114	3 668	23.1	33.95	785	25 246	14.8	27.38	406	13 054	40.7	32.01	1 305	41 968

Modifying factors

Operations	MCF (%)	PRF (%)
Hidden Valley & Kaveroi	95	81

MCF = Mine call factor

PRF = Plant recovery factor

Mineral resources and
ore reserves cont.

2009



Silver – Ore reserves

Operations	Proven				Probable				Total			
	Tonnes (Mt)	g/t	Silver (000kg)	Silver (000oz)	Tonnes (Mt)	g/t	Silver (000kg)	Silver (000oz)	Tonnes (Mt)	g/t	Silver (000kg)	Silver (000oz)
Hidden Valley & Kaveroi	1.4	39.00	55	1 755	17.6	36.70	646	20 767	19.0	36.87	701	22 522
Grand Total	1.4	39.00	55	1 755	17.6	36.70	646	20 767	19.0	36.87	701	22 522

Copper – Mineral resources

Operations	Measured				Indicated				Inferred				Total			
	Tonnes (Mt)	%	Cu (M kg)	Cu (M lbs)	Tonnes (Mt)	%	Cu (M kg)	Cu (M lbs)	Tonnes (Mt)	%	Cu (M kg)	Cu (M lbs)	Tonnes (Mt)	%	Cu (M kg)	Cu (M lbs)
Golpu	-	-	-	-	43.8	1.39	609	1 343	37.7	0.72	272	599	81.5	1.08	881	1 942
Nambonga	-	-	-	-	-	-	-	-	19.9	0.21	42	92	19.9	0.21	42	92
Grand Total	-	-	-	-	43.8	1.39	609	1 343	57.6	0.54	314	691	101.4	0.91	923	2 034

Modifying factors

Operations	MCF (%)	PRF (%)
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Golpu	100	88
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MCF = Mine call factor

PRF = Plant recovery factor

Copper – Ore reserves

Operations	Proven				Probable				Total			
	Tonnes (Mt)	%	Cu (M kg)	Cu (M lbs)	Tonnes (Mt)	%	Cu (M kg)	Cu (M lbs)	Tonnes (Mt)	%	Cu (M kg)	Cu (M lbs)
Golpu	-	-	-	-	35.4	1.13	400	882	35.4	1.13	400	882
Grand Total	-	-	-	-	35.4	1.13	400	882	35.4	1.13	400	882

Molybdenum – Mineral resources

Operations	Measured				Indicated				Inferred				Total			
	Tonnes (Mt)	ppm	Mo (M kg)	Mo (M lbs)	Tonnes (Mt)	ppm	Mo (M kg)	Mo (M lbs)	Tonnes (Mt)	ppm	Mo (M kg)	Mo (M lbs)	Tonnes (Mt)	ppm	Mo (M kg)	Mo (M lbs)
Golpu	-	-	-	-	43.8	110.00	5	11	37.7	157.00	6	13	81.5	131.75	11	24
Grand Total	-	-	-	-	43.8	110.00	5	11	37.7	157.00	6	13	81.5	131.75	11	24

Modifying factors

Operations	MCF (%)	PRF (%)
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Golpu	100	36
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MCF = Mine call factor

PRF = Plant recovery factor

Molybdenum – Ore reserves

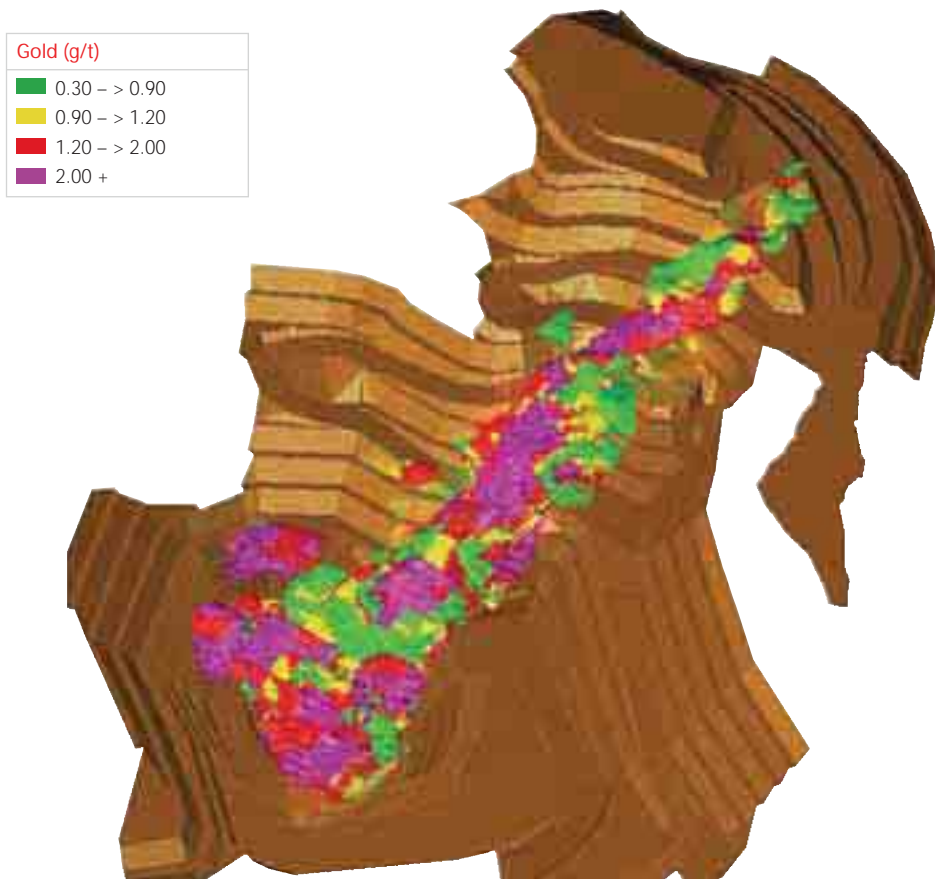
Operations	Proven				Probable				Total			
	Tonnes (Mt)	ppm	Mo (M kg)	Mo (M lbs)	Tonnes (Mt)	ppm	Mo (M kg)	Mo (M lbs)	Tonnes (Mt)	ppm	Mo (M kg)	Mo (M lbs)
Golpu	-	-	-	-	35.4	121.00	4	9	35.4	121.00	4	9
Grand Total	-	-	-	-	35.4	121.00	4	9	35.4	121.00	4	9

Mineral resources and ore reserves cont.

2009



Hamata open pit
Hidden Valley



Wafi-Golpu project
Golpu block cave, Wafi Project

