

Lahóca project  
RECSK, HUNGARY

INFORMATION  
AND  
EXCURSION GUIDE  
1995

# RHODES MINING NL

For many investors, the spectre of political risk hangs over investment in countries previously controlled by Communist governments. But the mining industry seems to have a different way of thinking. To it, an orebody is an orebody. That explains why Rhodes Mining NL is not only prepared to invest in formerly Communist countries, it is participating in a project in one of the world's few remaining Communist countries — Cuba.

Rhodes' overseas interests are the Lahoca gold project in Hungary and the Holguin gold project in Cuba. Rhodes owns 89.7 per cent of Lahoca in a joint venture with AVRT, the Hungarian State Property Holding Agency. In Cuba, Rhodes is a 50-50 partner with the government's resources arm, Geominera, in an exploration area of 120 square kilometres.

At home, Rhodes is a 50-50 partner in the Mt Martin project in Western Australia, where it is drilling to calculate a resource, and is also exploring at Westonia and Toweranna/Mallina (both in WA) and on Normanby Island, Papua New Guinea.

In Hungary and Cuba, Rhodes is reactivating old mining areas to get at deposits the previous owners were unable to exploit or did not find. But chairman Jack Keay says this is no criticism of local miners.

"In both Hungary and Cuba, we have found the level of expertise of their technical and geological people to be first-rate. In Hungary, the infrastructure and assay backup are particularly good. The Cuban economy is in more of a mess, but you can get things done.

"The valley in which Lahoca sits has a very long tradition of mining. There was a copper mine on the site, but it went out of business a few years ago. The Hungarian government

is naturally very keen to see a gold mining operation at Lahoca, to put that accumulated expertise back to work.

"The previous operators of the mine did not fully realise the gold potential at Lahoca, nor at the nearby Lejtakna orebody, because

acreage very highly."

David Russell, mining analyst at Perth broking firm Saw James, visited Lahoca earlier in the year, in the process of helping Rhodes Mining raise \$2 million through the placement of shares and options to European institutions. He

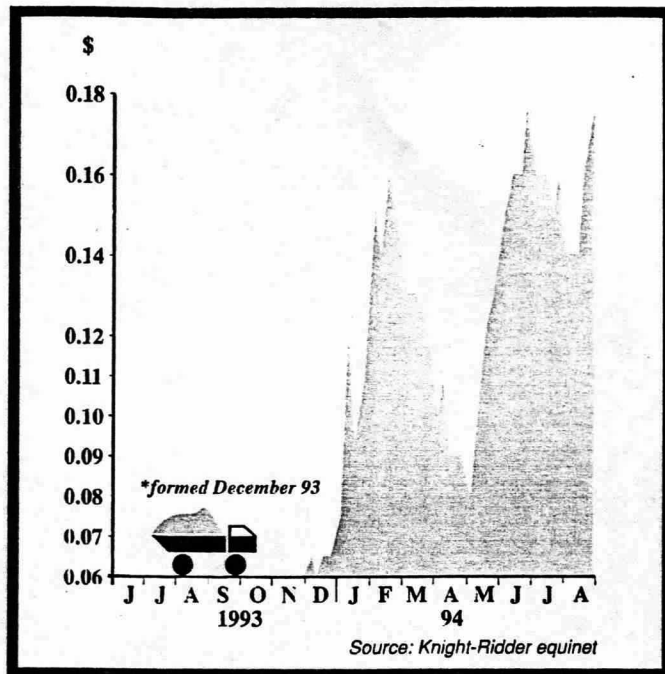
which in effect liberalises mining for foreign investors, and is fully aware that in doing so it can expect to gain in terms of jobs and tax revenue."

After visiting Lahoca, Russell believes the prospect compares well with some of the biggest anywhere. In fact, he believes it is similar to the giant gold deposit on Lihir Island in the New Ireland region of Papua New Guinea, considered to be one of the largest deposits ever found outside South Africa. "Lihir is a classic epithermal deposit — that is, large volume, near-surface low-grade gold deposits amenable to low-cost open-pit mining and processing methods.

"Epithermal deposits have assumed great importance in terms of gold mining internationally, with the two most important areas being the 'Ring of Fire' in the Pacific, and in Nevada, USA, both of which have witnessed recent gold rushes. To this it may now be possible to add Lahoca, which has the potential to become the largest gold producer in Europe.

"Major international mining houses are expressing interest in the evaluation of Lahoca but Rhodes intends to conduct the drilling program in its own right," says Russell. "Any early success from the drilling program would have a positive effect on Rhodes' share price."

James Dunn



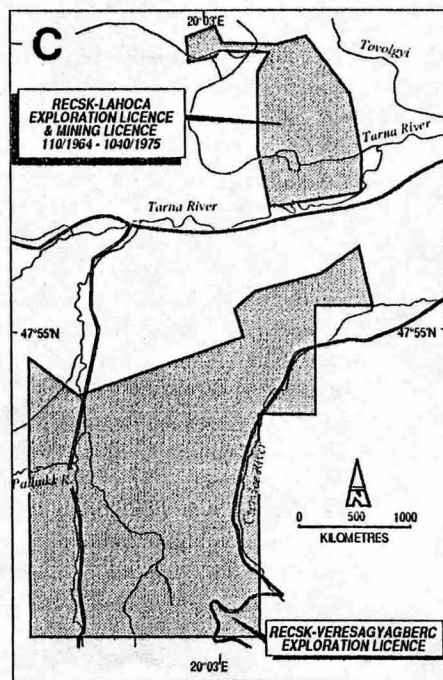
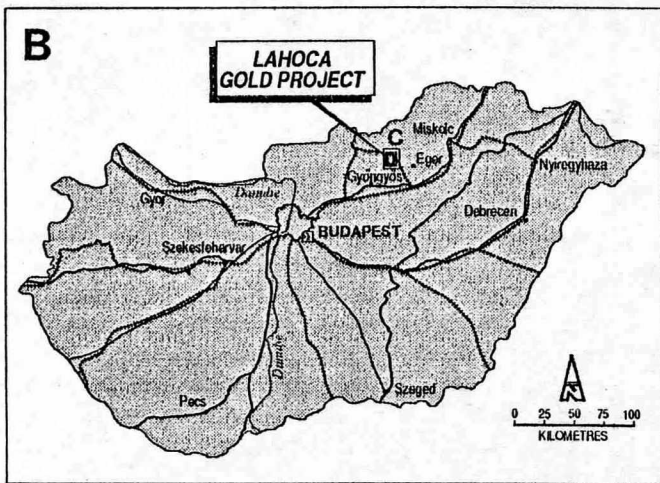
they were focused solely on copper production. In Cuba, the problem was that the concentrate they were producing by the gravity method and shipping to Czechoslovakia was uneconomic. They were isolated from some of the advances made by the Western gold industry. The CIL/CIP (carbon-in-leach/carbon-in-pulp) processing technology has never been used there.

"Two of the mines in our area were worked as open-cut mines and are just the same as the open-cut, low-grade mines in Australia that had become uneconomic in the late 1970s. Just as CIL/CIP technology made these mines viable again, it will do the same for the Cuban mines. The Canadians certainly think so — they have 42,000 square kilometres of tenements there, and the Toronto Stock Exchange values Cuban

says European emerging markets funds, and the European Bank for Reconstruction and Development, were very keen because they regard Hungary as a very exciting investment opportunity.

"The Hungarian government is as keen as mustard to see the project begin. It is well aware that mining gold there is in effect printing US dollars. It has brought in a new mining act

RHODES MINING (RMN) (at Sept 8)					
Ord price:	\$0.15	Market cap:	\$14.4m		
Spread:	\$0.15- 0.16	12-month high:	\$0.18	Low: \$0.055	
Dividend yield ('95 est.):	n/a	Franking:	n/a		
PE ratio ('95 est):	n/a	NTA:	\$0.059 per share		
Year to	Sales	Pre-tax	Stated	Gross	
June 30*	revenue	profit	earnings	dividend	
	\$m	\$m (loss)	per share (c)	per share	
	-	-	-	-	
% change	-	-	-	-	
Relative performance to All Ordinaries (%):					
1 mth:	+7.03	3 mths:	-6.85	12 mths:	n/a
*formed 1/12/93					
Source: Knight Ridder equinet					



**Rhodes Mining N.L.**  
**LAHOCA GOLD PROJECT**  
**LOCATION MAPS AND DETAILS OF**  
**MINING LEASE AND EXPLORATION LICENCES**

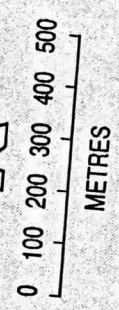
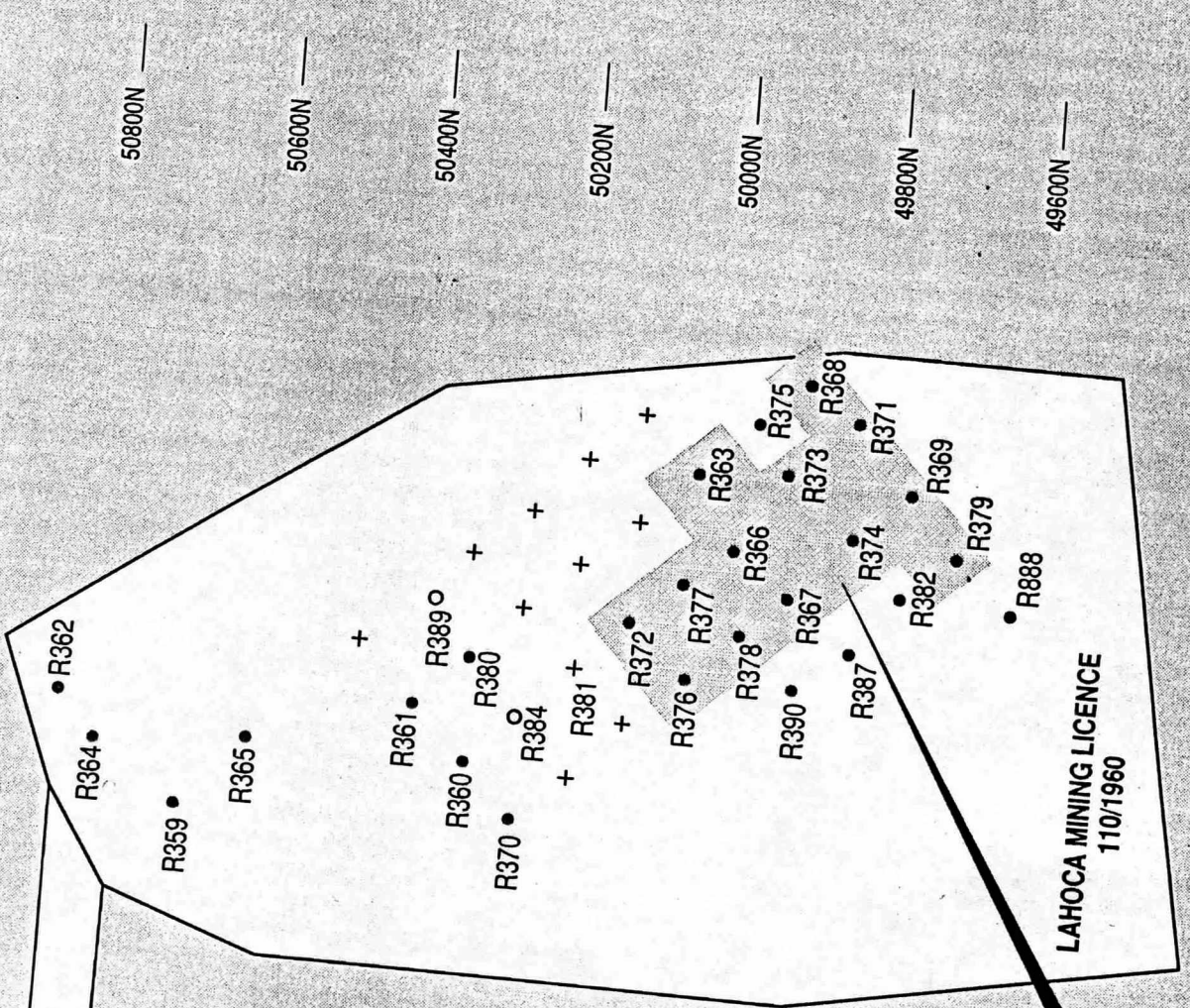


# LOCATION OF LAHOCA DRILLHOLES, HUNGARY

LEJTAKNA MINING LICENCE  
1040/1975

Area containing  
Lejtakna Resource

Area containing  
Lahoca Resource



## LEGEND

- Tenement outline
- + Planned Drill Site
- R390 • Completed Drillholes
- R389 ○ Drillhole in progress

77200E 77400E 77600E

QUARTERLY REPORT  
For the Period  
to 31 March 1995

## HIGHLIGHTS

- A programme of metallurgical testwork gave recoveries of 61% by direct cyanidation and over 92% by pressure oxidation on a sample considered representative of the major proportion of the gold deposit at Lahoca, Hungary.
- The resource at Lahoca was calculated at a higher cut-off grade of 1.5 g/t Au. The inferred resource at the several cut-off grades was estimated as:

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Cut-off Grade (g/t)	Tonnes	Average Grade (g/t)	Contained Gold (ounces)
0.5	24.5 million	1.4	1,100,000
1.0	12.7 million	2.1	860,000
1.5	7.3 million	2.9	680,000

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- At Holguin, Cuba, a preliminary programme of diamond drilling gave several significant intersections including 11.5 metres at 3.3 g/t Au at Reina Victoria.
- At Westonia in Western Australia, the operator Equinox Resources NL has identified some 40 geochemical anomalies which coincide with key structural features interpreted from the recent high resolution aeromagnetic survey.

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## REVIEW OF PROJECTS

During the quarter further study of the Lahoca gold deposit in Hungary retained priority. Metallurgical testwork received most attention. However, a programme of diamond drilling was completed in Cuba, with encouraging results.

At Westonia interpretation of the recent aerial magnetic survey yielded several structural targets for further work.

### 1 Lahoca, Hungary

*Rhodes Mining NL 89.7%*  
*Hungarian State Property Holding Agency AV Rt 10.3%*  
*Lahoca Mining Lease 110/1960*  
*Lejtakna Mining Lease 1040/1975*  
*Veresagyagberc Exploration Licence 181/1993*

During the quarter the AV Rt offered its 10.3% interest in Enargit Kft for sale by tender. Rhodes tendered, and also has pre-emptive rights over the equity under Hungarian company law. Formal notification from the AV Rt is expected shortly.

A resource estimate was calculated at a higher cut-off grade of 1.5 g/t Au using the same 29 drill holes as in previous estimates made at 0.5 g/t and 1.0 g/t cut-off grades. The three inferred resource estimates are:

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Cut-off Grade (g/t)	Tonnes	Average Grade (g/t)	Contained Gold (ounces)
0.5	24.5 million	1.4	1,100,000
1.0	12.7 million	2.1	860,000
1.5	7.3 million	2.9	680,000

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An 87 kg composite sample from Brumi and Upper George adits, with a head-grade of 2 g/t Au, was prepared for metallurgical tests.

In addition to grinding tests, the programme included direct cyanide extraction, flotation and whole of ore oxidation.

The sample specific gravity was measured as 2.69, slightly higher than that used in the resource calculations.

Grinding tests gave a ball-mill Work Index of 17.2 kW h/t.

Diagnostic leaching showed that only about 0.1 g/t Au was locked in silicates.

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## LAHOCA (cont):

- Direct Cyanidation

Direct cyanidation of the composite sample recovered 61% of the total gold, leaving a tail of 0.76 g/t Au.

Pressure cyanidation did not increase the recovery.

Recovery was not affected by particle size in the range 150  $\mu$  - 38  $\mu$ .

Recovery showed little sensitivity to cyanide concentration over the range 1-5 kg/t NaCN.

- Flotation

Attempts to produce a 10:1 upgrade by flotation have so far been unsuccessful.

While it proved possible to recover over 80% of the gold and over 90% of the sulphide by flotation, the float concentrate represented half of the original sample, a 2:1 upgrade only. Further research is being undertaken.

- Oxidation

Preliminary tests with pre-oxygenation at 60°C, fliblast, and Activox showed no appreciable improvement over direct cyanidation.

However pressure oxidation for two hours at 200°C at 2,100 kPa was highly effective. Gold recovery of 92.6% was achieved at 75  $\mu$  and 93.5% at 45  $\mu$ , leaving tails of less than 0.15 g/t Au from a head grade of 2 g/t Au.

If the final flow-sheet includes pressure oxidation, there is a significant increase in capital cost over direct cyanidation and economics require a large resource. It is considered probable that further drilling in the Lahoca mining lease area will greatly increase the size of the resource.

Site clearance is under way for further diamond drilling to test the extent of the resource, which is open both laterally and at depth.

Preparations are also under way for drilling gold anomalies with surface values of up to 0.7 g/t in the larger southern exploration licence.

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## **New gold discovery in an ancient copper district**

### **The development of the Lahoca gold project**

#### **Introduction**

Hungary was known as a historic gold producer of Europe. About 80 % of the medieval gold production of this continent has come from Hungarian mines. The old mining traditions became a history in the 20th century since practically no gold production was recorded from Hungary in these times. But, like anywhere else in the world, the old mining experience and knowledge served as the best starting point of repeated new exploration efforts when new techniques and knowledge evolved in the mining industry. This is the case in the Recsk ore zone, which is now considered as one of the major gold discoveries in the Carpathian Balkan zone in the recent years. **Fig. 1.** Our map shows the setting of the occurrence within the geographic boundaries of Hungary.

#### **Infrastructure**

**Fig. 2.** Our second figure shows the outlines of the mining tenements. We are now staying about 30 kms from the exploration site, in the provincial capital of Heves county. Recsk is situated in this county. The site is one and a half hours drive from Budapest, and lies along major railway and highway lines. It is close to the township of Recsk, of 3800 inhabitants, where mining has meant one of the major employment opportunities in the past. Our company holds now two exploration areas, one coincides with the old mining site, while the southern one is a grassroots exploration area. Both zones are close to water and electricity lines, and other existing infrastructural facilities. Now, with advancing exploration we are more and more convinced, that these favourable features will be coupled with one of the significant gold ore deposit of Central eastern Europe.

#### **Milestones of exploration and mining**

Recsk provides a good example of multiple revival of mining in an ore zone which is known for centuries. The first mining records go back to the 1700s, when small scale silver and copper mining was recorded from the centrally located small rich veins. The first major discovery is dated to 1852, when the mining of the oxidation zone of the Lahoca began. Small scale production was intermittently maintained until the 1st World War. The postwar period started with a significant finding of bonanza pockets, which gave a stimulation for later explorations, starting at 1926. **Fig.3** Our figure shows a historic section of the Lahoca from the 1920s. With copper as a major product and gold as byproduct, the mine became a modern industry and a major national supplier of copper until the late 1940s. With gradual depletion of reserves a new exploration period started in 1945, and lasted until 1950, providing a new, significant resource, which facilitated exploitation until the final closure of the mine in 1979. The total historic production was cca 3 million tons of ore, with cca 7 ton of contained copper. In 1965 a new exploration program was launched to search the depthward continuation of the Lahoca deposits on the northern and southern flanks. A major deep seated porphyry copper body was found, with high grade skarn copper ore association, which soon became the prime exploration target of the zone. **Fig. 4.** The complex has become known as the Recsk Deeps, with the high grade copper deposits in great depths, from 900 m to 1100 m. The explorations lasted from 1965 to 1985, and an enormous amount of geological information has been collected both from the surface and from underground. Due to economic changes in the national economy and in the world market, the Recsk deeps has remained an unfinished project, which is now on the care and maintenance basis. The idea of reevaluating the Lahoca ore zone again, for gold ore arised in 1979, when the development of processing techniques were coupled with the price explosion of gold. Later, the increasing number of information about epithermal gold deposits just increased the potential of the Recsk site. The realization of the idea started with the establishment of the Enargit KFT in 1991, when the economic environment has been radically changed, and the private risk capital got access to the mining industry. For more than a year the numerous historic underground and surface data was evaluated and integrated, and the magnitude of the mineralization potential of the site was assessed.



**Fig. 5.** This figure now shows the preliminary gold distribution pattern drawn from the historic data. This pattern served as basis of the new exploration program, which has finally reached the drilling stage in June 1994.

### **The current exploration program**

The database of these historic records allowed us to make an estimate, a so called pre-resource estimate of open pittable gold mineralization, which we determined as  
26 million ton of cca 2.5 g/t gold ore.

The old data allowed us to assume the presence of at least a 800 x 400 m zone. Studying the underground assay records it was concluded, that about 100 x 100 m spacing is adequate to provide continuous information of the gold ores. On this basis an initial 3500 m drilling program was designed and started in June 1994.

By the end of October the original program was completed and without interruption, extended to 4100 m, with 28 holes drilled. The mineralization extends beyond all the present limits of these explorations. **Fig. 6** The map shows the actual position of the planned and completed drillholes.

The first resource estimate, based on the first 13 holes, gave  
11 million ton of 1.5 g/t Au (0.5 g/t cut-off)  
or 5.7 million ton of 2.2 g/t Au (1.0 g/t cut-off)

figures.

Full resource estimate based on the total of 26 drillholes is expected by the end of 1994.

### **The geological characteristics of the mineralization**

**Fig. 7.** The Lahoca ore zone shows close similarities to other well known epithermal gold deposits in young volcanics districts. The closest analogies are in Bulgaria (Chelopech), Turkey, Greece. Other well known examples are in the Pacific, Caribbean and Andean belts. The model shows resemblance to a central heating system, where a heat source (in our case the porphyry intrusion) drives the hydrothermal circulation, which actually performs the selective enrichment of ore forming components.

The known enrichments are concentrated in two zones.

**Fig. 8.** Our figure now shows the smaller ore zone, called the Lejtakna zone, which has been drilled for copper in the 1970s, and been reassayed by us, allowing to make a resource estimate. This resulted a figure of

1.2 million ton of ore at 1.4 g/t grade plus 45 ppm Ag, 0.40 % Cu as credit.

**Fig. 9** As it is illustrated in our next figure, the Lahoca zone explorations were concentrated in three parts. The three parts resulted in the recognition of three slightly different ore types. High grade, steeply dipping breccia dikes are encountered on the northern end. Medium grade, 40-50 m thick Au-Cu ore is found in thick continuous ore zones in the central part. High grade 10-30 m thick subhorizontal breccious ore bodies of several hundred meter of strike length and dip extension are found in the southern flanks. This latter is now thought to be the optimum ore zone.

The exact figures of the assayed intersections are found in our quarterly report annexed in the folder.

The gold enrichment is associated with high copper and silver values, which may represent a bonus at the ore processing.

**Fig. 10** This section shows the central, thick part of the medium grade Au-Cu ores, while the next section **Fig 11** is an example of the breccia type ores, on the southern flank.

According to preliminary metallurgical testing, 16 % of the gold is free, while the rest is coupled with sulfides and arsenosulfides. This puts emphasis on the investigations of the metallurgical characteristics of the mineralization. Efforts are made recently to open the accessible parts of the old underground mine to facilitate further metallurgical sampling, and gather more detailed knowledge about the geology of the gold mineralization.

#### **Exploration plans for 1995**

The major objective for the next year is to find the outer limits of the mineralization and complete an in-fill drilling program, of several ten thousand meter of drilling. Underground sampling of the accessible drifts and stopes will complement the drilling program. A separate program of larger scale metallurgical testing has to be done.

It is expected that the final resource figures and metallurgical characterisation will be obtained during 1995, and will serve as basis for final design and mine planning.

It is hoped that Lahoca is only the first major gold deposit in this districts, and discoveries will continue in our other larger grassroots licences, south of the Lahoca.