Market Analysis

The **profit maximizing quantity is 5 or 6**, because when you increase production from 5 to 6, your cost increases (**MC=80,000**) by the same as what you get when selling the ore (**P=80,000**).

Market Price per Unit of Ore: 80,000 Drill Robot Cost per Hour: 10,000

Quantity	Time (in h)	MC	VC	FC	TC	Revenue	MR
0	0	0	0	65,000	65,000	0	0
1	5	50,000	50,000	65,000	115,000	80,000	80,000
2	5.3	53,000	103,000	65,000	168,000	160,000	80,000
3	5.8	58,000	161,000	65,000	226,000	240,000	80,000
4	6.5	65,000	226,000	65,000	291,000	320,000	80,000
5	7	70,000	296,000	65,000	361,000	400,000	80,000
6	8	80,000	376,000	65,000	441,000	480,000	80,000
7	9.2	92,000	468,000	65,000	533,000	560,000	80,000
8	10.5	105,000	573,000	65,000	638,000	640,000	80,000
9	12	120,000	693,000	65,000	758,000	720,000	80,000
10	14	140,000	833,000	65,000	898,000	800,000	80,000

Time:= time needed to produce this unit
MC:=Marginal Cost: The cost from the last unit produced (cost for the robot for this unit)
VC:=Varaible Cost: Total of all costs directly triggered through production (total robot cost)
FC:=Fixed Cost: All costs not directly triggered through production (fee for using the mine)
TC:= Total of all costs

Profit
-65,000
-35,000
-8,000
14,000
29,000
39,000
39,000
27,000
2,000
-38,000
-98,000