



Eve University Co-Operative Mining Guide

*By Dee Carson
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Purpose

The purpose of this guide is to document the overall philosophy and general approaches to co-operative mining operations in Eve University. Every member of Eve University, regardless of level of skills or experience can fill a role in a mining op that is both personally fulfilling and financially rewarding.

Prerequisites

You will be able to best utilize the information presented here if you have previously reviewed the following:

- Romble's Overview MP3 class
<http://www.eve-ivy.com/forum/viewtopic.php?t=1548>
- Halada's Guide to the Mining Profession
<http://www.eve-ivy.com/forum/viewtopic.php?t=2658>

Romble's guide walks you through the process of customizing your overview and saving several different versions of overview settings. This allows you to quickly change the overview display so that it shows only the information relevant to you at a particular point in time. We will be using the "Mining" overview settings.

Halada's guide is the best overall resource to mining as a profession. It covers ships, equipment and skill training. The best thing about the guide is the mathematical proofs Halada presents for his recommendations. Halada doesn't just say that an Osprey is a better choice than the smallest mining barge (Procurer), he provides the numbers and detailed calculations to support that stance.





Before You Undock

Let's review the skills required for mining activities. The only required skill is Mining. Increased training levels of this skill increase your yield and open up other training paths.

Mining Upgrades is not a required skill, but it does increase your yield, as does Astrogeology. If you are flying a hauler, training Science to Level IV allows you to fit a tractor beam and pull cans from the midst of the miners to a clear location for hauling.

Here are the primary leadership skills that impact mining activities:

Leadership	increases gang size by 2 per level
Mining Foreman	+2% to all squad member's mining yield per level

Although not directly related to mining, the following leadership skills provide other useful benefits to the members of the gang:

Armored Warfare	+2% to armor hit points per level
Siege Warfare	+2% to shield hit points per level
Information Warfare	+2% to targeting range per level
Skirmish Warfare	+2% to max velocity per level

Ships with Mining Bonuses

These ships provide mining bonuses.

<u>Ship</u>	<u>Bonus Skill</u>	<u>Bonus Per Level of Skill</u>
Bantam	Caldari Frigate	+20% to laser yield
Osprey	Caldari Cruiser	+20% to laser yield
Burst	Minmatar Frigate	+20% to laser yield
Tormentor	Amarr Frigate	+20% to laser yield
Navitas	Gallente Frigate	+20% to laser yield
Scythe	Minmatar Cruiser	+20% to laser yield
Arbitrator	Amarr Cruiser	+10% to mining drone yield
Vexor	Gallente Cruiser	+10% to mining drone yield





Why Mine Co-Operatively?

Many Eve citizens begin mining from the very first day of their existence. What factors indicate that mining in a co-operative manner is an activity to be desired? Why do we do what it is that we do? We mine together so that we :

- Make more isk.
- Involve members with tasks that are skill level appropriate.
- Are safer in both low sec and high sec belts.
- Provide an opportunity for more experienced members to teach others about the game.
- Provide a social element to the mechanics of the game.

Of the professions in Eve, mining and production are most impacted by the player's efficiency. For miners, it's all about mining. Time spent hauling, killing rats, moving cans or dealing with ore thieves, can flippers and other flavors of griefers is time not spent making little rocks out of big 'roids. Anything that can be done to eliminate or minimize the impact of all of those other factors means more little rocks in the hold, which means a fatter wallet.

A properly designed and staffed co-operative mining op allows miners to spend their time doing what they do best: mining. It also allows the miners to benefit from mining yield bonuses available only to members of a group. These bonuses can add an additional 10% or more to a miner's yield. If the miners are mining, then someone has to haul the little rocks to the station. If the op is in lower sec regions, something other than drones may be needed to protect the miners from rats, not to mention thieves and assorted other scoundrels. Those protection activities will result in a second "mining" operation as the wrecks are looted and salvaged for the benefit of the op participants.

Our theoretical op has miners, haulers, damage dealers and salvagers; a fairly broad slice of the possible professions in Eve! Mining ops are generally more relaxed than combat fleet ops, co-operative mission running or complex clearing. Chat and/or teamspeak deal with a wider variety of topics and separating the required tasks to specialists provides everyone time to participate in the conversations. Not only does this atmosphere provide a social element of connection with the other members, it lets the 'teaching' move beyond mining to cover a myriad of subjects.





Types of Co-Operative Mining Ops

Co-op mining ops come in a few distinct types. A particular op may morph from one type to another over the course of its existence as players come and go. The most basic types are as follows.

B.Y.O.C (Bring Your Own Can)

Many more experienced players have 2 accounts, with their main character trained to be a miner (let's call him Mike the Miner) and a second character (the alternate or "alt") specializing in hauling and refining (let's call him Hank the Hauler). By running two copies of the Eve client (either on two machines at the same desk or as separate instances on a single machine), Mike and Hank can be ganged together. Remember those bonuses available only to ganged members? They are now available to Mike.

Mike, being a good Uni member, announces in Corp chat that he is mining in HQ II-2 and that others are welcome to gang up with him. Mike converts the gang to a fleet so that the bonuses are available. Each of the miners that joins receives the mining yield bonuses, but each miner works independently, coming and going as he might choose, mining into his hold, a GSC or a jetcan as he decides. Hauling is the responsibility of each miner. Each miner is responsible for his own safety and shouldn't rely solely on gang mates to protect them (although it's impolite to allow gang mates to get popped if you can assist). Loot and salvage opportunities are subject to negotiation & mutual consent. Each miner earns what he mines.

Co-operation at this level provides the potential for bonuses, better protection than mining alone and the social aspects of the gang.

Short-term Full Op (Common Can)

In this case, a player (Mining Boss) has taken the time to plan an op and make spots in the op available to the membership. This may be carefully planned and announced on the website in the mining forum or it may be done entirely on the fly as a member discovers a room full of omber in mission space. The key difference here is that the ore mined





during the op is held communally, refined and optionally sold. The proceeds of the op (either in minerals or in isk) are split among the various participants based up on the method proposed by the Mining Boss.

Generally speaking, the proceeds from this type of op inside Eve University are split among the participants based on the time invested in the op, without regard to role (miner, hauler, combat) or production (Covetor vs Bantam, Badger vs. Iteron V). This means that a new member who can fly a Badger earns the same as the Covetor that mines and the Drake that provides cover. Is this simplistic? Absolutely. Does this weighted averaging penalize the more skilled players, flying the bigger ships? Clearly it does. If that bothers you, then don't participate! None of these are mandatory. Nobody is forcing you to be involved. I will say that younger players never forget the first big paycheck they earn by hauling for a couple of Covetor pilots mining mission ombre (thanks again, Jen Loo!). I believe this embodies the spirit of helpfulness and esprit de corps that makes Eve University unique in the Eve universe.

Long Term Full Op (The Expedition)

Periodically, the Uni will undertake a large scale, long duration operation in a system other than Korsiki. These Expeditions are planned and announced several weeks in advance to allow for adjustment of training schedules, acquisition of desired ships and fittings and research/scouting of the target system and surrounding space. Because of the travel involved and the length of planned stay, Expedition locations generally provide opportunities for mission/complex running as well.

The Expedition Boss for a particular expedition will publish the rules for that expedition, including record keeping requirements for any Common Can portions, rules for interaction with locals and what happens to the ore mined.

Again, participation is entirely voluntary. If you are not comfortable heading out to Metropolis for a two week low-sec op, then don't go this time. Build up your skills, fatten your wallet and undertake a more risky operation some time later.





Common Can Mining Activities

The leader of the mining session (Mining Boss) will scout the available belts and select the target belt for the op. The Mining Boss will position at a point on one end of the belt such that the longest ranged mining lasers in the group can reach the closest end of the belt. The position should also be above the plane of the belt and afford a clear path to the station or gate to be used by the haulers to make warping in and out of the belt easier, both for efficiency and safety.

Once the Mining Boss is positioned, the remainder of the miners in the gang will be instructed to warp to zero to the Mining Boss. At a slow speed, the other miners should approach the Mining Boss to a distance of 500 meters. Before you start to work, make sure that you are above the plane of the belt and are aligned for an escape point. That point can be a gate, a planet or a station. It doesn't matter. The idea is you should be able to click that spot and hit the warp to button in 2 seconds or less. You may not have more time than that!

Miners should begin laser/strip mining with the asteroids that are the furthest from their position and work toward the closest available. This allows miners using drones to target their drones on the closest 'roids and minimize the drone's travel time. If the op is to be focused on a single asteroid type, or will exclude a specific type, the Mining Boss will make this fact known.

All miners use a common can. The can should be time stamped so that the miners and haulers can keep track of the individual cans (GROUP 1227). When a can is full, the name should be changed to include "FULL" (GROUP 1227 FULL) so that the haulers are clear about which cans can be pulled.

Keep your combat drones in the bay until they are needed. Call them back when the threat has been eliminated. Having drones outside exposes them to being shot by rats (who have a nasty habit of targeting drones, before player ships). Plus they bump and thump your fellow miners and contribute to system lag.





Top Cover Activities

The lower the security level in which the op is located and the fewer miners involved, the more desirable having a dedicated combat pilot positioned in overwatch becomes. In .8 and higher, a couple of combat drones and a launcher among all the participants may be all that is required. In .4, a destroyer that can tractor and salvage the wrecks is a welcome addition. In 0.0, a cloaked Raven provides enhanced security against both NPCs and hostiles. The responsibility of the top cover is to engage any threat to the op and either destroy it or provide the op an opportunity to escape. Often, the top cover pilots also loot and salvage since they have more freedom of movement than the other members of the team.

Hauling Activities

First and foremost, the hauler's job is to get the mined ore to the station, safely and efficiently. The Mining Boss will attempt to balance the number of miners to the number of haulers so that there are neither stacks of cans waiting to be hauled or queues of haulers waiting for loads. Having the ability to use a tractor beam makes a hauler much more efficient. Haulers must be in the gang with the miners to avoid being flagged as criminals when they take the ore out of the can!

Generally speaking, the Mining Boss will direct the haulers to pull cans in the order in which they were popped, with the oldest can being pulled first. This is important because jetcans are perishable! If not emptied, they pop on their own in about an hour if they have not been renamed and in about an hour and a half if they have been renamed. This is why time stamping the cans is important. When in doubt, create a new can and transfer the contents of the old can to the new one. This is called 'refreshing' the can.

Secondly, unless you are in a small op (so the space around the can is not congested) or in an operational environment where the value of what is in the can makes it likely that a ore thief could strike, the hauler should only pull inactive or full cans. Do not empty the active can! Do not tractor the active can away from the miners! That is really bad form and causes the miners distress.





If there are several haulers the Mining Boss may put all the haulers in one squad. Haulers should co-ordinate their efforts in squad chat or TS so that more than one hauler doesn't try to pull the same can at the same time. If only one of the haulers has a tractor, he should pull the full cans to the warp in point to make loading & returning faster for the other haulers.

In instances where the top cover pilots do not loot/salvage, this role can be covered by haulers, particularly when the haulers have two high slots fitted with a tractor beam and a salvager.

The Mining Boss will designate a destination station for the haulers. This station is usually chosen to allow for better refining and for lower taxes, so it really does matter.

When you arrive at the station, make sure that you can separate the op ore/loot/salvage from any personal possessions in your hangar. If you have lots of items in your hangar, consider using a station vault to make things easier.

The Mining Boss will inform you when (after each load, every hour, at the end of the op or at the end of the expedition) and how (by contract or direct trade) you are to transfer the items hauled to the Mining Boss or his designee.





Contact Information

You may send comments, corrections, questions or suggestions to me using either Eve Mail or my external address: DeeCarson@gmail.com. Nothing is ever perfect, particularly initial documents, so I expect and encourage your feedback.

Acknowledgements

First of all, thanks to Morning Maniac, whose vision more than three years ago has provided a unique environment in the Eve Universe that focuses on taking brand new citizens, teaching them the skills they need to survive and prosper and then wishing them well as they leave, providing their talents and skills to other organizations. Eve University has been a supportive home for me in my first MMO experience. I can't imagine being anywhere else.

Finraer also gets a tip of the cap for building my first Osprey. That ship busted many a 'roid and was passed down to a newer miner when I moved to barges. Fin, I appreciate your patience and your generosity.

Jen Loo, The Uber Miner (who has displayed some very sharp fangs lately, according to the killboards), first invited me to consider Eve University when I asked her if it was ok if I mined in the same belt in my little Bantam as she was in with her Covetor. Your willingness to teach a brand new pilot, even before he was a part of the University exemplifies the spirit of Morning Maniac's vision.

Finally, to my corpmates. I can think of no better group of pilots, friends and mentors than you. Your attitude and actions produce richly deserved respect and friendship from the Eve Community.

- Dee Carson

"PER ERUDITIO VIS"

"Through Learning, Strength"

