

**Table 6.2**  
**Summary of Estimated Excavator Production Rates**

% Matl. Swell: Waste = 25.0%	In Situ Matl. Weights: Overburden (tonnes/cu.m.) = 2.50	Stripping Hours Per Shift = 12.0
Coal = 40.0%	Interburden (tonnes/cu.m.) = 2.50	Coal Loading Hours Per Shift = 12.0
	Coal (tonnes/cu.m.) = 1.63	Days Per Year = 313

MACHINE	TRUCK FLEET Capacity (tonnes)	EFF. TRUCK PAYLOAD CAPACITY (tonnes)	NO. OF PASSES	RATED BUCKET CAPACITY (cu. m.) [B]	BUCKET FILL FACTOR [FF]	SWELL FACTOR [S]	EFFECTIVE BUCKET CAPACITY (1) (bcm) (tonne) [EB1] [EB2]		CYCLE TIME (secs.) [CT]	NOMINAL SHIFT SCHED.	MECH. AVAIL. (2)	OPER. USAGE (3)	ESTIMATED PROD. RATE PER SHIFT (4)	ESTIMATED ANNUAL PRODUCTION CAPACITY (5)
<b><u>STRIPPING MACHINES</u></b>														
Liebherr R9250	91	100.8	4	14.0	0.900	0.800	10.1	25.2	36	6 x 1	87.0%	73.3%	7,720 bcm	4,832,500 bcm
Hitachi EX1900-6 - Backhoe	91	86.4	4	12.0	0.900	0.800	8.6	21.6	36	6 x 1	87.0%	73.3%	6,615 bcm	4,141,000 bcm
<b><u>COAL LOADING MACHINES</u></b>														
Liebherr R9250	91	92.9	6	14.0	0.950	0.714	9.5	15.5	36	6 x 1	87.0%	73.3%	11,855 tonnes	7,421,000 tonnes
Hitachi EX1900-6 - Backhoe	91	92.9	7	12.0	0.950	0.714	8.1	13.3	36	6 x 1	87.0%	73.3%	10,165 tonnes	6,363,500 tonnes

Notes: (1) Effective Bucket Capacity In Bank Cubic Metres ("bcm") =  $EB1 = B \times FF \times S$   
Effective Bucket Capacity In Tonnes =  $EB1 \times \text{Material Weight}$   
(2) Mechanical Availability =  $\text{Avail. Hours} / \text{Sched. Hours}$   
(3) Operational Usage =  $\text{Working Hours} / \text{Avail. Hours}$

(4) Rate At Given Mech. Avail. and 75% to 95% Truck Saturation  
=  $EB1 \text{ or } EB2 \times (3600 / CT) \times \text{Hours Per Shift} \times \text{Mech. Avail.} \times \text{Oper. Utilization}$   
(5) Based On 1,080 (8-hour) Shifts Per Year for 7 x 3 Shift Schedule