

Mineral Reserve Statement*, effective December 31, 2018

Category	000's Tonnes	Cu %	Au g/t	Contained Metal		
				Cu kt	Au koz	
Copper	Chapada Zone					
Proven	288,563	0.26	0.17	738	1,549	
Proven stockpiles	100,138	0.23	0.17	232	554	
Probable	275,928	0.26	0.16	711	1,381	
Total	664,629	0.25	0.16	1,681	3,484	
Gold (only)	Suruca Zone					
Proven	11,454		0.42		153	
Probable	53,741		0.53		908	
Total	65,195		0.51		1,062	

*Mineral Reserves are exclusive of Mineral Resources. Chapada Zone Mineral Reserves have been prepared using \$1,250/oz gold and \$3.00/lb copper price assumptions. Suruca Zone Mineral Reserves have been prepared using \$1,300/oz gold. Chapada open pit cut-off at \$4.06/t. Metallurgical recoveries at Chapada are dependent on zone and average 83.11% for copper and 56.94% for gold. Cut-off grade 0.19g/t gold for Suruca oxide and 0.3 g/t for Suruca sulphide. Metallurgical recoveries for Suruca oxide average 85% for gold and for Suruca sulphide average 88% for gold. All figures have been rounded to reflect the relative accuracy of the estimates. The qualified person responsible for the Mineral Reserve estimate is Luiz Pignatari, Registered Member of Chilean Mining Commission, EDEM Engenharia.

Mineral Resource Statement*, effective December 31, 2018

Category	000's Tonnes	Cu %	Au g/t	Contained Metal		
				Cu kt	Au koz	
Copper	Chapada Zone					
Measured	58,885	0.20	0.12	118	222	
Indicated	363,929	0.22	0.14	801	1,676	
Measured and Indicated	422,814	0.22	0.14	919	1,898	
Inferred	156,081	0.23	0.08	354	422	
Gold (only)	Suruca Zone					
Measured	1,284		0.39		16	
Indicated	81,039		0.54		1,416	
Measured and Indicated	82,323		0.54		1,432	
Inferred	12,565		0.48		194	

*Mineral Resources are exclusive of Mineral Reserves. Chapada Zone Mineral Resources have been prepared using \$1,600/oz gold and \$4.00/lb copper price assumptions. Suruca Zone Mineral Reserves have been prepared using \$1,600/oz gold. Chapada open pit cut-off at \$4.06/t (Chapada pits and Suruca SW). Metallurgical recoveries at Chapada are dependent on zone and average 83.11% for copper and 56.94% for gold. Cut-off grade 0.19g/t gold for Suruca oxide and 0.23 g/t for Suruca sulphide. Metallurgical recoveries for Suruca oxide average 85% for gold and for Suruca sulphide average 88% for gold. All figures have been rounded to reflect the relative accuracy of the estimates. The qualified person responsible for the Mineral Resource estimate is Felipe Machado de Araujo, Registered Member of Chilean Mining Commission, Mineral Resources Coordinator Brazil, Yamana Gold Inc.