

## 2. RTB BOR の 5 か年計画

### **RTB BOR GROUP**

#### **TECHNICAL AND ECONOMIC CONSIDERATION OF THE POSSIBLE PROFITABLE COPPER PRODUCTION AT RTB Bor Group**

- five year period -

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## 1.0 INTRODUCTION

Copper Mining and Smelting Complex Bor has had an organized copper production since 1903.

In the period until 2003 the following has been produced at RTB Bor:

- 1,938.635,000 t of the excavated material of which 689.125,000t of copper and the rest is waste;
- 5.089.220t of Cu in the ore;
- 292,130kg of Au in the ore;
- 1.415,530kg of Ag in the ore and significant quantities of platinum, palladium and selenium.

Nowadays, production at RTB Bor has been largely reduced due to:

- delays in the removal of overburden from ore deposits;
- worn-out equipment;
- high indebtedness.

In order to increase and stabilize the production up to the level of the minimum profitable quantity of app. 3000t of cathode copper per month, along with the proper quantity of waste, it is necessary to finalize an investment cycle in the shortest period.

It is quite normal that copper production is planned and analyzed on the long run. On this occasion, due to the very specific situation our home production is facing, an analysis for the forthcoming five year period has been carried out with the special attention paid to the production possibilities after the mentioned period.

The basic production concept in the next five years and after that, includes available copper ore reserves and their mining which is to be technically, technologically and economically justifiable and already achieved development level of mining and metallurgical facilities as well as skilled staff.

If we compare RTB Bor ore reserves to be mined in the future period with those worldwide, they could be classified as poor ore reserves.

Also, if we look back at the previous period, metal content in the ore has significantly decreased which in general terms requires the application of the newest technical, organizational and other types of solutions which will, in other words, mean profitable copper production out of such resources.

If we take a broader approach, copper production at RTB is very important due to several reasons, classified as:

- The existence of home resources;
- No problem of selling copper and precious metals;
- Regardless of temporary short-term extreme market disruptions in the selling price, world copper market is stable on the long run;
- The majority of produced metals will be exported worldwide, with very important export earnings;
- The entire production entity participates in the production and selling of copper which additionally increases the stability of copper production and provides for a better position of the entire production unit;
- Taking into account the geographical position of the Bor region as well as political and economical effects, it is of extreme importance to sustain development and copper production even at a price of additional subsidizing such production. Unfavourable demographic movements from the area of eastern Serbia would thus be prevented. Such copper production support measures are not unknown worldwide.

Obviously there are numerous reasons in favour of launching a new investment cycle in order to increase and stabilize the copper production at RTB Bor.

The intention of the Government of the Republic of Serbia is to actively participate in the investment cycle, primarily in solving the problem of old debts and the social programme and to adequately provide guarantees in order to finance the purchase of new equipment.

In case the new investment cycle does not start immediately, it is certain that the copper production, although very low already, will completely cease, with all the consequences arising out of it for RTB Bor, for the region and wider, at a price much higher than the investments needed for the new production cycle.

## 2.0 THE MINERAL BASE OF RTB BOR GROUP

When speaking of copper deposits, the Bor metallogenetic zone is one of the most important metallogenetic units in the Republic of Serbia. Having that in mind, particularly important is its north area, called the Timok magmatic complex. Beside copper and occasionally zinc as a byproduct, gold can also be obtained (the most important product economically speaking) as well as silver and certain metals of the platinum group. To be more precise, the zinc concentrate used to be produced in the course of excavating polymetallic deposits Tenka 1 & 2. The possibility to produce zinc concentrate again will depend on the technological process to be adopted for the treatment of the polymetallic (Zn, Pb, Cu, Au, Ag) mineralization of the Čoka Marin 1 deposit.

Evaluation of gold and silver as precious metals is to be carried out in the copper smelting and refining process. In that sense, interpretation, estimates and writing off of ore reserves can be done only by taking into account the main component - copper. Therefore, accompanying elements, such as Au and Ag are estimated only within the copper content limit. With new processes and owing to computers and available software, accompanying elements' contents are reestimated to the equivalent value of the main element. In this way, we can analyze the deposit in a more complex and economical way, which will contribute to a better recovery of mineral resources.

Deposits and the presence of copper, zinc and gold are registered in a few complex hydrothermally altered rocks, primarily andesite. According to the size, shape and the morphological type, metallic mineral deposits can be classified as belonging to different ore bodies. The following belongs to them, from north to south:

1. The Majdanpek ore field;
2. The Vlaole-Jasikovo ore field;
3. The Crni Vrh ore field;
4. The Mali Krivelj-Cerovo ore field;
5. The Veliki Krivelj ore field;
6. The Bor ore field.

Total copper and zinc geological reserves are shown in the tables to follow. However, we herewith point out that the following ore fields belong to the Majdanpek mining field: Majdanpek and Vlaole-Jasikovo. The following ore fields belong to the Bor mining field: Mali Krivelj-Cerovo, Veliki Krivelj and Bor. Upon the estimate of total geological reserves, the ore field Crni Vrh was added to the Bor ore field which is quite distant from infrastructural objects. Gold deposits belong to copper deposits due to the relatively small number and quantities of total reserves so far explored and discovered (Zlađe and Čoka Kuruga) and the presence of gold (Ogastur).

Among the mentioned copper deposits, certain changes have occurred during the computer estimate of ore reserves. This is particularly meant for the majority of known deposits during the process of upgrading and the proper reinterpretation was accomplished by means of the Gemcom program package. Reinterpretation and estimate have been done in order to transfer all the information and data into a digital form while data obtained in this way could be further processed from the mining and economical point of view. Open pit mines as well as mining itself were optimized by later processing of copper deposits.

Ore reserves accepted by the republic committee, with interpretations and estimates carried out by means of the computer technology and adequate software, have been confirmed for the Borska river copper deposit (3% out of total) and the polymetallic deposit Tenka 1 & 2. At the Borska river copper deposit mining operations are yet to start while the polymetallic deposit Tenka 1 & 2 has already been excavated. We herewith point out that economic evaluations have not been done yet for all deposits or for all of their parts (the Borska river deposit, for instance). The reason for this are the phases of excavation and not the excavation of the already confirmed ore reserves. Besides, it is important to emphasize that the major part of the remaining Borska river deposit (97% of the total) contains more copper than so far mined from all ore bodies in the Bor copper and gold deposit.

Geologic copper ore reserves (resources) as of December 31, 2003

W=3.5% Made from: 23.02.2004.

	Wet ore quantity t	Dry ore qty t	Cu-aver. %	Cu t	Au-aver. g/t	Au kg	Ag-aver. g/t	Ag kg	Pb-aver. %	Pb t	Zn t	Notes Processed Cutoff grade
<b>Majdanpek ore body</b>												
<b>North Mining District</b>												
Central ore body	205,676,443	196,477,767	0.300	596,149	0.257	50,990	1,929	382,698				
Dolovi 1	13,249,629	12,785,692	0.325	41,666	0.111	1,415	0,990	11,376				By hand 0.2%Cu
Dolovi 2	2,418,261	2,333,641	0.402	9,382	1.093	2,550	6,588	15,373				By hand 0.2%Cu
Stari Dufan	420,157	405,452	0.342	1,396	1.050	426	10,683	4,332				
Tenka 1+2 pyrite	461,383	445,235	0.292	1,299	0.541	241	7,299	3,249,754				By hand 0.1%Cu
Tenka 3 pyrite	5,949,887	5,741,641	0.420	24,098	0.393	2,256	4,060	23,310				By hand 0.1%Cu
<b>Total, North Mining District</b>	<b>228,175,790</b>	<b>220,189,628</b>	<b>0.306</b>	<b>673,980</b>	<b>0.263</b>	<b>57,878</b>	<b>2,001</b>	<b>440,537</b>				
<b>South Mining District</b>												
Coka Muskal	1,436,710	1,386,425	0.619	11,303	0.950	777	6,105	8,464				Gemcom 0.2%Cu&Ag
Stacion	27,986,040	27,006,529	0.307	82,613	0.196	5,307	1,667	45,009				Gemcom 0.2%Cu&Ag
South Mining District - Central ore body	390,089,750	376,436,609	0.333	1,259,294	0.188	89,981	1,223	455,960				Gemcom 0.2%Cu&Ag
<b>Total, South Mining District</b>	<b>419,512,500</b>	<b>404,829,563</b>	<b>0.334</b>	<b>1,353,910</b>	<b>0.188</b>	<b>76,064</b>	<b>1,258</b>	<b>509,432</b>				
<b>Total, Majdanpek ore body</b>	<b>647,688,290</b>	<b>625,019,190</b>	<b>0.324</b>	<b>2,027,390</b>	<b>0.214</b>	<b>133,942</b>	<b>1,820</b>	<b>949,969</b>				
<b>Vlaole-Jaskova ore body</b>												
Coka Marin												
Coka Marin 1 Cu-Au pyrite	1,158,539	1,117,990	0.760	8,502	1.628	1,708	11,724	13,107				By hand 0.2%Cu
Coka Marin 2 Cu-Au pyrite	746,728	719,628	1.156	8,317	5.252	3,779	25,828	18,567				By hand 0.2%Cu
Coka Marin 3	230,006	221,959	0.940	2,095	2.017	449	31,294	9,946				By hand 0.2%Cu
Coka Marin, Total	2,134,273	2,059,578	0.918	18,905	2.882	5,936	18,761	38,640				
<b>Total, Vlaole-Jaskova ore body</b>	<b>2,134,273</b>	<b>2,059,578</b>	<b>0.918</b>	<b>18,905</b>	<b>2.882</b>	<b>5,936</b>	<b>18,761</b>	<b>38,640</b>				
<b>Crml Vrh ore body</b>												
Dumrivi Potok	300,000,000	289,500,000	0.210	607,950	0.100	28,950	1,200	347,400				Estimated resources
Valja Strž	100,000,000	96,500,000	0.250	241,250	0.040	3,860	0,900	86,850				Estimated resources, Au<1g/t, Mo-97g/t, Ge-16g/t
Coka Kuruga - massive sulphides	1,500,000	1,447,500	0.900	13,028	1.000	1,448	3,000	4,343				
Coka Kuruga-hydroquartzite	1,311,528	1,265,625			0.900	1,138	3,030	3,835				By hand
Lipa	204,276	197,128	1.100	2,168	0.500	99	10,000	1,971				By hand
Zlece	17,713	17,093			12.480	213	81,100	1,386				By hand
<b>Total, Crml Vrh ore body</b>	<b>403,033,617</b>	<b>388,927,344</b>	<b>0.222</b>	<b>864,396</b>	<b>0.092</b>	<b>35,708</b>	<b>1,146</b>	<b>445,785</b>				
<b>Mall Krivelj-Cerovo ore body</b>												
Cerovo	238,358,600	230,016,049	0.316	726,504	0.112	25,847	0,797	183,301				Gemcom 0.2%Cu
Drenovo	45,777,880	44,175,654	0.290	127,973	0.064	2,823	1,430	63,167				Gemcom 0.2%Cu
Cementacija-2	26,580,420	25,650,105	0.337	86,470	0.272	1,851	1,117	28,639				Gemcom 0.2%Cu
Cementacija-4	4,027,930	3,886,952	0.290	11,277	0.070	272	1,100	4,276				Gemcom 0.2%Cu
Cementacija-3	9,143,820	8,823,798	0.337	29,746	0.070	818	1,100	9,708				Gemcom 0.2%Cu
Cementacija-1	14,383,850	13,880,415	0.287	39,937	0.070	972	0,400	5,552				By hand 0.2%Cu
Kralj Bugaraku-North	1,600,000	1,544,000	0.640	9,882	0.640	968	2,290	3,536				By hand 0.2%Cu
<b>Total, Mall Krivelj-Cerovo ore body</b>	<b>304,093,580</b>	<b>293,985,971</b>	<b>0.316</b>	<b>1,007,892</b>	<b>0.112</b>	<b>32,475</b>	<b>1,107</b>	<b>230,641</b>				
<b>Veliki Krivelj ore body</b>												
Mala Coka Trsilo	18,780,130	18,122,825	0.283	53,100	0.072	1,308	0,412	7,473				Gemcom 0.2%Cu
Veliki Krivelj	540,676,720	521,753,035	0.329	1,716,567	0.068	35,479	0,400	206,488				Gemcom 0.2%Cu
<b>Total, Veliki Krivelj ore body</b>	<b>559,456,850</b>	<b>539,875,860</b>	<b>0.328</b>	<b>1,769,667</b>	<b>0.068</b>	<b>36,787</b>	<b>0,400</b>	<b>213,961</b>				
<b>Bor ore body</b>												
Tilva Roč From level +14 to -76	6,142,278	5,927,298	0.747	44,277	0.163	968	1,069	6,514				By hand 0.4%Cu
Tilva Roč from level -76 to -235	6,100,000	5,886,500	0.699	41,147	0.158	930	1,204	7,087				By hand 0.4%Cu
P2A(+30/-75)	4,479,450	4,322,669	0.689	26,783	0.282	1,219	1,594	6,880				By hand 0.4%Cu
P2A from -75 to -155	7,257,288	7,003,284	0.654	45,801	0.236	1,653	1,414	9,903				By hand 0.4%Cu
Kamenjar 2 IX-XV C1-kat	1,503,772	1,451,140	0.624	9,049	0.206	299	1,010	1,466				By hand 0.4%Cu
Kamenjar XI-XV C2-kat	900,000	868,500	0.948	8,237	0.200	174	0,960	851				By hand 0.4%Cu
Brezonik(+120+80)	1,338,842	1,291,983	1.257	16,240	0.229	296	0,947	1,224				By hand 0.4%Cu
Dv+D+C	2,573,453	2,483,382	1.019	25,207								By hand 0.4%Cu
M+N	371,445	358,444	1.647	5,934								By hand 0.4%Cu
N1	413,966	399,506	1.323	5,287								By hand 0.4%Cu
Borska river	611,338,576	599,941,726	0.618	3,645,377	0.235	138,926	1,915	1,129,551				By hand 0.3%Cu
<b>Total, Bor ore body</b>	<b>642,419,101</b>	<b>619,934,432</b>	<b>0.626</b>	<b>3,876,310</b>	<b>0.233</b>	<b>144,463</b>	<b>1,877</b>	<b>1,163,487</b>				
<b>Recap</b>												
<b>Total, Majdanpek mining field</b>	<b>649,822,556</b>	<b>627,078,766</b>	<b>0.326</b>	<b>2,046,298</b>	<b>0.223</b>	<b>139,877</b>	<b>1,577</b>	<b>968,609</b>				
<b>Total, Bor mining field</b>	<b>1,604,909,468</b>	<b>1,648,737,637</b>	<b>0.365</b>	<b>5,845,876</b>	<b>0.177</b>	<b>181,260</b>	<b>0,891</b>	<b>1,379,448</b>				
<b>Total, Timok magmatic complex</b>	<b>2,657,765,540</b>	<b>2,664,743,746</b>	<b>0.334</b>	<b>8,556,669</b>	<b>0.139</b>	<b>356,636</b>	<b>1,097</b>	<b>2,813,642</b>				

Geologic zinc ore reserves (resources) as of December 31, 2003

W=3% Made at 19.02.2003.

	Wet ore quantity t	Dry ore qty t	Zn-aver. %	Zn t	Au-aver. g/t	Au kg	Ag-aver. g/t	Ag kg	Pb-aver. %	Pb t	Zn-aver. %	Zn t	Notes Processed Cutoff grade
<b>Majdanpek ore field</b>													
<b>North Mining District</b>													
Tenka 1+2 polymetallic	587,000	566,455	0.525	2,974	1.391	788	24,986	14,153	0.885	5,013	3.541	20,058	Gemcom 1.0%Zn
<b>Total, North Mining District</b>	<b>587,000</b>	<b>566,455</b>	<b>0.525</b>	<b>2,974</b>	<b>1.391</b>	<b>788</b>	<b>24,986</b>	<b>14,153</b>	<b>0.885</b>	<b>5,013</b>	<b>3.541</b>	<b>20,058</b>	
<b>Total, Majdanpek ore field</b>	<b>587,000</b>	<b>566,455</b>	<b>0.525</b>	<b>2,974</b>	<b>1.391</b>	<b>788</b>	<b>24,986</b>	<b>14,153</b>	<b>0.885</b>	<b>5,013</b>	<b>3.541</b>	<b>20,058</b>	
<b>Vlaole-Jaskovo ore field</b>													
Coka Marin													
Coka Marin 1 - polymetallic area	119,125	114,956	3.896	4,249	15.127	1,739	153,767	17,876	2.673	3,073	6.634	7,628	By hand 1.0%Zn
Coka Marin 2 polymetallic area	172,654	166,611	1.054	1,757	16.217	2,702	232,197	39,687	3.515	5,857	9,763	16,296	By hand 1.0%Zn
<b>Total, Coka Marin</b>	<b>291,779</b>	<b>281,567</b>	<b>2.133</b>	<b>6,006</b>	<b>15.772</b>	<b>4,441</b>	<b>200,176</b>	<b>56,363</b>	<b>3.171</b>	<b>8,930</b>	<b>8,485</b>	<b>23,892</b>	
<b>Total, Vlaole-Jaskovo ore field</b>	<b>291,779</b>	<b>281,567</b>	<b>2.133</b>	<b>6,006</b>	<b>15.772</b>	<b>4,441</b>	<b>200,176</b>	<b>56,363</b>	<b>3.171</b>	<b>8,930</b>	<b>8,485</b>	<b>23,892</b>	
<b>Crml Vrh ore field</b>													
Valja Saka	500,000	482,500	1.000	4,825	1.000	483	4,000	1,930	2.130	10,277	1.850	8,928	By hand
<b>Total, Crml Vrh ore body</b>	<b>500,000</b>	<b>482,500</b>	<b>1.000</b>	<b>4,825</b>	<b>1.000</b>	<b>483</b>	<b>4,000</b>	<b>1,930</b>	<b>2.130</b>	<b>10,277</b>	<b>1.850</b>	<b>8,928</b>	
<b>RECAP</b>													
<b>Total, Majdanpek mining field</b>	<b>878,779</b>	<b>848,022</b>	<b>1.059</b>	<b>8,980</b>	<b>6.166</b>	<b>5,229</b>	<b>83,164</b>	<b>70,516</b>	<b>1.644</b>	<b>13,843</b>	<b>5.183</b>	<b>43,950</b>	
<b>Total, Timok magmatic complex</b>	<b>1,378,779</b>	<b>1,330,522</b>	<b>1.038</b>	<b>13,806</b>					<b>1.820</b>	<b>24,220</b>	<b>3.974</b>	<b>52,877</b>	

Low content of copper and accompanying elements as well as unfavourable mining conditions have been the reason for ranging the major part of the ore reserves into those out of balanced or conditionally balanced. We point out that that the strategy of mining and treatment of ore at RTB Bor are based on available balanced copper, zinc and gold ore reserves shown in tables to follow.

Underground operations are currently being carried out at the following sites:

- In the underground pit Bor, the following ore bodies are mined: Tilva Roč, P2A and Brezonik.

Copper deposits are mined by open pit techniques at the following locations:

- Veliki Krivelj,
- Majdanpek-Mali Pek, south mining district and preparation for the exavation of the andesite ring.

Mineable (proofed) copper ore reserves as of December 31, 2003

														W=3.5% Made at 23.02.2004			
	Wet ore quantity	Dry ore quantity	Cu-av. Gr	Cu	u-aver. Gr	Au	Ag-av.	Ag	Pb-av	Pb	Zn-av	Zn	Primeredba				
	t	t	%	t	g/t	kg	g/t	kg	%	t	%	t	Processed	Cut-off gr.			
<b>Majdanpek ore field</b>																	
<b>North mining district</b>																	
Central ore body -TS 2	489,645	472,507	0.418	1,975	0.462	218	2,648	1,251									
Dolovi 1	1,698,957	1,639,494	0.322	5,282	0.122	200	0.143	234					By hand	0.2%Cu			
Dolovi 2	1,348,880	1,301,869	0.395	5,141	1.490	1,940	7,277	9,472					By hand	0.2%Cu			
Stari Dušan	420,157	405,452	0.342	1,386	1.051	426	10,683	4,331					By hand	0.2%Cu			
Tenka 1+2 pyrite	180,000	173,700	0.265	460	0.428	74	7,247	7					By hand	0.1%Cu			
Tenka 3 pyrite	298,869	288,409	0.175	504	0.162	47	1,569	453					By hand	0.1%Cu			
<b>Total north mining district</b>	<b>4,436,508</b>	<b>4,281,230</b>	<b>0.344</b>	<b>14,749</b>	<b>0.679</b>	<b>2,906</b>	<b>3,678</b>	<b>15,748</b>									
<b>South Mining District</b>																	
South Mining District - central ore body	91,146,093	87,956,980	0.414	364,138	0.286	25,155	1,748	153,747					Gemcom	0.2%Cu			
<b>Total South Mining District</b>	<b>91,146,093</b>	<b>87,956,980</b>	<b>0.414</b>	<b>364,138</b>	<b>0.286</b>	<b>25,155</b>	<b>1,748</b>	<b>153,747</b>									
<b>Total ore field Majdanpek</b>	<b>95,582,601</b>	<b>92,237,210</b>	<b>0.411</b>	<b>378,886</b>	<b>0.304</b>	<b>28,061</b>	<b>1,838</b>	<b>169,495</b>									
<b>Vlašje-Jaskovo ore field</b>																	
<b>Coka Marin</b>																	
Coka Marin 1 Cu-Au pyrite part (W=3.5, z.m. 3.2 t/m <sup>3</sup> )	278,971	269,207	0.909	2,448	1.895	456	7,403	1,993					By hand	0.2%Cu			
Total Coka Marin	278,971	269,207	0.909	2,448	1.895	456	7,403	1,993									
<b>Total Vlašje-Jaskovo ore field</b>	<b>278,971</b>	<b>269,207</b>	<b>0.909</b>	<b>2,448</b>	<b>1.895</b>	<b>456</b>	<b>7,403</b>	<b>1,993</b>									
<b>Mali-Krivičji-Cerovo ore field</b>																	
Cerovo	17,829,500	17,205,468	0.424	72,901	0.223	3,831	1,057	18,181					Gemcom	0.2%Cu			
Drenovo	16,710,020	16,125,169	0.342	55,191	0.098	1,579	1,544	24,903					Gemcom	0.2%Cu			
Cementacija-2	11,004,160	10,619,014	0.411	43,681	0.085	897	1,186	12,590					Gemcom	0.2%Cu			
<b>Total Mali Krivičji-Cerovo ore field</b>	<b>45,543,680</b>	<b>43,949,651</b>	<b>0.391</b>	<b>171,773</b>	<b>0.144</b>	<b>6,307</b>	<b>1,267</b>	<b>55,674</b>									
<b>Veliki Krivičji ore field</b>																	
Veliki Krivičji+M.C.Trailo	102,616,551	99,024,972	0.340	336,685	0.068	6,734	0,388	38,422					Gemcom	0.2%Cu			
<b>Total Veliki Krivičji ore field</b>	<b>102,616,551</b>	<b>99,024,972</b>	<b>0.340</b>	<b>336,685</b>	<b>0.068</b>	<b>6,734</b>	<b>0,388</b>	<b>38,422</b>									
<b>Bor ore field</b>																	
Tilva Ros from +14 to -76	3,195,587	3,083,741	0.700	21,586	0.200	617	1,090	3,361					By hand	0.4%Cu			
P2A(+30-75)	3,724,868	3,594,499	0.625	22,466	0.200	719	0,880	3,163					By hand	0.4%Cu			
Brazanik(+120/+80)	934,325	901,624	1.215	10,955	0.223	201	0,956	882					By hand	0.4%Cu			
Boraka River	15,492,056	14,949,834	0.800	119,570	0.266	3,976	1,892	28,281					By hand	0.3%Cu			
<b>Total Bor ore field</b>	<b>23,346,837</b>	<b>22,529,698</b>	<b>0.775</b>	<b>174,676</b>	<b>0.245</b>	<b>5,513</b>	<b>1,883</b>	<b>35,688</b>									
<b>RECAP</b>																	
<b>Total Majdanpek mining field</b>	<b>95,581,572</b>	<b>92,506,417</b>	<b>0.412</b>	<b>381,334</b>	<b>0.308</b>	<b>28,517</b>	<b>1,854</b>	<b>171,488</b>									
<b>Total Bor mining field</b>	<b>171,507,068</b>	<b>165,804,321</b>	<b>0.413</b>	<b>883,134</b>	<b>0.112</b>	<b>16,554</b>	<b>0,784</b>	<b>129,783</b>									
<b>Total Majdanpek-Bor</b>	<b>267,388,640</b>	<b>258,010,738</b>	<b>0.413</b>	<b>1,064,468</b>	<b>0.182</b>	<b>47,071</b>	<b>1,168</b>	<b>301,251</b>									

Mineable (proofed) zinc ore reserves as of December 31, 2002

														W=3% Made at 19.02.2003			
	Wet ore quantity	Dry ore quantity	Cu-av. G	Cu	u-aver. Gr	Au	Ag-av.	Ag	Pb-av	Pb	Zn-av.	Zn	Primeredba				
	t	t	%	t	g/t	kg	g/t	kg	%	t	%	t	Processed	Cut-off gr.			
<b>Majdanpek ore field</b>																	
<b>North mining district</b>																	
Tenka 1+2 polymetallic																	
<b>Total North mining district</b>																	
<b>Total Majdanpek ore field</b>																	
<b>Vlašje-Jaskovo ore field</b>																	
<b>Coka Marin</b>																	
Coka Marin 1-polymet. Area (W=3.5, z.m. 4.2 t/m <sup>3</sup> )	110,604	106,732	3.638	3,883	152.487	16,275	15,866	1,693	2,692	2,873	6,871	7,333	By hand	1.0%Zn			
Coka Marin 2-polymet. Area	110,604	106,732	3.638	3,883	152.487	16,275	15,866	1,693	2,673	2,873	6,834	7,333	By hand	1.0%Zn			
<b>Total Coka Marin</b>	<b>110,604</b>	<b>106,732</b>	<b>3.638</b>	<b>3,883</b>	<b>152.487</b>	<b>16,275</b>	<b>15,866</b>	<b>1,693</b>	<b>2,673</b>	<b>2,873</b>	<b>6,834</b>	<b>7,333</b>					
<b>Vlašje-Jaskovo total ore field</b>	<b>110,604</b>	<b>106,732</b>	<b>3.638</b>	<b>3,883</b>	<b>152.487</b>	<b>16,275</b>	<b>15,866</b>	<b>1,693</b>	<b>2,673</b>	<b>2,873</b>	<b>6,834</b>	<b>7,333</b>					
<b>RECAP</b>																	
<b>Total Majdanpek mining field</b>	<b>110,604</b>	<b>106,732</b>	<b>3.638</b>	<b>3,883</b>	<b>152.487</b>	<b>16,275</b>	<b>15,866</b>	<b>1,693</b>	<b>2,873</b>	<b>2,873</b>	<b>7,333</b>	<b>7,333</b>					
<b>Total Bor mining field</b>																	
<b>Total Majdanpek-Bor</b>	<b>110,604</b>	<b>106,732</b>	<b>3.638</b>	<b>3,883</b>	<b>152.487</b>	<b>16,275</b>	<b>15,866</b>	<b>1,693</b>	<b>2,873</b>	<b>2,873</b>	<b>7,333</b>	<b>7,333</b>					

### 3.0 THE FIVE YEAR PRODUCTION PERIOD

#### 3.1 The Bor Copper Mines (RBB)

##### 3.1.1 The Veliki Krivelj Mine, Bor

Ore mining technology at RTB Bor, in its open pits and underground operations are of a classical type. Ore and waste conveyor systems used on open pits are mutually linked and they consist of a truck – a crusher – a conveyor belt, which all significantly reduce haulage costs and usually have a major share in excavating costs.

- Physical scope of production - the open pit

	Description	Year	1	2	3	4	5	TOTAL
1.01.	Wet ore	t	3.995.845	7.995.966	7.997.677	7.998.366	7.998.249	35.986.103
1.02.	Waste	t	6.004.155	7.004.034	9.002.323	9.001.634	9.001.751	40.013.897
1.03.	Excavated material	t	10.000.000	15.000.000	17.000.000	17.000.000	17.000.000	76.000.000
1.04.	Moisture in the ore	%	3,0	3,0	3,0	3,0	3,0	3,0
1.05.	Dry ore	t	3.875.970	7.756.087	7.757.747	7.758.415	7.758.302	34.906.520
1.06.	Cu content in dry ore	%	0,312	0,345	0,364	0,298	0,329	0,332
1.07.	Cu quantity in the ore	t	12.093,03	26.758,50	28.238,20	23.120,08	25.524,81	115.734,62
1.08.	Au content in dry ore	%	0,070	0,070	0,070	0,070	0,070	0,070
1.09.	Au quantity in the ore	kg	271,32	542,93	543,04	543,09	543,08	2.443,46
1.10.	Ag content in dry ore	%	0,398	0,398	0,398	0,398	0,398	0,398
1.11.	Ag quantity in the ore	kg	1.542,64	3.086,92	3.087,58	3.087,85	3.087,80	13.892,79

- Physical scope of production - the Concentrator (flotation plant)

	Description	Year	1	2	3	4	5	TOTAL
2.01.	Dry ore	t	3.875.970	7.756.087	7.757.747	7.758.415	7.758.302	34.906.520
2.02.	Quantity of conc. Cu, wet	t	63.451,08	140.399,54	148.163,40	121.309,06	133.926,47	607.249,55
2.03.	Moisture in the concs.	%	10,00	10,00	10,00	10,00	10,00	10,00
2.04.	Concs. quantity, dry	t	57.105,97	126.359,59	133.347,06	109.178,15	120.533,82	546.524,60
2.05.	Cu content in dry concs.	%	18,0	18,0	18,0	18,0	18,0	18,0
2.06.	Cu quantity in the concs.	t	10.279,08	22.744,73	24.002,47	19.652,07	21.696,09	98.374,43
2.07.	Au content in dry concs.	%	1,47	1,33	1,26	1,54	1,40	1,39
2.08.	Au quantity in the concs.	kg	84,11	168,31	168,34	168,36	168,35	757,47
2.09.	Ag content in dry concs.	%	5,94	5,37	5,09	6,22	5,64	5,59
2.10.	Ag quantity in the concs.	kg	339,38	679,12	679,27	679,33	679,32	3.056,41
2.11.	Cu recovery	%	85,00	85,00	85,00	85,00	85,00	85,00
2.12.	Au recovery	%	31,00	31,00	31,00	31,00	31,00	31,00
2.13.	Ag recovery	%	22,00	22,00	22,00	22,00	22,00	22,00



### 3.1.2 The underground pit Bor

- Physical scope of production - the underground pit

	Year		1	2	3	4	5	TOTAL
1.01.	Wet ore	t	750.000	1.200.000	1.200.000	1.200.000	1.200.000	5.550.000
1.02.	Moisture in the ore	%	2,0	2,0	2,0	2,0	2,0	2,0
1.03.	Dry ore	t	735.000	1.176.000	1.176.000	1.176.000	1.176.000	5.439.000
1.04.	Cu content in dry ore	%	0,848	0,737	0,737	0,724	0,696	0,740
1.05.	Cu quantity in the ore	t	6.234,68	8.671,80	8.671,80	8.508,84	8.182,92	40.270,04
1.06.	Au content in dry ore	%	0,184	0,183	0,183	0,178	0,254	0,198
1.07.	Au quantity in the ore	kg	135,32	215,34	215,34	209,52	299,15	1.074,67
1.08.	Ag content in dry ore	%	1,019	1,019	1,015	1,019	1,661	1,157
1.09.	Ag quantity in the ore	kg	749,33	1.198,92	1.193,10	1.197,76	1.953,19	6.292,30

- Physical scope of production - the Concentrator

	Year		1	2	3	4	5	TOTAL
2.01.	Dry ore	t	735.000	1.176.000	1.176.000	1.176.000	1.176.000	5.439.000
2.02.	Quantity of conc. Cu, wet	t	29.441,54	40.950,17	40.950,17	40.180,63	40.459,99	191.982,50
2.03.	Moisture in the concs.	%	10,00	10,00	10,00	10,00	10,00	10,00
2.04.	Concs. quantity, dry	t	26.497,39	36.855,15	36.855,15	36.162,57	36.413,99	172.784,25
2.05.	Cu content in dry concs.	%	20,0	20,0	20,0	20,0	20,0	20,0
2.06.	Cu quantity in the concs.	t	5.299,48	7.371,03	7.371,03	7.232,51	7.282,80	34.556,85
2.07.	Au content in dry concs.	%	2,20	2,51	2,51	2,49	4,03	2,78
2.08.	Au quantity in the concs.	kg	58,19	92,60	92,60	90,09	146,58	480,06
2.09.	Ag content in dry concs.	%	7,07	8,13	8,09	8,28	15,82	9,61
2.10.	Ag quantity in the concs.	kg	187,33	299,73	298,28	299,44	576,19	1.660,97
2.11.	Cu recovery	%	85,00	85,00	85,00	85,00	89,00	85,81
2.12.	Au recovery	%	43,00	43,00	43,00	43,00	49,00	44,67
2.13.	Ag recovery	%	25,00	25,00	25,00	25,00	29,50	26,40

### 3.1.3 Smelter slag

- The quantity to treat

	Description	Year	1	2	3	4	5	TOTAL
1.01.	Wet slag	t	720.000	750.000	750.000	750.000	750.000	3.720.000
1.02.	Moisture in the slag	%	1,0	1,0	1,0	1,0	1,0	1,0
1.03.	Slag dry	t	712.800	742.500	742.500	742.500	742.500	3.682.800
1.04.	Cu content in dry slag	%	0,637	0,637	0,637	0,637	0,637	0,637
1.05.	Cu quantity in the slag	t	4.539,60	4.728,75	4.728,75	4.728,75	4.728,75	23.454,60
1.06.	Au content in dry slag	%	0,294	0,294	0,294	0,294	0,294	0,294
1.07.	Au quantity in the slag	kg	209,52	218,25	218,25	218,25	218,25	1.082,52
1.08.	Ag content in dry slag	%	1,960	1,960	1,960	1,960	1,960	1,960
1.09.	Ag content in the slag	kg	1.396,80	1.455,00	1.455,00	1.455,00	1.455,00	7.216,80

-Physical scope of production - the Concentrator

	Description	Year	1	2	3	4	5	TOTAL
2.01.	Dry slag	t	712.800	742.500	742.500	742.500	742.500	3.682.800
2.02.	Quantity of conc. Cu, wet	t	22.193,60	23.118,33	23.118,33	23.118,33	23.118,33	114.666,92
2.03.	Moisture in the concs.	%	10,00	10,00	10,00	10,00	10,00	10,00
2.04.	Concs. quantity, dry	t	19.974,24	20.806,50	20.806,50	20.806,50	20.806,50	103.200,23
2.05.	Cu content in dry concs.	%	15,0	15,0	15,0	15,0	15,0	15,0
2.06.	Cu quantity in the concs.	t	2.996,14	3.120,98	3.120,98	3.120,98	3.120,98	15.480,04
2.07.	Au content in dry concs.	%	4,72	4,72	4,72	4,72	4,72	4,72
2.08.	Au quantity in the concs.	kg	94,28	98,21	98,21	98,21	98,21	487,13
2.09.	Ag content in dry concs.	%	20,98	20,98	20,98	20,98	20,98	20,98
2.10.	Ag quantity in the concs.	kg	419,04	436,50	436,50	436,50	436,50	2.165,04
2.11.	Cu recovery	%	66,00	66,00	66,00	66,00	66,00	66,00
2.12.	Au recovery	%	45,00	45,00	45,00	45,00	45,00	45,00
2.13.	Ag recovery	%	30,00	30,00	30,00	30,00	30,00	30,00

**3.1.4 Total concentrates and metal in the concentrates production at the Bor Copper Mines (RBB)**

	Description	Year	1	2	3	4	5	TOTAL
1.01.	Dry ore and slag	t	5.323.770	9.674.587	9.676.247	9.676.915	9.676.802	44.028.320
1.02.	Cu quantity in the ore and slag	t	22.867,31	40.159,05	41.638,75	36.357,67	38.436,48	179.459,26
1.03.	Concs. quantity, dry	t	115.086,22	204.468,04	212.231,90	184.608,02	197.504,79	913.898,97
1.04.	Cu content in dry concs.	t	103.577,60	184.021,24	191.008,71	166.147,22	177.754,31	822.509,07
1.05.	Cu quantity in the concs.	t	18.574,69	33.236,73	34.494,48	30.005,56	32.099,86	148.411,31
1.06.	Au content in dry concs.	kg	236,58	359,12	359,15	356,66	413,15	1.724,66
1.07.	Au quantity in the concs.	kg	945,75	1.415,35	1.414,04	1.415,27	1.692,01	6.882,42

## 3.2 The Majdanpek Copper Mine

### 3.2.1 South Mining District

- Physical Scope of Production - the Open pit

	Year		1	2	3	4	5	TOTAL
1.01.	Wet ore	t	1.200.000	4.500.000	4.500.000	4.500.000	4.500.000	19.200.000
1.02.	Waste	t	5.500.000	7.310.000	3.910.000	860.000	120.000	17.700.000
1.03.	Profitable waste	t			4.500.000	8.000.000	7.890.000	20.390.000
1.04.	Excavated material (1.01.+1.02.+1.04.)	t	6.700.000	11.810,00	12.910,00	13.360,00	12.510,00	57.290.000
1.05.	Moisture in the ore	%	3,5	3,5	3,5	3,5	3,5	3,5
1.06.	Dry ore	t	1.158.000	4.342.500	4.342.500	4.342.500	4.342.500	18.528.000
1.07.	Cu content in dry ore	%	0,381	0,347	0,393	0,391	0,354	0,372
1.08.	Cu quantity in the ore	t	4.416,00	15.075,00	17.055,00	16.965,00	15.390,00	68.901,00
1.09.	Au content in dry ore	%	0,407	0,235	0,188	0,184	0,171	0,208
1.10.	Au quantity in the ore	kg	471,60	1.021,50	814,50	801,00	742,50	3.851,10
1.11.	Ag content in dry ore	%	2,818	1,268	0,946	0,949	0,911	1,131
1.12.	Ag quantity in the ore	kg	3.262,80	5.508,00	4.108,50	4.122,00	3.955,50	20.956,80

- Physical scope of production - the Concentrator-

	Year		1	2	3	4	5	TOTAL
2.01.	Dry ore	t	1.158.000	4.342.500	4.342.500	4.342.500	4.342.500	18.528.000
2.02.	Quantity of conc. Cu, wet	t	21.978	75.462	79.725	79.176	74.835	331.176
2.03.	Moisture in the concs.	%	9,00	9,00	9,00	9,00	9,00	9,00
2.04.	Concs. quantity, dry	t	20.000	68.670	72.550	72.050	68.100	301.370
2.05.	Cu content in dry concs.	%	17,0	18,0	20,0	20,0	19,0	19,1
2.06.	Cu quantity in the concs.	t	3.400,32	12.361,50	14.496,75	14.420,25	12.927,60	57.606,42
2.07.	Au content in dry concs.	%	12,03	5,95	4,04	3,89	3,71	4,89
2.08.	Au quantity in the concs.	kg	240,52	408,60	293,22	280,35	252,45	1.475,14
2.09.	Ag content in dry concs.	%	84,83	40,10	25,48	25,74	23,23	32,31
2.10.	Ag quantity in the concs.	kg	1.696,66	2.754,00	1.848,83	1.854,90	1.582,20	9.736,58
2.11.	Cu recovery	%	77,00	82,00	85,00	85,00	84,00	83,61
2.12.	Au recovery	%	51,00	40,00	36,00	35,00	34,00	38,30
2.13.	Ag recovery	%	52,00	50,00	45,00	45,00	40,00	46,46

### 3.2.2 Choka Marin

- Physical scope of production - the Underground mine

	Description	Year	1	2	3	4	5	TOTAL
1.01.	Wet ore	t	12.000	12.000	12.000	12.000	12.000	60.000
1.02.	Waste	t						0
1.03.	Excavated material	t	12.000	12.000	12.000	12.000	12.000	60.000
1.04.	Moisture in the ore	%						0
1.05.	Dry ore	t	12.000	12.000	12.000	12.000	12.000	60.000
1.06.	Cu content in dry ore	%	4,000	4,000	4,000	4,000	4,000	4,000
1.07.	Cu quantity in the ore	t	480,00	480,00	480,00	480,00	480,00	2.400,00
1.08.	Au content in dry ore	%	10,000	10,000	10,000	10,000	10,000	10,000
1.09.	Au quantity in the ore	kg	120,00	120,00	120,00	120,00	120,00	600,00
1.10.	Ag content in dry ore	%	100,000	100,000	100,000	100,000	100,000	100,000
1.11.	Ag quantity in the ore	kg	1.200,00	1.200,00	1.200,00	1.200,00	1.200,00	6.000,00

- Physical scope of production - the Concentrator

	Description	Year	1	2	3	4	5	TOTAL
2.01.	Dry ore	t	12.000	12.000	12.000	12.000	12.000	60.000
2.02.	Quantity of conc. Cu, wet	t						
2.03.	Moisture in the concs.	%						
2.04.	Concs. quantity, dry	t	12.000	12.000	12.000	12.000	12.000	60.000
2.05.	Cu content in dry concs.	%	4,00	4,00	4,00	4,00	4,00	4,00
2.06.	Cu quantity in the concs.	t	480,00	480,00	480,00	480,00	480,00	2.400,00
2.07.	Au content in dry concs.	%	10,00	10,00	10,00	10,00	10,00	10,00
2.08.	Au quantity in the concs.	kg	120,00	120,00	120,00	120,00	120,00	600,00
2.09.	Ag content in dry concs.	%	100,00	100,00	100,00	100,00	100,00	100,00
2.10.	Ag quantity in the concs.	kg	1.200,00	1.200,00	1.200,00	1.200,00	1.200,00	6.000,00
2.11.	Cu recovery	%	100,00	100,00	100,00	100,00	100,00	100,00
2.12.	Au recovery	%	100,00	100,00	100,00	100,00	100,00	100,00
2.13.	Ag recovery	%	100,00	100,00	100,00	100,00	100,00	100,00

### 3.2.3 Total concentrates and metal in the concentrates production at the Majdanpek Copper Mine (RBM)

	Description	Year	1	2	3	4	5	TOTAL
1.01.	Dry ore	t	1.170.000	4.354.500	4.354.500	4.354.500	4.354.500	18.588.000
1.02.	Cu quantity in the ore	t	4.896,00	15.555,00	17.535,00	17.445,00	15.870,00	71.301,00
1.03.	Concs. quantity, dry	t	33.978,02	87.461,54	91.725,27	91.175,82	86.835,16	391.175,82
1.04.	Cu content in dry concs.	t	32.000,00	80.670,00	84.550,00	84.050,00	80.100,00	361.370,00
1.05.	Cu quantity in the concs.	t	3.880,32	12.841,50	14.976,75	14.900,25	13.407,60	60.006,42
1.06.	Au content in dry concs.	kg	360,52	528,60	413,22	400,35	372,45	2.075,14
1.07.	Au quantity in the concs.	kg	2.896,66	3.954,00	3.048,83	3.054,90	2.782,20	15.736,58

### 3.2. Total concentrates and metal in the concentrates production at RTB Bor

	Description	Year	1	2	3	4	5	TOTAL
1.01.	Dry ore and slag	t	6.493.770	14.029.087	14.030.747	14.031.415	14.031.302	62.616.320
1.02.	Cu quantity in the ore and slag	t	27.763,31	55.714,05	59.173,75	53.802,67	54.306,48	250.760,26
1.03.	Concs. quantity, dry	t	149.064,24	291.929,58	303.957,17	275.783,84	284.339,95	1.305.074,79
1.04.	Cu content in dry concs.	t	135.577,60	264.691,24	275.558,71	250.197,22	257.854,31	1.183.879,07
1.05.	Cu quantity in the concs.	t	22.455,01	46.078,23	49.471,23	44.905,81	45.507,46	208.417,73
1.06.	Au content in dry concs.	kg	597,10	887,72	772,37	757,01	785,60	3.799,80
1.07.	Au quantity in the concs.	kg	3.842,41	5.369,35	4.462,87	4.470,17	4.474,21	22.619,00

## 4.0 LABOUR FORCE

Beside the significant fluctuation of its labour force, RTB Bor has still got at its disposal «the critical mass» of the necessary high quality staff. However, according to the world criteria and by means of a comparative analysis carried out for one employee per necessary scope of production, it has been ascertained that RTB Bor has a surplus of employees of approximately 25 percent.

### 4.1 The Bor Copper Mines (RBB)

#### 4.1.1 The Veliki Krivelj Mine, Bor

Qualification	As of Decmeber 31, 2003			Needed no. of employees per project			Reduction <b>TOTAL</b>
	Open Pit	Concentrator	Total:	Open Pit	Concentrator	Total:	
University degree	25	28	53	10	9	19	34
Higher education	12	10	22		7	7	15
Highly-skilled	326	115	441	203	65	268	173
Secondary educ.	97	70	167	63	81	144	23
Skilled	110	136	246	54	70	124	122
Semi-skilled	6	5	11		56	56	-45
Low-skilled	0	11	11		12	12	-1
Unskilled	16	0	16				16
<b>Total:</b>	<b>592</b>	<b>375</b>	<b>967</b>	<b>330</b>	<b>300</b>	<b>630</b>	<b>337</b>

#### 4.1.2 The Underground mine Bor

Qualification	As of Decmeber 31, 2003			Needed no. of employees per project			Reduction <b>TOTAL:</b>
	Underground mine	Bor Concentrator for Underground mine	<b>Total</b>	Underground mine	Bor Concentrator for Underground mine	<b>Total</b>	
University degree	16	17	33	5	6	11	22
Higher education	3	8	11			0	11
Highly-skilled	283	103	386	106	45	151	235
Secondary educ.	16	44	60	20	21	41	19
Skilled	274	57	331	175	67	242	89
Semi-skilled	75		75	108	46	154	-79
Low-skilled		2	2			0	2
Unskilled			0				0
<b>Total:</b>	<b>667</b>	<b>231</b>	<b>898</b>	<b>414</b>	<b>185</b>	<b>599</b>	<b>299</b>

#### 4.1.3 Smelter Slag Bor

Qualification	As of Decmeber 31, 2003		Needed no. of employees per project		Reduction <b>Total:</b>
	Bor Concentrator for slag		Bor Concentrator for slag		
University degree		5		2	3
Higher education		3			3
Highly-skilled		29		12	17
Secondary educ.		13		8	5
Skilled		16		20	-4
Semi-skilled				10	-10
Low-skilled					
Unskilled					
<b>Total:</b>		<b>66</b>		<b>52</b>	<b>14</b>

#### 4.1.4 The Bor Copper Mines, total

Qualification	As of Decmeber 31, 2003		Reduction
	Bor Copper Mines - Total	Needed no. of employees per project	
University degree	91	32	59
Higher education	36	7	29
Highly-skilled	856	431	425
Secondary educ.	240	193	47
Skilled	593	386	207
Semi-skilled	86	220	-134
Low-skilled	13	12	1
Unskilled	16	0	16
<b>Total:</b>	<b>1.931</b>	<b>1.281</b>	<b>650</b>

**Note:** In case a social programme is not carried out and the number of employees is not reduced, the Bor Copper Mines will have higher expenses out of its earnings by totally US\$ 16.575,000 or US\$ 3.315,000 annually.

#### 4.2 The Majdanpek Copper Mine (RBM)

Qualification	As of Decmeber 31, 2003			Needed no. of employees per project			Reduction
	Open pit	Concentr	Total:	Open pit	Concentr	Total:	
Ph. D.	1	1	2	1	1	2	0
University degree	36	21	57	36	21	57	0
Higher education	31	31	62	31	31	62	0
Highly-skilled	162	77	239	138	59	197	42
Secondary educ.	225	126	351	183	144	327	24
Skilled	309	164	473	250	170	420	53
Semi-skilled	23	12	35	13	5	18	17
Low-skilled	70	52	122	38	29	67	55
Unskilled	2	2	4				4
<b>Total:</b>	<b>859</b>	<b>486</b>	<b>1.345</b>	<b>690</b>	<b>460</b>	<b>1.150</b>	<b>195</b>

**Note:** In case a social programme is not carried out and the number of employees is not reduced, the Majdanpek Copper Mine will have higher expenses out of its earnings by totally US\$ 4.972,500 or US\$ 994,500 annually



### 4.3 RTB Bor, totally (mining operations)

Qualification	As of Decmeber 31, 2003	Needed no. of employees per project	Reduction
	Total	Total	Total:
Ph. D.	2	2	0
University degree	148	89	59
Higher education	98	69	29
Highly-skilled	1095	628	467
Secondary educ.	591	520	71
Skilled	1066	806	260
Semi-skilled	121	238	-117
Low-skilled	135	79	56
Unskilled	20	0	20
<b>Total:</b>	<b>3.276</b>	<b>2.431</b>	<b>845</b>

**Note:** In case a social programme is not carried out and the number of employees is not reduced, RTB Bor will have higher expenses out of its earnings by totally US\$ 21.547,500 or US\$ 4.309,500 annually.

## STANDARD OPERATING MATERIAL (consumables)

Special attention has been paid to the planned consumption of the standard operating material due to its high share in the value of expenditure. Level of consumption per each production phase (drilling, blasting, loading, haulage, crushing, flotating) is the basis of the planned consumption of the standard operating material. In comparison with the world standard, in certain parts of the production process some deviations, larger than elsewhere, have been registered. The aim of the management is to reduce the planned consumption by means of the synchronized management of the entire production process.

### 5.1 The Bor copper Mines (RBB)

#### 5.1.1 The Veliki Krivelj Mine, Bor

##### V. Krivelj Open pit

1.000 t

No.	Name of material	Unit	Standar	Q'ty	Price	Value	Price/unit
			Unit/1000t	unit	\$/unit.	\$	\$/t
1	Drilling rods 7 3/4	pcs.	0,00038	0,00038	3.011,12	1,14	0,001
2	Drilling crowns 9 7/8	pcs.	0,00085	0,00085	2.248,67	1,91	0,002
3	Explosive	kg	165,0000	165,00000	0,53	87,45	0,087
4	Mining fusehead No. 8 pcs	pcs..	0,0180	0,01800	0,42	0,01	0,000
5	Amplifiers PP/360	pcs..	0,7000	0,70000	2,00	1,40	0,001
6	Retarders	pcs..	0,3300	0,33000	1,55	0,51	0,001
7	Detonating fuse C/12	m	12,0000	12,00000	0,28	3,36	0,003
8	Safety fuse	m	0,0350	0,03500	0,28	0,01	0,000
9	Oil D2	l	365,0000	365,00000	0,65	237,25	0,237
10	Oil and lubricants	kg	15,6210	15,62100	3,00	46,86	0,047
11	Electricity	kWh	1346,0284	1.346,02840	0,031	41,05	0,041
12	Steel ropes	kg	1,8500	1,85000	3,15	5,83	0,006
13	Tyres	pcs.					
	EUC R - 170 / 36,00 x 51	pcs..	0,0037	0,00370	9.634,71	35,65	0,036
	CAT 16-G/18,00 x 25	pcs..	0,0015	0,00150	1.773,10	2,66	0,003
						<b>465,10</b>	<b>0,465</b>

##### The V. Krivelj Concentrator

1 t

No.	Name of material	Unit	Standar	Q'ty	Price	Value	Price/unit
			Unit/1000t	unit	\$/unit.	\$	\$/t
1	Lime	kg	3,500	3,5000	0,053	0,187	0,1871897
2	Reagents	kg	0,045	0,0450	1,322	0,059	0,0594999
3	Steel linings	kg	0,020	0,0200	1,781	0,036	0,0356207
4	Rubber linings	kg	0,003	0,0030	5,190	0,016	0,0155690
5	Rods	kg	0,275	0,2750	0,448	0,123	0,1232759
6	Balls	kg	0,480	0,4800	0,506	0,243	0,2428800
7	Water	m3	0,120	0,1200	0,138	0,017	0,0165517
8	Oil and lubricants	kg	0,009	0,0090	3,276	0,029	0,0294828
9	Electricity	kWh	21,000	21,0000	0,0305	0,641	0,6405000
10	Filter cloth	m2	0,0001	0,0001	10,52	0,001	0,0010517
11	Crusher linings	kg	0,004	0,0040	1,78	0,007	0,0071248
						<b>1,359</b>	<b>1,359</b>

**5.1.2 The Underground Mine Bor****Underground Mine**

1 t

No.	Name of material	Unit	Standar	Q'ty	Price	Value	Price/unit
			Unit/1000t	unit	\$/unit.	\$	\$/t
1	Explosive		0,40040	0,4004	0,92	0,37	0,36837
2	Mining fusehead No. 8 pcs		0,116	0,1156	0,67	0,08	0,07771
3	Amplifiers PP/360		0,0020	0,0020	0,42	0,00	0,00084
4	Retarders		0,0060	0,0060	0,28	0,00	0,00169
5	Detonating fuse C/12		0,030	0,0300	0,28	0,01	0,00844
6	Underground round-shaped timber		0,0003	0,0003	43,10	0,01	0,01175
7	Sawn timber		0,000035	0,0000	185,86	0,01	0,00651
8	Mono-block drills		0,00052	0,0005	78,70	0,04	0,04073
9	Drilling rods 76 mm		0,00032	0,0003	265,28	0,08	0,08383
10	Drilling crowns 45-48 mm		0,00149	0,0015	73,00	0,11	0,10877
11	Drilling crowns 76 mm		0,00050	0,0005	165,10	0,08	0,08255
12	Starting segment 76 mm		0,00006	0,0001	174,80	0,01	0,01049
13	Oil D-2		0,686	0,6863	0,65	0,44	0,44370
14	Oil and lubricants		0,117	0,1173	3,28	0,38	0,38409
15	Electricity		36,31	36,3100	0,03	1,11	1,10808
16	Drilling equipment tyres		0,00002	0,0000	1.594,60	0,03	0,03381
17	Tyres for loading and lifting equipment		0,000045	0,0000	2.856,00	0,13	0,12852
18	Industrial water		0,261	0,2613	0,14	0,04	0,03604
19	Polynel 22.5 mm		0,0050	0,0050	5,99	0,03	0,02996
20	Couplings		0,00005	0,0001	49,10	0,00	0,00265
21	Rough cloth for desliming		0,00100	0,0010	1,29	0,00	0,00129
22	Water and air pipes (TP)		0,0032	0,0032	2,24	0,01	0,00707
23	Water and air rubber pipes		0,0015	0,0015	2,59	0,00	0,00378
24	Ventilation pipes		0,0010	0,0010	41,47	0,04	0,03993
25	Tube-like anchors		0,0052	0,0052	5,34	0,03	0,02766
26	Sand		0,00036	0,0004	9,48	0,00	0,00344
27	Cement		0,1294	0,1294	0,09	0,01	0,01142
28	Concrete iron 22-25		0,0151	0,0151	0,45	0,01	0,00676
29	Steel net		0,00345	0,0035	3,79	0,01	0,01309
30	Detonating cable		0,0072	0,0072	0,08	0,00	0,00056
						<b>3,083</b>	<b>3,083</b>

**The Concentrator for underground ore**

1 t

No.	Name of material	Unit	Standar	Q'ty	Price	Value	Price/unit
			Unit/1000t	unit	\$/unit.	\$	\$/t
1	Lime	kg	2,700	2,7000	0,052	0,140	0,1402603
2	Reagents	kg	0,055	0,0550	1,318	0,073	0,0725000
3	Steel linings	Kg	0,050	0,0500	1,781	0,089	0,0890517
4	Rubber linings	Kg	0,005	0,0050	5,190	0,026	0,0259483
5	Rods	Kg	0,400	0,4000	0,448	0,179	0,1793103
6	Balls	Kg	0,450	0,4500	0,506	0,228	0,2277000
7	Water	m3	0,350	0,3500	0,138	0,048	0,0482759
8	Oil and lubricants	Kg	0,009	0,0090	3,276	0,029	0,0294828
9	Electricity	kWh	21,000	21,0000	0,0305	0,641	0,6405000
10	Filter cloth	m2	0,0015	0,0015	7,41	0,011	0,0111207
						<b>1,464</b>	<b>1,464</b>

## 5.1.3 Smelter slag

Slag Concentrator

1 t

No.	Name of material	Unit	Standar	Q'ty	Price	Value	Price/unit
			Unit/1000t	unit	\$/unit.	\$	\$ / t
1	Lime	kg	2,700	2,7000	0,052	0,140	0,1402603
2	Reagents	kg	0,080	0,0800	1,313	0,105	0,1050000
3	Steel linings	kg	0,120	0,1200	1,812	0,217	0,2174400
4	Rubber linings	kg	0,170	0,1700	1,781	0,303	0,3027759
5	Rods	kg	0,010	0,0100	5,190	0,052	0,0518966
6	Balls	kg	0,900	0,9000	0,448	0,403	0,4034483
7	Water	kg	0,600	0,6000	0,506	0,304	0,3036000
8	Oil and lubricants	m3	0,800	0,8000	0,138	0,110	0,1103448
9	Electricity	kg	0,012	0,0120	3,276	0,039	0,0393103
10	Lime	kWh	45,000	45,0000	0,0305	1,373	1,3725000
						<b>3,047</b>	<b>3,047</b>

## 5.2 The Majdanpek Copper Mine

### 5.2.1 South Mining District

Open pit		1.000 t					
No.	Name of material	Unit	Standar	Q'ty	Price	Value	Price/unit
			Unit/1000t	unit	\$/unit.	\$	\$/t
1	Drilling rods 7 3/4	pcs.	0,00020	0,00020	3.011,00	0,60	0,0006022
2	Drilling crowns 9 7/8	pcs.	0,00153	0,00153	2.119,00	3,24	0,0032421
3	Explosive	kg	75,0000	75,00000	0,53	39,60	0,0396000
4	Mining fusehead No. 8 pcs	pcs..	0,0300	0,03000	0,42	0,01	0,0000126
5	Amplifiers PP/360	pcs..	0,4000	0,40000	2,00	0,80	0,0008000
6	Retarders	pcs..	0,3000	0,30000	1,55	0,47	0,0004650
7	Detonating fuse C/12	m	5,5000	5,50000	0,28	1,55	0,0015455
8	Safety fuse	m	0,0400	0,04000	0,28	0,01	0,0000112
9	Oil D2	l	419,1750	419,17500	0,65	270,79	0,2707871
10	Oil and lubricants	kg	14,2100	14,21000	3,80	54,00	0,0539980
11	Electricity	kWh	627,1860	627,18600	0,03	19,13	0,0191292
12	Steel ropes	kg	1,7000	1,70000	3,15	5,36	0,0053550
13	Tyres	pcs.					
	EUC R - 170 / 36,00 x 51	pcs..	0,00274	0,00274	9.635,00	26,40	0,0263999
	CAT 16-G/18,00 x 25	pcs..	0,00079	0,00079	1.773,00	1,40	0,0014007
						<b>423,35</b>	<b>0,423</b>

### The Concentrator

1 t

No.	Name of material	Unit	Standar	Q'ty	Price	Value	Price/unit
			Unit/1000t	unit	\$/unit.	\$	\$/t
1	Lime	kg	3,000	3,0000	0,053	0,16	0,1590000
2	Reagents	kg	0,042	0,0420	1,350	0,06	0,0567000
3	Steel linings	kg	0,040	0,0400	1,780	0,07	0,0712000
4	Rubber linings	kg	0,050	0,0500	5,190	0,26	0,2595000
5	Rods	kg	0,400	0,4000	0,448	0,18	0,1792000
6	Balls	kg	0,700	0,7000	0,506	0,35	0,3542000
7	Water	m3	0,000	0,0000	0,000	0,00	0,0000000
8	Oil and lubricants	kg	0,012	0,0120	3,800	0,05	0,0456000
9	Electricity	kWh	23,000	23,0000	0,0305	0,70	0,7015000
						<b>1,83</b>	<b>1,827</b>

### 5.2.2 Choka Marin

#### Choka Marin

1 t

No.	Name of material	Unit	Standar	Q'ty	Price	Value	Price/unit
			Unit/1000t	unit	\$/unit.	\$	\$/t
1	Crushing					0,132	0,13211
	- lubricant	kg	0,0048	0,0048	3,800	0,02	0,01824
	Electricity	kWh	3,5000	3,50	0,0305	0,11	0,10675
	steel linings	kg	0,0040	0,0040	1,780	0,01	0,00712
2	Steel linings	kg	0,072	0,0720	1,780	0,13	0,12816
3	Rods	kg	0,460	0,4600	0,448	0,21	0,20608
4	Balls	kg	0,800	0,8000	0,506	0,40	0,40480
5	Oil and lubricants	kg	0,008	0,0080	3,800	0,03	0,03040
6	Electricity	kWh	50,000	50,0000	0,0305	1,53	1,52500
						<b>2,427</b>	<b>2,427</b>

## INVESTMENTS IN DESIGNED PRODUCTION

RTB Bor's equipment is of a high degree of complexity and productivity. Having in mind insufficient or modest investments in its protection and current maintenance in the previous years and due to its low level of technical readiness, investments in the purchase of new equipment and the so-called capital maintenance of the existing equipment have been planned as well as investments in mining infrastructural objects due to mining sites expansion.

### 6.1 The Bor Copper Mines

#### 6.1.1 The Veliki Krivelj Mine Bor

No	Position	Currency	Price/unit	Q'ty	Planned year
					1 <sup>st</sup>
	<b>Equipment</b>				<b>12.841.900</b>
1	Hydraulic excavator Vb=16m3	\$	2.600.000	2	5.200.000
2	Trucks. Dumpers 170t	\$	1.300.000	5	6.500.000
3	Bulldozer	\$	418.000	2	836.000
4	Grader	\$	176.500	1	176.500
5	Water cistern, 15m <sup>3</sup> /min.	\$	129.400	1	129.400
	<b>Other investments</b>				<b>7.035.000</b>
1	Spare parts - open pit mine	\$			2.645.000
2	Spare parts – concentrator	\$			2.040.000
3	Waste dump works	\$			2.350.000
	<b>Total V. Krivelj:</b>				<b>19.876.900</b>

#### 6.1.2 The Underground Pit Bor

No	Position	Currency	Price/unit	Q'ty	Planned year
					1 <sup>st</sup>
	<b>Equipment</b>				<b>2.453.400</b>
1	Drilling rig for horizontal boring	\$	330.000	1	330.000
2	Diesel loader for vertical boring Bucket volume 4.2 m3	\$	492.500	2	985.000
3	Drilling rig for vertical boring (SIMBA 253)	\$	446.500	1	446.500
4	ANFO explosive charger	\$	176.500	1	176.500
5	Service vehicle	\$	63.000	2	126.000
6	Compressors	\$	294.000	1	294.000
7	Hand drill	\$	10.600	9	95.400
	<b>Other investments</b>				<b>2.133.000</b>
1	Spare parts for underground equipment	\$			563.000
2	Mining and construction objects in the underground pit	\$			570.000
3	The Bor Concentrator spare parts (a part belonging to the the underground pit)	\$			1.000.000
	<b>Underground Pit Total:</b>				<b>4.586.400</b>

**6.1.3 Smelter Slag Bor**

No	Position	Currency	Price/unit	Q'ty	Planned year
					1 <sup>st</sup>
	<b>Equipment</b>				<b>950.000</b>
1	Excavator CAT 5080	\$	500.000	1	500.000
2	Truck CAT 773	\$	450.000	1	450.000
	<b>Other investments</b>				<b>1.573.000</b>
1	Spare parts for the Bor Concentrator (a part belonging to the underground pit)	\$			1.573.000
	<b>Total</b>	<b>\$</b>			<b>2.523.000</b>

**6.1.4 Total investments in the Bor Copper Mines designed production**

No	Position	Currency	Price/unit	Q'ty	Planned year
					1 <sup>st</sup>
	<b>Equipment</b>	<b>\$</b>			<b>16.245.300</b>
	<b>Other investments</b>	<b>\$</b>			<b>10.741.000</b>
	<b>Bor Copper Mines Total</b>	<b>\$</b>			<b>26.986.300</b>

**6.2 The Majdanpek Copper Mine (RBM)**

	Position	Cur	Unit price	Planned years					
				1.	2.	3.	4.	5.	
	<b>Equipment</b>								
1	Dump trucks – 3 pcs.	\$	1.300.000	1.300.000	1.300.000	1.300.000			3.900.000
	<b>Total</b>	<b>\$</b>							<b>3.900.000</b>
	<b>Other investm.</b>								
1	Conveyor system	\$		700.000					700.000
2	Crushing (maintenance)	\$		1.100.000					1.100.000
3	Concentrator (maintenance)	\$		1.900.000					1.900.000
4	Displacement of the road	\$		220.000					220.000
5	Displacement of transmission lines	\$		330.000					330.000
6	Profitable waste	\$				1.904.000	3.384.000	3.337.000	8.625.000
	<b>Total</b>	<b>\$</b>		<b>4.250.000</b>	<b>0</b>	<b>1.904.000</b>	<b>3.384.000</b>	<b>3.337.000</b>	<b>12.875.000</b>
	<b>Majdanpek Copper mine Total</b>			<b>5.550.000</b>	<b>1.300.000</b>	<b>3.204.000</b>	<b>3.384.000</b>	<b>3.337.000</b>	<b>16.775.000</b>

### 6.3 Total investments in RTB Bor's designed production

Position	Currency	Planned years					
		1.	2.	3.	4.	5.	
<b>Equipment</b>	<b>\$</b>	<b>17.545.300</b>	<b>1.300.000</b>	<b>1.300.000</b>			<b>20.145.300</b>
<b>Other investments</b>	<b>\$</b>	<b>14.991.000</b>		<b>1.904.000</b>	<b>3.384.000</b>	<b>3.337.000</b>	<b>23.616.000</b>
<b>Total RTB:</b>	<b>\$</b>	<b>32.536.300</b>	<b>1.300.000</b>	<b>3.204.000</b>	<b>3.384.000</b>	<b>3.337.000</b>	<b>43.761.300</b>

**Note:** Investments of \$8.625,000 have been predicted for the so-called profitable waste at the Majdanpek Copper Mine. These investments are not classical ones therefore real investments are somewhat reduced by the given amount and they are app. \$8.148,000 for the Majdanpek Copper Mine or \$35.136,000 for the entire mining production at RTB Bor.



## 7.0 ECONOMIC AND FINANCIAL ANALYSIS

### 7.1 Initial parameters

1. Financial parameters are here given in US Dollars and the USD exchange rate is 58.00 dinars.
2. Selling prices for the following products:
  - copper US\$2,000/t (last ten years' average is US\$1,999/t)
  - gold US\$12,000/kg
  - silver US\$150/kg
3. Metallurgical treatment charges
  - copper smelting and refining, total US\$400/t cathode copper;
  - gold processing, US\$ 150/kg refined gold
  - silver processing, US\$10/kg refined silver.
  -
4. Metallurgical recovery
  - copper: 93%
  - gold 91%
  - silver 85%
5. The price of material is the average purchase price valid at the beginning of 2004.
6. Amortization of fixed assets has been determined according to the current regulations for new investments while for the existing (old) ones amortization has been included in proportion to the remaining value of fixed assets.
7. Employees' net salaries have been calculated at the level of US\$ 250 per month and per one worker over the entire period. Legal obligations, such as taxes and contributions have been calculated at the rate of 70% on net salaries.
8. Other material and non-material expenses, current maintenance costs and services among others, have been taken out of the copper production price calculations at RTB Bor for the year 2004.
9. Profit tax is determined at the rate of 14%.
10. It has been agreed that investments be financed out of loans under the following terms:
  - repayment period is five years with one year grace period;
  - interest rate is 8.0% p.a.;
  - equal semi-annual instalments;
  - advance payment is 20% of the value of total investments.Other investment security options are also available, such as: lease among others, which has not been considered on this occasion.
11. Old financial and commercial obligations are in the amount of US\$ 430 mio and they have not been treated over the projected five year period.

## 7.2 Economic and financial parameters of the Bor Copper Mine

### 7.2.1 The Veliki Krivelj Bor

#### - The Balance of Success

in 000 \$

DESCRIPTION	1	3	4	5	TOTAL	
<b>A. GROSS INCOME</b>	<b>16.243</b>	<b>35.740</b>	<b>37.612</b>	<b>31.139</b>	<b>34.180</b>	<b>154.913</b>
<b>B. GROSS EXPENDITURE</b>	<b>20.045</b>	<b>32.481</b>	<b>30.941</b>	<b>30.237</b>	<b>29.944</b>	<b>143.648</b>
<b>1. OPERATING EXPENDITURE</b>	<b>20.045</b>	<b>30.900</b>	<b>29.647</b>	<b>29.254</b>	<b>29.298</b>	<b>139.143</b>
- material expenses	9.917	17.516	18.448	18.449	18.449	82.778
- maintenance	4.700	5.100	2.850	2.550	2.550	17.750
- amortization	584	2.973	2.973	2.973	2.973	12.476
- services and other mat.	1.141	1.608	1.673	1.579	1.623	7.624
- non-material expenses	490	490	490	490	490	2.450
- personal income	3.213	3.213	3.213	3.213	3.213	16.065
<b>2. FINANCIAL EXPENDITURE</b>	<b>0</b>	<b>1.581</b>	<b>1.294</b>	<b>983</b>	<b>647</b>	<b>4.505</b>
- Interest		1.581	1.294	983	647	4.505
<b>C. GROSS PROFIT</b>	<b>-3.803</b>	<b>3.259</b>	<b>6.671</b>	<b>902</b>	<b>4.236</b>	<b>11.265</b>
- taxation		456	934	126	593	2.110
<b>D. NET PROFIT</b>	<b>-3.803</b>	<b>2.803</b>	<b>5.737</b>	<b>776</b>	<b>3.643</b>	<b>9.156</b>
<b>Cummulativ</b>	<b>-3.803</b>	<b>-1.000</b>	<b>4.738</b>	<b>5.513</b>	<b>9.156</b>	

#### - Cost price

##### Open pit mine

in 000 \$

	1	2	3	4	5	Total	\$/t exc. mat.
- material expenses	4.650	6.975	7.905	7.905	7.905	35.340	0,465
- maintenance	2.700	3.100	1.700	1.400	1.400	10.300	0,136
- amortization	421	2.371	2.371	2.371	2.371	9.905	0,130
- services and other mat.	536	628	666	666	666	3.162	0,042
- non-material expenses	290	290	290	290	290	1.450	0,019
- personal income	1.683	1.683	1.683	1.683	1.683	8.415	0,111
- Interest		1.233	1.009	766	505	3.512	0,046
<b>Total expenses</b>	<b>10.280</b>	<b>16.280</b>	<b>15.624</b>	<b>15.081</b>	<b>14.820</b>	<b>72.084</b>	<b>0,948</b>
<b>Cost price \$/t excavated mat.</b>	<b>1,028</b>	<b>1,085</b>	<b>0,919</b>	<b>0,887</b>	<b>0,872</b>	<b>0,948</b>	

#### Concentrator

in 000 \$

DESCRIPTION	1	2	4	5	Total	\$/t exc. mat.	
- material expenses	5.267	10.541	10.543	10.544	10.544	47.438	1,318
- maintenance	2.000	2.000	1.150	1.150	1.150	7.450	0,207
- amortization	163	602	602	602	602	2.571	0,071
- services and other mat.	605	980	1.005	914	958	4.462	0,124
- non-material expenses	200	200	200	200	200	1.000	0,028
- personal income	1.530	1.530	1.530	1.530	1.530	7.650	0,213
- interest		348	285	217	142	993	0,028
<b>Total expenses</b>	<b>9.765</b>	<b>16.201</b>	<b>15.315</b>	<b>15.157</b>	<b>15.126</b>	<b>71.564</b>	<b>1,989</b>
<b>Cost price \$/t excavated mat.</b>	<b>2,444</b>	<b>2,026</b>	<b>1,915</b>	<b>1,895</b>	<b>1,891</b>	<b>1,989</b>	

<b>V.Krivelj</b>						<b>In 000 \$</b>
<b>DESCRIPTION</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Total</b>
- material expenses	9.917	17.516	18.448	18.449	18.449	82.778
- maintenance	4.700	5.100	2.850	2.550	2.550	17.750
- amortization	584	2.973	2.973	2.973	2.973	12.476
- services and other mat.	1.141	1.608	1.671	1.580	1.624	7.624
- non-material expenses	490	490	490	490	490	2.450
- personal income	3.213	3.213	3.213	3.213	3.213	16.065
- interest	0	1.581	1.294	983	647	4.505
<b>TOTAL EXPENSES</b>	<b>20.045</b>	<b>32.481</b>	<b>30.939</b>	<b>30.238</b>	<b>29.946</b>	<b>143.648</b>
Reduced by Au value	907	1.815	1.815	1.815	1.815	8.168
Reduced by Ag value	40	81	81	81	81	364
<b>NET EXPENSES I</b>	<b>19.098</b>	<b>30.585</b>	<b>29.043</b>	<b>28.341</b>	<b>28.049</b>	<b>135.116</b>
Smelting and refining charges	3.824	8.461	8.929	7.311	8.071	36.595
<b>NET EXPENSES II</b>	<b>22.922</b>	<b>39.046</b>	<b>37.972</b>	<b>35.652</b>	<b>36.120</b>	<b>171.711</b>
<b>Cost price of Cu in the concs. (\$/t)</b>	<b>1.857,95</b>	<b>1.344,70</b>	<b>1.209,98</b>	<b>1.442,16</b>	<b>1.292,83</b>	<b>1.373,9</b>
<b>Cost price of Cu in the catho. (\$/t)</b>	<b>2.397,80</b>	<b>1.845,91</b>	<b>1.701,06</b>	<b>1.950,71</b>	<b>1.790,13</b>	<b>1.876,7</b>

**- Financial cash flow**

						<b>in 000 \$</b>
<b>DESCRIPTION</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>	<b>Total</b>
1. Gross income	16.243	35.740	37.612	31.139	34.180	154.913
- realization	16.243	35.740	37.612	31.139	34.180	154.913
2. Own funds						0
3. Loans	15.902					15.902
4. Remaining value	0	0	0	0	10.321	10.321
- fixed assets					10.321	10.321
<b>GROSS INFLOW</b>	<b>32.145</b>	<b>35.740</b>	<b>37.612</b>	<b>31.139</b>	<b>44.501</b>	<b>181.136</b>
5. Investments	19.877					19.877
6. Material expend.	16.248	24.714	23.461	23.068	23.112	110.602
7. Personal income	3.213	3.213	3.213	3.213	3.213	16.065
8. Legal obligations		456	934	126	593	2.110
9. Financial expend.	0	1.581	1.294	983	647	4.505
10. Repayments		3.521	3.808	4.119	4.455	15.902
<b>GROSS OUTFLOW</b>	<b>39.338</b>	<b>33.485</b>	<b>32.709</b>	<b>31.509</b>	<b>32.019</b>	<b>169.060</b>
<b>NET FINANCIAL FLOW</b>	<b>-7.194</b>	<b>2.255</b>	<b>4.902</b>	<b>-370</b>	<b>12.482</b>	<b>12.076</b>
<b>Cummulative</b>	<b>-7.194</b>	<b>-4.938</b>	<b>-36</b>	<b>-406</b>	<b>12.076</b>	
<b>Discount factor</b> 8,0%	<b>1,00</b>	<b>0,926</b>	<b>0,857</b>	<b>0,794</b>	<b>0,735</b>	
<b>DISCOUNT VALUE</b>	<b>-7.194</b>	<b>2.088</b>	<b>4.203</b>	<b>-294</b>	<b>9.174</b>	<b>7.978</b>

**- Economic cash flow**

in 000 \$

DESCRIPTION	1	2	3	4	5	Total
1. Gross income	16.243	35.740	37.612	31.139	34.180	154.913
2. Remaining value - fixed assets	0	0	0	0	10.321	10.321
<b>GROSS INFLOW</b>	<b>16.243</b>	<b>35.740</b>	<b>37.612</b>	<b>31.139</b>	<b>44.501</b>	<b>165.234</b>
4. Investments	19.877	0	0	0	0	19.877
6. Operating expens.	16.248	24.714	23.461	23.068	23.112	110.602
7. Personal income	3.213	3.213	3.213	3.213	3.213	16.065
8. Legal obligations	0	456	934	126	593	2.110
<b>GROSS OUTFLOW</b>	<b>39.338</b>	<b>28.383</b>	<b>27.608</b>	<b>26.407</b>	<b>26.918</b>	<b>148.654</b>
<b>NET FINANCIAL FLOW</b>	<b>-23.096</b>	<b>7.357</b>	<b>10.004</b>	<b>4.732</b>	<b>17.583</b>	<b>16.580</b>
<b>Cummulative DISCOUNT VALUE</b>	<b>-23.096</b>	<b>-15.739</b>	<b>-5.735</b>	<b>-1.003</b>	<b>16.580</b>	
Discount factor	8,00%	1,00	0,926	0,857	0,794	0,735
Discount factor	22,41%	1,00	0,817	0,667	0,545	0,445
-With 8,00 %	-23.096	6.812	8.577	3.756	12.924	8.974
-With 22,41% (ISR)	-23.096	6.010	6.676	2.579	7.830	0

**7.2.2 The Underground Pit Bor****- The balance of success**

in 000 \$

DESCRIPTION	1	2	3	4	5	Total
<b>A. GROSS INCOME</b>	<b>8.535</b>	<b>12.002</b>	<b>12.002</b>	<b>11.769</b>	<b>12.486</b>	<b>56.795</b>
<b>B. GROSS EXPENDITURE</b>	<b>9.198</b>	<b>12.160</b>	<b>11.804</b>	<b>11.732</b>	<b>11.654</b>	<b>56.548</b>
<b>1. OPERATING EXPENDITURE</b>	<b>9.198</b>	<b>11.795</b>	<b>11.505</b>	<b>11.505</b>	<b>11.505</b>	<b>55.509</b>
- material expenses	3.388	5.421	5.421	5.421	5.421	25.073
- maintenance	1.660	1.660	1.370	1.370	1.370	7.430
- amortization	228	744	744	744	744	3.204
- services and other mat.	518	566	566	566	566	2.782
- non-material expenses	349	349	349	349	349	1.745
- personal income	3.055	3.055	3.055	3.055	3.055	15.275
<b>2. FINANCIAL EXPENDITURE</b>	<b>0</b>	<b>365</b>	<b>299</b>	<b>227</b>	<b>149</b>	<b>1.039</b>
-Interest		365	299	227	149	1.039
<b>C. GROSS PROFIT</b>	<b>-663</b>	<b>-158</b>	<b>198</b>	<b>37</b>	<b>832</b>	<b>247</b>
- taxation		0	28	5	116	149
<b>D. NET PROFIT</b>	<b>-663</b>	<b>-158</b>	<b>171</b>	<b>32</b>	<b>715</b>	<b>97</b>
<b>Cummulativ</b>	<b>-663</b>	<b>-820</b>	<b>-650</b>	<b>-618</b>	<b>97</b>	

- Cost price Underground pit							in 000 \$	
DESCRIPTION	1	2	3	4	5	Total	\$/t exc. mat.	
- material expenses	2.312	3.700	3.700	3.700	3.700	17.111	3,083	
- maintenance	1.130	1.130	950	950	950	5.110	0,921	
- amortization	136	552	552	552	552	2.344	0,422	
- services and other mat.	353	388	388	388	388	1.905	0,343	
- non-material expenses	210	210	210	210	210	1.050	0,189	
- personal income	2.111	2.111	2.111	2.111	2.111	10.557	1,902	
- interest		285	233	177	116	811	0,146	
<b>Total expenses</b>	<b>6.253</b>	<b>8.376</b>	<b>8.144</b>	<b>8.088</b>	<b>8.027</b>	<b>38.888</b>	<b>7,007</b>	
<b>Cost price \$/t excavated mat.</b>	<b>8,337</b>	<b>6,980</b>	<b>6,787</b>	<b>6,740</b>	<b>6,689</b>	<b>7,007</b>		

Concentrator							in 000 \$	
DESCRIPTION	1	2	3	4	5	Total	\$/t exc. mat.	
- material expenses	1.076	1.722	1.722	1.722	1.722	7.963	1,435	
- maintenance	530	530	420	420	420	2.320	0,418	
- amortization	92	192	192	192	192	860	0,155	
- services and other mat.	165	178	178	178	178	877	0,158	
- non-material expenses	139	139	139	139	139	695	0,125	
- personal income	944	944	944	944	944	4.718	0,850	
- interest		80	66	50	32	228	0,041	
<b>Total expenses</b>	<b>2.946</b>	<b>3.784</b>	<b>3.660</b>	<b>3.644</b>	<b>3.626</b>	<b>17.660</b>	<b>3,182</b>	
<b>Cost price \$/t excavated mat.</b>	<b>3,927</b>	<b>3,154</b>	<b>3,050</b>	<b>3,037</b>	<b>3,022</b>	<b>3,182</b>		

Underground pit cost price						in 000 \$	
DESCRIPTION	1	2	3	5	Total		
- material expenses	3.388	5.421	5.421	5.421	5.421	25.073	
- maintenance	1.660	1.660	1.370	1.370	1.370	7.430	
- amortization	228	744	744	744	744	3.204	
- services and other mat.	518	566	566	566	566	2.782	
- non-material expenses	349	349	349	349	349	1.745	
- personal income	3.055	3.055	3.055	3.055	3.055	15.275	
- interest	0	365	299	227	148	1.039	
<b>TOTAL EXPENSES</b>	<b>9.198</b>	<b>12.160</b>	<b>11.804</b>	<b>11.732</b>	<b>11.653</b>	<b>56.548</b>	
Reduced by Au value	627	999	999	972	1.581	5.177	
Reduced by Ag value	22	36	35	36	69	198	
<b>NET EXPENSES I</b>	<b>8.548</b>	<b>11.126</b>	<b>10.770</b>	<b>10.725</b>	<b>10.004</b>	<b>51.173</b>	
Smelting and refining charges	1.971	2.742	2.742	2.690	2.709	12.855	
<b>NET EXPENSES II</b>	<b>10.520</b>	<b>13.868</b>	<b>13.512</b>	<b>13.416</b>		<b>64.029</b>	
<b>Cost price of Cu in the concs. (\$/t)</b>	<b>1.613,07</b>	<b>1.509,42</b>	<b>1.461,15</b>	<b>1.482,89</b>	<b>1.373,60</b>	<b>1.480,85</b>	
<b>Cost price of Cu in the catho. (\$/t)</b>	<b>2.134,48</b>	<b>2.023,03</b>	<b>1.971,13</b>	<b>1.994,50</b>	<b>1.877,03</b>	<b>1.992,31</b>	

## - Financial cash flow

in 000 \$

DESCRIPTION	1	2	3	4	5	Total
1. Gross income	8.535	12.002	12.002	11.769	12.486	56.795
- realization	8.535	12.002	12.002	11.769	12.486	56.795
2. Own funds						0
3. Loans	3.669					3.669
4. Remaining value	0	0	0	0	2.522	2.522
- fixed assets					2.522	2.522
<b>GROSS INFLOW</b>	<b>12.204</b>	<b>12.002</b>	<b>12.002</b>	<b>11.769</b>	<b>15.008</b>	<b>62.986</b>
5. Investments	4.586					4.586
6. Material expend.	5.915	7.996	7.706	7.706	7.706	37.030
7. Personal income	3.055	3.055	3.055	3.055	3.055	15.275
8. Legal obligations		0	28	5	116	149
9. Financial expend.	0	365	299	227	149	1.039
10. Repayments		812	879	950	1.028	3.669
<b>GROSS OUTFLOW</b>	<b>13.556</b>	<b>12.228</b>	<b>11.966</b>	<b>11.943</b>	<b>12.055</b>	<b>61.749</b>
<b>NET FINANCIAL FLOW</b>	<b>-1.352</b>	<b>-226</b>	<b>36</b>	<b>-174</b>	<b>2.954</b>	<b>1.238</b>
<b>Cummulative</b>	<b>-1.352</b>	<b>-1.578</b>	<b>-1.542</b>	<b>-1.716</b>	<b>1.238</b>	
<b>Discount factor</b>	8,0%	1,00	0,926	0,857	0,794	0,735
<b>DISCOUNT VALUE</b>	<b>-1.352</b>	<b>-209</b>	<b>31</b>	<b>-138</b>	<b>2.171</b>	<b>503</b>

## - Economic financial flow

In 000 \$

DESCRIPTION	1	2	3	4	5	Total
1. Gross income	8.535	12.002	12.002	11.769	12.486	56.795
2. Remaining value	0	0	0	0	2.522	2.522
- fixed assets					2.522	
<b>GROSS INFLOW</b>	<b>8.535</b>	<b>12.002</b>	<b>12.002</b>	<b>11.769</b>	<b>15.008</b>	<b>59.317</b>
4. Investments	4.586	0	0	0	0	4.586
6. Operating expens.	5.915	7.996	7.706	7.706	7.706	37.030
7. Personal income	3.055	3.055	3.055	3.055	3.055	15.275
8. Legal obligations	0	0	28	5	116	149
<b>GROSS OUTFLOW</b>	<b>13.556</b>	<b>11.051</b>	<b>10.789</b>	<b>10.766</b>	<b>10.878</b>	<b>57.040</b>
<b>NET FINANCIAL FLOW</b>	<b>-5.021</b>	<b>951</b>	<b>1.213</b>	<b>1.003</b>	<b>4.131</b>	<b>2.277</b>
<b>Cummulative</b>	<b>-5.021</b>	<b>-4.070</b>	<b>-2.857</b>	<b>-1.854</b>	<b>2.277</b>	
<b>DISCOUNT VALUE</b>						
Discount factor	8,00%	1,00	0,926	0,857	0,794	
Discount factor	13,00%	1,00	0,885	0,783	0,693	0,613
	%					
<b>-With 8,00 %</b>	<b>-5.021</b>	<b>881</b>	<b>1.040</b>	<b>796</b>	<b>3.036</b>	<b>732</b>
<b>-With 13,00% (ISR)</b>	<b>-5.021</b>	<b>842</b>	<b>950</b>	<b>695</b>	<b>2.534</b>	<b>0</b>

## 7.2.3 Smelter slag Bor

## - Balance of success

in 000 \$

DESCRIPTION	1	2	3	4	5	Total
<b>A. GROSS INCOME</b>	<b>5.525</b>	<b>5.755</b>	<b>5.755</b>	<b>5.755</b>	<b>5.755</b>	<b>28.545</b>
<b>B. GROSS EXPENDITURE</b>	<b>3.977</b>	<b>4.609</b>	<b>4.573</b>	<b>4.533</b>	<b>4.491</b>	<b>22.183</b>
<b>1. OPERATING EXPENDITURE</b>	<b>3.977</b>	<b>4.409</b>	<b>4.409</b>	<b>4.409</b>	<b>4.409</b>	<b>21.611</b>
- material expenses	2.172	2.262	2.262	2.262	2.262	11.221
- maintenance	280	280	280	280	280	1.400
- amortization	46	339	339	339	339	1.402
- services and other mat.	1.174	1.222	1.222	1.222	1.222	6.062
- non-material expenses	40	40	40	40	40	200
- personal income	265	265	265	265	265	1.326
<b>2. FINANCIAL EXPENDITURE</b>	<b>0</b>	<b>201</b>	<b>164</b>	<b>125</b>	<b>82</b>	<b>572</b>
- interest		201	164	125	82	572
<b>C. GROSS PROFIT</b>	<b>1.548</b>	<b>1.146</b>	<b>1.182</b>	<b>1.222</b>	<b>1.264</b>	<b>6.362</b>
- taxation	217	160	166	171	177	891
<b>D. NET PROFIT</b>	<b>1.331</b>	<b>985</b>	<b>1.017</b>	<b>1.051</b>	<b>1.087</b>	<b>5.471</b>
<b>Cummulativ</b>	<b>1.331</b>	<b>2.316</b>	<b>3.333</b>	<b>4.384</b>	<b>5.471</b>	

## - Cost price

in 000 \$

DESCRIPTION	1	2	3	4	5	Total	\$/t exp. Mat.
- material expenses	2.172	2.262	2.262	2.262	2.262	11.221	3,017
- maintenance	280	280	280	280	280	1.400	0,376
- amortization	46	339	339	339	339	1.402	0,377
- services and other mat.	1.174	1.222	1.222	1.222	1.222	6.062	1,630
- non-material expenses	40	40	40	40	40	200	0,054
- personal income	265	265	265	265	265	1.326	0,356
- interest	0	201	164	125	82	572	0,154
<b>TOTAL EXPENSES</b>	<b>3.977</b>	<b>4.609</b>	<b>4.573</b>	<b>4.533</b>	<b>4.491</b>	<b>22.183</b>	<b>5,963</b>
Reduced by Au value	<b>5,524</b>		<b>6,097</b>		<b>5,988</b>	<b>5,963</b>	
Reduced by Ag value	1.017	1.059	1.059	1.059	1.059	<b>5.253</b>	
<b>NET EXPENSES I</b>	<b>50</b>	<b>52</b>	<b>52</b>	<b>52</b>	<b>52</b>	<b>258</b>	
Smelting and refining charges		<b>3.498</b>	<b>3.462</b>	<b>3.422</b>	<b>3.380</b>	<b>16.673</b>	
<b>NET EXPENSES II</b>	<b>1.115</b>	<b>1.161</b>	<b>1.161</b>	<b>1.161</b>	<b>1.161</b>	<b>5.759</b>	
<b>Cost price of Cu in the concs. (\$/t)</b>	<b>4.025</b>	<b>4.659</b>	<b>4.623</b>	<b>4.583</b>	<b>4.541</b>		
<b>Cost price of Cu in the catho. (\$/t)</b>	<b>971,42</b>	<b>1.120,87</b>	<b>1.109,19</b>	<b>1.096,56</b>	<b>1.082,89</b>	<b>1.077,03</b>	
- material expenses	<b>1.444,54</b>	<b>1.605,24</b>	<b>1.592,68</b>	<b>1.579,09</b>	<b>1.564,40</b>	<b>1.558,10</b>	

## - Financial cash flow

						in 000 \$
DESCRIPTION	1	2	4	5	Total	
1. Gross income	5.525	5.755	5.755	5.755	5.755	28.545
- realization	5.525	5.755	5.755	5.755	5.755	28.545
2. Own funds						0
3. Loans	2.018					2.018
4. Remaining value	0	0	0	0	1.351	1.351
- fixed assets					1.351	1.351
<b>GROSS INFLOW</b>	<b>7.543</b>	<b>5.755</b>	<b>5.755</b>	<b>5.755</b>	<b>7.106</b>	<b>31.914</b>
5. Investments	2.523					2.523
6. Material expend.	3.666	3.804	3.804	3.804	3.804	18.883
7. Personal income	265	265	265	265	265	1.326
8. Legal obligations		160	166	171	177	674
9. Financial expend.	0	201	164	125	82	572
10. Repayments		447	483	523	565	2.018
<b>GROSS OUTFLOW</b>	<b>6.454</b>	<b>4.877</b>	<b>4.883</b>	<b>4.888</b>	<b>4.894</b>	<b>25.996</b>
<b>NET FINANCIAL FLOW</b>	<b>1.089</b>	<b>878</b>	<b>873</b>	<b>867</b>	<b>2.212</b>	<b>5.918</b>
<b>Cummulative</b>	<b>1.089</b>	<b>1.966</b>	<b>2.839</b>	<b>3.706</b>	<b>5.918</b>	
<b>Discount factor</b>	8,0%	1,00	0,926	0,857	0,735	
<b>DISCOUNT VALUE</b>	<b>1.089</b>	<b>813</b>	<b>748</b>	<b>688</b>	<b>1.626</b>	<b>4.963</b>

## - Economic cash flow

						in 000 \$
DESCRIPTION	1	3	4		Total	
1. Gross income	5.525	5.755	5.755	5.755	5.755	28.545
2. Remaining value	0	0	0	0	1.351	1.351
- fixed assets					1.351	
<b>GROSS INFLOW</b>	<b>5.525</b>	<b>5.755</b>	<b>5.755</b>	<b>5.755</b>	<b>7.106</b>	<b>29.896</b>
4. Investments	2.523	0	0	0	0	2.523
6. Operating expens.	3.666	3.804	3.804	3.804	3.804	18.883
7. Personal income	265	265	265	265	265	1.326
8. Legal obligations	0	160	166	171	177	674
<b>GROSS OUTFLOW</b>	<b>6.454</b>	<b>4.230</b>	<b>4.235</b>	<b>4.241</b>	<b>4.247</b>	<b>23.406</b>
<b>NET FINANCIAL FLOW</b>	<b>-929</b>	<b>1.525</b>	<b>1.520</b>	<b>1.514</b>	<b>2.859</b>	<b>6.489</b>
<b>Cummulative</b>	<b>-929</b>	<b>596</b>	<b>2.116</b>	<b>3.630</b>	<b>6.489</b>	
<b>DISCOUNT VALUE</b>						
Discount factor	8,00%	0,926	0,857	0,794	0,735	
Discount factor	165,36%	1,00	0,377	0,142	0,020	
<b>-With 8,00 %</b>	<b>-929</b>	<b>1.412</b>	<b>1.303</b>	<b>1.202</b>	<b>2.102</b>	<b>5.090</b>
<b>-With 165,36% (ISR)</b>	<b>-929</b>	<b>575</b>	<b>216</b>	<b>81</b>	<b>58</b>	<b>0</b>



## 7.2.4 Total RBB

## - Balance of success

in 000 \$

DESCRIPTION	1	2	3	4	5	Total
<b>A. GROSS INCOME</b>	<b>30.303</b>	<b>53.497</b>	<b>55.369</b>	<b>48.663</b>	<b>52.421</b>	<b>240.253</b>
<b>B. GROSS EXPENDITURE</b>	<b>33.221</b>	<b>49.250</b>	<b>47.317</b>	<b>46.502</b>	<b>46.090</b>	<b>222.379</b>
<b>1. OPERATING EXPENDITURE</b>	<b>33.221</b>	<b>47.103</b>	<b>45.561</b>	<b>45.167</b>	<b>45.211</b>	<b>216.263</b>
- material expenses	15.478	25.199	26.131	26.132	26.132	119.073
- maintenance	6.640	7.040	4.500	4.200	4.200	26.580
- amortization	858	4.056	4.056	4.056	4.056	17.082
- services and other mat.	2.833	3.396	3.461	3.367	3.411	16.468
- non-material expenses	879	879	879	879	879	4.395
- personal income	6.533	6.533	6.533	6.533	6.533	32.666
<b>2. FINANCIAL EXPENDITURE</b>	<b>0</b>	<b>2.146</b>	<b>1.756</b>	<b>1.335</b>	<b>878</b>	<b>6.116</b>
- Interest		2.146	1.756	1.335	878	6.116
<b>C. GROSS PROFIT</b>	<b>-2.918</b>	<b>4.247</b>	<b>8.052</b>	<b>2.161</b>	<b>6.332</b>	<b>17.874</b>
- taxation	0	595	1.127	303	886	2.911
<b>D. NET PROFIT</b>	<b>-2.918</b>	<b>3.653</b>	<b>6.925</b>	<b>1.858</b>	<b>5.445</b>	<b>14.963</b>
<b>Cummulativ</b>	<b>-2.918</b>	<b>735</b>	<b>7.660</b>	<b>9.518</b>	<b>14.963</b>	

## - Cost price

in 000 \$

DESCRIPTION	1	2	3	4	5	
- material expenses	15.478	25.199	26.131	26.132	26.132	119.073
- maintenance	6.640	7.040	4.500	4.200	4.200	26.580
- amortization	858	4.056	4.056	4.056	4.056	17.082
- services and other mat.	2.833	3.396	3.459	3.368	3.412	16.468
- non-material expenses	879	879	879	879	879	4.395
- personal income	6.533	6.533	6.533	6.533	6.533	32.666
- interest	0	2.147	1.757	1.335	877	6.116
<b>TOTAL EXPENSES</b>	<b>33.221</b>	<b>49.250</b>	<b>47.316</b>	<b>46.503</b>	<b>46.089</b>	<b>222.379</b>
Reduced by Au value	2.551	3.873	3.873	3.846	4.455	<b>18.598</b>
Reduced by Ag value	113	168	168	168	201	<b>819</b>
<b>NET EXPENSES I</b>	<b>30.557</b>	<b>45.209</b>	<b>43.275</b>	<b>42.489</b>	<b>41.433</b>	
Smelting and refining charges	6.910	12.364	12.832	11.162	11.941	55.209
<b>NET EXPENSES II</b>	<b>37.467</b>	<b>57.573</b>	<b>56.106</b>	<b>53.651</b>	<b>53.374</b>	<b>258.171</b>
	<b>1.645,09</b>	<b>1.360,21</b>	<b>1.254,54</b>	<b>1.416,03</b>	<b>1.290,75</b>	<b>1.367,56</b>
	<b>2.168,91</b>	<b>1.862,59</b>	<b>1.748,96</b>	<b>1.922,61</b>	<b>1.787,90</b>	<b>1.870,50</b>

## - Financial cash flow

in 000 \$

DESCRIPTION	1	3	4	5	Total	
1. Gross income	30.303	53.497	55.369	48.663	52.421	240.253
- realization	30.303	53.497	55.369	48.663	52.421	240.253
2. Own funds						0
3. Loans	21.589					21.589
4. Remaining value	0	0	0	0	14.194	14.194
- fixed assets					14.194	14.194
<b>GROSS INFLOW</b>	<b>51.892</b>	<b>53.497</b>	<b>55.369</b>	<b>48.663</b>	<b>66.615</b>	<b>276.036</b>
5. Investments	26.986					26.986
6. Material expend.	25.830	36.514	34.971	34.578	34.622	166.516
7. Personal income	6.533	6.533	6.533	6.533	6.533	32.666
8. Legal obligations		595	1.127	303	886	2.911
9. Financial expend.	0	2.146	1.756	1.335	878	6.116
10. Repayments		4.780	5.170	5.592	6.048	21.589
<b>GROSS OUTFLOW</b>	<b>59.349</b>	<b>50.568</b>	<b>49.558</b>	<b>48.340</b>	<b>48.968</b>	<b>256.783</b>
<b>NET FINANCIAL FLOW</b>	<b>-7.457</b>	<b>2.929</b>	<b>5.811</b>	<b>323</b>	<b>17.648</b>	<b>19.253</b>
<b>Cummulative</b>	<b>-7.457</b>	<b>-4.528</b>	<b>1.283</b>	<b>1.606</b>	<b>19.253</b>	
<b>Discount factor</b>	8,0%	1,00	0,926	0,857	0,794	0,735
<b>DISCOUNT VALUE</b>	<b>-7.457</b>	<b>2.712</b>	<b>4.982</b>	<b>256</b>	<b>12.971</b>	<b>13.465</b>

## - Economic cash flow

in 000 \$

DESCRIPTION	1	2	3	4	5	Total
1. Gross income	30.303	53.497	55.369	48.663	52.421	240.253
2. Remaining value	0	0	0	0	14.194	14.194
- fixed assets					14.194	
<b>GROSS INFLOW</b>	<b>30.303</b>	<b>53.497</b>	<b>55.369</b>	<b>48.663</b>	<b>66.615</b>	<b>254.447</b>
4. Investments	26.986	0	0	0	0	26.986
6. Operating expens.	25.830	36.514	34.971	34.578	34.622	166.516
7. Personal income	6.533	6.533	6.533	6.533	6.533	32.666
8. Legal obligations	0	595	1.127	303	886	2.911
<b>GROSS OUTFLOW</b>	<b>59.349</b>	<b>43.642</b>	<b>42.632</b>	<b>41.414</b>	<b>42.042</b>	<b>229.078</b>
<b>NET FINANCIAL FLOW</b>	<b>-29.046</b>	<b>9.855</b>	<b>12.737</b>	<b>7.249</b>	<b>24.574</b>	<b>25.369</b>
<b>Cummulative DISCOUNT VALUE</b>	<b>-29.046</b>	<b>-19.191</b>	<b>-6.453</b>	<b>795</b>	<b>25.369</b>	
Discount factor	8,00%	1,00	0,926	0,857	0,794	0,735
Discount factor	26,30%	1,00	0,792	0,627	0,496	0,393
<b>-With 8,00 %</b>	<b>-29.046</b>	<b>9.125</b>	<b>10.920</b>	<b>5.754</b>	<b>18.062</b>	<b>14.816</b>
<b>-With 26,30% (ISR)</b>	<b>-29.046</b>	<b>7.803</b>	<b>7.985</b>	<b>3.598</b>	<b>9.659</b>	<b>0</b>

### 7.3 Economic and financial parameters of the Majdanpek copper mine

- Balans of success

	in 000 \$					
DESCRIPTION	1	2	3	4	5	Total
<b>A. GROSS INCOME</b>	<b>10.006</b>	<b>25.279</b>	<b>27.104</b>	<b>26.852</b>	<b>24.298</b>	<b>113.539</b>
<b>B. GROSS EXPENDITURE</b>	<b>15.965</b>	<b>23.080</b>	<b>21.766</b>	<b>20.833</b>	<b>20.714</b>	<b>102.358</b>
<b>1. OPERATING EXPENDITURE</b>	<b>15.965</b>	<b>22.639</b>	<b>21.301</b>	<b>20.219</b>	<b>19.992</b>	<b>100.116</b>
- material expenses	5.056	13.246	11.808	10.518	10.205	50.833
- maintenance	3.124	1.280	1.100	1.150	1.130	7.784
- amortization	936	1.099	1.356	1.525	1.692	6.608
- services and other mat.	611	774	798	787	726	3.696
- non-material expenses	374	374	374	374	374	1.870
- personal income	5.865	5.865	5.865	5.865	5.865	29.325
<b>2. FINANCIAL EXPENDITURE</b>	<b>0</b>	<b>441</b>	<b>465</b>	<b>614</b>	<b>723</b>	<b>2.243</b>
- interest		441	465	614	723	2.243
<b>C. GROSS PROFIT</b>	<b>-5.959</b>	<b>2.199</b>	<b>5.338</b>	<b>6.020</b>	<b>3.584</b>	<b>11.181</b>
- taxation		308	747	843	502	2.400
<b>D. NET PROFIT</b>	<b>-5.959</b>	<b>1.891</b>	<b>4.591</b>	<b>5.177</b>	<b>3.082</b>	<b>8.782</b>
<b>Cummulativ</b>	<b>-5.959</b>	<b>-4.068</b>	<b>523</b>	<b>5.700</b>	<b>8.782</b>	

- Cost price

	in 000 \$						
DESCRIPTION	1	2	3	4	5	Total	\$/t exc. mat.
- material expenses	2.836	4.997	3.559	2.269	1.956	15.617	0,423
- maintenance	2.499	1.024	880	920	904	6.227	0,169
- amortization	562	659	814	915	1.015	3.965	0,107
- services and other mat.	366	465	479	472	435	2.218	0,060
- non-material expenses	224	224	224	224	224	1.122	0,030
- personal income	3.519	3.519	3.519	3.519	3.519	17.595	0,477
- interest		265	279	368	434	1.346	0,036
<b>Total expenses</b>	<b>10.006</b>	<b>11.153</b>	<b>9.754</b>	<b>8.688</b>	<b>8.487</b>	<b>48.089</b>	<b>1,303</b>
<b>Cost price \$/t excavated mat.</b>	<b>1,491</b>	<b>0,943</b>	<b>1,158</b>	<b>1,617</b>	<b>1,832</b>	<b>1,303</b>	

Concentrator

	in 000 \$						
DESCRIPTION	1	2	3	4	5	Total	\$/t exc. mat.
- material expenses	2.220	8.249	8.249	8.249	8.249	35.216	1,833
- maintenance	625	256	220	230	226	1.557	0,081
- amortization	374	440	542	610	677	2.643	0,138
- services and other mat.	244	310	319	315	290	1.478	0,077
- non-material expenses	150	150	150	150	150	748	0,039
- personal income	2.346	2.346	2.346	2.346	2.346	11.730	0,611
- interest		177	186	246	289	897	0,047
<b>Total expenses</b>	<b>5.959</b>	<b>11.927</b>	<b>12.012</b>	<b>12.145</b>	<b>12.227</b>	<b>54.270</b>	<b>2,825</b>
<b>Cost price \$/t excavated mat.</b>	<b>4,917</b>	<b>2,643</b>	<b>2,662</b>	<b>2,692</b>	<b>2,710</b>	<b>2,825</b>	

Cost price - the Majdanpek Copper Mine						in 000 \$
DESCRIPTION	1	2	3	4	5	Total
- material expenses	5.056	13.246	11.808	10.518	10.205	50.833
- maintenance	3.124	1.280	1.100	1.150	1.130	7.784
- amortization	936	1.099	1.356	1.525	1.692	6.608
- services and other mat.	611	774	798	787	726	3.696
- non-material expenses	374	374	374	374	374	1.870
- personal income	5.865	5.865	5.865	5.865	5.865	29.325
- interest		441	465	614	723	2.243
<b>TOTAL EXPENSES</b>	<b>15.965</b>	<b>23.080</b>	<b>21.766</b>	<b>20.833</b>	<b>20.714</b>	<b>102.358</b>
Reduced by Au value	3.888	5.700	4.456	4.317	4.016	22.377
Reduced by Ag value	345	471	363	364	331	1.873
<b>NET EXPENSES I</b>	<b>11.733</b>	<b>16.909</b>	<b>16.947</b>	<b>16.152</b>	<b>16.367</b>	<b>78.108</b>
Smelting and refining charges	1.443	4.777	5.571	5.543	4.988	22.322
<b>NET EXPENSES II</b>	<b>13.177</b>	<b>21.686</b>	<b>22.519</b>	<b>21.695</b>	<b>21.354</b>	<b>100.431</b>
<b>Cost price of Cu in the concs. (\$/t)</b>	<b>3.023,73</b>	<b>1.316,77</b>	<b>1.131,57</b>	<b>1.084,00</b>	<b>1.220,72</b>	<b>1.301,67</b>
<b>Cost price of Cu in the catho. (\$/t)</b>	<b>3.651,33</b>	<b>1.815,88</b>	<b>1.616,74</b>	<b>1.565,59</b>	<b>1.712,60</b>	<b>1.799,64</b>

## - Financial cash flow

Financial cash flow						in 000 \$
DESCRIPTION	1	2	3	4	5	Total
1. Gross income	10.006	25.279	27.104	26.852	24.298	113.539
- realization	10.006	25.279	27.104	26.852	24.298	113.539
2. Own funds						0
3. Loans	4.440	1.040	2.563	2.707	2.670	13.420
4. Remaining value	0	0	0	0	12.117	12.117
- fixed assets					12.117	12.117
<b>GROSS INFLOW</b>	<b>14.446</b>	<b>26.319</b>	<b>29.667</b>	<b>29.559</b>	<b>39.085</b>	<b>139.076</b>
5. Investments	5.550	1.300	3.204	3.384	3.337	16.775
6. Material expend.	9.164	15.675	14.080	12.829	12.435	64.183
7. Personal income	5.865	5.865	5.865	5.865	5.865	29.325
8. Legal obligations		308	747	843	502	2.400
9. Financial expend.	0	441	465	614	723	2.243
10. Repayments		983	1.293	1.966	2.726	6.969
<b>GROSS OUTFLOW</b>	<b>20.579</b>	<b>24.572</b>	<b>25.655</b>	<b>25.501</b>	<b>25.587</b>	<b>121.894</b>
<b>NET FINANCIAL FLOW</b>	<b>-6.133</b>	<b>1.747</b>	<b>4.012</b>	<b>4.058</b>	<b>13.498</b>	<b>17.182</b>
<b>Cummulative</b>	<b>-6.133</b>	<b>-4.386</b>	<b>-374</b>	<b>3.685</b>	<b>17.182</b>	
<b>Discount factor</b> 8,0%	1,00	0,926	0,857	0,794	0,735	
<b>DISCOUNT VALUE</b>	<b>-6.133</b>	<b>1.618</b>	<b>3.440</b>	<b>3.222</b>	<b>9.921</b>	<b>12.067</b>

## - Economic cash flow

	in 000 \$					
DESCRIPTION	1	2	3	4	Total	
1. Gross income	10.006	25.279	27.104	26.852	24.298	113.539
2. Remaining value - fixed assets	0	0	0	0	12.117	12.117
<b>GROSS INFLOW</b>	<b>10.006</b>	<b>25.279</b>	<b>27.104</b>	<b>26.852</b>	<b>36.415</b>	<b>125.656</b>
4. Investments	5.550	1.300	3.204	3.384	3.337	16.775
6. Operating expens.	9.164	15.675	14.080	12.829	12.435	64.183
7. Personal income	5.865	5.865	5.865	5.865	5.865	29.325
8. Legal obligations	0	308	747	843	502	2.400
<b>GROSS OUTFLOW</b>	<b>20.579</b>	<b>23.147</b>	<b>23.897</b>	<b>22.920</b>	<b>22.138</b>	<b>112.682</b>
<b>NET FINANCIAL FLOW</b>	<b>-10.573</b>	<b>2.131</b>	<b>3.207</b>	<b>3.932</b>	<b>14.277</b>	<b>12.974</b>
<b>Cummulative DISCOUNT VALUE</b>	<b>-10.573</b>	<b>-8.442</b>	<b>-5.234</b>	<b>-1.302</b>		<b>12.974</b>
Discount factor	8,00%	1,00	0,926	0,857	0,794	0,735
Discount factor	28,97%	1,00	0,775	0,601	0,466	0,361
<b>-With 8,00 %</b>	<b>-10.573</b>	<b>1.974</b>	<b>2.750</b>	<b>3.121</b>	<b>10.494</b>	<b>7.765</b>
<b>-With 28,97% (ISR)</b>	<b>-10.573</b>	<b>1.653</b>	<b>1.928</b>	<b>1.833</b>	<b>5.160</b>	<b>0</b>

## 7.4 Economic and financial parameters of RTB Bor

## - Balance of success

	in 000 \$					
DESCRIPTION	1	2	3	4	5	Total
<b>A. GROSS INCOME</b>	<b>40.309</b>	<b>78.776</b>	<b>82.473</b>	<b>75.515</b>	<b>76.719</b>	<b>353.792</b>
<b>B. GROSS EXPENDITURE</b>	<b>49.186</b>	<b>72.330</b>	<b>69.083</b>	<b>67.335</b>	<b>66.804</b>	<b>324.737</b>
<b>1. OPERATING EXPENDITURE</b>	<b>49.186</b>	<b>69.742</b>	<b>66.862</b>	<b>65.386</b>	<b>65.203</b>	<b>316.379</b>
- material expenses	20.533	38.445	37.939	36.650	36.337	169.906
- maintenance	9.764	8.320	5.600	5.350	5.330	34.364
- amortization	1.794	5.155	5.412	5.581	5.748	23.690
- services and other mat.	3.444	4.170	4.259	4.154	4.137	20.164
- non-material expenses	1.253	1.253	1.253	1.253	1.253	6.265
- personal income	12.398	12.398	12.398	12.398	12.398	61.991
<b>2. FINANCIAL EXPENDITURE</b>	<b>0</b>	<b>2.588</b>	<b>2.221</b>	<b>1.948</b>	<b>1.601</b>	<b>8.358</b>
-Interest	0	2.588	2.221	1.948	1.601	8.358
<b>C. GROSS PROFIT</b>	<b>-8.877</b>	<b>6.446</b>	<b>13.390</b>	<b>8.180</b>	<b>9.915</b>	<b>29.055</b>
- taxation	0	902	1.875	1.145	1.388	5.311
<b>D. NET PROFIT</b>	<b>-8.877</b>	<b>5.544</b>	<b>11.516</b>	<b>7.035</b>	<b>8.527</b>	<b>23.745</b>
<b>Cummulativ</b>	<b>-8.877</b>	<b>-3.333</b>	<b>8.182</b>	<b>15.218</b>	<b>23.745</b>	

- Cost price

Cost price - RTB in 000 \$

DESCRIPTION	1	2	3	4	5	Total
- material expenses	20.533	38.445	37.939	36.650	36.337	169.906
- maintenance	9.764	8.320	5.600	5.350	5.330	34.364
- amortization	1.794	5.155	5.412	5.581	5.748	23.690
- services and other mat.	3.444	4.170	4.257	4.155	4.138	20.164
- non-material expenses	1.253	1.253	1.253	1.253	1.253	6.265
- personal income	12.398	12.398	12.398	12.398	12.398	61.991
- interest	0	2.588	2.222	1.949	1.600	8.358
<b>TOTAL EXPENSES</b>	<b>49.186</b>	<b>72.330</b>	<b>69.082</b>	<b>67.336</b>	<b>66.804</b>	<b>324.737</b>
Reduced by Au value	6.439	9.573	8.329	8.163	8.472	40.975
Reduced by Ag value	457	639	531	532	532	2.692
	<b>42.290</b>	<b>62.118</b>	<b>60.222</b>	<b>58.641</b>	<b>57.800</b>	<b>281.070</b>
Smelting and refining charges	8.353	17.141	18.403	16.705	16.929	77.531
<b>NET EXPENSES II</b>	<b>50.643</b>	<b>79.259</b>	<b>78.625</b>	<b>75.346</b>	<b>74.728</b>	<b>358.602</b>
Cost price of Cu in the concs. (\$/t)	1.883,32		1.217,31	1.305,86	1.270,11	1.348,59
Cost price of Cu in the catho. (\$/t)	2.425,08	1.849,57	1.708,93	1.804,15	1.765,71	1.850,10

- Average cost price in the five year period for basic production phases

Production phases	V. Krivelj	Undergr. pit	Slag plant	Majdanpek	RTB
\$/t excavated material	0,948	7,007		1,303	
\$/t ore treated in Concentrator	1,989	3,182	5,963	2,825	
\$/t Cu in the concentrate	1.373,49	1.480,85	1.077,03	1.301,67	1.348,59
\$/t cathode Cu	1.876,87	1.992,31	1.558,10	1.799,64	1.850,10

- Financial cash flow

in 000 \$

DESCRIPTION	1	2	3	4	5	Total
1. Gross income	40.309	78.776	82.473	75.515	76.719	353.792
- realization	40.309	78.776	82.473	75.515	76.719	353.792
2. Own funds						0
3. Loans	26.029	1.040	2.563	2.707	2.670	35.009
4. Remaining value	0	0	0	0	26.311	26.311
- fixed assets					26.311	26.311
<b>GROSS INFLOW</b>	<b>66.338</b>	<b>79.816</b>	<b>85.036</b>	<b>78.222</b>	<b>105.700</b>	<b>415.113</b>
5. Investments	32.536	1.300	3.204	3.384	3.337	43.761
6. Material expend.	34.994	52.189	49.052	47.407	47.057	230.699
7. Personal income	12.398	12.398	12.398	12.398	12.398	61.991
8. Legal obligations	0	902	1.875	1.145	1.388	5.311
9. Financial expend.	0	2.588	2.221	1.948	1.601	8.358
10. Repayments	0	5.763	6.463	7.558	8.774	28.558
<b>GROSS OUTFLOW</b>	<b>79.928</b>	<b>75.140</b>	<b>75.213</b>	<b>73.841</b>	<b>74.555</b>	<b>378.677</b>
<b>NET FINANCIAL FLOW</b>	<b>-13.590</b>	<b>4.676</b>	<b>9.823</b>	<b>4.381</b>	<b>31.145</b>	<b>36.436</b>
Cummulative	-13.590	-8.914	909	5.291	36.436	
Discount factor 8,0%	1,00	0,926	0,857	0,794	0,735	
<b>DISCOUNT VALUE</b>	<b>-13.590</b>	<b>4.330</b>	<b>8.422</b>	<b>3.478</b>	<b>22.893</b>	<b>25.532</b>

## - Economical cash flow

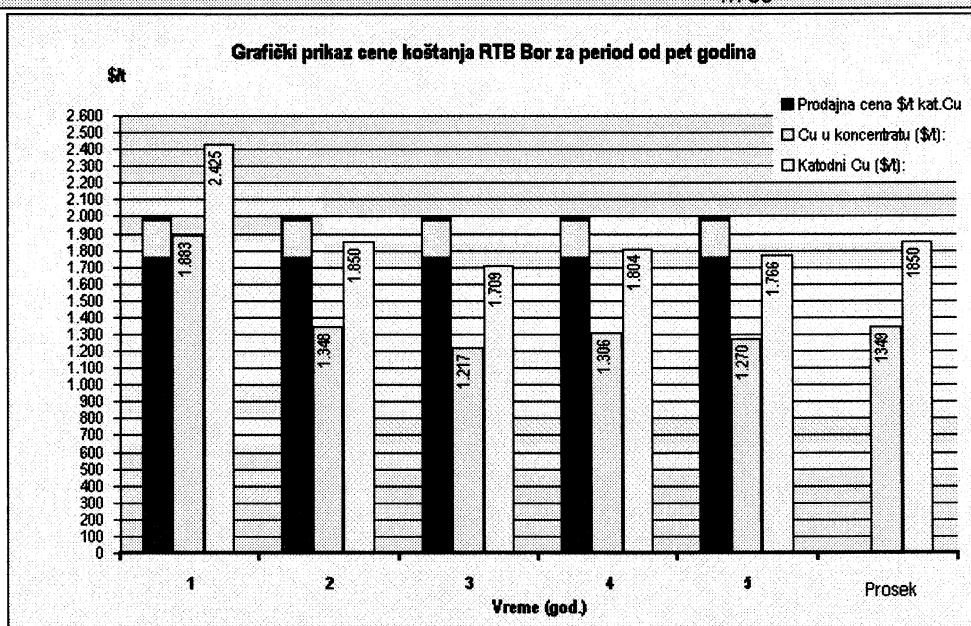
in 000 \$

DESCRIPTION	1	2	3	4	5	Total
1. Gross income	40.309	78.776	82.473	75.515	76.719	353.792
2. Remaining value - fixed assets	0	0	0	0	26.311	26.311
<b>GROSS INFLOW</b>	<b>40.309</b>	<b>78.776</b>	<b>82.473</b>	<b>75.515</b>	<b>103.030</b>	<b>380.104</b>
4. Investments	32.536	1.300	3.204	3.384	3.337	43.761
6. Operating expens.	34.994	52.189	49.052	47.407	47.057	230.699
7. Personal income	12.398	12.398	12.398	12.398	12.398	61.991
8. Legal obligations	0	902	1.875	1.145	1.388	5.311
<b>GROSS OUTFLOW</b>	<b>79.928</b>	<b>66.789</b>	<b>66.529</b>	<b>64.334</b>	<b>64.180</b>	<b>341.761</b>
<b>NET FINANCIAL FLOW</b>	<b>-39.619</b>	<b>11.987</b>	<b>15.945</b>	<b>11.181</b>	<b>38.850</b>	<b>38.343</b>
<b>Cummulative DISCOUNT VALUE</b>	<b>-39.619</b>	<b>-27.632</b>	<b>-11.688</b>	<b>-507</b>	<b>38.343</b>	
Discount factor	8,00%	1,00	0,926	0,857	0,794	0,735
Discount factor	27,12 %	1,00	0,787	0,619	0,487	0,383
<b>-With 8,00 %</b>	<b>-39.619</b>	<b>11.099</b>	<b>13.670</b>	<b>8.876</b>	<b>28.556</b>	<b>22.581</b>
<b>-With 27,12% (ISR)</b>	<b>-39.619</b>	<b>9.430</b>	<b>9.867</b>	<b>5.443</b>	<b>14.879</b>	<b>0</b>

## - Sensitivity of the:

Change	-20%	-15%	-10%	-5%	0	5%	10%	15%	20%
Income		-9,79	2,00	14,23	27,12	40,88	55,75	72,04	90,06
Expenses	68,66	56,97	46,26	36,35	27,12	18,46	10,27	2,46	-5,04
Investments	37,80	34,84	32,09	29,52	27,12	24,86	22,73	20,72	18,82
Wages	37,42	34,75	32,15	29,60	27,12	24,69	22,31	19,97	17,69
Cu prices		-9,58 (1.700\$)	2,75 (1.800\$)	14,71 (1.900\$)	27,12 (2.000\$)	40,40 (2.100\$)	54,80 (2.200\$)	70,62 (2.300\$)	88,19 (2.400\$)

Cost prices - RTB	1	2	3	4	5
Selling prices \$/t cathode Cu	2.000	2.000	2.000	2.000	2.000
Cu in the concentrate (\$/t):	1.883	1.348	1.217	1.306	1.270
					1.709



**8.0 NATIONAL PAYABILITY - ADDITIONAL VALUE**

Additional value = gross income - (material cost + investments)  
\$ 78.820,700 = \$ 353.279.000 - (\$230.697,000 + \$ 43.761,300)

**DISTRIBUTION EFFECT**

1. Net additional value	\$78.820,000
2. Net salaries	\$ 36.465,000
3. Interest	\$ 8.358,000
4. Tax and contribution	\$ 30.836,000
5. Social surplus, undistributed	\$ 3.161,700

**NET FOREIGN CURRENCY EFFECT**

Foreign currency payments	\$ 78.480,000
1. Manufacturing components	\$ 21.885,000
2. Spare parts	\$ 20.637,000
3. Equipment	\$ 27.600,000
4. Interest	\$ 8.358,000
5. Foreign currency inflow	\$ 247.650,000

**Net foreign currency effect**                    **\$ 169.170,000**



## 9.0. CONCLUSION

1. Mineable ore reserves make possible the continuation of profitable copper production in the next five years (the examined period) and feed the promising prospects for further mining at RTB Bor beyond that period.
2. The average copper content in the ore of 0.38% undoubtedly ranges RTB Bor's ore reserves in the category of poor ores.
3. Designed copper production in the five year period along with investments of \$35,136.300 will result in the positive financial effect in the amount of \$23.745,000 on condition the average copper selling price is at least \$2000/t of cathode copper with reduction of employees down to the needed level.
4. Redundant labour, according to the projected level is to be solved by the social programme of the Government of Republic of Serbia.
5. One has to bear in mind that a loss will be registered in the first year according to the project primarily due to a lower scope of production and it will be necessary for the Government of the Republic of Serbia to continue with their copper production subsidies. In case selling price is seriously disturbed or changed, it will be necessary to further continue with subsidies.
6. Old debts of RTB Bor in the amount of \$ 430.000,000 have not been dealt with in this project. The Government takes the major share of the mentioned debt (75% out of total) mainly as long-term loans from the Paris and London club, other loans granted by closed down state banks, credit arrangements through the Development fund, obligations for public income and other public and state enterprises (the Electric Authority of Serbia (EPS), Oil Industry of Serbia (NIS), Yugoslav Railways Company).  
Having in mind such a structure, it is logical to convert such debts into RTB Bor's state shares. The position of RTB Bor is changed completely in this way because with the new ownership structure, the privatization process and investments by potential partners become safer in this way.  
Obligations to other home and foreign banks and partners are to be solved in the course of their restructuring in the form of various modalities.  
Designed mining production along with prior completion of the social programme and the programme of subsidies create conditions for servicing the remaining part of old debts.
7. Upon solving the problem of old debts, the social programme and the programme of subsidies, the privatization process of RTB Bor can be approached in a more serious manner.
8. It is possible to increase RTB Bor's production after completing an investment cycle to provide for its more stable business operation.  
However, the investment cycle cannot be completed without the previous strategic decision to be made by the Government of the Republic of Serbia with regard to RTB Bor.
9. As for conversion of old debts in the form of participation of the state in RTB Bor's capital, the method of management of RTB Bor is also something to be regulated properly.
10. RTB Bor's metallurgical complex (smelter, refinery, foundry, copper wire plant, etc.) has not been treated by this project.  
The equipment of the metallurgical complex is also very old and worn out and the smelting technology is of the third generation.  
However, with the minimum investment of US\$ 3.000,000 for the repair of the plant, the metallurgical complex will be capable of completely processing the designed mining production which both make a unique technological entity.  
It is understood that by means of the social programme the redundant number of employees will leave the metallurgical complex.  
One part of the subsidies will be used to cover a share of cost in the metallurgical complex.  
It is certain that the better option is to initiate an investment cycle for the metallurgical part but at the moment it is not feasible and the priority is to settle the mining production first.

11. Environmental problems at RTB Bor are very complex. They can be observed through soil, water and air pollution. The major cause of the problem is the result of a hundred years of RTB Bor's production. However, current soil, water and air degradation is not to be neglected. With its current level of production, RTB Bor is not able to solve inherited or newly created problems on its own. This problem requires participation of the Government of the Republic of Serbia in order to involve international institutions and funds. Only by making this problem known world-wide could RTB Bor's problem be solved successfully.
12. Therefore, the problems of RTB Bor are complicated and multi-disciplinary but are also possible to solve. It is important to take into account the fact that only by partial solving certain segments no successful solution of the entire RTB Bor could be provided. When we say the successful solution we mean the simultaneous solution of all the mentioned problems.
13. Stable production of RTB Bor, beside achieving economic goals also means the geo-political stability of the whole region and the entire production entity.

## 10.0 DEVELOPMENT STRATEGY AFTER THE CONSIDERED 5 YEAR PERIOD

The answer to the following question is given in tables below:

«What happens after the 5 year period»

### The Underground Pit Bor

The construction of the transition phase of the Borska river ore body up to the level of -235 for the purpose of continued mining operations at the underground pit Bor («the Borska river» ore body).

Production facilities and ore quantities in the remaining part of the underground pit with the «Borska river» ore body – I phase:

Year		Excavated material			
		Ore (t)	Cu (t)	Au (kg)	
Current web	1	900.000	6.030	162	927
Borska reka I phase	1	900.000	6.390	247	1.640
	2	1.500.000	10.650	412	2.730
	3	2.000.000	14.200	550	3.640
		2.000.000	15.000	550	3.640
	5	2.000.000	15.000	550	3.640
	6	2.000.000	15.000	550	3.640
Total current web		900.000	6.030	162	927
Total B. Reka I phase		10.400.000	76.240	2.859	18.930
<b>Total underground pit</b>		<b>11.300.000</b>	<b>82.030</b>	<b>3.021</b>	<b>19.857</b>

The Borska reka ore body in its first phase will make possible undisturbed mining for the next ten years. However when we take into account the remaining part of the «Borska reka» (II phase), it is undoubtedly shown the underground pit Bor could be mined on the long run.

### The "Veliki Krivelj" open pit mine

The development of the open pit mine according to the plan and even deeper, with a possible increase of capacities depending on copper price in the market.

Technical and technological improvements in the mining and processing operations are aimed at better metal recovery and decrease in mining costs.

The remaining quantities are located at K-10.

Wet ore (t)	(t)	80594166
Waste (t)	(t)	47574991
Excavated material (t)	(t)	128169157
Medium Cu content in dry ore	(%)	0.352
	(g/t)	0.070
Medium Ag content in dry ore	(g/t)	0.398
Mining period	years	11

Down to K-10 undisturbed production in the next 11 years is provided.

### Technogenic raw material – slag

The production is continued with technical and technological improvements for better metal recovery in the flotation and metallurgical processes and lower costs in all technological entities.

Remaining slag quantities for treatment

Slag	(t)	cca 13 000 000
Waste	(t)	0
Excavated material	(t)	cca 13 000 000
Medium Cu content	(%)	0.6
Medium Au content	(g/t)	0.25
	(g/t)	2.00
Mining period	years	10

### The Majdanpek copper mine

After 5 years, the remaining reserves in the South Mining District open pit are shown in the following table:

The open pit development strategy is in accordance with the Feasibility study. However, the removal of overburden and mining are to be performed on the northern part of the pit with later moving to the east in order to maintain the continuity in ore production and reduce the waste removal period.

The remaining ore reserves in the «South mining district» open pit

Wet ore	(t)	87,207,291.00
Waste	(t)	192,800,000.00
Excavated material	(t)	280,007,291.00
Medium Cu content	(%)	0.420
Medium Au content	(g/t)	0.276
Medium Ag content	(g/t)	1.514
Mining period	years	20

3. 収集資料リスト

平成 16 年 12 月 20 日作成

地域		調査団	セルビア鉱業振興マスター	調査の種類	作成部課
国名	セルビア ・モンテ ネグロ	等名称	セルビア鉱業振興マスター プラン形成基礎調査	現地調査期間	担当者氏名
				平成 16 年 12 月 7 日～ 平成 16 年 12 月 17 日	

番号	資料の名称	形態	オリジナル・コピーの別	部数	言語	収集先名称 又は発行機関
1	Local Environmental Action Plan Draft Summary, April 2003	Paper	Original	1	英	Municipality of Bor
2	ベオグラード大学 Faculty of Technology and Metallurgy の紹介	CD	Copy	1	英	ベオグラード大学 Faculty of Technology and Metallurgy
3	RTB BOR Copper Institute の紹介	CD	Copy	1	英	RTB BOR Copper Institute
4	Five Year Program of RTB BOR	CD	Copy	1	英	RTB BOR Copper Institute
5	INTREAT Project のキックオフ会議の資料	Electronic File (PP)	Copy	1	英	ベオグラード大学 Faculty of Technology and Metallurgy
6	RTB BOR 製錬所電解排液の性状	Electronic File (Excel)	Copy	1	英	ベオグラード大学 Faculty of Technology and Metallurgy

	Ekonomist	Magazine	Original	1	英	a media international group publication
7						
8	Majdanpek 銅山南鉱 1 億トン開発計画 F/S (Summary)	Paper	Copy	1	英	RTB BOR, Majdanpek 銅山
9	RTB BOR 製錬所概念フロー図	Paper	Copy	1	セ	RTB BOR 製錬所
10	Majdanpek 銅山選鉱場フローシート及びび 操業成績など	Paper	Copy	1	セ	RTB BOR, Majdanpek 銅山
11	セルビア道路地図	Paper		1	セ	
12	Krivelj 選鉱場フローシート、操業成績、 原単位使用量等	Paper	Copy	1	セ	RTB BOR
13	BOR 地域の銅山位置など概念図	Paper	Copy	1	セ	RTB BOR
14	BOR 銅銅山断面概念図	Paper	Copy	1	セ	RTB BOR
15	Majdanpek 銅山の図面	Paper	Copy	1	セ	RTB BOR
16	セルビア統計 2004	CD	Copy	1	セ	セルビア統計局