ASTEROID MINERS

JOHN GIBSON

9 nano games

ALBAN VIARD STUDIO GAMES PLUS

Capstone Games

In ASTEROID MINERS you lead your crew of fellow Belters in mining the asteroid belt, excavating valuable minerals in the cold of space. It is a two-player dice-rolling game where you excavate precious metals using a precision drill and upgradable mining equipment, digging deeper and deeper into a series of 3 asteroids. You will use a dice pool to manipulate your drill components to match the minerals in your current excavation section. After successful excavations you may sell your minerals to a fluctuating Metal Market, trying to earn more profit than your competitor to win the game.

Components

6 double-sided Asteroid Map/Event cards

2 double-sided Player cards

1 Metal Market/
Mining Equipment
Upgrade card

3 purple wooden cubes
3 red wooden cubes
2 green wooden cubes
1 blue wooden cube

1 blue 6-sided die
2 white 6-sided die
2 black 6-sided dice
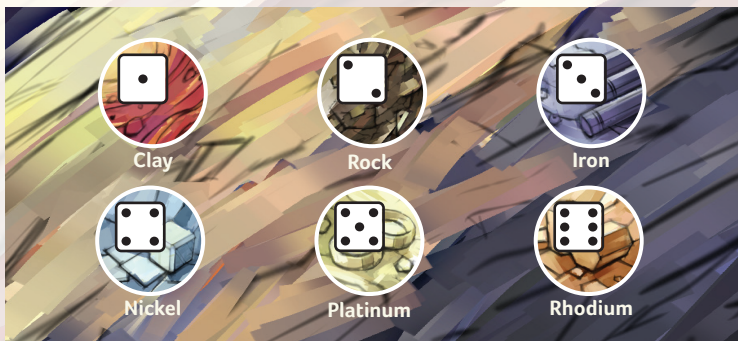4 green 6-sided dice

Goal of the Game
Make more money than your competitor as you compete to excavate 3 successive asteroids.

Setup
1. You will sit **beside** each other, rather than across from each other, but wait until Steps 3–4 to sit down.
2. The odder player is *Odd*; the other, *Even*. Roll a die. If the result is odd, Odd goes first; otherwise, Even does.
3. The first player is **Red**, takes the **P1 Player card** (1A side up) and the **3 red cubes**, and sits on the left.
4. The second player is **Purple**, takes the **P2 Player card** (2A side up) and the **3 purple cubes**, and sits on the right.
5. Assemble **Asteroid Map cards 1A** and **1B** between you, 1A above 1B, to form the asteroid map for Asteroid 1.
6. Place the **Metal Market / Mining Equipment Upgrade card** above the asteroid map.
7. Place **Event cards 1A** and **1B** (on the backs of the Level-3 Asteroid Map cards) to the left of the metal market, 1A to the left of 1B.
8. Set aside the other 2 Asteroid Map / Event cards for later.
9. Each player, do the following with your 3 player-color cubes:
   a. Place 1 as a **Funding cube** on **10** on your Funding track.
   b. Place 1 as a **Mining cube** on the **Mine Entrance space** at the top of your side of the asteroid map, just below P1/P2.
   c. Place 1 as an **Upgrade cube** on your U1 space on the Mining Equipment Upgrade (lower) portion of the Metal Market / Mining Equipment Upgrade card.
10. Set up the Metal Market:
   a. Roll a die to set the prices for Iron and Platinum (see below) and place a green Metal Market Price cube on the appropriate space:
      i. 6: $4M/$9M
      ii. 5: $3M/$7M
      iii. 3–4: $2M/$5M
      iv. 1–2: $1M/$3M
   b. Roll a die to set the prices for Nickel and Rhodium (see below) and place a green Metal Market Price cube on the appropriate space:
      i. 6: $5M/$10M
      ii. 5: $4M/$8M
      iii. 3–4: $3M/$6M
      iv. 1–2: $2M/$4M

Example Setup

Level 1 Event Cards

Event Tracking Cube

Metal Market/ Mining Equipment Upgrade Card

9 Shared Player Dice

Metal Market Tracking Cubes

Mining Equipment Upgrade Tracking Cubes in Player Colors

Player 1 Mining Cube

Player 2 Mining Cube

Funding Tracking Cube

Funding Tracking Cube

Player 1 (1A) Board

Player 2 (2A) Board

Level 1 (1A and IB) Asteroid Map Cards

Clay

Rock

Iron

Nickel

Platinum

Rhodium

Playing the Game

You will gradually drill through 3 asteroids. Red goes first in Asteroid 1, but for Asteroids 2–3, the player with less funding goes first.

On your turn, perform the following phases:

1. Event
2. Drill
3. Modify Dice
4. Excavation
5. Bid for Tender
6. Market
7. Mining Equipment Upgrade
8. Cleanup

Phase 1: Event

a. Roll the blue Event die.

b. Place the blue Event Tracking cube on the space to the right of the matching die image on the Event cards. If you rolled the Event number it was already on, then reroll until you get a new number.

Example: If you rolled a 1 on the blue Event die, you'd place the blue Event Tracking cube on the space to the right of 1 at the top of the left card.

- This upper portion of the Event section is the event effect, which can positively or negatively impact your mining actions this turn. We'll cover the different effects in the phases when they apply.

- The lower portion indicates the Modify Dice for this event. We'll cover this in Phase 3: Modify Dice.

Event Card

Event Selector

Event Action

Modify Dice

Phase 2: Drill

In this phase, you will populate the 4 Drill Component spaces at the top of your Player card. You want to roll numbers matching the remaining materials you need to mine in your current asteroid stratum, but you have no choice in the matter... until Phase 3: Modify Dice.

a. Roll any 4 dice you like (you may roll **green** and **up to 1 other color**), 1 at a time as follows:

Event: Damaged Drill: You can only roll 3 dice, and thus populate only 3 Drill Component spaces.

- If you intend to roll **white** dice (to try to make your opponent pay your mining costs), you must roll them **before the green dice**.
- If you intend to roll **black** dice (to try to mine for free, but your opponent would gain the mining costs you'd usually pay), you must roll them **before the green dice**.
- If you intend to roll the blue die (to try to change the current event), you must roll it after the green dice.
- Roll the die and place it in a Drill Component space matching its number.
- If that space is already occupied, you must place the new die in the next empty space to the right (if there are no more empty spaces to the right, start again from the left, looking for an empty space).

b. If you rolled the blue die, and you wish to change the current event to the blue die's number:

- Pay the amount below the blue die's Drill Component space.

=$2X **Event**: **Hard Ore**: The blue drill component costs you double.

- Replace the blue die with an unused green die set to the same value. Discard the blue die; you cannot use it for the rest of your turn.
- Move the blue Event cube to the new event. The old event no longer applies; the new event does.
- If you thereby canceled a Damaged Drill event, immediately roll a 4th green die to be the 4th drill component.

4th Roll   **1st Roll**   **2nd Roll**   **3rd Roll**

Example: You choose to roll 3 green dice and the blue die (but you must roll them 1 at a time, and the blue die must be last).

First, you roll a 4, which you must place on the 3–4 space.

Next, you roll a 3. The 3–4 space is already occupied, so you must put the 3 on the 5 space.

Next, you roll a 5. Because the 5 space is already occupied, you must put the 5 on the 6 space.

Finally, you roll a 6 on the blue die. Its space, too, is occupied, so you must place it on the 1–2 space.

Because your blue 6 ended up on the $0M space, and you are unhappy with the current event, you pay $0M to move the blue Event Tracking cube to Event 6. You replace the blue 6 with a green 6 from the pool, discarding the blue die.

Phase 3: Modify Dice

Roll the remaining 5 dice (the colors of the remaining dice don't matter at all) to modify your drill components. By rolling pairs you can use, you can attempt to modify your drill components to match the materials you need to drill in the current stratum.

 Event: **Damaged Drill**: You can only roll 4 dice (their colors don't matter).

a. Roll all of the remaining dice, hoping to roll pairs; their effects are as follows:
   - Pairs of 1–4 are defined on the Mining Equipment Upgrade card; you only have access to those of your current equipment level or weaker.
     - **1s**: ±1 pip to a single drill component (**Note**: 6+1=1; 1−1=6).
     - **2s**: ±2 pips to a single drill component (**Note**: 5+2=1; 6+2=2; 2−2=6; 1−2=5).

7

- **3s**: ±1 pip to each of 2 drill components (**Note**: 6+1=1; 1−1=6).
- **4s**: ±2 pips to each of 2 drill components (**Note**: 5+2=1; 6+2=2; 2−2=6; 1−2=5).

- Pairs of 5–6 are defined in the Modify Dice (lower) portion of the current event, and do not require equipment upgrades to use them; you merely need to get the right doubles.

  - **5s** in the event effects:

    Swap 2 **green** drill components.

    Swap 2–4 **green** drill components; in other words, you can rearrange all green drill components.

    Swap a **green** drill component out for any die from the dice pool. Discard the removed die; you cannot use it for the rest of your turn. Treat the new drill component as if it were green.

    2×: Swap a **green** drill component out for any die from the dice pool. Discard the removed die; you cannot use it for the rest of your turn. Treat the new drill component as if it were green.

  - **6s** in the event effects:

    Reroll 1–2 **green** drill components.

    Reroll 1–4 **green** drill components.

    Set the number of 1 **green** drill component to anything you like.

Efficient Drilling: In Phase 4: Excavation, use any 1 drill component again.

- If it's green, you don't pay for the extra use.
- If it's white, your opponent doesn't pay for the extra use.
- If it's black, your opponent doesn't get paid for the extra use.

b. **2×**: Set aside any number of dice you'd like to keep, and reroll the rest.

c. One pair at a time, apply its effects, then discard the pair.

- You cannot modify white drill components.
- Each equipment level you've attained allows you to modify black drill components once per turn for free. Presumably: You can also modify them with pairs, as usual.
- You can modify a blue drill component using pairs of 1–4, but not with pairs of 5–6.

$0M	$1M	$2M	$4M
4th Roll	*1st Roll*	*2nd Roll*	*3rd Roll*

Example (continued from previous example): You are Red, and your current asteroid stratum is made up of clay (1) and rock (2). Because you have already upgraded your mining equipment once, you can use not only pairs of 1s, but also pairs of 2s to modify your drill components. Currently, your drill components are 6, 4, 3, 5, and you want 1 (clay) and 2 (rock).

You roll the 5 dice of the dice pool, and get 1, 2, 3, 5, 6. You can use double 1s, 2s, 5s, or 6s, but you decide to "invest" in the 1 and the 2, setting them aside.

For your second roll, you reroll the 3, 5, 6 and get 2, 3, 4. Yes! You got a second 2; you set it aside.

On your third and final roll, you reroll the 3, 4 and get 1, 4. Great! A second 1!

Now you use the pair of 1s to add 1 to your 6 drill component, making it wrap around to 1.

You use the pair of 2s to subtract 2 from your 4 drill component, making it a 2.

This leaves your drill components as 1, 2, 3, 5. You have the 1 to get through the clay and the 2 to get through the rock. This will be a good turn!

Phase 4: Excavation

Player side designation
Mine Entrance and starting space for Drill Cubes
Excavation Section
Section Excavation Completed Space

Bid for Tender Space (dice off)
Excavation Tunnel
Unit Excavation Space
Final Section Excavation Completed Space for the Level
Asteroid Map Level
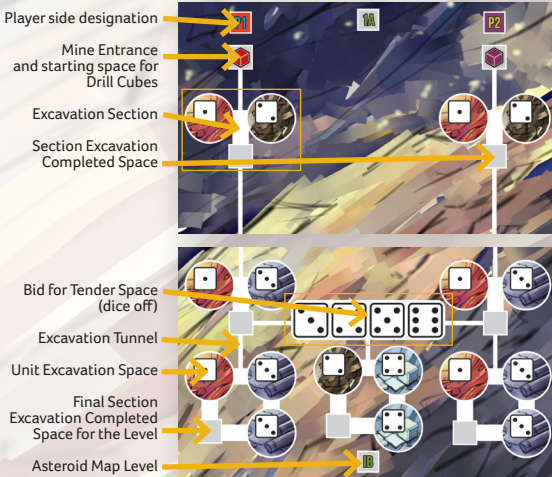
Use your drill components to extract matching materials from the current asteroid stratum.

10

a. Choose any combination of your drill components to use to partially or fully excavate a single stratum. Each drill component can extract a single space of the same-number material from the stratum.

Clay (1) and rock (2) are worthless;

Iron (3) and nickel (4) are basic metals you will sell;

Platinum (5) and rhodium (6) are precious metals you will sell at generally better prices.

b. Payment:

- For each **green** die you use, **you pay** the amount indicated below its Drill Component space. Honest labor.

 Event: Hard Ore: Each green drill component costs you double.

- For each **white** die you use, your **opponent pays** the amount indicated below its Drill Component space. Industrial espionage!

 Event: Hard Ore: Each white drill component costs your opponent double.

- For each **black** die you use, your **opponent gains** the amount indicated below its Drill Component space. Subcontracting.

 Event: Hard Ore: Each black drill component pays your opponent double.

 Event: Scrapyard Find: One drill component of your choice costs $0 to use. You probably want to use this effect on a green die.

Efficient Drilling: For each time you activated the double-6 event effect Efficient Drilling in Phase 3: Modify Dice, use any 1 drill component again.

- If it's green, you don't pay for the extra use.
- If it's white, your opponent doesn't pay for the extra use.
- If it's black, your opponent doesn't get paid for the extra use.
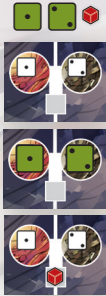
Example (continued from previous example): You wish to use your green 1 and 2 drill components to drill through the clay (1) and rock (2) of this stratum. This costs you $0M + $1M = $1M. You started with $10M, so now you have $9M. If you'd wanted to use the 2 and the 3, instead, it would have cost you $1M + $2M = $3M, and you'd have $7M left.

c. Place each chosen drill component on a **same-number** material of the 1st stratum **below** your Mining cube along a tunnel (white path).
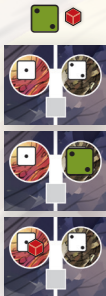
Note: If you had partially excavated this stratum on a previous turn (see below), instead, you will continue drilling it: Materials up through the Mining cube's space are already drilled, and you must drill the higher-number spaces of the stratum.

All required dice
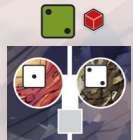
Partial required dice

d. If you have covered all spaces of that stratum, it is **fully excavated**: Remove the dice, and move your Mining cube to the space just below.

Note: If you had partially excavated this stratum on a previous turn (see below), covering all **remaining** (higher-number) spaces fully excavates the stratum.

12

e. Otherwise, it is **partially excavated**: Remove the dice, and move your Mining cube **n** spaces into this stratum, from lowest-number material to highest-number material (or reading order, or Z order), where n is the number of dice you just removed from it.
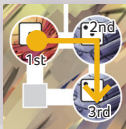
Phase 5: Bid for Tender

If your Mining cube just reached the space connected to the quartet of die faces {3, 4, 5, 6}, and you are the first to reach it, you and your opponent must compete in a real-time dice fest to lay claim to the stratum below it.

a. You each take 4 dice (their colors are irrelevant).

b. In unison, count down, "3, 2, 1, roll!"

c. On "roll" start rolling your dice over and over, trying to get 3, 4, 5, 6.

d. Each time you roll another die needed for that quartet, set it aside.

e. Once you have 3, 4, 5, 6, call out, "Mine!" [*Get it?*]

f. Whoever legally calls "mine" first has exclusive access to the stratum below the quartet, once they've reached it, anyway.

Phase 6: Market

If you just finished fully excavating a stratum this turn, sell the metal you mined; otherwise, **skip this phase** (do not adjust prices).

Event: Increased Demand: If you just finished fully excavating a stratum including one of the metals depicted in the event effect, increase the Metal Market price for that pair by 1 level.

Event: Decreased Demand: If you just finished fully excavating a stratum including one of the metals depicted in the event effect, decrease the Metal Market price for that pair by 1 level.

a. Each metal you mined (3–6) gains you its current market value; advance your Funding cube accordingly.

Event: Exclusive Contract: If you just finished fully excavating a stratum including the metal depicted in the event effect, you can only sell 1 of that metal.

Event: Kickbacks: Get the bonus depicted in the event effect each time you sell the depicted metal.

14

Example: Let's say you fully excavated the 2nd stratum of Asteroid 1; that means you mined clay (1) and iron (3). The clay is worthless, but you can sell the iron to the Metal Market. The going prices, as indicated by the green cube of the Iron/Platinum track, is $3M. So, you gain $3M, incrementing your Funding track accordingly.

b. After selling all metal from that stratum:

- If you sold any iron (3) or nickel (4), move the Iron/Platinum Market Price cube down a level (min. $1M/$3M) because the supply increased; otherwise, move it up a level (max. $4M/$9M) because the demand increased.
- If you sold any platinum (5) or rhodium (6), move the Nickel/Rhodium Market Price cube down a level (min. $2M/$4M) because the supply increased; otherwise, move it up a level (max. $5M/$10M) because the demand increased.

Example (continued from previous example): Because you sold iron, the prices of iron and platinum fall a step. Because you sold iron, but not nickel or rhodium, the prices of nickel and rhodium rise a step.

Note: You are not limited to $64M.

Phase 7: Mining Equipment Upgrade

You may spend your funds to upgrade your mining equipment, granting you more dice modification abilities per turn: Pay the price in the equipment below your Upgrade cube to move it down to the next level (as many times as you like and can afford).

Phase 8: Cleanup

If you are P2, and someone's Mining cube is at the bottom of the asteroid map, perform the following steps:

a. Remove both Mining cubes from the asteroid map.

b. If you were on Asteroid Level 1, replace the asteroid map with 2A above 2B, and replace the Event cards with 2A and 2B. The player with less funding is P1 for Level 2; place your Mining cubes on the correct Mine Entrance per the new turn order (keep your cards and colors, though).

15

c. If you were on Asteroid Level 2, replace the asteroid map with 3A above 3B, and replace the Event cards with 3A and 3B. The player with less funding is P1 for Level 3; place your Mining cubes on the correct Mine Entrance per the new turn order (keep your cards and colors, though).

d. If you were on Asteroid 3, the game is over.

Otherwise, your opponent starts their turn.

Game End

The player with more funding wins. In the event of a tie, the player who has achieved a greater equipment level wins. If it's still a tie, then you are evenly matched!

Variants

Shorter Game

If players want to play a shorter game of Asteroid Miners, then they can play using the following changes:

- Start with Level II Asteroid Map cards instead of Level I.
- Use the 2 Level II Event cards.
- Place the Funding Tracking Cube on the "15" space of the Funding track [**$M**] instead of "10."
- Place their Mining Equipment Upgrade Tracking cube on the 2nd space of the Mining Equipment Upgrade track: The [**U2**] spot instead of the [**U1**] spot.

This will roughly simulate players having reached the second level of mining asteroids with equal scores—thus eliminating playing the first level and cutting the game time by a third.

Metal Market Reset

At the beginning of each new asteroid (II and III), the active player will reroll the starting values of the Metal Market.

Solitaire Rules

Asteroid Miners can be played as a solo game. The solitaire player will play as Player 1, and the Virtual Player will play as Player 2. This solo version is same as the regular game with the following exceptions:

Setup

- Do not place a Mining Equipment Tracking cube for Player 2—it's not necessary.

Phase 1: Event
- Roll the blue Event Die for Player 2, but with the following differences:
    - **Ignore Modify Dice section**: This Section is not applicable.
    - **Applying Event Text:** All Drill components cost double this turn—all costs below are doubled if this Event is in effect for Player 2.
    - **Applying Event Text:** You may use a Drill component of your choice for $0—subtract $2M from the cost below (minimum $0M) if this Event is in effect for Player 2.
    - **Applying Event Text:** You can only roll 3/4 dice for the Drill/Mining this turn—roll only 6 dice if this Event is in effect for Player 2.

Phase 2: Drill, Phase 3: Modify Dice, and Phase 4: Excavation
Instead of rolling 4 dice for the Drill Components and then modifying them using the dice pool, Player 2 will roll all 8 green, white, and black dice on their turn:

- Treat all dice as though they were green—do not apply any white or black die effects. **NOTE: Player 1 can still choose to roll blue, white, or black dice and the regular rules apply.**
- Roll all dice only once—there is no rerolling.
- Do not use the Drill section of the player board—you will not be placing the rolled dice on the player board.
- Look for dice numbers matching the section being excavated:
    - If there is a die face matching each of the required units in the section, then the section is **Fully Excavated**.
    - If only one or a few of the dice match the required units in the section, then the section is **Partially Excavated**.
    - If there are no matches, then there was **No Excavation** on this turn for Player 2.

Use the following to determine the funding costs for Player 2:

2-Unit Excavation Section
- **New Section**
    - Fully Excavated Cost: **$2M**.
        - Move Player 2 cube to Section Excavation Completed Space
    - Partially Excavated Cost: **$1M**.
        - Move Player 2 cube to 1st Unit Excavation Space

- **Partially Excavated Section**
    - Fully Excavated Cost: **$1M**.
        - Move Player 2 cube to Section Excavation Completed Space
    - No Excavation Cost: **$0M**.
        - Player 2 cube remains on 1st Unit Excavation Space

3–Unit Excavation Section
- **New Section**
  - Fully Excavated Cost: **$3M**.
    - Move Player 2 cube to Section Excavation Completed Space
  - Partially Excavated Cost: **$2M**.
    - Move Player 2 cube to 1st Unit Excavation Space
- **Partially Excavated Section**
  - Fully Excavated Cost: **$1M**.
    - Move Player 2 cube to Section Excavation Completed Space
  - Partially Excavated Cost: **$0M**.
    - **First Time:** Move Player 2 cube to 2nd Unit Excavation Space
    - **All other attempts:** Player 2 cube remains on 2nd Unit Excavation Space

4–Unit Excavation Section
- **New Section**
  - Fully Excavated Cost: **$2M**. Fully Excavated Cost: **$7M**.
    - Move Player 2 cube to Section Excavation Completed Space
  - Partially Excavated Cost: **$3M**.
    - Move Player 2 cube to 2nd Unit Excavation Space
- **Partially Excavated Section**
  - Fully Excavated Cost: **$2M**. Fully Excavated Cost: **$2M**.
    - Move Player 2 cube to Section Excavation Completed Space
  - Partially Excavated Cost **$1M**.
    - **First Time:** Move Player 2 cube to 3rd Unit Excavation Space
    - **All other attempts:** Player 2 cube remains on 3rd Unit Excavation Space

Phase 5: Bid for Tender
Roll two green dice for yourself and two black dice for Player 2. Whichever roll is higher wins the Bid for Tender. Reroll if there is a tie.

Phase 6: Market Phase
Market Phase is treated as normal for Player 2—they will earn funding for the sale of their excavated metals. Their sale to the Metal Market may be affected by the Event card like a regular player.

Phase 7: Mining Equipment Upgrade
Player 2 does not participate in this phase.

Phase 8: Clean Up
Regular rules apply.

Game End
If there is a tie for funding, then Player 2 (the game) wins.

Advanced Version of Solo Play

The player can choose to play either [**1B**] (Ecological Ability) or [**2B**] (Scavenger Ability), but the Game player will always play the regular side [**A**]. All other rules above apply.

Upgraded Mining Equipment Variant

Similar to the rules above, but with the following changes:

Setup
- Place the purple cube on the [**U1**] spot the Mining Equipment Upgrade track for Player 2—the Virtual Player can use the Mining Equipment ability to modify a die.

Phase 1: Event
- **Still Ignore Modify Dice section**: Player 2 will not be using the 5's and 6's Modify Dice abilities on their turn.

Phase 3: Modify Dice
- Level I:
  - When Player 2 rolls their 8 dice to match the units in the section to excavate, they can apply:
    - Either a +1 or –1 to a single die to get it to match a unit.
- Level II:
  - When Player 2 rolls their 8 dice to match the units in the section to excavate, they can apply:
    - Either a +1 or –1 to a single die to get it to match a unit, or
    - Either a +2 or –2 to a single die to get it to match a unit
- Level III:
  - When Player 2 rolls their 8 dice to match the units in the section to excavate, they can apply:
    - Either a +1 or –1 to a single die to get it to match a unit, or
    - Either a +2 or –2 to a single die to get it to match a unit, or
    - Either a +1 or –1 to two dice to get them to match two units. You are allowed to subtract 1 from one die and add 1 to another die.

Phase 7: Mining Equipment Upgrade
- At the completion of the Level I asteroid map, Player 2 will spend $4M to upgrade their Mining Equipment to the [**U2**] spot.
- At the completion of the Level II asteroid map, Player 2 will spend $4M to upgrade their Mining Equipment to the [**U3**] spot.

In all cases above the Virtual Player still only rolls all 8 once, and they do not need to roll any actual pairs matching the Mining Equipment level—we are just simulating a player having successfully rolled a pair in their dice pool and modifying the dice in their Drill.

Iconography

Dice in 4 colors
(Green, White, Black, and Blue)

Component Square

Drill Component (generic)

One Drill Component

One Drill Component
of any color

Dice Pool

Valuable Materials
⊡ Iron
⊡ Nickel
⊡ Platinum
⊡ Rhodium

Material (generic)

Two Materials of
the Same Type

Metal Market

Sell during
Market Phase

➡ To/For   ⬌ Swap

🔄 Reroll   # Change Number

No White, Black or
Blue Dice

No White, Black or
Blue Dice from the Drill

Event Action Examples

=+$1M   Get +$1M for each Iron you sell this turn.

You can roll only 3 dice for the Drill this turn.

You can roll only 4 dice for the Dice pool this turn.

+1   Before selling Nickel/Rhodium, raise the Market up one spot

=$2X   All Drill components cost double this turn.

=$0M   You may use a Drill component of your choice for $0M.

1   You may sell only 1 Platinum this turn.

Modify Equipment Examples

You may swap the location of 2 Drill components.

You may swap 2 dice from the Drill with 2 dice from the Dice pool.

You may reroll all Drill components this turn.

Change the number of any 1 Drill component.

Use 1 Drill component for 2 matching materials when excavating.

Modify Equipment Example

−1/+1 ➡   −1/+1 to 1 Die