

PREFACE



This document is part of the "HÂRN-GUILD-TEAM"-project (HGT), initiated and coordinated by the EUROPEAN HÂRNMASTER GUILD (EHG). The goal of the HGT is to elaborate all the guilds and societies forming the Hârnica Mangai.

"MINERS' GUILD" is a gaming resource for the fantasy world of Kethira, as published by Columbia Games in its Hârn-World/-Encyclopaedia Hârnica series.

"MINER'S GUILD" should be accompanied by three other documents, called "MINES IN LYTHIA", "MINING" and "METALLURGY", the first listing details on all mines of Lythia, the second listing all known Lythian mines and giving some examples of typical mines, the last one detailing mining and smelting technologies.

Throughout this article, references are marked in **BOLD CAPITALS**. Important phrases are typed in *ITALIC CAPITALS* where they are explained. Citations from any sources are printed in *italic* and enclosed by quotation marks, followed by a reference to the source.

This document describes the situation that can be found throughout the well-developed regions of Lythia. In less progressive and populated areas – and as such Hârn can be seen – mines tend to be smaller operations, often with a lower degree of organisation.

INTRODUCTION

"Miners belong to one of the most powerful and wealthiest of guilds on Hârn. The crown holds the mining rights to all land in most realms, and either owns the mines directly or leases them out to the guild for a hefty royalty. An earl or baron whose fife includes a valuable mine is out of luck, and the guild has been granted unique and special powers to protect miners from jealous nobles. These include: the right to prospect on any lands other than

temples, orchards, gardens, or highways; the right to cut timber to use in mines and forges, with or without the local lord's permission; the right to hold their own courts of law; and, in most cases, freedom from taxes, tolls, and military service. In addition, a serf employed in a king's mine for two years, automatically becomes a freeman, a mayor source of aggravation to the nobility. Nobles are rarely pleased to see the opening of a mine on their lands, and more than a few guilded prospectors have mysteriously vanished over the years.

Silver, tin, copper, iron, and salt are the most common metals and minerals mined. Gold is

CREDITS

WRITERS & CONTRIBUTORS

Christian Düntgen (xris@xris.de)

MAPS & GRAPHICS

Christian Düntgen

EDITORS

Philip Calkins
Dirk R. Festus Festerling
Bruce A. Hunt
Michael Jung
Neil Milne

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REFERENCES

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www.kelestia.org

mined in the Sorkin Mountains, but only by the Khuzdul. Most ores are smelted in small foundries and forges set up close to the mine to avoid transportation of bulk ores. Such foundries are never popular with the local nobility because they consume vast quantities of timber as fuel. The value of metals varies according to their refined purity. Common metals are generally sold by the hundredweight (100 pounds), rare metals by the pound, and precious metals by the ounce." (HÄRNWORLD, HÄRNDEX)

"MINERS' GUILD - One of the wealthiest guilds on Hârn, with a rigid monopoly on mining and smelting. The guild owns and operates some mines, but most miners are bonded to mines owned by the crown. In Kanday, Melderyn, Rethem, Kaldor, and Chybisa, mining rights are held by the king. An earl or baron whose fief includes a silver mine is out of luck; the revenue it produces is not his. It is this arrangement which has made the Miners' Guild powerful. To protect miners from jealous local lords, monarchs have granted them special privileges. These include: the right to prospect on any lands other than temples, orchards, gardens, or highways; the right to cut timber, with or without the local lord's permission, to use in their mines and forges; the right to hold their own courts of law; the right to protect anyone employed at a mine; and, in most cases, freedom from taxes, tolls, and military service. Any unfree tenant who flees to a king's mine, and is employed therein for two years, automatically becomes a freeman. A few master miners, who specialise in searching for new mineral deposits (prospectors) have mysteriously vanished; probably at the hands of local gentlefolk who see no advantage in having their fiefs dug up or their trees cut down. In the Thardic Republic, mines are owned by local landlords; the guild is less powerful here, but miners are still well paid. Silver, tin, copper, iron, lead, and salt are the most important minerals mined on Hârn. The Khuzdul mine gold in the Sorkin Mountains. Most ores are smelted in small foundries and forges near the mine (to reduce transportation costs). Such foundries are

never popular with local residents since they consume vast quantities of fuel. Metal values vary according to refined purity, This is usually between 85-95% (if honestly refined); the Khuzdul are able to refine most metals to 98% or better." (HÄRNPLAYER, HÄRNIC DICTIONARY)

SIGNS

The Miners' Guild uses a badge as heraldic symbol. The badge identifies its bearer as a member of the Miners' Guild. The symbol is also used to mark mines as exempt areas. Wearing this badge or using the symbol in any other way without legitimisation of the Miners' Guild is prohibited by law and may be persecuted as breach of guild privilege. The correct heraldic description follows:



"Party per pale purple and sanguine, a brock proper."

HISTORY

The production metals, particularly of iron and steel, is one of the basic foundations of the current successful Lythian cultures. Bronze, iron and steel can be formed to nearly any shape. It makes the base for effective tools – and weapons.

The production of large amounts of iron and steel depends on a combination of many skilled specialists: miners, smelters, charcoalers and smiths. The iron ore has to be extracted from the rock – only small amounts of iron can be extracted from meteorites or from grass ore. The ore has to be smelted to produce iron – which has to be forged to become good steel, that could serve as the raw material for the working of the smiths.

The operation of a mine or smelt naturally needs a higher degree of organisation than the operation of most other workshops. In the most cases, the ore has to be won from small veins,

found between worthless rocks in the mountains. Shafts and tunnels have to be excavated to follow these veins – tons of overburden have to be moved, cave-ins of unstable rock and flooding by seeping water or hidden underground sources are a common danger, that have to be minimised by mining engineers.

When the ore has to be smelted, the construction of special furnaces, several additions and special fuel is needed, that allow for the high temperatures needed to reduce the ore.

Most rich veins are found within remote or inaccessible areas, and beside the dangers of nature, like river floodings and landslides, the inhabitants of these unpleasant lands, barbarians and outlaws, are common threats (even within civilised areas, miners are threatened by local nobles who try to get rid of privileged miners who consume the natural resources at the landholder's expense).

To match these problems and requirements, people cooperate in productional units, initially organised in form of family/clan businesses. Similar forms of organisation can be found in Khuzan clans (and Ivinian who adopted the Khuzan habits, see *IVINIA*). Later, independent craftsmen from different families unite their interests and found cooperations and, further on, guilds. The purpose of these guilds is to provide a higher degree of security to its members; their members defend their common interests against dangers originating from the work or external enemies. This development can still be observed in many Hârníc mines.

When the idea of international guilds was spread throughout Hârn in the 5th century TR, local miners' guilds existed on Hârn for about 200 years.

The tribal nations (“barbarians”) of Hârn mine and smelt only small amounts of metal. They acquire metal in trade or loot from civilized settlements. Only three of the Jarin tribes, namely the Kubora, Urdu and Equani use significant quantities of metal and also know to make it. In this societies, the concept of “guild” is still un-

known and knowledge is passed by a handful of men from father to son.

MONOPOLIES & PRIVILEGES

Throughout most Lythian states, the sovereign maintains the *MINERAL REGAL*, a law restricting the winning and use of all or at least certain minerals, such as rock salt, ores, building stone or clay, to the sovereign respectively his representatives. The sovereign might rent out the regal in total or parts to vassals, other persons or companies, usually for the return of an annual royalty.

Whoever wants to lawfully exploit protected mineral resources must obtain a licence from the holder of the mineral regal. Mining without such a licence is usually deemed a felony.

Throughout most states of civilized Hârn, the Miners' Guild holds the mineral regal for all types of ore and rock salt. To foster their returns from the mineral regal, most sovereigns have granted additional and extraordinary privileges to the Miners' Guild, that ensure the miners' personal freedom and independence:

"The right to prospect on any lands other than temples, orchards, gardens, or highways; the right to cut timber to use in mines and forges, with or without the local lord's permission; the right to hold their own courts of law; and, in most cases, freedom from taxes, tolls, and military service. In addition, a serf employed in a king's mine for two years, automatically becomes a freeman." (*HÂRNWORLD, HÂRNINDEX*)

These rights are jealously defended against all attempts of restriction or offence, e.g. by local lords. The guild spends a lot of effort and money to assure itself the king's (or government's) good will and support. The guild will track down and punish everyone who seems to be a risk for this essential relationship. Whenever the government changes, the Miners' Guild will try to protect their interests by gaining an immediate confirmation of their privileges.

RANKS & RESPONSIBILITIES

Within the Miners' Guild, there are four ranks, each of which will be described in detail.

APPRENTICES

Apprentices are miners in training. Regarding the enormous monopolies and privileges granted to the Miners' Guild, joining the Miners' Guild seems to be a promise of wealth and perhaps gain of power for freemen. Almost all children of guilded miners are usually granted an apprenticeship. Only the most skilled unguilded workers (usually former serfs) will be granted the chance of an apprenticeship (see *UNGUILDED CRAFTSMEN*).

Sometimes wealthy masters of other guilds (most common mercantylers, metalsmiths, or charcoalers) manage to gain an apprenticeship for one of their offspring – by payment or close relationship to a guildmaster or mine officer; but these occasions are rare: the Miners' Guild is somewhat paranoid of infiltration and betrayal of the higher guild offices – jealously guarding the guild's secrets.

Apprentices work for the grant of knowledge, accommodation, nourishment and medical treatment. Accepting an apprenticeship means to relinquish one's personal freedom. The mine officers and their masters are the absolute authorities within the mines. Until an apprentice is expelled, or fails his promotion to become a pitman (journeyman) for a second time, he is subject to his master's whim. He has to follow the masters' orders and work hard.

The apprentice's rights are restricted to training, accommodation, sufficient nourishment and medical treatment to preserve his ability to work. He may also appeal to the Guild Council, if he thinks he is abused or mistreated by his master; but usually, such accusations are regulated in favour of his master...

An apprenticeship in the Miners' Guild is one of the hardest forms of education. Apprentices have to work in the mines and foundries for six hard years until they can hope for a promotion

to the rank of a pitman (journeyman).

During this time, they serve in the workings under the dangers of floodings, cave-ins and darkness, and in the smelteries, next to hissing and blazing furnaces. They learn how to construct shafts and tunnels, how to cope with critical situations. Outside the mine shafts, they learn to build and operate furnaces and foundries and how to refine the ores.

This knowledge is taught by hard and dangerous daily work within the narrow tunnels – side by side with the unguilded workers and under the stringent instruction and control of the pitmen and masters: in their first years, the apprentices usually are to carry lorries of ore and overburden out of the tunnels, or do other unqualified labour. They also are used to pick the rocks and clean the tunnels. In the foundries, they have to maintain the fires, operate the bellows and clean the smelting pits and forges.

In the last years of their apprenticeship they learn to drift tunnels and sink shafts. Gifted apprentices whose talent is discovered by attentive masters might be allowed to learn some aspects of the guild's secret arts, as prospecting, metallurgy or the construction and operation of machines like winches, pumps or hammer mills.

COLLIERS

The miners' journeymen are called *pitmen*. After an apprenticeship of at least five years, an apprentice's master will present the candidate to the Guild Council and report on his skills, behaviour and character. The mine officers then decide, whether to promote the apprentice to the rank of a pitman or not. If the result is positive, the former apprentice will be entitled to call himself a pitman and will be admitted into the Miners' Guild as a full member. A diploma of rank is given to the approved pitman. If he fails the promotion, he regains the freedom to leave the mine, to stay and work as an unguilded (but maybe qualified) worker, or to stay for an additional year as an apprentice and get a second, and last, chance of promotion.



**MINER WORKING
ON HIS KNEES**

Notice the miner's working clothing: a padded cap, some kind of hooded tunic hold by a leather belt, wrap-around trousers and leather shoes.



MINER DRIFTING OVER HEAD

The miner wears a padded cap to protect his head from hitting at sharp edges

Colliers are qualified workers who usually work as hewers or are in command of single workgroups of unguided workers and apprentices. Most pit foremen are experienced pitmen. Colliers may be substituted by experienced unguided workers, but each travelling pitman has the right to demand an unguided worker's position from the local guildmaster. Colliers are responsible for most parts of the apprentices' training.

Some pitmen have specialised on certain jobs during their apprenticeship, e.g. as smelters, tunnel and shaft constructors, mine engineers, etc.

Colliers may appeal for a claim. If it is granted by the Guild Council, they may open a mine alone or in cooperation with fellow pitmen. However, smelting privileges are inaccessible to pitmen, ensuring their dependency from master miners.

Only pitmen and the ranks up are deemed as members of the local guild chapter, called the **BROTHERHOOD**. They are expected to pay the guild fees and their regular contributions to the brotherhood's funds. Colliers profit from the Miners' Guild's health insurance system. See **BROTHERHOOD'S FUND**.

MASTER MINERS

After five years working as a pitman, a miner might appeal to the Guild Council for a promo-

tion to become a master miner. His request must be supported by at least three master miners.

It is well known, that a promotion strongly depends on the masters' recommendations and on the candidate's professional success. Written recommendations of guild officers (especially guildmasters) are an excellent point in favour of a pitman. As the guild is very interested in restricting interactions with potential external financiers (e.g. mercantylers) to competent miners, eloquent and scheming negotiators are sought for. And so, the candidate will be interviewed by the Guild Council and if he passes this examination by the Guild Officers, he will be promoted to the rank of a master miner. His promotion will be recorded on a personal diploma of rank.

Master Miners are expected to pay the guild fees and their regular contributions to the brotherhood's funds and they profit from the **BROTHERHOOD'S FUND**, the miners' social insurance. They can appeal for claims or smelting privileges and work on their own account or on behalf of a union. Additionally, while small mines may be operated by a single pitman on his own or in cooperation with some fellow pitmen, in large mines, each shift and mining or refinement facility within a mine has to be observed by a master miner, while single workgroups may be lead by pitmen or experienced unguided workers. Masters inspect the pitmen's work and – sometimes – train and test the apprentices.

Master miners will personally work only in small mines or foundries. With major mines, they rather oversee the working or deal with logistical and financial aspects of the operations. However, some master miners specialise in disciplines such as mine engineering, surveying, prospecting, metallurgy, or mining laws and can become well-paid experts or guild officers after some travelling time.

<i>Mine Officer</i>	<i>Area of Responsibility</i>
<i>Guildmaster</i>	maintenance of economic and political connections; representation in the Mangai; presides mine councils and attends to union meetings
<i>Master of the Mines</i>	proper operation of the mines; control safety regulations; control payment of wages, profits and aids
<i>Master Prospector</i>	prospection within the mining region; determination of the workability of claimed findings
<i>Master Mine Surveyor</i>	survey of mines, esp. of underground constructions; collecting evidences in case of breaches of claim
<i>Woodward</i>	supply with wood for construction and charcoal; care for the woods near the mines; control of the timbering by miners
<i>Master of the Furnaces</i>	control of the proper operation of the furnaces, smelteries, charcoal kilns, saltworks, etc. within the mining region; control the quantity and quality of products

Table 1: Mine Officers

In less important mine districts, only a selection of this offices is deemed necessary. Also, a mine officer can be in charge of any combination of listed responsibilities.

MINE OFFICERS

The syndics within the Miners' Guild are called *mine officers*. They are elected by all masters employed in the mining region from their number on an annual brotherhood's meeting. Their responsibility is the proper operation of the mines in their district and the jurisdiction within the guild's area. The **MINE OFFICERS** table lists the most common offices in Lythian mines.

Each mining district has a guildmaster. Theoretically, he is responsible for the book-keeping of fees, for the recruitment, logistics and the operation of the mines and refinement facilities (e.g. smelteries, saltworks).

The guildmaster presides the Guild Council and attends all union meetings within his mining district to supervise the flow of profits and aids. He registers all claims and appeals for smelting privileges in order of appearance and reports them to the guild council. Within the mine, he commands any policing forces (usually mercenaries) paid by the guild.

The guildmaster will be supported by at least two additional mine officers – qualified master miners, who are responsible for special areas within the operation of the mines. The most common mine officers have been listed in the **MINE OFFICERS** table.

The mine officers visit all mines within the district on a regular basis to control the mines' accordance with the guild's mining laws. They are often sought for their expertise by local miners and the guildmaster. If a mining officer comes upon an irregularity, he will reprimand those responsible in minor cases and/or report the fact to the guild council.

Violations against the mining laws are submitted to them and they conduct any necessary investigations.

GUILD COUNCIL

The mine officers form the local *GUILD COUNCIL*, whose head is the guildmaster. The guild council discusses all guild affairs.

Its major functions are to decide on the allocation or withdrawal of claims, to hold court of law on all legal cases within the mining district and between its guild members and workers, and to debate and enact the mining law. See **MINING LAWS** for details.

The Guild Council and the guildmaster are elected from all master miners resident within a mining district, but in some mines (especially in royal mines), all master miners hold the position of a mine officer.

The mine officers supervise the payment of

wages to all mineworkers once a tenday. They may be assisted by additional scribes, clerks, messengers, cashiers and tax collectors.

Read **ORGANISATION** to learn more on the organisation of Lythian mines.

UNGUILDED CRAFTSMEN

For common works, as transportation of bulk ore, overburden and fuel, draining of mine shafts etc., unguilded labourers are brought into action. They are cheaper than gilded miners. Where slaves are available, they are the first chosen for these jobs. In feudal societies, serfs who have run away from their masters may serve in this way to earn their personal freedom after a period of two years in a king's mine. Their situation is usually exploited by unscrupulous guildmasters. Unguilded workers are also deployed for the most dangerous tasks within the shafts and tunnels – why should the gilded miners take an avoidable risk?

Unguilded workers often cut trees, produce charcoal, and serve within the smelting works, firing the furnaces, operating the bellows and casting the metal into bars.

Former serfs, who have stayed for two years within the mine, are declared to be freemen. They can then leave the mine or may continue to work in the mine, as they please. If they stay, they will be paid relatively high compared to other unguilded workers. Workers who have shown high skills during this two years, may be offered the chance of an apprenticeship to the Miners' Guild. For the guildmaster, this is a chance to exploit a skilled worker for an additional period of time; for the freeman, it is an additional chance of social advancement.

The Guild Councils of most mines hire some mercenaries for policing service within the mine, to guard the mine's area, prise crews (while logging wood, prospecting) and most transports. This is necessary, as local nobility may try to sabotage the operation of the mine by killing miners and burning mine facilities, while frequently brigands will try to steal whatever they

can. Since most mines are remotely located from civilisation, the danger of occasional gar-gun raids is ubiquitous.

THIRD PARTY GUILDMEN

Most large scale mines hire masters of other guilds to work in the mine's facilities. Most commonly found are charcoalers, metalsmiths, timberwrights, millers, salters, and jewellers. Large mines may also hire a bonded master physician to treat wounded workers. As bonded masters, they are paid by the Guild Council. Small mines usually prefer to work out special provisions with local freemasters to supply the mine's needs. In proximity to prosperous mine districts, the other guilds may establish additional franchises to meet the mines' demand.

Neither bonded members of other guilds, nor their freemasters are members of the Miners' Guild of course. They don't have the right to attend the brotherhood's meetings or take part at elections for the guild officers. In a few cases, the Miners' Guild will grant a honorary membership to certain trusted personalities. Honorary masters may attend to the brotherhood's meetings, but have no right to vote. Refer to the section **CONNECTIONS TO OTHER GUILDS** for detailed information on the inter guild relationships.

MINER FAMILIES

Mining and smelting need a lot of manpower. To ensure the supply of this resource, women and even children are commonly involved in the mining activities. While male miners usually do the advancing working and vertical transports within tunnels and shafts, boys starting with the age of 8 years, do the cleaning and horizontal transports of ore and overburden through the narrow galleries.

Other boys accompany their mothers and sisters in separating and preparing the ore for the smelting process.

Many small-scale opencast mines in technical backwater regions – like Hårn – are exploited by companies of 1–3 miner families.

Because of the fact, that the miners are at least unpopular with local landholders, most mines located in cultivated regions have serious problems with getting farming land for raising crops of their own. However, a miner family will grow vegetable and fruit in a small garden and keep some livestock.

GUILD MEMBERS AS PLAYER CHARACTERS

A Player Character should start as a just appointed pitman with the occupational skills as shown in the OCCUPATIONAL SKILLS/GUILDED table.

Skills for unguilded miners can be found in the OCCUPATIONAL SKILLS/UNGUILDED table. If the specialisation rule for skills is in use, the players should use some of the specialities listed below in the section CRAFTSMANSHIP AND KNOWLEDGE instead of plain "Mineralogy" and "Engineering".

As usual, the player and the GM should take some time for a pregame to set up the background of the character.

MINERS AS SAPPERS

In times of war, life usually gets unpleasant for miners with their installations attacked by roaming warbands, and the mines flooded after

<i>Miner/Collier (6 years)</i>	
HM1	Mineralogy/4, Engineering/3, Metalcraft/2, Woodcraft/2, Jewelcraft/1; 5 option points
HM2	Mineralogy/4, Engineering/3, Metalcraft/2, Woodcraft/2, Jewelcraft/1; 5 option points
HM3	Mining/4, Engineering/3, Metalcraft/2, Woodcraft/2, Jewelcraft/1; 5 option points
HMG	Mineralogy 2/4, Engineering 2/4, Woodcraft 2/4, Metalcraft 1/2, Jewelcraft 1/3; 5 option points

Table 2: Occupational Skills/Guilded
 HM1 = Hårn Master 1st edition; HM2 = Hårn Master 2nd edition; HM3 = Hårn Master 3rd edition; HMG = Hårn Master Gold

the workers fled into safety. Some miners will try to make the best of their situation, abandon their mine and sign on with an army. Their expertise in digging and tunnelling is asked for during sieges of strong fortifications, as well as

<i>Mine worker (2 years)</i>	
HM1	Mineralogy/2, Engineering/2, Woodcraft/2; 2 Option points
HM2	Mineralogy/2, Engineering/2, Woodcraft/2; 2 Option points
HM3	Mineralogy/2, Engineering/2, Woodcraft/2; 2 Option points
HMG	Mineralogy/2, Engineering/2, Woodcraft/2; 2 Option points

<i>Melting worker (2 years)</i>	
HM1	Mineralogy/2, Ceramics/2, Timbercraft/2; 2 Option points
HM2	Mineralogy/2, Ceramics/2, Timbercraft/2; 2 Option points
HM3	Mineralogy/2, Ceramics/2, Timbercraft/2; 2 Option points
HMG	Mineralogy/2, Ceramics/2, Timbercraft/2; 2 Option points

Table 3 Occupational Skills/Unguilded

their skills in the operation and construction of siege machines. Thus, miners are often hired as well-paid sappers.

Less fortunate miners might get abducted by a ruthless commander and be forced into his army.

ORGANISATION

Throughout Lythia, mines belong to the largest economic businesses. Their infrastructural demands and the complexity of the work processes demand for a high degree of organisation. There are several aspects to keep in mind:

- financing
- protection/defence (as mines often lie in remote areas)
- policing and jurisdiction
- shift-work (time-critical processes – e.g., smelting and draining)
- maintenance of mine safety

The Miners' Guild also maintains some urban guild halls. These are found only within important mining districts and are used as hostels for guild members and as representative quarters for negotiations with external financiers and

merchants or heads of other guilds. The guild's main business is done in mining camps scattered within the mountainous wilderness.

At some mining districts, the guild maintains smelteries, forges and other working and social installations at a central point, while lots of small mines are located within the surrounding area.

These mines are worked by miners who have obtained a claim (the equivalent of a franchise) from the Miners' Guild. Most claims are held by master miners, who work the mine with several pitmen and workers on their own account. Sometimes, even pitmen may get a claim. See **FRANCHISING** to learn more about it.

BROTHERHOOD & MINE DISTRICT

The local guild chapters historically emerged from brotherhoods formed of miners working nearby mines on a common mineral deposit. This is still the case, even today: A local guild chapter (still called *BROTHERHOOD*) consists of all master miners and pitmen resident within the corresponding *MINE DISTRICT*. A district is usually defined by a workable deposit or a group of deposits.

In technically backward regions, like Hârn, mines tend to be small workings of 3 to 10 miners, and a brotherhood will be formed by the miners of 3 to 20 mines. In advanced regions, mines are large businesses with hundreds of specialized workers, and a brotherhood may comprise a single mine only.

The master miners of a district elect a council of mine officers, among them the guildmaster as the brotherhood's representative.

REGIONAL GUILD

In almost all Lythian states, the miners have organized in regional guild chapters. Most of them cover the territory of a single state. The meaning of this level of organisation, is to secure the miners' privileges, especially to obtain the mineral regal from the respective sovereign.

The regional guild operates by a council formed by the guildmasters of all associated

brotherhoods. This *HIGH COUNCIL* usually elects a spokesman and negotiator to represent the Miners' Guild's interests with the regional Mangai and the sovereign.

ROYAL MINES

Royal mines are operated on behalf and cost of the royal treasury. The king is the only financier. He will usually take on master miners for the supervision and additional miners for the operation of the mine. However, the Exchequer Royal will install a trusted steward and some garrison to enforce the royal claims and protect the valuables from vanishing.

Royal mines aren't popular with miners, because they are known for strict and harsh control by the king's steward (who usually has some personal financial interests in addition to the king's).

As kings don't like to take economical risks, they prefer to rent out the mineral regal to the Miners' Guild in return for a hefty annual royalty.

A similar kind of contract is preferred in the Kingdom of Kaldor, where the crown not only rents out the actual mines, but enfeoffs the Miners' Guild with manorial fiefs containing the mines. This politic renders the local guildmaster as a kind of local lord, with full jurisdiction about local serfs.

Another option is to rent out single mines to the Miners' Guild. However, royalties are usually paid in form of the *TITHE*, which is fixed as the 10th part of all mined ore's value.

A special privilege of royal mines is that a runaway serf, who works within the mine for two years, gains his personal freedom. Many serfs try to reach a mine in hope of a better future, only to find themselves exploited as cheap workers by the miners for some years.

MINES OPERATED BY THE GUILD

Very few mines are operated by the Miners' Guild directly. Usually, such mines are high-risk capital investments to force the development of new mining regions.

MINES OPERATED BY AN UNION

To finance the founding of a new mine, or to expand the operation of an existing mine, large amounts of money are needed. Only a few miners could afford these expenses on their own.

To raise these funds, a group of miners may cooperate and form a *UNION*. If the claims operated by the union are held by a master miner, third party financiers are allowed to invest into the mine. Usually, such investors are found among wealthy merchants or nobles.

Persons, who participate in the union, hold one or more *SHARES*. All the costs and profits of a mine are distributed among the unionists depending on their number of shares. Sometimes, special persons or institutions are entitled to hold *FREE SHARES*. While regular shares participate in any losses and winnings of the union, free shares participate on all winnings, but are free from any payments due to losses. Free shares are often granted to finance a parish or to pay members of foreign guilds (especially master millers).

Financial regulations are settled on a time basis of three months. The unionists must take part in a quarterly union meeting (in person or by means of an representative), or their claims will be forfeit. On these union meetings, they will receive their share of the mine's revenue – or will have to pay for their part of the deficits.

The Guild registers unions with all unionists and their shares held. All union meetings are presided by the Guildmaster, who controls all payments. A unionist who wants to alienate his shares needs the consent of his co-unionists.

METAL SYNDICATE

The Miners' Guild has established a monopoly on metal trade, called the *METAL SYNDICATE*. All smelters are ordered to cast their metals into ingots and bars of a defined weight and size. The Master of the Furnaces validates their quality and weight and lets each ingot or bar be marked with a die, indicating origin, quality and

weight of the metal.

The marked bars and ingots are stored well-locked in a safehouse until they are transported for sale – usually to the nearest market available or to a contracted mercantylar.

In most kingdoms, the Royal Exchequer holds an option to obtain all coinable metals, like silver and gold. The metal syndicate helps to ensure this privilege.

BROTHERHOOD'S FUND

The Miners' Guild maintains some kind of social insurance system, to protect guild members from loss of income due to sickness or accident, both aspects being common problems among miners and smelters.

The system predates the founding of the extensive guild structure, originally being set up by brotherhoods, cooperating groups of pitmen. Since the foundation of the present guild structures, it was integrated into the organisation and spread all over Lythia.

All guild members pay fixed dues into the *BROTHERHOOD'S FUND*. This fee is usually 2d per tenday (the *BROTHERHOOD PENCE*). Miners with less dangerous jobs are sometimes expected to pay a slightly higher fee. The guild supplements the fund with the fifth part of all franchise fees.

If a guild member becomes ill or injured, he will get medical treatment on expense of the brotherhood's fund and a low *SICKPAY* for the time of his convalescence, but not longer than two months.

After this period, or in the case of incapacity resulting from age or a working accident, a *PENSION* will be paid to a guild's full member until the miner's recovery or his death. This pension is usually 1/2 of the local minimum wage.

The brotherhood's fund is organised by a trustee – called *GUILD FATHER* or *GUILD ELDER* – and one or two assistants. All are elected by the guildmembers. They are responsible for managing the fund and for the maintenance of common installations like the *BROTHERS' ASYLUM*,

where old and sick guild members will be nursed. Sometimes, they will engage a bonded master physician and/or apothecary, or pay for a priest holding regular services. They also pay out pensions and sickpays.

Cheating to get a pension or sickpay is a serious offense. See **MINING LAWS**.

MINING LAWS

The Miners' Guild holds a privilege unique within the kingdoms of Hårn. Mines under the control of the Miner's Guild have the right to maintain their own jurisdiction. The local guild-master presides the jury, usually being identical with the guild council. This jury is an equivalent to a feudal noble's court. This court will dispense justice within the mining district.

The definition of the operative area of the mining laws is a common point of dispute between the Guild and local fiefholders, often settled in favour of the Guild by the Sheriff at the royal court. Usually, it is assumed, that the Guild's jurisdiction covers all cases

- within the underground constructions
- in all buildings maintained by the guild
- 100 yards around any kind of mine infrastructure, as drift entrances or shaft mouths.

The Guild Council is responsible for all crimes committed within the mine's territory and for all offences of the Guild's members and workers – even outside of the mine's area – if no third party is involved. If a third party is involved, all parties may appeal to the king's or sheriff's court, as they please.

Offences and Punishments

The social, economic and criminal law applied within mines is largely similar to common urban law. But there are characteristic extensions regarding specific problems of mining and regulations for companies. A short catalogue of offences specific to the miner's guild follows:

LARCENY OF THE BROTHERHOOD – cheating to get money from the brotherhoods' fund;

punishments: pillory, fine; in severe cases the offender will get cast out of the guild (including withdrawal of diploma).

VIOLATION OF CLAIM – mining outside the area of ones own claim; the offender has to pay restitution to the victim and an additional fine of up to 1£ to the guild (regarding this is in fact a breach of the royal mineral regal, this is a mild punishment!).

SABOTAGE – any manipulation of mining facilities, that intentionally endangers life or property. Offenders will forfeit all franchises and be cast out of the guild. Afterwards, they will be tried for murder in the sheriff's or king's court. Most, however, don't survive the transport...

BREACH OF GUILD PRIVILEGE – all attempts to

1. mine without a registered claim,
2. circumvent the Miners' Guild monopoly on metal trade with a third party, or
3. sell ore to an illegitimate smelter or merchant.

This is deemed a very serious offence; the offenders' property will be fined, all franchises (claims and smelting privileges) be revoked. The offender is cast out of the guild.

OFFENCE AGAINST THE FORREST LAWS – the woodward is responsible for the use of the woods within the mining district. The woodward regulates the lumbering by assigning areas to each mine. The claimholder may only use lumber from this woodland. In less wooded areas, the woodmaster commands to reforest all cleared woodland within one year.

NEGLECT OF A MINE – claim holders must work their mine. If their mine is found unworked for at least ten successive days,



PROSPECTING MINERALS

the claim will be withdrawn and taken over to the guildmember who first reported the neglect to a member of the guild council.

Guild Secrets

Guild secrets cover

- the location of wealthy mines (esp. for gold, silver, gems),
- advanced technologies used for scooping, haulage, refinement and smelting,
- mineralogical and metallurgical knowledge.

KNOWN GUILDHALLS AND RESIDENT MASTERS

Detailed information on the mines located throughout Lythia can be found in the GM-only rated document "**MINES IN LYTHIA**", which should adjoin this resource. It provides information on location, size and products of all known Lythian mines.

Please check the **PREFACE** to learn how to obtain "**MINES IN LYTHIA**".

GUILD POLITICS

The Guilds' politics follow a few major guidelines:

The guild heavily depends on the king's favour – both for their need of workers and for the grant of regal mineral privilege. The custom of freeing serfs after having worked in a king's mine for two years, ensures a constant stream of cheap hands. Where this kind of volunteers isn't available, slaves and prisoners are a common source of manpower.

The mineral privilege is another essential to the Miners' Guild. When this monopoly cannot be easily obtained from a monarch, as is in the Thardic Republic, major efforts are done to establish somewhat of an equivalent.

Within the guild, worker revolts have to be prevented or suppressed. One method to achieve this goal is to give some competence and responsibility to lower ranks. e.g. by grant-

ing franchises to pitmen and even unguided workers.

Financiers' investments are essential to the guilds' operations. To keep their support, their investments and interests must be secured in some way, simultaneously limiting external influences into guild affairs.

FRANCHISING

Within the Miners' Guild, several kinds of franchises are separated, the two most important being *CLAIMS* and *SMELTING PRIVILEGES*. It is not unusual for a master miner to hold several claims and possibly an additional smelting privilege at a time. Normally, he will act as the representative for a union.

The guild fees add up to 20% of the metal-price (10% of all ore mined, 10% of all metal smelted) and seem to be very high, but there are reasons for this. The guild fees must cover for three main expenses:

1. The royalties in return to the mineral royalty make up the 10th part (10.0%) of the ore value. The royalty is collected by the guild in charge of the crown. It is included in the franchise fees.
2. The miners have installed some kind of health insurance to protect miners and their families from the consequences of illness and disability from working accidents; this insurance makes up 6p per month for each guild member (Additionally, the fifth part of all fees paid by franchise holders – 20% of the guild's total amount – will be passed to the **BROTHERHOOD'S FUND**).
3. The remaining part (75% of the total amount) is left to the Miners' Guild for their day-to-day operation, including the wages for guild officers, bonded metalcrafters and millers, mercenaries, teamsters, maintenance of guild installations (e.g., drainage galleries and installations, paths), lobbying the authorities to ensure the guild privileges, and financing prospection campaigns.

Claims

A *CLAIM* is the exclusive right to win minerals from a well defined area. Claims may usually only be obtained by master miners. The claimholder may work the granted mine on his own account or act as a representative for a *UNION*. In some regions, it is also possible for pitmen to hold a claim – but only with the restrictions, that no foreign capital is involved and that no more than five persons work the mine at any time.

Claims are registered and awarded by the guild, following a strict protocol:

1. A miner who discovers a deposit of ore, appeals to the guild council or to the guild-master.
2. The Guildmaster checks, if there is an existing claim to this deposit.
3. The Master Prospector tests the quality of the minerals to check for the deposit's exploitability.
4. The Master Mine Surveyor surveys the area. It is parted into single plots, 15 by 75 yards, called *CLAIMS* (the size of a claim may vary, due to local customs and topology). The finder will get the claim centred on his finding plus one additional adjoining claim of his choice. The rest of the area is put up for an auction held by the Miners' Guild.
5. The claims are registered with the guild chapter's *MINE REGISTER*. The register lists the name of the claimholder (in each case a member of the Miners' Guild) and, if applicable, all unionist (financiers) of the mine.

Claim holders have to give one tenth of their production to the Miner's Guild. They might be charged for additional operational fees (e.g., drainage ninth).

Smelting Privileges

A *SMELTING PRIVILEGE* gives its owner the right to maintain a smeltery. He has an option of purchase on all ore of a specific metal mined in a defined area. He can process these ores in the

smelting works and sell the metal to the Miners' Guild. A smelting privilege will only be granted to a master miner – never to a pitman or unguilded person. Each master miner may hold at the most one single smelting privilege (though he may hold several claims in addition). The meaning of this reglementation is to prevent concentration of essential production facilities in single hands.

Smelting privileges are granted by the guild council on a per-hearth-basis. This is, each hearth needs an separate allowance by the guild council.

Master miners working small-scale mines will usually also operate a smelting privilege; they will construct small wind, smelt their own ore and sell their metal to the guild. Colliers who work as autonomous or enfeoffed miners (see *CONTRACTS*) will have to either sell their ore to a licensed smelter, or let him do the smelting on their own account.

Smelters must sell all metal to the Miner's Guild (see *METAL SYNDICATE*). One tenth (10.0%) of the metal will be kept as the guild's fee.

Dirt Picking Licenses

Another common kind of franchise is a *DIRT PICKING* OR *WAILER'S LICENSE*. Such a license allows its holder to search the heaps of a mine for valuable minerals, thrown away with the overburden. Dirt picking becomes lucrative, when advances in smelting techniques allow for less valuable ores to be smelted. These meagre ores would have been deposited of earlier.

Dirt picking licenses may be granted to anyone appealing for it by the Guild Council, even to unguilded workers. In some regions, wailing is a common task for women, children and the poor.

Dirt pickers pay one tenth of their findings to the heap's owner, another tenth as a license fee to the guild. If the dirt picker is a guild member, he has to pay the brotherhood's pence in addition – another reason, why this job is very unpopular with miners.

Drainage Privileges

Within important underground workings, drainage privileges might be granted to master miners. This privilege entitles its holder to construct a gallery primary dedicated to drain mines from mine waters. If this gallery is connected to a mine and drains its waters ("inherits the waters"), the holder of the drainage privilege (called *DRAINING MINER*) earns one ninth of the ore won by that mine (called *DRAINAGE NINTH*), as long, as his drainage gallery is the deepest gallery, that drains that mine.

The drainage mine is free from any fees. This reflects the enormous risk of investment the drainage miner has to take.

In some mining districts, drainage galleries are within the area of responsibility of the common guild activities.

CONTRACTS

There are five basic designs for contracts with miners. To choose the right form of contract might become crucial to a claimholder, as it provides possibilities to maximize profits and to minimize losses.

Autonomous Miners ("Eigenlehner")

This is the most applied legal form for small mines (and almost all Hârnic ones): The mine is worked by the claimholder (usually a master miner) and up to four other persons, assisted by their family members. The claimholder completely acts for his own account.

Bonded Miners ("Fürdinger")

Most mines owned by a union are worked with help of bonded miners, usually pitmen and apprentices. They receive a fixed wage plus individually arranged productivity bonuses. Often the contract is set up between claim holder and a group of pitmen, thus insuring the productivity and reliability of the whole group.

Enfeoffed Miners ("Lehnhäuer")

An other popular form to operate a large mine is to lend a part of it (usually a single draft

or pit) to an enfeoffed miner, usually a free pitman or master miner, for a fixed amount of ore per tenday plus a percentage of any additionally won ore. If the enfeoffed miner fails to deliver the fixed rent, he must pay a fine and/or is evicted of the contract. If the enfeoffed miner surpasses the base rent, he might earn big profits, but working accidents or other serious problems hindering the advance of labour (as cave-ins, or floodings) are at his own risk. The enfeoffed miner may take on additional workers on his own account as he pleases (but is usually restricted by contract to take on guild members only).

Piece Rate Wages ("Gedinge")

This contract binds the payment of any wage to a minimum of work progress (*PIECEWORK*). If the employee fails to meet the determined minimum requirements, he will not be paid at all, but usually demitted after several such occasions. If the worker exceeds the arranged goal, he will be paid graduated productivity bonuses determined by his performance. This kind of contract is especially popular when drifting long tunnels (e.g. drainage galleries) of sinking shafts to fasten work.

Productivity Wagers ("Leistungswette")

Specialists, as hydraulic engineers, who are responsible for high-risk investments, are often contracted with a productivity wager. The costumer and the contractor bet on the result of the work: If a certain minimal quality is matched by the contractor's service, the costumer will pay a large wage, if the contractor fails, he'll get nothing (or even worse – be fined).

For example, the owner of a mine announces he wants to have a certain engine with specified properties installed in his mine. Interested engineers might compete for the project by price and by the promised properties of their individual designs (reference projects are of importance). The owner of the mine will then set up a contract binding any payment to the accordance of the installed machine to the prior set-up requirements. Until the design is imple-

mented, the share holders of the mine will pay for the engineer's expenses (e.g., keep, wages, materials). If the engineer's design holds his promises, he will get the (usually generously) agreed payment, possibly an additional bonus if his machine surpasses the costumers' expectations. If he fails, he'll usually be chased off without a penny. Some swindlers (and even engineers who just over-estimated their abilities) have been reported been slain by their disappointed and enraged customers – usually after refusing or failing to pay back the costumers' losses. An engineer will try to flee in expectation of not meeting the minimal requirements before this happens.

PROSPECTION CAMPAIGNS

With holding the mineral regal, the Miners' Guild periodically finances expeditions to prospect for deposits of ore and other valuable minerals.

Officially, the Guild asks the king to order his lieges to support and protect those expeditions. But to effectively protect an expedition, the Guild has to hire men-at-arms on its own expense. An expedition consists of at least a master miner specialised in prospection, some additional pitmen or apprentices and one or two dozens of mercenaries, teamsters, porters and other auxiliary staff. The usual survey method is to start inspecting river sediments for secondary mineral deposits. When something of interesting is found, the river is followed upstream to locate the primal ore deposits.

If several deposits seem to be workable and profitable, the guild might appoint a master miner to be a *LOCATOR*. The locator is responsible for the foundation of the new mine (or even a new mining district and guild chapter). He will look for miners and related craftsmen interested in opening the new workings or in financing the project. He will control the installation of the necessary infrastructure (guild hall, hostel, refinement installations, fortifications, if needed) and set up a working guild administration. The payment he gets is a matter of negotiations with

the guild, but often the locator receives simply some of the most lucrative claims.

CONNECTIONS TO THE MANGAI

The Mangai is the association of the powerful Lythian guilds. Its main purpose is to ensure its members' privileges. This strongly depends on the observance of each others' monopolies. Due due the extensive privileges the Miners' Guild holds, conflicts with other guilds are nearly unavailable:

1. Miners may cut wood as they please, often colliding with the interests of the Timberwrights', Woodcrafters' or Shipwrights' Guild;
2. dealing with the miners is very profitable, but the miners are somewhat paranoid guarding their guild secrets – often refusing other guilds the access to their installations and remote mining camps; the guilds don't like to miss their profits;
3. miners hold a tax- and toll-exempt status in most regions and don't need to provide military service – all of these things are crucial to the existence of a town or city, governed by the Mangai;
4. the miners tend to employ bonded masters as smiths, charcoalers, timberwrights, woodcrafters and ostlers, sometimes even seamen, innkeepers or jewellers – the guilds usually try to discourage this custom because of their own profits.

The Mangai is the natural place to address and discuss such disputes. Often they are settled in favour of the Miners' Guild, as they tend to have strong supporters: The Merchants' Guild makes great profits dealing with the miners and several important mercantylers are unionist with large investments into the Miners' Guild's operations. Similar situation is given with the Litigants' Guild. The two mentioned guilds are very strong within most major settlements. In addition, the miners' privileges might be directly protected by the king's forces, as the Miners' Guild is one of the most reliable supporters of the crown.

To balance these advantages, the other guilds often try to ensure the support of the local nobility – fond of terrorising those "nasty parasites".

CONNECTIONS TO OTHER GUILDS



Guild of Arcane Lore

Among the ordinary people, the extraction of valuable metal from bare stone is widely deemed an arcane art. Of course, on the most part this is just a prejudice borne from ignorance and fantasy. However, there exist some connections between miners and magicians.

Besides their great traditional wisdom and experience, some of the best Khûzan mining clans utilise magic in prospecting ores and in avoidance of hitting water-bearing layers. Khûzdul, Sindarin and even a few humans know the arts of treating metals by magic means. Those call themselves to follow the ways of *Jmorvi*. Jmorvi-Shek-Pvar study all aspects of metals and its manipulation. They are capable of producing metal objects of superior or exactly defined properties.

As the Guild of Arcane Lore is a somewhat secretive organisation and avoids public contacts, there are few official connections to the Miners' Guild. Most frequently, contacts are maintained by Jmorvi Shek-Pvar or alchemists, who try to obtain specially treated minerals, metals or alloys. At least for human miners, it is far from usual to use magic in prospecting. Despite this, some prospectors may have dormant, but useful psionic talents.



Chandlers' Guild

The chandlers not only provide wicks and tallow for the miners lamps, but also provide the mines with food and diverse necessities. Since the mines are often located far off of civilisation, it is more convenient for miners to order from a peddler than personally travel to the next settlement to purchase food or tools. A few chandlers have

specialized in supplying mining camps.



Charcoalers' Guild

Most ore mines hire bonded charcoaler masters to produce charcoal needed in the furnaces, smelteries and saltworks to refine the miners' products. They cut trees on behalf of the Miners' Guild or obtain the wood from a bonded or free timberwright.

Sometimes, they operate as freemasters, especially when supplying small mines with fuel.

A few charcoalers obtain coal from miners to sell it.



Jewellers' Guild

Where precious stones or metals are mined, bonded jeweller masters can sometimes be found within the mines to cut the gems and increase their value before they are sold on the free market. In states, where coins are minted, jewellers are engaged with cutting the stencils and usually they supervise the whole minting process. Thus, regular meetings with mine officers are common.

Some jewellers have also specialised in the manufacture of fine balances to weigh precious metals and gems.



Litigants' Guild

In important mining areas, lots of unions may be active in mining and smelting ore. Large amounts of money are turned over. Due to this fact – and as most external financiers are members of the Merchants' Guild – it has come into common practice to let at least all union and trading contracts be set up by litigants.



Locksmiths' Guild

Locksmiths usually work with alloys like brass. They purchase the needed raw materials like copper and zinc or steel from merchants or miners, preferring the last option for better quality and lower costs.

On the other hand, locksmiths produce high precision instruments like astrolabes, compasses and others, useful to miners for measuring distances and angles.



Masons' Guild

Master masons operate quarries on their own. They usually don't need the assistance of a miner.

Only sometimes; when they need qualified advice; they hire a bonded master miner to cope with special problems; like flooding or tunnelling.

Within mines, major refinement facilities and buildings (smelteries; guild halls; etc.) will be erected by master masons on behalf of the Miners' Guild. Buildings as shaft houses are unknown on Hårn (but not on all mainland Lythia).



Mercantylers' Guild

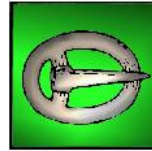
Mercantylers play an important role in the financing of mines. The foundation of a new mine is a very cost-intensive intention: trails must be cut through the wilderness; the mining and refinement facilities have to be constructed; workers must be paid; mercenaries be hired to protect the mine from brigands and the local nobility's raids, and the hefty royalty for the mining licence has to be paid.

To raise the needed funds; either even the wealthy Miners' Guild has to borrow money from the usurers of the Mercantylers' Guild, or – more commonly done – the miners will set up a union with mercantylers as share holders.

Another important role of the mercantylers is the regional trade of the mine's products. Usually; the Miner's Guild sells its products on the nearest market available. Mercantylers will obtain the products and ship them to related markets to re-sell them to other mercantylers and smiths.

Metalsmiths' Guild

The service of a metalsmith is an essential for nearly all mines, as the mining tools, especially



the picks and chisels, have to be sharpened daily. Each hewer uses at last two sets of tools – the first set will be used that day, the second being sharpened at the mine's smithy meanwhile.

The usual metalsmith must obtain his raw materials from the local markets, where miners or mercantylers sell raw metals in form of bars. It is not unusual for smiths to travel to a market or fair once a year to obtain enough steel (or other metals) to meet the complete year's requirements (or even more). They could purchase metals from a local merchant, but only for a higher price – and usually of an inferior quality.

Bonded metalsmith masters can be found in most iron mines. They are responsible for the refinement of iron to steel of high quality. Iron will be forged and hammered to decrease its carbon content until it becomes wrought iron or steel. For this work, hammer mills are used whenever their construction and operation is possible. Sometimes, these hammer mills are owned by the mine and rented to metalsmith freemasters, working on their own account – but usually, hammermills are owned by the Millers' Guild who operates it in cooperation with the smiths.

Steel and wrought iron are hammered into bars and shipped into to the next market to be sold to merchants or smiths. Other metals are casted into bars or ingots for trade.



Millers' and Millwrights' Guild

The Millers' Guild holds the privilege to operate any kind of mill,. Furthermore, the guild effectively owns nearly all mills and lends them to their members only. As the crushing or grinding of ore is essential to proper smelting, master millers can be found at almost all major smelteries, where they operate the ore mills on behalf of the Miners' Guild or a miner holding a smelting privilege. Most crushing mills (nearly all of about 120 mine-head mills on Hårn) are powered by

animals or slaves, some by waterwheels. A relative new development are *BLOW MILLS*, water wheels that power bellows to constantly blow furnaces, thus drastically improving metal quality and yield. The latest development are *FORGE MILLS*, powering the bellows and hammers of a smithy to refine pig iron to wrought iron. The first Hârníc forge mill was constructed in 702 TR at Gosus/Melderyn imitating a design from Shorkyne. From Gogus, the new technology quickly spread throughout eastern Hârn, and today, 19 forge mills are in operation, but only four west of the Kald, none yet in Orbaal.

Technically, mine-head mills are always located within the jurisdiction of the Miners' Guild, but belong to the Millers' Guild. The mills are franchised to bonded master millers, who usually work under a master miner. The Millers' Guild pays a toll of 1& per annum to the Miners' Guild for the right to operate a mill, and bonded millers usually charge a share of 5-15% of the metals smelted from the ore they processed (the so-called *MULTURE*). As an alternative, millers might accept to become shareholders unions using their services and abdicate any *multure* they would normally charge from these unions.

Millwrights are the constructors of the most of Lythian machines. They are familiar with water- and wind-powered engines like mills. A few millwrights know how to construct as complicated machines as pumps or different kind of hoists (for ore, overburden and water) and how to use water or wind to power them. If a serious drainage problem arises, such a millwright might be engaged to build a machine of appropriate design.

On mainland Lythia, some miners called *MINING ENGINEERS* have specialised in the construction of mining, conveying and draining machinery. Such experts belong to the best-paid guildsmen throughout Lythia. As engineering makes only a very small part of the Millers' business, and the mining engineers will never construct grinding or crushing machinery, the tensions arising from this development are still moderate.

Potters' Guild

The potters hold the monopoly over the manufacture and sale of ceramics. While potters purchase special mineral materials like borax, feldspar (additions to make ceramics watertight, mineral colours, glazes) from miners, they usually win clay on their own, working alluvial deposits digging clay pits located near streams. On the other hand, potters supply miners' lamps, crucibles, probing shards, retorts, *alem-biques* and other laboratory equipment to the miners.



Salters' Guild

"Salters have a monopoly in the retailing of salt; an essential mineral since it is the principal method of preserving food. A master salter will own a shop in town; where bulk salt can be purchased; and also a variety of pickled or salted foods. Mining of salt is done by the Miners' Guild, but it can only be sold to a master salter; who will mark it up for re-sale. In coastal regions, some salters have sought to circumvent other guild monopolies by producing sea-salt through evaporation of sea water in salt pans; the process is expensive and not very successful. Rock salt tastes better and is more in demand." (HÂRNWORLD; HÂRNDEX)

In salt mines; rock salt is mined by the Miners' Guild. The mined salt may be directly sold to a mercantylor or a local freemaster salter. More usually than the direct marketing of mined salt is the refinement of the raw salt by either dissolving the salt in water and subsequent crystallisation of the salt in salt pans, or wash the ground rock salt with almost saturated salt brine. The refined salt is of a higher quality and can be sold for a better price. The refinement process is accomplished by a bonded master salter hired by the Miners' Guild. The Salters' Guild will try to prevent salters from signing such a contract, as the guild's politic prefers to establish freemaster franchises for the saltmakers. On the other hand, miners have the privilege to cut wood for free, so that a saltworks owned by the Miners' Guild and operated by a

bonded saltmaker has lower fuel costs and thus will realise higher profits.



Timberwrights' Guild

"Their main customers are woodcrafters; shipwrights; masons; and charcoalers. Miners generally have the right to cut their own timber but often employ bonded timberwrights for their expertise."
(HÄRNWORLD; HÄRNDEX)



Weaponcrafters' Guild

Weaponcrafters are the main purchasers of high quality steels. Various kinds of steels are needed for different parts of armour and weapons. The degree of flexibility and hardness highly depends on differences in the steel's content of carbon, a fact unknown to lythian metallurgists and preventing them from designing specific steels. The effects of alloying steel with wolfram, titanium, vanadium or chrome are completely unknown on Lythia.

One way to produce superior weapons combining flexibility and sharpness is to weld different kinds of steel into a package and then iterate a process of folding, welding and hammering the package. This results in a steel consisting of multiple alternating layers of hard and flexible steel, combining both properties, e.g. for a sword's blade. Such packages of damask steel are produced by weaponcrafters – usually for their personal use only. This technology is highly developed in the eastern empires of Lythia – especially Shoju. Throughout Hâm, only very few weaponcrafters know or even practice this art.

CONNECTIONS TO CHURCHES AND THEIR CLERICAL ORDERS

Church of Peoni

Peoni is the goddess most worshiped by Lythian miners. Within the Peonian cult, the worship of saints is a common practice – and almost all trades have their own patron saint. For the miners, this is *OWIN.*, whose symbol can be found in the Miners' Guild's heraldic sign: the badger.

“OWIN. Badger. Born 415 BT in Trierzon. Died 303 BT in Trierzon. Second Tirrala of Kolinon. Owin was a hermit living quietly in northern Trierzon. For many decades he had peace and achieved a state of great holiness and reverence. This attracted the attention of a number of evil spirits, who resolved to tempt him into sin. Unable to conquer his purified nature, they turned their wiles and wrath on the humble people living in the area, and Owin could perceive that all would be destroyed. He received a vision from the lady and transformed himself into a great badger. He led his people deep under the mountains, where they overcame demons of darkness and fire and gained several powerful secrets. Emerging again into the surface world, Owin helped the people to re-establish their lives, then returned to his peaceful, eremetical life. He is the patron saint of miners.” [HRT: MEADOWS OF VALON].

Owin's Saint Day is 11th Nulus [HRT: PEONIAN SAINTS DAYS]. Within most mines, this is an important holiday with a mass, in important mining districts sometimes even with a miners' parade and a local festival.

Reflecting the dangers of their work underground, miners are very pious people. At the beginning of each shift, common prayers are held in the local chapel or in a dedicated room within or near the pit head building.

Church of Agrik

In some areas, especially in central Lythia, Agrik, the Fiery Lord of the Octagonal Pit, is worshipped by miners, driven by the connection of their work to the fiery aspects of this deity. In

many regions with prevailing Laranian/Peonian religion, smelters and metallurgist often prefer to devote a silent prayer to Agrik before taking on their work. Usually this prayer just asks Agrik not to send his wrath upon the miner and his work.

CONNECTIONS TO THE NOBILITY

“An earl or baron whose fife includes a valuable mine is out of luck

Nobles are rarely pleased to see the opening of a mine on their lands; and more than a few guilded prospectors have mysteriously vanished over the years.

Such foundries are never popular with the local nobility because they consume vast quantities of timber as fuel.”

Naturally, miners are strong supporters of the crown/sovereign. This may raise additionally problems with local authorities such as manorial lords.

CONNECTION TO THE TRIBAL NATIONS (“BARBARIANS”)

The relationship of miners and the Hârníc Barbarians is described as follows:

“Miners are considered villains by many tribal nations since they often intrude and establish mines in valuable hunting ground or sacred sites. Clearcutting and diverting and poisoning of streams are ecologically damaging processes which miners employ and tribesmen resent. One major effect is the amount of available game drops drastically within several miles of a mine.

The Miners' Guild on Hârn is powerful and wealthy. It is not uncommon for mines to employ slaves, runaway serfs, and hardened criminals. They are not above acquiring additional slaves from a nearby tribe, or trading weapons to one in exchange for captives from a rival tribe.

In addition to armed rough-and-ready miners, mercenaries are often hired to protect the interests of the guild.

In areas close to civilization, the guild can usually count on the assistance of the Sheriff's men or a company of the local Legion in the event of difficulty."
[HÄRNMASTER BARBARIANS 12].

POLITICAL INFLUENCE

The Miners' Guild is one of the most wealthy, influential, and powerful guilds within the Lythian Mangai. The miners' privileges are the most extensive granted to any guild. Both, privileges and influence, are based on the societies' need for metals and the high degree of specialisation.

PRODUCTS

The following table lists typical fees and prices:

Service/Product	Price
amber	
antimony	
arsenic (grey)	
arsenic (yellow)	
bitumen	
borax	
brass	3d/pound
bronze	4d/pound
coal	
copper	2d/pound /hundredweight
diamond	42.67d x (m/carat) ²
feldspar	
gold	400d/ounce 64000d/pound
iron	1f/pound /hundredweight
lead	1f/pound
mythral (platinum)	8000d/pound 400000d/pound???
petroleum	
quicksilver	7200d/pound
salt	
silver	20d/ounce 320d/pound
steel	1d/pound /hundredweight
sulphur/brimstone	
tin	2d/pound /hundredweight
zinc	2d/pound /hundredweight

in cash. The listed costs are usual wages for hired/bonded workers. Profits of independent miners working their own claim variate to a high degree, depending on their success. Alternative payment models implement piecework (e.g., depending on the advance rates of a gallery, amount of mined ore, etc.).

Rank	Wage			Support		
	Day	Month	Year	Day	Month	Year
Master Miner	3.50d	84 d	1008 d	1d	24d	288 d
Pitman	1.50d	37d	453d	1d	24d	288 d
Miner Apprentice	-	-	-	1d	24d	288 d
Skilled Labourer	1.00d	24d	288d	1d	24d	288d
Unskilled Miner	0.50d	12d	144d	1d	24d	288d

ANNOTATIONS

The HårnMaster rules, in combination with the data provided in various kingdom modules, give some reference to the number of miners on Lythia. Deferred numbers for the total estimated amount of miner households (using HMG rules) are presented in the table below.

Kingdom	Master Miners	Workers (ss/us)	Mining Slaves	Mines
Azadmere	234	0/0	0	7+
Chybisa	6	1/1	0	10
Evael	1	0/0	0	0
Kaldor	77	19/13	0	41
Kanday	60	14/10	0	17
Melderyn	97	24/16	0	58
Orbaal	44	4/5	4	17
Rethem	59	5/10	10	29
Tharda	63	5/8	10	55

A master miner's household consists of one master, two pitmen, one apprentice and the master's and pitmen's families, totalling 16 persons. From these, 11.5 can be considered as working (at least in part-time work) in the mine, only 4.5 are too young, too old or disabled.

Each worker (ss – semi-skilled, us – unskilled) or slave household consists of approximately 5

WAGES

Wages are split in *WORKING WAGE* and *SUPPORT*. While the fist is usually paid in cash, the latter is usually paid in kind (accomodation and daily meals). Optionally, also the support may be paid

members, 3.5 working and 1.5 seniors, juniors or disabled.

The data implies, that almost all Hårnic human mining operations will be rather small,

most of them will be run by 1 – 2 master households. Only important resources (e.g., silver) or deposits allow for mining with a higher effort of manpower.

COST FOR MINERS' TOOLS

<i>Item/Service</i>	<i>Price</i>
mallet	43d
hand hammer	6d
pick	8d
chisel, iron	6d
wedge, iron	2d
wedge, wood	1f
crowbar	9d
adze/hatchet	6d
handsaw	15d
spade, wood	2d
spade, iron	8d
shovel, iron	6d
scraper, iron	6d
chain, heavy	9d/m
rope, hemp	2d/m
pit lamp, clay	2d
pit lamp, bronze	
lamp oil	3d/quarter
tallow	3d/pound
torch	2f
plumb & line	2d
compass	1000d
dioptra	300d
spirit level	50d
chorobates	40d
truck	15d
wheelbarrow	10d
basket	2d
pannier	4d
bucket, wood	4d
bucket, leather	16d
trough	15d
ore tub	10d
charcoal	
sharpening of cutting tools (1 set of chisels and wedges)	1f/day

Wages & Support

	Working Wages			Support		Total Year	(all days)	HârManor Total
	Day	Month	Year	Month	Year		Income/ Day	
Miner	3,50 d	84 d	1.008 d	24,00 d	288 d	1.296 d	3,60 d	
Metalsmith	3,00 d	72 d	864 d	24,00 d	288 d	1.152 d	3,20 d	1.100 d
Miller	3,50 d	84 d	1.008 d	24,00 d	288 d	1.296 d	3,60 d	
Physician	3,00 d	72 d	864 d	36,00 d	432 d	1.296 d	3,60 d	1.200 d
Salter	2,00 d	48 d	576 d	24,00 d	288 d	864 d	2,40 d	700 d
Timberwright	3,25 d	78 d	936 d	24,00 d	288 d	1.224 d	3,40 d	1.200 d
Labourer	1,75 d	42 d	504 d	24,00 d	288 d	792 d	2,20 d	
Scribe	2,75 d	66 d	792 d	24,00 d	288 d	1.080 d	3,00 d	800 d
Teamster	3,00 d	72 d	864 d	24,00 d	288 d	1.152 d	3,20 d	900 d
Man at Arms	1,25 d	30 d	360 d	24,00 d	288 d	648 d	1,80 d	
Priest	2,00 d	48 d	576 d	48,00 d	576 d	1.152 d	3,20 d	800 d