Pebble Copper Mine Proposals

Components	Proposal name			
	Option A	Option B	Option C	Option D
Mine information				
Location	59.89° N, 155.29° W	59.89° N, 155.29° W	59.89° N, 155.29° W	59.89° N, 155.29° W
Method	Open pit	Open pit	Underground	Underground
Estimated life span	78 years	20 years	35 years	150 years
Estimated number of new jobs	800	150	75	65
Maximum mine surface area	17.9 km^2 (6.9 sq miles)	1.5 km^2 (0.6 sq miles)	0.6 km^2 (0.23 sq miles)	0.6 km^2 (0.23 sq miles)
Maximum mine depth	1.24 km (0.8 miles)	0.3 km (0.2 miles)	1.8 km (1.1 miles)	1.5 km (0.9 miles)
Total amount of ore* to be mined	5,900 million mt	23 million mt	410 million mt	54 million mt
Ore* extraction rate	208,000 mt/day	31,100 mt/day	35,000 mt/day	1,000 mt/day
Mining waste				
Size of waste rock pile	22.6 km^2 (8.7 sq miles)	0.58 km^2 (0.2 sq miles)	1.4 km^2 (0.5 sq miles)	.17 km^2 (0.07 sq miles)
Amount of AGR	4,700 million mt	86 million mt	202 million mt	25 million mt
Amount of non-AGR	11,000 million mt	320 million mt	764 million mt	95 million mt
Dust	1,622 mt/day	234 mt/day	12.3 mt/day	3.2 mt/day
Milling waste				
Estimated amount of tailings produced	6,600 million mt	26 million mt	460 million mt	61 million mt
Total surface area of storage ponds	48.6 km^2 (18.8 sq miles)	5.8 km^2 (2.2 sq miles)	Not applicable	8.3 km^2 (3.2 sq miles)
Maximum storage pond dam height	209 m (685.7 feet)	92 m (301.8 feet)	Not applicable	110 m (360.9 feet)
Dust	1082 mt/day	170 mt/day	46.2 mt/day	9.8 mt/day
Smelting waste				
Amount of slag produced	88.5 million mt	.34 million mt	6.15 million mt	0.81 million mt
SO_2 gas	76,960 mt/day	10,400 mt/day	17,100 mt/day	350 mt/day
Waste management plan				
Overburden	Stored in piles near pit; used to refill pit after closure	Stored in piles near pit; used to refill pit after closure	Stored in piles near pit.	Stored in piles near pit; used to refill pit after closure
Tailings	Stored in lagoons	Stored in lagoons	Offshore disposal	Stored in lagoons
Slag	Sold for concrete production, road construction, and sandblasters	Stored in piles near pit; used to refill pit after closure	Stored in piles near pit; used to refill pit after closure	Sold for concrete production, road construction, and sandblasters
Dust	Gravity collectors	None	None	Gravity collectors
SO_2 gas	Wet scrubbers	None	None	Wet scrubbers
Mine water	Discharged into rivers (no treatment)	Trapped and treated; sludge buried underground	Discharged into rivers (no treatment)	Trapped and treated; sludge buried underground
Expenses				
Personnel	$55,000/job	$58,000/job	$51,000/job	$61,000/job
Mining (removing ore)	$500/mt of ore	$200/mt of ore	$300/mt of ore	$300/mt of ore
Milling (separating minerals)	$250/mt of ore	$100/mt of ore	$125/mt of ore	$150/mt of ore
Refining (smelting and electrolysis)	$1,000/mt of ore	$1,000/mt of ore	$1,000/mt of ore	$1,000/mt of ore
Waste management	$500/mt of ore	$200/mt of ore	$50/mt of ore	$400/mt of ore
Mine closure	$2 million/$km^2$ of surface area	$1 million/ km^2 of surface area	$1.5 million/km underground	$1.1 million/km underground

Note: AGR = acid-generating rock; mt = metric ton = 1,000 kg (2,205 lb); SO_2 = sulfur dioxide.

*Ore = Rock with copper in it