

## Translation of cards.

### Tapahtuma (Event cards)

#### ***Konsulttikortti (Consultants)***

Saanio & Riekola Oy is an engineer agency specialized in the planning of rock spaces, mines and storage solutions for nuclear waste. By using this card, you increase the efficiency of your work – In your next turn you can double the result of your die roll (to a maximum of 6). An unused card is worth 1 victory point at the end of the game.

#### ***Konsulttikortti (Consultants)***

PBI is a research and consultation company. Since 1993 PBI has done research with the Finnish industry and industrial companies. The mining industry is one of the industries in which PBI specializes. By using this card, you double the production of your ore once. An unused card is worth 1 Victory point at the end of the game.

#### ***Menetät Kaivoslupasi (you lose your Mining Permit)***

Go immediately to the Tukes office in Rovaniemi to attempt to get a new Mining Permit.

#### ***Menet suorittamaan jatko-opintoja Aalto-yliopistoon. (You are expanding your education at Aalto-University.)***

Your next turn is spent studying.

#### ***Tarvitset yritykseesi lisää geologian asiantuntemusta. (You need more geological expertise in your company.)***

Go Immediately to expand your education at Turku-University. You spend your next turn studying.

#### ***Menet suorittamaan jatko-opintoja Oulun-yliopistoon. (You go to expand your education at Oulu University.)***

Your next turn is spent studying.

#### ***Vietät kesälomaasi Outokummussa (You spend your summer vacation in Outokumpu)***

Go immediately to the Outokumpu Mining Museum. You spend your next turn looking at the exhibitions.

#### ***Liityt Vuorimiesyhdistyksen jäseneksi Vuorimiespäivillä. (You Join Vuorimiesyhdistys during the Vuorimies-days.)***

Roll the die again. You also gain a Membership card worth 1 Victory Point.

#### ***Liityt Vuoriteknikot Ry:n jäseneksi. (You join Vuoriteknikot Ry.)***

Roll the die again. You also gain a Membership card worth 1 Victory Point.

#### ***Tervetuloa FinnMateria-messuille Jyväskylään. (Welcome to the FinnMateria fair in Jyväskylä.)***

Go immediately to Jyväskylä without rolling a die. You spend your next turn at the Fair and receive a Fair card worth 1 Victory Point.

#### ***Työturvallisuuskorttisi vanhenee. (Your work-safety card needs to be updated.)***

Use your next turn renewing your Work-safety card.

#### ***Kaivoslaki muuttuu. (The mining law changes.)***

Go immediately to the Tukes offices in Rovaniemi, without rolling a die, to get more information. You spend your next turn in Rovaniemi.

***On säädetty uusi ympäristövero. (A new environmental tax has been legislated.)***

Pay 1000 mining money as an added tax for each mine, refinery, smelter, concentration plant and factory you own.

***Kaivoksellasi ei ole sattunut työtapaturmia yli 200 päivään. (Your mine has been accident free for 200 days.)***

As a reward you may roll again.

***Työntekijäsi vaihtaa työnantajaa. (Your employee switches employer.)***

Spend the next turn looking for a new employee.

***Kaivuskoneesi huolletaan. (Your mining machine is undergoing maintenance.)***

Your next turn is spent doing maintenance.

***Kaivoksesi tuotantomäärät ovat ylittäneet arvion. (Your mines production has surpassed the estimates.)***

As a reward you may pick one Machine, Technology or Material card for free.

***Kaivoksesi ympäristölupaa päivitetään. (Your mines environmental permit is being updated.)***

Wait for 2 turns.

***Kalliorakennusyhtiöt Oy louhii vaativia nousuja. (Kalliorakennusyhtiöt Oy builds complicated raises.)***

KRY builds all the needed ventilation shafts and ore shoots for your mine. This card is worth 1 Victory Point at the end of the game.

***GTK on tutkinut lähettämäsi kansannäytteen. (GTK has tested your layman sample.)***

You get rewarded with 3000 mining money for a good sample.

***Olet löytänyt mielenkiintoisen mineraalinäytteen. (You have found an interesting mineral sample.)***

Deliver the sample immediately, without rolling a die, to the GTK office in Kuopio.

***Yrityksesi liittyy Kaivannaisteollisuus ry:n jäseneksi. (Your company joins Kaivannaisteollisuus ry.)***

Roll the die again. You also get a membership card worth 1 point.

***Peltonen LMR neuvoo sinua lakiasioissa. (Peltonen LMR advises you in legal matters.)***

By using this card, you will get back your Mining Permit if you have lost it. An unused card is worth 1 Victory Point at the end of the game.

***Witraktor toimittaa kaivoksellesi koneita. (Witraktor delivers machines to your mine.)***

By using this card, you double the production of your ore once. An unused card is worth 1 Victory Point at the end of the game.

**Museo (Museum card)**

***Outokummun Kaivosmuseumo (Outokumpu Mining Museum)***

Outokumpu Mining Museum is a specialist museum about mining. The museum has exhibitions on the history of mining as well as mining today. This card is worth 1 Victory Point.

**Luvat (Permits)**

***Kaivoslupa (Mining Permit)***

The Player has received a permit for mining from Tukes.

**Urakointi (Contracting)**

This card allows you to start a mine without the need of Machines or Materials. Half of the proceeds are deducted for contracting fees.

## **Koulutus (Education)**

### ***Diplomi-insinööri (Master of Sciences)***

You have graduated Master of Sciences from Aalto-university in Espoo. +1 Victory point.

### ***Diplomi-insinööri, geologi (Master of Sciences, geology)***

+1 Victory Point.

### ***Geologi (Geologist)***

You have graduated as a geologist from Turku University. +1 Victory Point.

## **Kaivos (Mine)**

### ***Kittilän Kaivos (Kittilä mine)***

The Kittilä gold mine owned by Agnico Eagle was founded 2008. It produces 5000 kg of gold each year and employs 500 people. This card is worth 1 Victory Point.

### ***Kylylahden kaivos (Kylylahti mine)***

The Kylylahti mine is owned by Altona Mining Ltd. The mine produces 550 000 tons of copper-gold-zinc ore annually. The mining started in 2012. This card is worth 1 Victory Point.

### ***Pampalon kaivos (Pampalo mine)***

Production started in 2012. Pampalo mine is owned by Endomines and represents Karjalan Kultalinja – responsible mining in Ilomantsi.

### ***Tytyrin kaivos (Tytyri mine)***

About 300 000 tons of limestone is mined annually at the Tytyri mine by Nordkalk. Tytyri is one of three underground mines and the companies third largest location in Finland. This card is worth 1 Victory Point.

### ***Kemin kaivos (Kemi mine)***

Kemi mine is the largest underground mine in Finland. The mine, owned by Outokumpu Chrome Oy, is the only chromium mine in the EU. The concentration process used is gravitational, so no chemicals are used. This card is worth 1 Victory Point.

### ***Pyhäsalmen kaivos (Pyhäsalmi mine)***

The Pyhäsalmi mine opened its doors on the 1<sup>st</sup> of March 1962. The mine is one of the deepest mines in Europe and among the most productive of its size in the world. The mine employs 250 people. This card is worth 1 Victory Point.

### ***Talvivaaran kaivos (Talvivaara mine)***

Talvivaaran Kaivososakeyhtiö Oy was an internationally significant metal producer, with focus mainly on nickel and zinc. This card is worth 1 Victory Point.

### ***Siilinjärven kaivos (Siilinjärvi mine)***

Siilinjärvi mine, owned by Yara Suomi Oy, consists of the Särkijärvi and the Saarinen apatite quarry and concentration plant. Production started in 1979. Annually the mine produces about 11 million tons of ore. This card is worth 1 Victory Point.

### ***Uusi kaivos (New Mine)***

You successfully found a new mine. This card is worth 1 Victory Point.

## **Jalostamo (Refinery)**

### ***Outokumpu, Tornio***

The Outokumpu corporation is a global leader in stainless steel. At the factories in Tornio ferrochrome and high-grade steel smelters, the cold rolling mill and port are integrated. This card is worth 1 Victory Point.

## **Rikastamo (Concentration plant)**

### ***Luikonlahden rikastamo (Luikopnlahti concentration plant)***

The Luikonlahti concentration plant, owned by Altona Mining Ltd. concentrates from the Kylylahti mines ore 8000t of copper, 8400oz of gold and 1600t of zinc. Production started in 2012. This card is worth 1 Victory Point.

## **Sulatto (Smelter)**

### ***Boliden Harjavalta***

Boliden Harjavalta is part of the Boliden corporation. The plants of Boliden Harjavalta are situated in Pori and Harjavalta. the company's main products are copper, gold and silver. This card is worth 1 Victory Point.

## **Tehdas (Factory)**

### ***Boliden Kokkola***

Boliden Kokkola is one of the largest zinc factories in the world. The company's main products are zinc and zinc composites. The factory is part of the Boliden corporation. This card is worth 1 Victory Point.

## **Koneet (Machines)**

### ***Sandvik Tampere***

Sandvik mining is a leading producer of mining equipment as well as maintenance and technical services. This card is worth 1 Victory Point.

### ***Sandvik Turku***

Sandvik mining is a leading producer of mining equipment as well as maintenance and technical services. This card is worth 1 Victory Point.

### ***Atlas Copco***

In our mining catalog there is, among other things, drilling equipment and supporting equipment. Our founding principles are innovation, sustainable development and ethics. This card is worth 1 Victory Point.

### ***Flowrox***

On the shores of the Saima you can find the Flowrox main office as well as the guest cabin Nuutinnokka. Flowrox valves and pumps improve operational reliability and saves on maintenance costs. This card is worth 1 Victory Point.

## **Teknologia (Technology)**

### ***Outotec***

Outotec offers innovative technology and services for sustainable utilization of the world's natural resources. This card is worth 1 Victory Point.

## **Materials**

### ***Forcit Explosives***

Forcit explosives is a leading Finnish civilian explosives expert. We produce explosives and explosives equipment for use by mining professionals. We have nine factories in Finland. Our selection is improved by imported explosives equipment. This card is worth 1 Victory Point.

### **Messut (Fair)**

#### ***Messukortti***

The player has visited the FinnMateria fair in Jyväskylä. This card is worth 1 Victory Point.

### **Jäsenkortti (Membership card)**

#### ***Vuoriteknikot ry:n jäsenkortti (Vuoriteknikot ry membership card)***

The player has joined Vuoriteknikot ry. This card is worth 1 Victory Point.

#### ***Vuorimiesyhdistys ry:n jäsenkortti (Vuorimiesyhdistys ry membership card)***

The player has joined Vuorimiesyhdistys ry. This card is worth 1 Victory Point.

#### ***Kaivannaisteollisuus ry:n jäsenkortti (Kaivannaisteollisuus ry membership card)***

The player has joined Kaivannaisteollisuus ry. This card is worth 1 Victory Point.

## **Tuote (Product)**

### ***Kromi (Chromium)***

KEMI MINE

Chromium is used in the production of stainless steel. The Kemi mine's concentrate is refined at the Outokumpu Tornio factory into ferrochrome and from there into stainless steel.

### ***Kuparimalmi (Copper ore)***

KYLYLAHTI MINE

Outokumpu-type massive copper ore (Cu). Gold (Au) and zinc (Zn) content also considerable. Mineral ores: chalcopyrite (CuFeS<sub>2</sub>) and sphalerite (Zn(Fe)S).

### ***Kuparirikaste (Copper concentrate)***

LUIKONLAHTI CONCENTRATION PLANT

Copper concentrate is the main product of Luikonlahti concentration plant. The copper content of the concentrate is about 24% and also contains about 6g/t of gold. The concentrate is transported to Harjavalta copper smelter.

### ***Kupari (Copper)***

PYHÄSALMI MINE

The products of Pyhäsalmi mine are copper, zinc and pyrite concentrate. The mined ore is massive, coarse sulfide ore.

### ***Kupari (Copper)***

BOLIDEN HARJAVALTA

Boliden Harjavalta produces one of the world's most important metals - copper. Copper conducts electricity and heat well and it can be recycled endlessly.

***Kulta (Gold)***

KITTILÄ MINE

Gold is used in jewelry, electronics and medicine, among others. Gold is also an investment option, where it is kept as bars in bank vaults.

***Sinkki (Zinc)***

BOLIDEN KOKKOLA

Boliden Kokkola produces one of the most used metals in the world – zinc. One of the main uses of zinc is protecting other metal from corrosion.

***Kulta (Gold)***

PAMPALO MINE

Most of the gold in the world is produced outside Europe. China, Australia and the USA are the biggest producers in the world. When the Pampalo mine was founded, it turned Finland into the biggest gold producer in Europe.

***Apatiitti (Apatite)***

SIILINJÄRVI MINE

The Siilinjärvi apatite is calcium fluorophosphate. It is used for producing fertilizer and animal fodder.

***Nikkeli (Nickel)***

TALVIVAARAN MINE

The main products of Talvivaara mine are nickel and zinc. Nickel is used as a composite in some types of steel and in the electronics industries. The most common uses of zinc is preventing corrosion.

***Ruostumaton teräs (Stainless steel)***

OUTOKUMPU TORNIO

Completely recyclable stainless steel is corrosion-proof, strong, hygienic and esthetic. Stainless steel is used in different industries, construction, home appliances and kitchens, among others.

***Kalkkikivi (Limestone)***

TYTYRI MINE

Limestone is mainly calcium carbonate ( $\text{CaCO}_3$ ). With products made with refined limestone we reduce our ecological burden, improve crop yield and improve industrial processes.

**Muistipeli (Memory Game)**