



**THE ART OF
BORDERLANDS 2**





FOREWORD

Being the Art Director on a project like *Borderlands 2* was like stepping onto Pandora for the first time. There was raw beauty to witness, adventures to be had, and the ever-present lure of glorious loot to be obtained around every corner. However, just like exploring an uncharted territory, there was danger at every turn. How do I take an immensely beautiful and unique art style and improve upon it? How do I add snow, grass, and lava to Pandora's barren wastelands without changing the character of this amazing planet? How do I make 87 bazillion guns even bazilliondier?

Quite simply put: *I didn't do any of those things.*

Instead I had the pleasure to direct an amazingly talented group of individuals who rose to the challenge and made *Borderlands 2* the incredible experience that it is. I am well and truly honored to work with such a passionate, creative, and hardworking team. These folks are the kind of people who are excited to have a fifteen minute discussion about Bandits wearing sombreros and whether said sombrero-wearing-Bandits should drink Molotov cocktails. They are also the kind of people who routinely asked for the chance to improve an asset even though they knew it would mean a long night of work ahead. Mostly, though, they are the kind of people who love what they do and you can see that passion in every crate you leap over, every monster you explode, and every loot chest you delve into.

Many people might assume that in a game where visuals are at the fore, much of its look must come from the Art Team. While we do have a big impact on the game's visuals, I think it's important to understand that the final look of *Borderlands 2* was a teamwide effort that involves every discipline at Gearbox. Story and Design dreams up an incredible world, and Code helps us realize those dreams while Effects, Animation, and Audio all make heads explode along the way. I think however, it's important to note that the Level Designers are the people who combine the elements created by the other teams into a rich and expressive world for players to explore. We owe much of the final look and feel of Pandora to their tireless effort.

Thanks to everyone at Gearbox for making the development of *Borderlands 2* an amazing adventure and I hope this book will provide some insight to the reader as to how we got it made.

Jeremy "The Chef" Cooke



Ash Sky [Tris Babayan]

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THE TEAM

Borderlands 2 boasted the largest development team in Gearbox history. Over two hundred extremely talented people contributed to the project.



The *Borderlands 2* team, during one of their rare excursions to the mysterious land known as "outdoors."





ART STYLE

The concept art style originated with a desire to overhaul the look and feel of *Borderlands* to be something that was trying to be less photorealistic and something that was more eye catching and unique. What we wanted was for the look of the game to be immediately identifiable from a single screenshot and to not be confused with a bevy of post-apocalyptic aesthetic games being developed and announced around the same time. The game's identity was fighting with itself at the time. On one hand, it wanted to be semi-realistic but at the same time the game was allowing you to jump 12 feet in the air. This complex juxtaposition of ideas also helped us to recognize that the game needed a stylistic change that would suit its game-play and attitude.

As we thought about changing the style we went back to our early concept artwork to remind us of where we wanted the game to go when we started the project. One thing that kept coming up as we looked at the old artwork was that we wished the game looked like the concept art. "Why can't it look like that? That is what I want to play!" was the cry at the time. So we set out to find a way for the renderer and the artwork of the game to look like a living version of the concept art. That is what we wanted to play. So artists, level designers, and engine programmers worked hard together to realize the look we were going for.

We wanted the hand of the artist to be readily apparent in every asset in the world. The diffuse texture was created to look like a gauche underpainting with clear and obvious inked line work and hatching defining the detail of the texture applied to the model. This allowed for the quirks and idiosyncratic nuance of every disparate artist to show through in each asset. It felt warm and natural and the opposite of the machine-like precision of 3D models and computer generated worlds.

Illustration

[Scott Kester] Right



RENDERING THE SCENE

Many people see *Borderlands* as having a style similar to anime or cel-shading. In truth though, it only shares the bold outlines of those styles and keeps the photorealistic lighting found in many modern games. We feel it was this blend of realism and bold hand-painted style that allowed *Borderlands* to connect with so many people.

The other amazing benefit of this (which we could not predict when taking on the overhaul of the look and feel of the game) was the way in which it impacted and freed the game designers to be even more creative. So the game-play became more radical, fun, and over the top along with the artwork. And the more outlandish the design direction from game designers, the more outrageous the artwork which followed until parity was formed that defined the look, feel, and overall tone of the game and became the *Borderlands* look.



"This piece was another concept done at the very early stages of the project. Jeramy Cooke was interested in working in these large ice elements and Kevin Duc was exploring that idea with images such as these," says Brian Cozzens. "We were curious to know how the ice might influence the style and inking, so I did a paintover of that work to achieve this final result."



"This concept was an interesting piece. It was made at the very beginning of the project by Kevin Duc, during his exploration of incorporating more vibrancy in the *BL2* environments," says Cozzens. "He illustrated it with all this wonderful color and interesting shapes. Afterwards, out of curiosity, I went back over it and applied the *Borderlands* style so we could fully grasp how that could look in game with the inking and style. It was pretty exciting to see the results!"

Art Style Concepts

[Phil Whor] *Top Left*

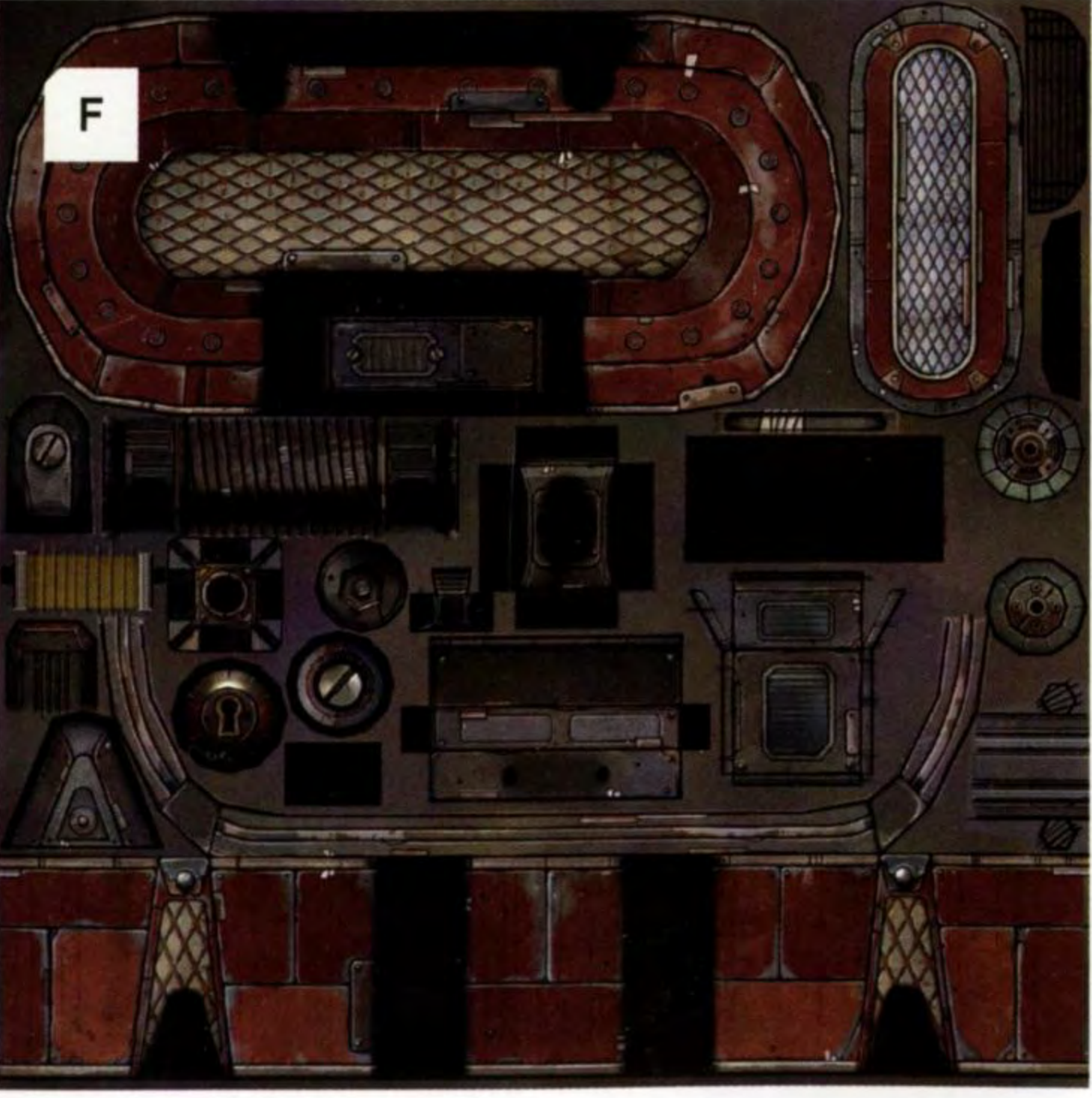
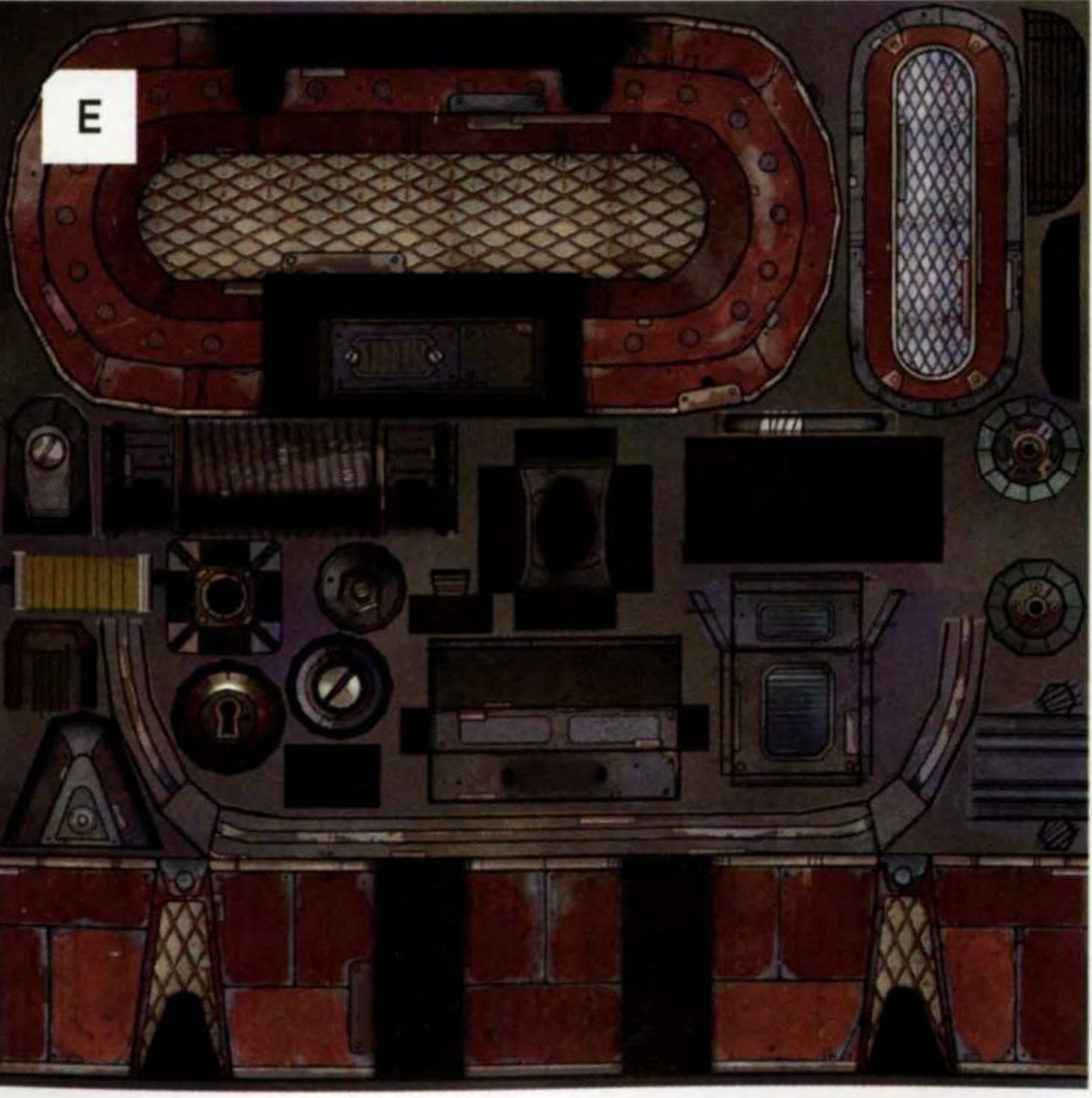
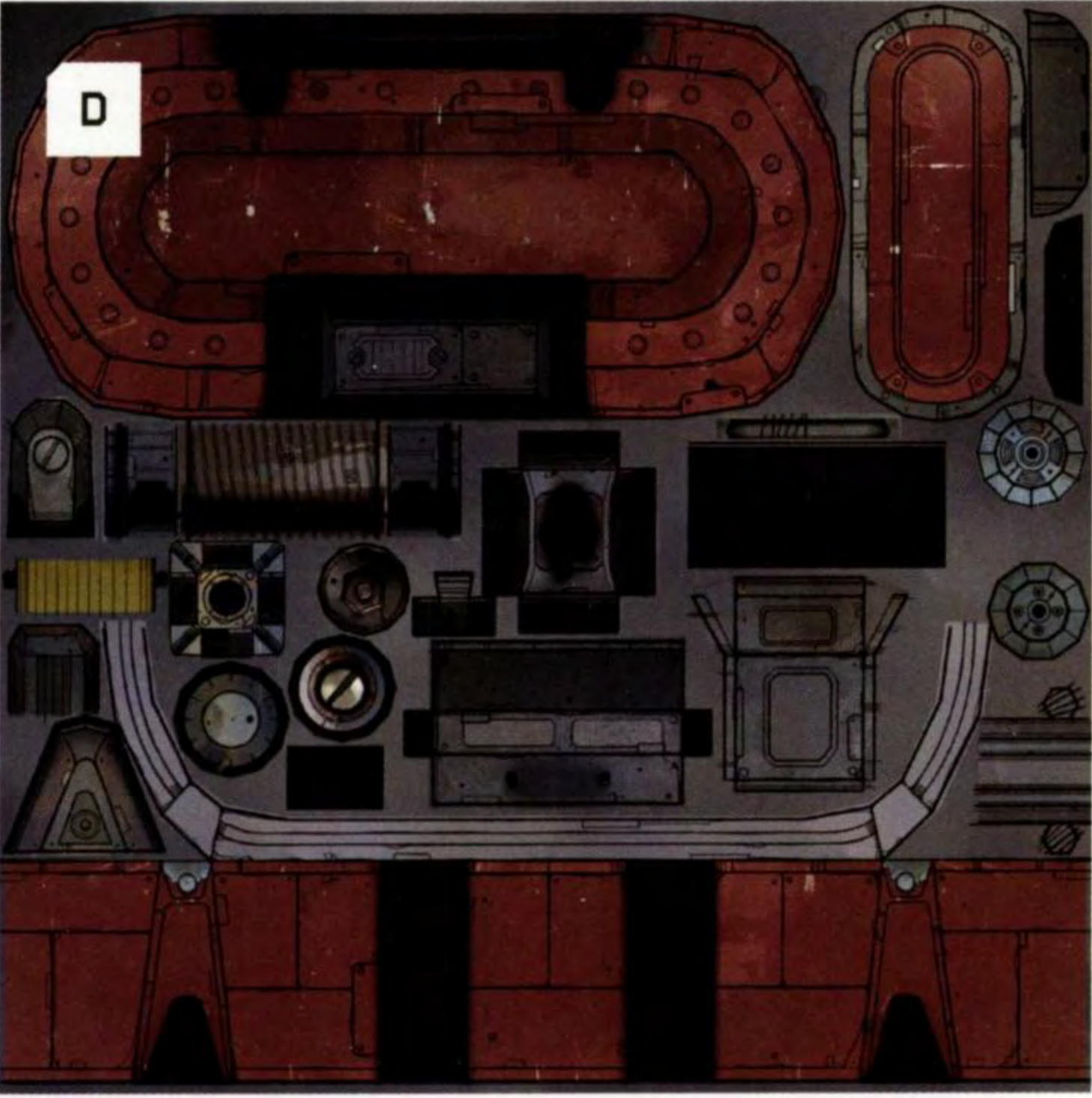
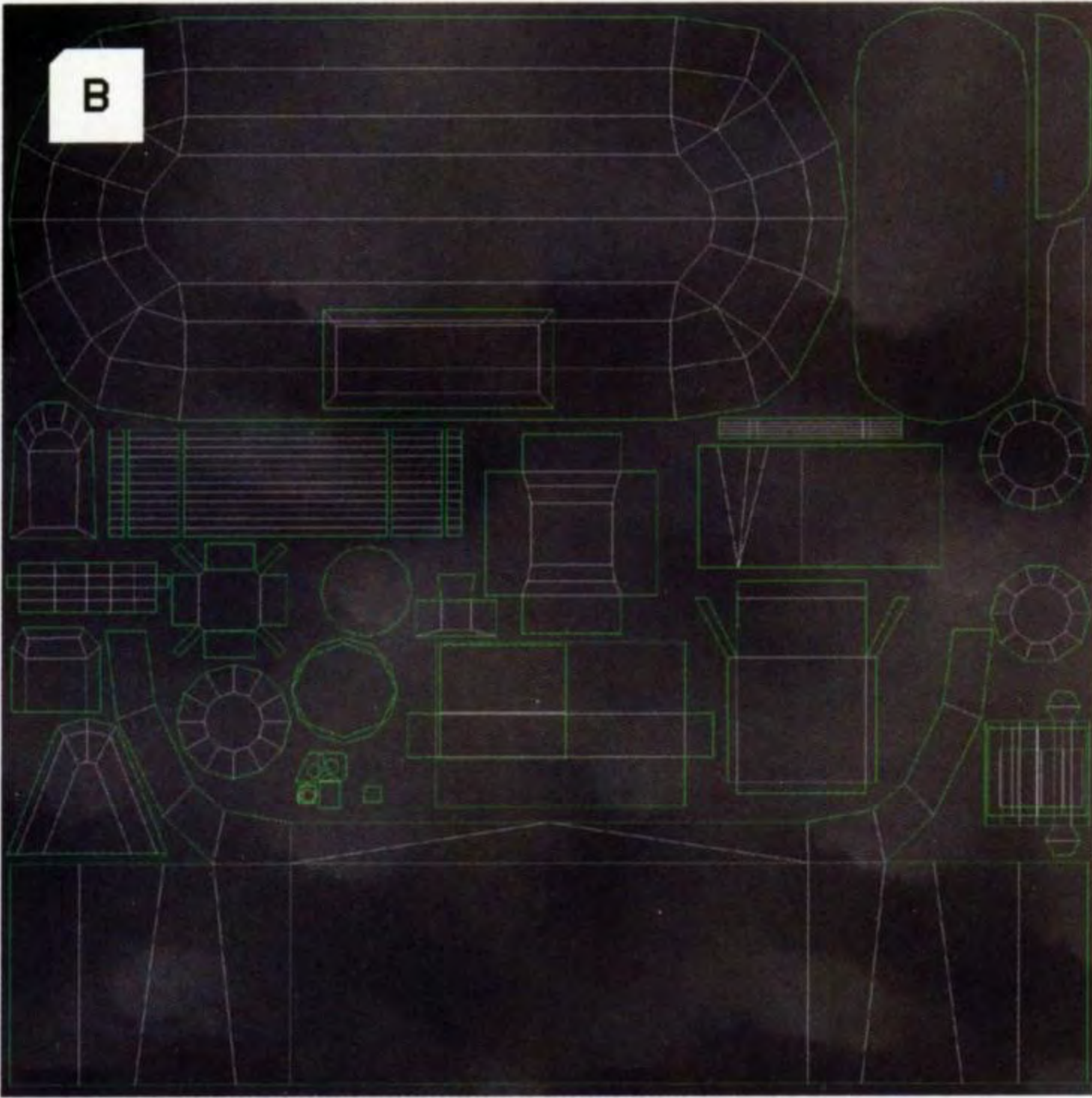
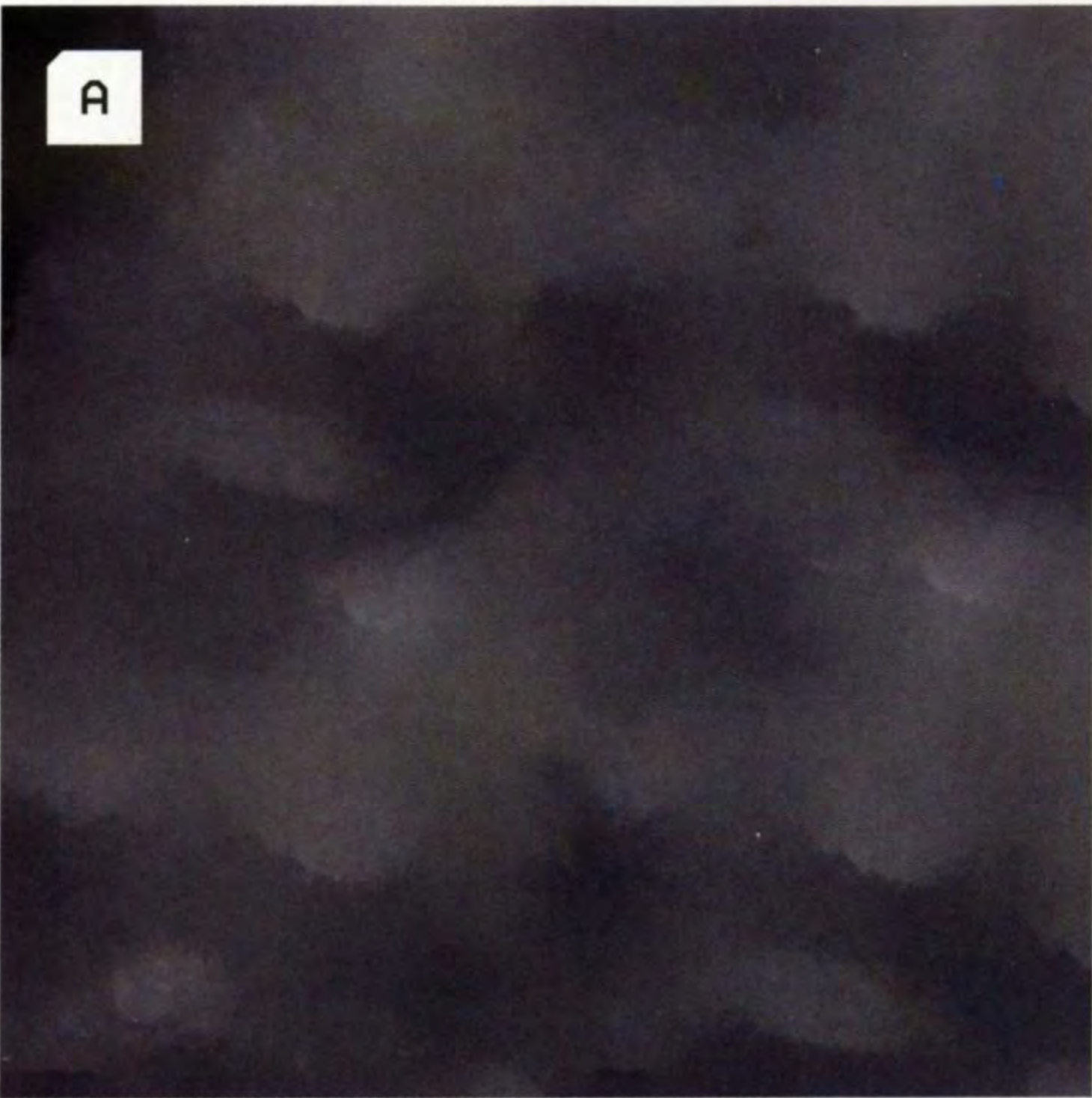
[Matias Tapia, Brian Cozzens] *Top Right*

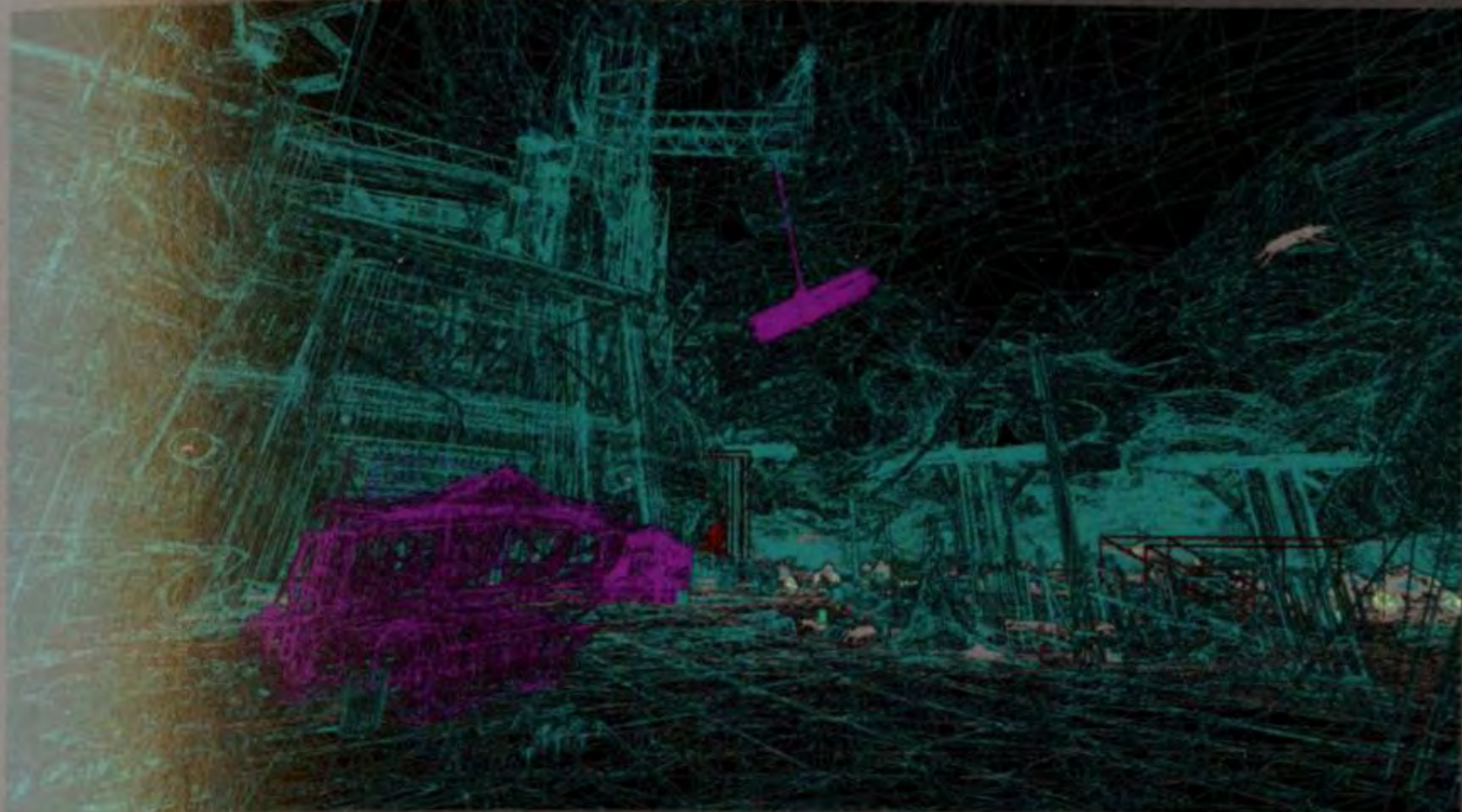
[Kevin Duc] *Left*

[Brian Cozzens, Kevin Duc] *Above*

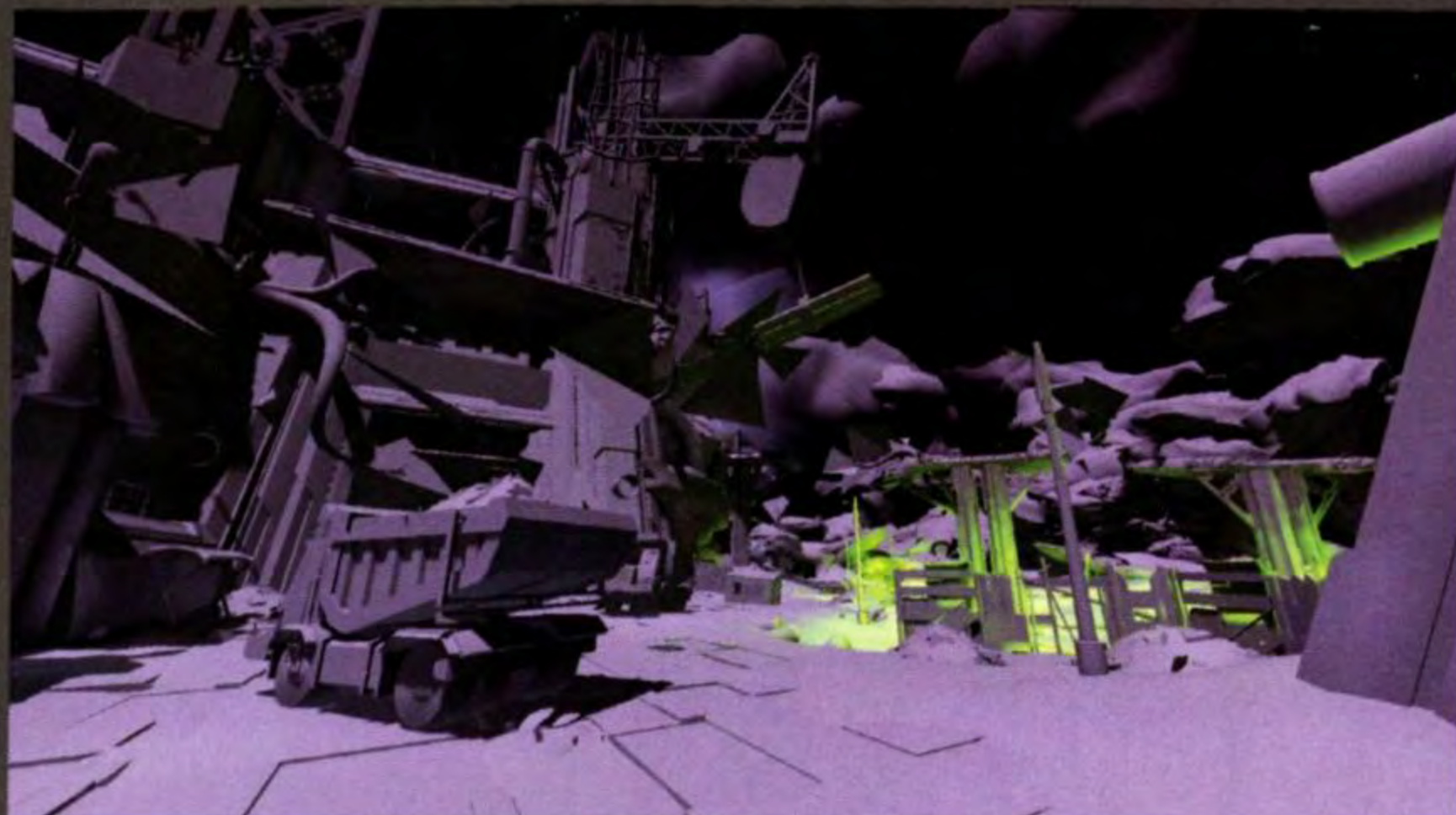
PAINTING THE TEXTURES

- A. Start with a low contrast base texture.
- B. Overlay the UV layout so we can see the shape of the mesh.
- C. Block in base colors and other materials.
- D. Add inks and ambient occlusion baked from the high poly model.
- E. Add detail, wear, and do a color balance pass.
- F. Layer in highlights and shadows to further define the form.





In the first image you can see a typical scene drawn in wireframe to show the amount of polygons used to build our world. Most scenes draw over a million triangles every frame! Objects that never move are drawn in dark cyan, while objects that can move are shown in pink. The grey creatures you can make out in the background are the spawn locations for creatures placed by the level designer, while the red rectangles are particle systems used to draw special effects placed in the world.



The second image shows our lighting pass. Each environment is processed to calculate how light would bounce around the scene. Here you can notice the light from the corrosive lake reflected onto nearby objects in a realistic manner. Areas of the building in the mid-ground show radiant light bouncing naturally from one object to another.



The third image shows the world drawn with diffuse color information only. Here you can see the hand-painted paint and ink lines that *Borderlands* is known for.



The next layer in our rendering process is known as "Ambient Occlusion." During this step the renderer uses depth information from the scene to look for cracks and edges. It then renders out approximated shadows based on how deep those cracks are. This is done every frame so that characters and other movable objects will create shadows where they touch the ground.



Probably one of the most striking visual effects in the *Borderlands* renderer is the outline pass. This shader is similar to the ambient occlusion pass, but instead of rendering soft shadows it draws outlines around all hard edges. You'll notice that this effect fades off the further into the background it goes.



The next step brings all the previous layers together to create the final image. Here we take our high dynamic range image and reduce it down to something we can render. This allows us to adjust the exposure of the image at runtime to make sure our black and white levels are balanced. We also use a special "color look-up table" to tweak various values and colors to achieve the particular mood we are going for. In this case our goal was toxic, corroded, and creepy.

CHARACTERS

Though Pandora might be a harsh, unforgiving wasteland of a planet, it tends to attract a wide spectrum of people. The cast of *Borderlands 2* includes all kinds of colorful characters—from attractive fascists to underage demolitions experts, you'll befriend and/or murder countless people during your adventures in *Borderlands 2*.

But of course, you probably knew all that. But did you know that Sir Hammerlock used to be a fat guy? Or that Handsome Jack nearly looked like Gary Oldman's character from *Book of Eli*? Nearly all of the characters in *Borderlands 2* went through several iterations before the game's release, and the following pages will show you the team's philosophies when designing these characters, as well as a few ideas that ended up on the cutting room floor.

Illustration

[Scott Kester] Right





AXTON

CONCEPT ART

Axton was conceived as the evolution of the Soldier class filled by Roland in the first game. "We initially wanted Axton to feel a bit more modern military, lighter, more lithe than Roland did from *Borderlands 1*," concept artist Scott Kester said. "Regardless, I tried to explore a gamut of what modern soldier meant and looked like. We wanted a younger feel to him, a bit more sly, not quite so serious, but completely capable when things get heavy."

Visually, Axton was meant to communicate a clear gameplay promise: if you're a fan of military shooters, Axton is your guy. He doesn't mess around with crazy magic, or stealthy ninja-stuff, or insane dual-wielding—he's a straightforward, meat-and-potatoes, hooah-spouting commando...

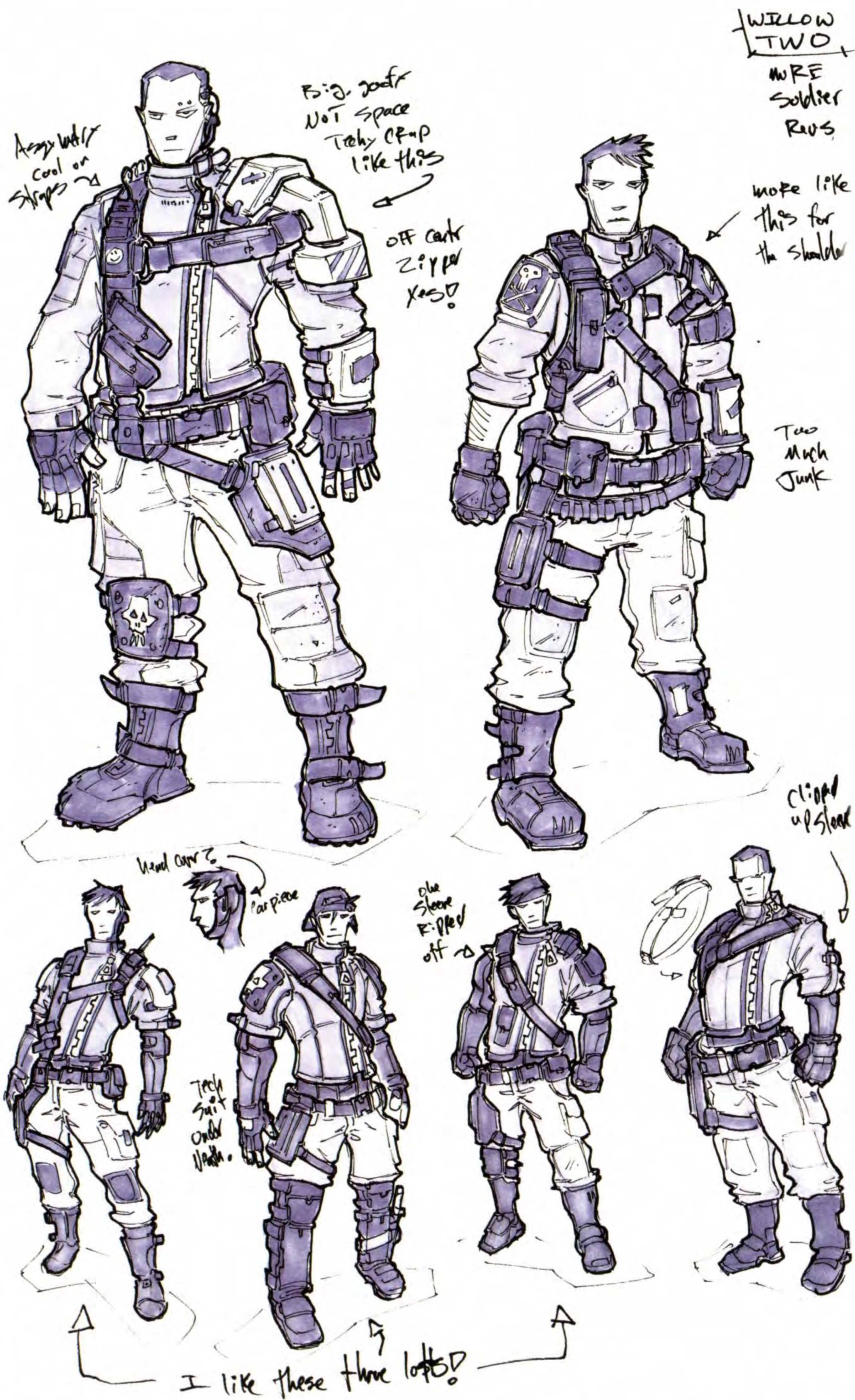
With a twist, of course, because nothing in *Borderlands* is exactly what you'd expect. First, you'll notice that Axton isn't the close-cropped, brunette hardass that you'll typically see in war games; he's got a stylish coif of blonde hair. You may also have spotted the steel bars implanted above his left eye. The purpose of these bars was twofold: first, they ensure that Axton visually stands out from other marine-type videogame protagonists, and second, they communicate some interesting backstory (evidently, the Dahl military surgically implants their rank signifiers into the flesh of their soldiers). "All of the characters have little bits of who they are attached to them," Kester says. "I relish in the little touches. From his ex-wife's wedding ring on his necklace, to his military rank bolted into his forehead."





Commando Model [Adam May] Left
 Commando Concepts [Scott Kester] Right

“He doesn’t mess around with crazy magic, or stealthy ninja-stuff, or insane dual-wielding—he’s a straightforward, meat-and-potatoes, hooah-spouting commando.”



One of the big challenges of Axton’s design was finding a look that communicated “soldier” without communicating “Roland.” “Would he retain some of that feel of Roland?” Kester asks. “Did he have a future slant or was he more retro? I tried to explore a gamut of what he could feel like. In the end I think he turned out to feel a bit loose, more casual, but still held true to his militant past.

“Anytime I put armor on him it felt constricting, which you can see in some of these drawings. I also needed to make sure he felt new in comparison to Roland.”

BORDERLANDS TWO

Commando
Soldier
Concepts

I like
This guy
Lighter, not
so Heavy



Too
Thick-
Feels
Dumpy

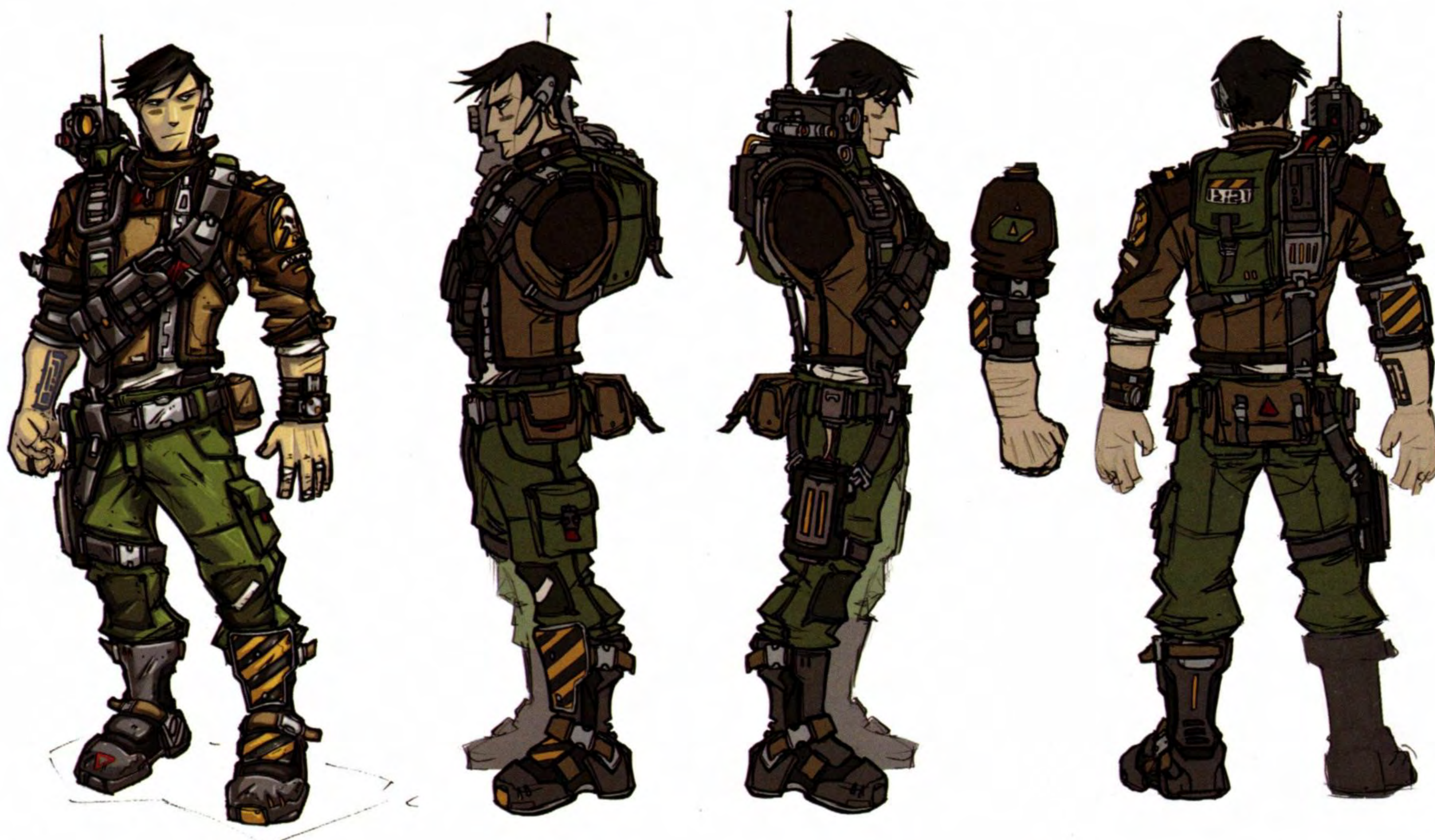


More "Techy"
look?



Commando Concepts
[Scott Kester]

The art team used many different pop-culture soldiers as inspiration for Axton. They looked at Hicks from *Aliens*, Bruce Willis from *Tears of the Sun*, and various other military badasses to convey that Axton was an experienced, grizzled guy who could probably kill you and everyone you cared about if he was ordered to, but would at least be extremely professional and polite while doing so. "The tech on him decidedly feels a bit old," Kester says. "A touch retro, which I thought was cool in comparison to the slightly more modern soldier vibe we were going for with him. The brown leather jacket helps as well; it feels more like an old school adventurer. *Borderlands* is defiantly a combination of the past and the future colliding together."



3D MODELING AND TEXTURES

"The commando was one of the most difficult characters we worked on and went through the most iterations," Adam May says. "Trying to make a serious, put-together, modern-day black-ops type soldier fit into the crazy world of *Borderlands* was a challenging and fun task. We spent a lot of time trying to figure out what was too serious and what was too silly or stylized."

As you can see on the bottom of the page, Axton originally had a much different head. "This was one of the early heads of Axton," May says. "People were having a difficult time relating to him and felt he looked as much like a villain as a hero. So we shifted to more of a Sam Worthington and Metroman-esque vibe and landed where he is now."

Late in development, Axton's head was remodeled to give him more of a hard, experienced appeal.

We went through several variants of his head before we landed on the final look for Axton's face," Kester says. "A huge part of the process is refining and tweaking when you realize that something just feels off. You don't always hit the mark on the first pass."

Commando Concepts

[Scott Kester] *Top Left*

Commando Models

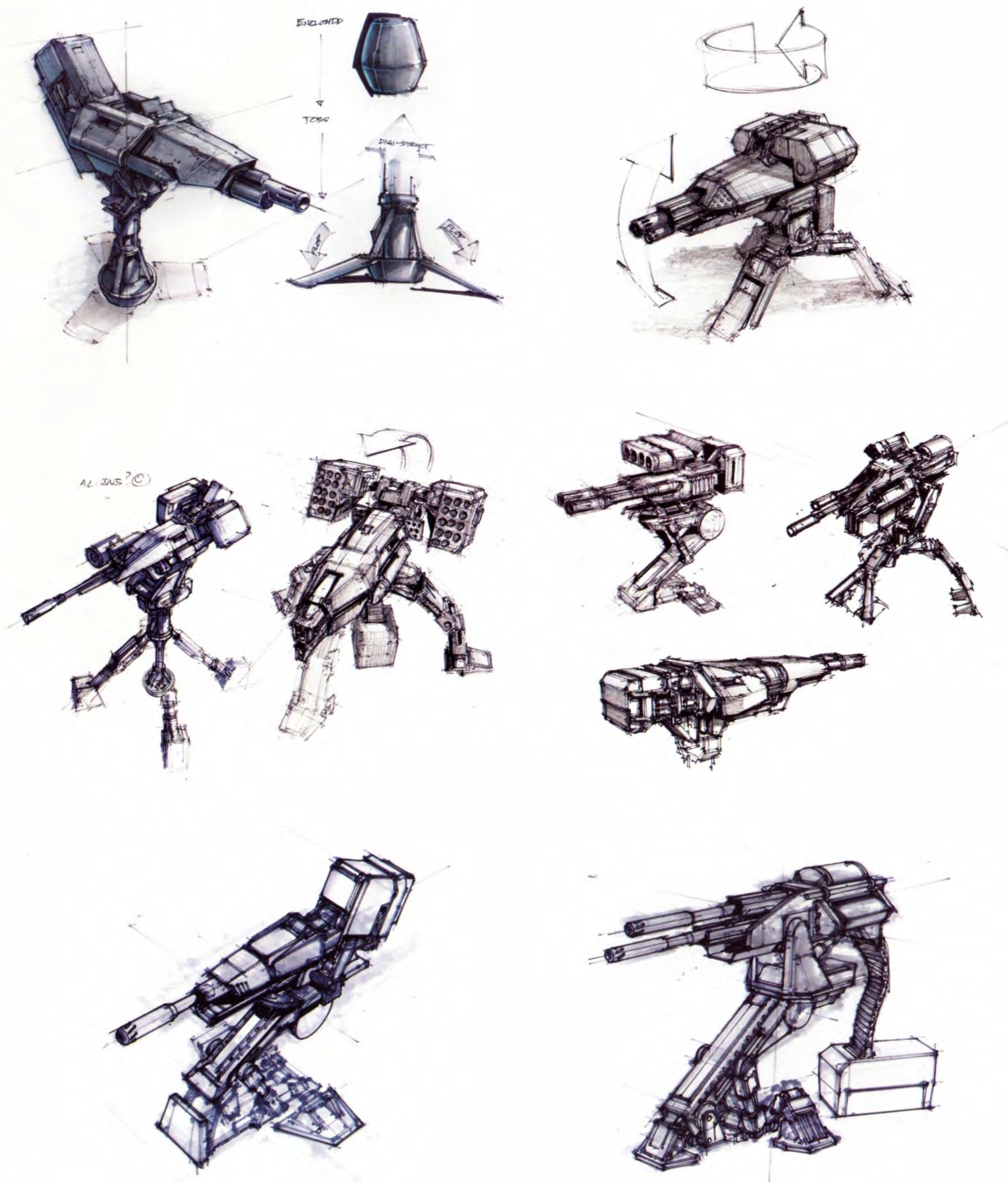
[Adam May] *Bottom Left and Below*



AXTON'S TURRET

Axton's Sabre Turret was designed, both visually and mechanically, to make Roland's Scorpio Turret look like a PEZ dispenser. "Whoever said a dog's a man's best friend," Adam May says, "obviously never had a deployable turret."

"I make it a point not to reference other video games in my designs," concept designer Lorin Wood says, "so I sought inspiration from other elements of military and popular culture, then mixed in some rocket launchers and legs for good measure."



Turret Concepts [Lorin Wood] Left

Commando and Turret Model [Adam May, David May] Right



SALVADOR

CONCEPT ART

When it came time to announce *Borderlands 2* to the world, Salvador the Gunzerker was chosen as the game's unofficial mascot—his bandaged, mohawked head was the first thing Gearbox fans saw when the team released *BL2*'s teaser trailer in August of 2011. Why? Perhaps because his action skill was the most easy for fans to wrap their head around in a thirty-second teaser. Or perhaps because his short stature and dark skin made certain that he couldn't be confused with any character from the first game.

Or maybe it's just because he looks so damn cool.

Concept designer Scott Kester strove to create a character who is "the essence of *Borderlands*...a guy who lives and breathes guns." From the numerous bandoliers slung across his body to the bullet tattoos that adorn his right bicep, Sal makes no pretenses about his purpose on Pandora. He's here to shoot stuff, and have a hell of a lot of fun doing it.



WILLOW TWO



Just a more
- Militant approach -

Leather Bomber



Def feels
more
Merc than
Soldier
at least -
Kinda
Digit
- Patton
Pants



Little Bit
Wolver



pretty common Tough guy



Misc Scars
& Band aids



More
standard typical

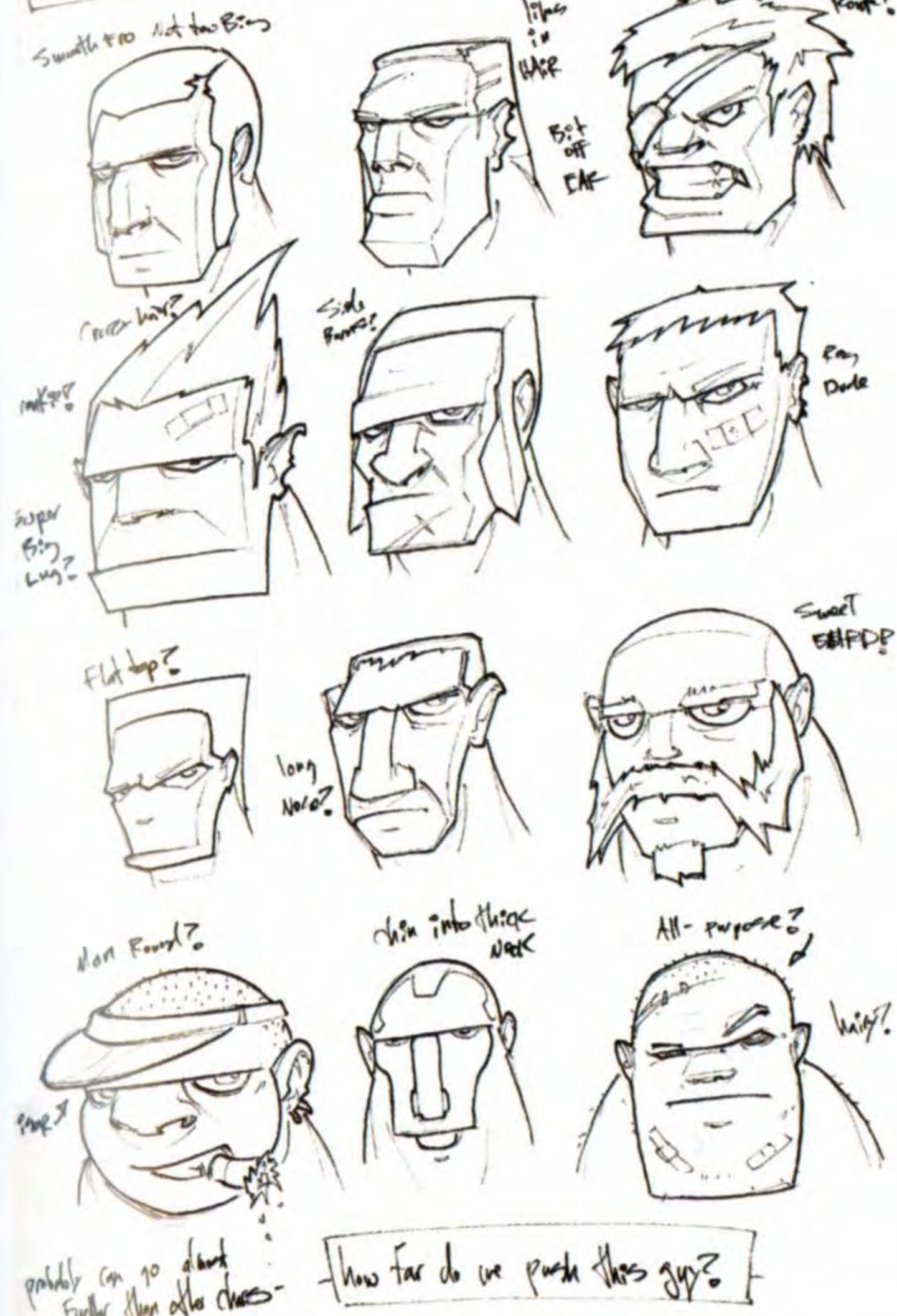




Despite his relatively simple gameplay premise, Salvador's class name changed more often than any other playable character. First, his class was called "Merc," until the team decided that was too bland. Then, "Gunslinger." Then, finally, "Gunzerker," to convey his status as an evolution of the Berserker class from the first game.

Much of his design also revolved around creating a distinctive silhouette. "In *Borderlands 1* we had Brick, the big tough guy," Scott Kester says. "This time around, we wanted another big guy, but didn't want to use a similar body type. So we said, 'Let's make a little big guy!'" From the start we really wanted to make a more compact character with Sal: short and stocky, and totally badass."

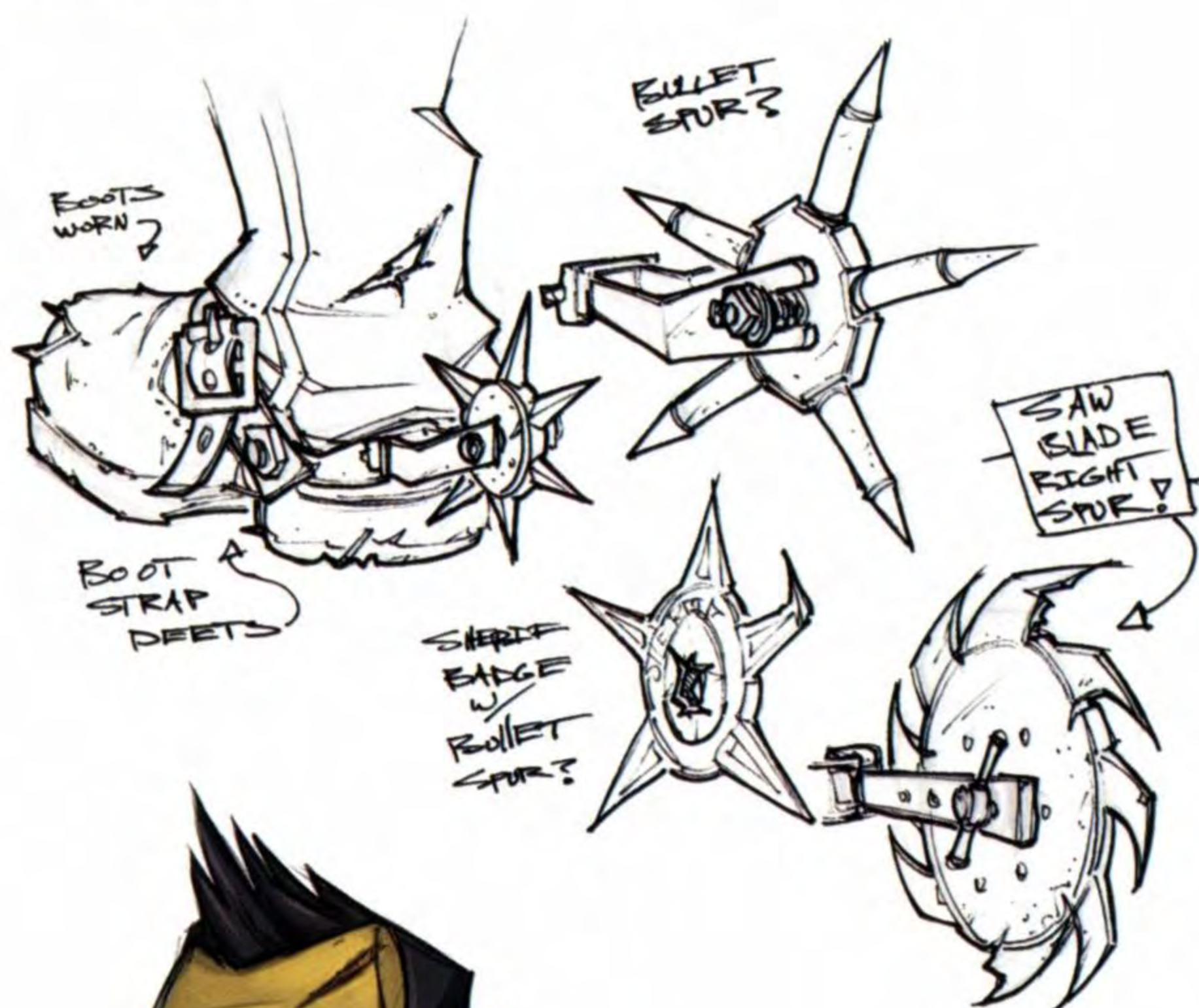
MERC HEAD VARS



“It’s true, the little dude loves his big guns. But no, he’s not compensating.”

Scott Kester says, “Sal is probably my favorite design of all the characters; I love how he came together. The small touches on him, the bullets, buttons, and bullet spurs. His whole body has so much personality. I think we tend to try things that other companies might not in regards to characters. I’m thankful we are asking more questions than just starting with what is already status quo.”

“It’s true, the little dude loves his big guns,” Adam May says. “But no, he’s not compensating.”

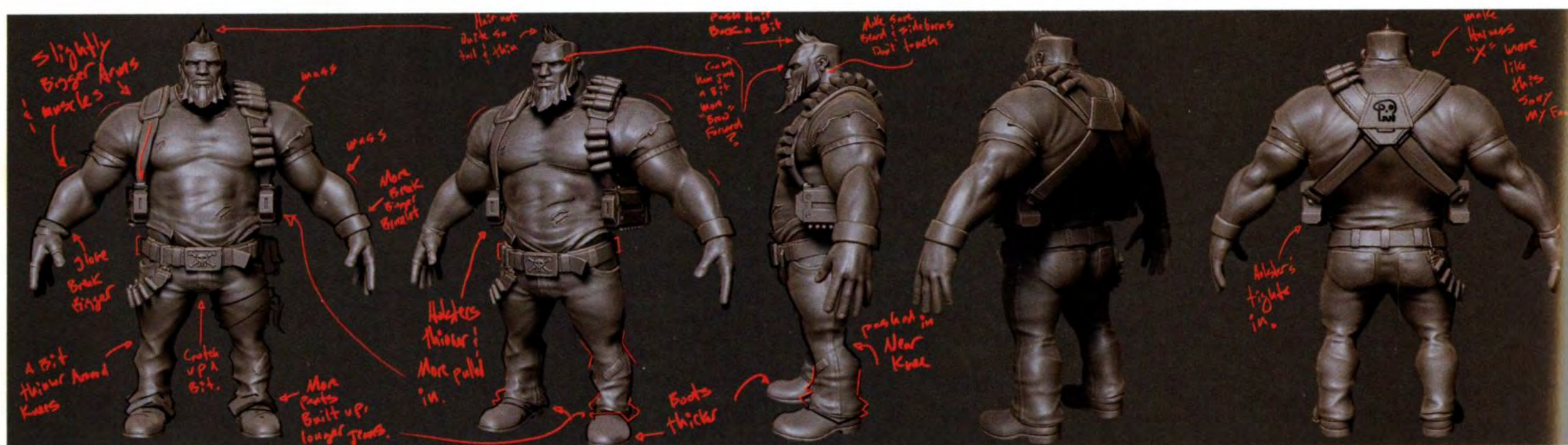


3D MODELING AND TEXTURES

"What a blast to work on," Adam May says. "I'd never made a guy as wide as he was tall, so proportions were all over the place at first. But it was a lot of fun making the littlest big dude on the planet."

Scott Kester reminisces, "I tried to infuse a lot of 'punk' into Sal. I wanted a character that felt a bit more like a trouble maker or a hooligan. He's ultimately a hero, but you're not exactly sure if he's going to double cross you in the end. Jayne from *Firefly* was definitely a good bit of inspiration for us."

"We tried several different takes on Sal from a design side. Was he a straight thug? Was there some military influence? Was he a rebel freedom fighter? He was the most fun for me to draw and develop out of all these characters."



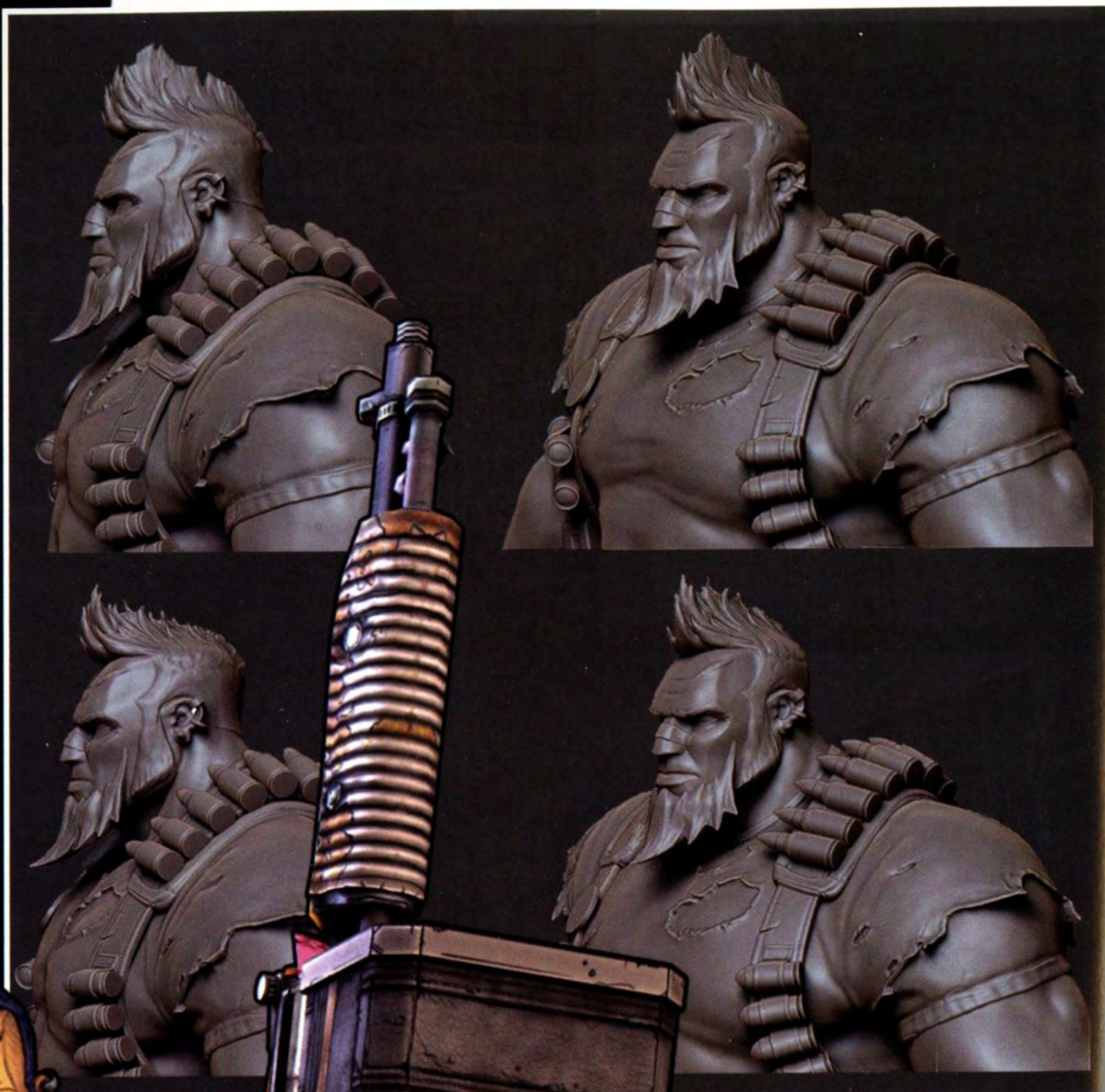


Gunzerker Models [Adam May]
Top Left, Middle Right, Bottom
Gunzerker Model Notes and Concepts
 [Adam May, Scott Kester] *Top Right, Middle Left*



THE MERC'S MOHAWK

Though you may not notice it at first, Salvador is *Borderlands*' own version of the fantasy dwarf archetype. His size, his bulk, and most especially his hair are reminiscent of your Gimilis and your Oakenshields, but with a distinct *Borderlands* twist. No Tolkien dwarf could ever rock a Mohawk like our man Salvador.



“Salvador’s a dwarf, not a midget. He just prefers guns instead of axes.”

— Adam May





Gunzerker Models

[Adam May] Left

Gunzerker Model

[Adam May, Kevin Penrod] Right

MAYA

CONCEPT ART

As the only returning class from *Borderlands* (in name, at least), the artists had an interesting challenge in designing a new Siren: how do you take Lilith's mystical, yet down-to-earth appeal and translate it into an entirely new character with entirely new abilities? "Maya was definitely a difficult but fun problem to work on," Adam May says. "Everyone had ideas to share on what would make her look cool. Problem was it was never the same as the person before them."

With Maya, the team endeavored to make her feel as distinct from Lilith as possible, while still displaying the unique characteristics that define her as a Siren. "Lilith was so loose and casual, and we wanted Maya to feel clean and together, professional," Scott Kester says. "We started in a more sci-fi slant; it felt too contrived, so I started adding more layers and textures to her design." Where Lilith was casually dressed, for instance, Maya is wearing (admittedly sleek) combat armor.

Maya was also designed to appear more in tune with her Siren heritage than Lilith—as you can see, Maya displays her Siren tattoos prominently. Does she do this to strike fear into her enemies? Because her tattoos need to be exposed in order for her Siren powers to work? Or because it looks totally badass?

Probably the last thing.



SIREN - NEW!

Sleek, Simple, Sexy

More Mature (slightly)
than Lilith - Not
Tom Boy-ish
older than her as well?

Feels a
bit like
Lilith But
New

SKIN
SUIT
WET
SUIT

Looser
Cout to
Break up
Shells

Break
up
holster

Clunky
Boots?

pretty Rad

WILLOW
TWO
Siren
Initial
Designs

Need to make
More Head/hair
Variants

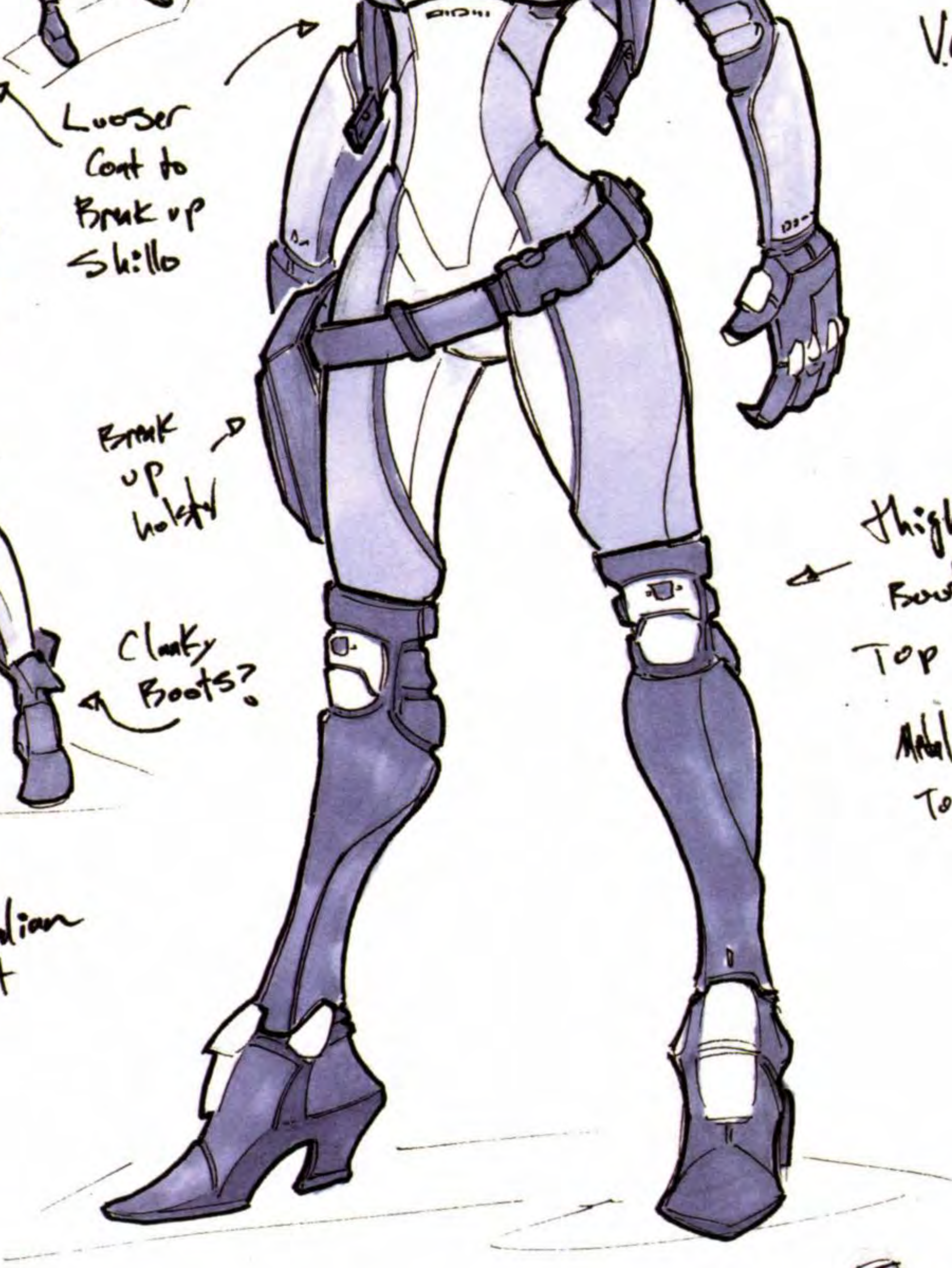
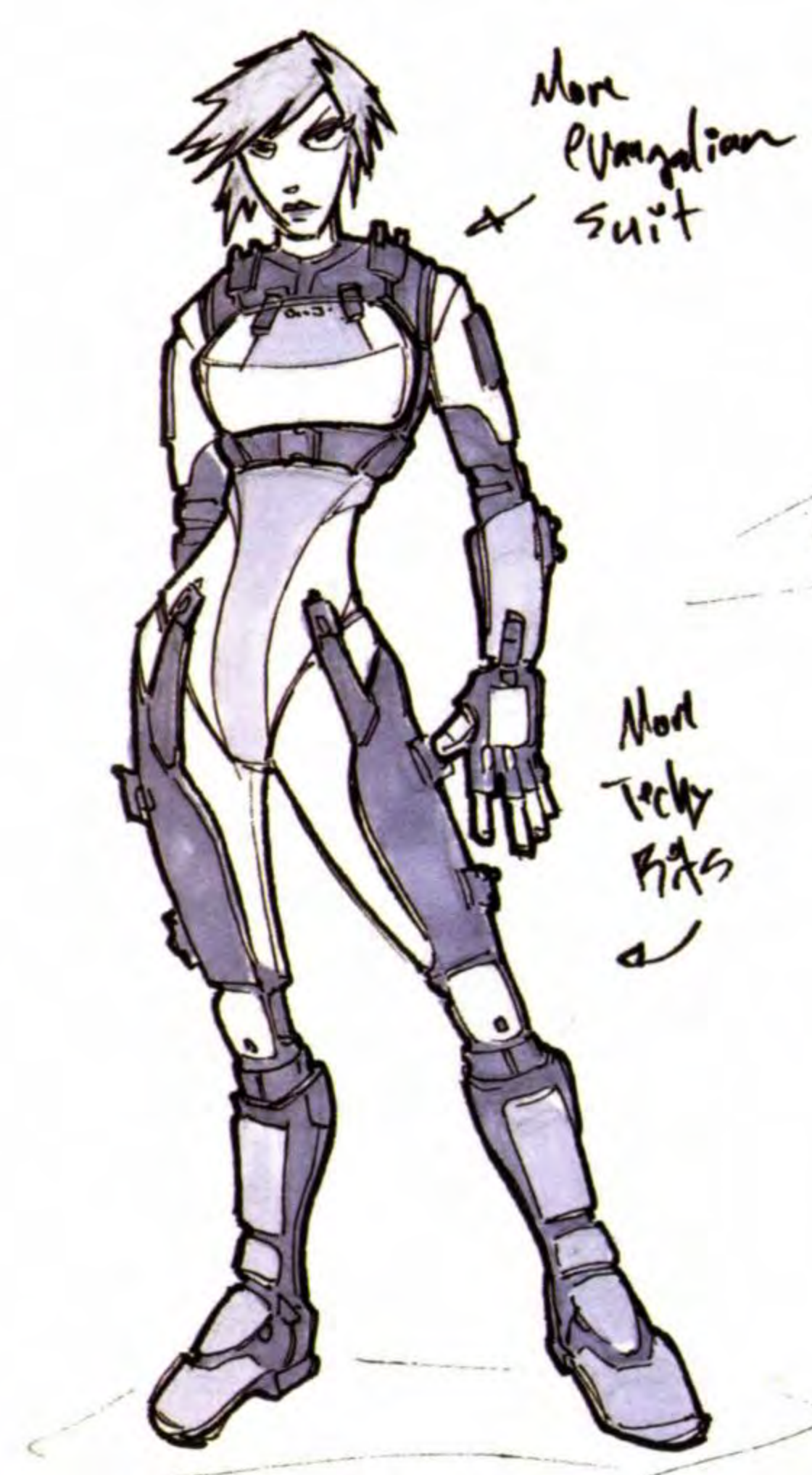
High-high
Boots on
Top of suit
Metal knee pads
Top of Boots

More
Evangelion
suit

More
Techy
bits

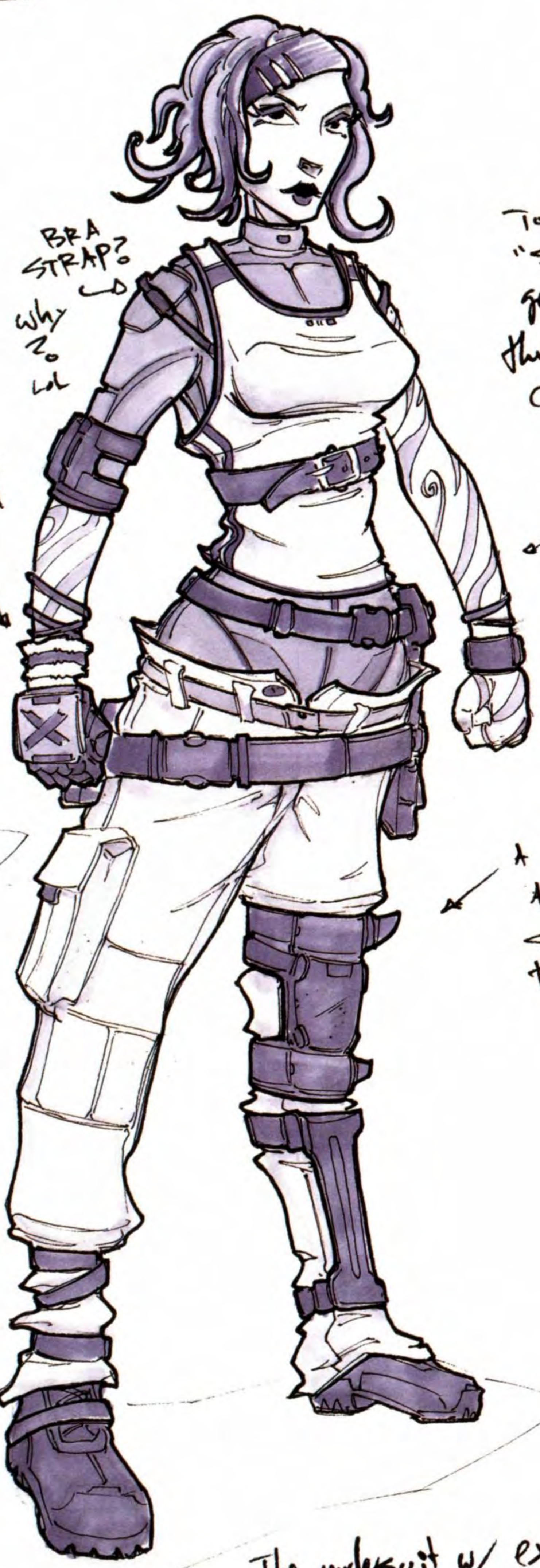
Slight
skirt?

More
plated?
looks
clunky



TR> ing to be not quite so smooth sexy -
Still Needs to feel B-lauS!

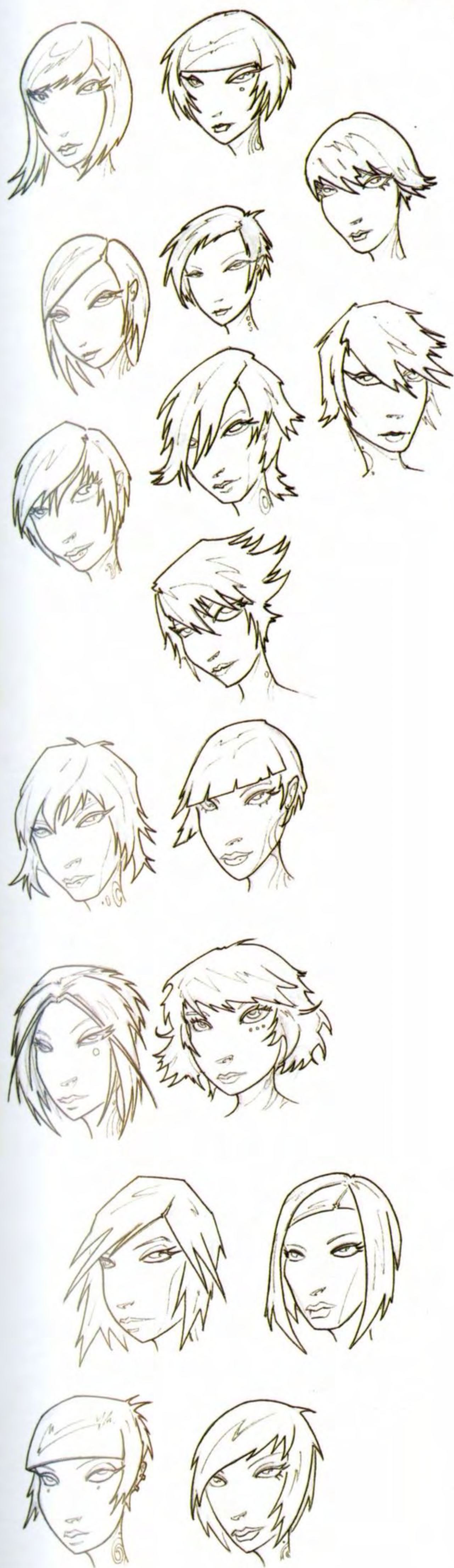
Willow
#2
Siren
2.0



The undersuit w/ exposed
Flash for tats, plus the
looser pants feels great.

Need to see "Hips" Plus tight
Top - should be HOT

SIREN HEADS



Just as Salvador fits into the tank/dwarf archetype, Maya was meant to communicate the support/mage archetype; someone who could hold her own in battle and nuke the hell out of her enemies, but who couldn't soak up damage in the same way that a walking slab of meat such as Salvador might be able to. While early concept drawings attempted to imply this strength through numerous pieces of combat gear (note the various gun holsters, straps and belts) the team eventually decided that a sleek, minimalist approach might be more effective.

Siren Concepts [Scott Kester] *Left*
Siren Head Concepts and Paintovers
 [Matias Tapia] *Right*

3D MODELING AND TEXTURES

The art team used many different aspects of Maya's design to communicate hints about her backstory. The book at her hip implies a lifetime of study and a thirst for knowledge (likely about her Siren heritage); her sleek, minimalist combat armor suggests a character who favors mobility and efficiency over all else.



“We try to make strong female characters that feel believable but ultimately capable and can hold their own with anyone that comes their way.”

Maya continues the proud Gearbox tradition of being a strong, female protagonist who actually looks like a real woman. Rather than possessing the proportions of Jessica Rabbit, Maya, like Lilith before her, was designed to communicate strength and badassity before sex appeal. “We try to make strong female characters that feel believable but ultimately capable and can hold their own with anyone that comes their way, not just ‘hot girls,’” Kester says.

“I tried to model Maya as the tall, slender, European counter-part to the shorter, cute, wild-child Lilith was,” says Adam May.

Siren Model [Adam May] *Left, Bottom*
Siren Head Concepts and Paintovers
 [Scott Kester] *Right*



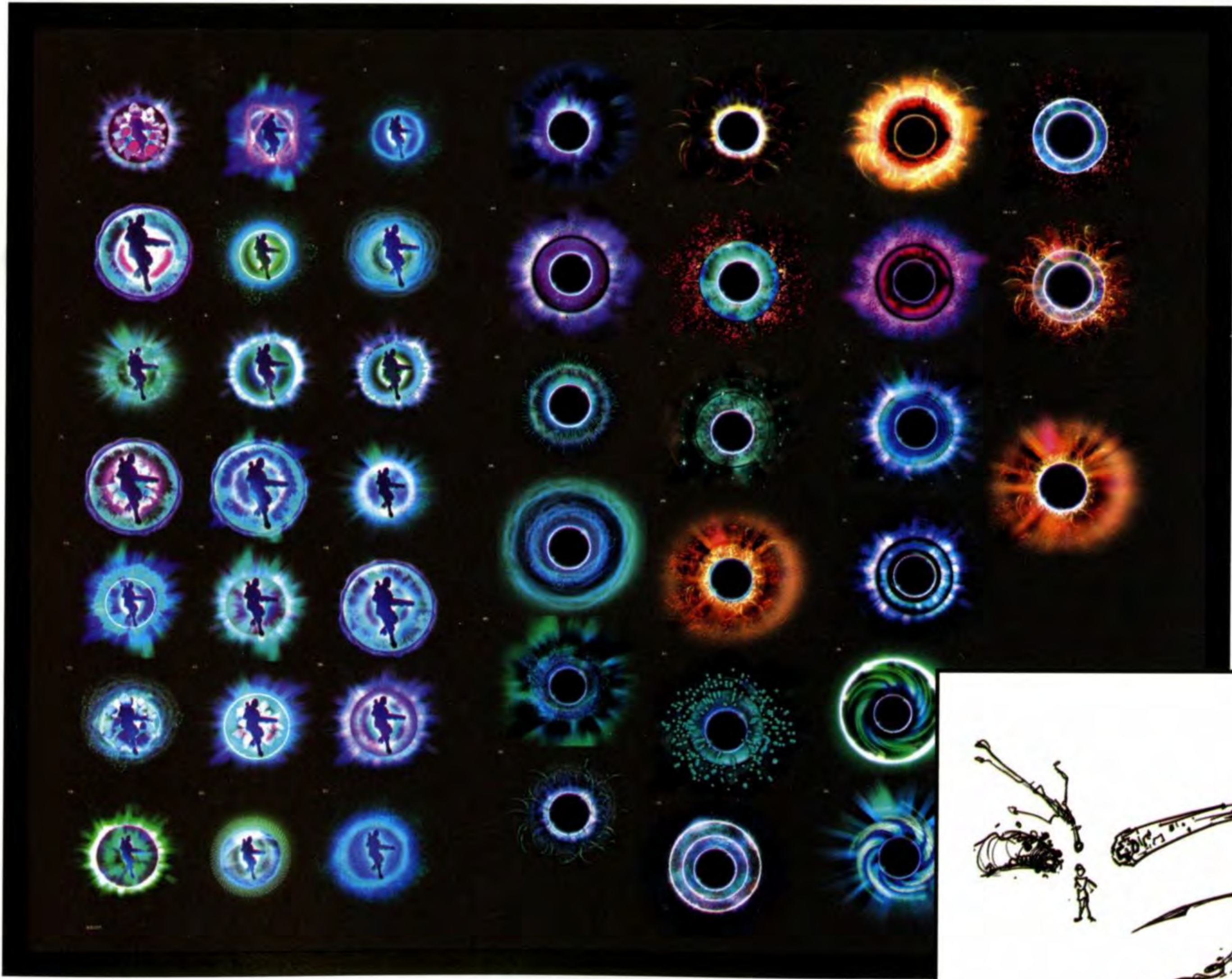
SIREN FLAVOR

“We really wanted Maya to feel athletic, an adventurer, but at the same time mysterious and other worldly,” Kester says. “The Siren tattoos are a dominant feature to her appearance; I tried to create a sharp contrast by covering her right arm completely to let the Siren tattoo define her and show her heritage.”



SIREN SKILLS

Maya’s Phaselock orb underwent many revisions. The team had to find the right balance between mysticism, raw power, and elegance—since Maya’s Phaselock bubble doesn’t actually hurt enemies, it had to look strong enough that a grunt couldn’t break out of it, but not so chaotic that players would expect their targets to be taking constant damage.



Siren Models [Adam May] *Top*
Phaselock Concepts [Matias Tapia] *Above*
Phaselock Concepts [Jeremy Cooke] *Right*
Siren Model [Adam May, Jennifer Wildes] *Next Page*



ZERO

CONCEPT ART

Who is Zer0? Is he even human? And why does he have four fingers? If you've asked yourself any of those questions, then the art team accomplished their mission.

Zer0, the Assassin, was meant to embody the archetype of the mysterious badass—the guy with the mask who raises more questions than he answers, and who eliminates enemies with a ninja-like precision and dispassion. “I grew up obsessed with Snake Eyes from G.I. Joe, so I definitely drew some inspiration from there,” Scott Kester says of Zer0. Additionally, masked badasses like Boba Fett were also pulled into the character's design.

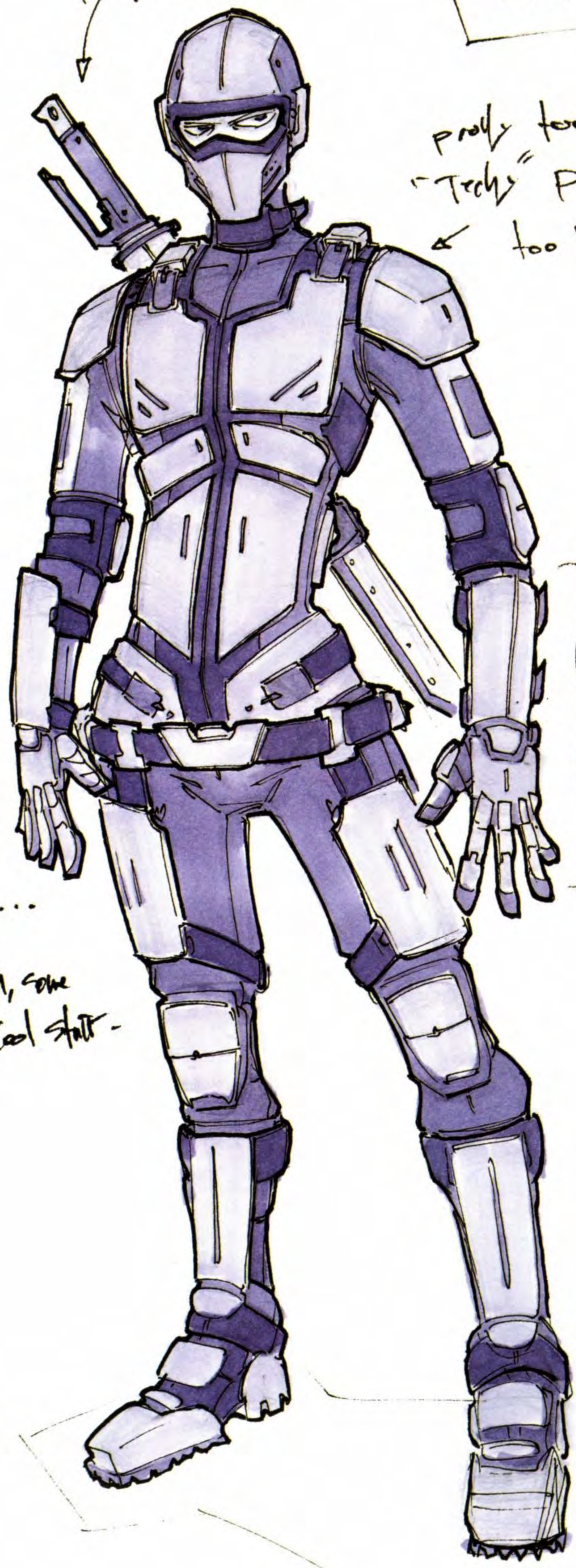
If you're looking for hints about Zer0's true identity, though, you won't find them here. The team remains notoriously tight-lipped about Zer0's origins—his mystery is part of his mystique. Maybe he's an alien, or a robot, or some sort of Siren/Claptrap hybrid that will ultimately destroy Pandora and all its inhabitants.

Then again, maybe not.





little
boar



SWORD
PIMP.

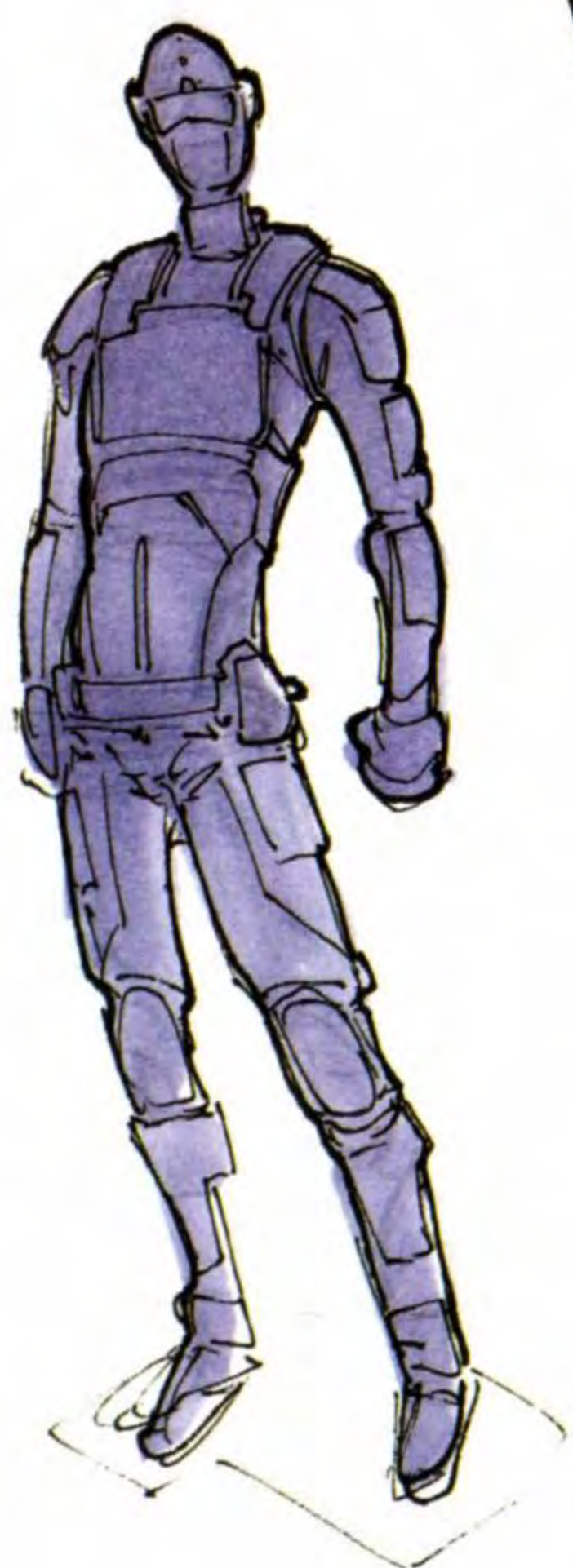
WILLOW 2
ASSASSIN
START!

probably too
"Techy" plate-like
& too busy.

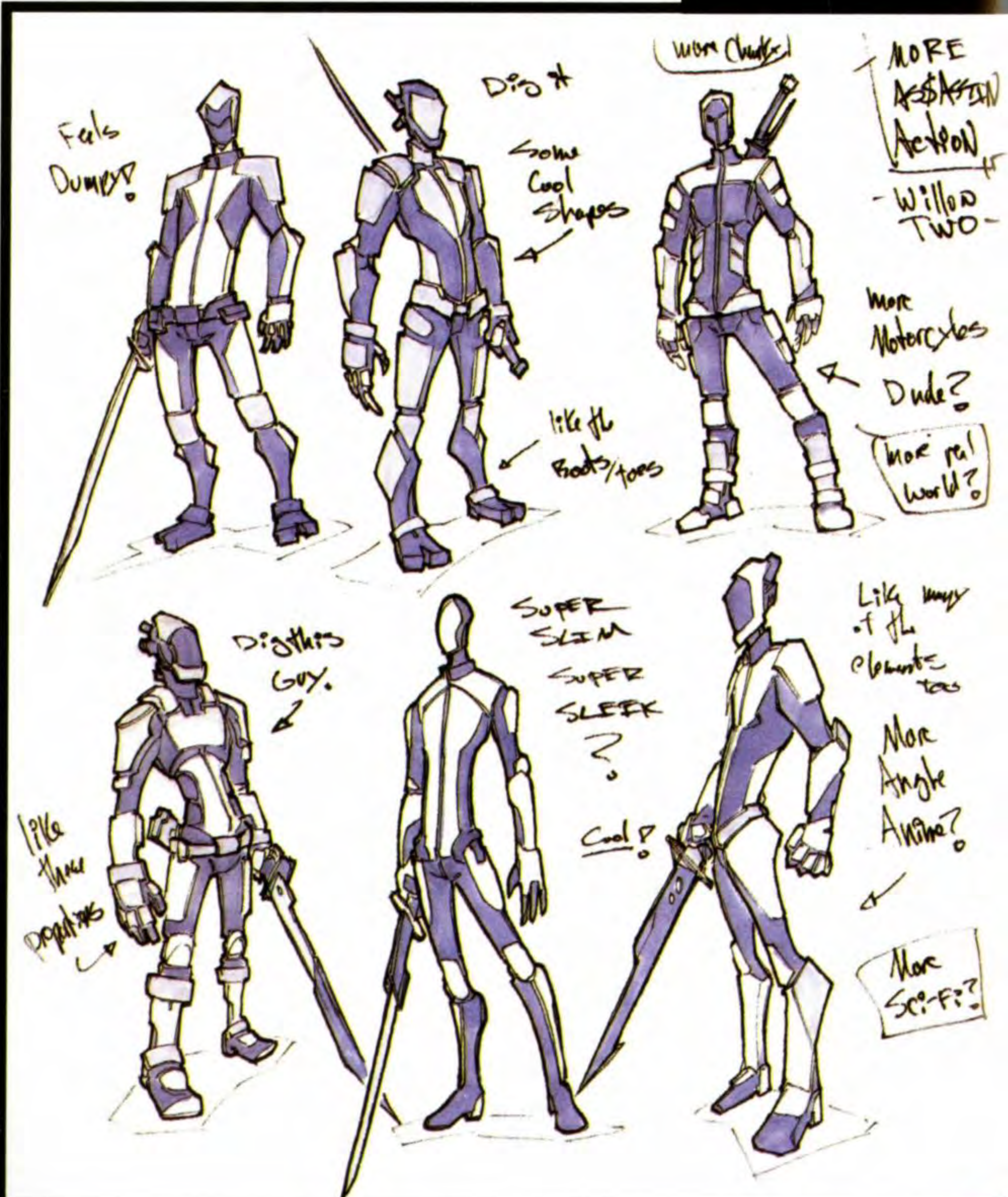
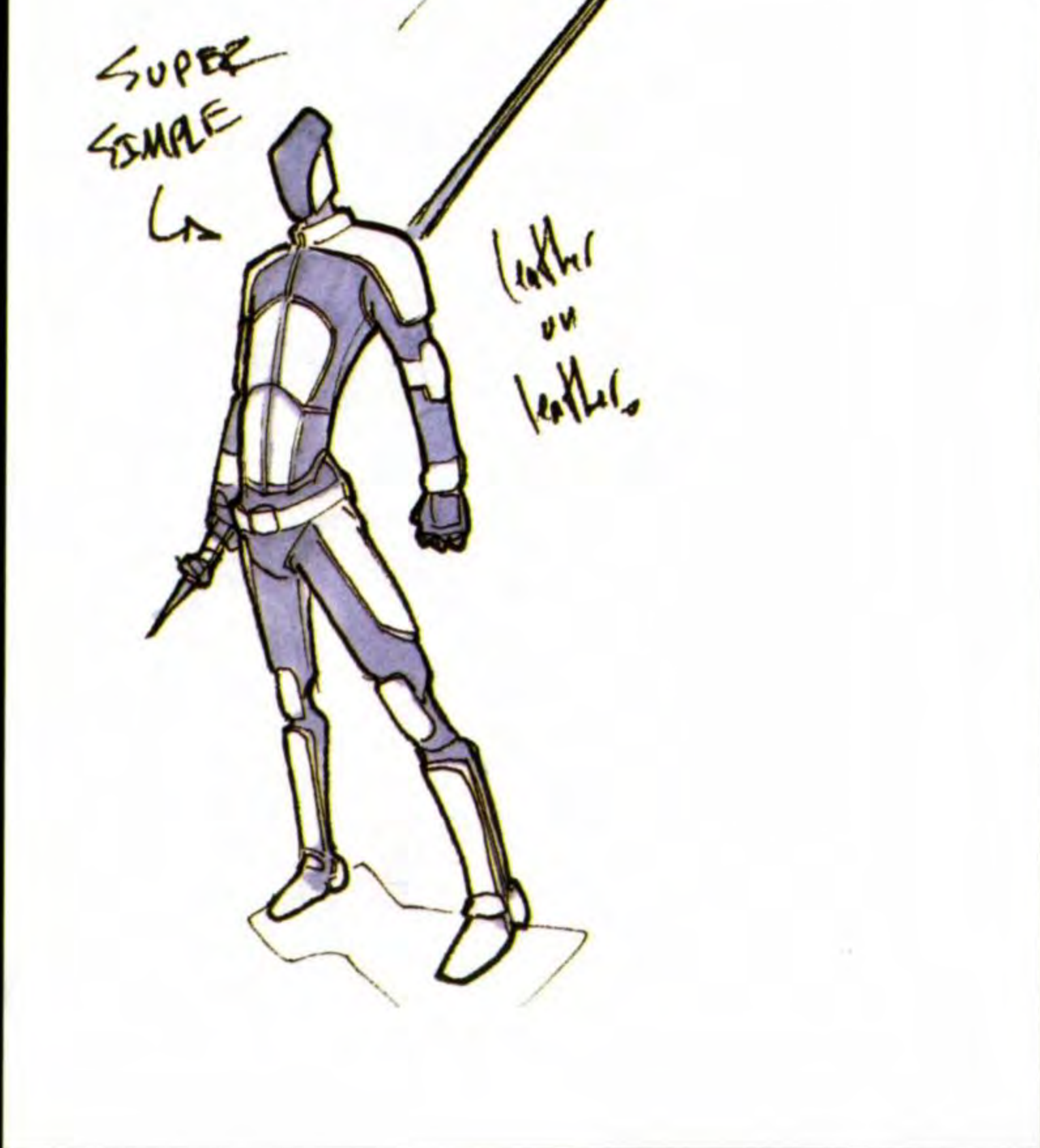
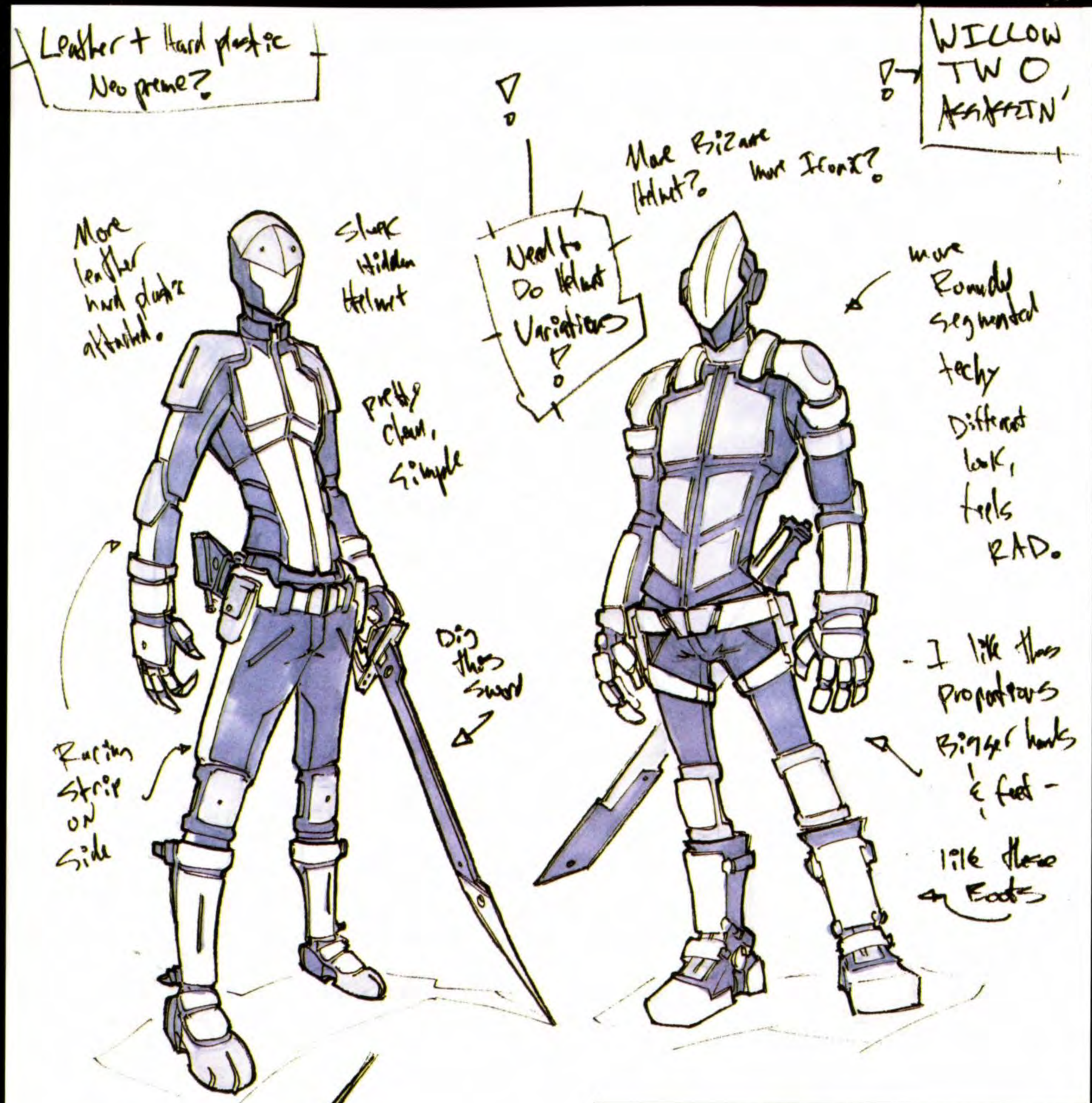
Sweet
!

probably
NOT so
plate
layered
human....

- Ah, some
cool stuff -



Assassin Model [Adam May] Left
Assassin Concepts [Scott Kester] Right

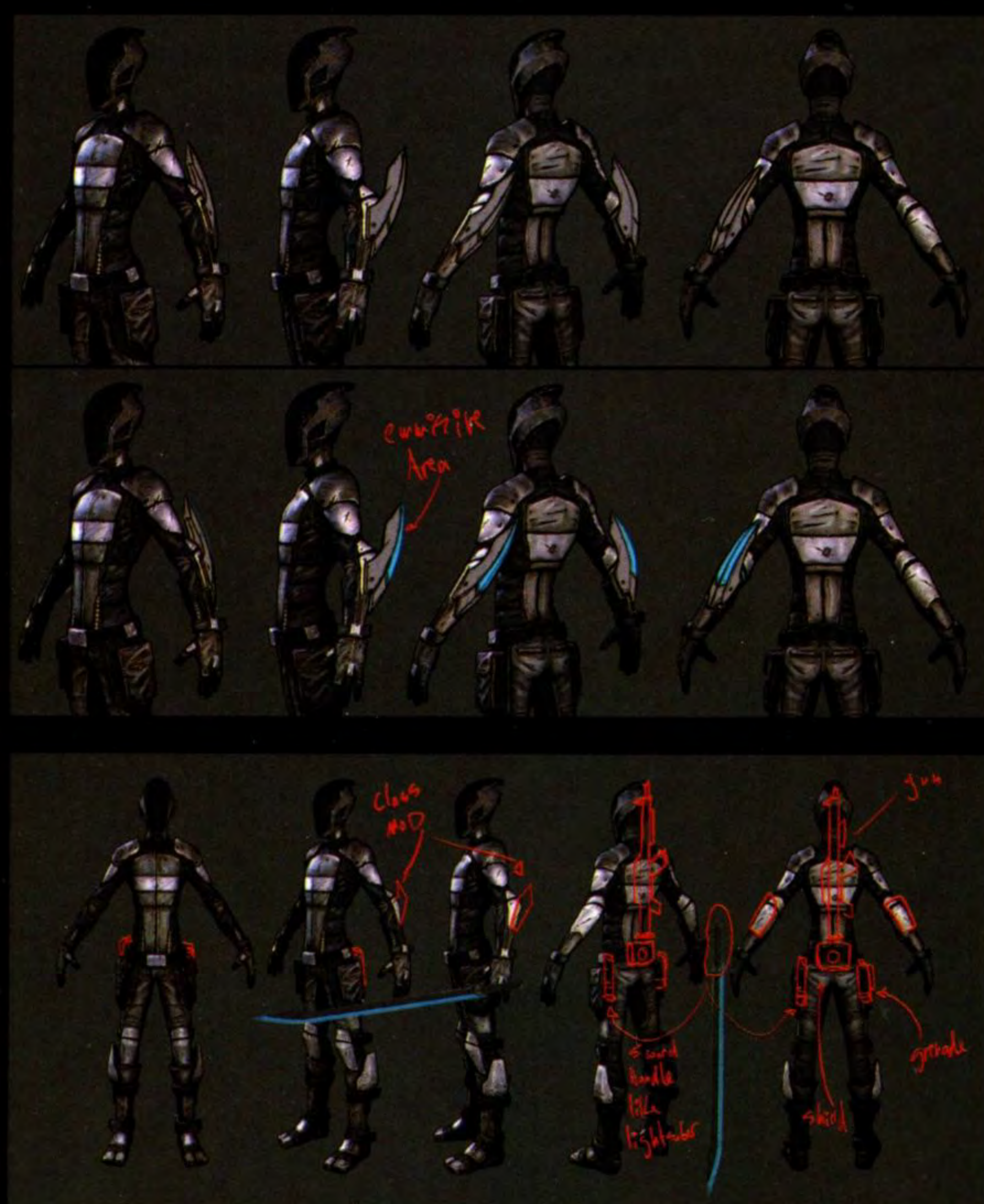
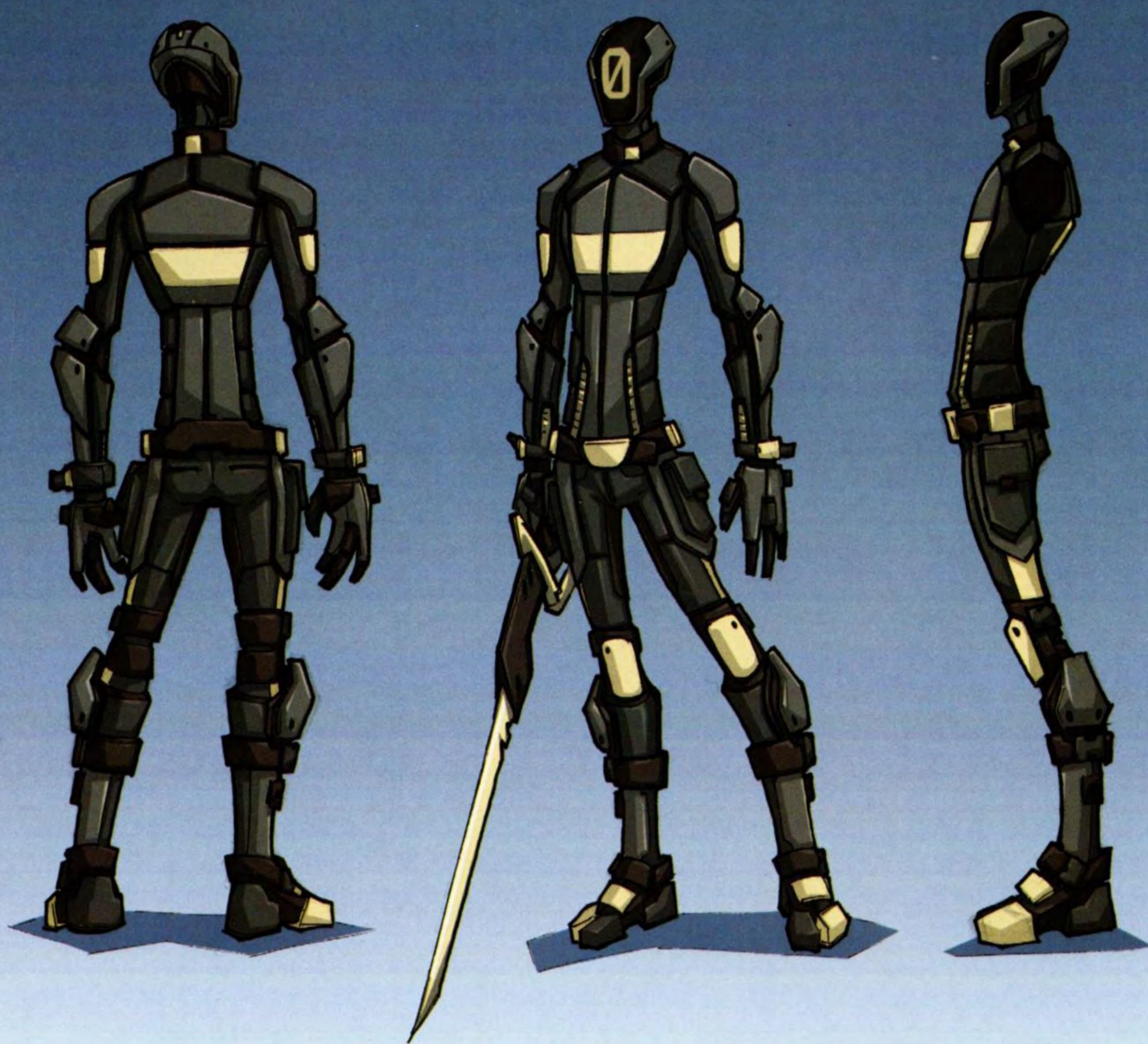


Concept designer Scott Kester has a unique superpower where he can (A) draw four or five really cool-looking sketches in a couple of hours, right before (B) completely ripping them apart with his often hilarious, self-deprecating written commentary alongside the drawings.

Assassin Concepts [Scott Kester]

"Zero went through more changes than any other character," says Adam May. "A lot of people thought he was just too strange and too different to fit in with the rest of the characters. 'Oh god, please no' was the first bit of feedback we got when we showed this model company wide."

"His helmet went through a ton of iterations," May says. "It just kept looking like a bald guy from the front."



Assassin Concepts [Scott Kester] Top

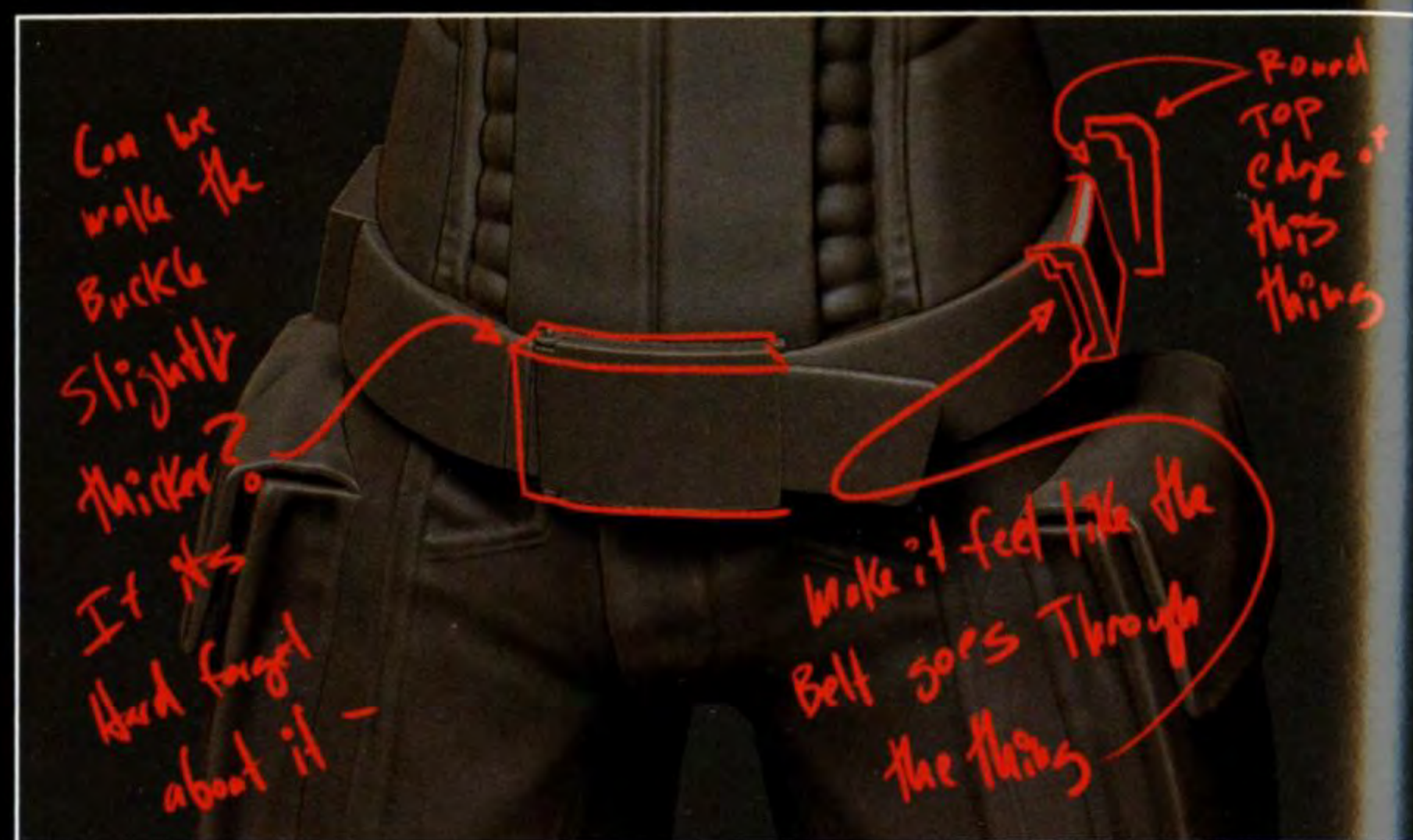
Sword Concepts [Scott Kester] Bottom Left

Assassin Model Notes and Concepts [Scott Kester, Adam May] Bottom Right



3D MODELING AND TEXTURES

Of Zer0's mystery, Scott Kester says, "What is Zer0? Who is Zer0? I did some subtle things and tweaks to the design to ask questions. Zer0 only has three fingers and a thumb, the silhouette has large chunky breaks to contrast the thin frame, everything is smooth, non-descript and somewhat blank. Is Zer0 a robot? A human? We felt that not giving away those answers made Zer0 more interesting. The face shows nothing—it was definitely a gamble to commit to a character like this!"



On the whole, *Borderlands* takes place in a universe that is grimy, dirty, rough, and lived-in—in other words, the exact opposite of how you'd want a sleek, hi-tech, possibly robotic ninja to look. "It's easy to take a character like this completely sci-fi, but we tried to balance the materials and ground them more into our world; lots of inspiration from motorcycle gear and racing leathers ran through the design," Scott Kester says. "Zer0 and Salvador were the characters that let me get the most extreme from a pure character design angle, both becoming my favorite characters that I've designed for *Borderlands 1* and *2*."

It took a great amount of discussion and effort to get Zer0 into a spot where he looked like the smooth, silent-as-the-grave ninja promised by his design while still looking like he could fit into the kitbashed universe of *Borderlands*. Though Zer0's armor is clearly hi-tech and smooth, the artists textured it to make it clear that the Pandoran wastes took a harsh toll on its once-shiny exterior.

"Mysterious. Futuristic. Sword. Ninja. Sounds cool to me," Adam May says.



Assassin Models [Adam May] *Top Left, Bottom Left*
Assassin Model Notes and Concepts [Adam May, Scott Kester] *Middle Left*
Assassin Model Colorization Concepts [Kevin Duc, Adam May] *Right*



ZEROSPEAK

From the early stages of Zer0's visual design, the art team knew they wanted something that really made Zer0 stand out from the crowd. Something cool, and hi-tech, and mysterious (much like Zer0 himself). It was for these reasons that they came up with the idea for Zer0's visor, which displays different messages depending on what he's doing at any given time. When healing a teammate, the visor displays an ASCII heart symbol (<3). When he falls into fight for your life mode, "FML" appears in front of his eyes. "Zer0's voice is augmented; he only speaks in Haiku, and only shows emotion through emoticons. Yeah, he's not your average video game character," says Scott Kester.

"I actually like to think his name isn't even really Zer0," Jeramy Cooke says. He much prefers to believe that Pandora's natives named the Assassin that because every time he kills someone, a giant red "0" flashes in front of his visor.



Assassin Model [Adam May] Left, Right
Assassin Speak [Jeramy Cooke] Top



“Mysterious. Futuristic. Sword. Ninja.
Sounds cool to me.”

HANDSOME JACK

CONCEPT ART

As *Borderlands 2*'s plot developed, it became increasingly clear that the game was going to need a central, well-developed villain. "We knew we needed an arrogant bad guy named Handsome Jack," said lead writer Anthony Burch. "But we didn't know what he should look like."

Given Jack's centrality to the story line, the art team spent several days finding the right mixture of "cool" and "douchey."

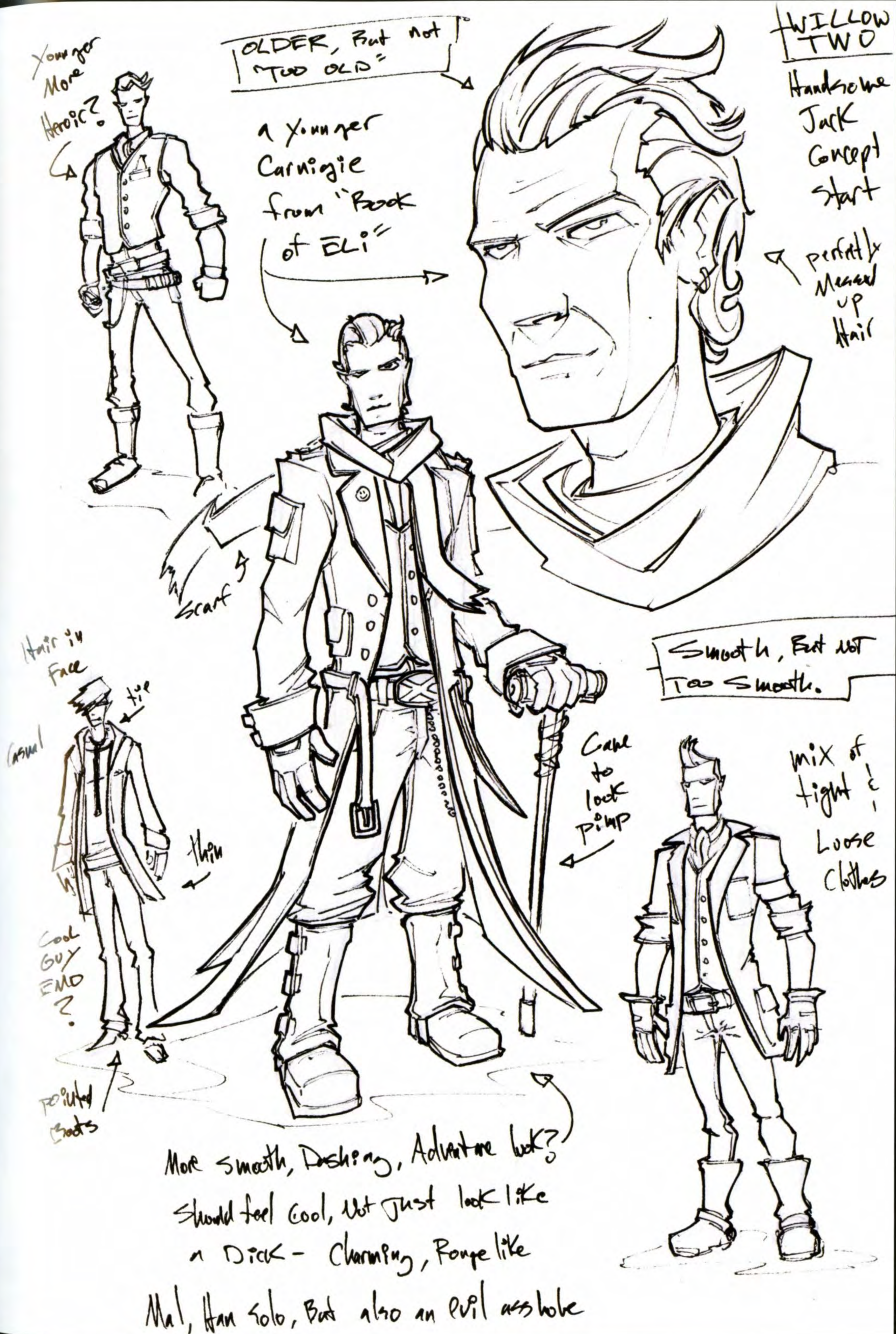
"We always thought of Handsome Jack as the main character from some game that never came out," Scott Kester says. "So when designing him I wanted him to feel altogether heroic, full of himself, smooth, but also totally pompous."

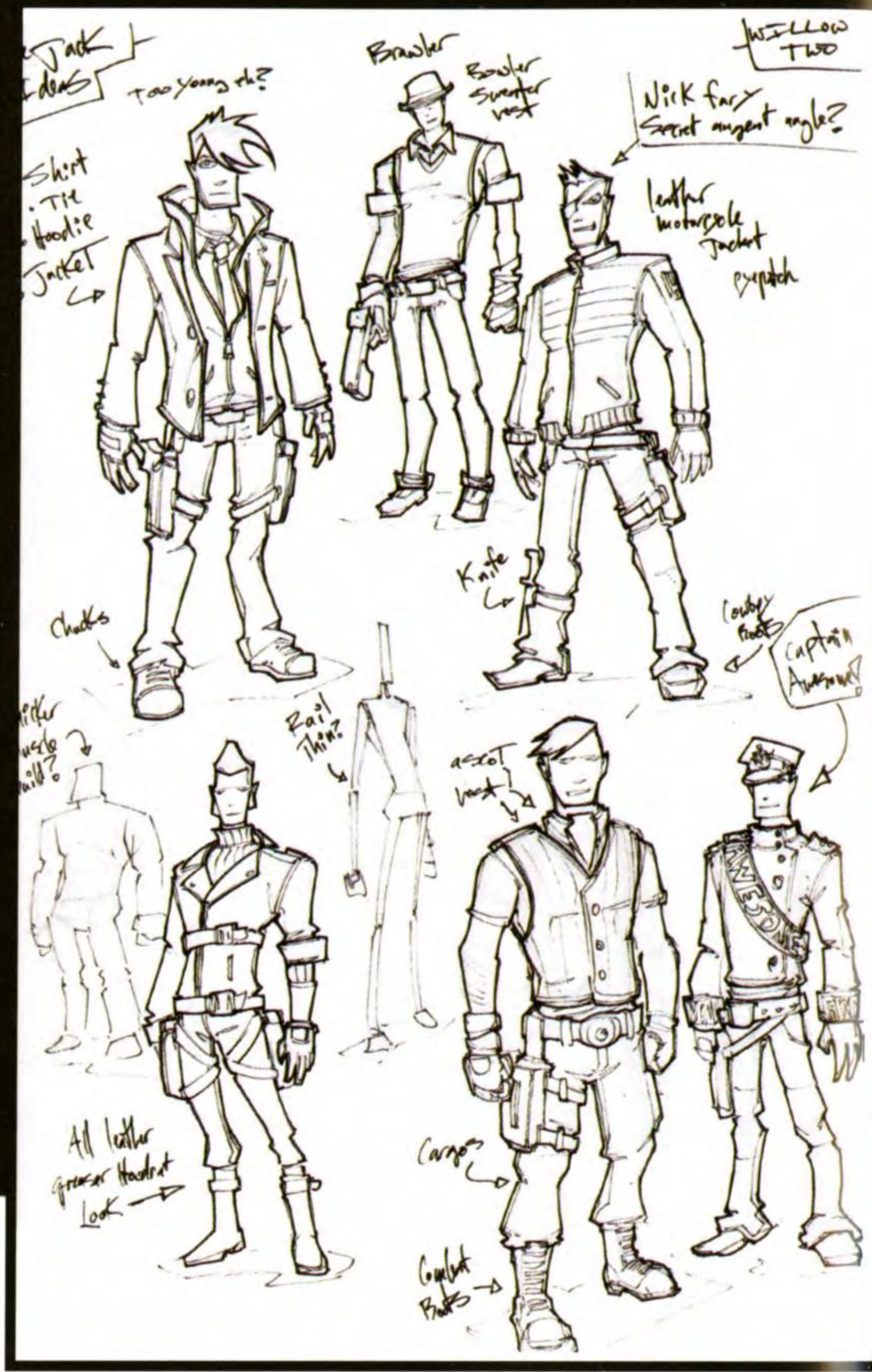
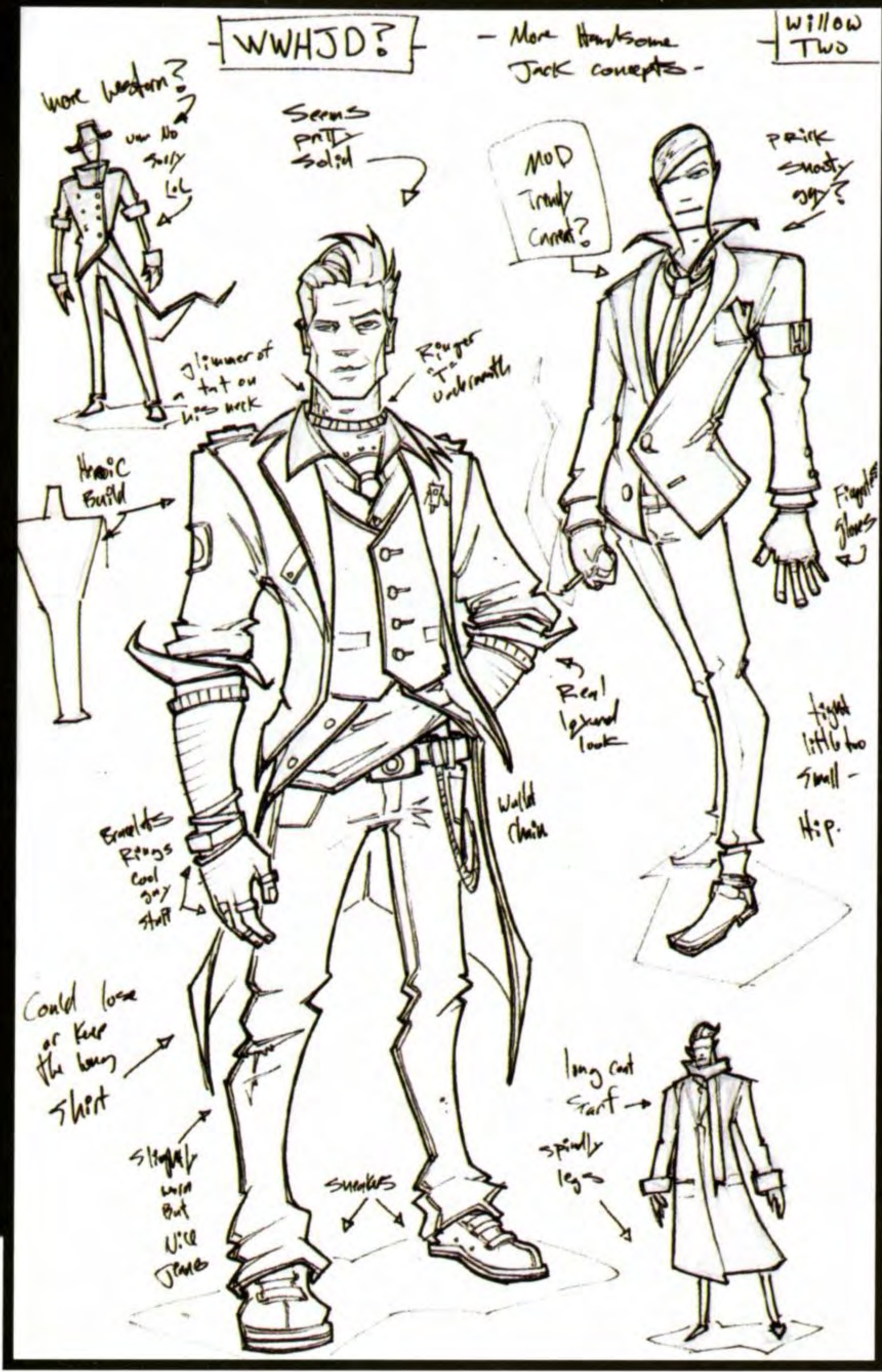
The trick came in finding a way to give Jack a heroic sort of flair, but with a sinister edge—to imbue him with something harsh, and unsettling, and decidedly *un*-Handsome.

Enter: that creepy mask. Donning what the team referred to as "Pandoran plastic surgery," the newly-masked Handsome Jack hit a healthy balance between sinister and cool.

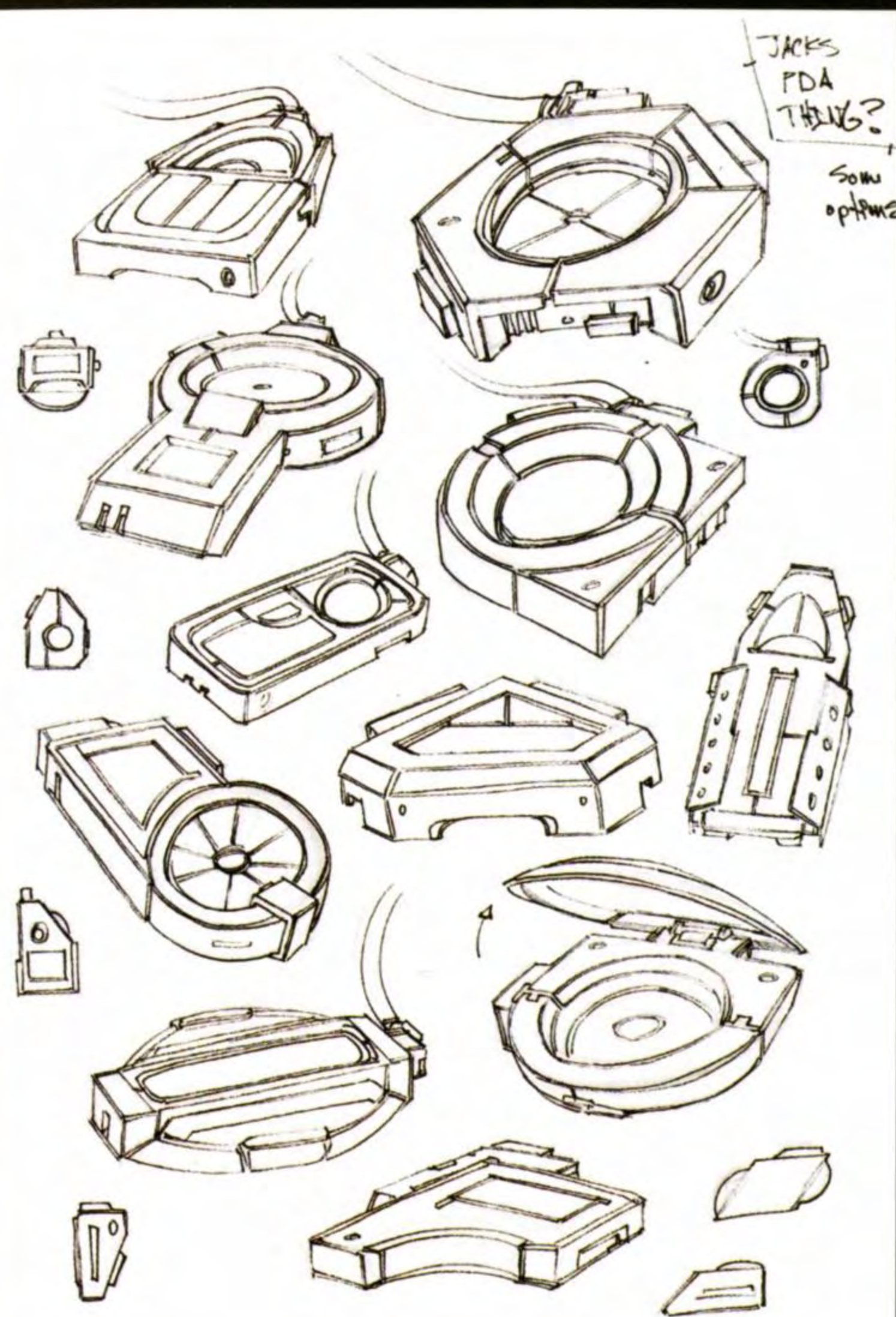
Jack Model [Damian Kim] *This Page*
Jack Concepts [Scott Kester] *Next Page*





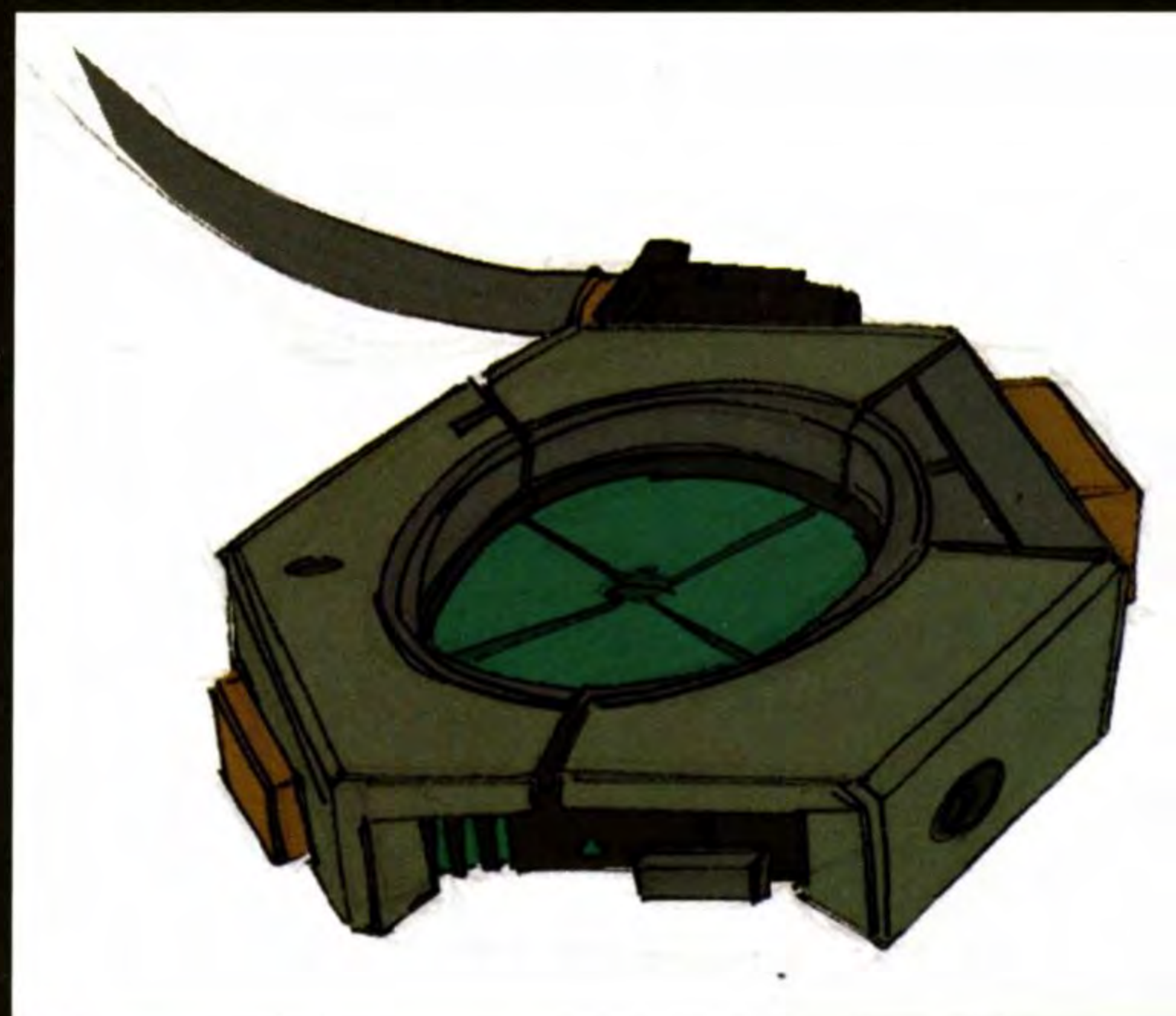


Jack Concepts [Scott Kester]



"My first explorations into Jack were more of an international man of travel, an adventurer," Kester says. "I tried a handful of different looks that didn't quite come together until I started trying to layer him more, make him feel more current to today, a bit more hip and stylish."

"In the end I went with a young CEO look, sporty and casual yet simultaneously well dressed and cool. He has his high-tech Hyperion toys, but is still balanced by the casual hip sneakers on his feet."



Jack Concepts [Scott Kester] Left
PDA Concept [Scott Kester] Right

3D MODELING AND TEXTURES

“Once Jack’s body was getting closer to completion it didn’t feel like it was enough—this is *Borderlands*—he needed more of an edge, a hook. We brainstormed and I started drawing these weird prosthetic faces on him; it stuck, it felt new, it felt wrong, and gave him that little extra bit of personality.

“The key was harmonization with human anatomy and style which show characteristics of Handsome Jack as a hero of Opportunity,” Damian Kim says. “We wanted to exaggerate his chin and healthier looking upper body with a slightly skinny lower body.”

“His head and face is my favorite part of Jack. I tried to add some Bruce Campbell in there, some David Bowie; he came together fantastic, from his hair, to the latches and seams, which give him that little bit extra weirdness.”



“Jack is your main enemy in the game,” Kester says. “If the villain has no charisma or personality, everything falls flat. From the writing, to his model and design, it was important to make him as compelling of a villain as possible. He was a blast to design and work on.”

Jack Models [Damian Kim]

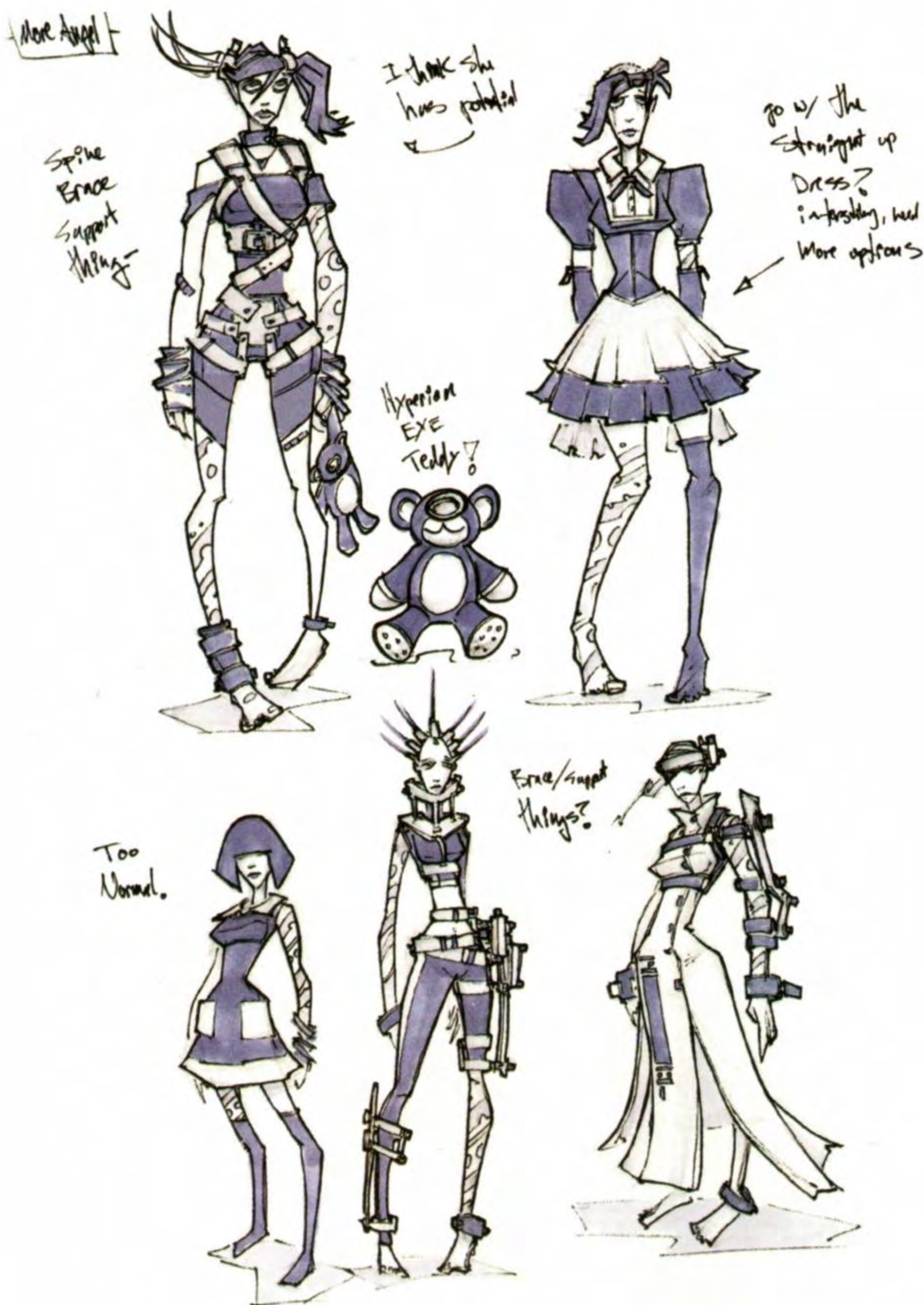
“The trick came in finding a way to give Jack a heroic sort of flair, but with a sinister edge—to imbue him with something harsh, and unsettling, and decidedly un-Handsome.”

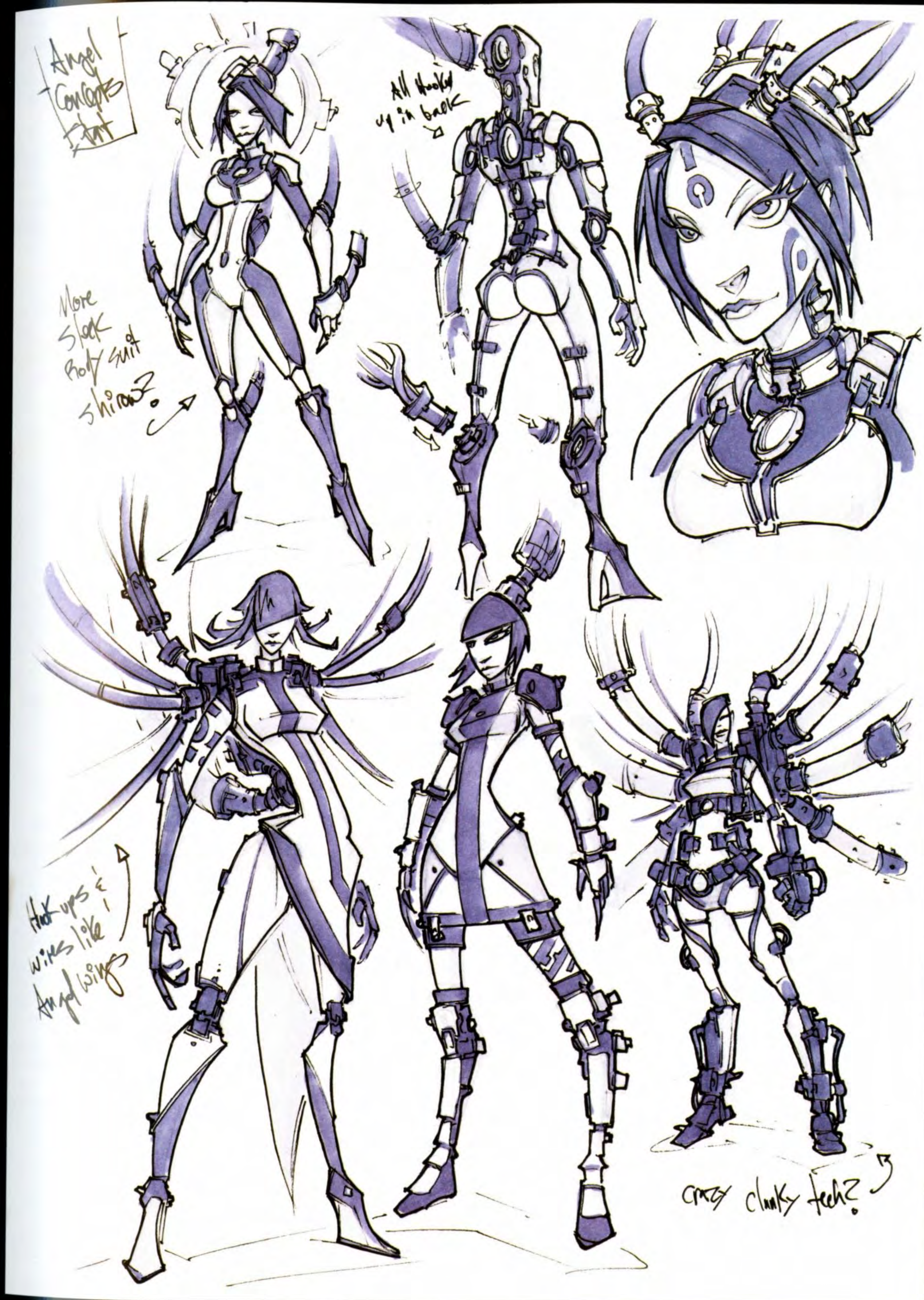


ANGEL

When it came time to create the physical embodiment of what had once been nothing more than a live-action video and a voice over the radio, the art team met with some interesting challenges.

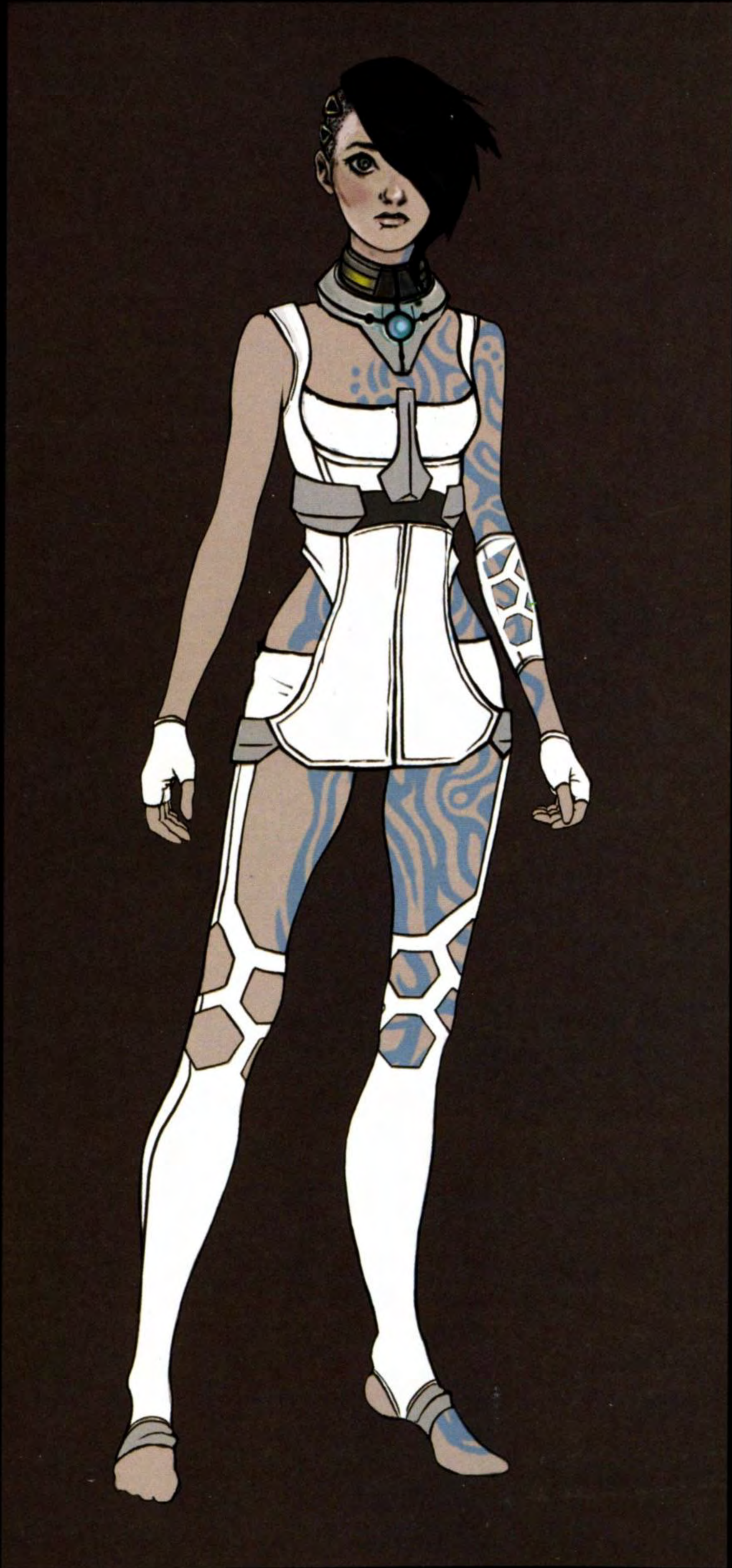
“We tried several different looks to what Angel could really be and look like,” Scott Kester says. “Was she a mental patient? Was she a weapon? It was fun to throw out some different ideas and try to find the visuals to who the actual in-game Guardian Angel is, and not just seeing her as a distorted, live-action video.

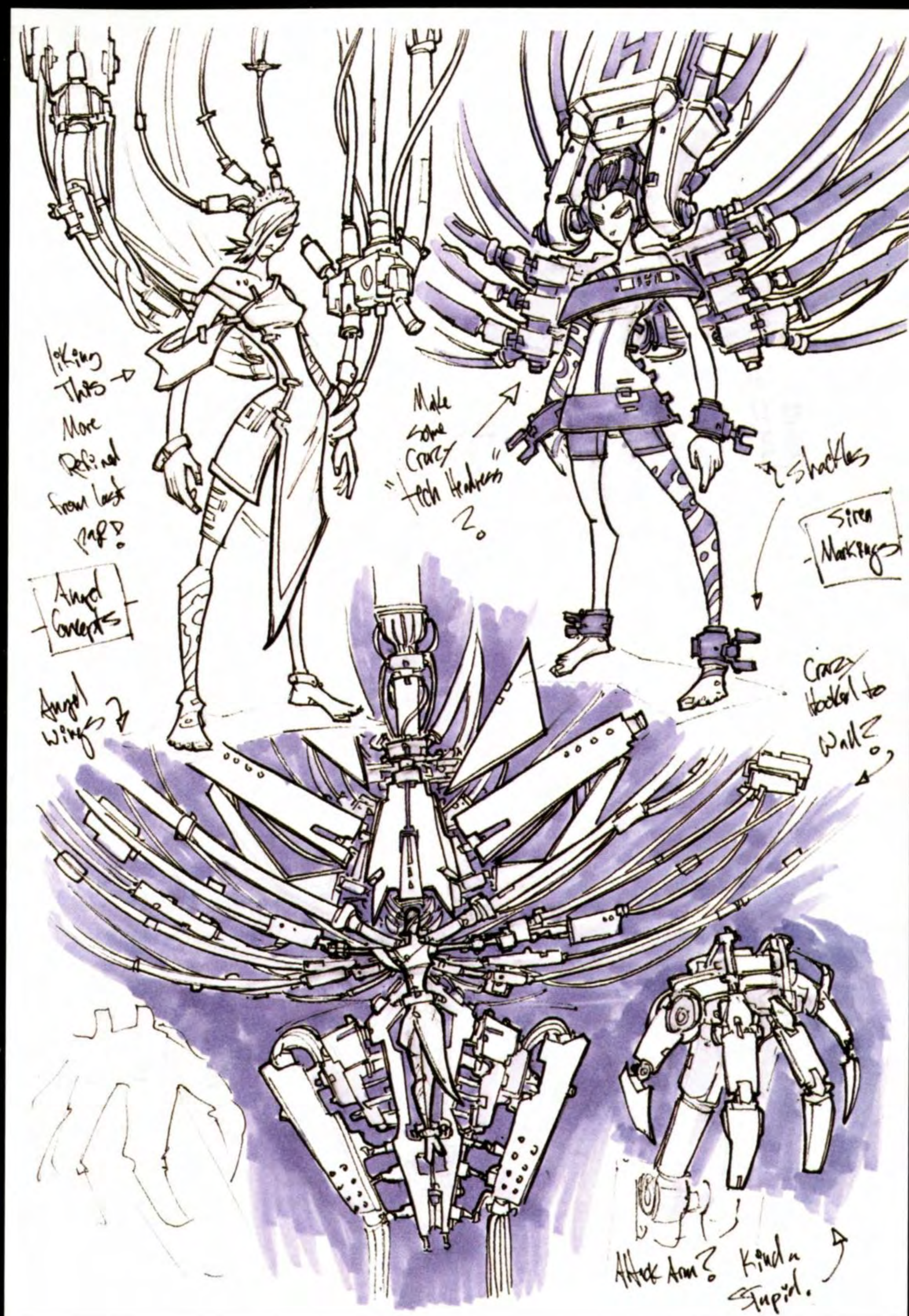




"I was leaning towards some Shirov-esque designs on some of this, kind of a cool contrast to the majority of what you typically see in *Borderlands*. This area was the most high-tech space of all in the game and we tried to represent that in the game."

Angel Concepts
[Jennifer Wildes] 1st Right, Below
[Scott Kester] 2nd Right





Angel Concept [Scott Kester] Right
Angel Models [Matt Link, Jennifer Wildes, Scott Kester] Left
Angel Models [Matt Link] Bottom

ELLIE

"I absolutely love Ellie," artist Matias Tapia says. "Starting the concept, I was unclear on the route she was meant to take, so unlike other characters I took as many divergent routes as I could. From midget to paraplegic, I was afraid of making a joke of it and then taking it too far. So I was very glad that she became what she did. An honestly cool character."



Ellie Concepts [Matias Tapia]
Above Left, Next Page, Top
Ellie Models [Kevin Penrod]
Above Right, Next Page, Bottom



MAD MOXXI

Scott Kester says of Moxxi, Pandora's most popular sexpot-slash-tournament host, "She was a character I drew very quickly, having no idea she'd go on to become as popular as she is today. That said, I'm happy people have taken to her. I usually rebel against the 'hot time sexy girl' in games but it's just such her character and who she is that it makes sense. And if the design supports the character, well, it's a win in my book.

"Not only that, but Moxxi's personality doesn't just end at her lasciviousness," Kester says. "Moxxi has a fair amount of depth in her character—she's not just 'the hot one.' I was originally trying to convey that she's a showgirl, a bit past her prime, trying to use what she has to get by."



"Moxxi is a true testament to good teamwork," says artist Adam May. "She was made as a DLC character on a super tight schedule, but Scott nailed down a great concept, which made the modeling part easy, and Jen was able to do an awesome job texturing her with no time [to] spare. She's still one of my favorite characters."



Moxxi Model [Adam May, Jennifer Wildes] **Right**
Moxxi Concepts [Scott Kester] **Above**

"KANDI"

QUEEN OF HEARTS CARD

HEART TATTOO

MEGAPHONE

SPATS

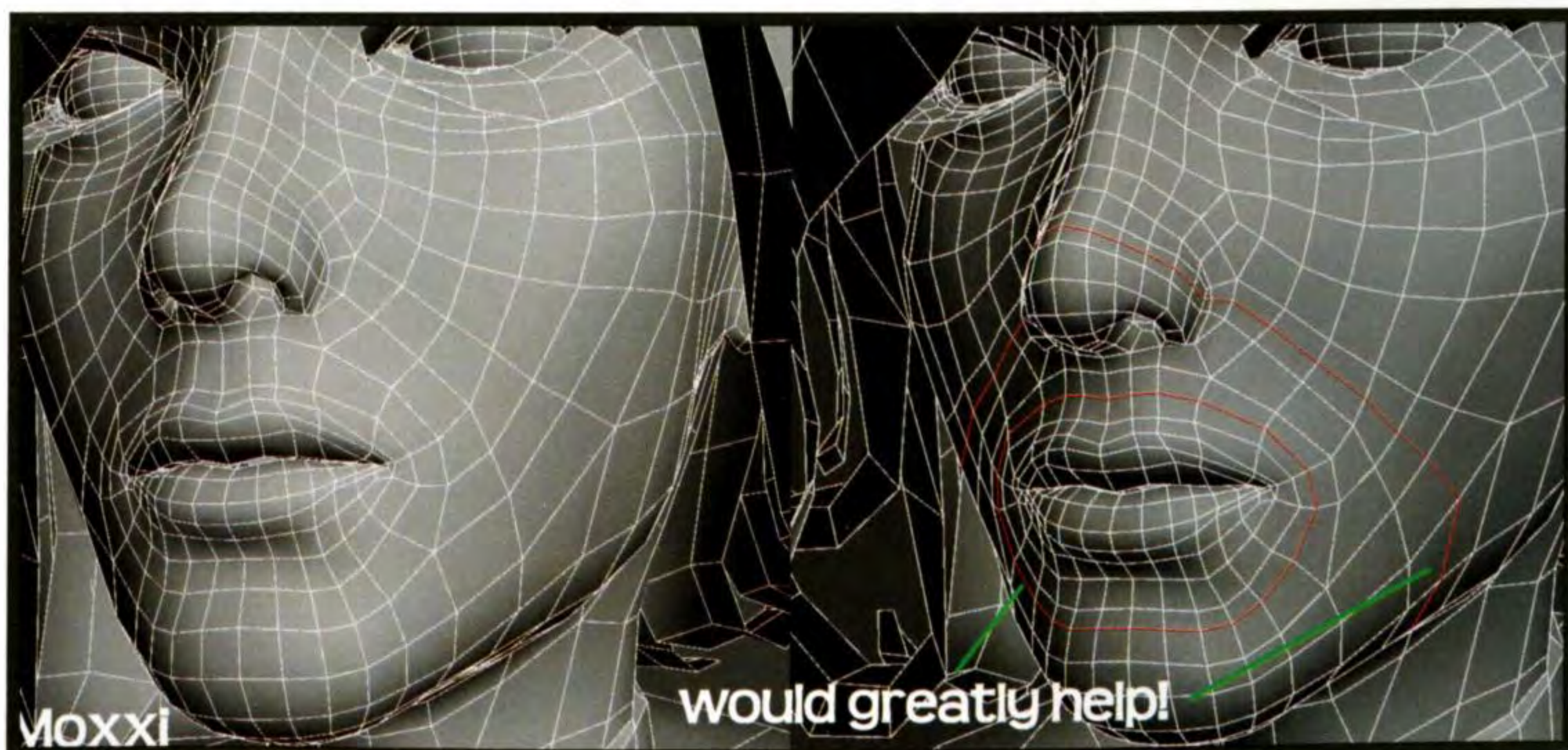
CIGS

HER PISTOL
NAMED "RUBI"

QUEEN OF HEARTS
PLAYING CARD
IMAGE ON BACK?
TOO MUCH?
SCREEN PRINTED
OR EMBROIDERED

LESS CARNIVAL, MORE WESTERN
STILL HAS SOME "CARNY" FEEL THOUGH.
CARD/HEART THEMED.
WAS HOPING THAT THIS IS FLYNT'S
WOMAN.

Moxxi Concepts [Scott Kester] Above
Moxxi Model [Adam May] Right



MOXXI

would greatly help!

MARCUS

Everyone's favorite amoral weapons dealer, Marcus, evidently belongs to a long family lineage full of people who look disturbingly similar to him—"each more beautiful than the last," as Scott Kester awkwardly phrases it.

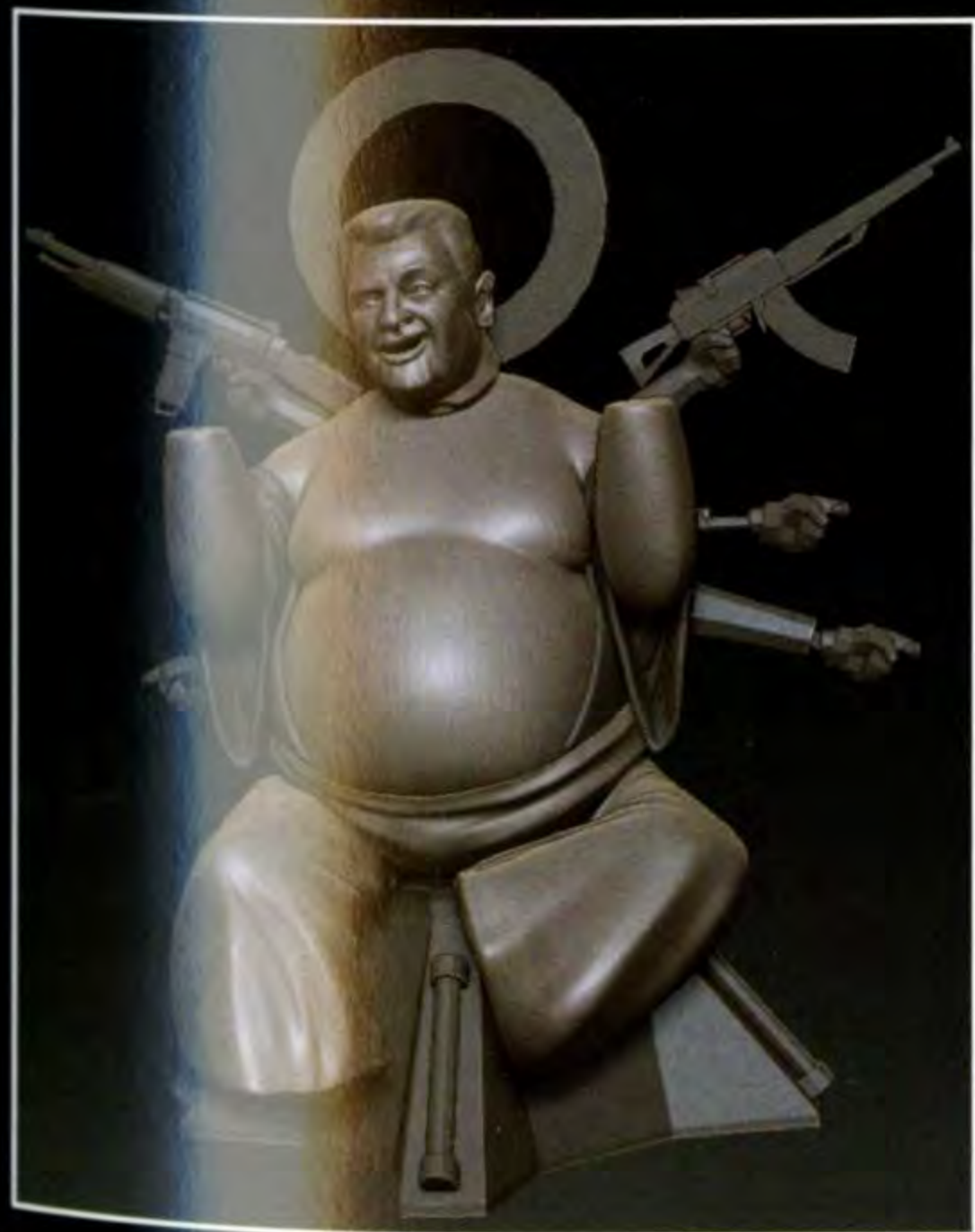
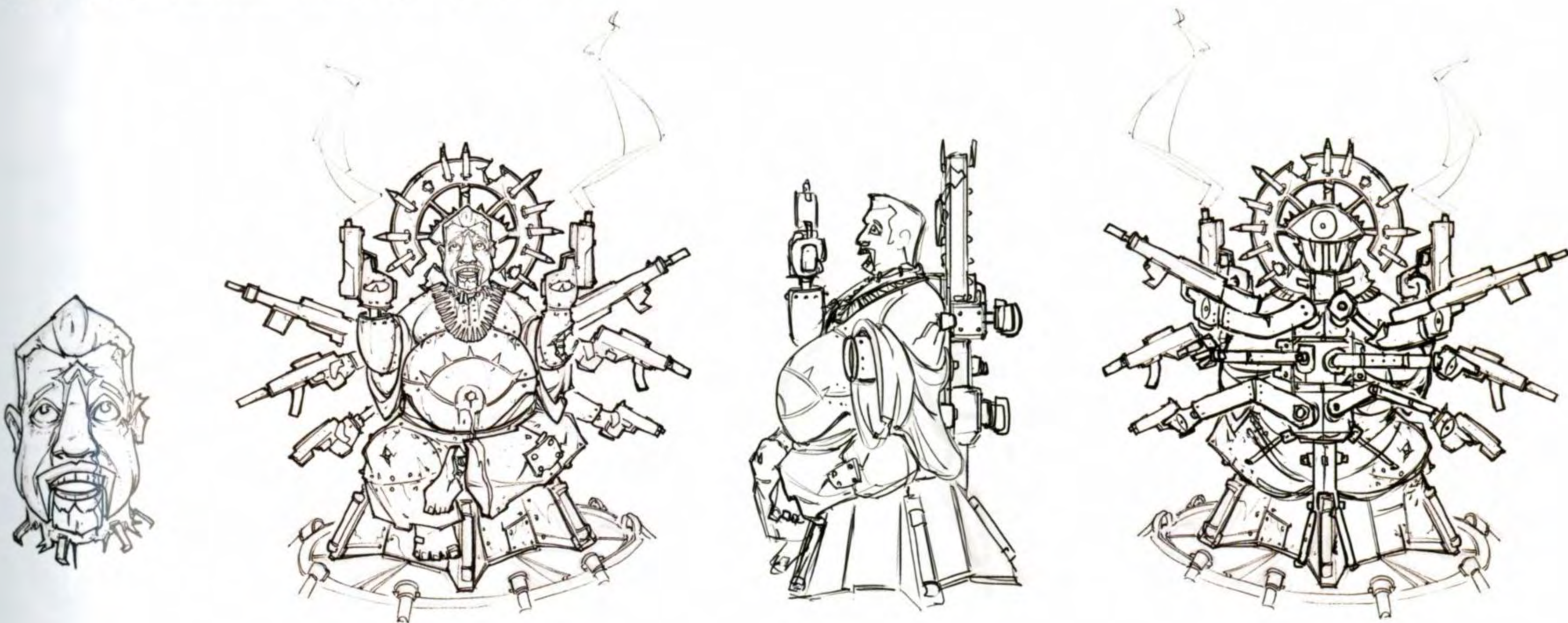


Marcus Sign Concepts [Scott Kester] *Above*
Marcus Model [Shadows In Darkness,
 Brian Cozzens, Adam May] *Right*



MARCUS STATUE

The Marcus Buddha statue came into being as a means of giving the Bloodshot bandits a distinct visual identity. "I wanted a really stand-out showpiece for the dam top," Scott Kester says. "The Bloodshot were these crazed bandits that worshipped Marcus since he was the 'bringer of guns' so they built a shrine on the dam to honor him. So mechanical Marcus Buddha was born. Once again, when I threw this idea out I figured it would be shot down, but we ran with it and it made it into the game. *Borderlands* is the kind of game where almost anything can fly within context."



Statue Concepts [Scott Kester] Above
Statue Model [Wes Parker, Kevin Penrod] Bottom

SIR HAMMERLOCK



"Having to nail down a 'hunter' shouldn't be very hard," Matias Tapia says of conceiving Sir Hammerlock. "This is video games, after all. But the interesting part was that he had to be somehow disabled as a hunter. Then the concept became more of a mix between a big game hunter and a researcher, so the variants fluctuated between those two points...how much of a hunter? How much of a researcher?"

"The first version, he was affable. Maybe too close to Marcus in design. But the final one is so much more gentlemanly!"



Sir Hammerlock Model [Matt Link] Left
Sir Hammerlock Concepts [Matias Tapia] Above

Sir Ham
[Matias

Once the character has been modeled, animation is a great way to convey the NPC's personality. "Working with our mocap specialist, Hector Fajardo, I created the animation of Sir Hammerlock putting Claptrap's eye back into its socket," says Tu Nguyen. "I thought it would be great if Hammerlock would kind of carefully screw it in and then just bang it home. I think it fits Hammerlock's sort of love/hate he has for Claptrap."



THE SHERIFF

“A female character that’s beautiful, not ‘sexy’, not ‘pretty’. At the same time, a female character that’s evil...but is not a man-eating dominatrix.”

Of the nefarious Sheriff, Matias Tapia comments, “Making female characters it’s becoming an increasingly tricky thing to do. So to me, she was an experiment. How to make a female character that’s beautiful, not ‘sexy’, not ‘pretty’. At the same time, a female character that’s evil...but is not a man-eating dominatrix.”

“I was ready to stop on #9, but Jeremy pushed the concept forward to the point where I can say that I’m honestly proud of it.”



Sheriff Model [Wes Parker] Left
Sheriff Concepts [Matias Tapia] Above and Right



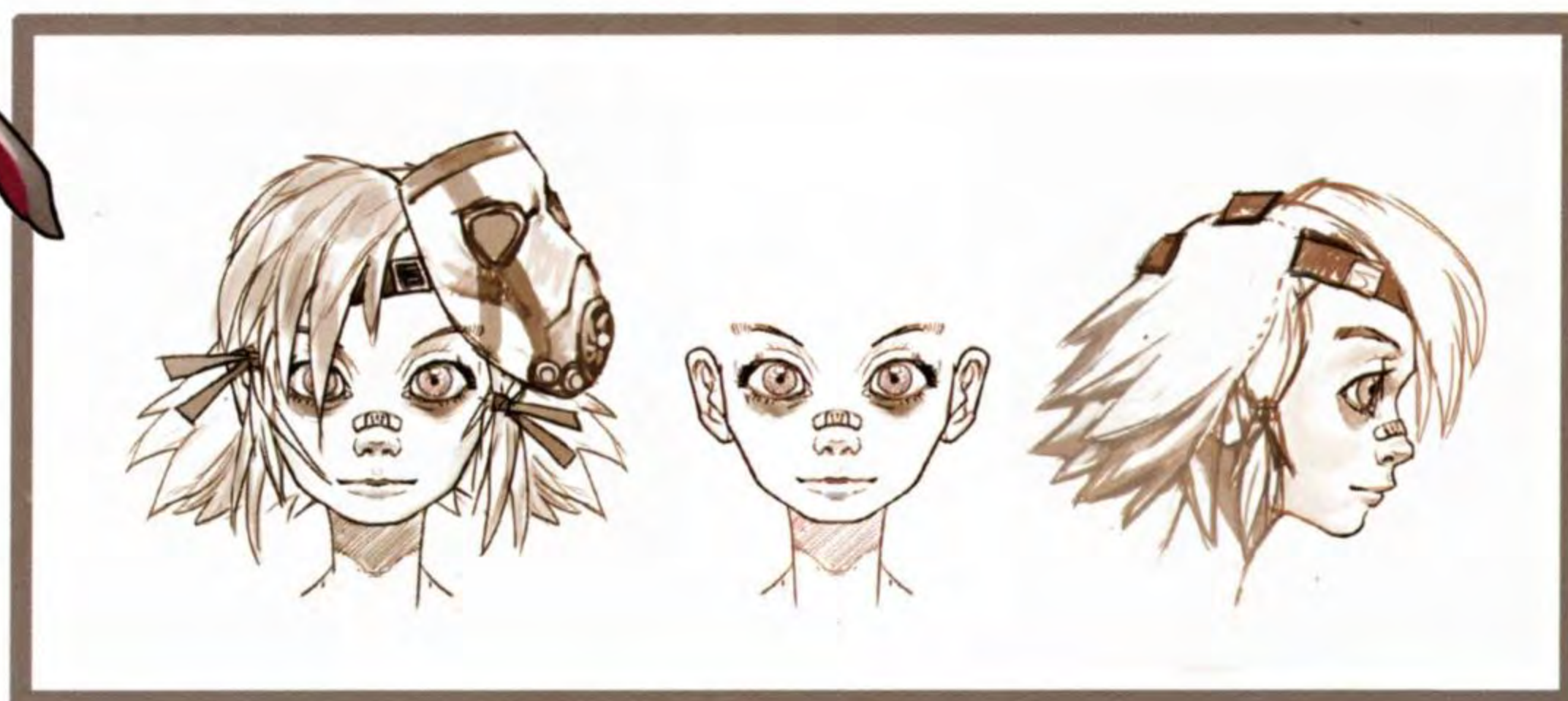
TINY TINA

“Tiny Tina got a lot of attention,” Tapia recollects. “A child character is nothing new, but it is rare. A breath of fresh air among a lot of badass. It’s easy to go back to the ‘Alice’ well for murderous, insane children, but it thankfully moved away from those roots to turn into something special thanks to that extra attention she got from Anthony [Burch, lead writer] and Jeramy [Cooke, art director].”

“Most notable is the psycho mask on Tina’s head. At the time, it simply clicked with some people and it was justified as, ‘hey, maybe she found it,’ but my intention was a bit more simple. Crazy people on Pandora wear psycho masks, she is crazy, so she does too...but only half way.”



“A breath of fresh air among a lot of badass.”



"Tiny Tina was my favorite character to make for this project," says Wes Parker. "She came together really fast too, in just two and a half weeks from final concept to finished model and texture. Her outfit was just so much fun to make I couldn't stop. While sculpting, I really wanted to capture the crazy eyes of the final concept, as well as the gangly youth vibe. A small detail that I added which no one noticed is that she has crayon smudges on her straightjacket. Between building bombs and being generally crazy, she finds time to color!"

Tina Model [Wes Parker] *Left*
Tina Concepts [Matias Tapia]
Far Left, Top Right



SCOOTER

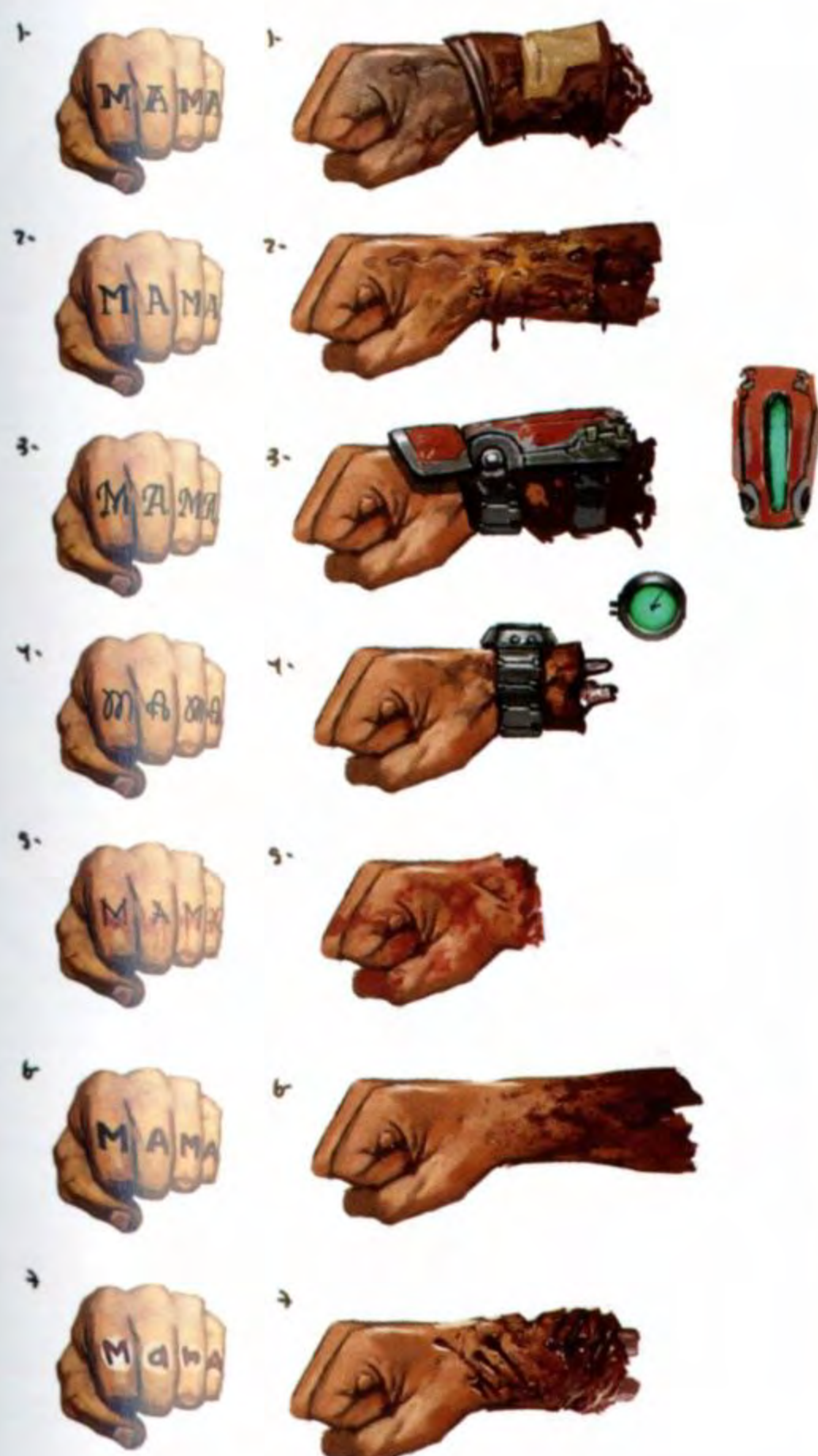
Pandora’s resident catchphrase-spouting, car-fixing, sister-crush-having redneck is an interesting contradiction: despite his loud, boisterous personality, Scooter has one of the most down-to-earth visual designs in the entire *Borderlands* cast.



Scooter Body DIFs [Liquid, Gearbox] Above
Scooter Model [Gearbox] Right

TAGGART

Regarding Taggart the Huntsman, artist Matias Tapia says, "He was the first on a line of lovingly done side quests that required a bunch of custom assets. Might be weird to mention this, but this is probably the character that resembles myself the most...if I was on steroids. That beard is something I actually had as well."



Taggart Concept [Matias Tapia] Top Right
 Taggart Concept [Scott Kester] Top Left
 Taggart Severed Fist [Piranha] Middle
 Taggart Fist Concepts [Matias Tapia] Left
 Mother's Gift Concepts [Matias Tapia] Above

ECHO CHARACTERS

“A typical game doc/script is actually much more ambitious than customers would imagine,” Tapia says. “But then there are restrictions and limitations. Not every character can be fully modeled and animated, for instance.

“So these characters where made for that reason: to add something specific, to make something custom so the narrative ideas could be better communicated. Regardless of whether it was for five seconds or longer, I wanted people to look in the corner of their screen and know that Mrs. Harchek, for instance, was not a nice person.”

UNA



MRS. HARCHEK



FLANKSTEAK



WILL THE BANDIT



TRAIN CONDUCTOR



DOCTOR SAMUELS



FIREHAWK





SECURITY OFFICER
ELYSE BOOTH

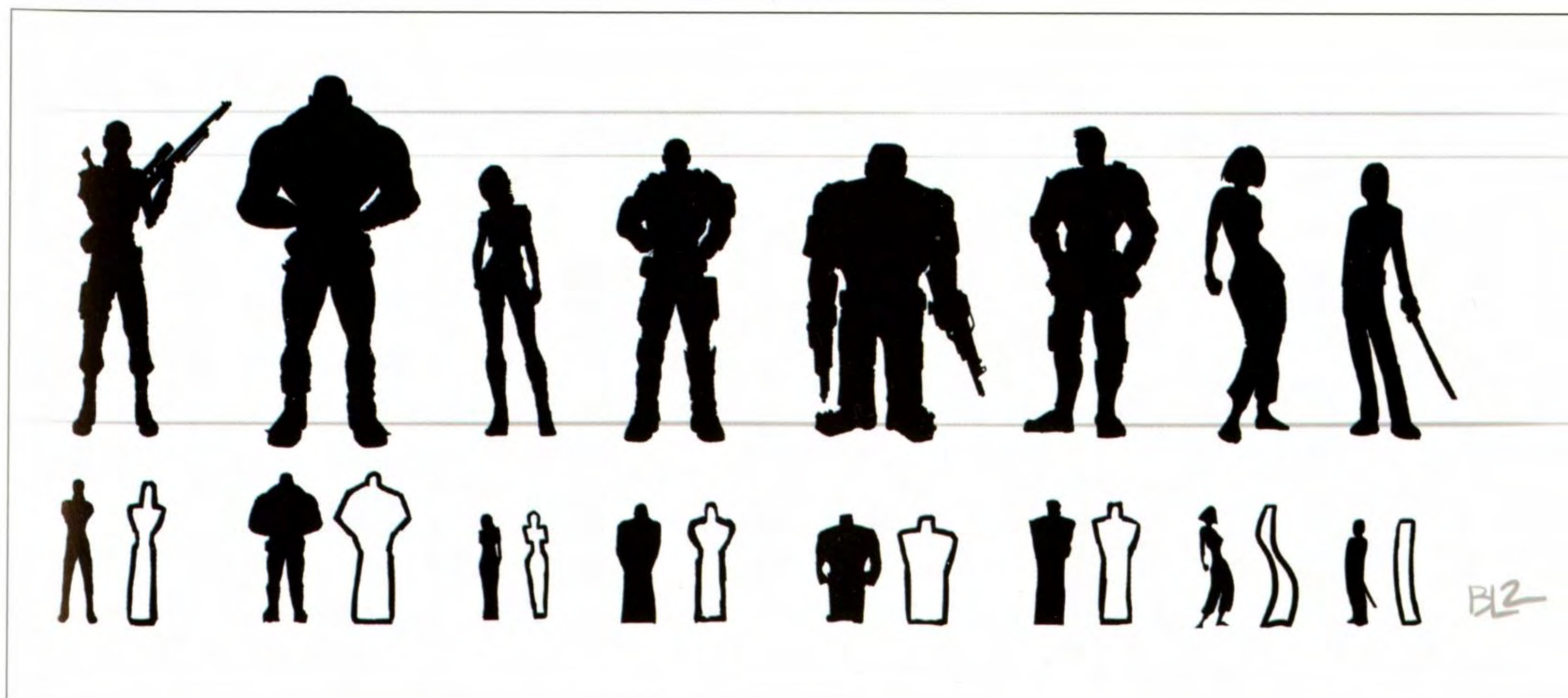
BORDERLANDS 1

CHARACTERS



Given that *Borderlands 2* takes place five years after the events of the first game, the team felt that the original four Vault Hunters needed a visual redesign to show off how they'd changed in that time. "Since several years had passed since *Borderlands 1*," Scott Kester says, "we wanted to represent a change in the original Vault Hunters, to tell more of their story visually. A lot has happened and we wanted to show a bit of what each character has been through. It was important to show some change, but we didn't want to drastically change the main look of the characters to the point where you didn't recognize them."

Borderlands 1 Models [Adam May, Jennifer Wildes, Brian Cozzens, Shadows In Darkness] *This Page, Next Page, Top*
Updated Looks for Borderlands 2 [Scott Kester, Jennifer Wildes, Damian Kim, Kevin Penrod] *Next Page, Middle*
Size Comparison Silhouettes [Jeremy Cooke] *Next Page, Bottom*



LILITH

"Lilith has grown stronger; surging with power, starting to eat away at her clothing, making her feel a bit more tattered," Scott Kester says.



BRICK

Kester explains, "Brick has been living with Bandits, residing near chaos; naturally some of those elements have crept into his overall look."



MORDECAI

"Mordecai has fallen off the most, becoming the most disheveled and haggard to represent where he is when the game starts," according to Kester.



ROLAND

"Roland has moved into more of a leadership role with the Crimson Raiders; his look now represents more of a commander," says Scott Kester.



Borderlands 1 Models

[Adam May, Jennifer Wildes, Brian Cozzens, Shadows in Darkness]

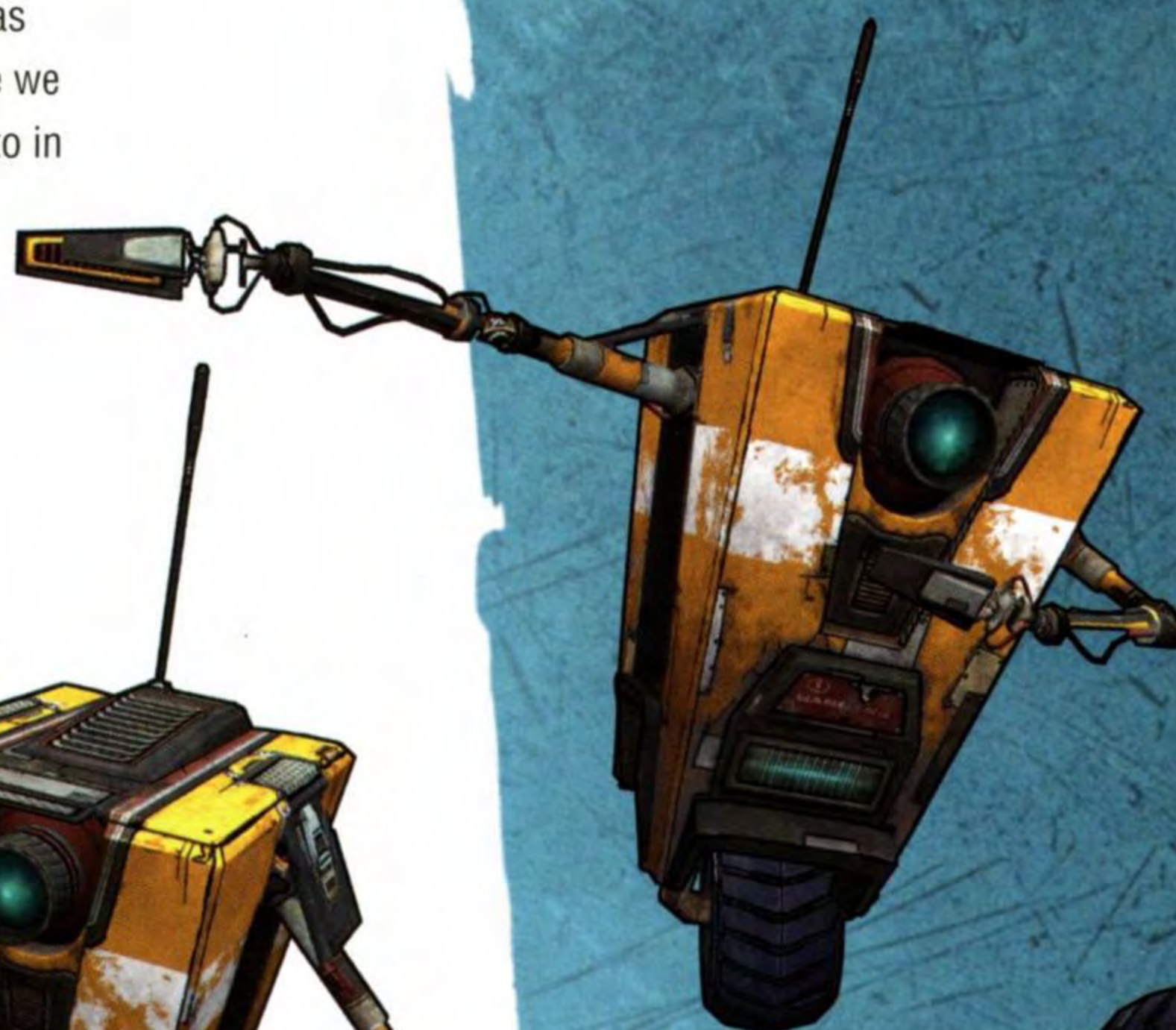
Retouched Models for Borderlands 2

[Scott Kester, Jennifer Wildes, Damien Kim, Kevin Penrod]

CLAPTRAP

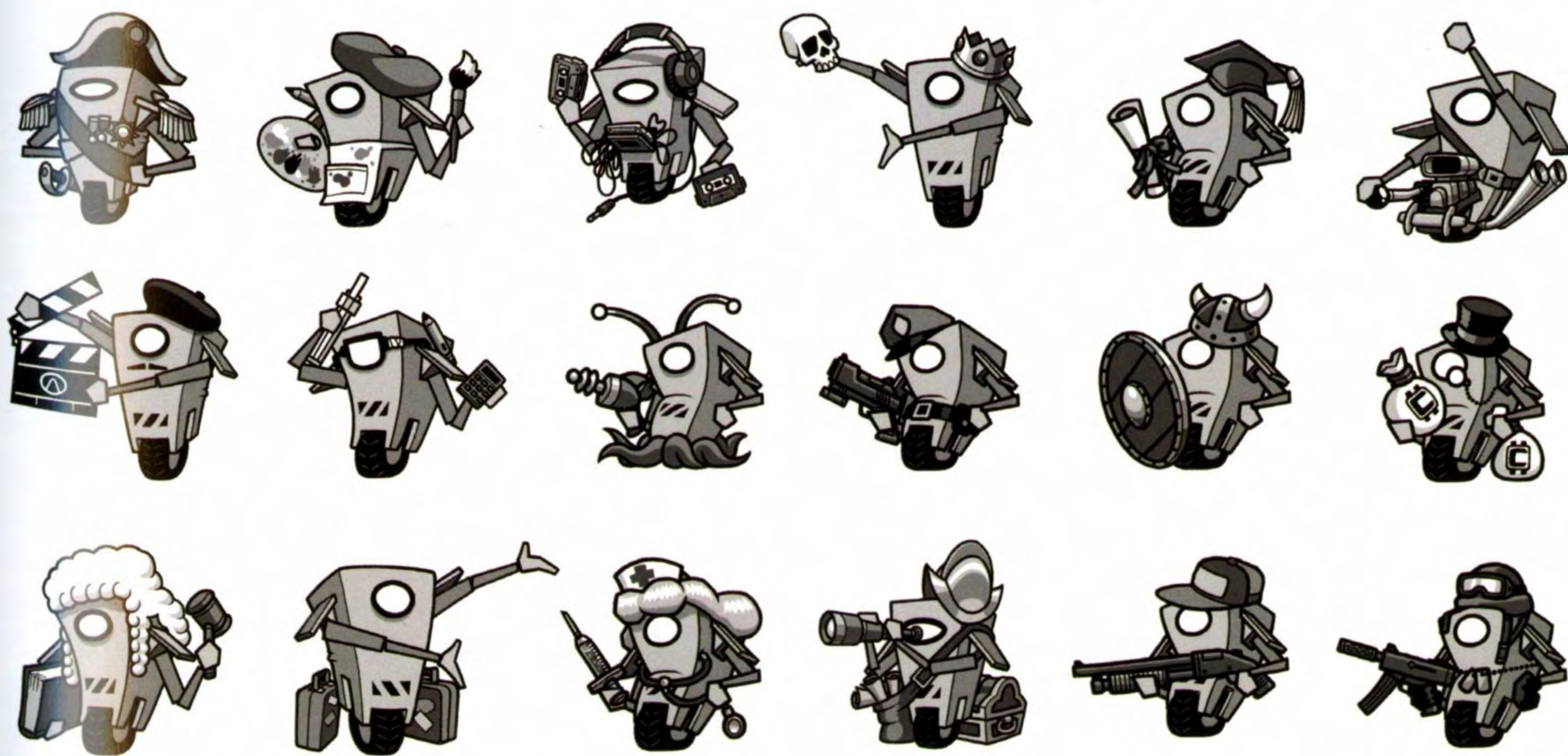
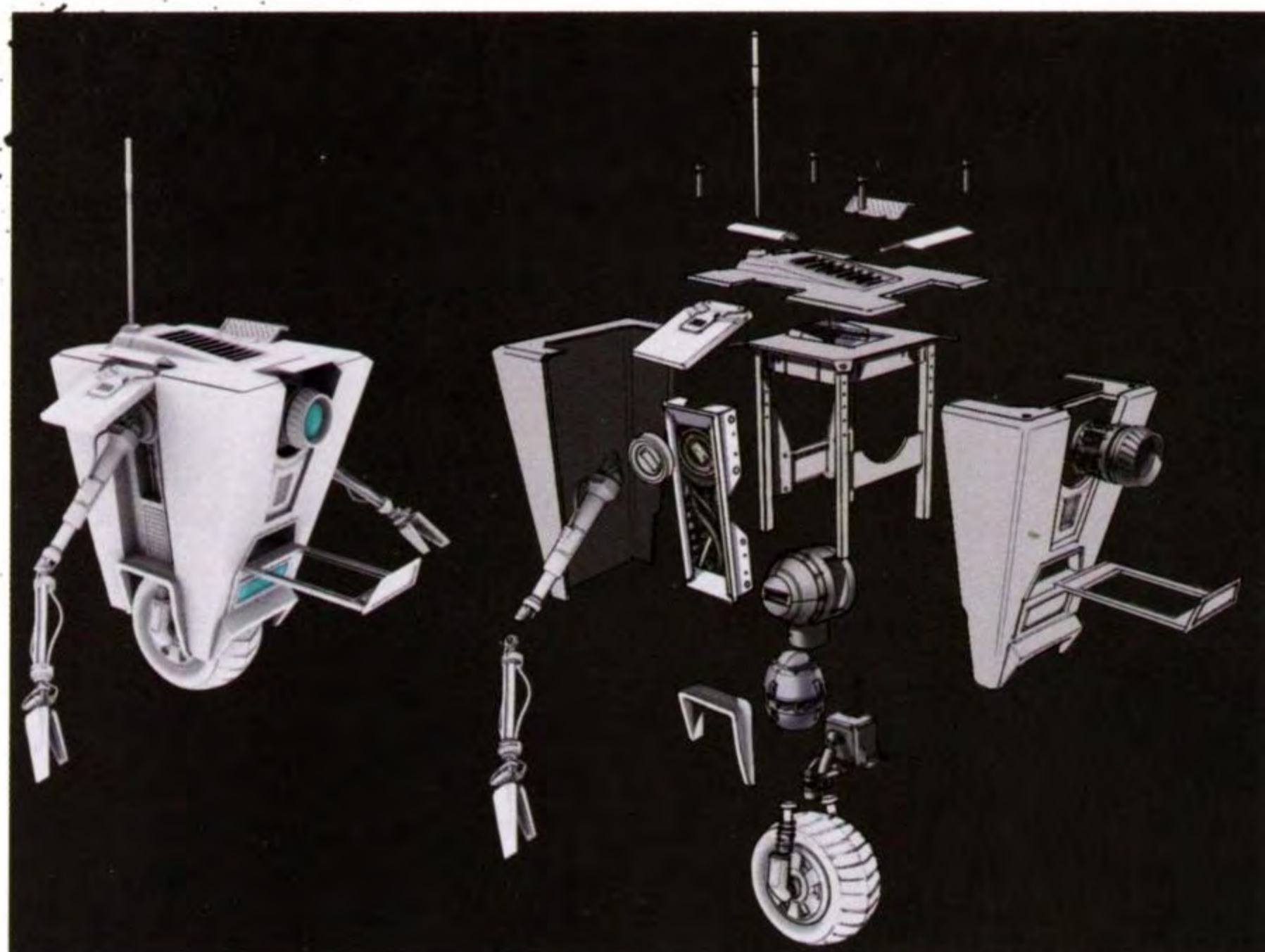
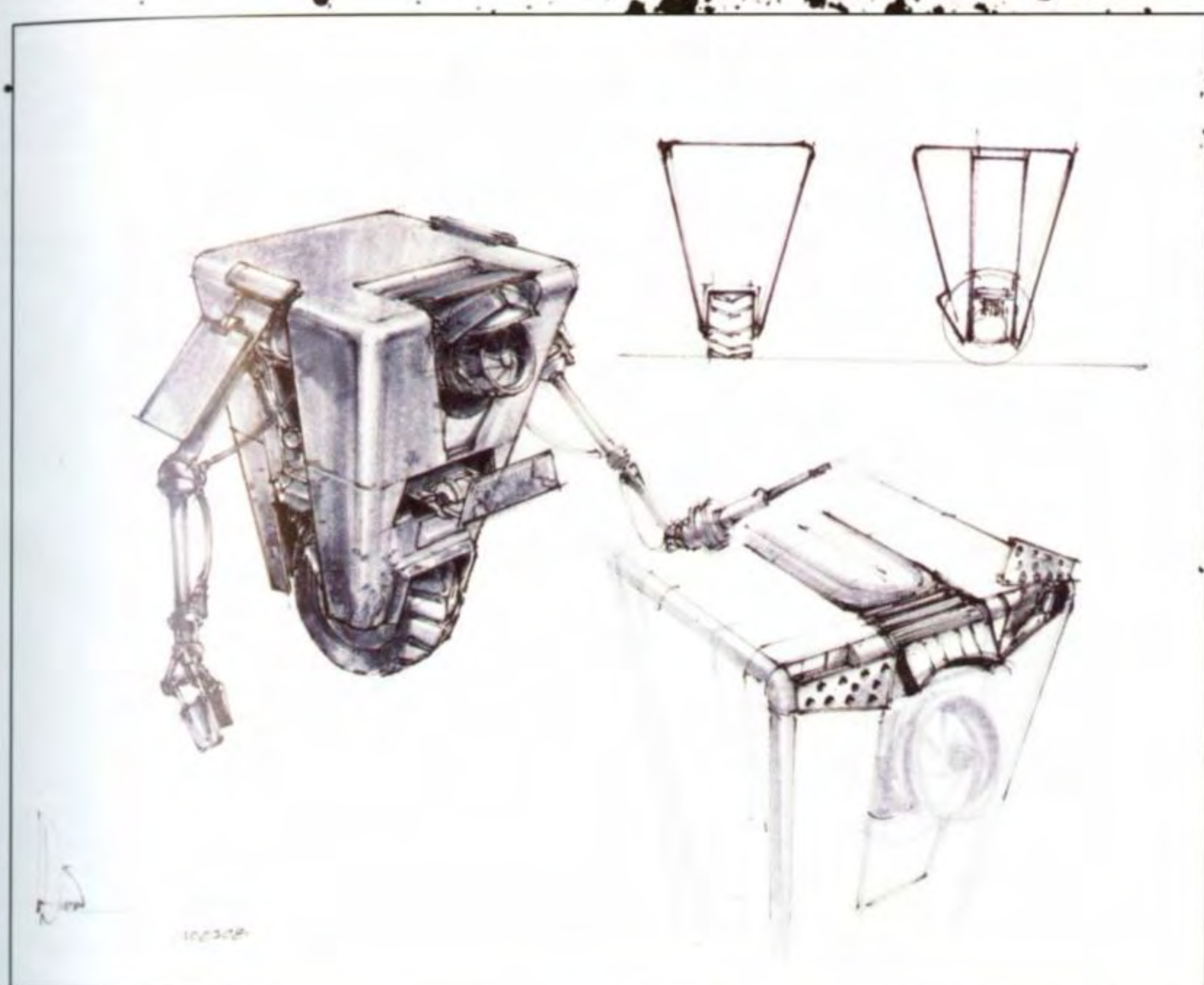
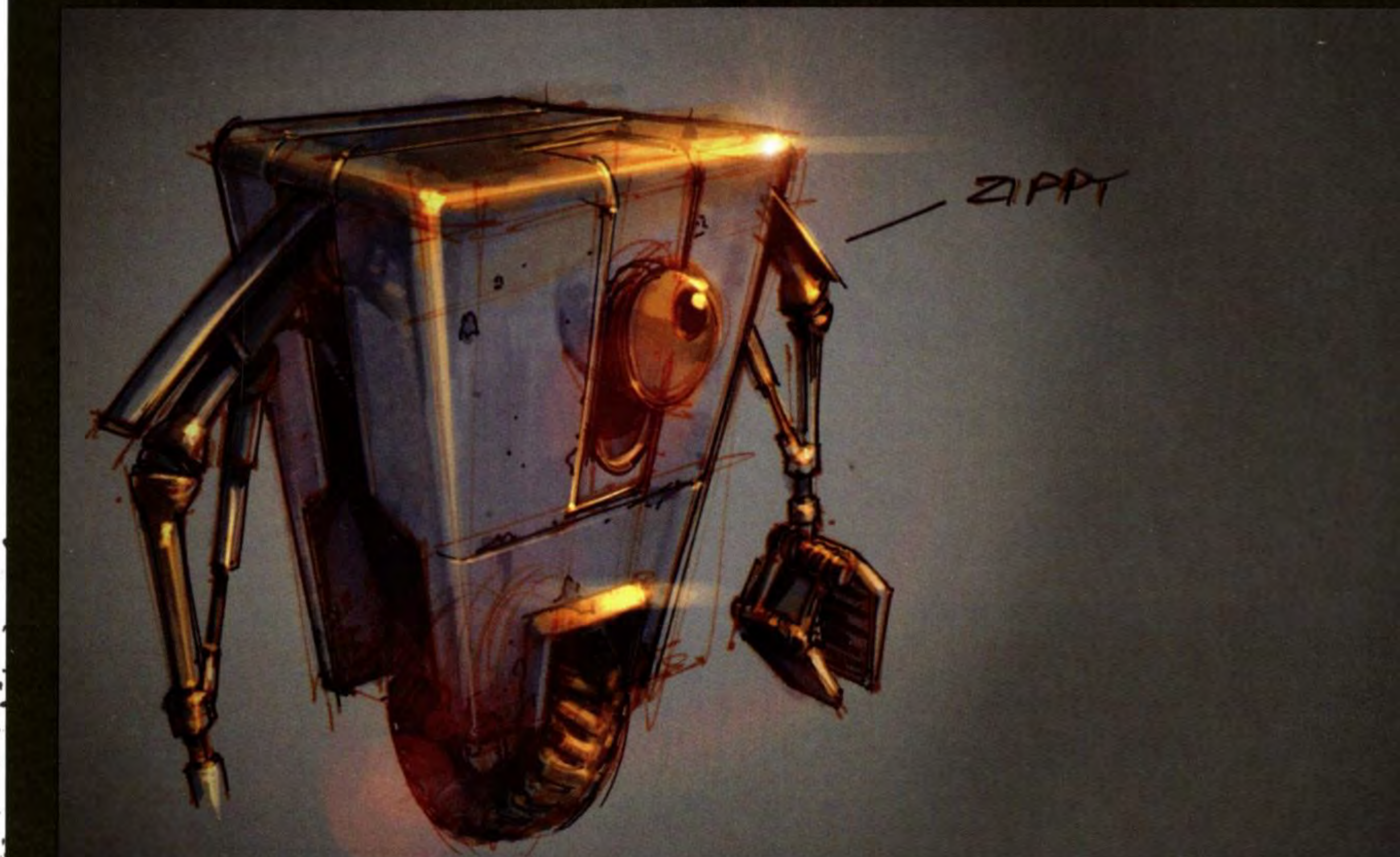
"Claptrap was created as both a nod to a friend of mine who designed Pixar's Wall-E character, and my own personal challenge to design the most generic robot I could think of," says concept artist Lorin Wood. "I like to think I was successful."

"I was working on another project at the time and did the initial sketch that started it all, and named him 'Zippy.' I posted that in our database system as a joke. When I was pulled onto *Borderlands*, the art director, Brian Martel, saw the sketch and loved it. I fleshed out his design in meetings with Brian as we acted out his behaviors and developed a personality. Some of those details, such as articulated eyebrows, were removed before we went to the modeling phase. It was added to in spades by David Eddings (when he provided the voice) and our fantastic animators."



Claptrap Models
[Brent Hollon] *This Page*

Zippy (Claptrap) Concept
 [Lorin Wood] *Top*
Claptrap Concepts
 [Lorin Wood] *Middle Left*
Claptrap Model
 [Brent Hollon, Lorin Wood]
Middle Right
Claptrap Credits Cartoons
 [Kale Menges] *Bottom*



ENVIRONMENTS

While the first game's fans responded positively to the art style and general tone of the environments, we saw room for improvement. The fans wanted more varied environments. They wanted to explore new and dangerous locales. They wanted to see colors that weren't "brown" or "slightly different shade of brown."

We listened.

And so, the team massively expanded the look and feel of Pandora—to take this dangerous wasteland of a planet and create all new environments that feel as if they could burn, freeze, electrocute, and melt players in about a hundred different ways.

Over the following pages, you'll discover how to give character to a frozen tundra (hint: dragons), some crazy-cool concepts for Angel's chamber (hint: apartment kitchen), and how to use players' nostalgia against them (hint: Fyrestone).

Illustration

[Scott Kester] *Right*





ZONE 1

BLOODSHOT RAMPARTS

Lovely vistas, and quasi-blasphemous statues.



BLOODSHOT STRONGHOLD

Psychos! Nomads! Whirlpools!



CAUSTIC CAVERNS

Come for the *Minecraft* Easter Egg, stay for the acid burns.



END OF THE LINE

A winter wonderland of flaming scrap metal and blood-soaked snow piles.



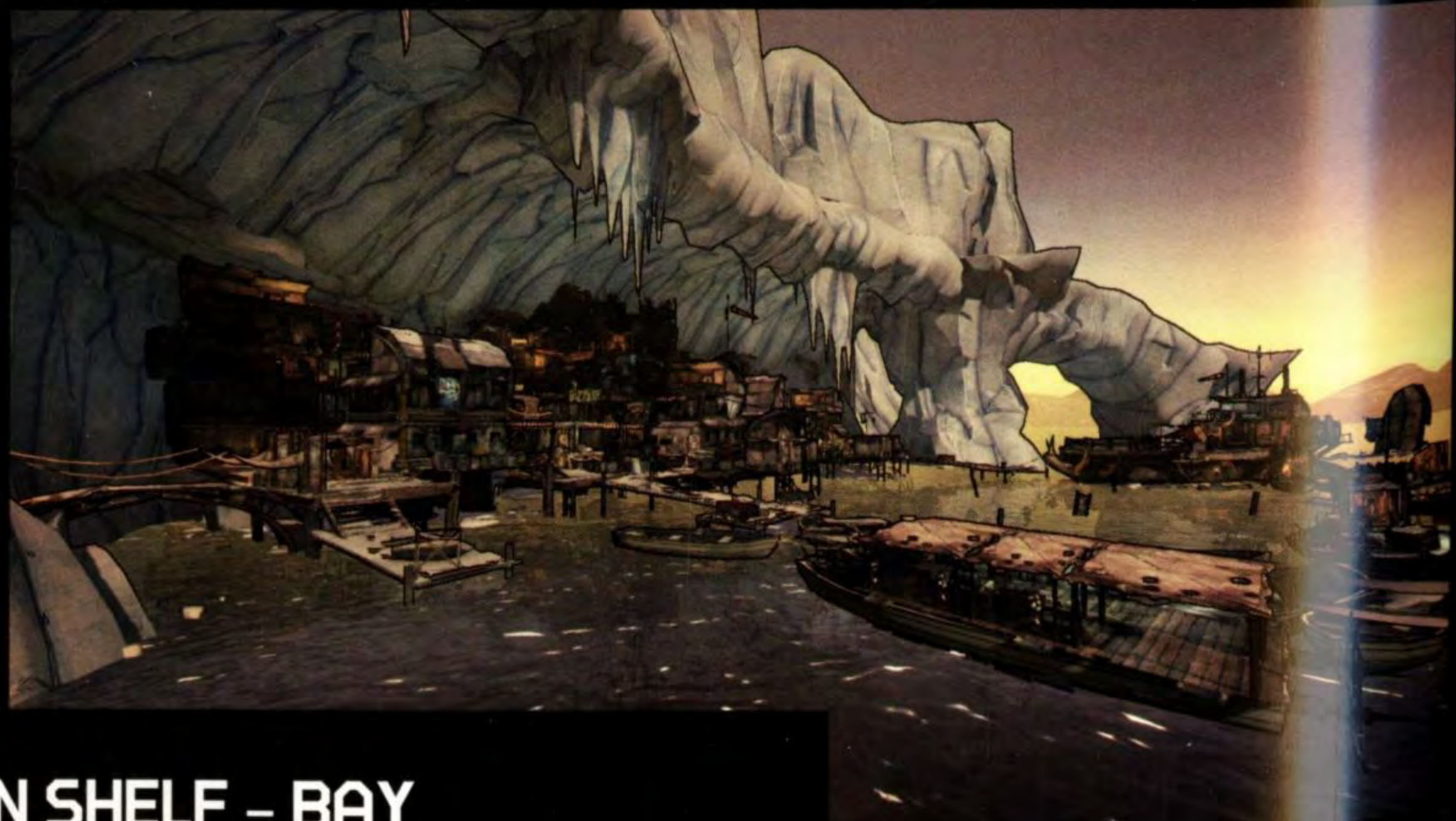
FROSTBURN CANYON

Lilith's blood-splattered home away from home, and the lair of the Children of the Firehawk.



SOUTHERN SHELF

The first big area of the game, featuring Captain Flynt and his Ripper clan.



SOUTHERN SHELF – BAY

The Ripper clan's number one vacation spot—if you're into blood, bullets, and midgets riding Bullymonges, this is your place.

SOUTHPAW STEAM AND POWER

A churning, grumbling bandit hideaway full of assassins and angry Psychos.



THE FRIDGE

FEEL the bone-chilling cold! SMELL the pungent musk of burning flesh! FORGET that last sentence, because that's pretty gross!



THREE HORNS - DIVIDE

The first major zone in the game, and the home of everyone's favorite awkwardly-named creatures, the Bullymongs.



THREE HORNS - VALLEY

Featuring the Happy Pig Motel, the Bloodshot Dam, and a whole lotta murder.



TUNDRA EXPRESS

Tiny Tina's stomping grounds. Bring a fire weapon!

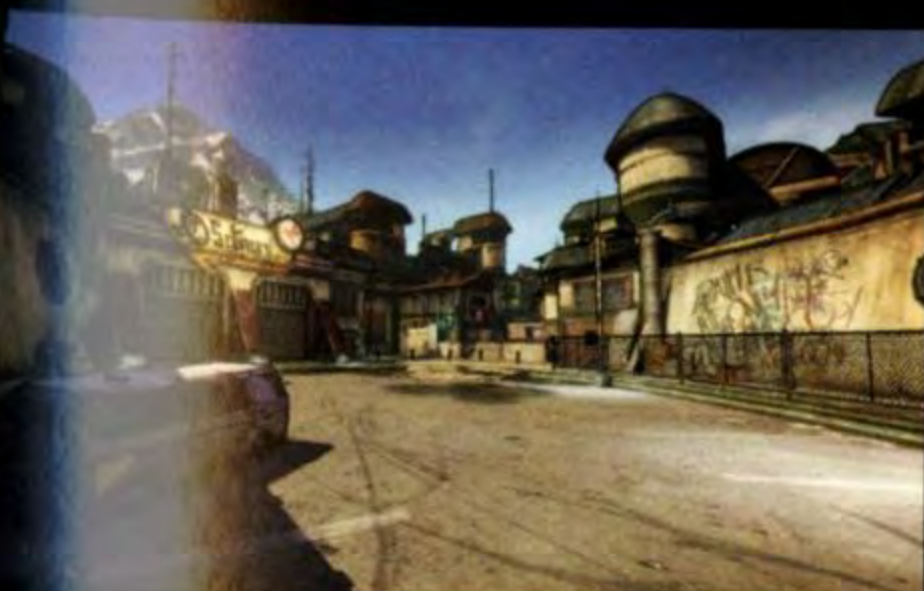


WINDSHEAR WASTE

Handsome Jack's preferred dumping ground for dead and not-quite-dead-but-are-actually-pawns-in-a-greater-evil-scheme Vault Hunters.

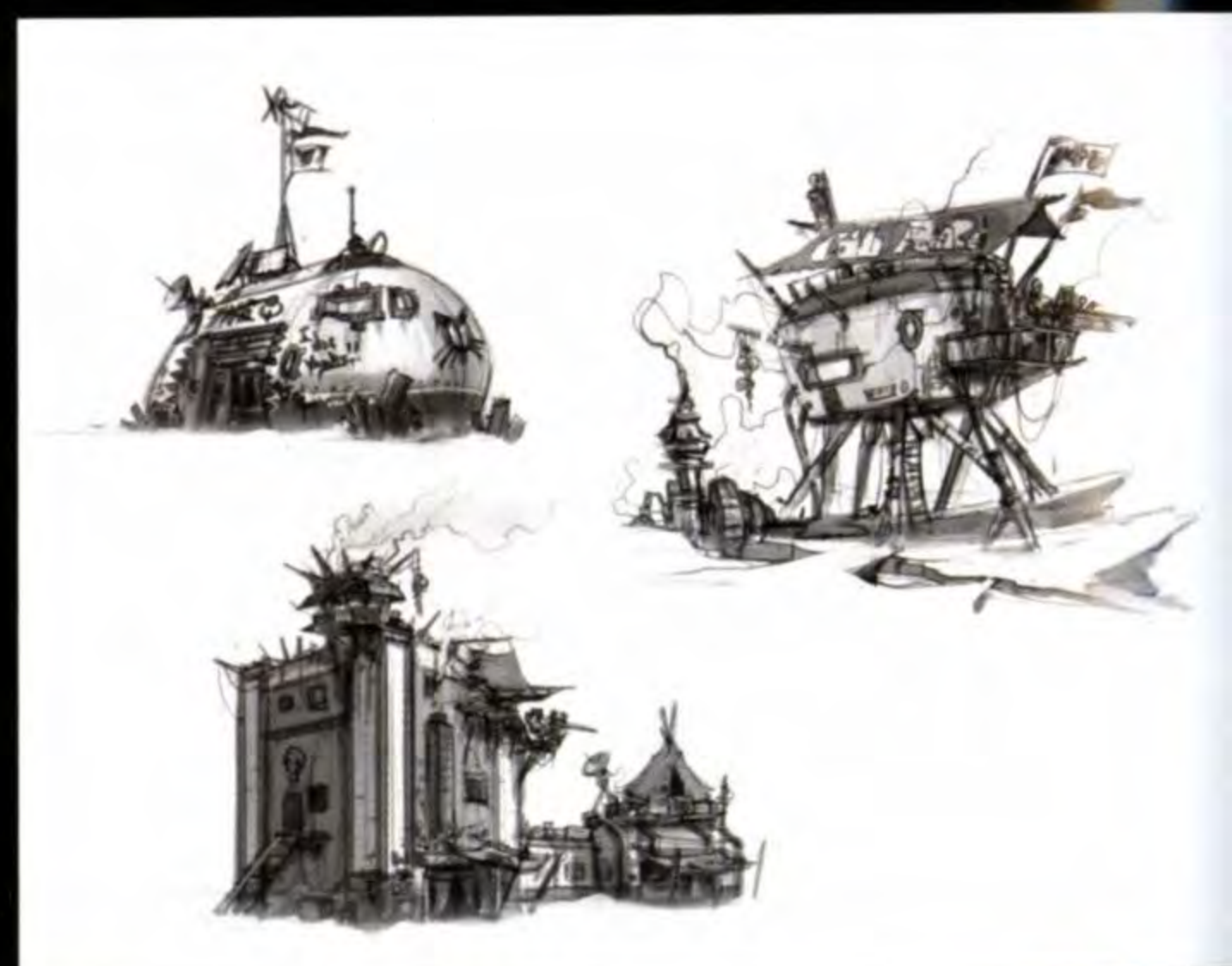
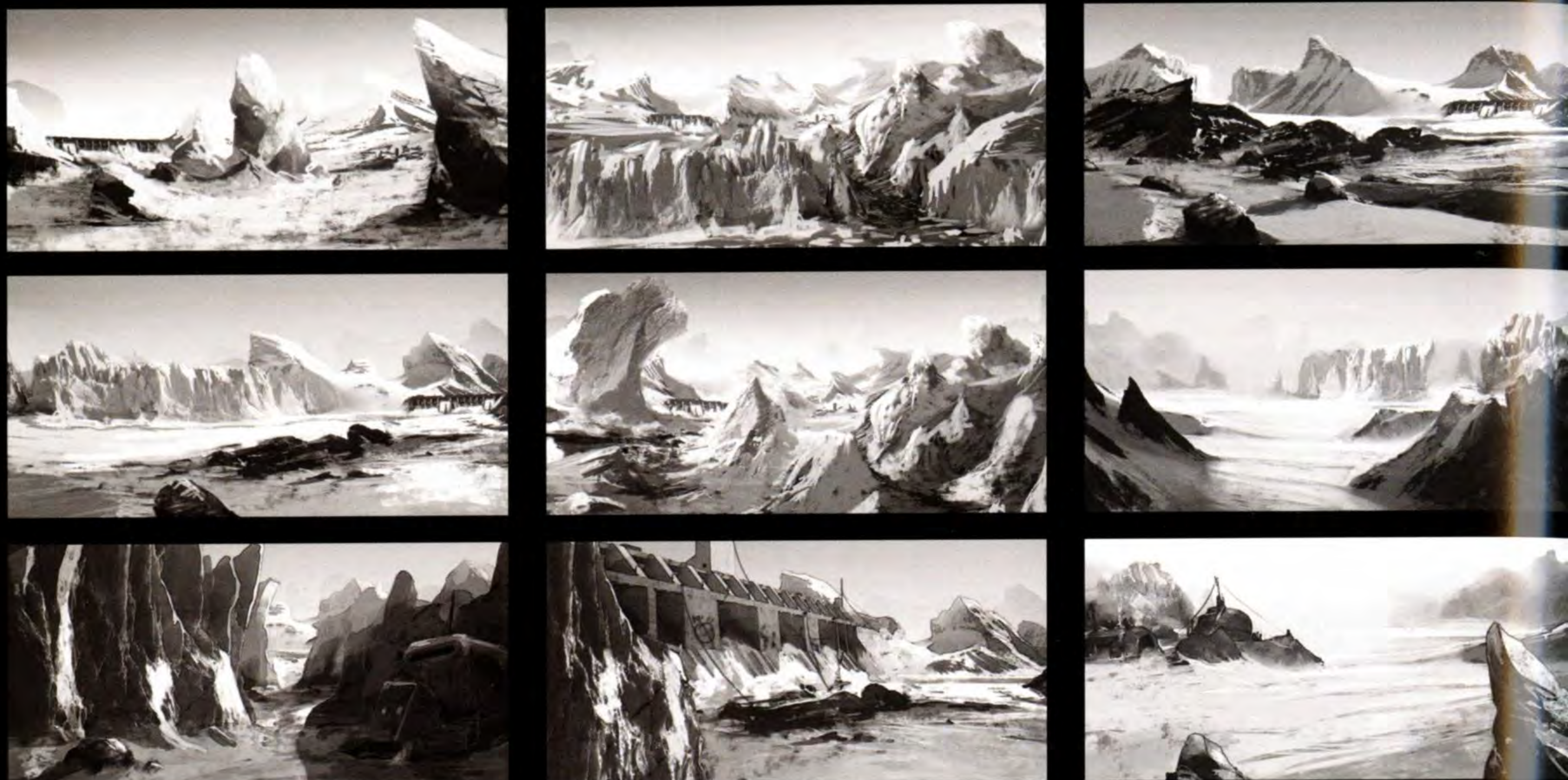
SANCTUARY

The last stronghold of the resistance against Handsome Jack, and home of "The Official Pandoran Knocking On Metallic Things Exactly Four Times Before Pausing and Then Knocking Four More Times" Fan Club.



THREE HORNS

It was decided very early on that the snowy tundra of Three Horns should be the first environment the player experiences. Like every other spot on Pandora, the tundra needed to feel lived-in, but distinct. "These were some very early Bandit arctic habitations," Kevin Duc says of the images below. "We wanted to keep the thrown together feel of our other Bandit areas, but use shapes and materials that reflected the arctic environment."



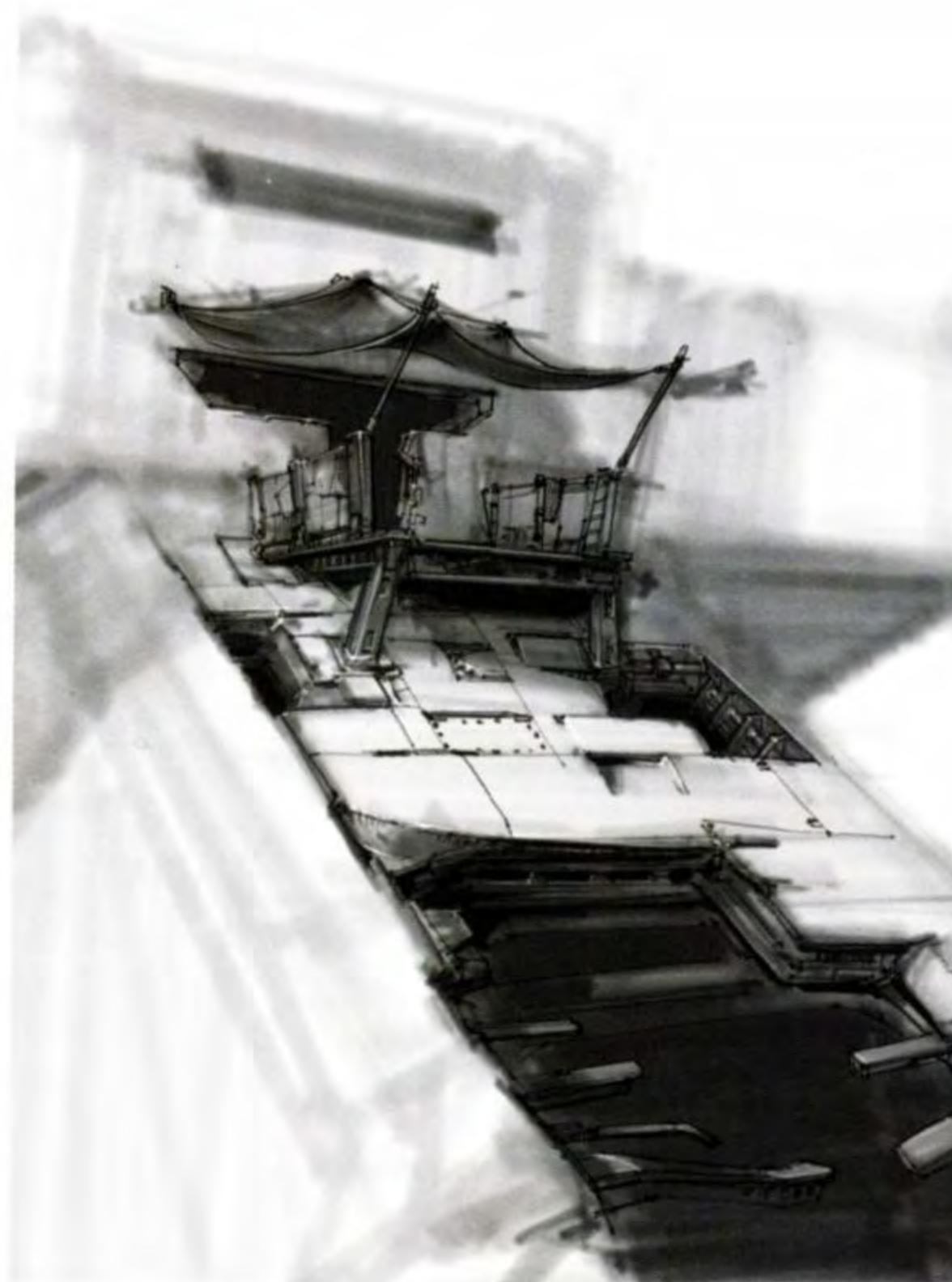
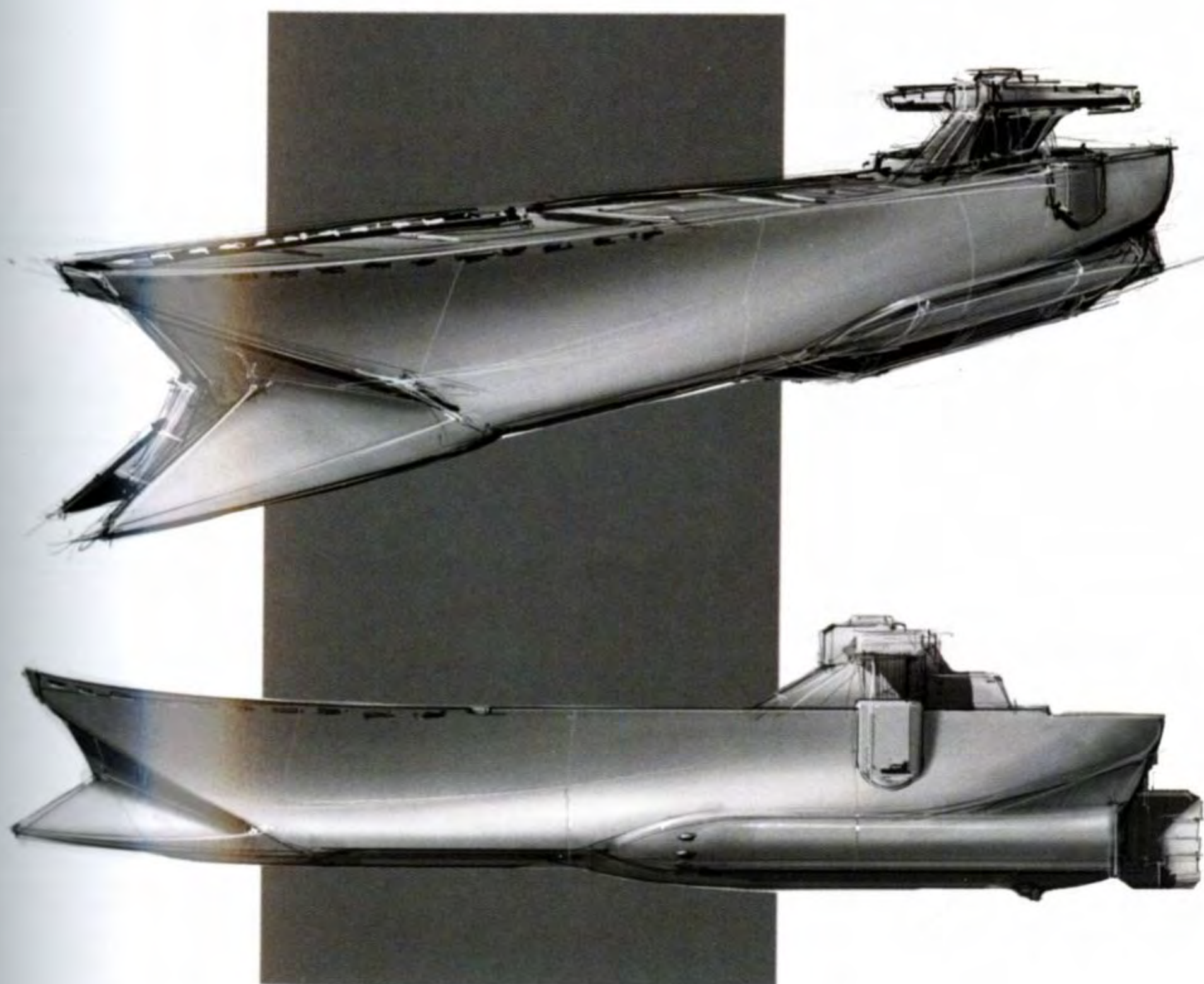
SOUTHERN SHELF

Captain Flynt's bandits needed something visually striking—something that drew your eye, and conveyed a sense of awe-inspiring scale. Enter: the Dragon Boat. Initially conceived by Scott Kester, the Dragon Boat was used as the major set piece for the Southern Shelf area. "With the Dragon Boat I was going for a major set piece and 'wow' moment," Kester says. "This is very early on in the game and I wanted to set the stage for the first real boss encounter, Flynt. I also wanted to set a precedent for set pieces in the game. Those bandits really are a crafty lot."

"There was a bit of a Viking theme running here, and we just wanted to have some fun with it. I also loved the idea of dismantling the boat, and using those pieces to create a huge Dragon for no real reason other than, hey—sweet dragon dude."

Zone 1 Concepts [Matias Tapia] *Above*
Zone 1 Concepts [Kevin Duc] *Middle Right*
Southern Shelf Concepts [Scott Kester] *Left*

Dragon Boat Concept [Scott Kester] *Below*
 Dragon Boat Concepts [Lorin Wood] *Bottom*



"Based on Scott Kester's layout I wanted to explore what this ship looked like before it was beached. I thought a recognizable vessel, like an oil tanker, was a good foundation and [I could] just augment some of the shapes to push it away from anything found in the real world."

"Once there was a general idea of what was going to happen on this ship, I jumped in again to help further define the flavor of the vessel based on who inhabits it," says concept artist Lorin Wood. "This was the boss character's balcony which he stands on and taunts you. The bridge conning tower seemed an appropriate place for a throne, so I tore it up."

CLAPTRAP IGLOO

Once the team knew they wanted you to immediately meet up with Claptrap after awakening in the tundra, concept artists began sketching out Claptrap's new abode. "Based on Scott's sketches, I made an igloo with various scraps clumsily attached to it so it would resemble a house...having Claptraps as ice blocks still reads as 'kinda creepy,' which I personally enjoy," says concept artist Matias Tapia.

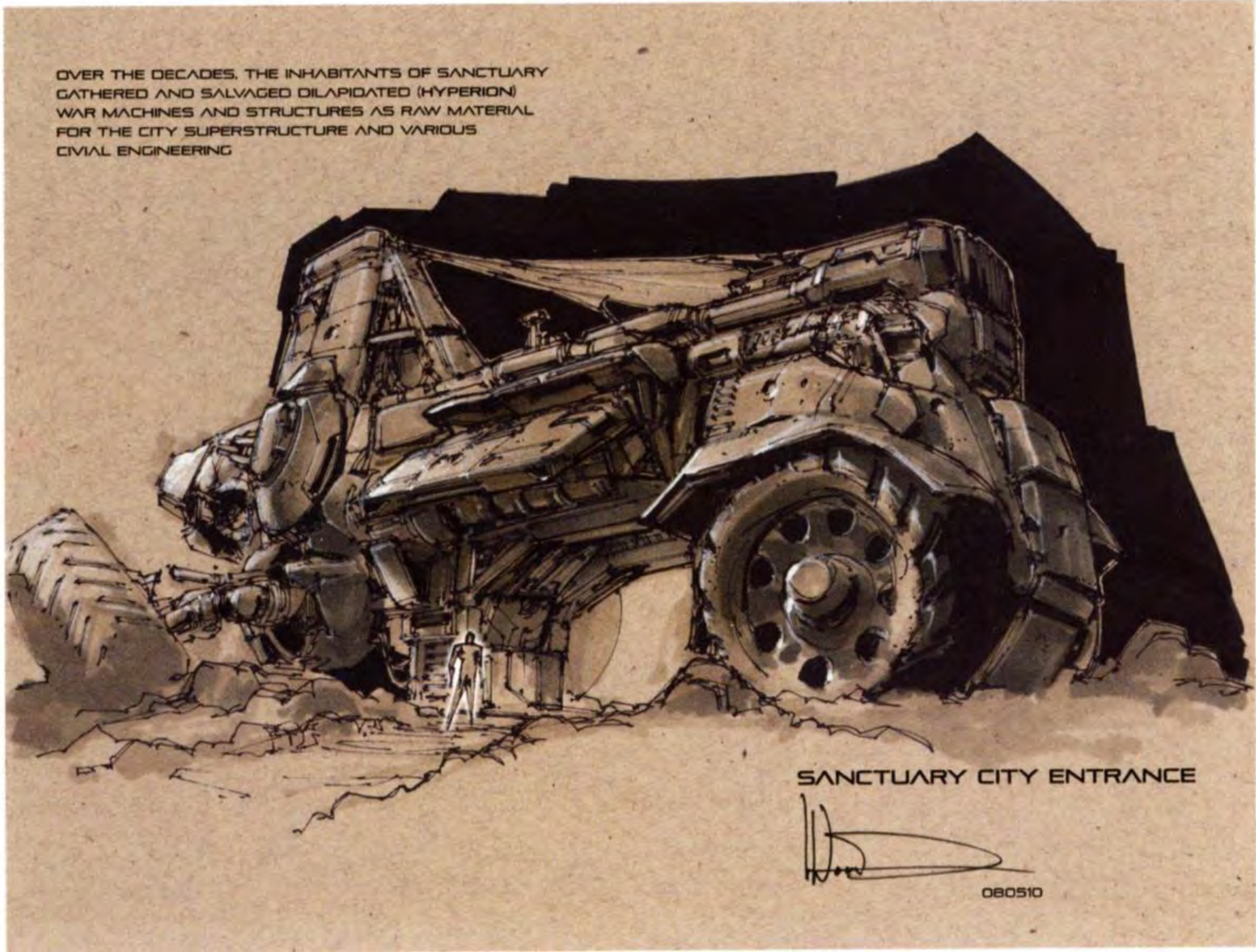
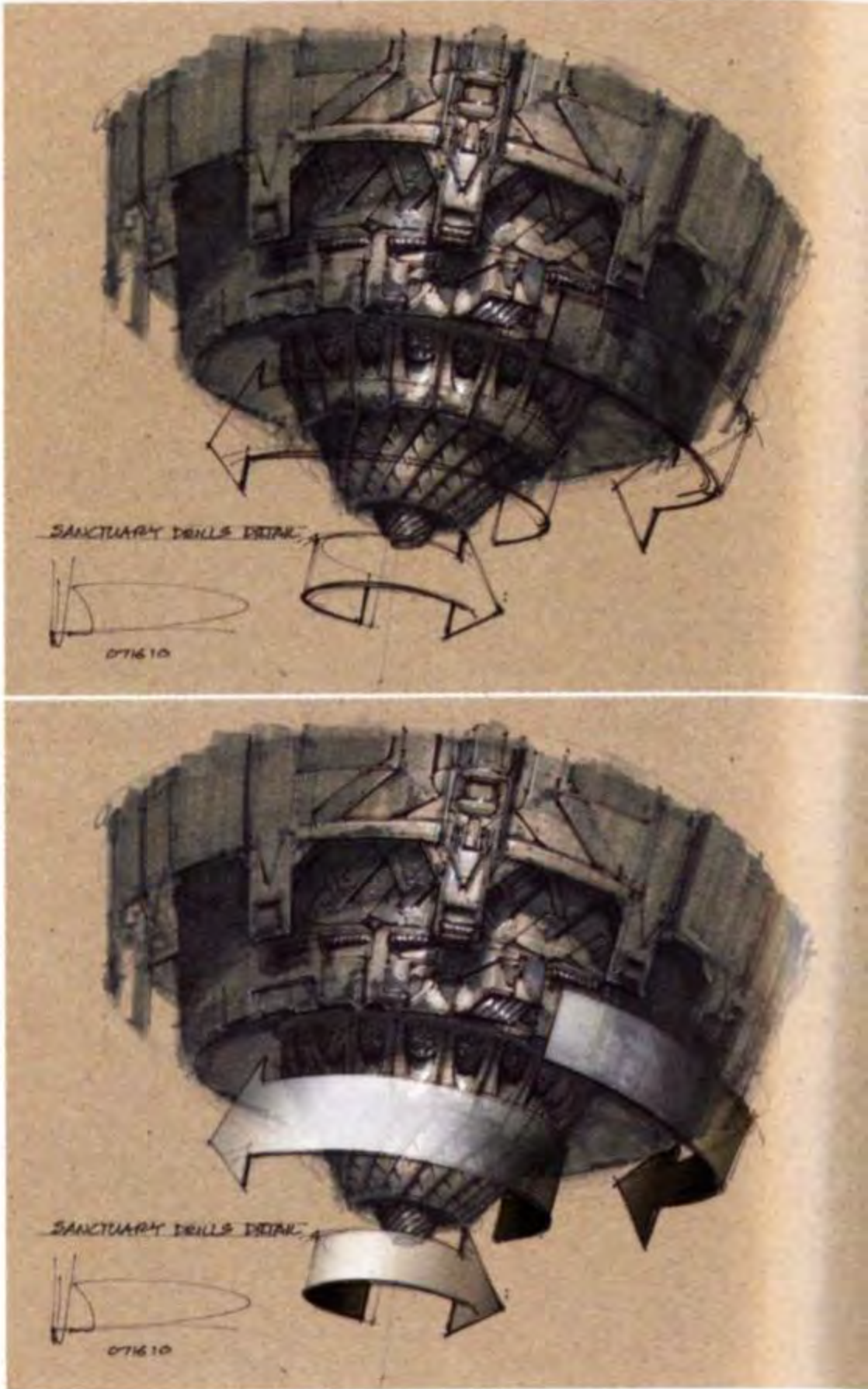
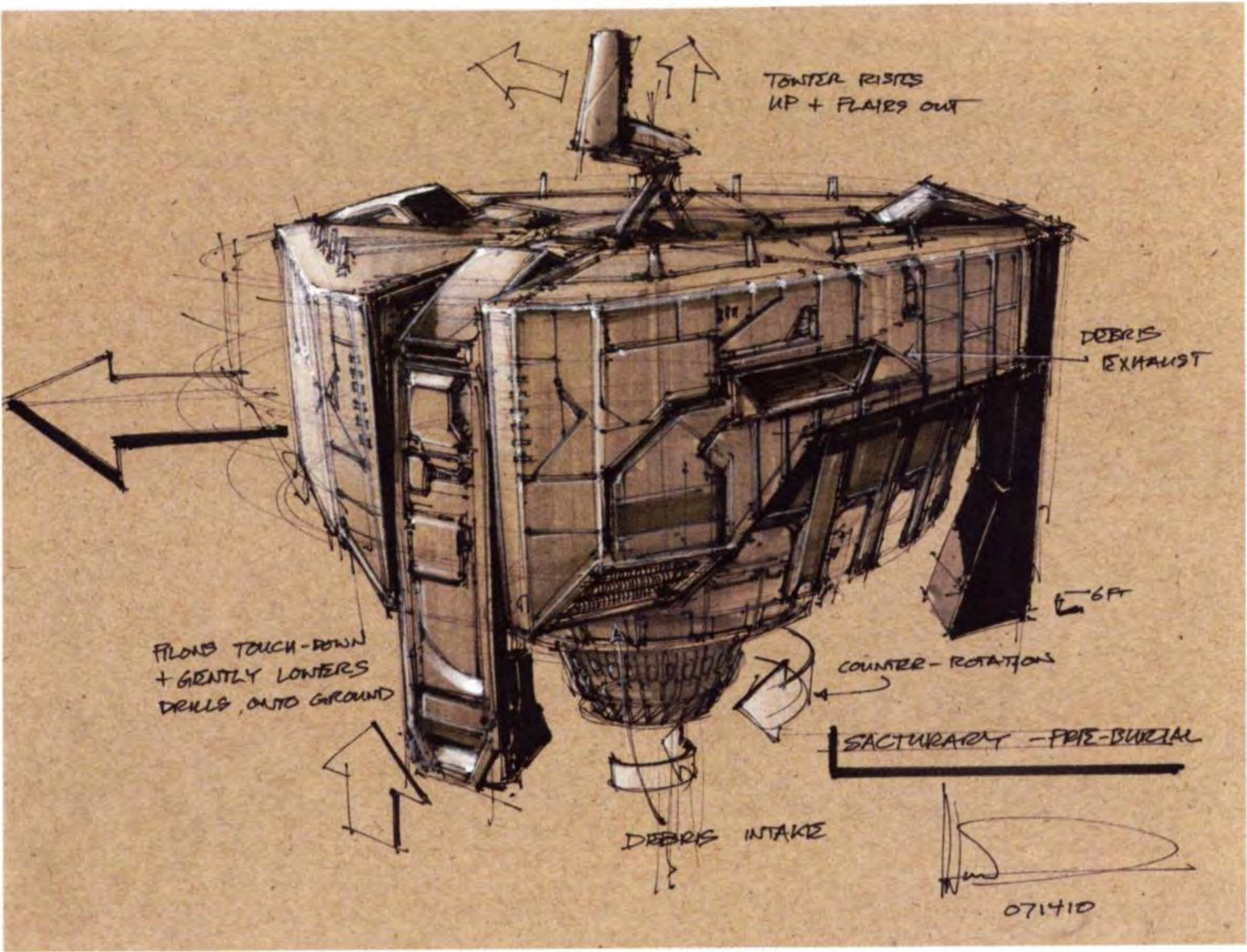


Even when concept art isn't explicitly followed by level design, it can often help to establish the general tone of a space. "While the sketch does not represent the scene," Tapia says, "it was perhaps used for [the] mood and feel of it."

Igloo Concepts [Matias Tapia]



"These are color compositions for the igloo as it would hopefully look at the beginning of the game," says Tapia. "The idea was to make it as noticeable as possible, so the player would naturally go there without realizing that the area was actually fenced."



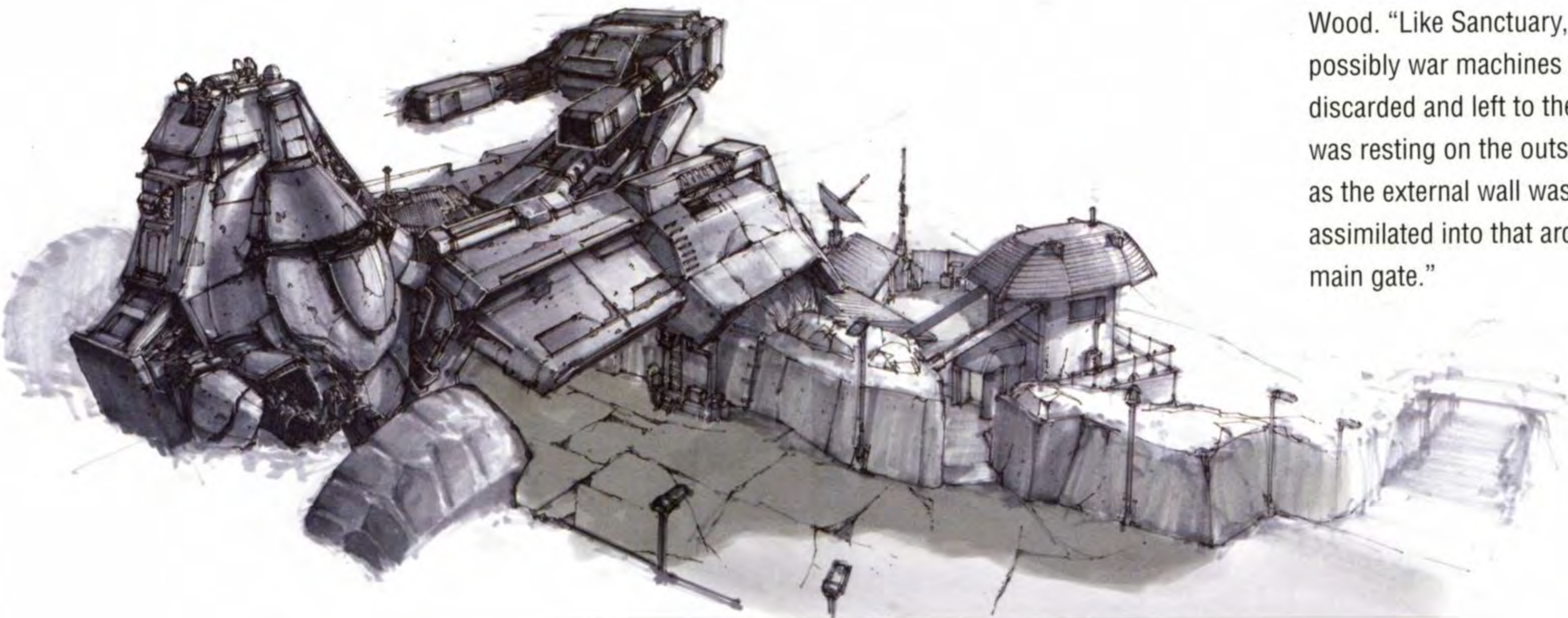
Sanctuary Concepts [Lorin Wood]

SANCTUARY

The friendly town of Sanctuary needed special attention as it is, for all intents and purposes, the *only* friendly town on Pandora. But it also needed its own visual identity and backstory, which is where Lorin Wood came in.

"I like to have a backstory or scenario for my designs as it allows me to evolve the design naturally and add some history to why it exists, and its purpose," he says. "I came up with the concept that one of the major manufacturers in this universe sent a massive mining craft to Pandora. The ship drops in from orbit, burrows in with its monstrous drills and begins churning out raw ore in its internal processing factory. This one was abandoned for some reason and over the course of centuries was eroded and covered by the elements. When it was completely submerged, various peoples and cultures of Pandora slowly built on top of it, unaware that this behemoth lay underneath it... even though there is an obviously man-made pinnacle in the central square with the words 'Sanctuary' etched into it. Why they didn't put two and two together is beyond me."

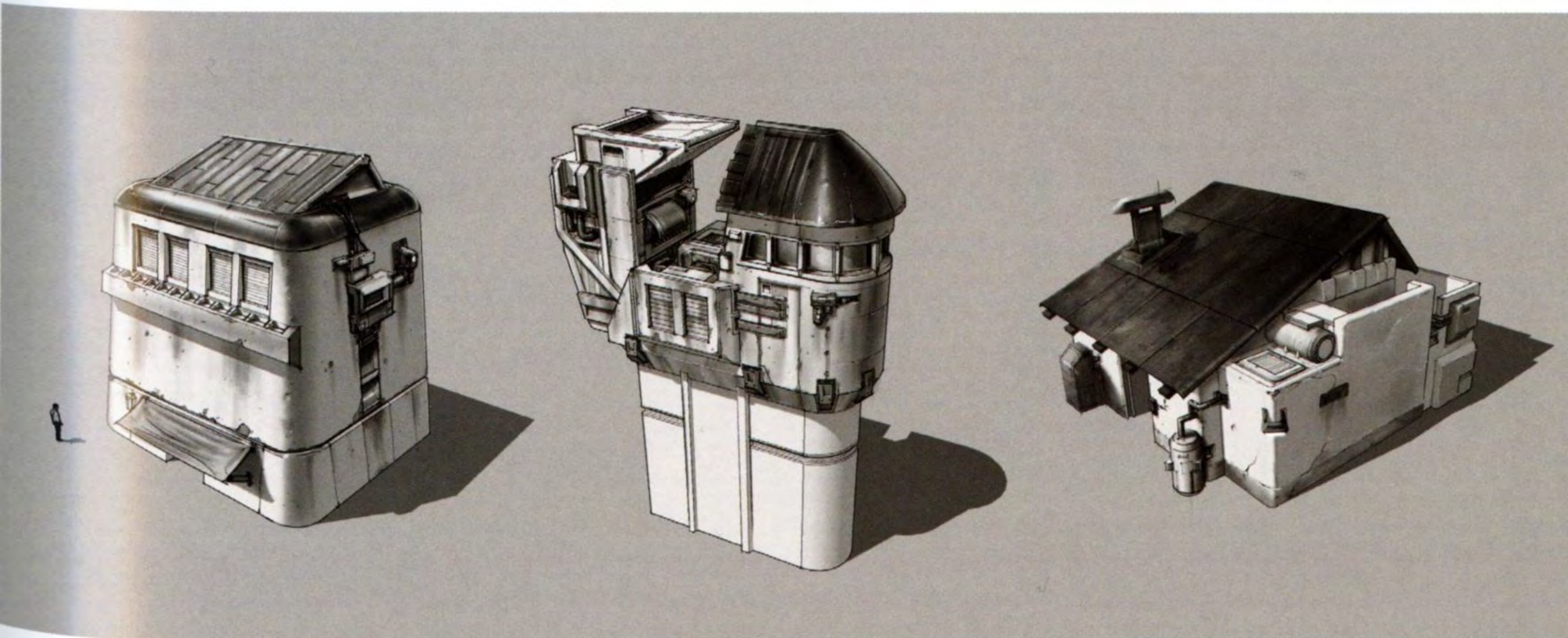
"The large vehicle was an early idea I had," says Wood. "Like Sanctuary, these giant rolling vehicles, possibly war machines of some sort, were also discarded and left to the elements. One of these was resting on the outskirts of the township, and as the external wall was built, this vehicle was assimilated into that architecture to form the main gate."





Says Lorin Wood, "Jeremy Cooke, the art director, and I wanted the city to be an homage to the work of Hayao Miyazaki, who's works usually consist of an interesting mix of Asian and European influences. We liked the idea of this aesthetic defining the town because it was a departure from the previous game environments, and it would emphasize this location is a 'sanctuary' from the violent *Borderlands* world outside of the wall...and yes, I referenced Cloud City in the design of the buildings."

Sanctuary Concepts [Lorin Wood] *Above*
Sanctuary Concepts [Lorin Wood] *Below*



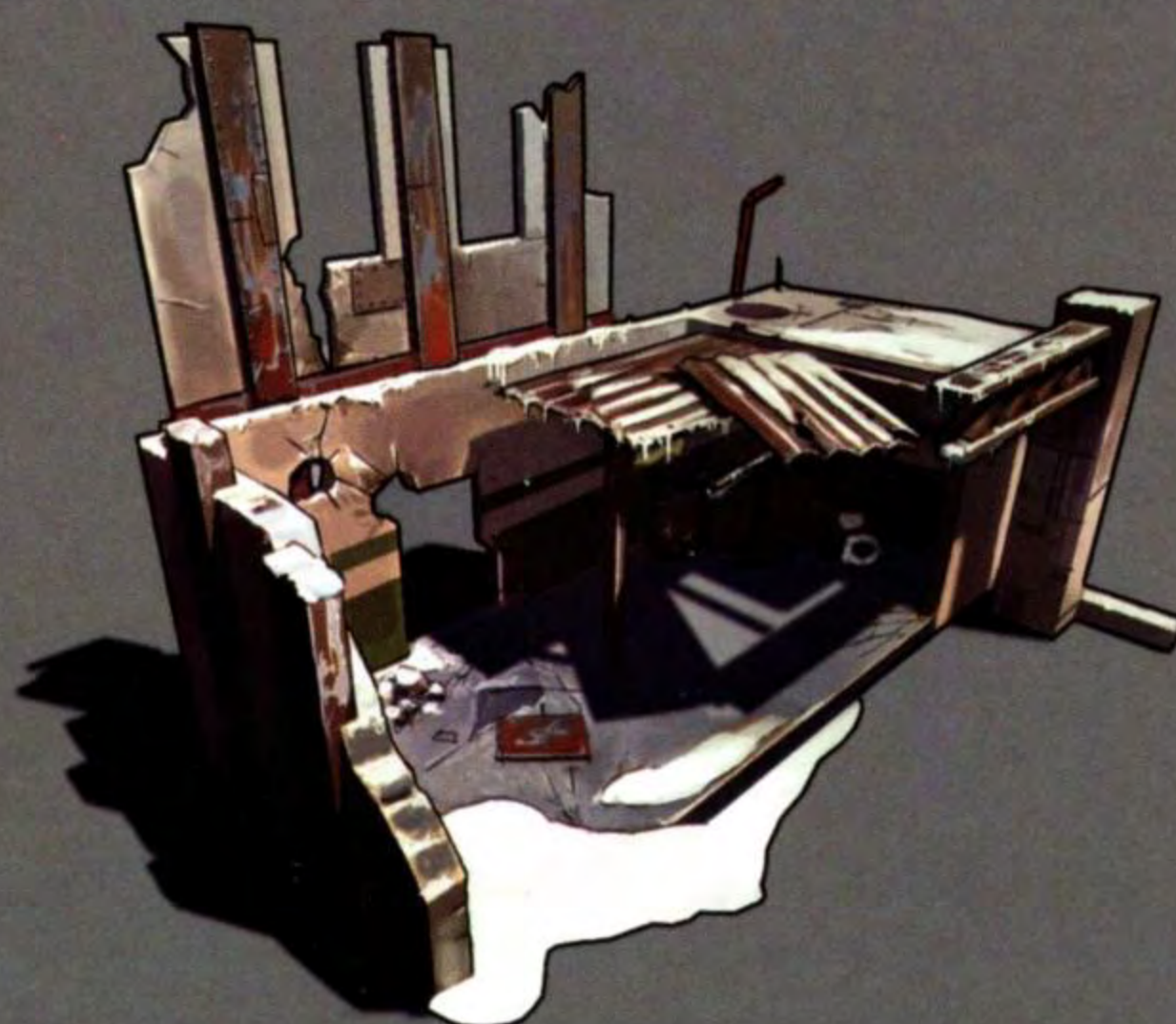
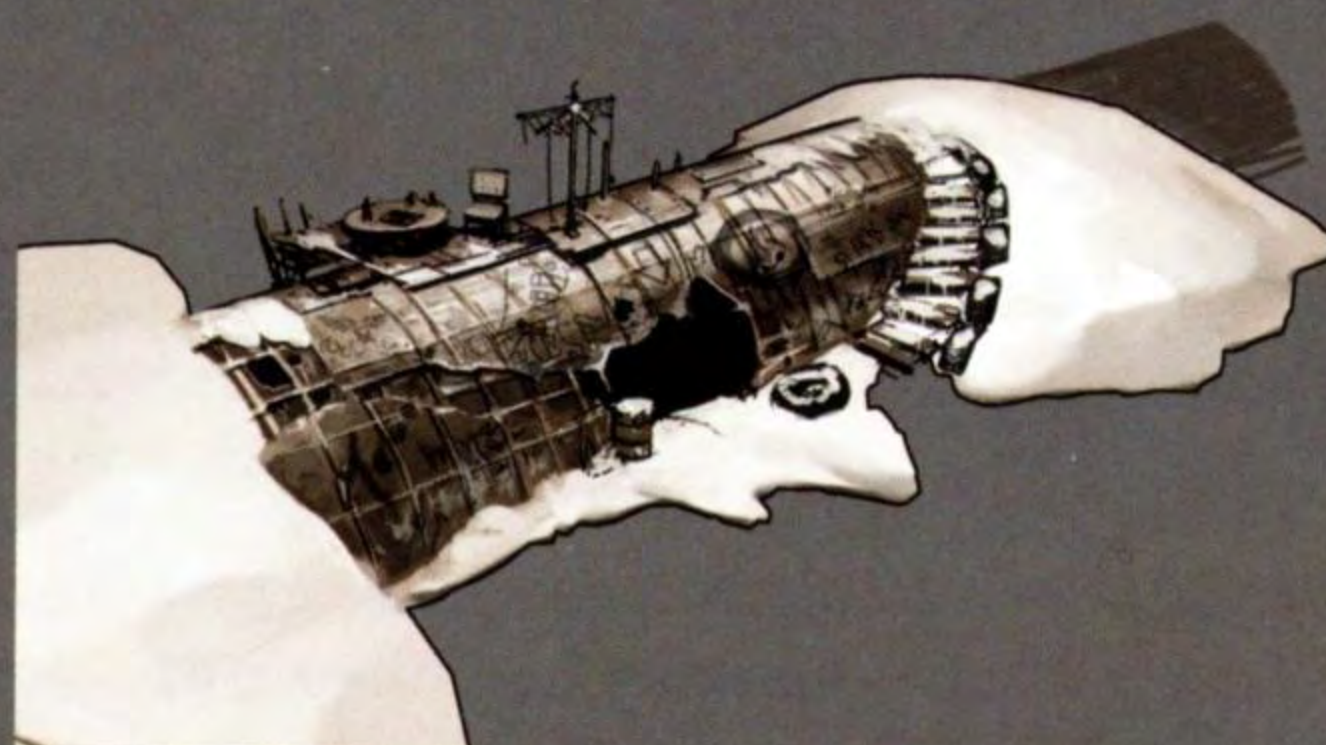
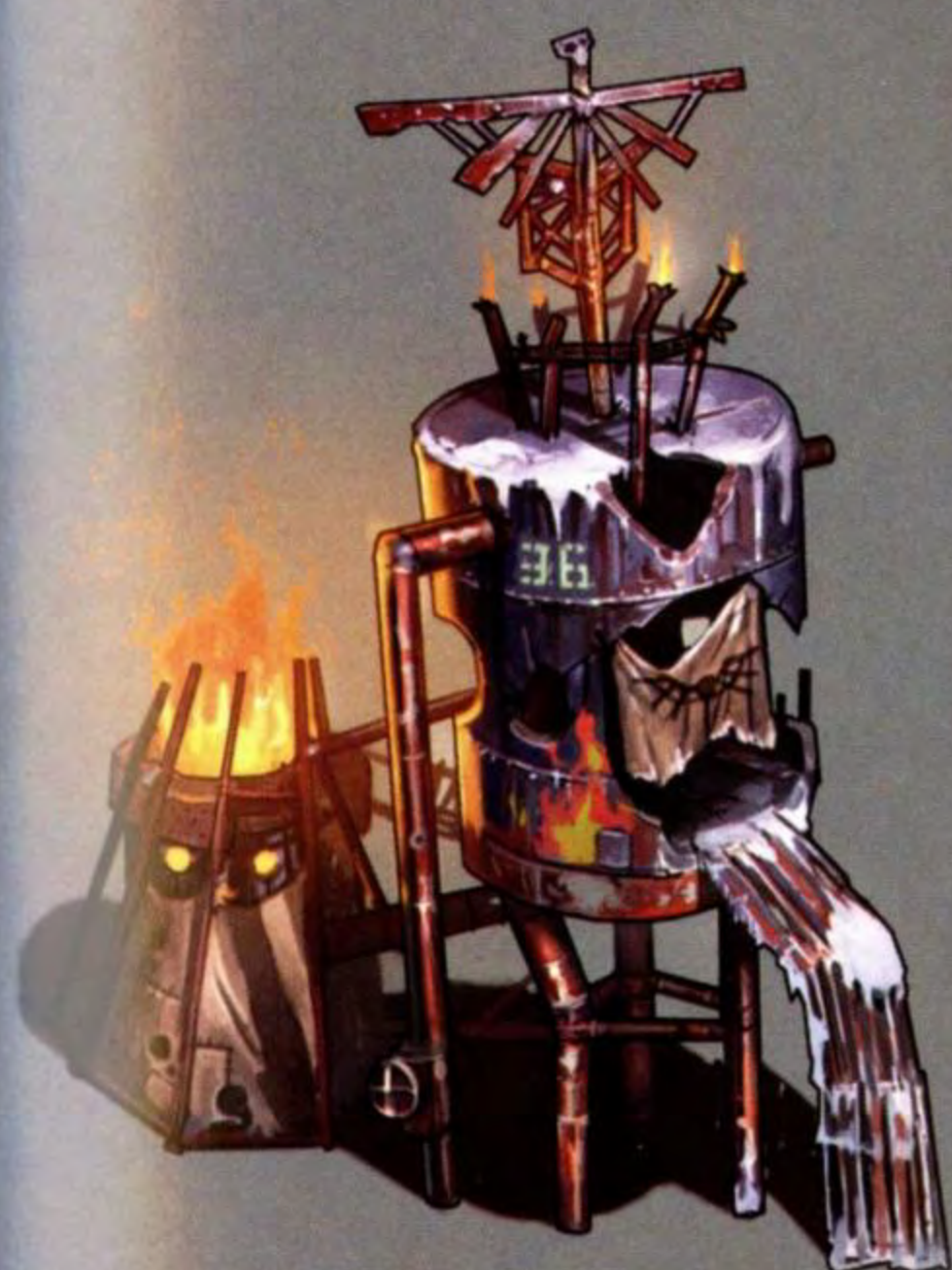


FROSTBURN CANYON

"I was aiming for contrast when making the rocks as dark as they could go without actually making black rocks," says Matias Tapia. "Inspired more [by] Chinese peaks than something you would find on an actual icy environment. Then just mix and serve at room temperature."



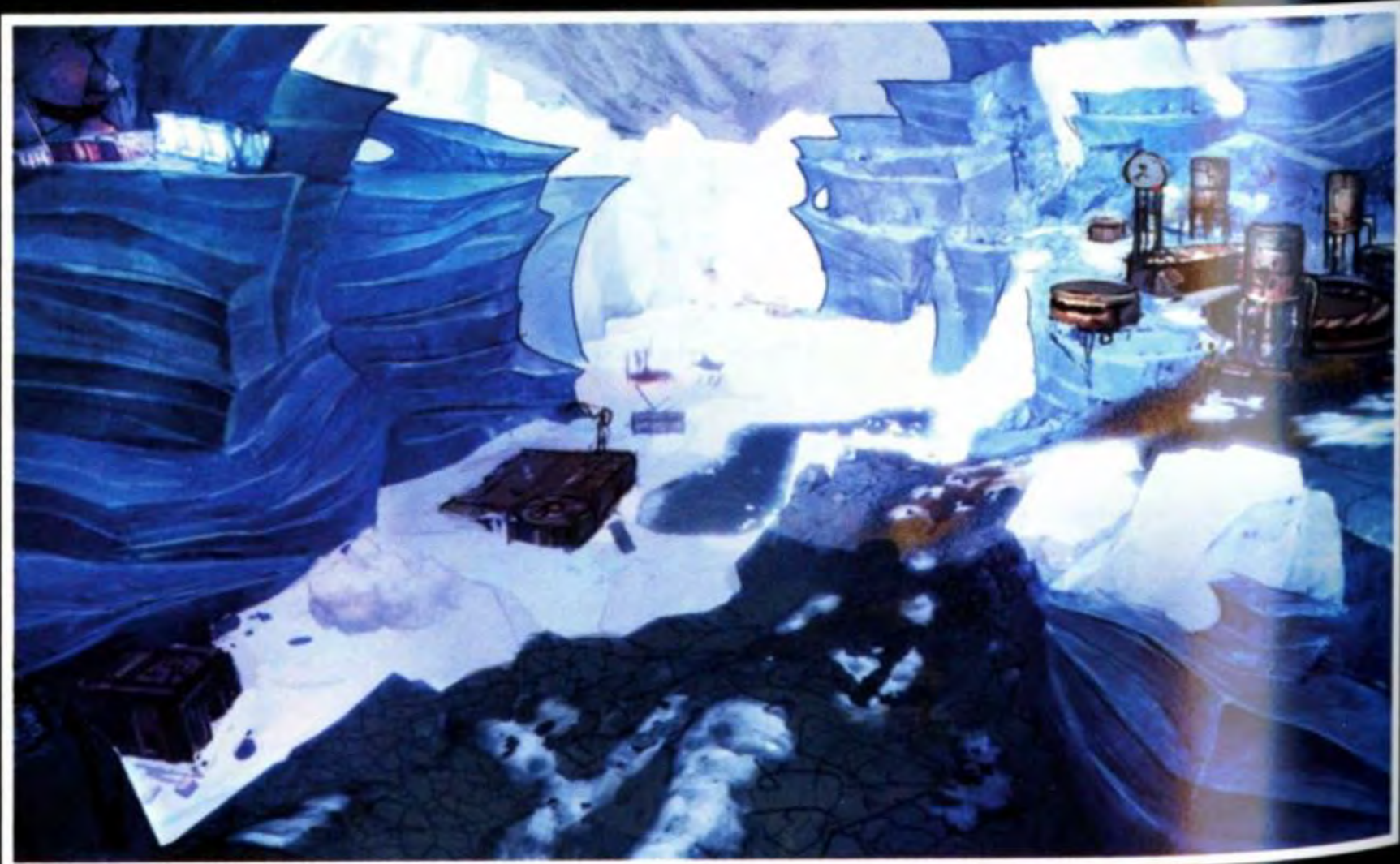
Frostburn Canyon Concepts
[Matias Tapia]



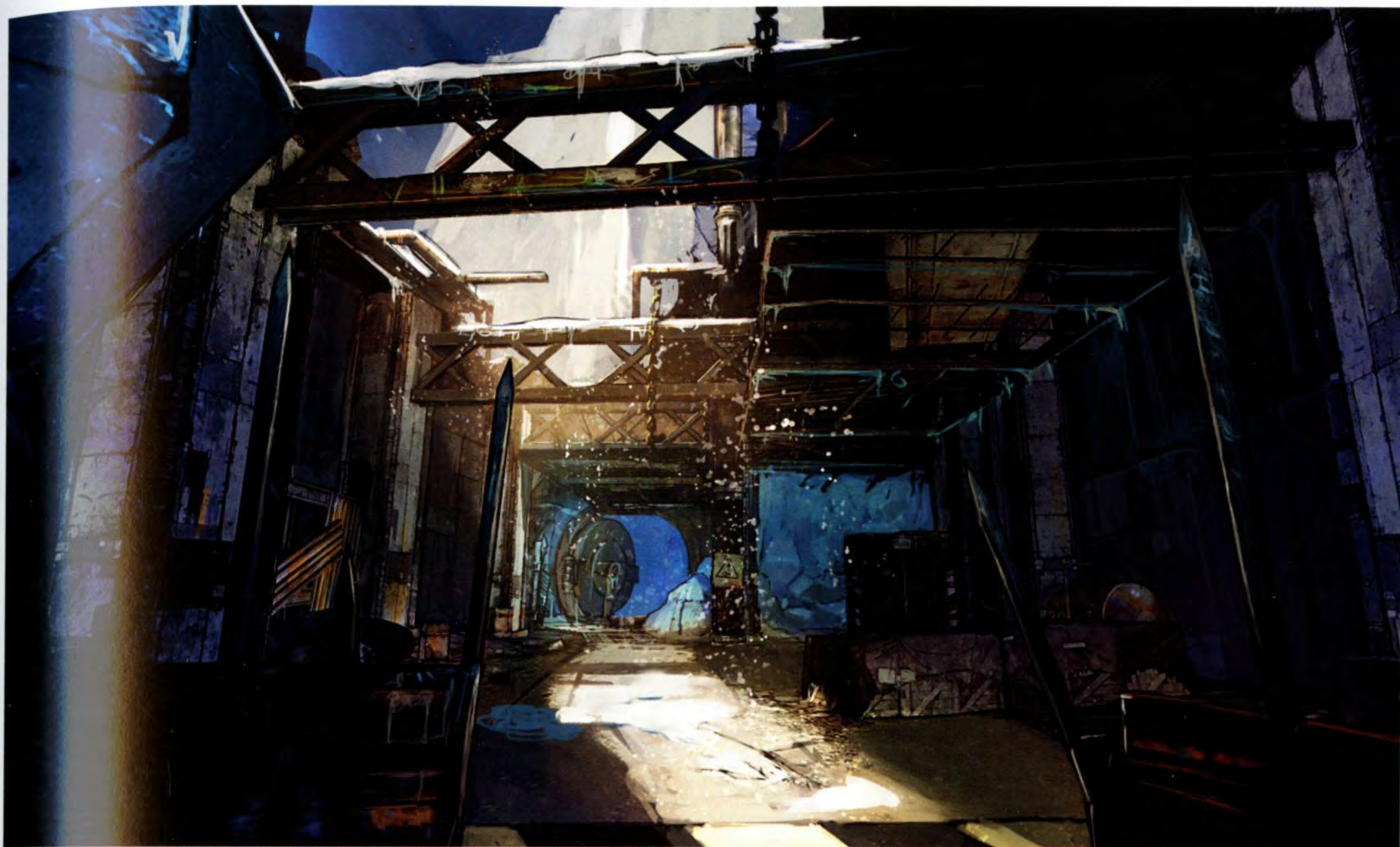
The abode of Lilith (aka the Firehawk) and her insane worshippers needed special attention to convey the complicated backstory of this area. "It was easier to help conceive this environment as soon as I was able to focus on the props and how these would relate to the Firehawk cult," Tapia says. "I wanted to somehow make it even crappier than normal bandit housing on the excuse that 'Firehawk' destroyed most of it...and they had to improvise."



Of the corpse-filled ruins surrounding the Firehawk's lair, Tapia says, "Since the beginning, I wanted to find a place for gigantic dead things on the environment. Other than that, I tried looking into different glacier styles to implement along with the current one. Granted, I over-did that style on the concepts below by making it *too* prevalent, but at least it was a good example of what not to do."



Frostburn Canyon Concepts [Matias Tapia]



Tapia also conceptualized the interior of the Firehawk's lair. "I think the idea was to make some sort of 'Batcave' for her. At some point I thought it would be neat to have gigantic power cables go through the environment, converging with the lair to indicate some sort of out-of-proportion operation, as well as implying that this facility had already been installed by one of the corporations in the past."





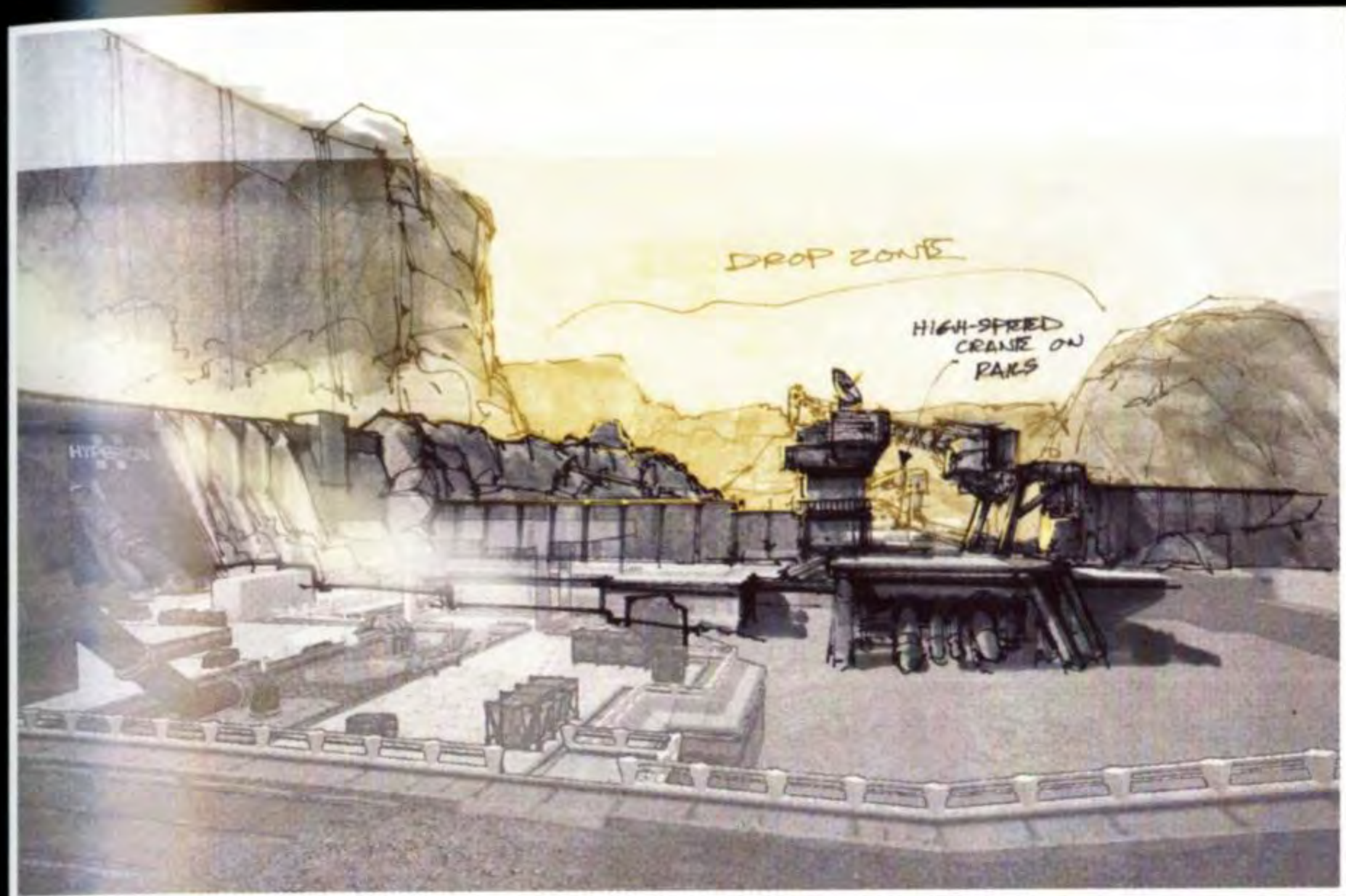
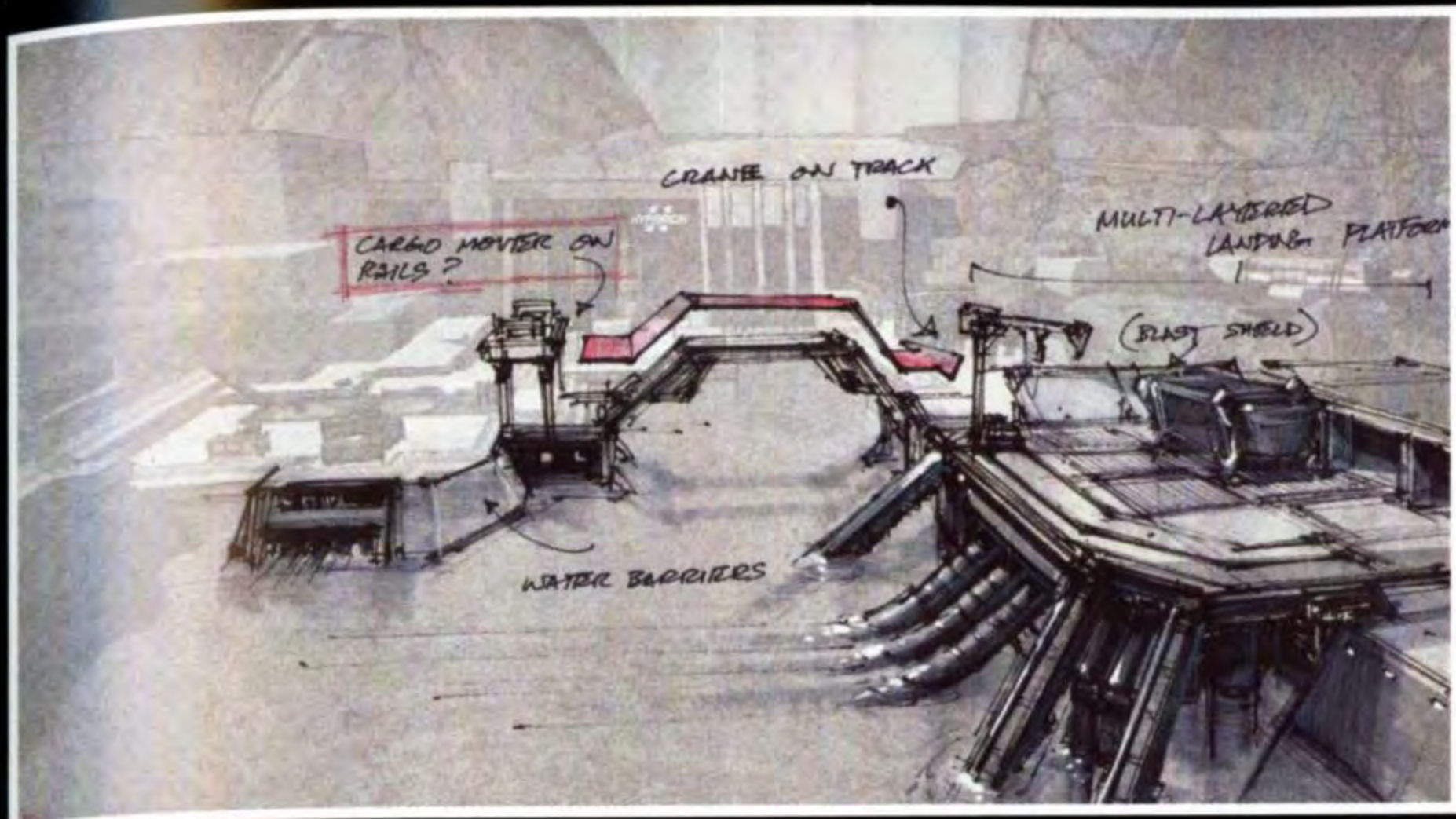
BLOODSHOT RAMPARTS

The bandits of the Bloodshot clan needed to have their own distinct visual presence, a task that artist Kevin Duc was happy to take on. “We experimented with some Aztec and Mayan influenced wall deco, and I tried jazzing it up with multicolored, fluorescent lights. These images provided some mood direction, and capitalized on the idea of reinforced concrete, angled walls, and huge generators sunk into the flooring.”

Additionally, the dam separates two of the major environments in the game—the snowy tundra, and the grass of the Highlands. “By utilizing the idea that the glacier is actually pressing into and destroying parts of the dam, we were able to bring in that icy blue glow and remind players of the environment they just traveled from,” Duc says.

Bloodshot Ramparts Concepts
[Kevin Duc]

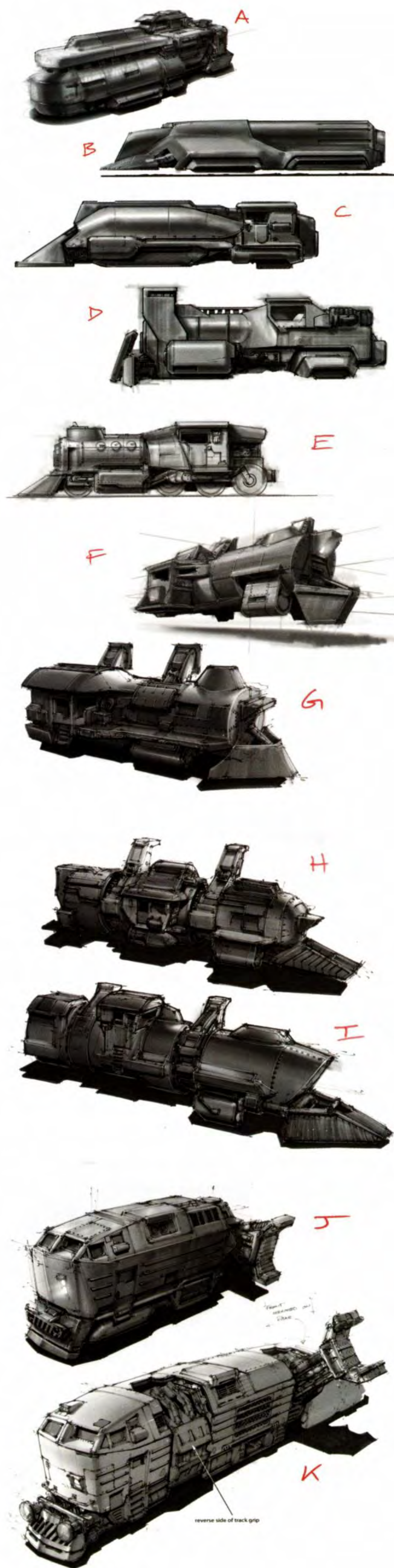




TUNDRA EXPRESS

Early on, the Tundra Express map was built around a simple idea: a train would be constantly running through it, and would somehow be hijacked in a story mission. Above, you can see some quick environment "dressing" by Lorin Wood. "I made some hardcopies of screenshots and used my trusty pen and markers to spiffy up this area. Quick and dirty," he says. To the right, you can see some of Wood's concepts for the train running through the map. "The train further emphasized this quasi-Western world we created."

Tundra Express Concepts [Lorin Wood]

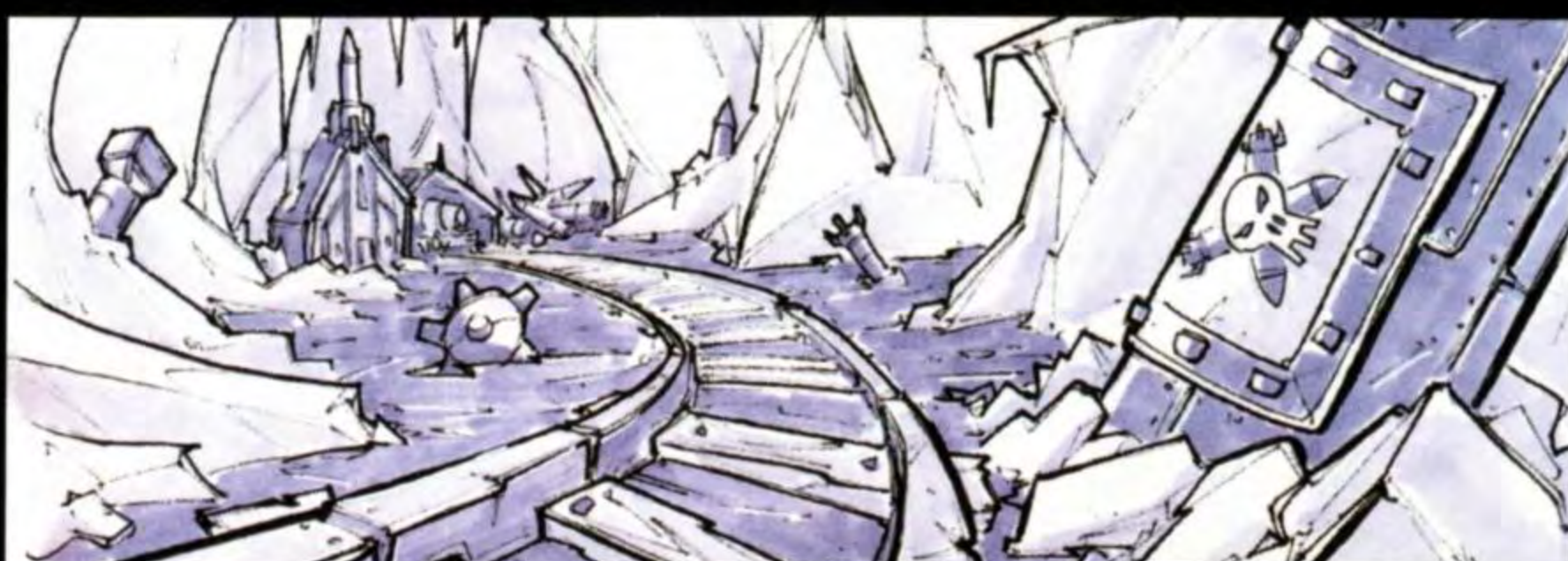
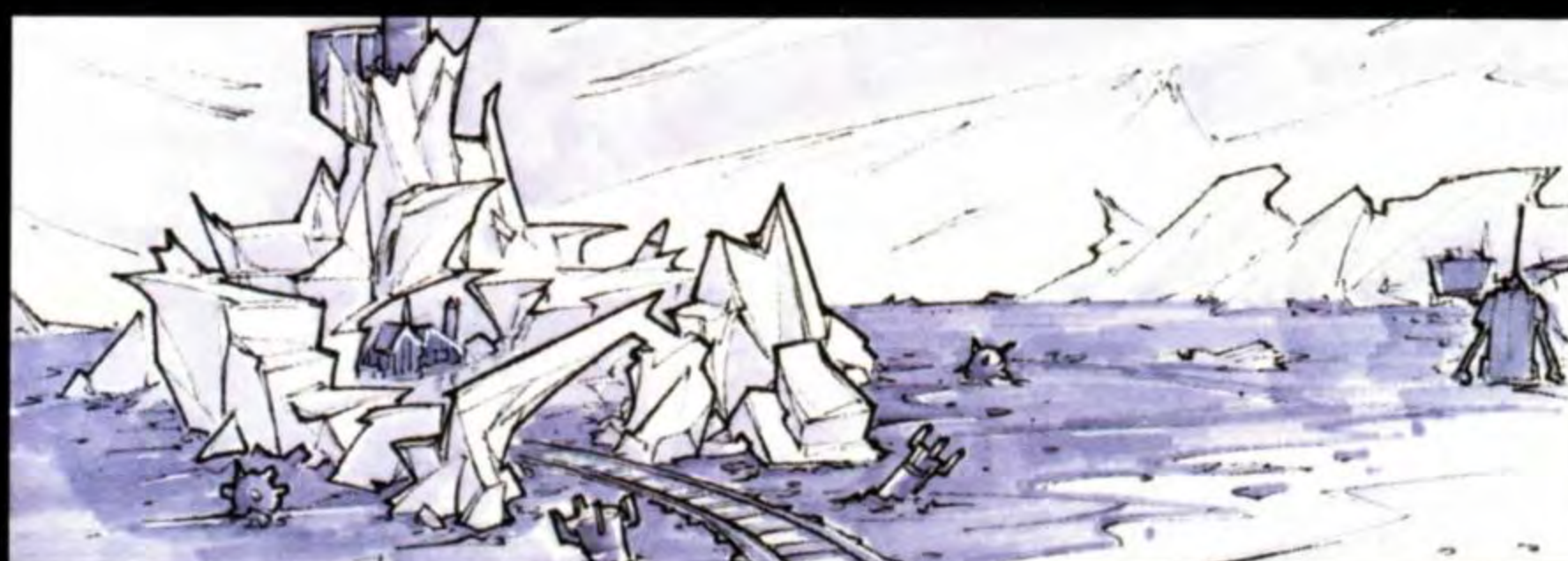




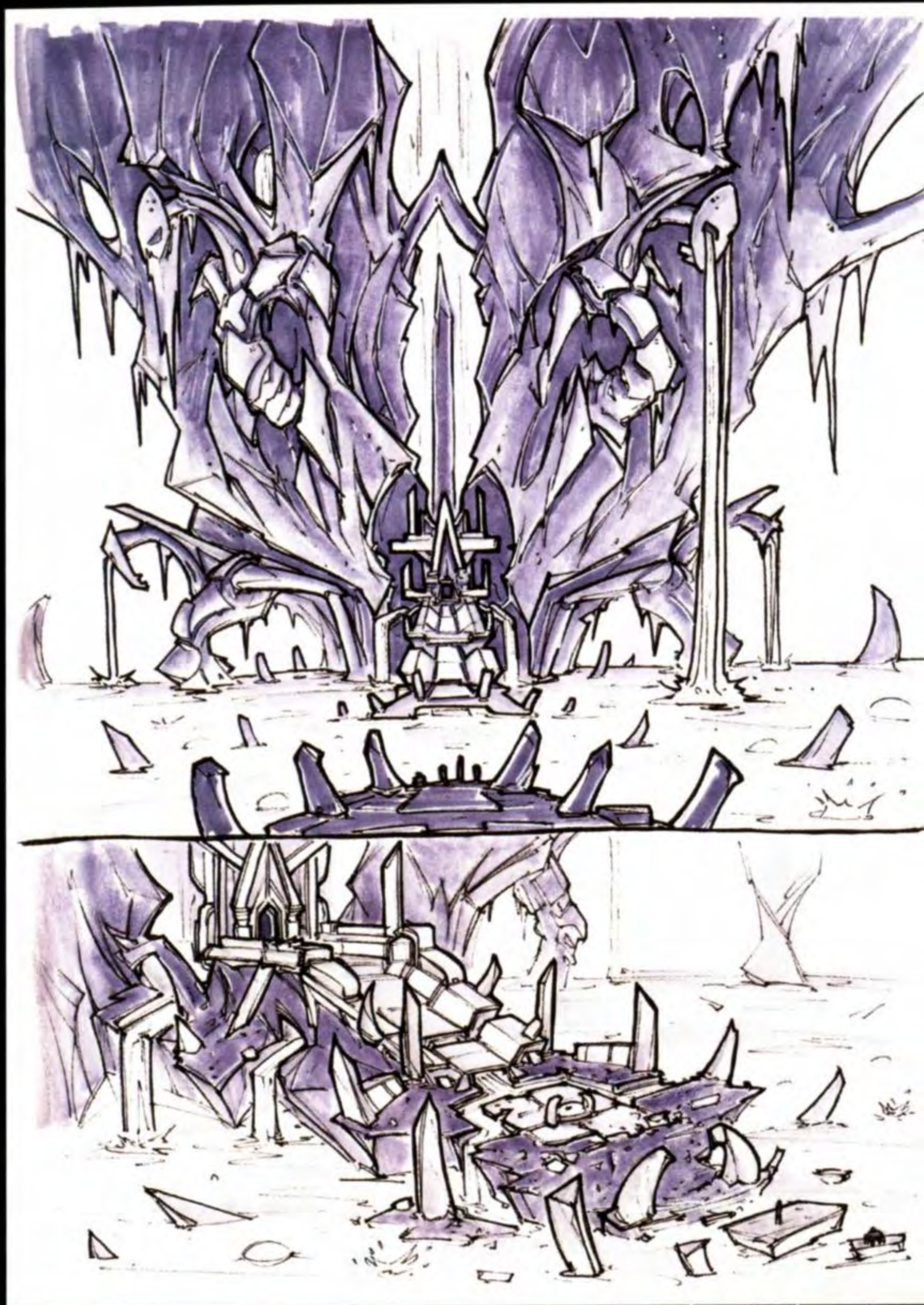
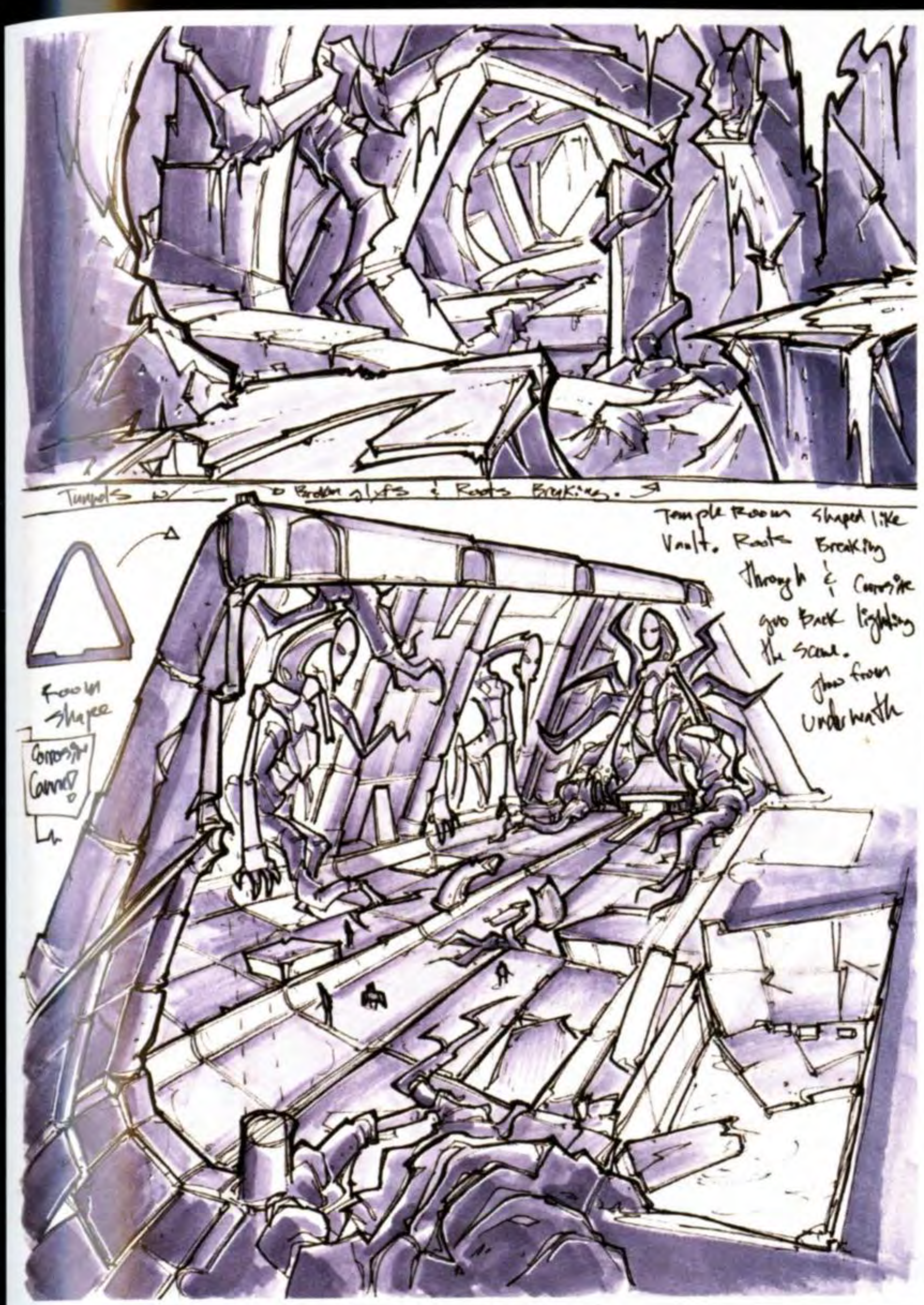
"Tiny Tina's House was conceived to feel like a quaint 'Swiss Miss' house—quite the juxtaposition to the character herself," Scott Kester says.



Kester also conceived the Bandit housing sprinkled across the area. "The original idea of the train Bandit camp is that they'd hijack any trains that came through, loot the goods, and live inside the train cars afterwards," he says.

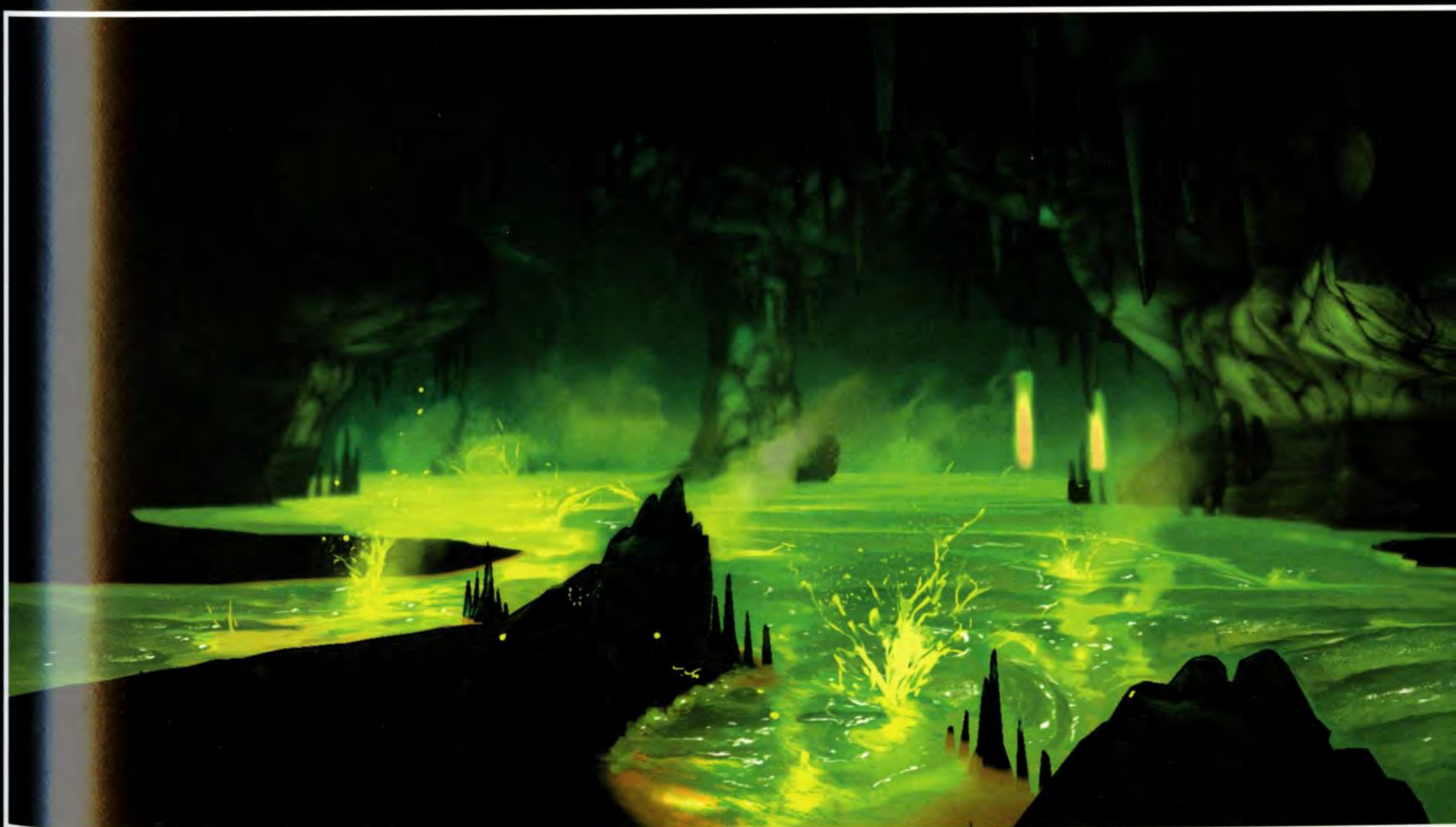


Tundra Express Screenshot [Jason Reiss, David Avery] *Top*
Tundra Express Concepts [Scott Kester] *Above*



CAUSTIC CAVERNS

Originally, the Caustic Caverns were going to have statues of Guardians—the Eridian-created enemies from the end of the first game. Scott Kester remembers, “They were removed and used at the end of the game instead. Some of these concepts were also used elsewhere.”

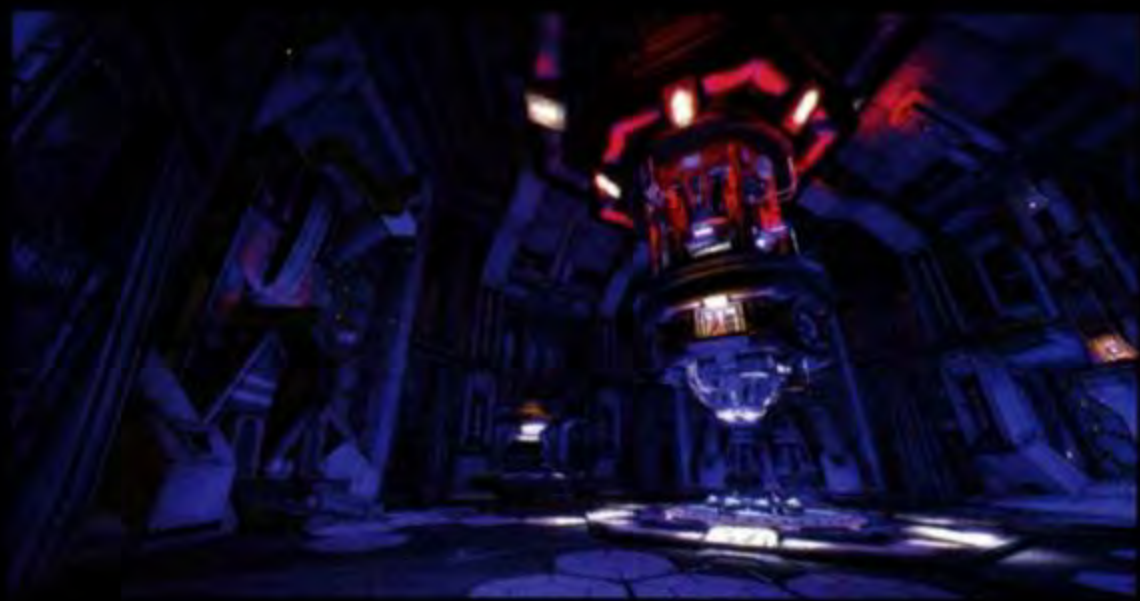


Cavern Concepts [Scott Kester] *Top*
Cavern Concepts [Matias Tapia] *Bottom*

ZONE 2

CONTROL CORE ANGEL

A techno-horror battleground of sudden death and harsh lighting.



FINK'S SLAUGHTERHOUSE

If you love ice and bandit murder, this is where you wanna be.



LYNCHWOOD

Of all the wild west-esque areas in Pandora, this is the wildest and the westiest.



NATURAL SELECTION ANNEX

This Hyperion-owned circle of slaughter arena is a paradise of overgrown machinery and Varkid blood.



OPPORTUNITY

Handsome Jack's fascist city of the future is waiting for *you*...to get the hell out so our taxpaying tenants can move in.



TERRAMORPHOUS PEAK

The mysterious cliffs where *Borderlands 2*'s terrifying raid boss lives. Try not to fall to your death.



THE BUNKER

Handsome Jack's stronghold in the sky affords players the ability to get killed by all kinds of fun stuff, such as robots, turrets, or a giant, transforming warship.



THE HIGHLANDS

Grass! Water! Stalkers! The highlands of Pandora are as lush and inviting as they are dangerous.



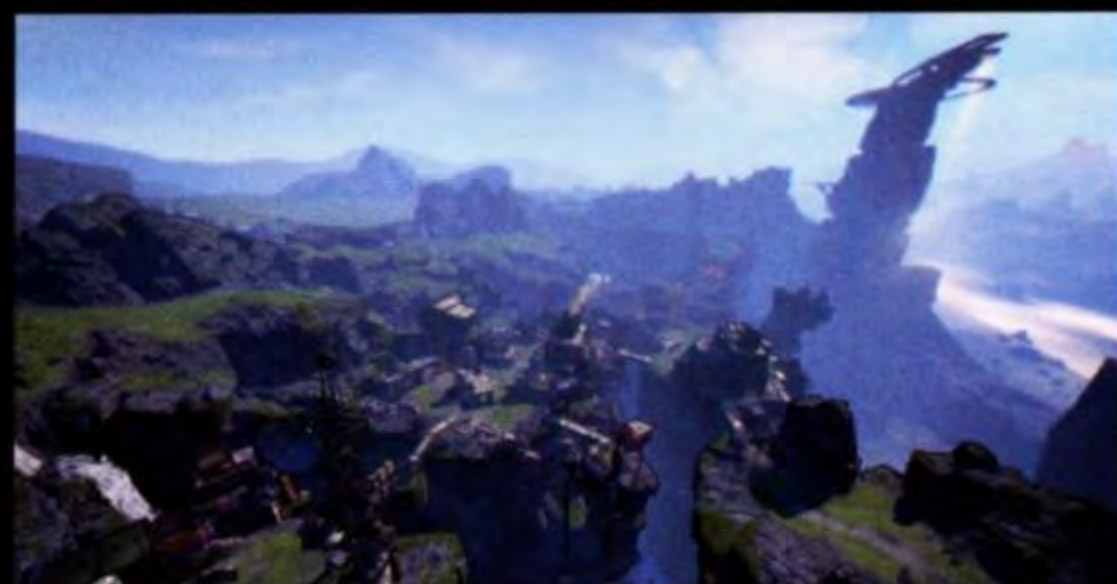
THE HIGHLANDS - OUTWASH

Hyperion's Eridium Extraction Plant stands out like a garish, industrialized sore thumb. Covered with robots. This metaphor is atrocious.



THOUSAND CUTS

The bandit-infested cliffs that Brick's Slab Bandit Clan calls home.



THE HOLY SPIRITS

Welcome to the home of the amoral Zaford Bandit Clan, who love murder as much as they love booze. And they *really* love booze.



WILDLIFE EXPLOITATION PRESERVE

Hyperion's awful creature torture facility of awfulness. Visually, this map represents a close marriage of Hyperion hi-tech with Pandoran nature.



THE HIGHLANDS

The grassy Highlands represent a large change for the player. Suddenly abandoned by their Guardian Angel and the city they called home, the player is thrust into a lush, yet dangerous, environment never before seen in *Borderlands*. "These are very early, what we refer to as "Blue Sky" concepts for the grasslands," Kevin Duc says. "The glacial wall was one idea for creating a fairly blunt boundary between the tundra and the grasslands. The Cliffside research station was an idea for what a Hyperion presence might look like. We also explored rock shapes within these images, something that provides a lot of the feel of a particular area."

Zone 2 Concepts [Kevin Duc] Below
Zone 2 Concepts [Scott Kester] Right



for all "Boulders" Act 2 -
Note these could be used elsewhere

Crashed spaceship -
Boulders lying in it -

Cable Cars -
travels across the chasm -

Willow two Act two Idios

old Bill -
Boulders re-
travels & Displayed -

Small cars that led to upper levels



little hole
sniper
perches
the
Boulders
hanging
upside
down
over
hang

Crane lifting
old random
Crap from the
New Drying
up River
Bed -

Big Box
Shelter

Overhead up lake st



Big DAM
spanning
between
the
Snow
Area &
Act 2
green
area -

Some sort
of water
treatment
Machine
near the
Dam itself

Drains up River Road



Huge
Jackhammer

Big hole
spike

Came into
Mountain side

Willow two
Act two Idios

Big
drill
dinner
on tracks
Well
under
Drill things

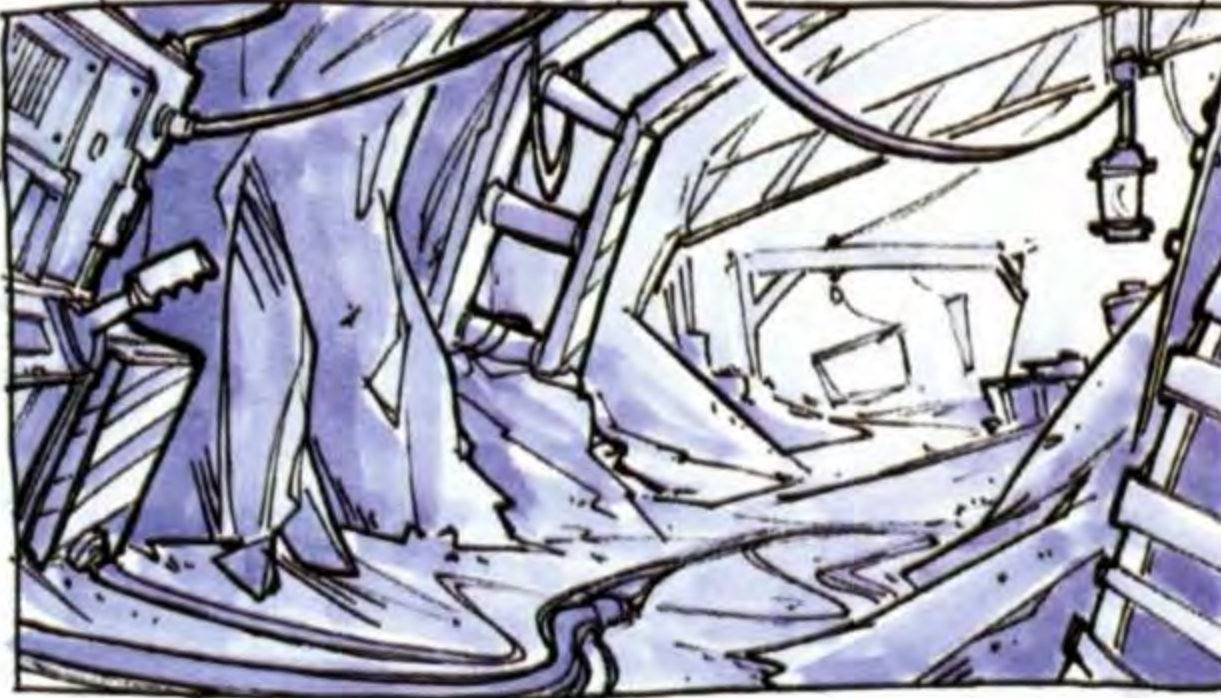
Hyperion
way
Mining
Equipment?

2 to 3 of
these
style
Camps on
Act 2



Heavy
Machinery
lights
Cables
etc

Support
stake



Smaller
could
handle
turning
them
off?

Make
Mining
seem
frenzied
or
Crazy

Big
spade

Big
Huge
Drills
with
their
Drill
out?
like a huge
Drill
press
on a
sliding
track -



Chunks of Ice from
flow to flow slide
down DAM and splash

Big Melting
Iceberg?

Willow Two
Act two Idios
The Big old
DAM?

come out her
into Act two?
works down
Mountain

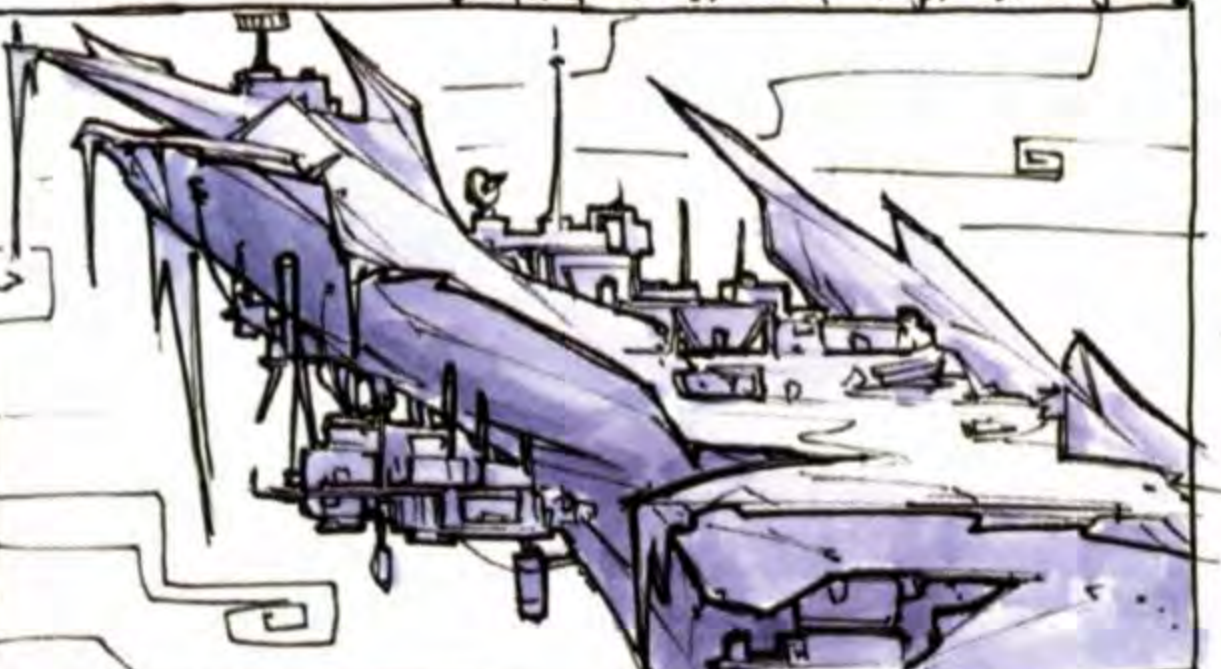
left
work
Area



Range
Hollow
Boulders
towers
Hollow
under
New
Hyperion
work
silence?

perhaps on one of the Major over hang?

New fancy
tech stuff on
the top -
glider Boulders
hanging
underneath?



Cut-away
to show
that
Hyperion
has been
little
offices
hidden in
the tower
and
machines

Hyperion
and
Bridges



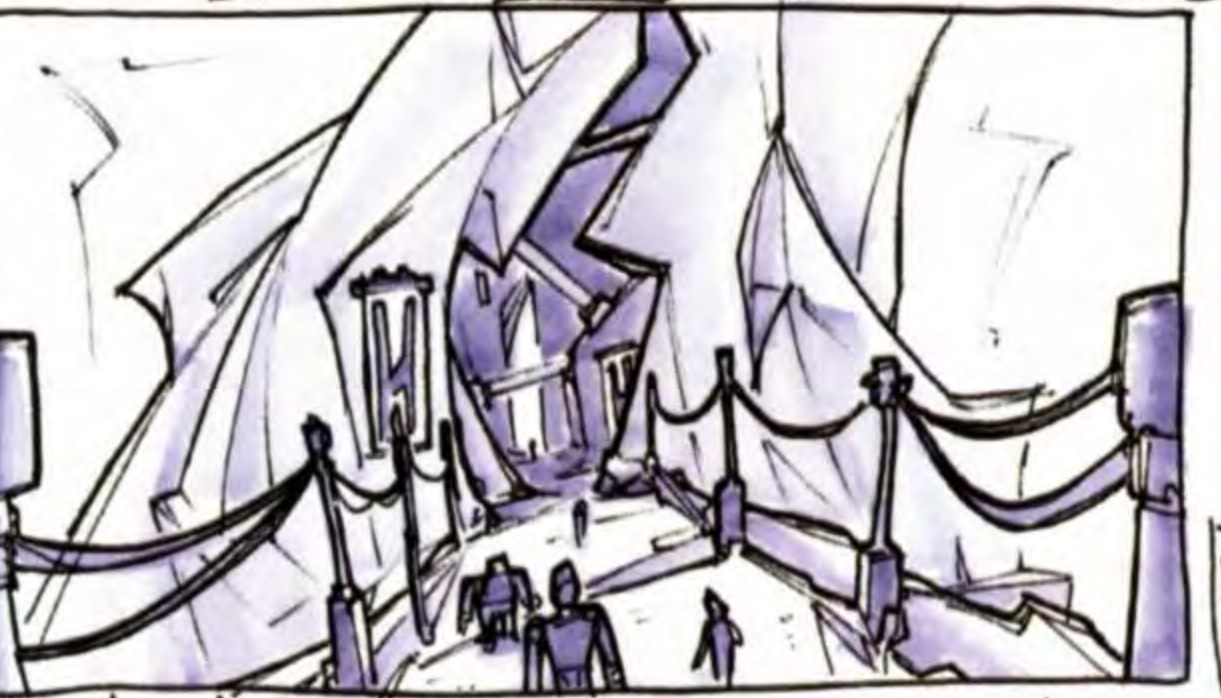
Willow two
Zone entrance
Idios

Carved
through
the Mountain
struts
keeping the
Mountain
together -

Wooden
Bridge
from Zone
#2

Crazy
Bridge
looking
to it
falling
apart?
Crazy?

ZONE 2 to Flag cliff
entrance



Swing
set
w/
Boulders
hanging
from
it
Noises

WELCOME
SLAG
NANO

old
giant
sign
entrance
to
Zone?

Took
both
Arm
Keeps
moving
up
& Down -

quilted?



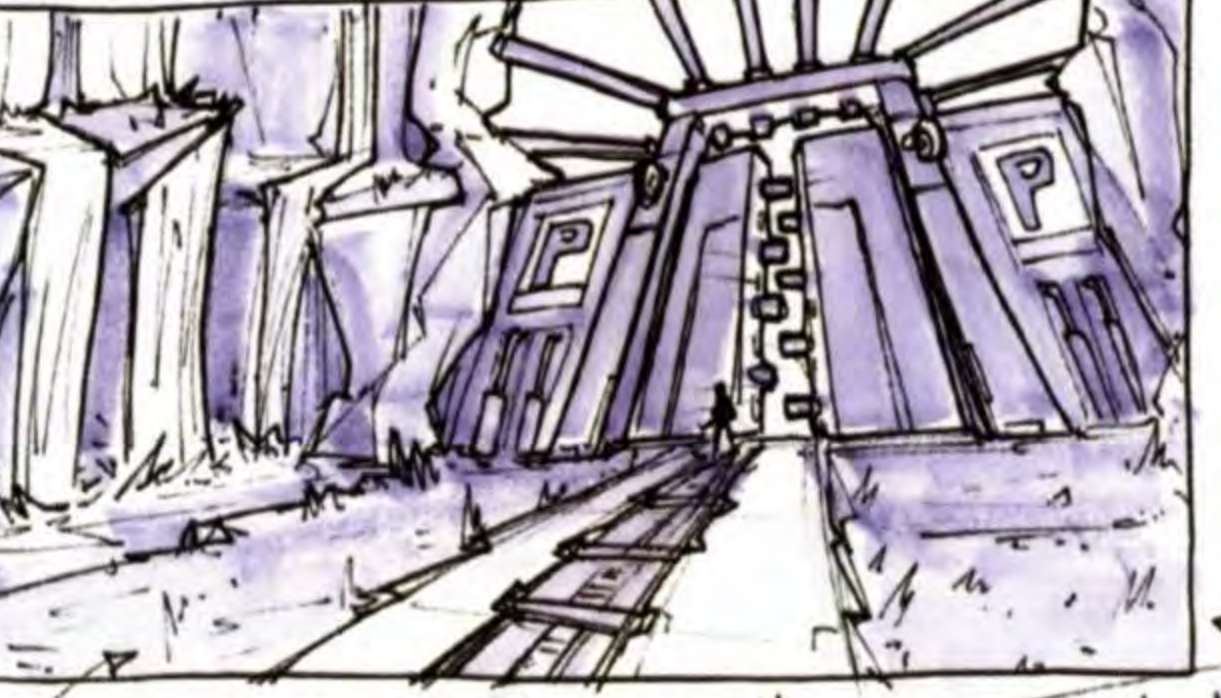
Water
falls
from
Melting
Ice?
Close
to act

Big
Turbine
park
entrance
Find
More
Instructions

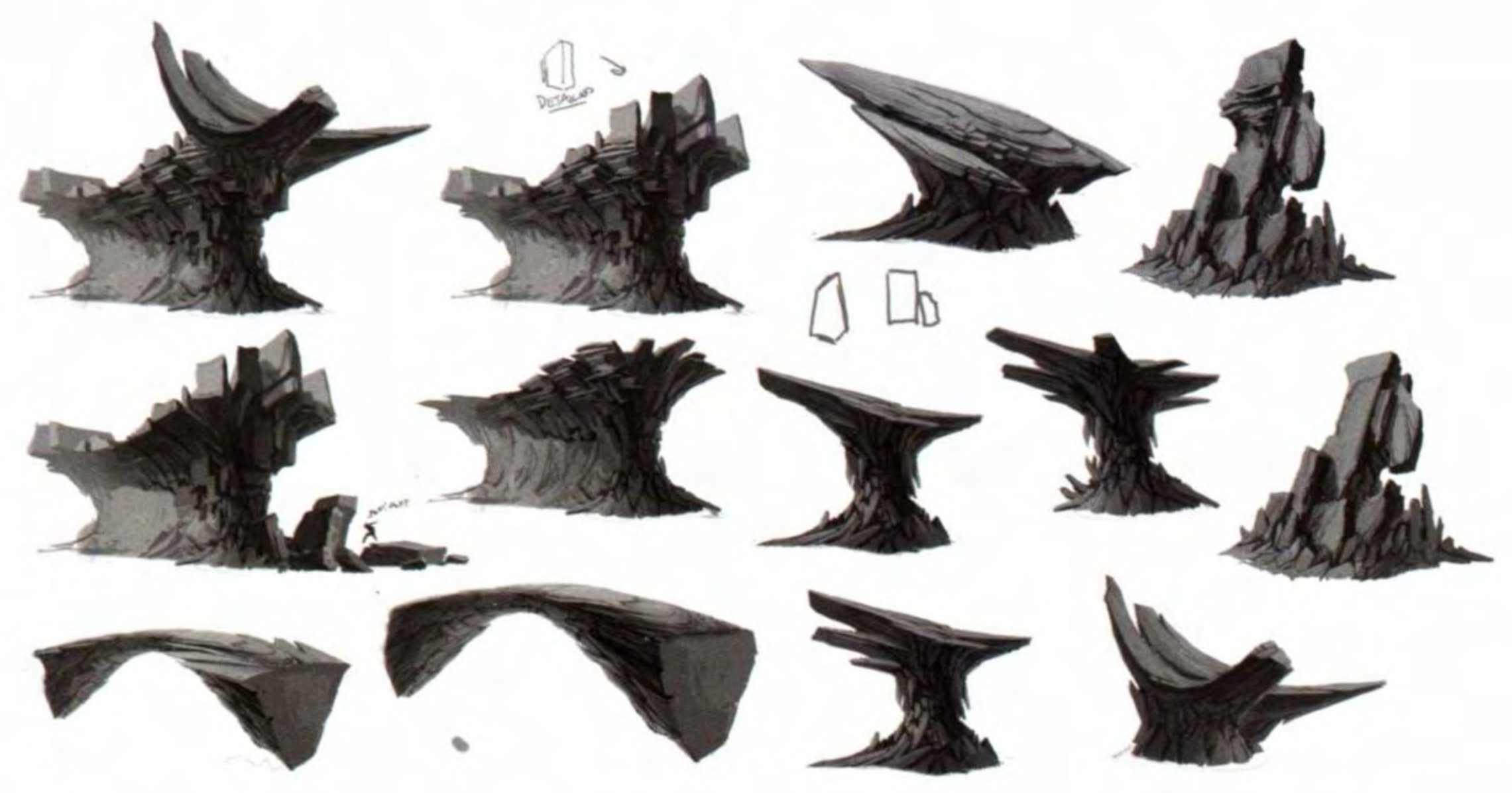
Door
opens
like
teeth
a bit
intimidating

Open
grassland - track in from Train thing -

PAIDORA PARK
Entrance

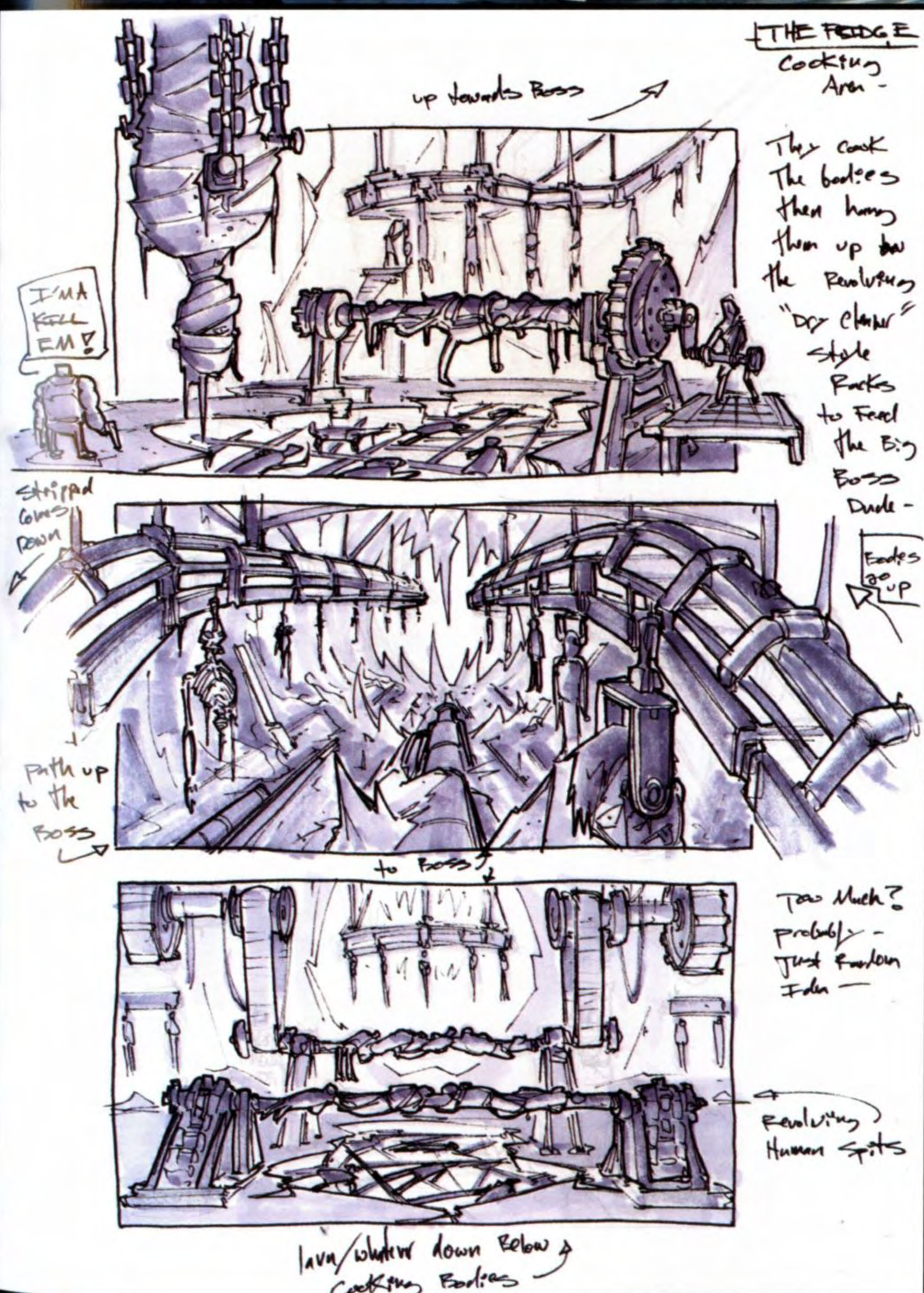


"It's surprising how much rocks influence the feel of a landscape," Duc says. "In *Borderlands*, we always want a very dangerous, deadly feel for all of our areas. In the landscape, rocks are one of our tools that we use to convey these moods. A lot of these flat, chipped away surface structures were influenced by shale deposits." The illustration below was "a quick painting to see how the different rock shapes might integrate into a grasslands type environment."



Boulder Concepts
[Kevin Duc] Top
Boulder Concepts
[Kevin Duc] Bottom





THE FRIDGE

The feral Rats of Pandora needed a special place to call home, and the ice-cold Fridge ended up being the perfect location. "The idea depicted here," Duc says, "is that they've taken Bandits down into their frosty cave and encased them in ice for later use." In this case, "later use" means "leftovers."

Fridge Concepts

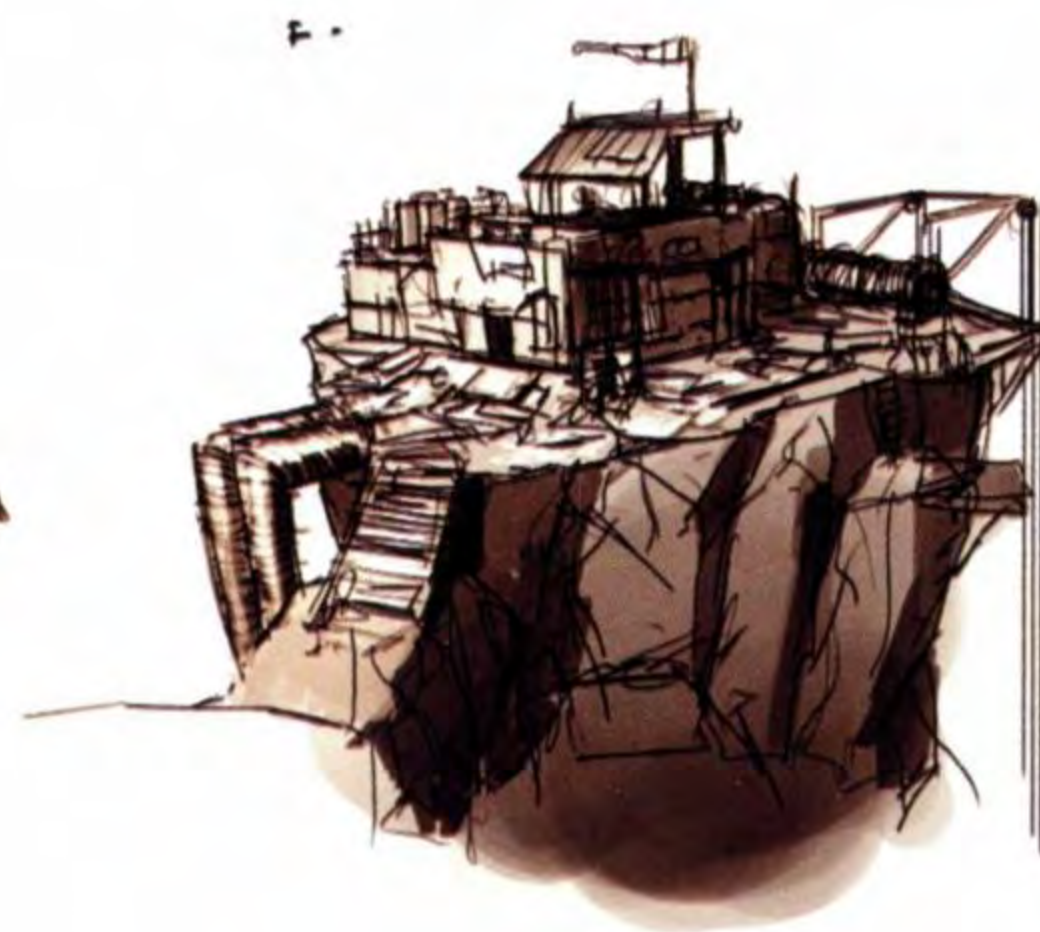
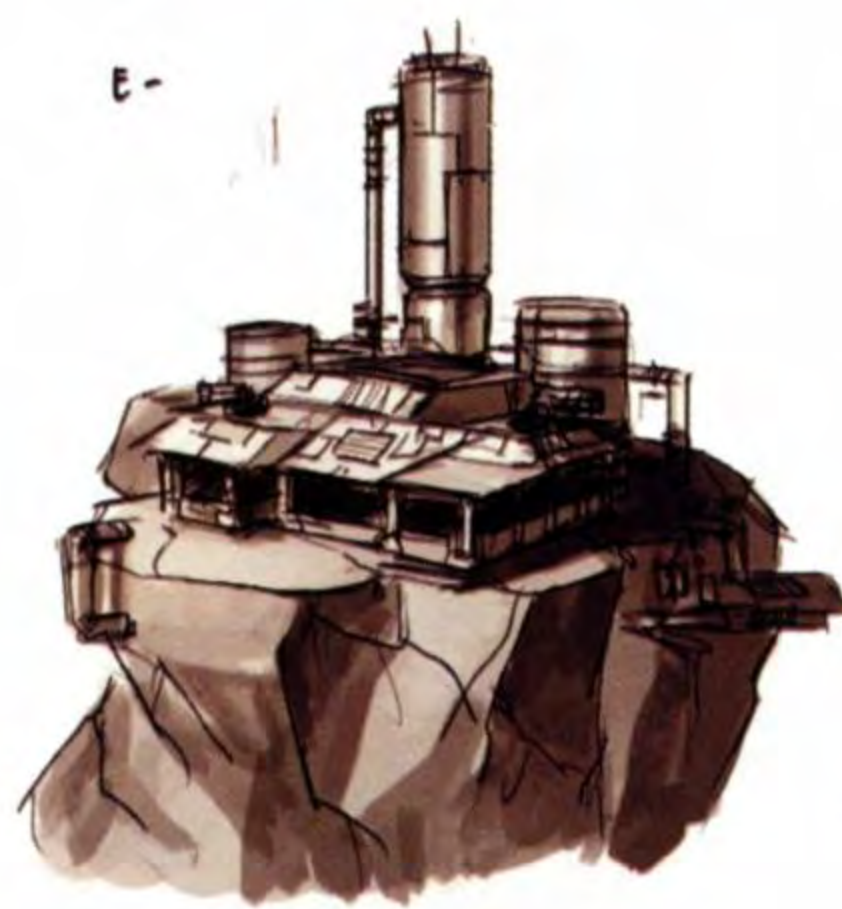
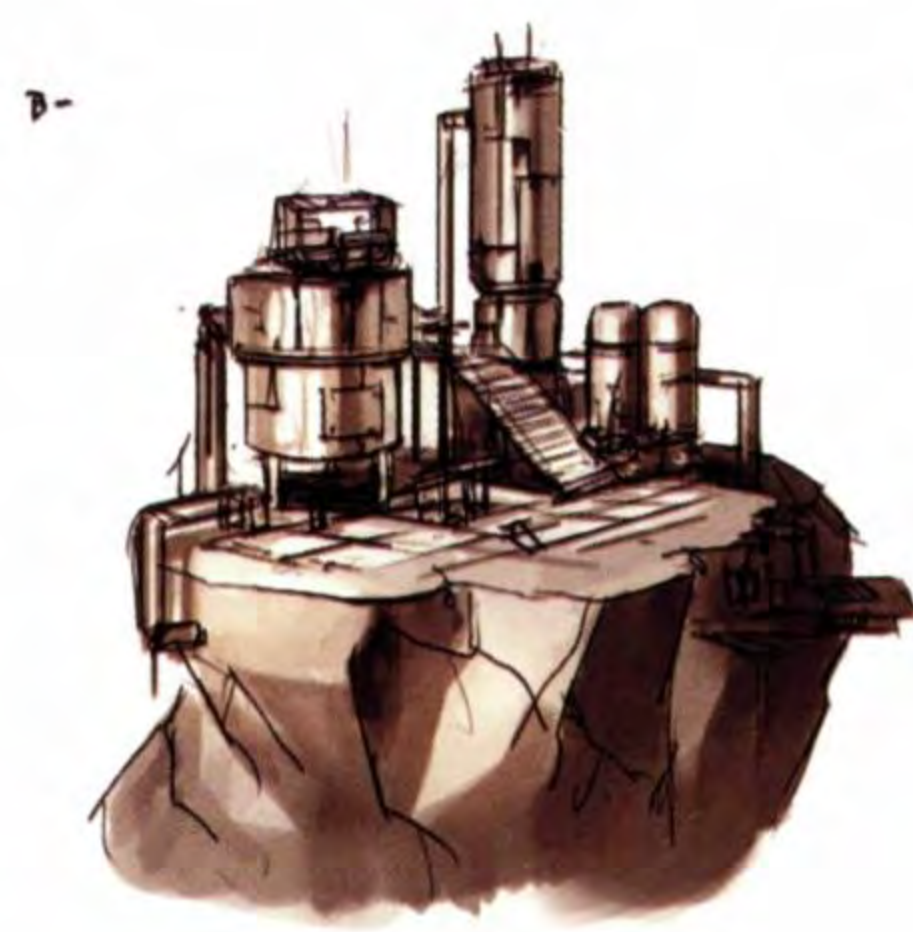
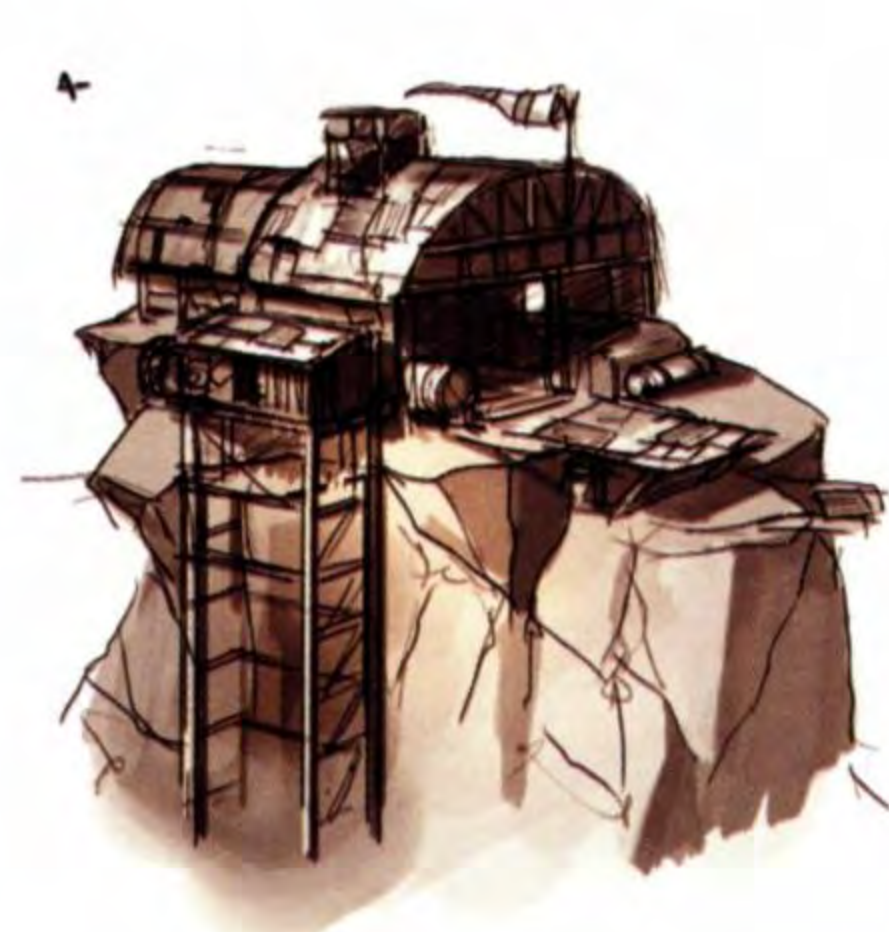
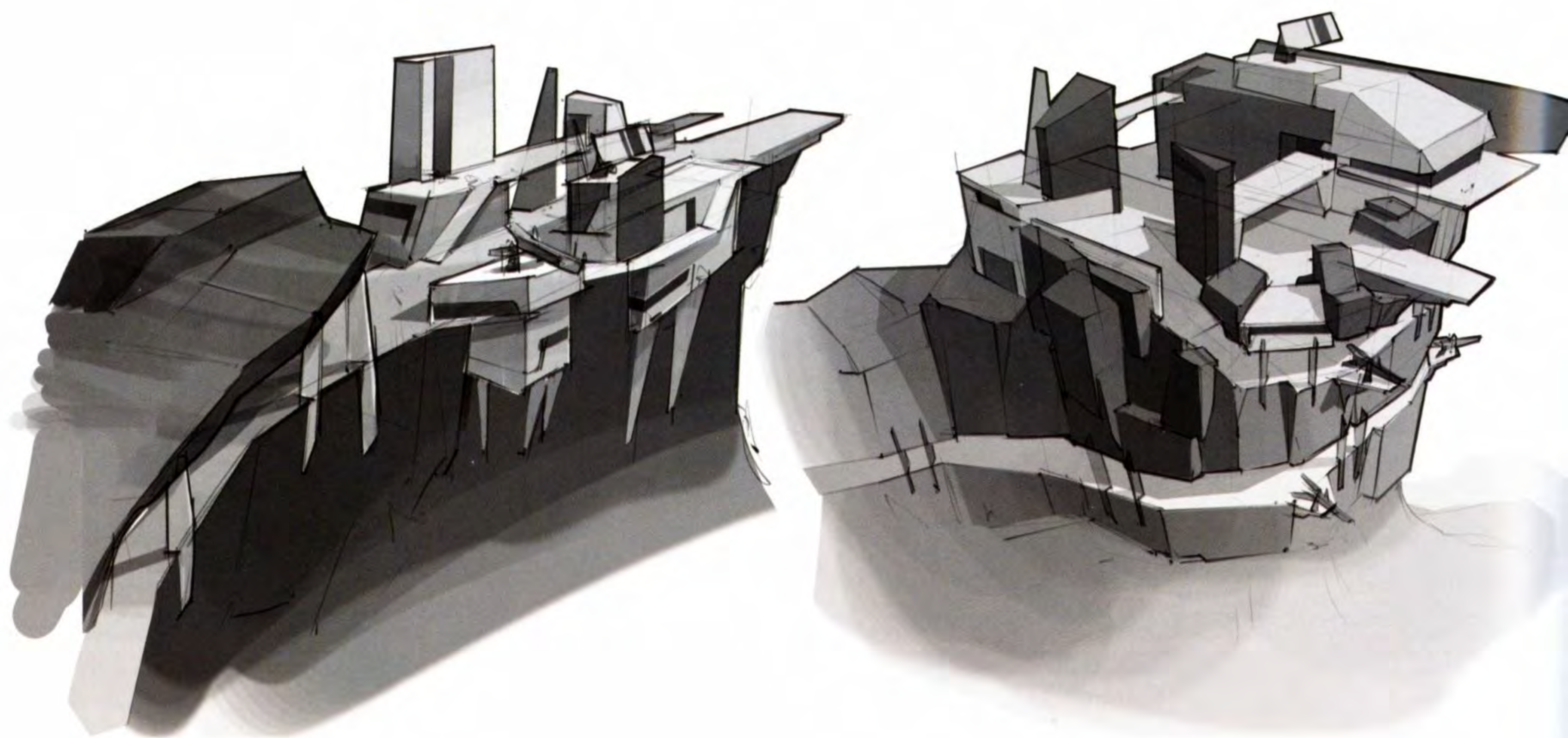
[Kevin Duc] Top

Fridge Concepts

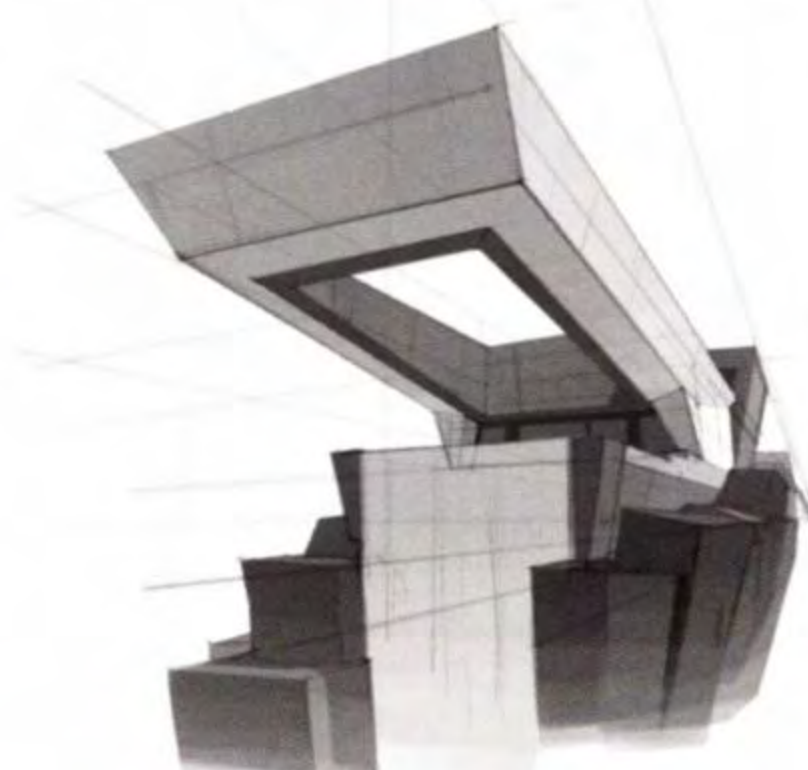
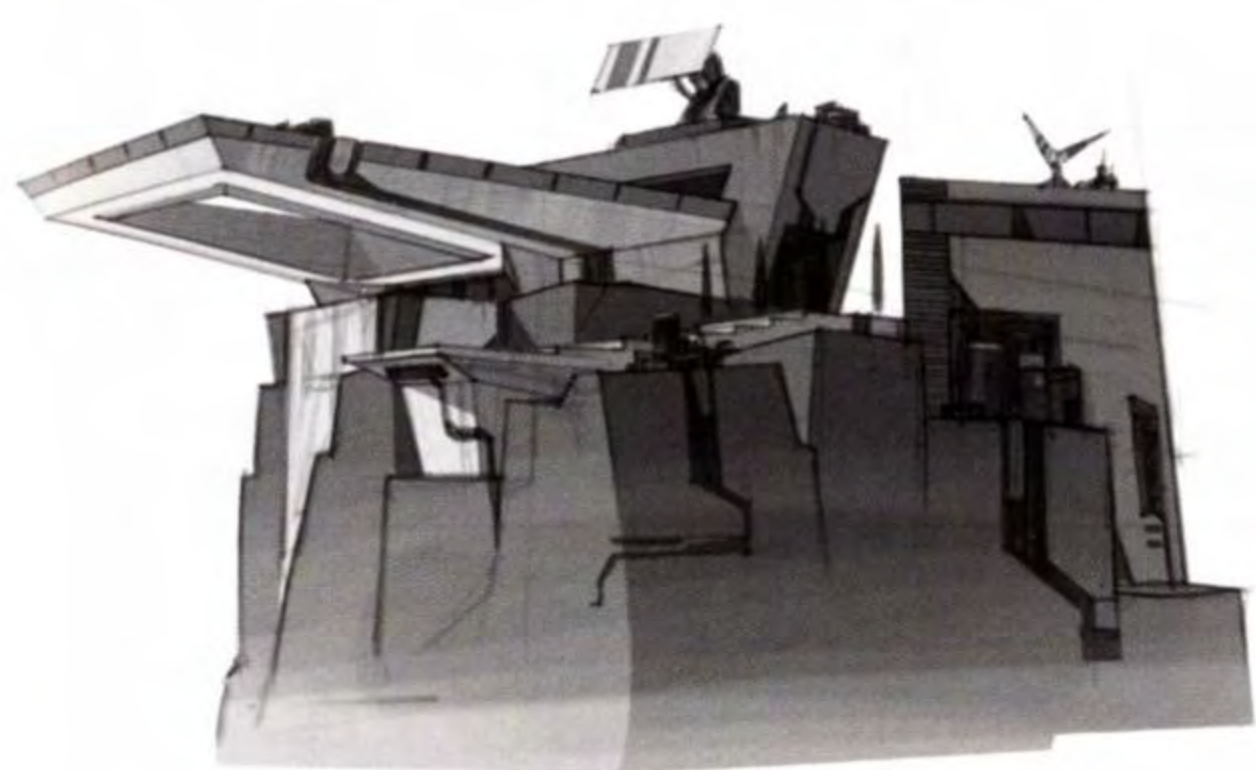
[Scott Kester] Left

THOUSAND CUTS

The Hyperion building atop Thousand Cuts was originally conceived of as Handsome Jack's house, says Kevin Duc. "Handsome Jack's fortress of solitude needed to be both a stronghold and a reflection of his egotistical character. The architecture is pompous, poured concrete superstructures in a modern style. The cliff complex needed to be extravagant while also reflecting Hyperion's cold, calculated design language."



Cliff Concepts
[Kevin Duc] *Top*
Cliff Concepts
[Matias Tapia] *Bottom*



Cliff Concepts

[Kevin Duc] *Left*

Cliff Concepts

[Matias Tapia] *Below*

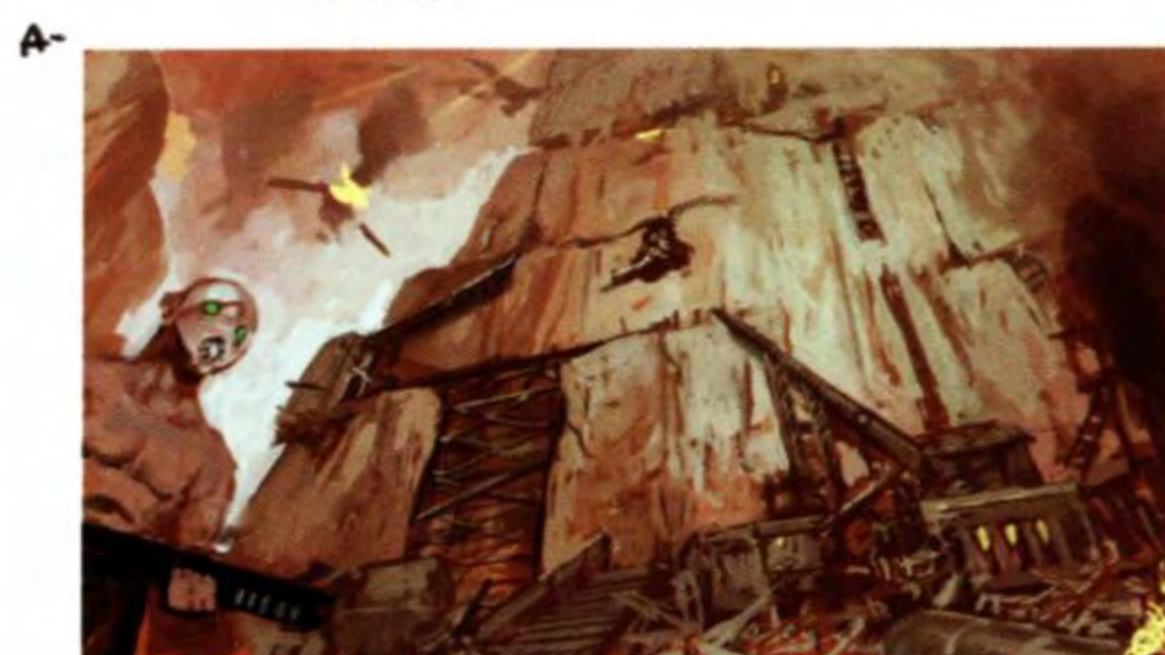
Cliff Concepts

[Matias Tapia] *Bottom*

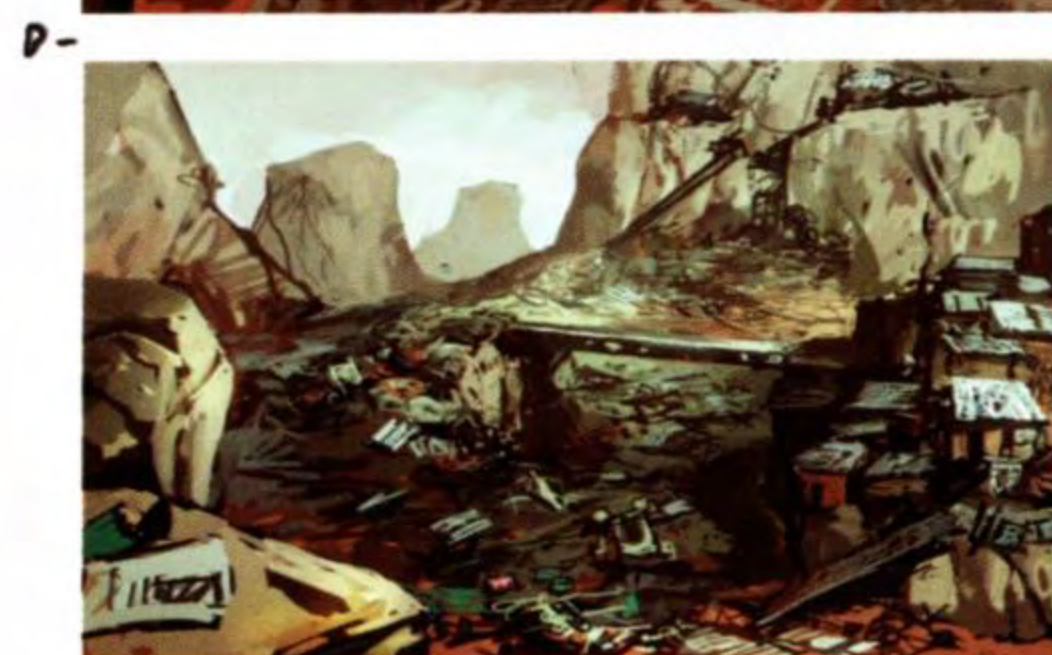
Hypenion..



Bandit



Color Comp.

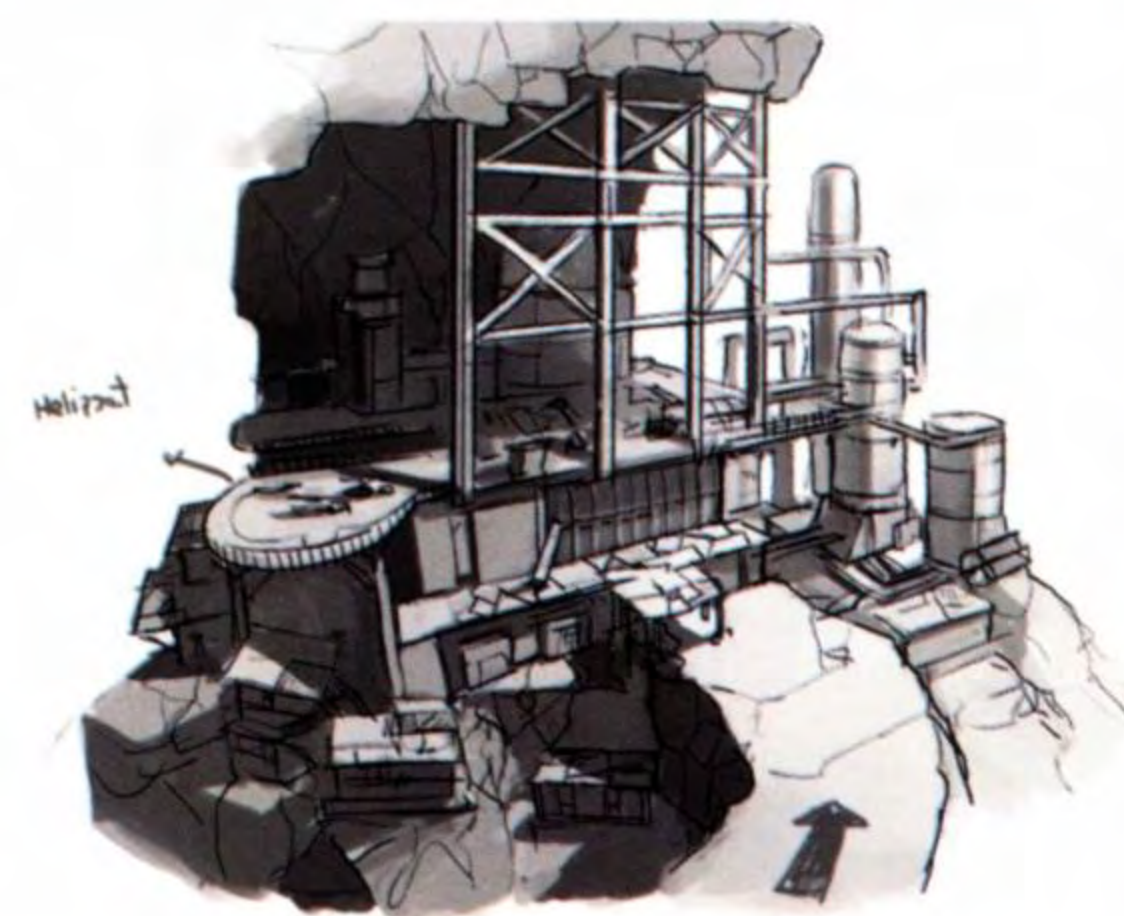


↓
Pilot or
Teach!!



GYROCOPTER FACTORY AND JACK'S BUNKER

"The fight up to Handsome Jack's fortress needed to feel epic," says Kevin Duc. "The house was intended to sit on the edge of the Grasslands and Ash. I pulled a lot of influence from the recent volcano in Iceland, and thought that a giant, lightning bolt laden volcanic plume would be a perfect backdrop to the player's first encounter with Jack."



Artist Matias Tapia was tasked with creating a Buzzard factory—before the Buzzards had actually been designed and built. "At this point, I think we didn't have a Gyrocopter yet, but needed to have a factory. So, the factory sketches were sort of designed to be an abandoned Hyperion factory instead of what it actually became."

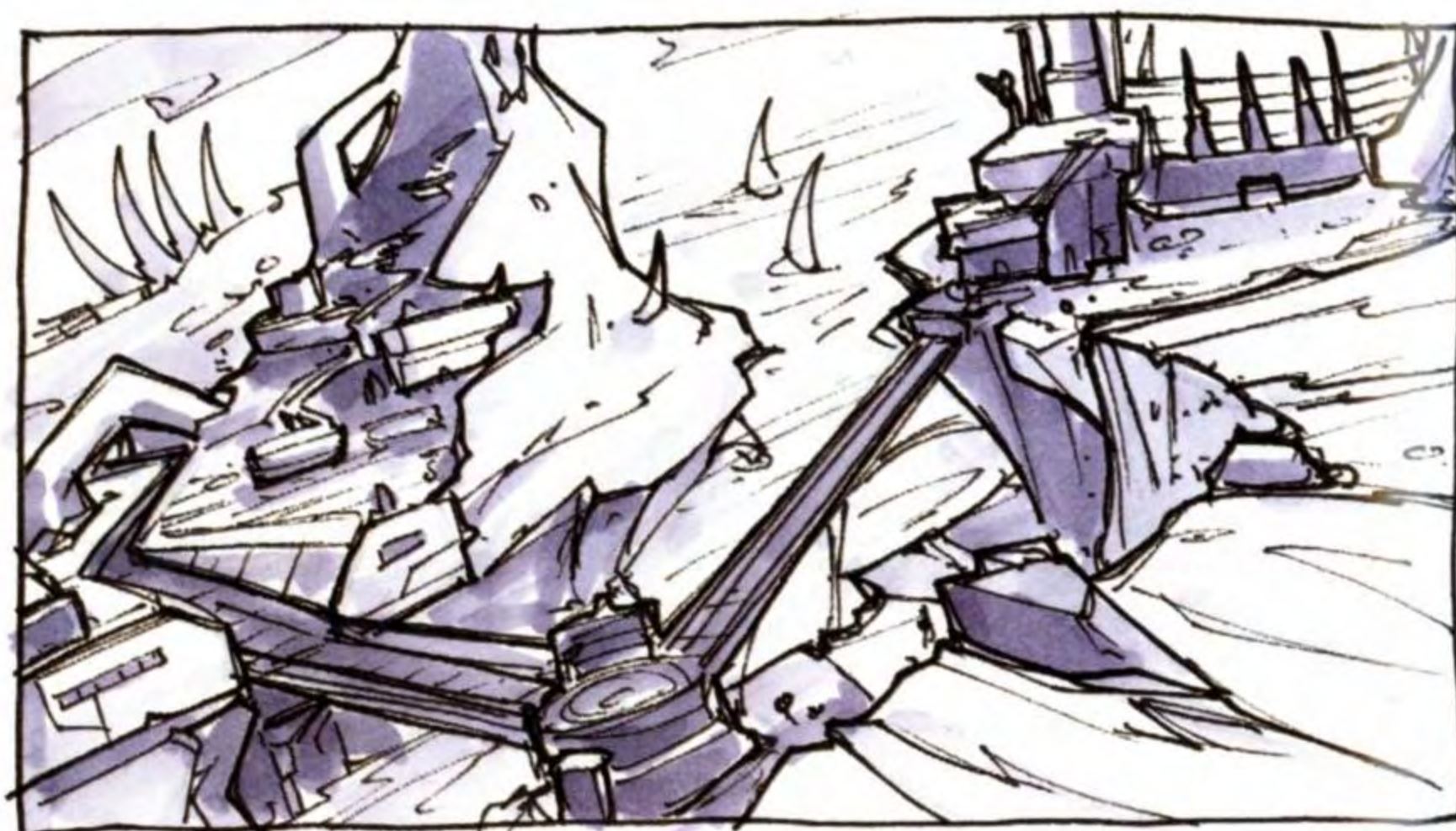
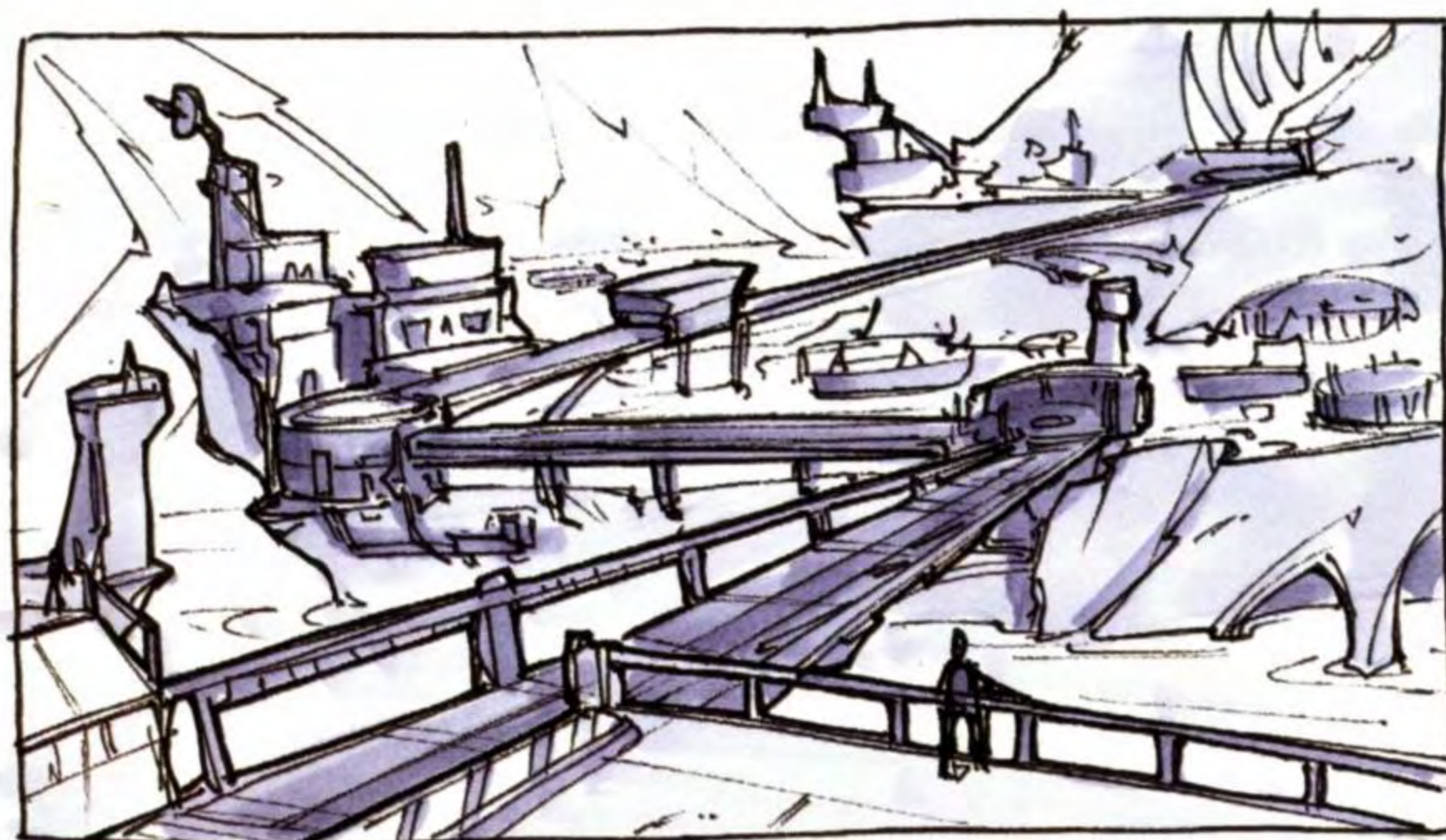
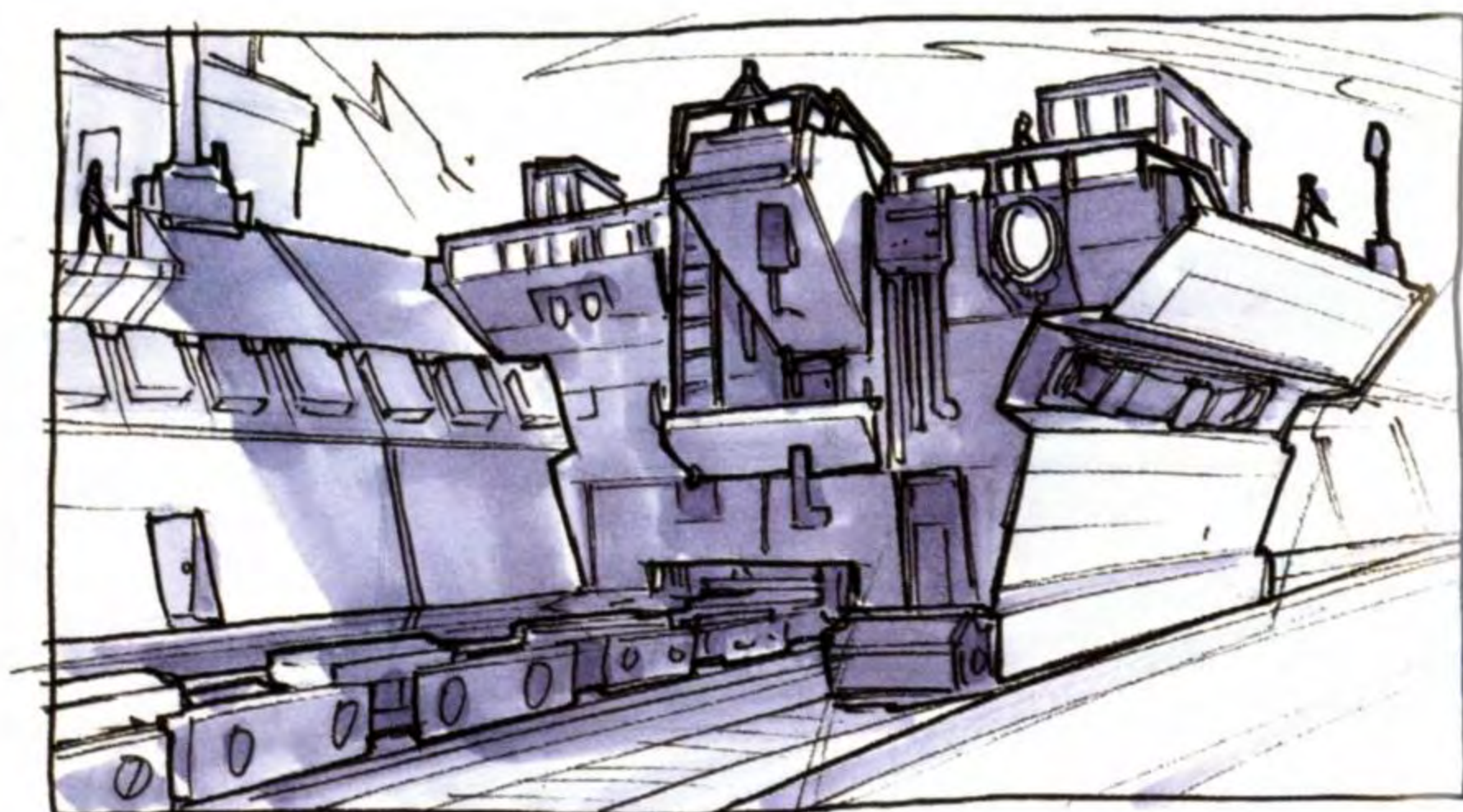


Factory Concept [Matias Tapia]
Jack's Bunker Concept [Kevin Duc] *Right*



WILDLIFE EXPLOITATION PRESERVE

The Wildlife Exploitation Preserve—half-jokingly referred to as “Pandora Park” internally—was always thought of as a Hyperion-made creature experimentation area smack-dab in the middle of the grassy Highlands. “Our environment artists requested a paint for ideas on integrating a research facility into a rocky outcropping,” Kevin Duc says. “This piece tries to convey the dirty, poisoned environment and the harsh Hyperion architecture.”

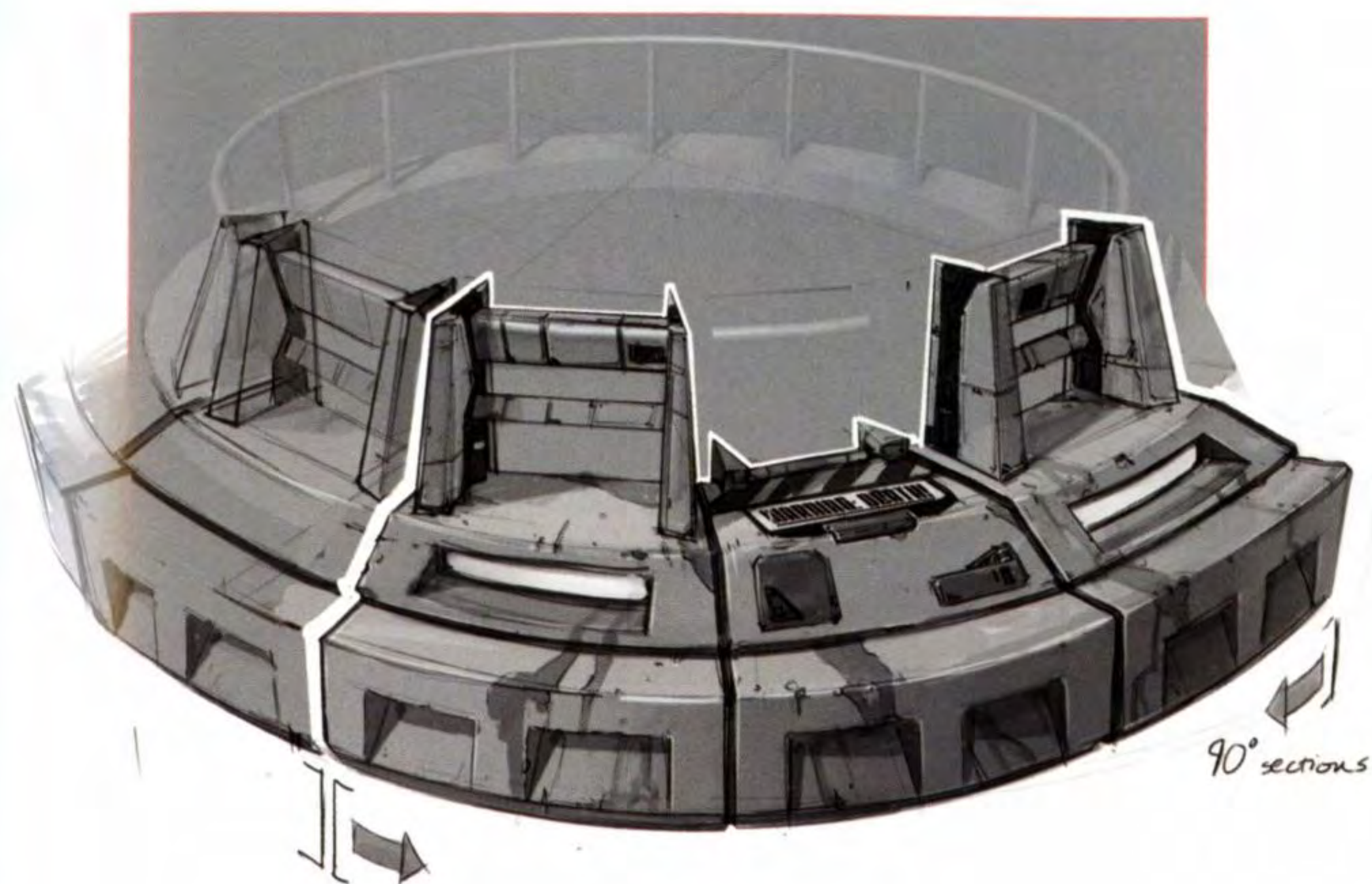


Pandora Park Concepts

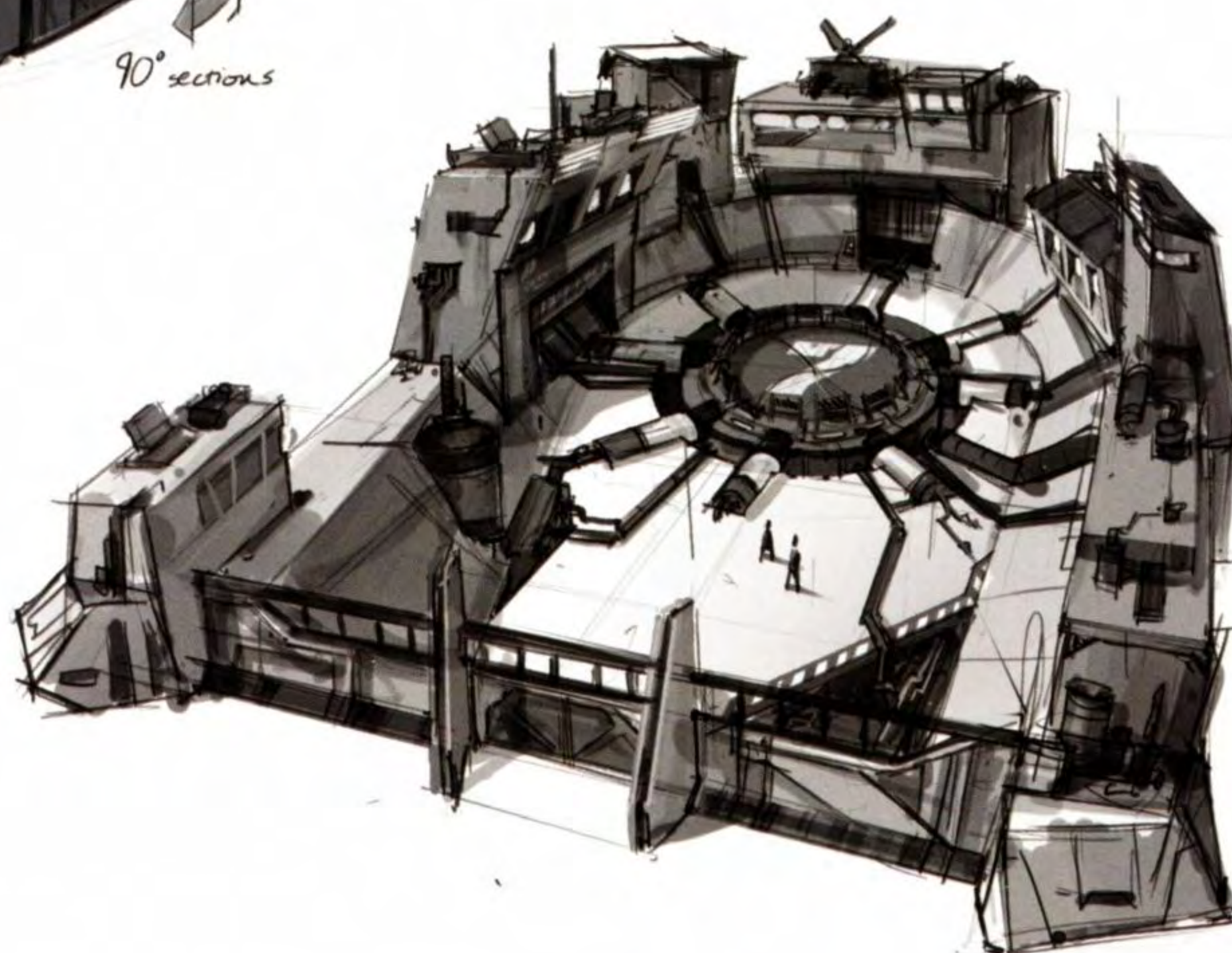
[Scott Kester] Above

[Kevin Duc] Below



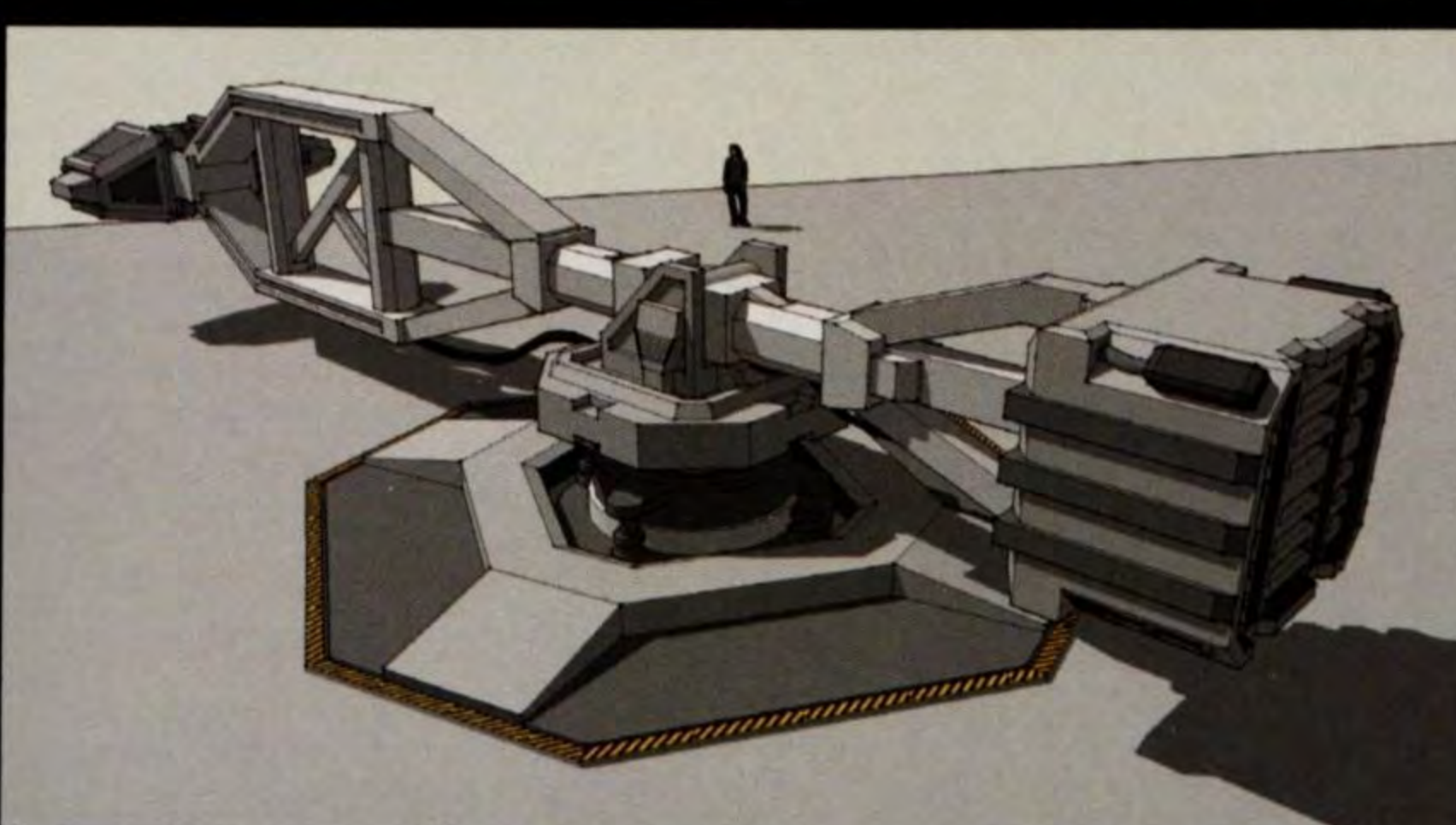
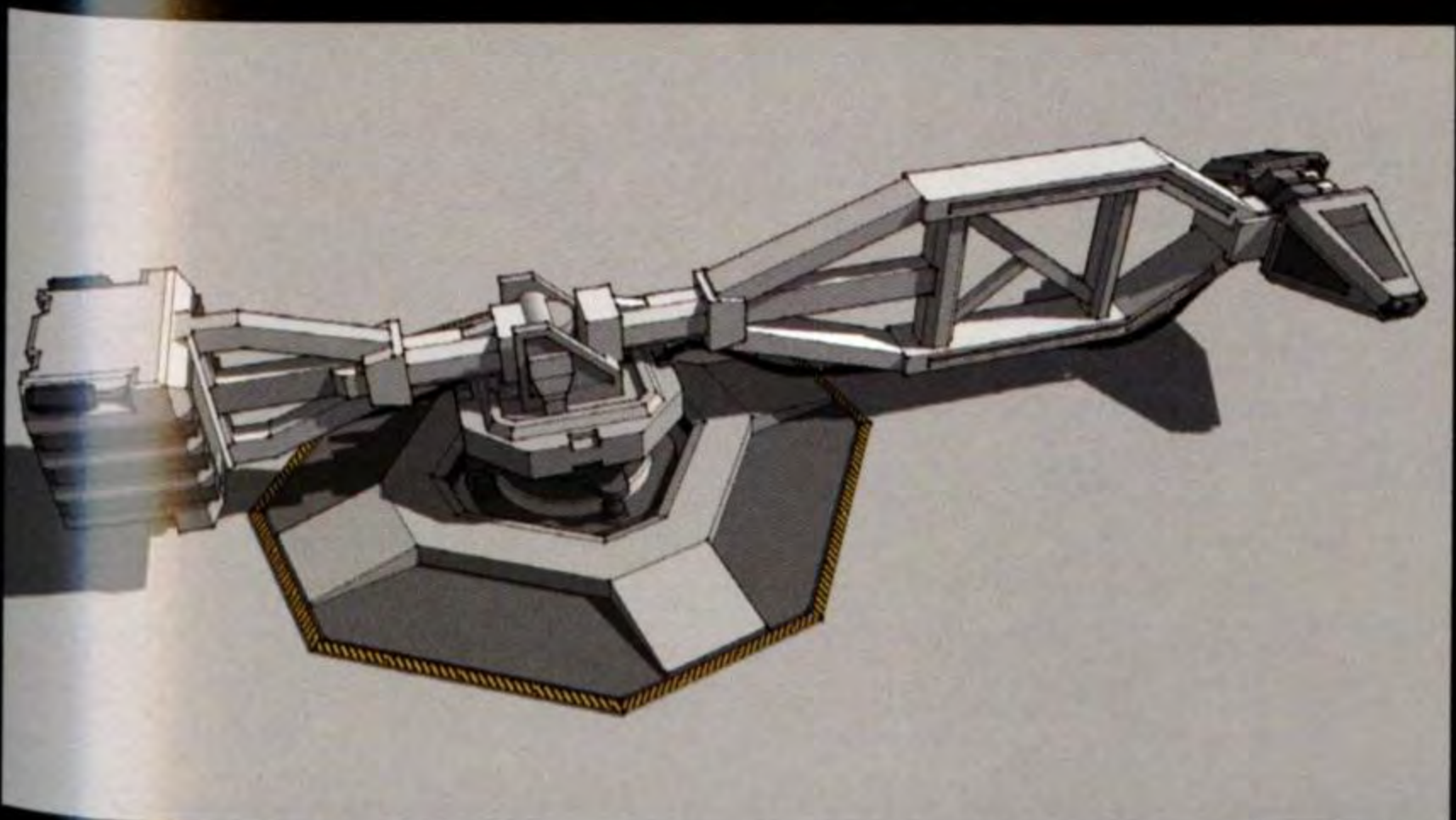
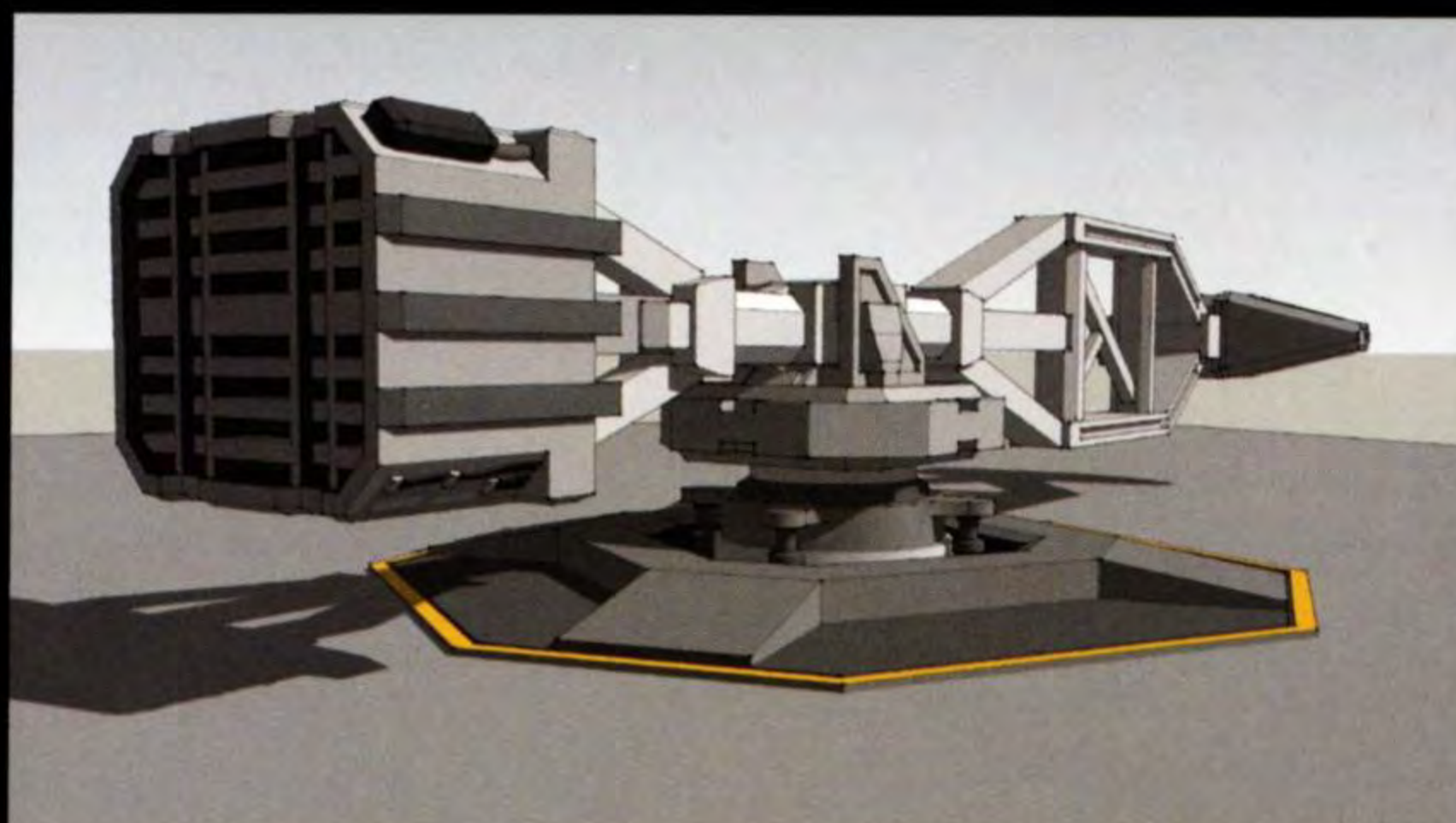
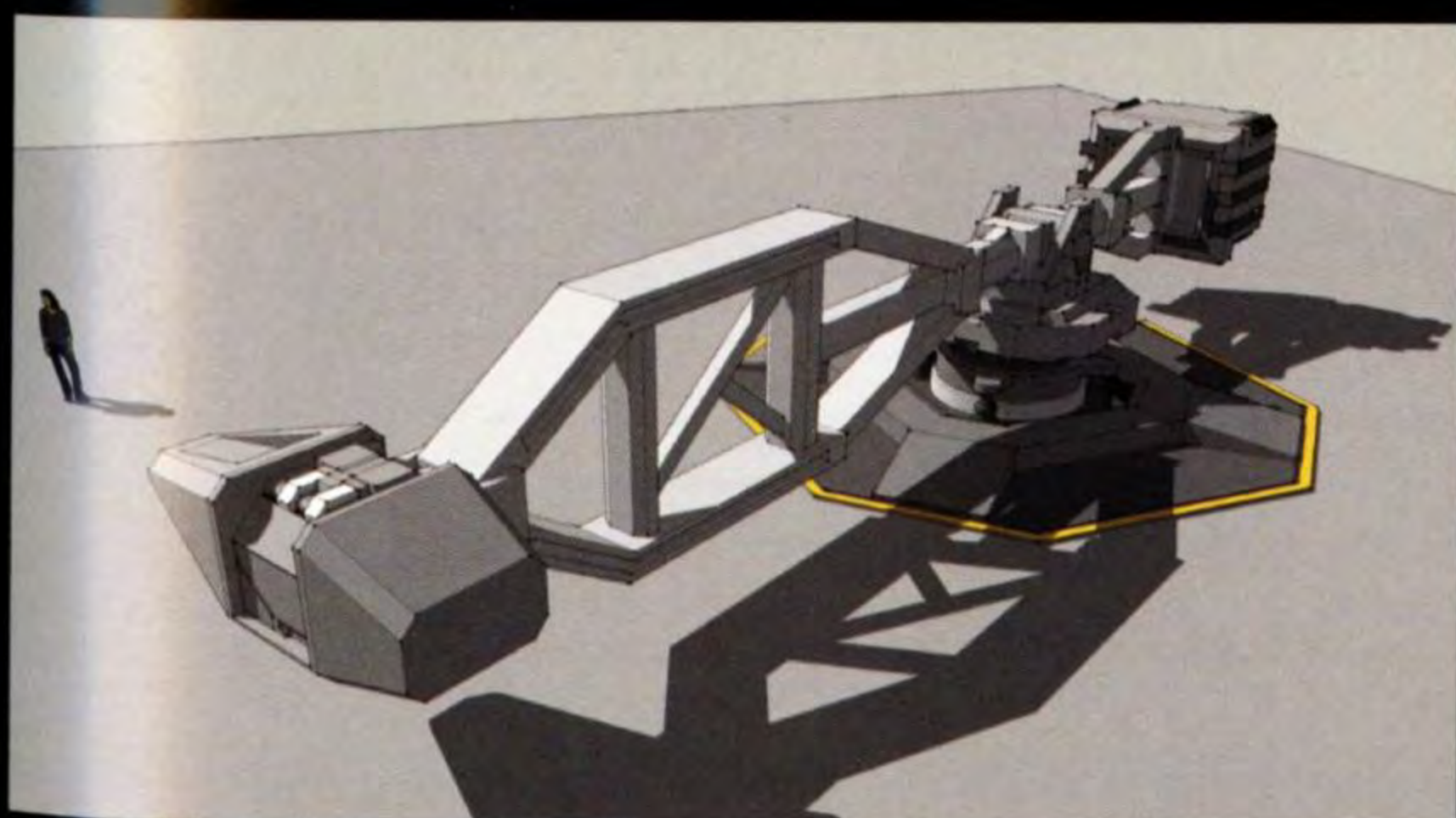


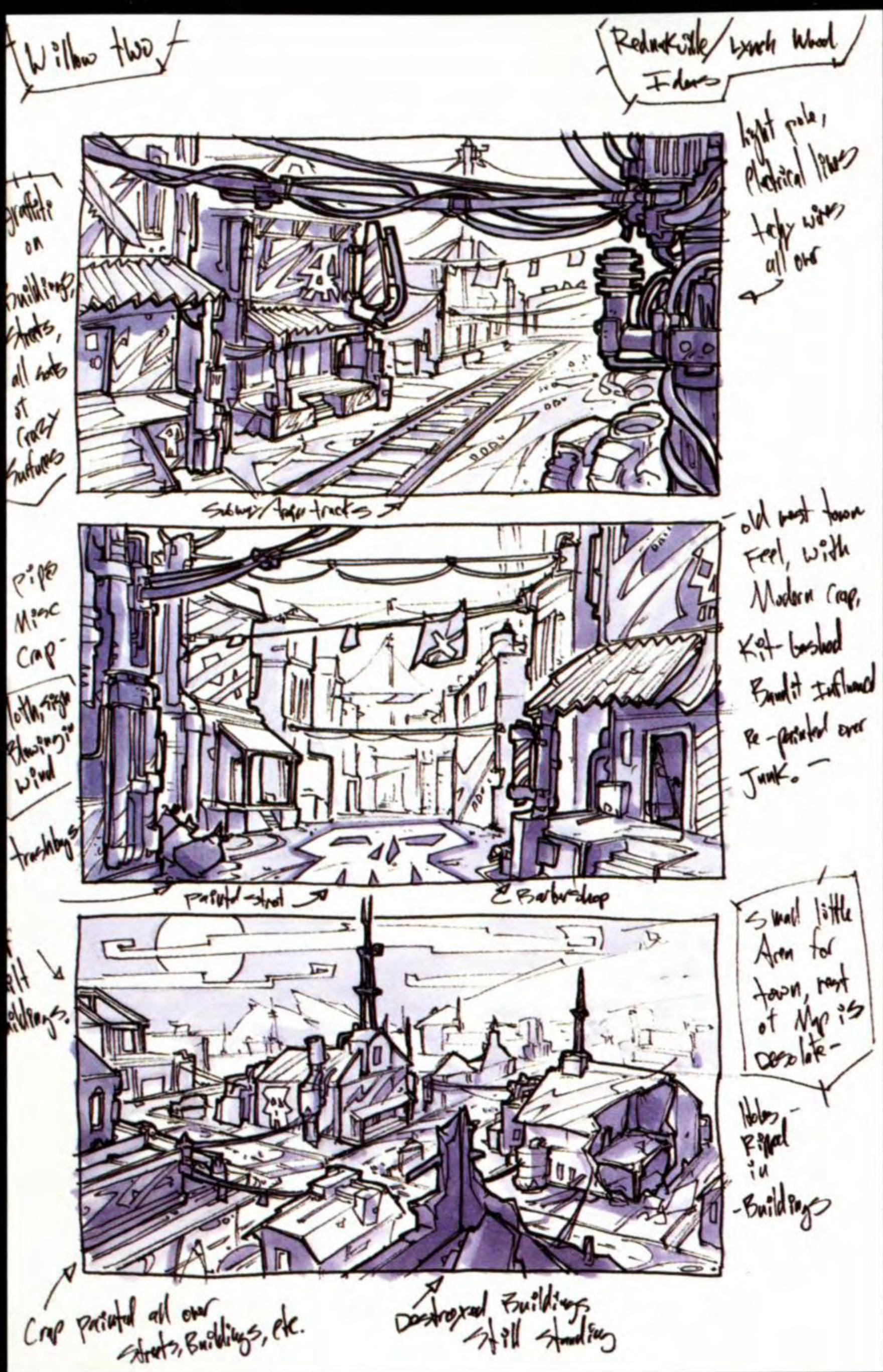
Once the design team knew they wanted the player to fight a gigantic Bloodwing, the boss fight arena needed to be designed. Kevin Duc says, "The Bloodwing fight needed a closed space to host a controlled battle. These pieces defined what Hyperion guard rails and buildings might look like within the research facility, as well as the general layout of the Bloodwing encounter."



Bloodwing Arena Concepts [Kevin Duc] *Above, Right,*
Centrifuge Concepts [Lorin Wood] *Below*

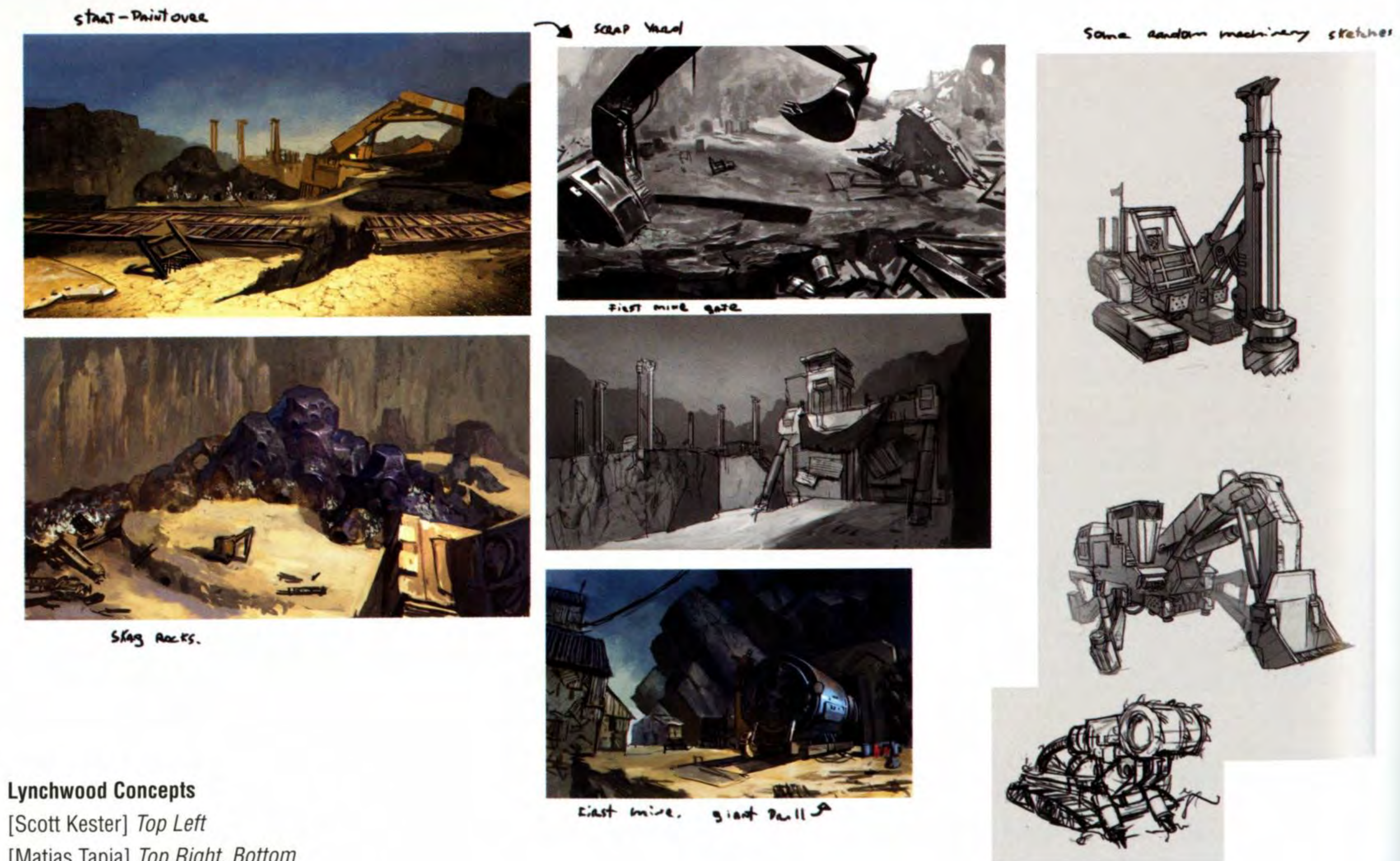
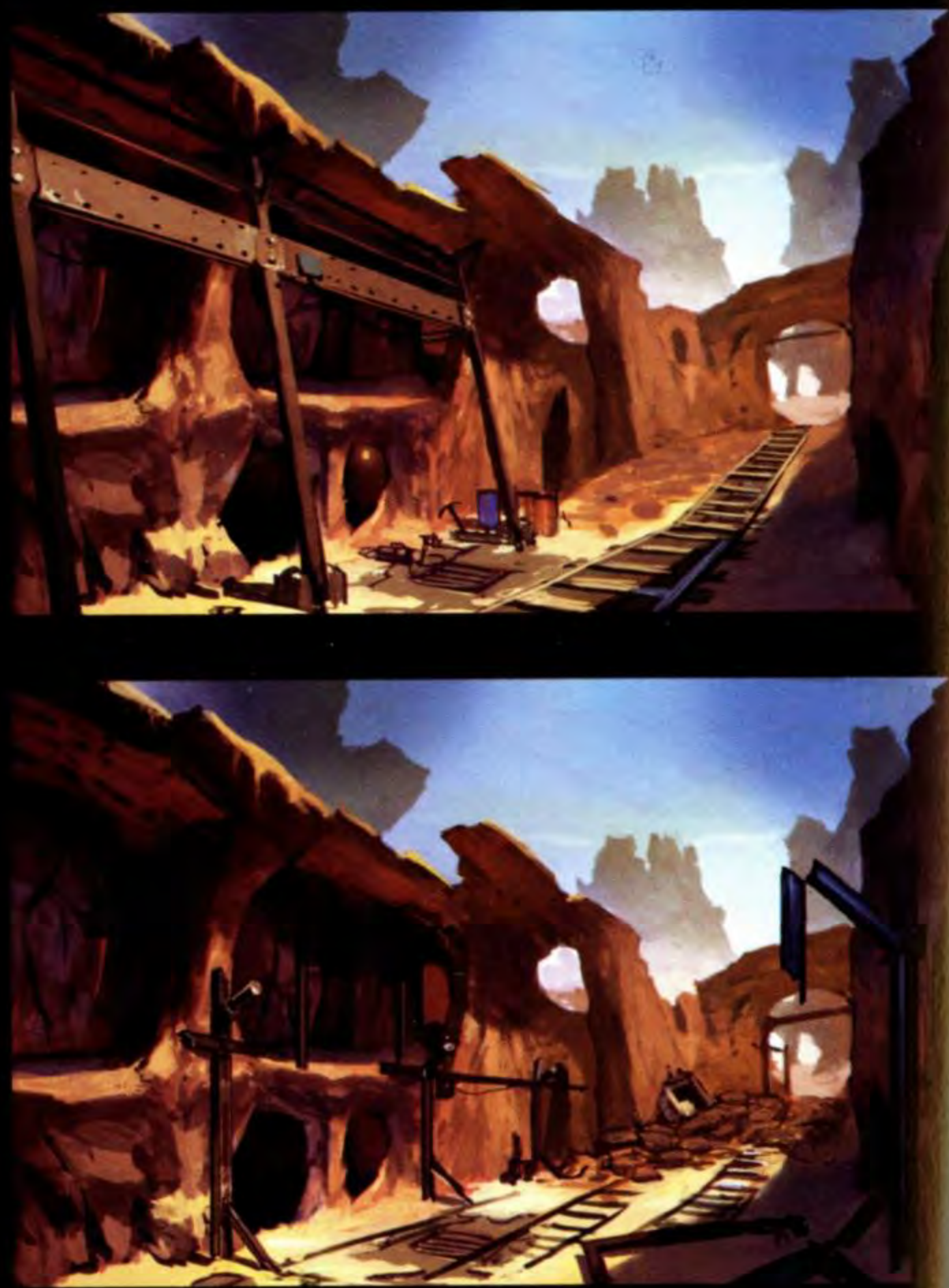
"I bypassed traditional media and elected to just crank this design out completely in 3D as it was so geometric that seemed to be the logical tool," says Lorin Wood. "Some poor critter was crammed into the angular pod at the end. The shrieking..."



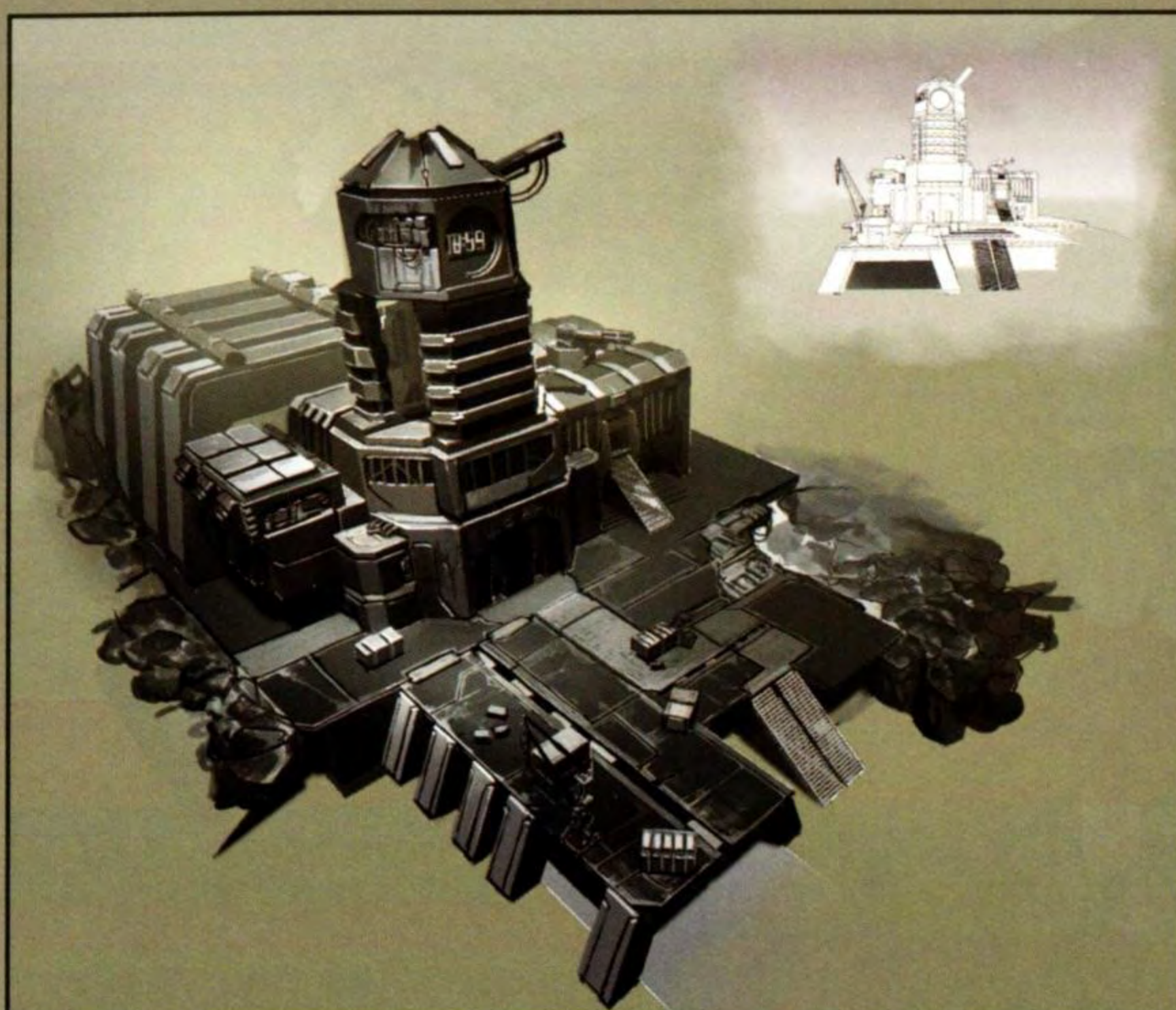


LYNCHWOOD

The team knew they wanted a classic Wild West-style town for *Borderlands 2*—a place where you could easily imagine a tumbleweed rolling down the street and over the body of the gunslinger you just shot in the head during high noon. Lynchwood became that town.



Lynchwood Concepts
[Scott Kester] Top Left
[Matias Tapia] Top Right, Bottom



These concepts for Lynchwood explored how the team could repurpose existing assets (the bus, the digger wheel) to give the city a new visual identity. The bus graveyard, in particular, stood out as particularly cool.

Lynchwood Concepts [Matias Tapia] *Above*
Longwall Components [Matias Tapia] *Below*



OPPORTUNITY

The Hyperion-built city of Opportunity represents Handsome Jack’s hopes for the future—that one day, all of Pandora might look as clean and shiny and unnervingly fascist as Opportunity. “Hyperion has developed its own design language, which consists of a lot of 45 degree angles,” says Lorin Wood. “This city is the pinnacle of opulence and pristine architecture. I thought flying buttresses would be something interesting to see around this environment; hanging off the glass monoliths or arching over communal walkways.”

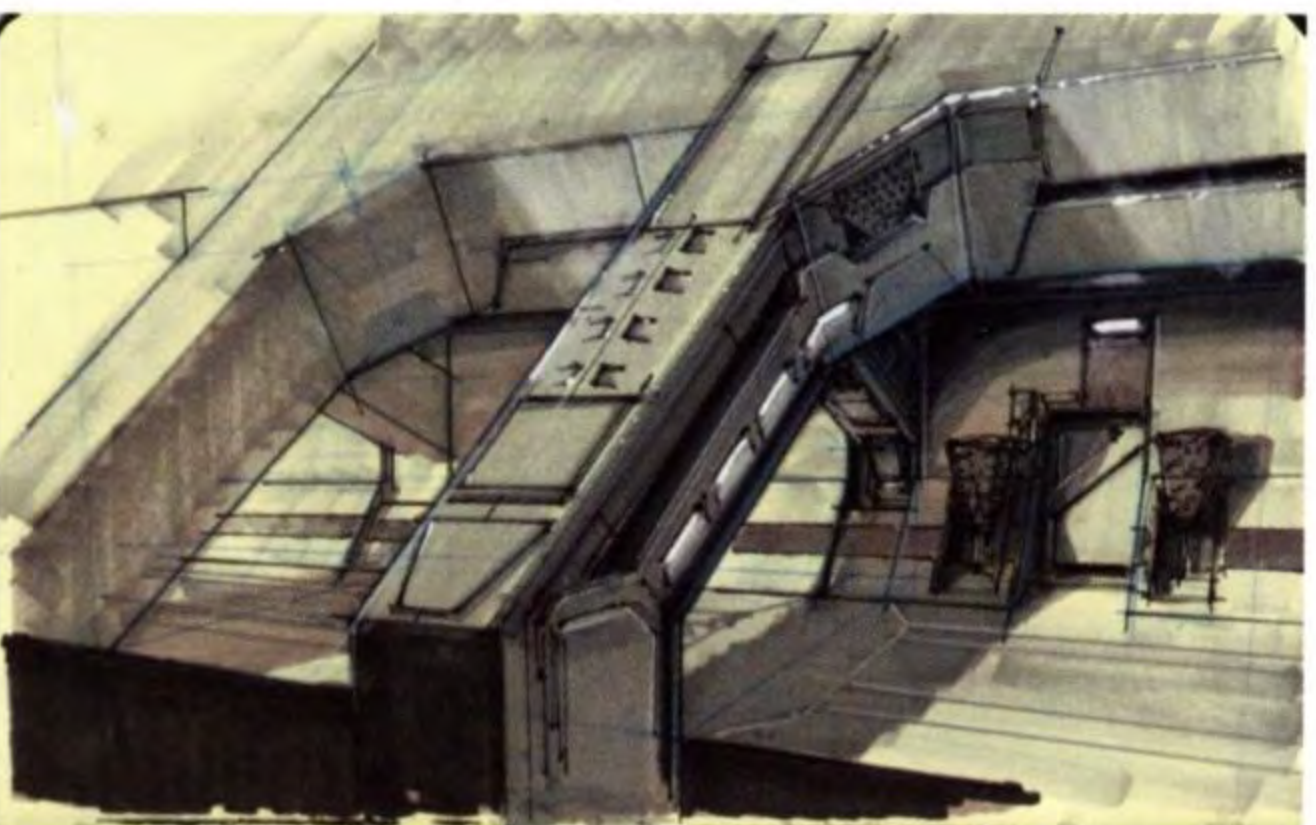
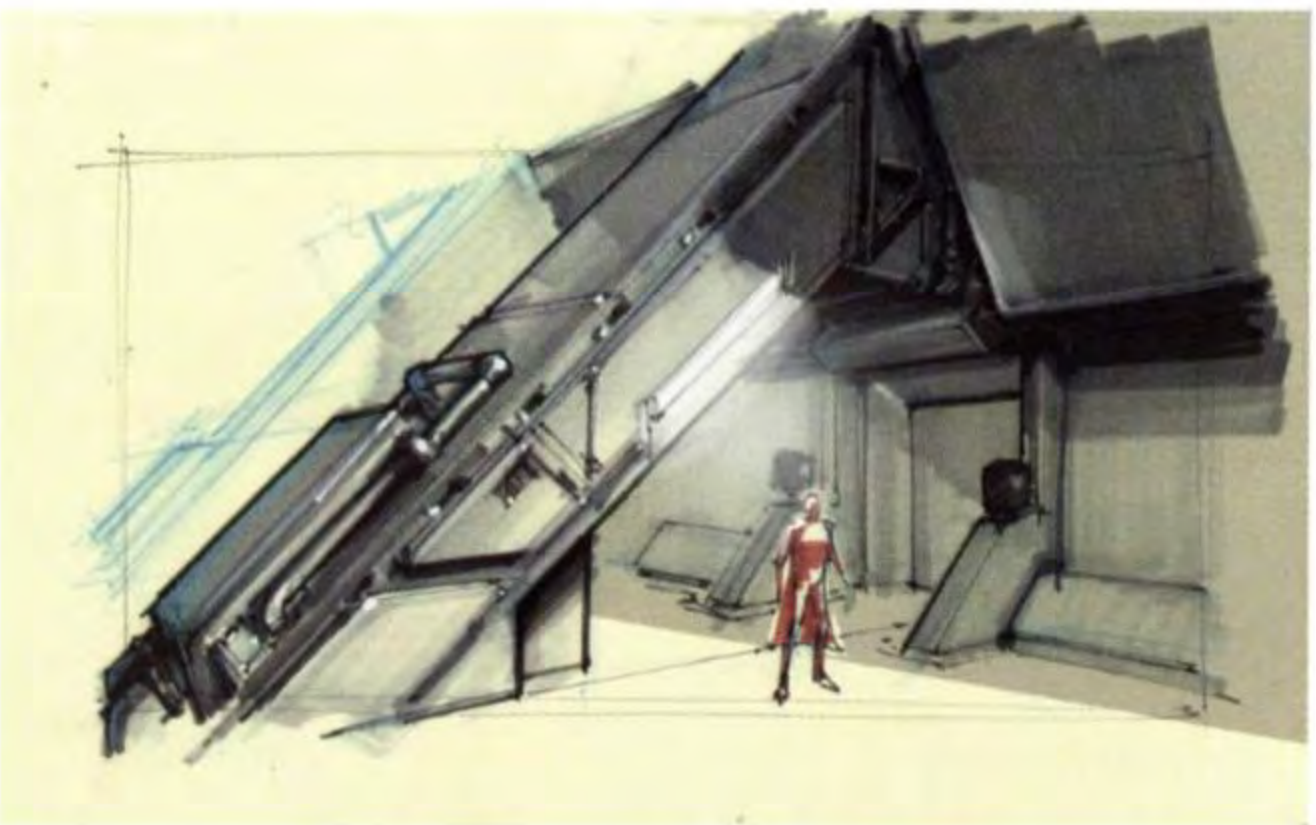
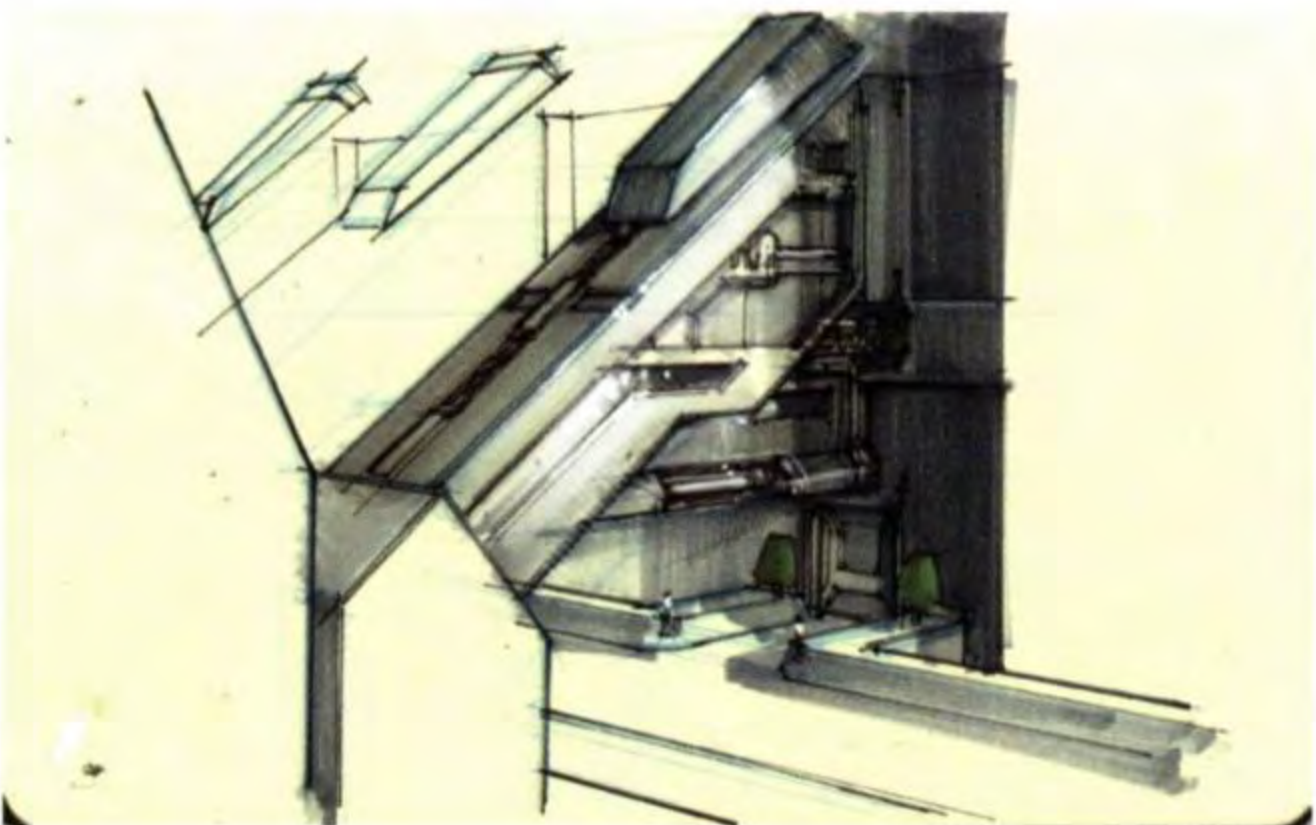
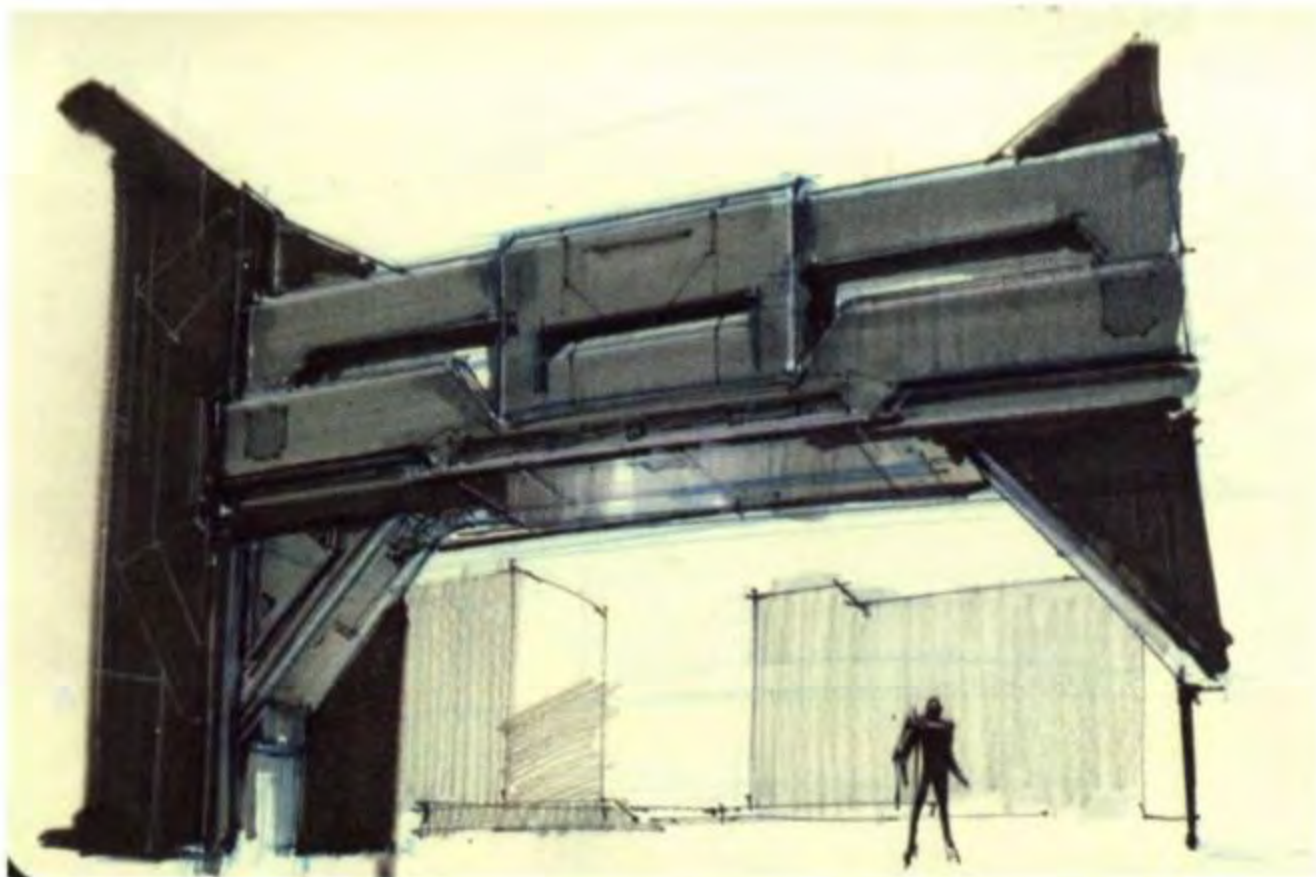


“These are sketches of an upgraded ‘New You’ machine in the Hyperion style,” says Kevin Duc.

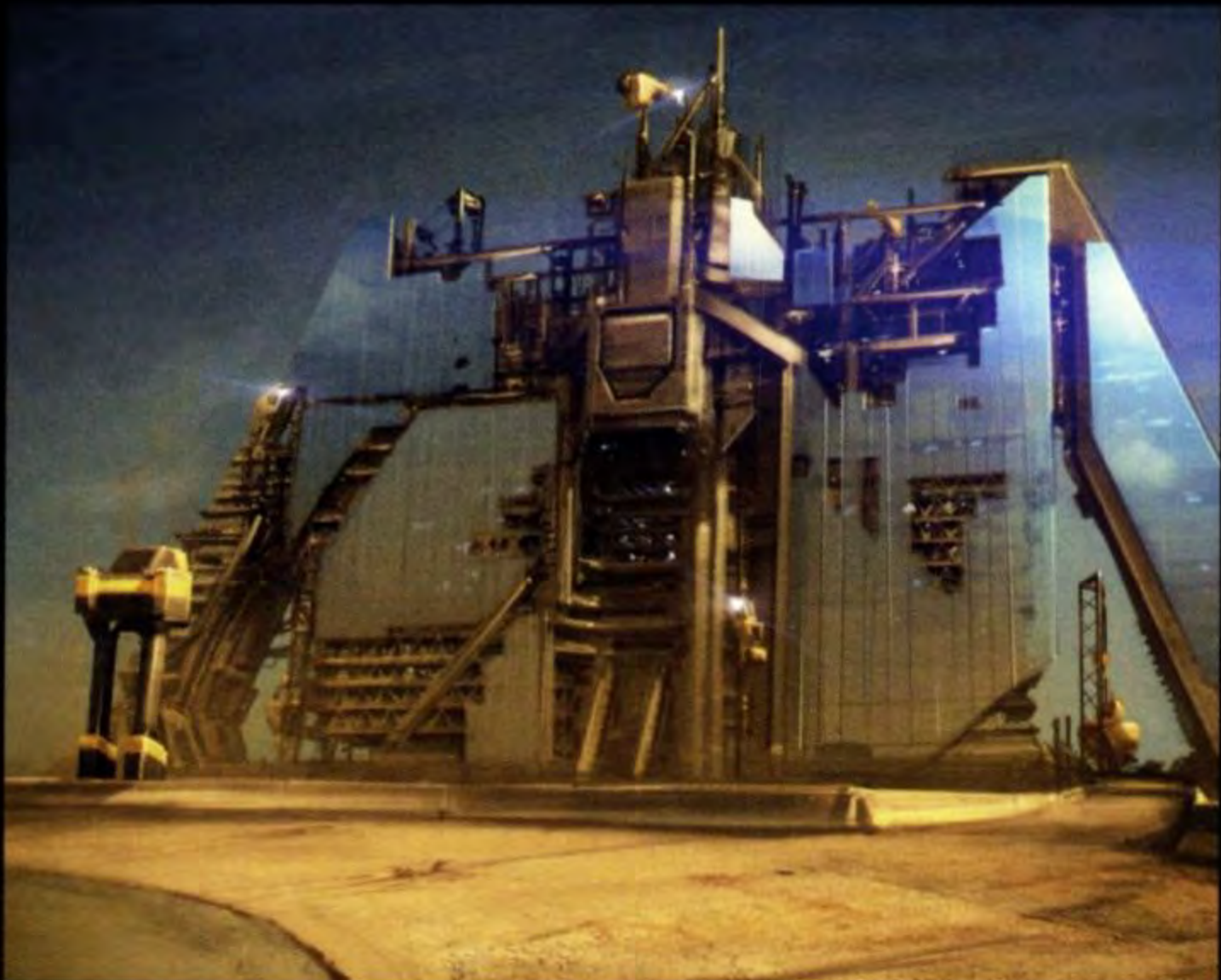
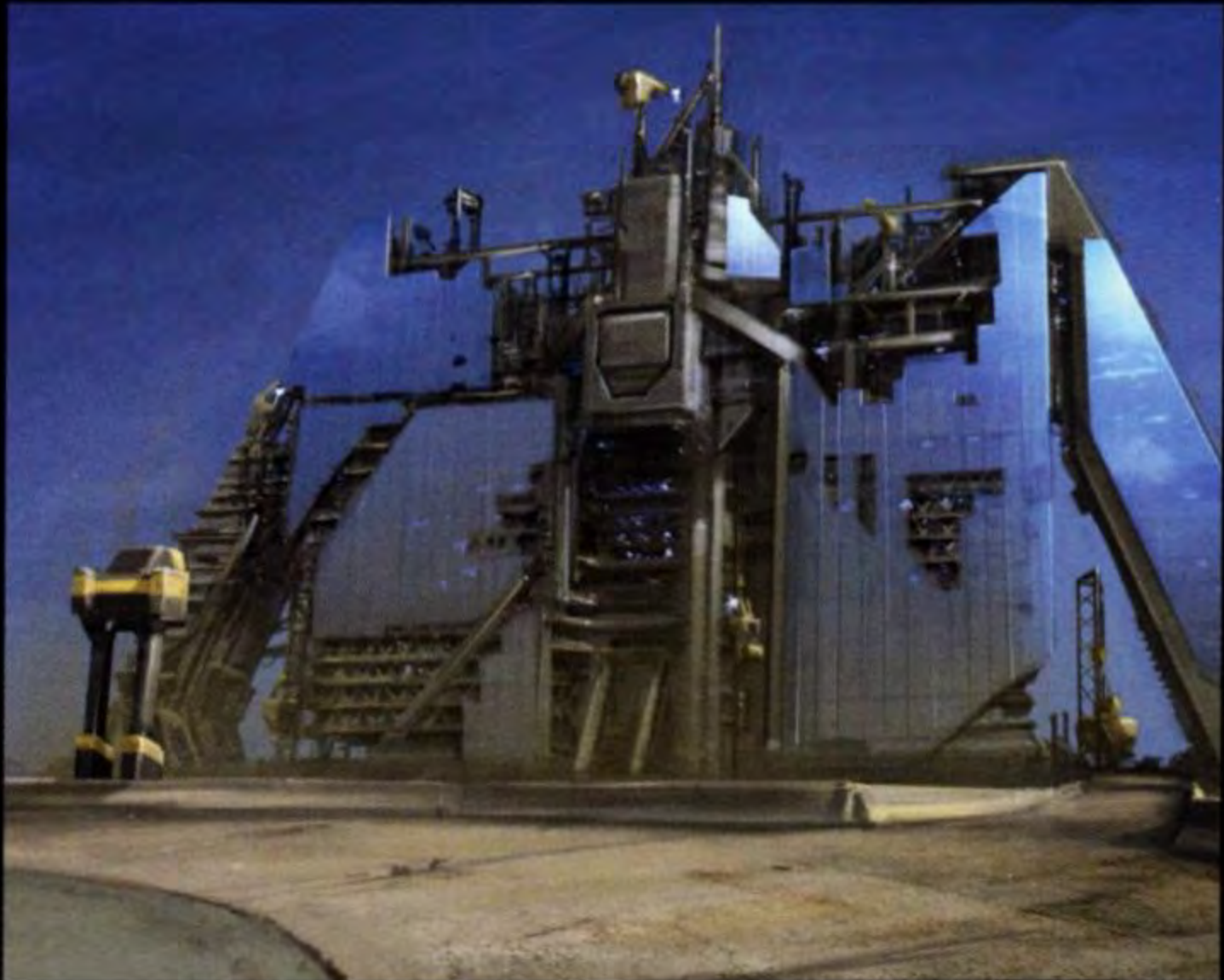
Hyperion City Concepts

[Kevin Duc] Above

[Lorin Wood] Below, Right



HYPERION



“This was a study of the type of architecture (both in scale, style, and ambition) that is the norm in Hyperion City,” says Lorin Wood.



"This illustration began with several photos from my plane window as I flew out over Long Beach, California, looking back towards Los Angeles," Wood says. "Handsome Jack is building his own little Dubai off shore, so this was the perfect angle to really show his flagrant disregard for anything but his ego. I imagined him completely stripping away the shoreline for miles and transferring that landmass to the man-made island."



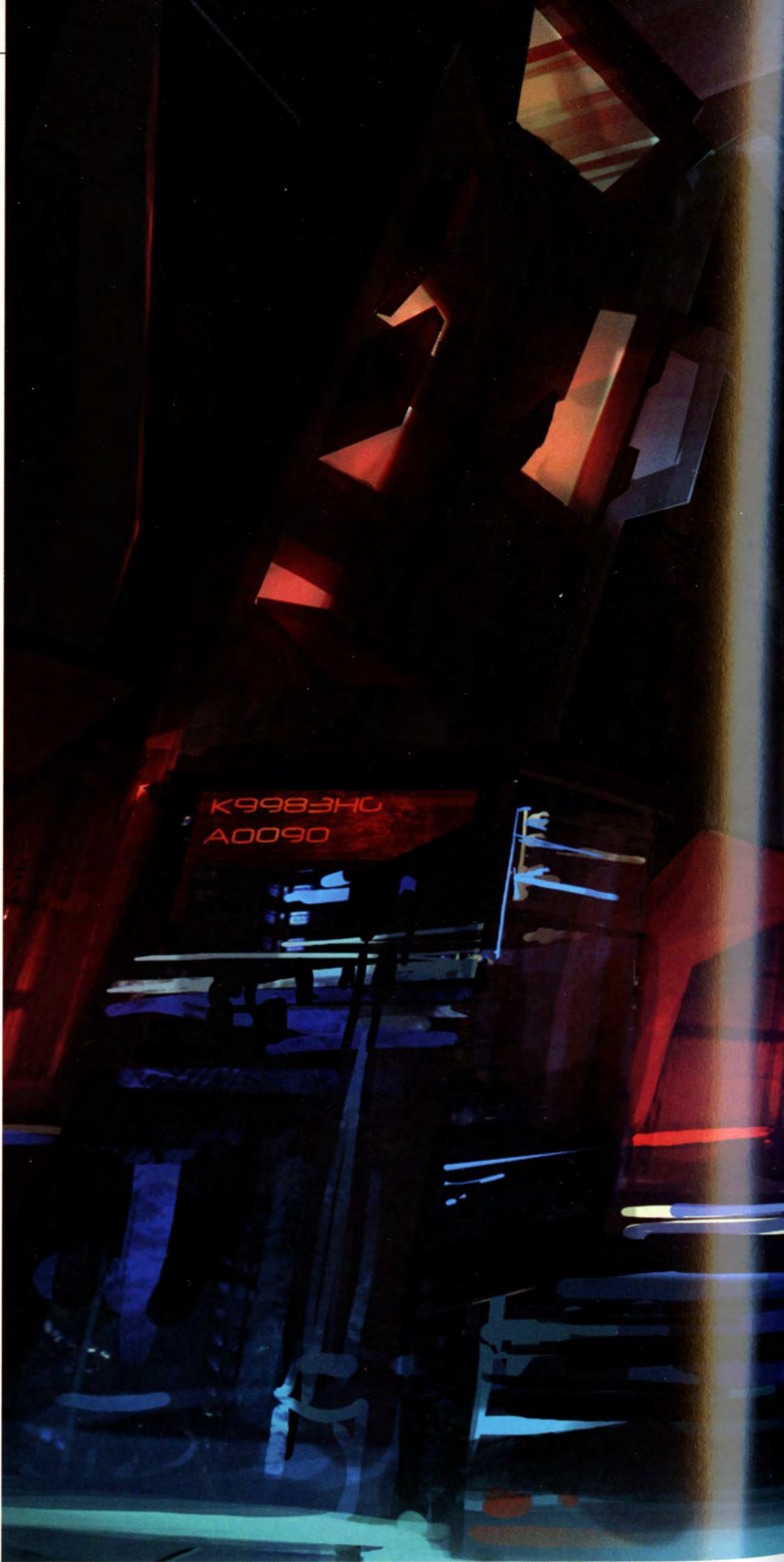
CONTROL CORE ANGEL

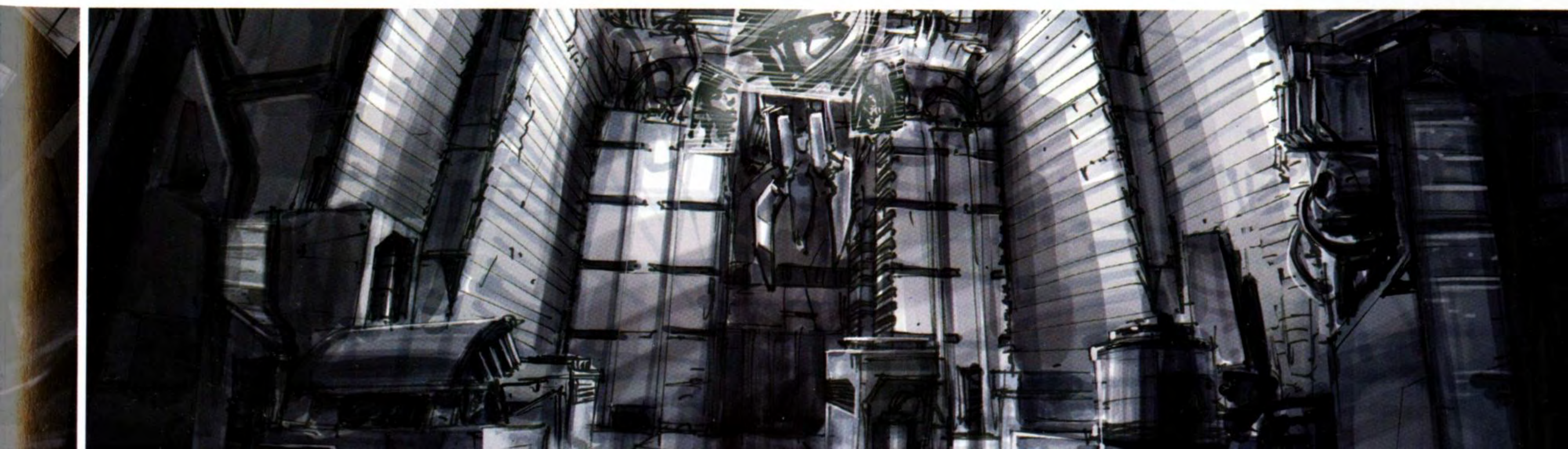
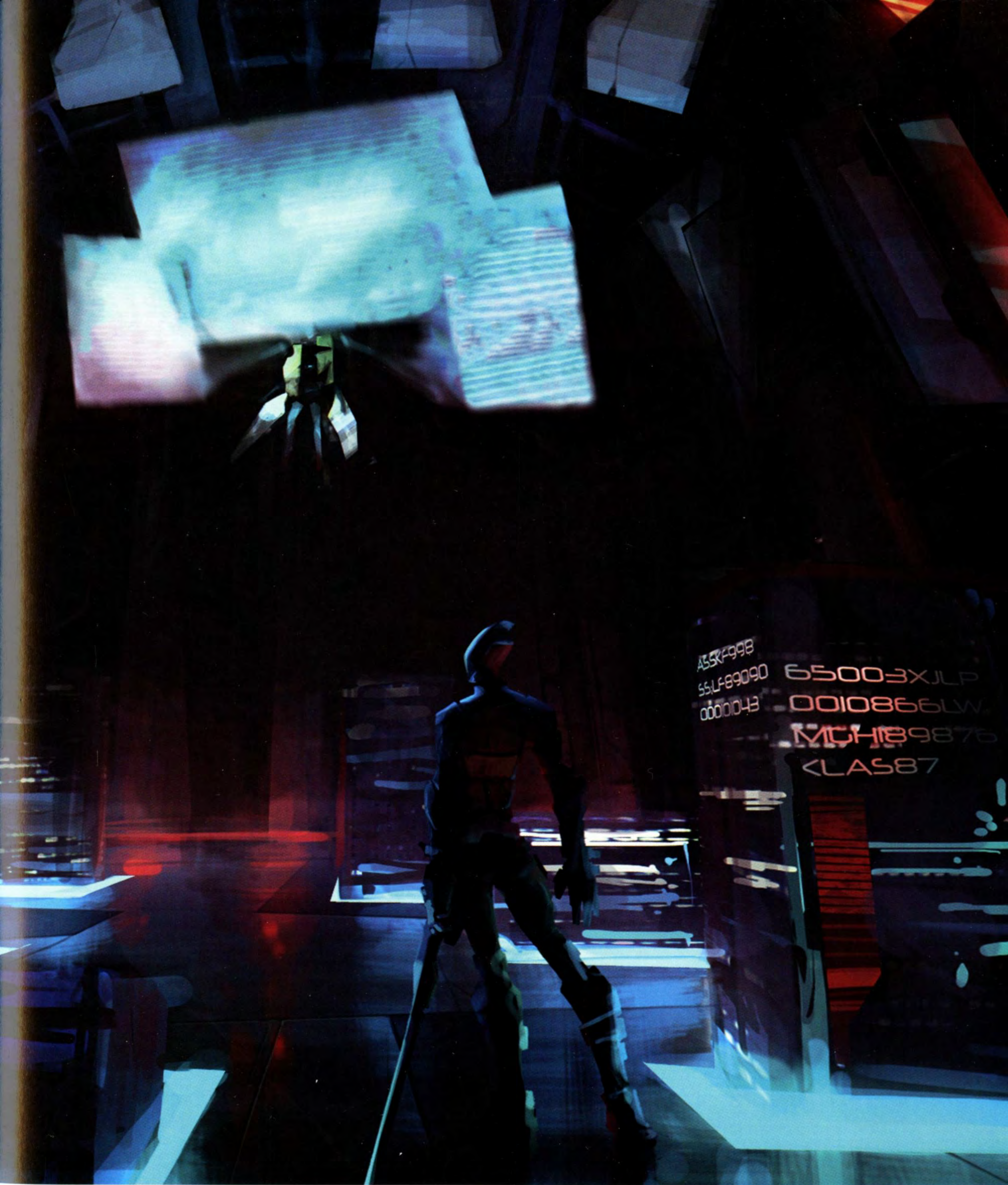
“These drawings represent an early design idea for the Angel encounter,” says Kevin Duc. “The player Fast-Travels to a bizarrely serene, antiseptic modern apartment where they meet Angel in the flesh. In the midst of the conversation, the apartment walls collapse outwards and a robotic armature swoops in, encapsulates Angel, and pulls her up into the newly revealed arena.”

Initially, Angel was written as having two split personalities—her true self, and her dark side that surfaced whenever Jack ordered her to do something. “The viewscreen projections show the split personalities of Angel while she both fights you, and asks for your help,” Duc says. “The supercomputers rising from the floor provide cover while robot enemies pour into the room through wall and ceiling openings.”



Vog’s Chamber Concepts [Kevin Duc]





ZONE 3

ARID NEXUS – BADLANDS

As a final twist of the knife to those few players who might not have already hated Jack and Hyperion, the team wanted to show what had become of the iconic Fyrestone area from the first *Borderlands*.



ARID NEXUS – BONEYARD

The dry, bone-filled wasteland of the Boneyard is not a particularly nice place to be.



HERO'S PASS

The final gauntlet between the player and Handsome Jack. It's got lava, because lava is climactic and awesome.

ERIDIUM BLIGHT

Welcome to the wasteland! The apocalyptic, Eridium-ravaged blight served both to highlight Jack's ravaging of Pandora, and reflect the darkness of the narrative.



ORE CHASM

This arena, given its name by resident Gearbox punmaster Randy Varnell, is run by a lascivious Hyperion bot. It is also, you will note, *damn* good lookin'.



SAWTOOTH CAULDRON

Home of the Sawteeth, and the single largest freefall in the entire game. Probably. We oughtta look that up.



VAULT OF THE WARRIOR

Look at all that lava! That is some climactic lava, yeah?



OVERVIEW

By the time the story reaches its third act, things have gotten dark—*really* dark. Now that several characters are dead and Jack is closer than ever to winning, the art team wanted the environments to reflect the mood of the story. “It has to read as ‘evil,’ so naturally lava, smoke, and pointy things come to mind,” Matias Tapia says.



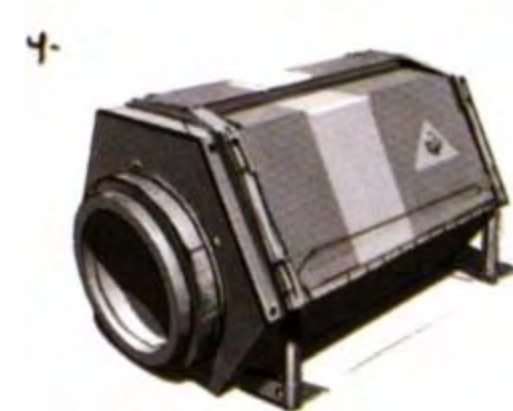


Zone 3 Concepts [Matias Tapia] *Left, Right*
 Zone 3 Screenshot [Tris Baybayan, Carl Shedd] *Below*



FYRESTONE

In bringing the player back to a newer, more perverted version of Fyrestone from the original game, the art team contrasted the older visual elements of the first game with some of *Borderlands 2*'s new visual cues. "I think that here is where the look of Eridium was finalized," Tapia says. "It was easier to handle this environment as a type of unique pollution and a sign of exploitation (adding pumping machines and extraction tubes for the latter). Then it was applied to *Borderlands 1* environments for comparison."



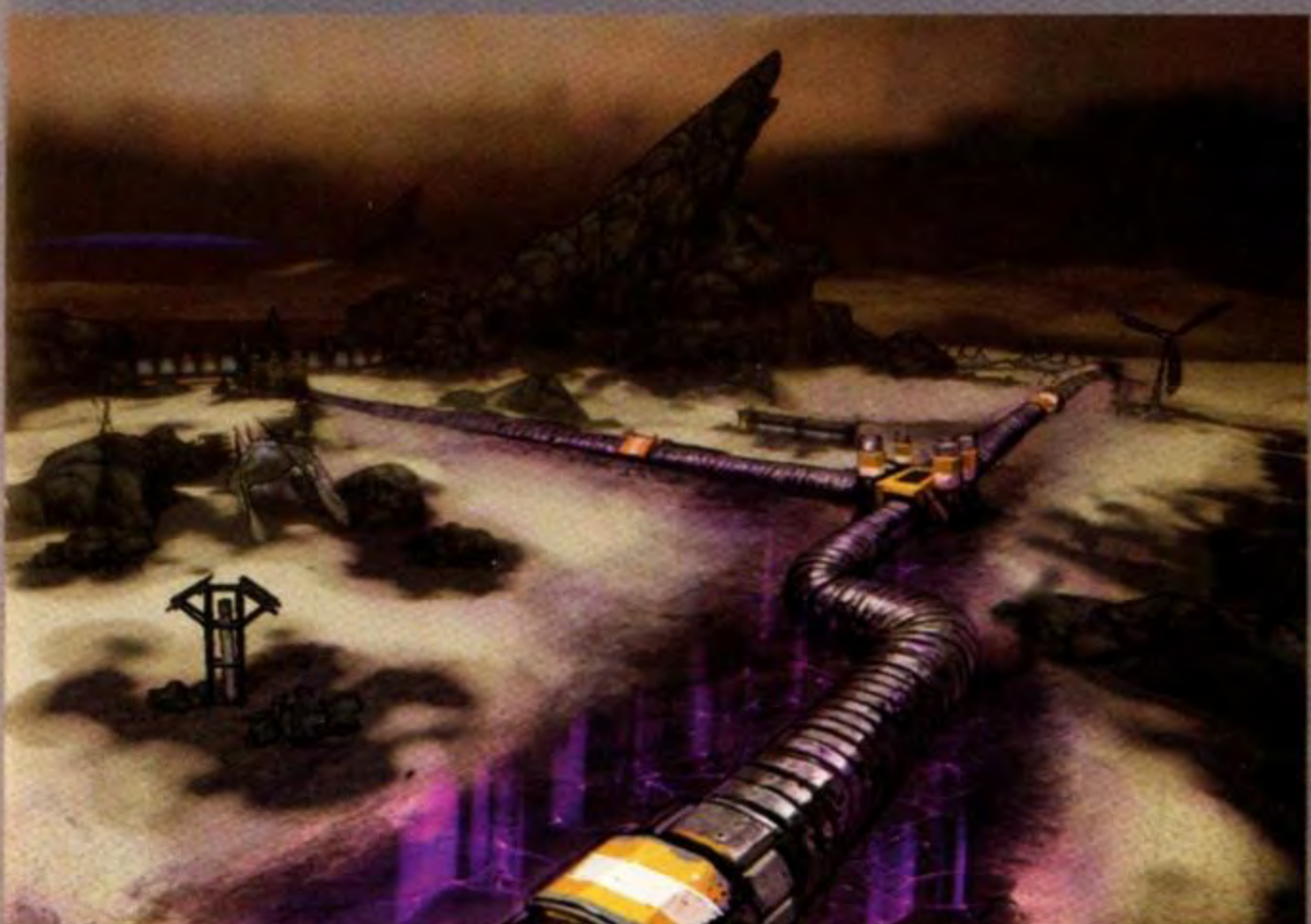
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Eridium Tube Concepts

[Matias Tapia]

Previous Page, Left

Fyrestone Screenshots

[Carl Shedd]

Previous Page, Right

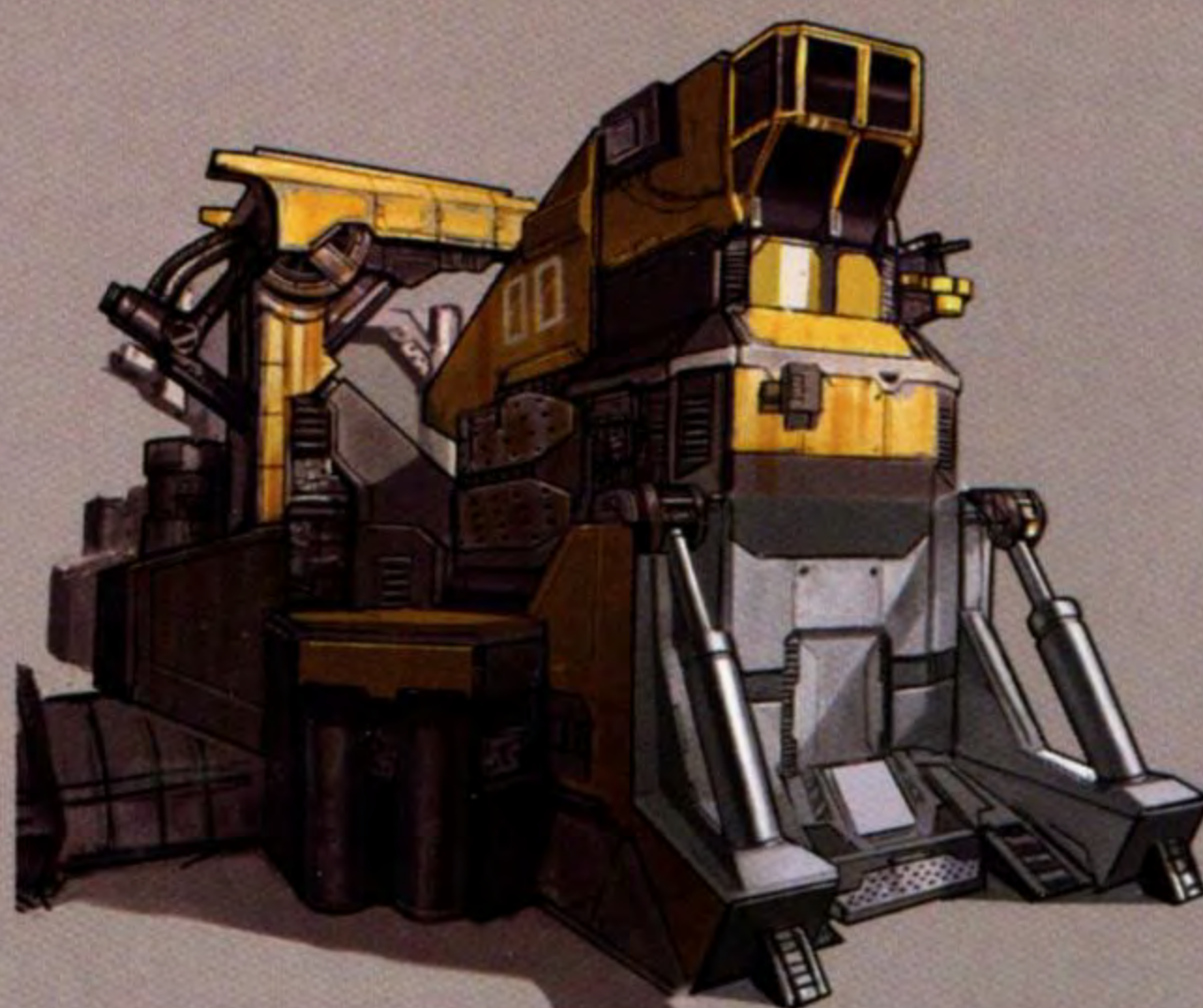
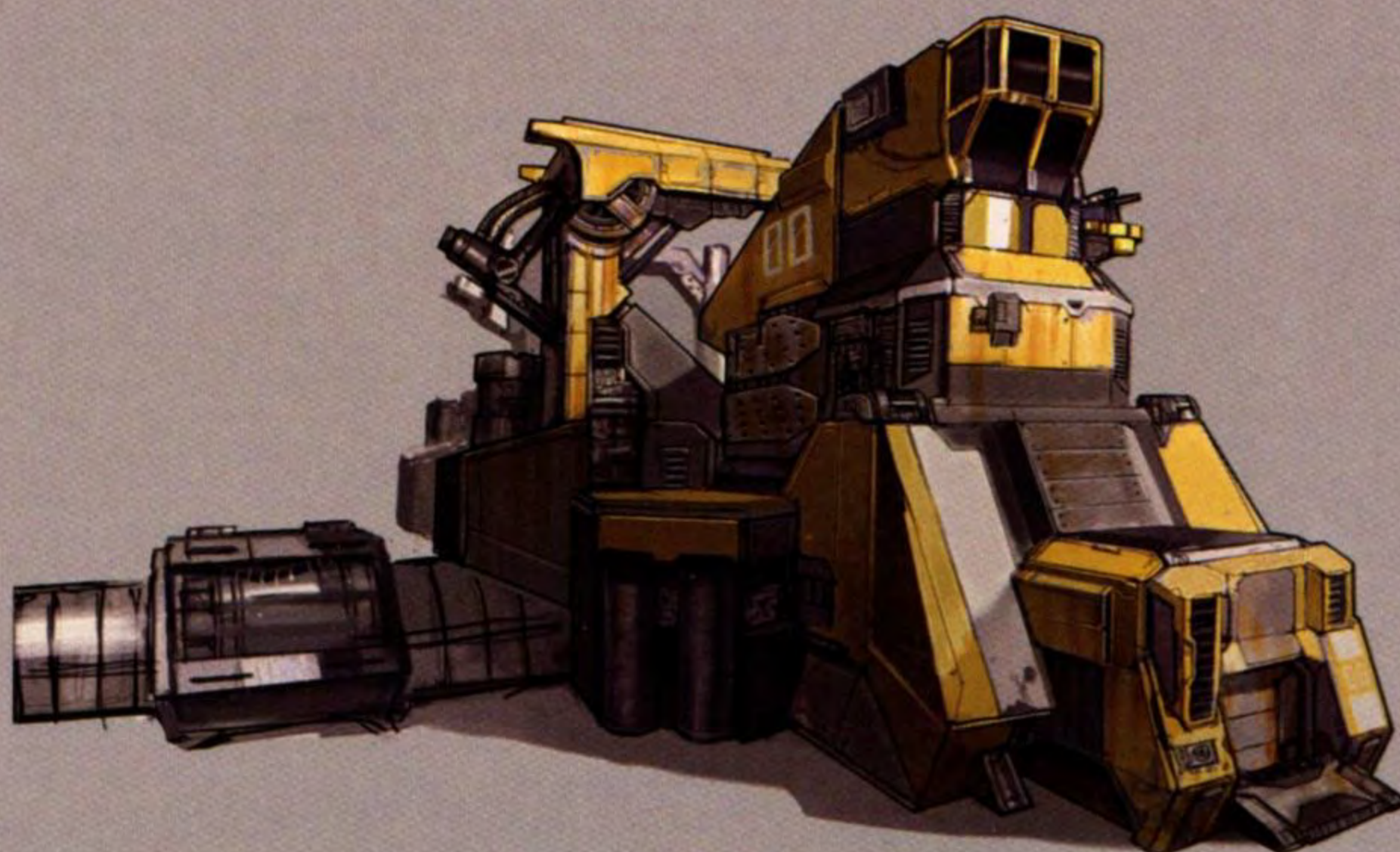
Fyrestone Concepts

[Matias Tapia] *Left*

Hyperion Pumping

Station Concepts

[Matias Tapia] *Below*



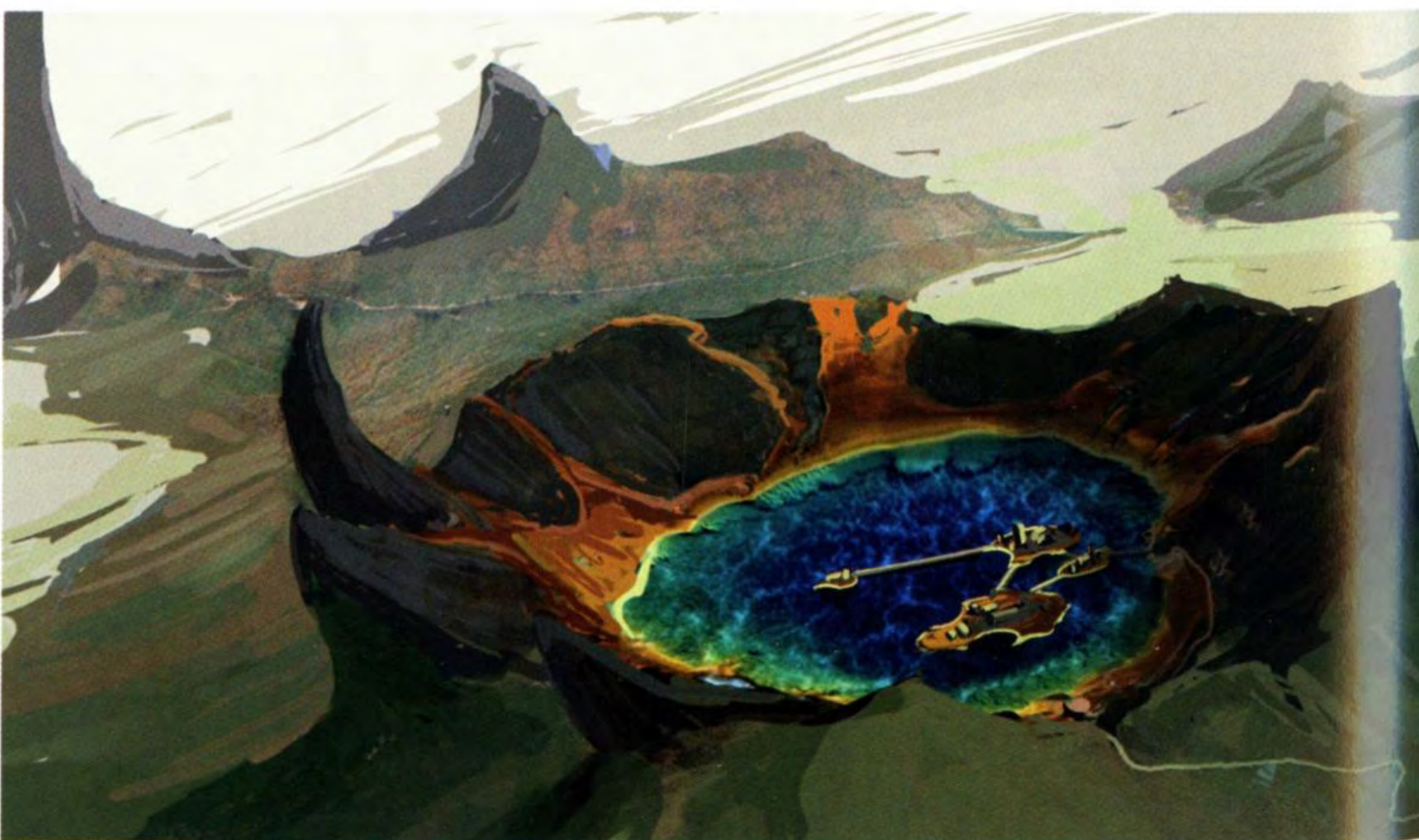


SAWTOOTH CAULDRON

Originally, Sawtooth Cauldron (referred to internally as “Crater Lake”) was originally conceived as a sort of vacation spot for bandits.

“We had to think of the scale of the grasslands areas and what type of colors and geologic formations we might encounter,” Kevin Duc says. “We imagined a huge hotsprings-like caldera with a village sitting in its center. These ideas led the way to our Crater Lake map.”

“Initially I suggested making the map an abandoned theme park,” adds Matias Tapia.



Crater Lake Concepts

[Matias Tapia] Top

[Kevin Duc] Bottom Left, Bottom Middle

[Gearbox] Bottom Right



1

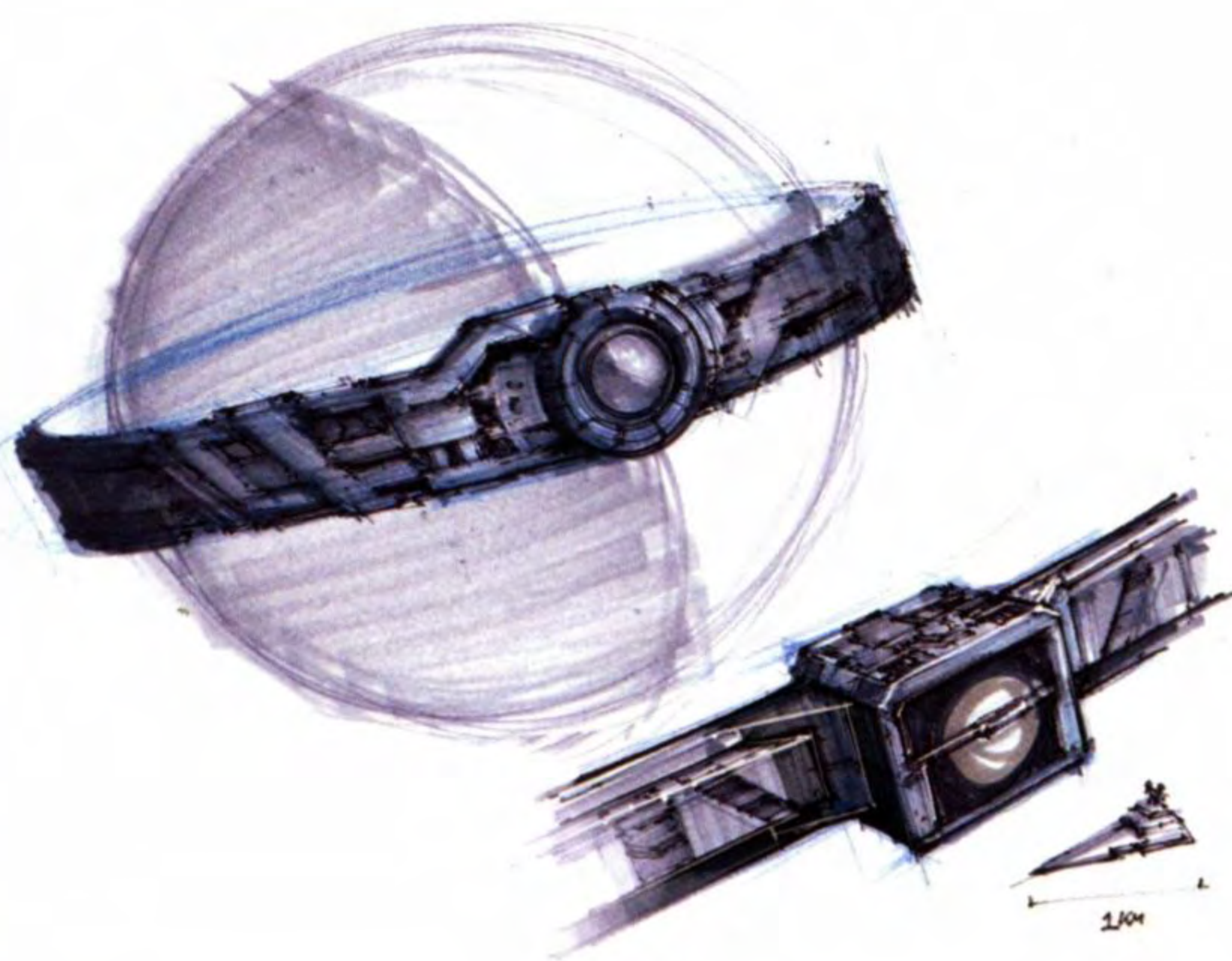


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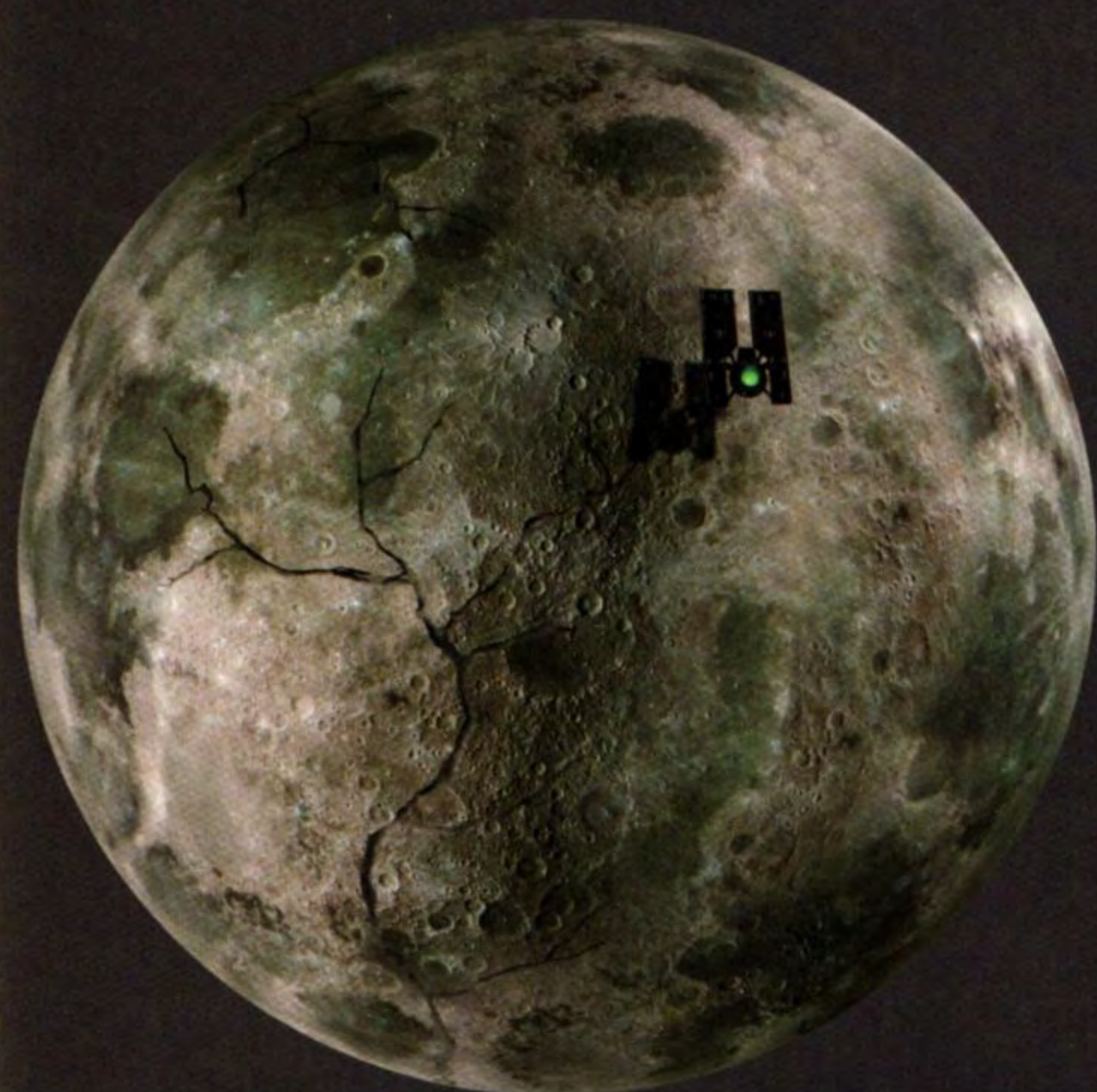
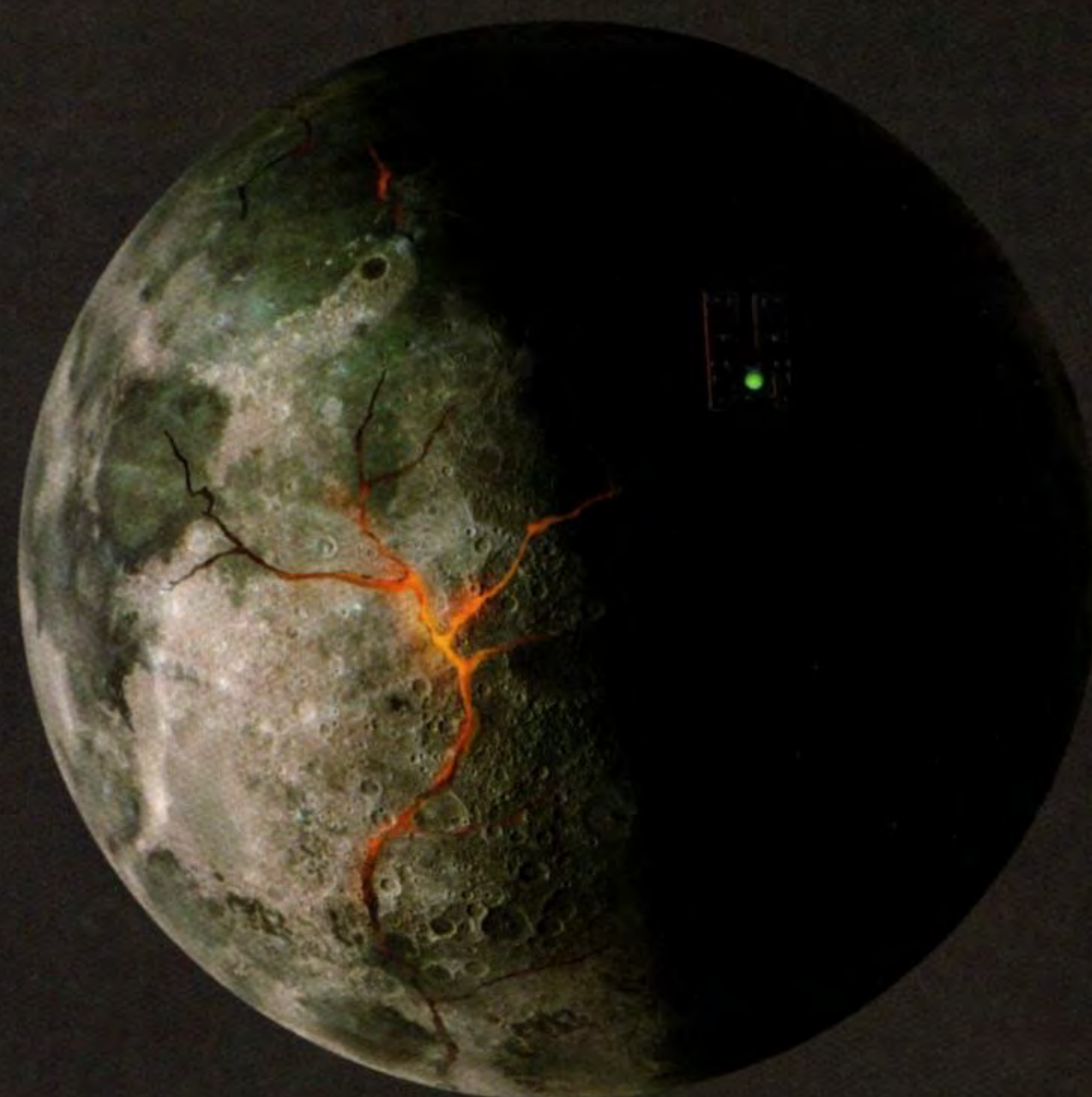
These concepts show different explorations for the Hyperion moon base. Should it be a belt, encircling the moon? More of a space station, floating ominously above its surface? In the end, the team chose to go with the massive H-shaped satellite moonbase that not only looks distinctive, but reminds you exactly who you're dealing with.



MOON BASE

The Hyperion moon base came about as an attempt to visually tell the story of Hyperion's complete and total control over Pandora.

Whenever players looked into the sky, the art team wanted them to know that Hyperion was running the show—they've taken over not just Pandora and its people, but even the friggin' moon.



Moon Base Concepts

[Lorin Wood] *Previous Page, Top, Above*

Ash Sky

[Tris Baybayan] *Left*

WEAPONS & GEAR

Borderlands is, quite simply, nothing without its guns. Whether you're finding them, selling them, watching them pop out of a skag's mouth or using them to blow a psycho's face off, guns are the lifeblood of the *Borderlands* experience.

When it came time to improve upon the 87 bazillion guns offered by the first game, the team could have taken the easy way out—could have added a few more gun parts and paint jobs to the existing system before calling it a day.

Instead, they scrapped the entire gun system, and all the original gun art from the first game, and decided to rebuild everything—everything—from the ground up.

You'll see how the art team developed a unique look for each manufacturer. You'll see a bunch of ideas that didn't quite make it into the game (a few of us still miss the bandit beer bottle scope). But mainly, you'll see guns. A hell of a lot of guns.

Oh, also, pretty much every piece of commentary in this chapter comes from Kevin Duc. We mention this just to save you the trouble of reading phrases like "Duc says" and "according to Duc" so many times that a blood vessel bursts in your brain.

Illustration

[Scott Kester] *Right*





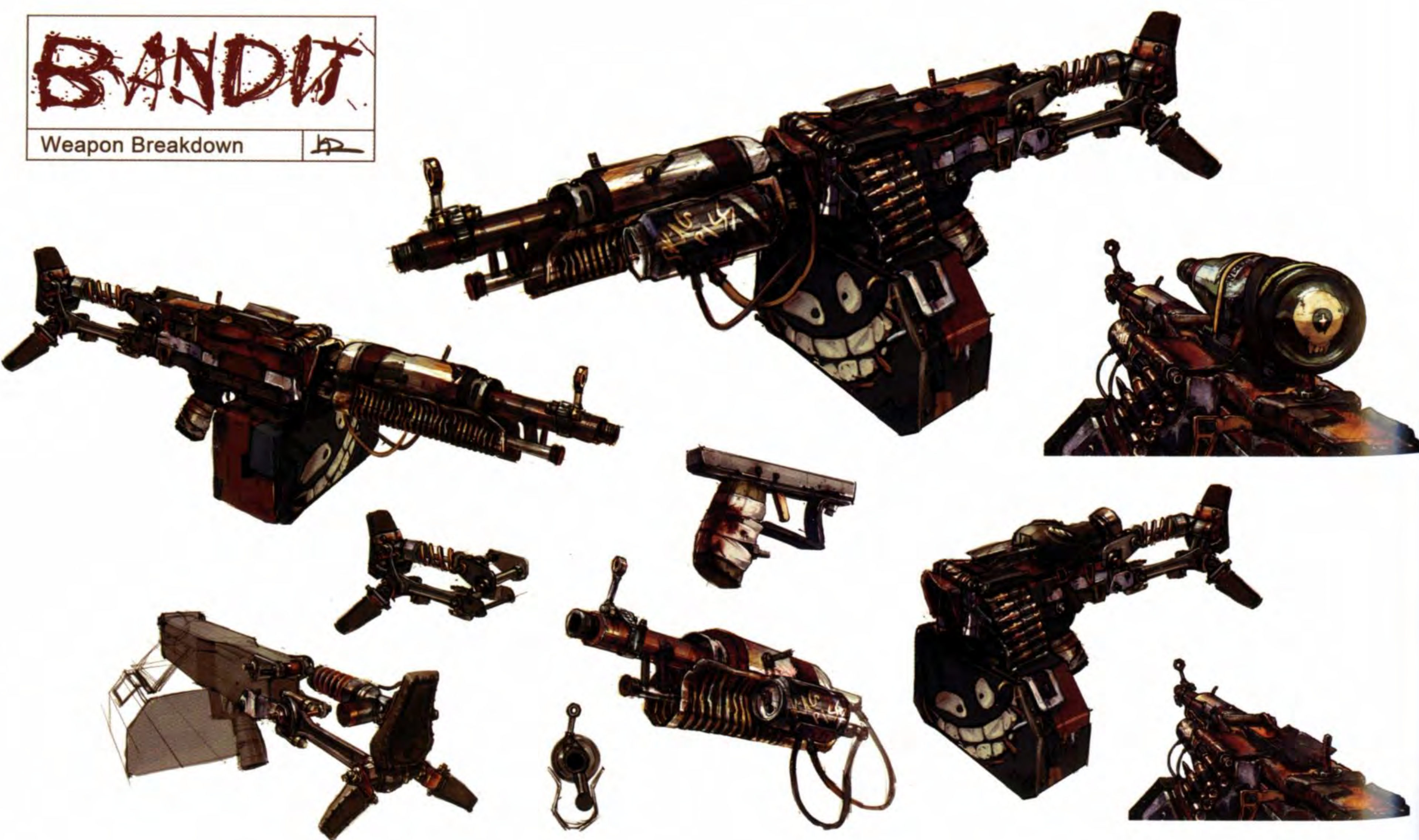
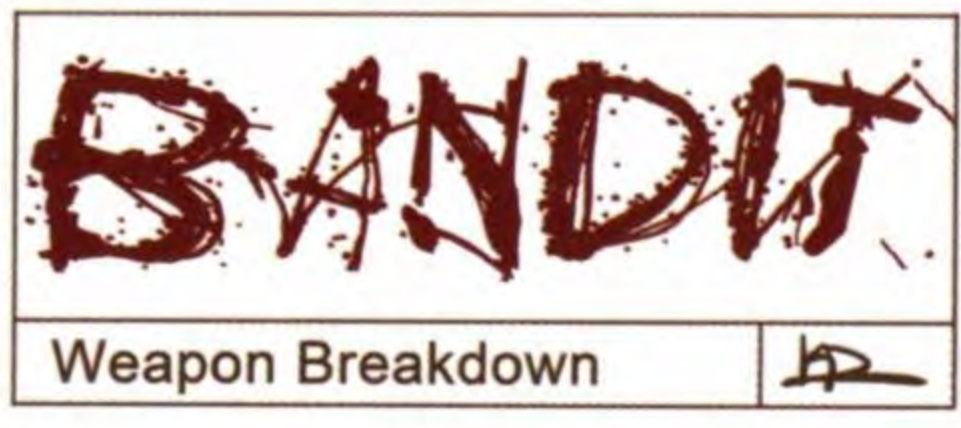
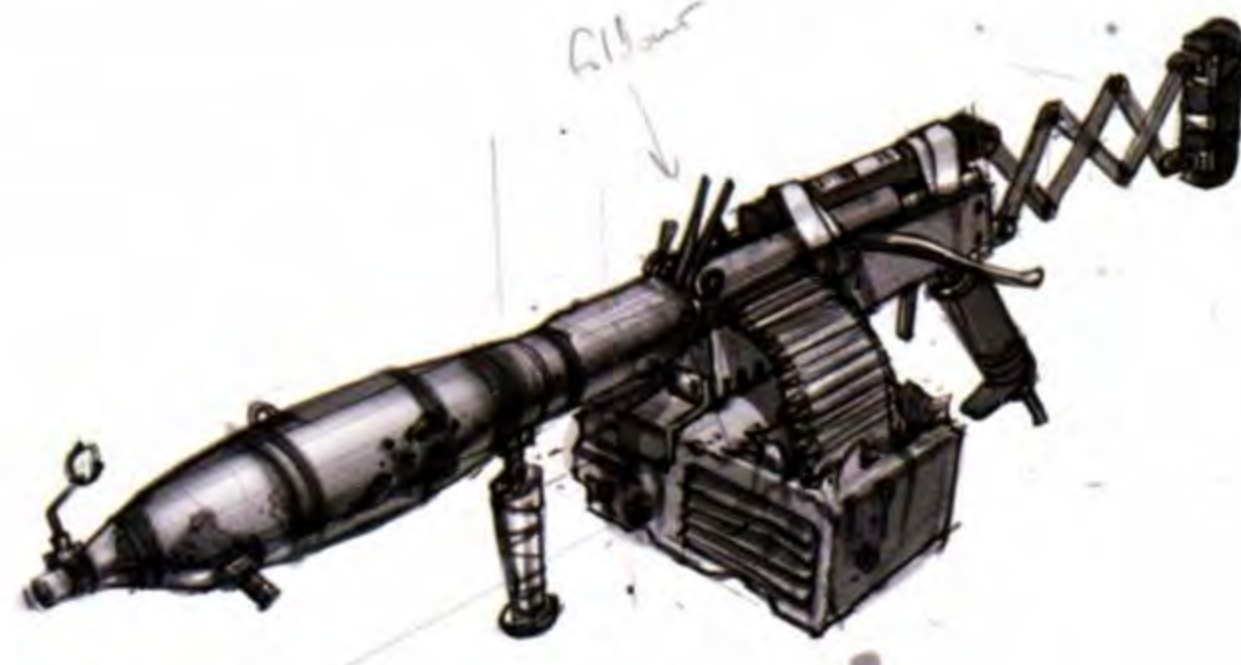
BANDIT

OVERVIEW

The Bandit class of weapons was pushed by a want for us to answer the question of “what type of weapons would an isolated bandit, sitting out in the wastes, build?” We wanted these guns to look cobbled together with found objects, to have screws and nuts and bolts coming off at skewed angles, and at the same time look dangerous. The design team wanted a large capacity magazine and left the rest to the artists’ imagination.

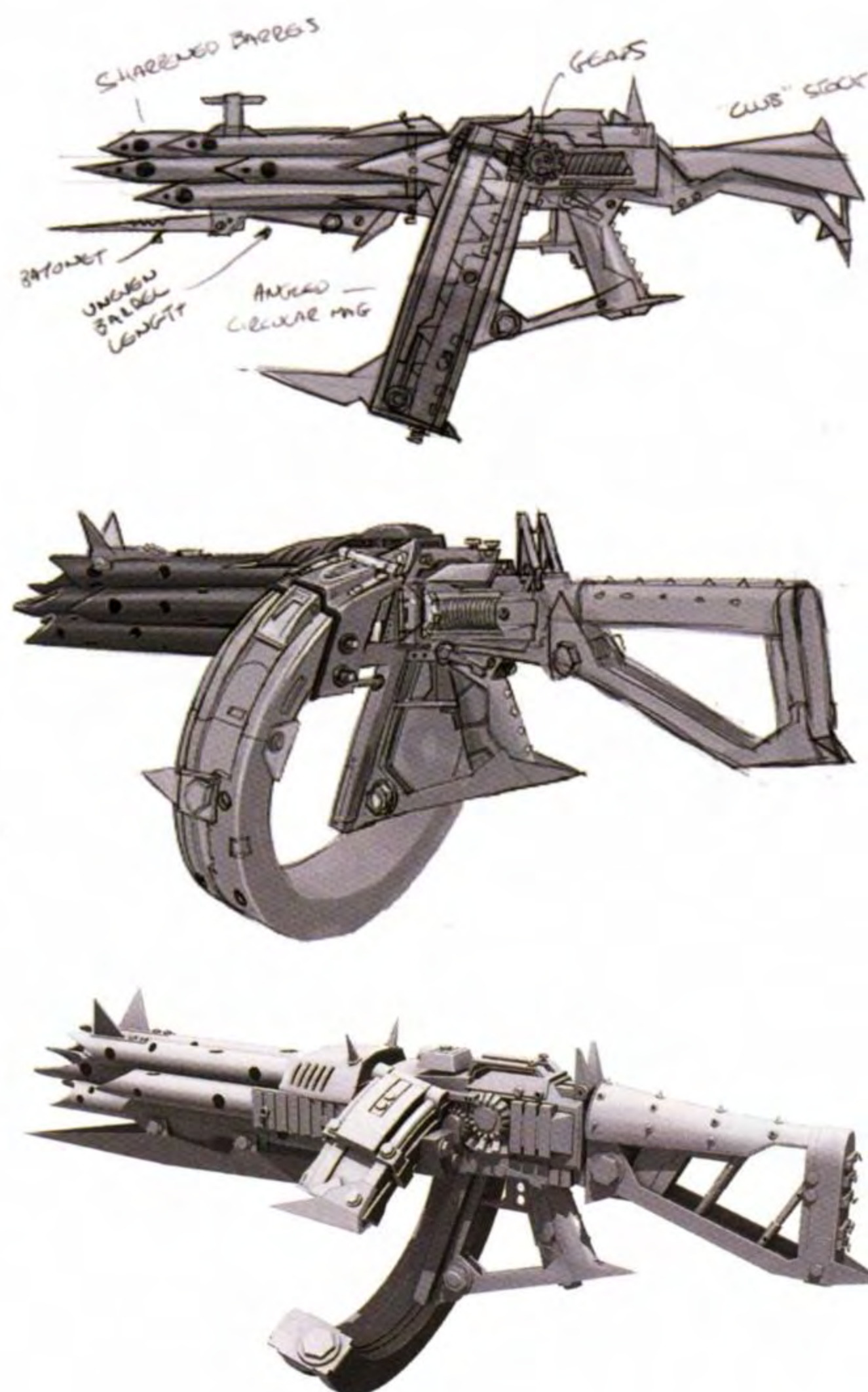
“On our first light machine gun pass, we went really far into the junky, cobbled together look,” Duc says. “We even built our first scope out of a beer bottle. As the weapons system was implemented, and parts began swapping with other manufacturers, we found that our initial design language may have been a bit too scrappy. In later iterations of the Bandit machine gun, we tightened up some of the odd angles, and went with a sturdier looking design.”

Bandit Explorations [Kevin Duc, Jeramy Cooke] *Right*
Weapon Breakdown [Kevin Duc] *Below*

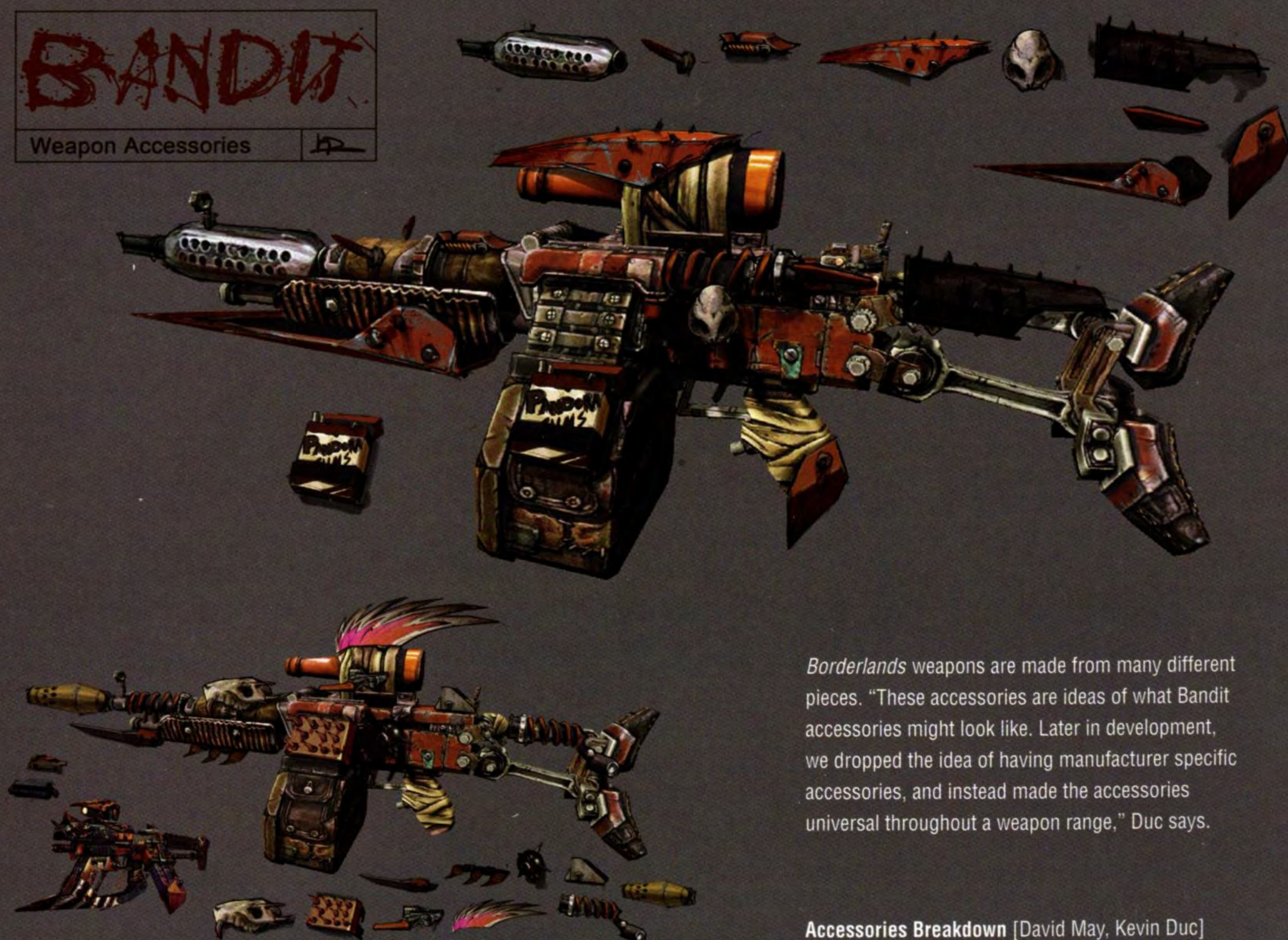


ASSAULT RIFLE

“The Bandit guns were originally designed to have a rag-tag, pieced together look,” says David May. “After a few designs came on board we opted to go with a more streamlined aggressive look. This helped the design to integrate better with other manufacturers as well as look less ‘junky.’ The original gun was then redesigned and built to fit the updated Bandit aesthetics.”



Assault Rifle Concepts [Martin Sawkins] *Above*
Assault Rifle Models [David May] *Left*



Borderlands weapons are made from many different pieces. "These accessories are ideas of what Bandit accessories might look like. Later in development, we dropped the idea of having manufacturer specific accessories, and instead made the accessories universal throughout a weapon range," Duc says.

Accessories Breakdown [David May, Kevin Duc]

SMG

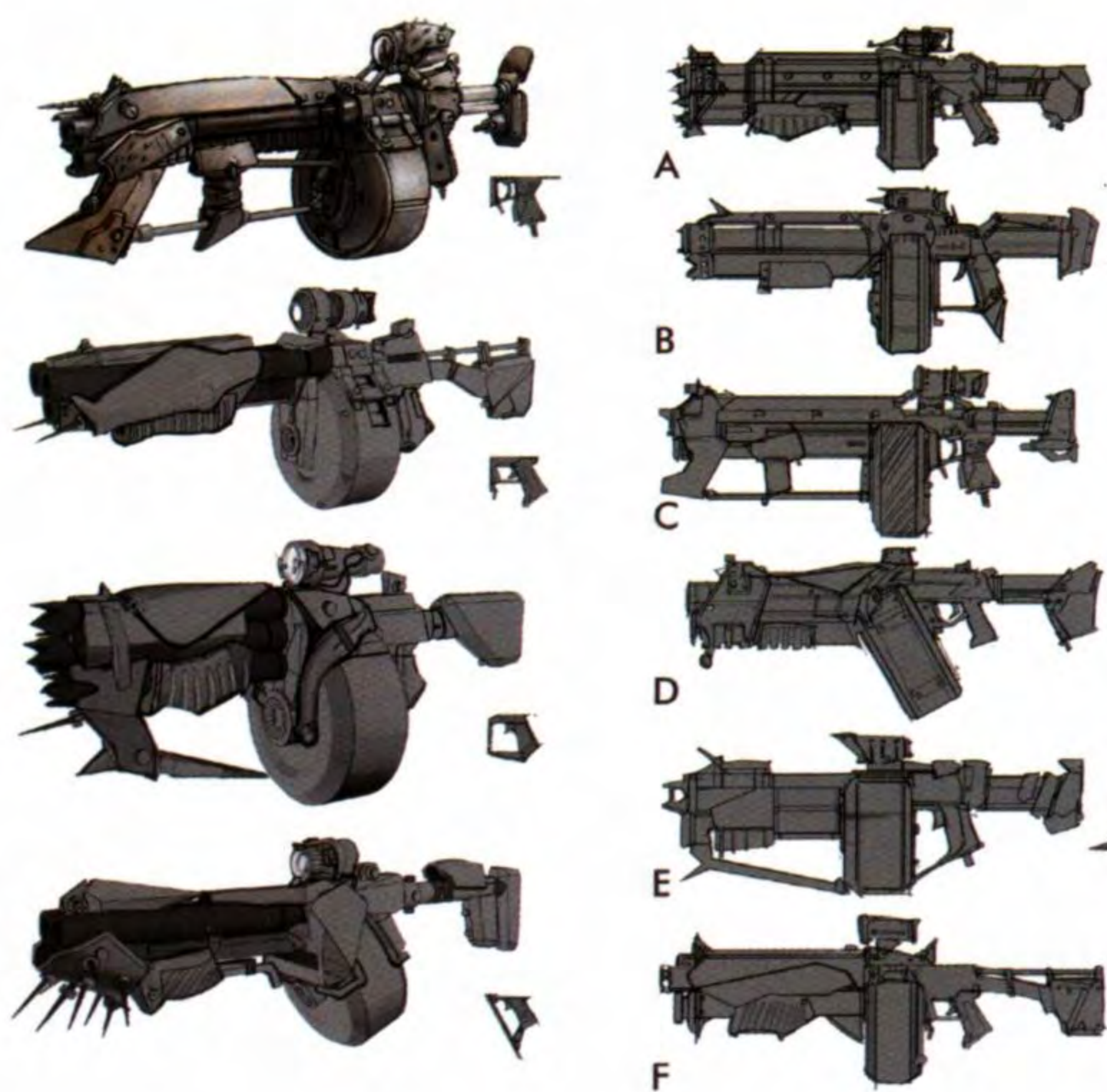
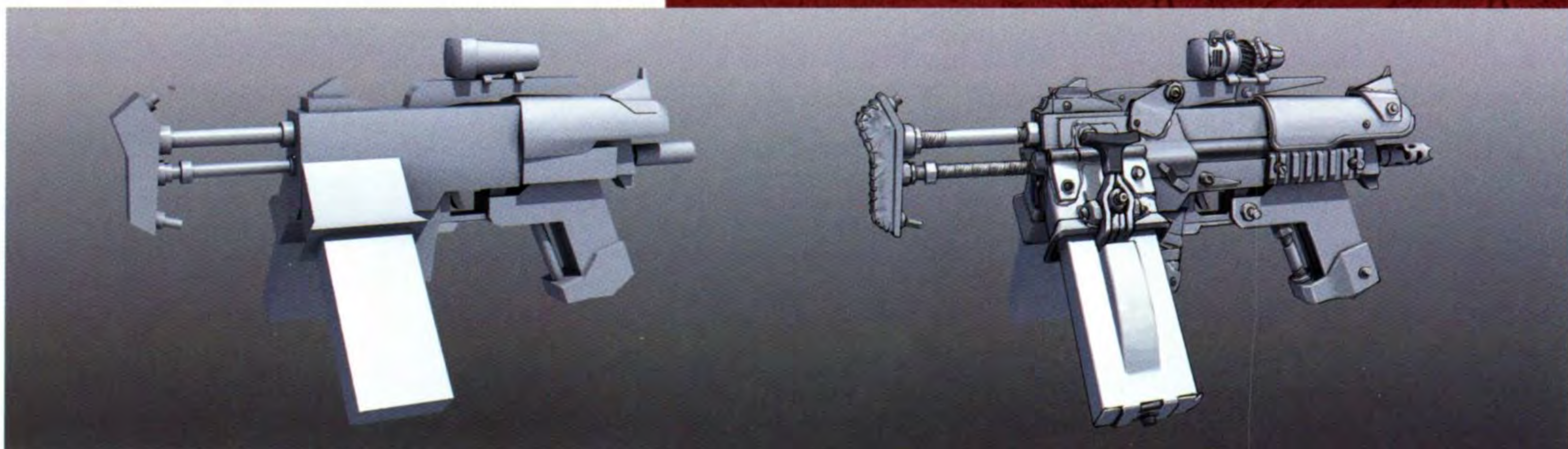
These SMG concepts show the reboot of the Bandit manufacturer identity. We wanted these weapons to look sharp, strong, and deadly. You can imagine the metal is pressed quarter inch steel, the kind of thing you could throw off of a building, pick up, and stab someone in the face with. We still wanted the homebuilt look, but maybe built with a bit more skill than we had first envisioned.

Since our weapons are made of parts that are procedurally mixed in our game system, we have to breakdown each weapon into its component pieces. Here the individual parts that make up the Bandit SMG are called out for the 3D artist.

"Once the initial design for a weapon is solidified, our 3D artist, David May, makes a 3D block-in mesh for each weapon in a class. We have to make sure that all pieces in a particular weapon type fit together. For example, all barrels must attach to all bodies in a functioning, aesthetically pleasing way. Once these pieces fit, I paintover David's block-in mesh to provide a very accurate representation of what the final model should look like," Duc says.

SMG Concepts [Kevin Duc] *Right*

SMG Mesh [David May, Kevin Duc] *Below*



SHOTGUN

The Bandit shotgun continues the theme of high capacity magazines. 3Point, a partner of ours, handled most of the heavy lifting on the shotgun designs and models. The process was very similar to working with in-house artists, as 3Point sent us a set of sketches, we provided feedback, and so on and so forth. The middle piece is a paintover done over one of 3Point's drawings to pull the design closer to our established Bandit language.

Shotgun Concepts [3Point] *Left*

Shotgun Concept [Kevin Duc, 3Point] *Below*



ROCKET LAUNCHER

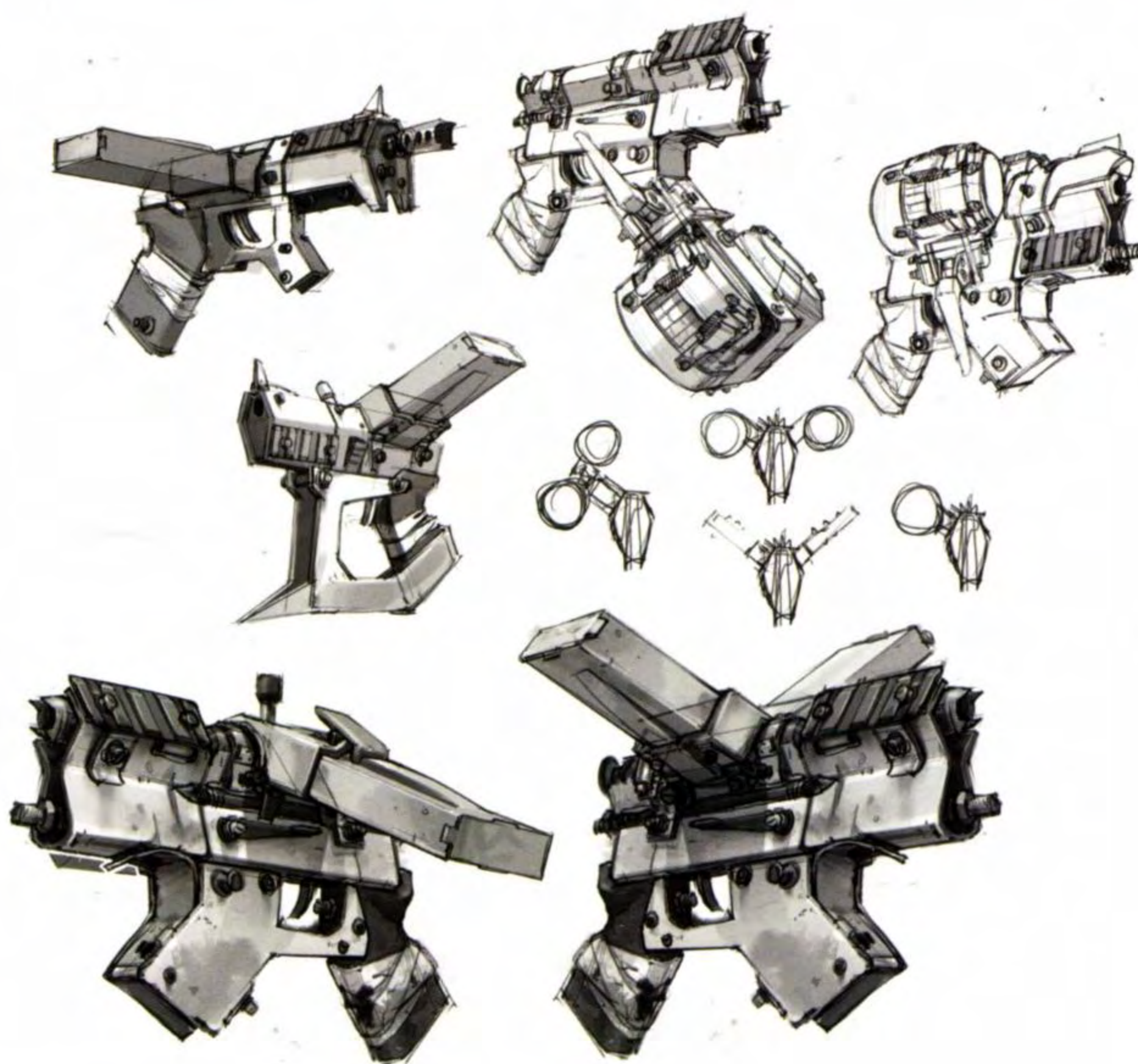
"The Bandit launcher and Bandit weapons in general were a special challenge because all of the crazy 'bandit' type things we did in the environments (piecemealing it together from other objects, cloth wrapped around everything, etc.) had to be toned back so they still looked good when mixed with the other guns," says Jett Sarrett. "I think the end result was better for it."

Rocket Launcher Concepts [Virtuous] Below
Rocket Launcher Models [Jett Sarrett] Right

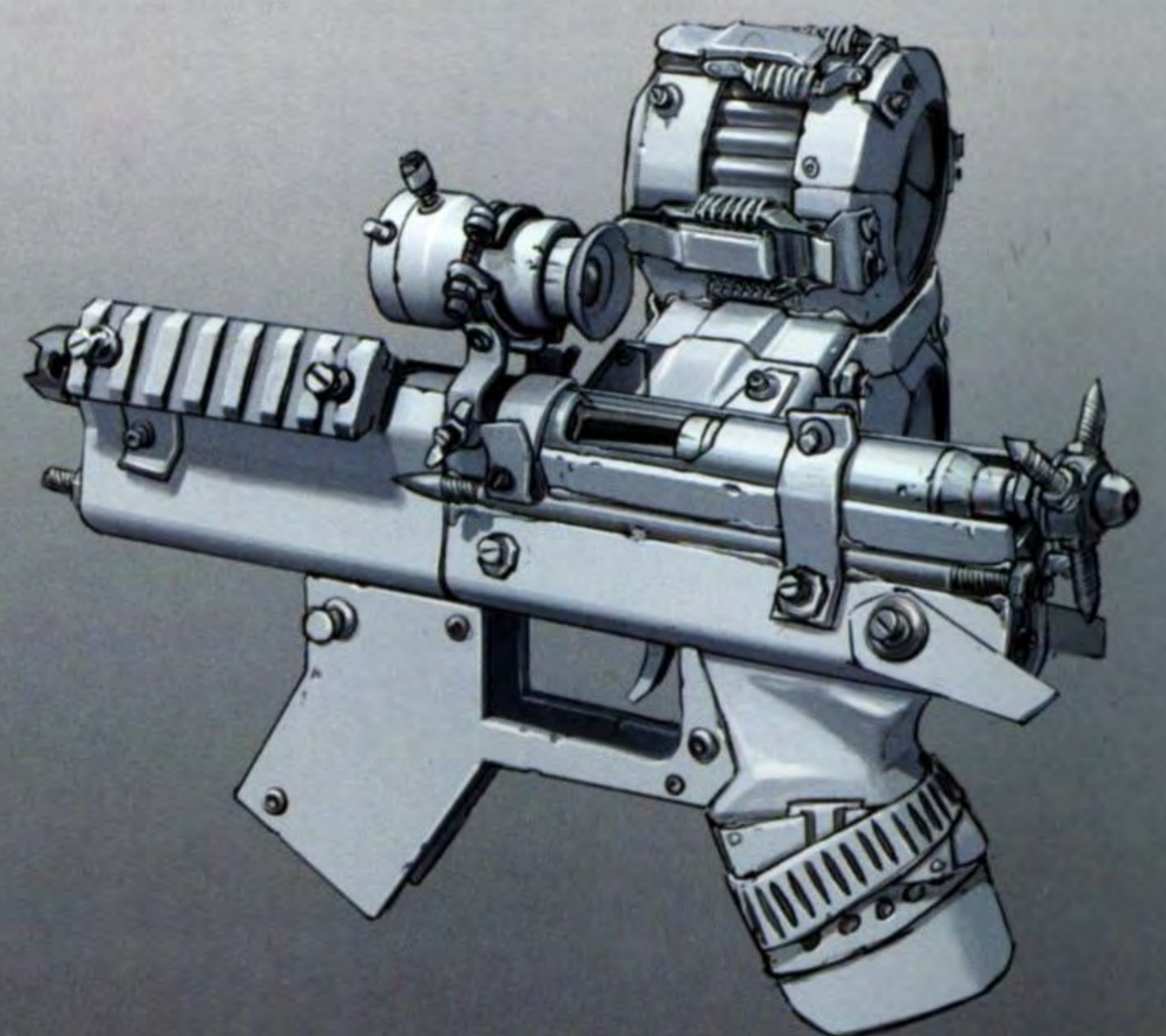


PISTOL

"The Bandit pistol retains the large capacity theme. In these sketches we explored various configurations and types of magazines. In the end, we went with a side-loaded magazine and a big, double-drum magazine for rarer pistols," says Duc.



Pistol Concepts [Kevin Duc] Above
Pistol Concept [David May, Kevin Duc] Right

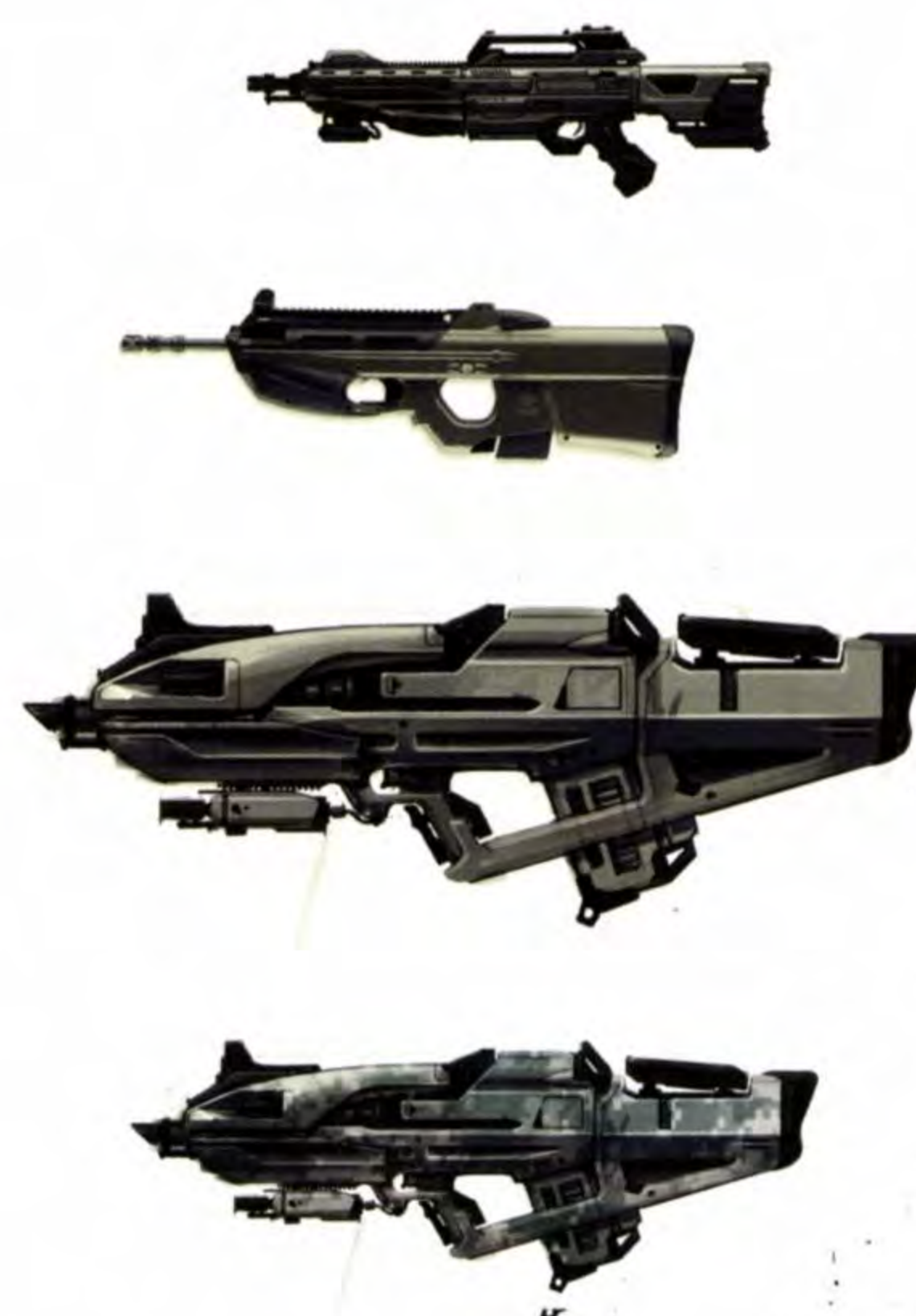


DAHL

OVERVIEW

The design philosophy behind Dahl was one of modern, adjustable military weapons. We wanted Dahl to look like something the user could conform to his dimensions and needs, so we included accessory rails, adjustable chin straps, modular grips, etc. Dahl appeals to those players whose tastes sway towards modern military weapons. In these early concepts, we experimented with a bit more rounded, flowing shape.

Our original Dahl assault rifle was intended as a bullpup design (a magazine to the rear of the trigger). This presented problems with our parts swapping and animation concerns forced us to follow a more traditional magazine layout in future designs. In this breakdown image, you can see the use of digital camo patterns to further push the modern military theme.



DAHL

Weapon Breakdown



"Dahl accessories are akin to what might be found on a real-world weapon. Laser sights, grip covers, flashlights, etc., are all possible accessories for Dahl. These accessories, like the Bandit exploration, were done before we decided on universal, shared accessory parts," explains Kevin Duc.



Dahl Explorations [Kevin Duc] *Top*
Weapons Breakdown [Kevin Duc] *Middle*
Accessories Breakdown [Kevin Duc] *Right*

Base



A



B

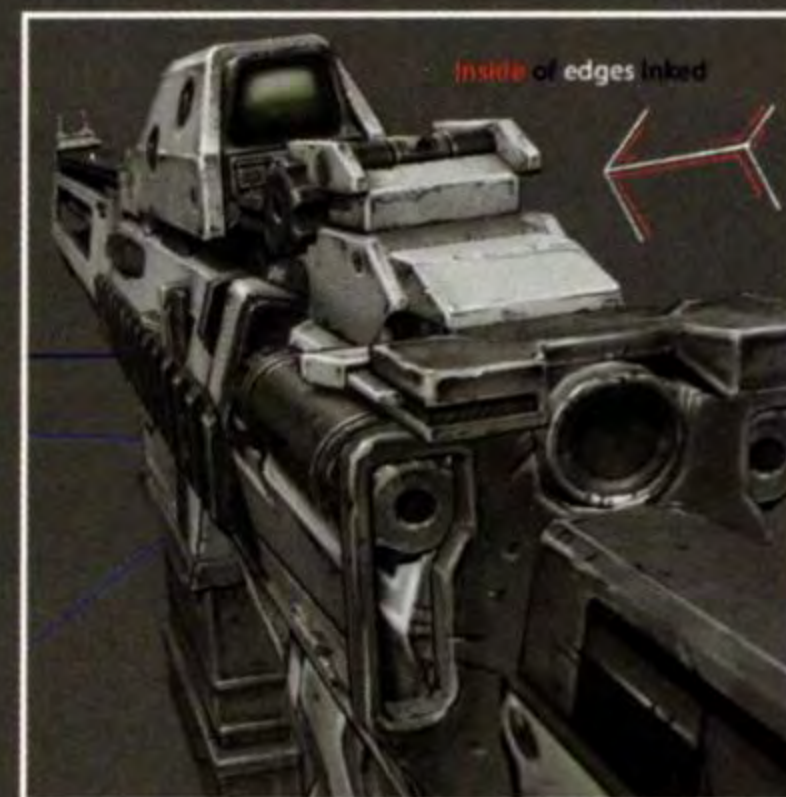


A+B



ASSAULT RIFLE

"Each weapon in *Borderlands 2* has a base body and two body part add-ons. These add-ons are rarity specific, and allow us to create four body varieties with a single base mesh. Here we have laid out these body parts, where they are located on the base body, and how they interact with each other when used together."

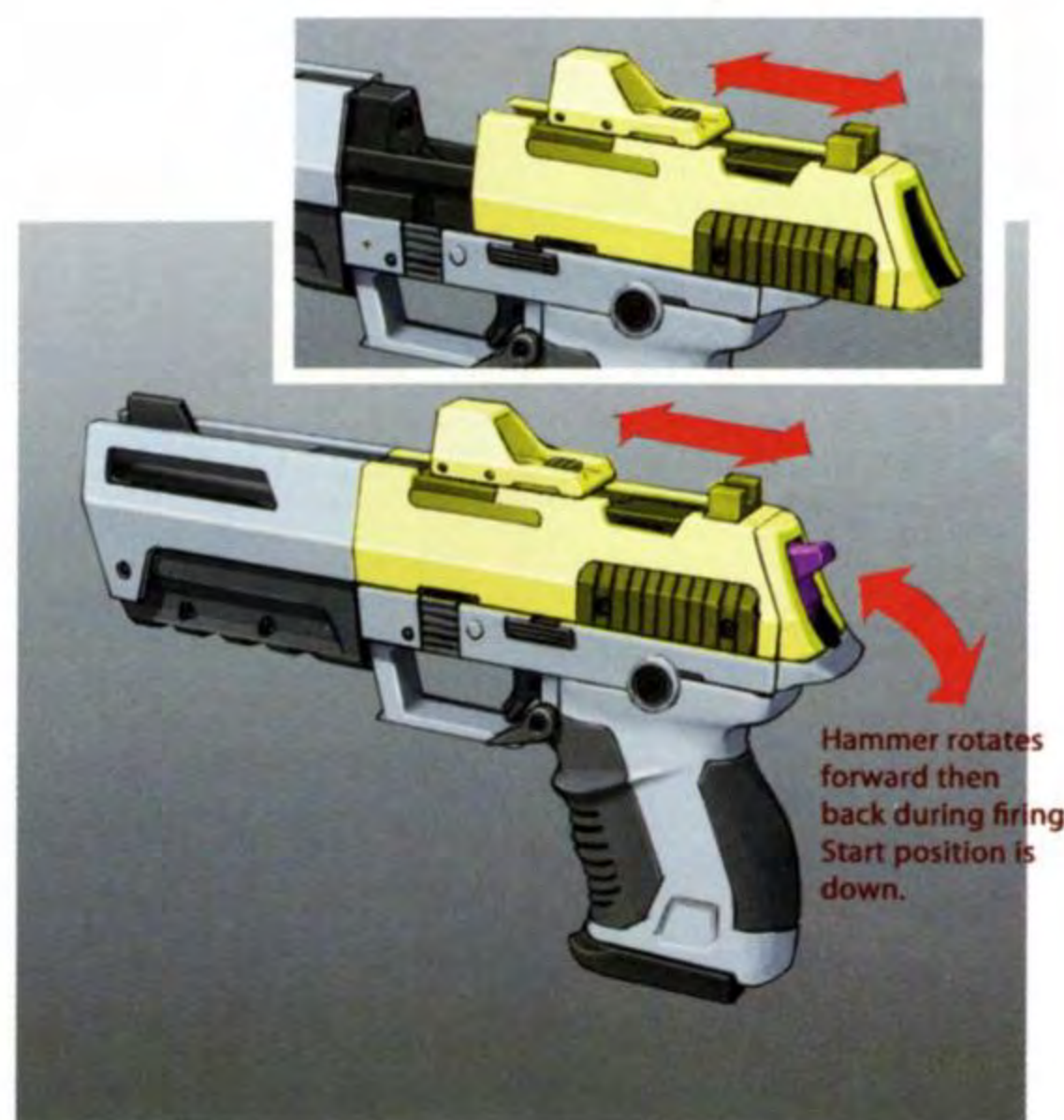


Assault Rifle Texture
[Liquid, Kevin Duc] *Above*
Assault Rifle Variations
[David May, Kevin Duc] *Left*

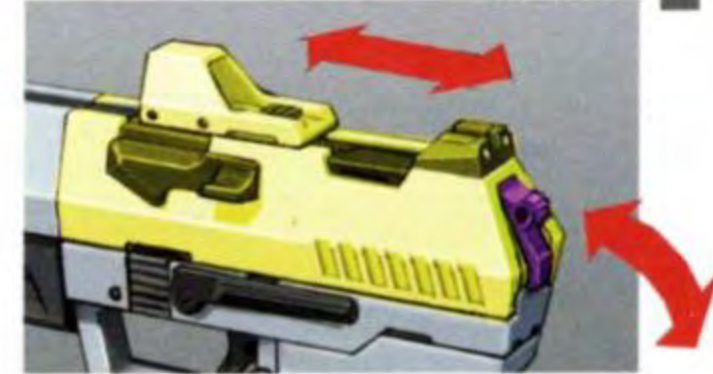
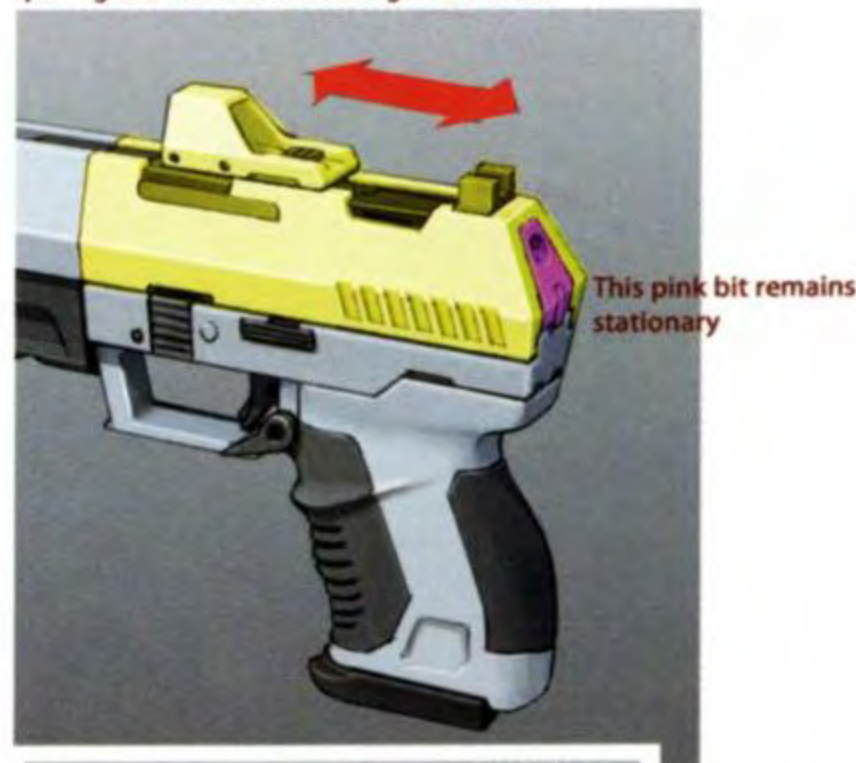
PISTOL

The Dahl pistol is our modern style, magazine fed semi-automatic pistol. This meant designing the weapon with a grip magazine, a slide, and both closed and open hammer configurations. We kept the exposed floating barrel and long, horizontal break-line of our assault rifle and sniper rifle designs, and built on the adjustability aspect with replaceable grip panels and accessory rails.

The animation of the pistol involved both a closed and open hammer design. We described these various reload and firing sequences for our animators. These drawings help not only the animators, but also the modeler building the weapon. They let the modeler know which parts can be welded together and which parts need to be free-floating geometry. For example, the slide moves independently from the rest of the model in both reload and firing.



Slide moves back during firing. Player racks gun by pulling slide back and releasing it for reload.



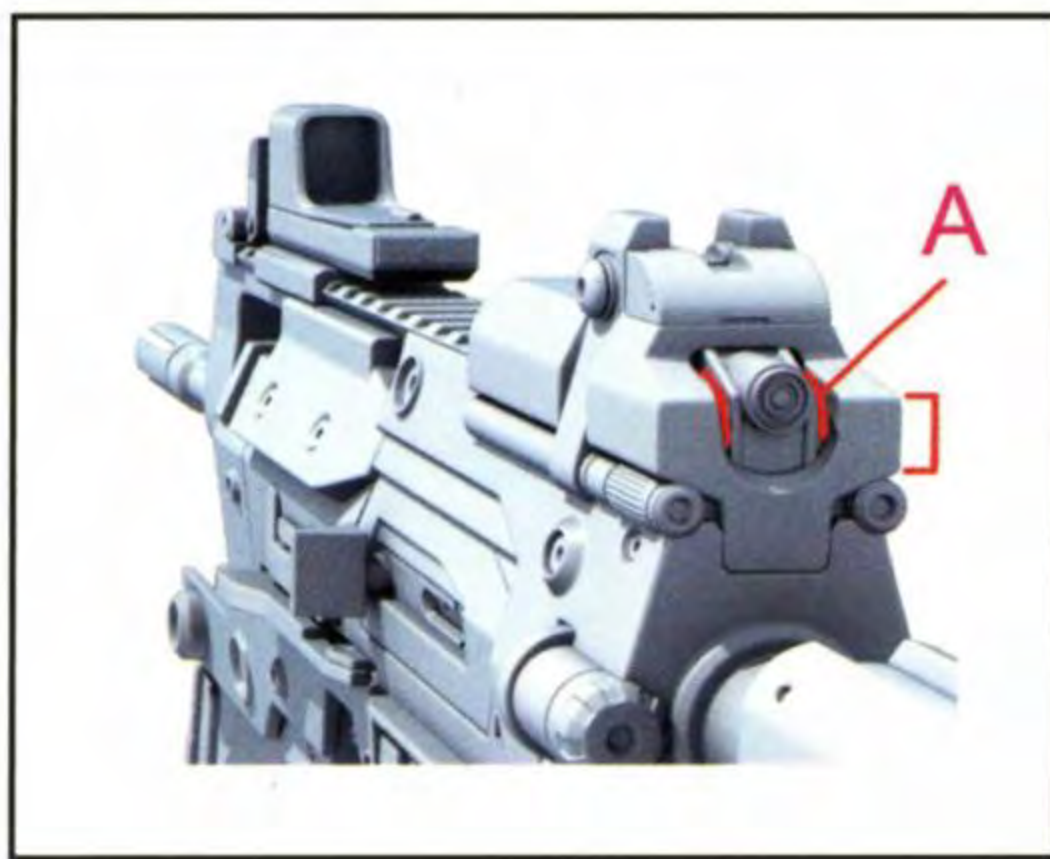
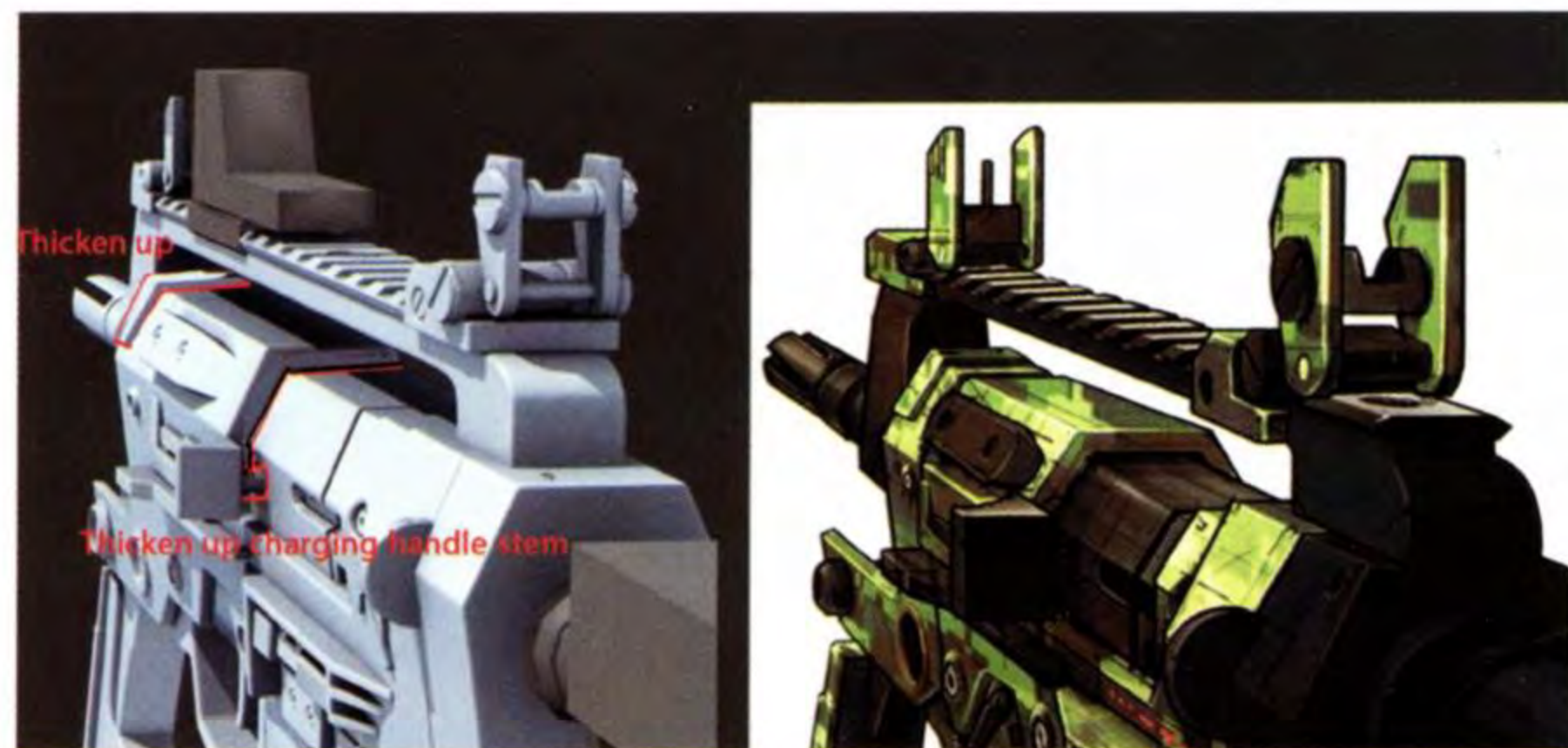
Pistol Concepts [Kevin Duc] *Above*
Pistol Animatics [Kevin Duc, David May] *Right*



SMG

With the Dahl aesthetic defined by our assault rifle, we began exploration of the SMG. The SMG continues to evoke the modern aesthetic with rails, flip-up iron sights, standard magazine, and adjustability throughout.

“From the start, we wanted the Dahl SMG to be a bullpup layout. Since our grips and body sizes had to be consistent from manufacturer to manufacturer, setting the goal for a bullpup SMG early in the design process prevented any future complications,” says Kevin Duc.



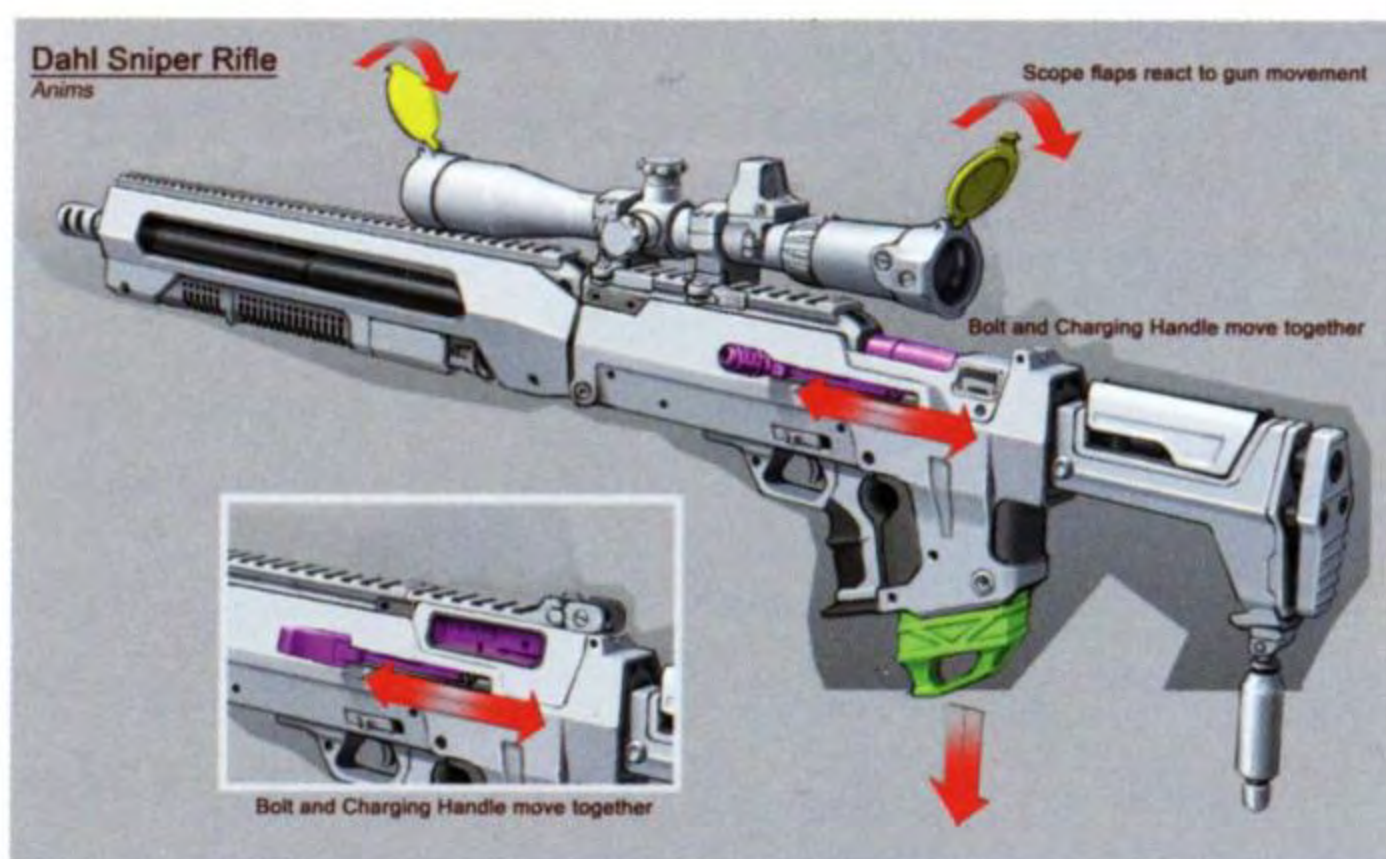
- SMG Concepts
- [Kevin Duc] Top Left, Above
- SMG Model/Concept
- [Kevin Duc, Liquid]
- Middle Left
- SMG Models
- [Liquid] Middle Right, Bottom Right
- SMG Anim
- [Kevin Duc] Bottom Left

When we design guns, we try to make them look and behave in a believable manner. This means designing with function in mind. For the Dahl SMG, rounds are loaded into the bottom of the gun and fed up into the chamber. The bolt moves back and forth, seating each round into the chamber and expelling the spent cartridge. The interior of the gun is described here showing the chamber that each round is lifted into. The firing animation and reloading animations are also described to our animators so that everyone in the development chain is clear in how these weapons function.

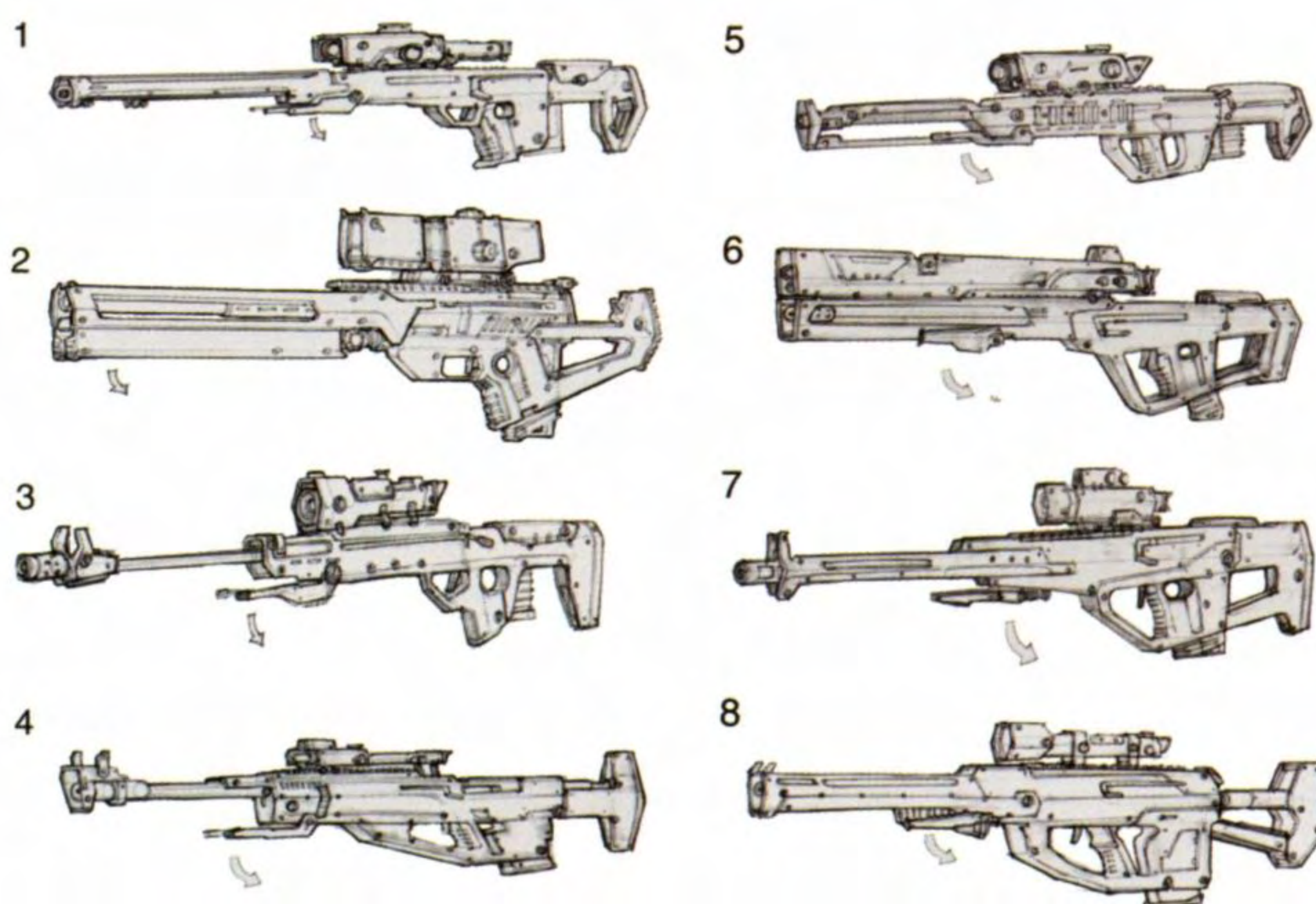


SNIPER RIFLE

The Dahl sniper rifle continues Dahl's bullpup theme and modern aesthetics. We tried quite a few designs trying to push the aesthetic a bit into the future. In the end, we pulled the designs back into the final modern look you see in game. Family resemblance to the Dahl assault rifle can be seen in the barrel shroud with exposed floating barrel, open-top bolt design, accessories rail, and the aforementioned bullpup magazine.



"The various moving parts and animation requirements are described to help our tech animators rig the sniper rifle," says Jett Sarrett. "Knowing what parts move allows the animators to build skeletons and weight parts to the correct bones so that firing animations and reloads change the weapon state accurately."



"This was the first gun that I did, learning how our weapon system works, from the parts on the weapon itself, to the materials, masking, color breaks, even inking is different on the weapons. It was a lot to take in; it was a good challenge though, and I learned a lot from it. Big shout out to Dave May and Kevin Duc for helping me out through this!" says Jett Sarrett.

Sniper Rifle Concepts

[Robert Simons] *Top, Middle Right*

Sniper Rifle Anims [Robert Simons, Kevin Duc] *Middle Left*

Sniper Rifle Models [Jett Sarrett] *Right*



HYPERION

OVERVIEW

Hyperion design language reflects the austerity and high technology of Hyperion. We drew influence from Claptrap's slab-sided design, and applied these design elements of flat, faceted surfaces and exposed tech internals to a gun shape.



HYPERION



PISTOL

We wanted the Hyperion class of weapons to have lots of movement in both firing and reloads. Going with the high-tech theme, we envisioned all the parts to be electro-mechanical in nature. For example, when the pistol reloads, the scope slides forward, the magazine slides out and is replaced by another, and the gun retracts that magazine and slides the scope back into place.

Pistol Concepts

[Kevin Duc] *Top Left*

Aesthetics Pass

[Kale Menges] *Top Right*

Pistol Breakdown

[Kevin Duc] *Left*



SMG

These are some of the first Hyperion weapon drawings. We pulled a lot of influence from Claptrap, and used flat sided, angular shapes. We also integrated our “waffle pattern” metal panels, pulled from some of our Hyperion architectural designs.

“Early on we envisioned the Hyperion SMG as using a top-loading mechanism. We wanted the scope and magazine to rotate forward and slightly eject the magazine into the player’s hand. When the player replaces the magazine, the weapon retracts it and the scope [moves] back into position with a servo-like sound,” explains Duc.

SMG Concepts [Kevin Duc] *Above*

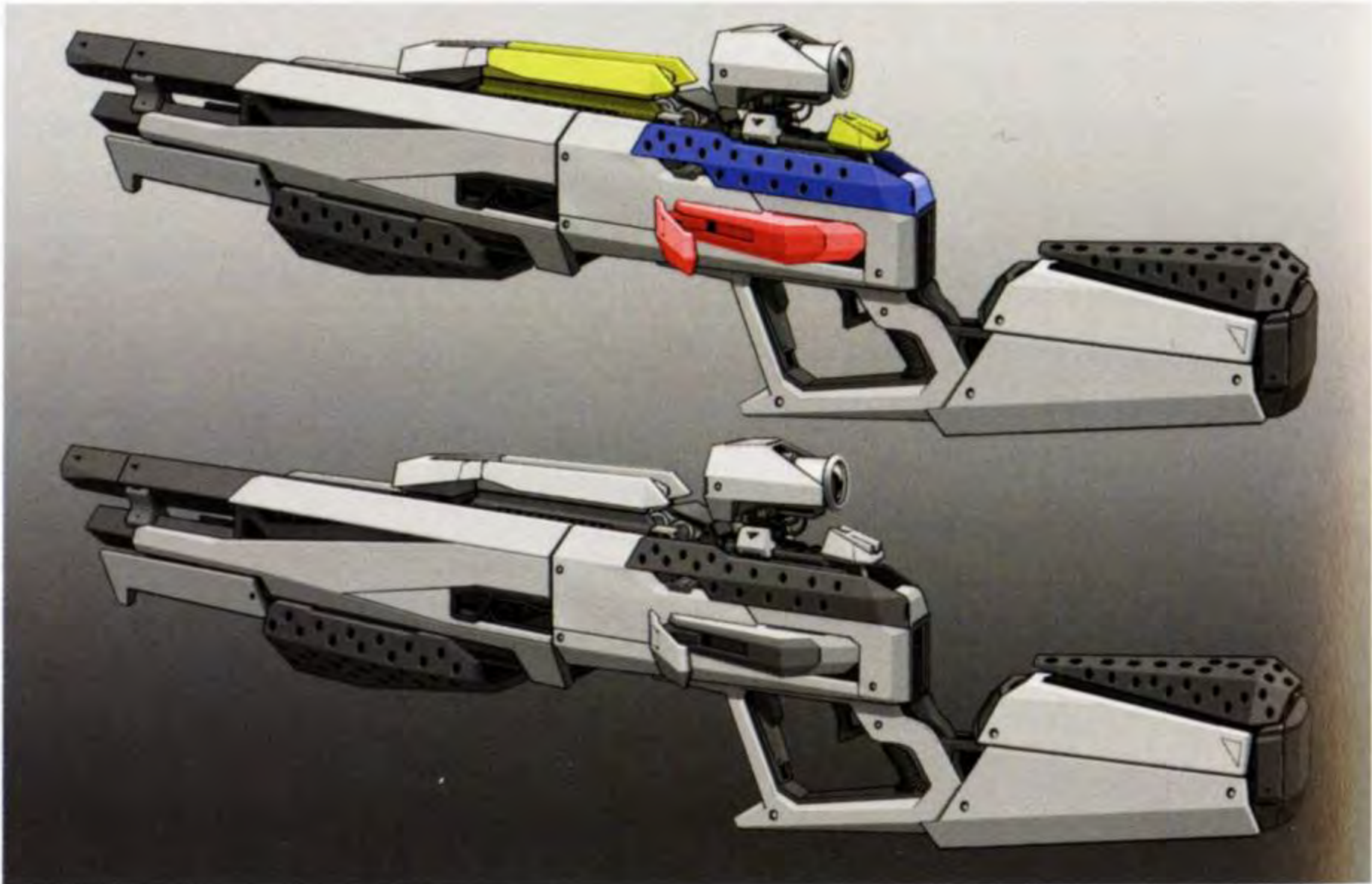
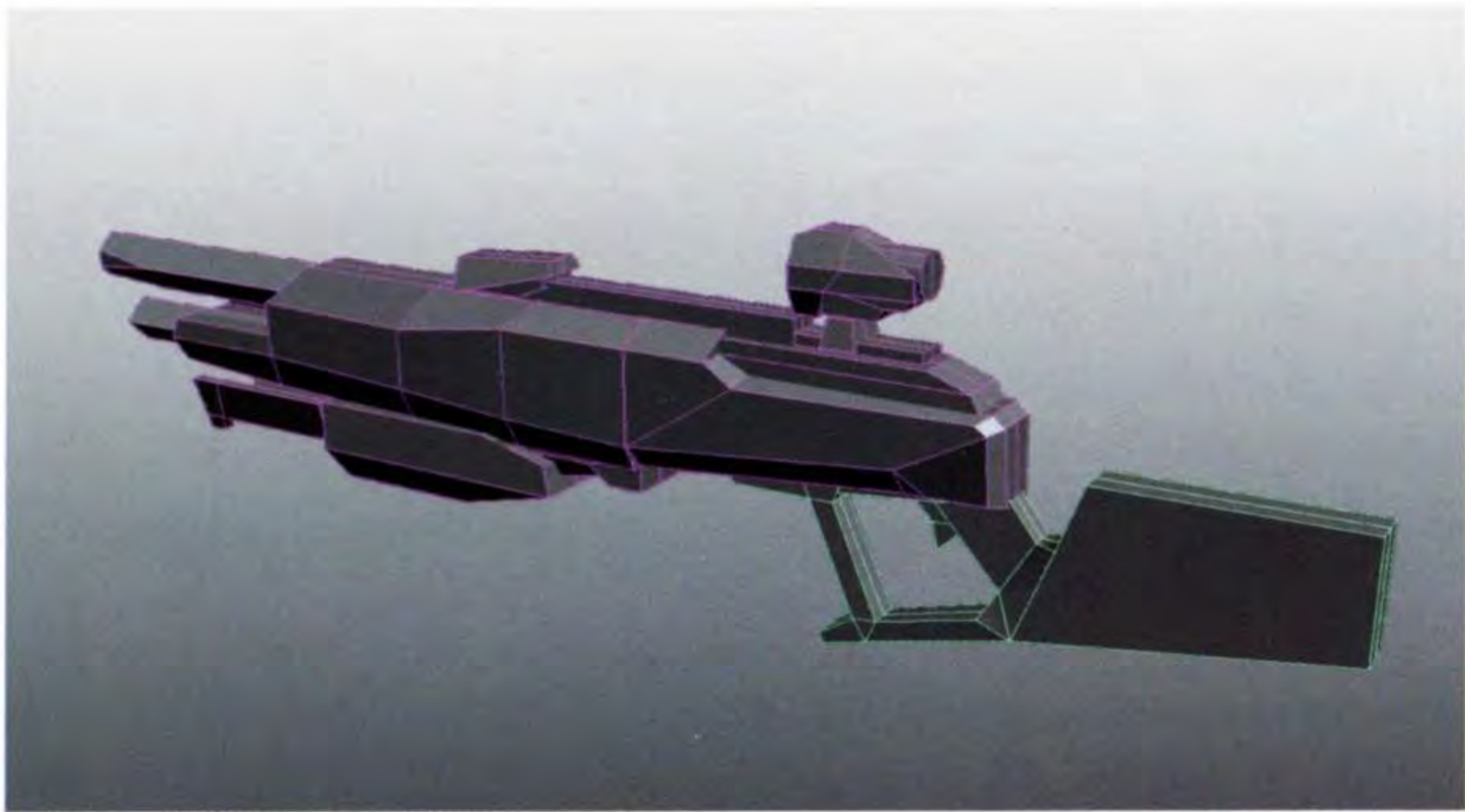
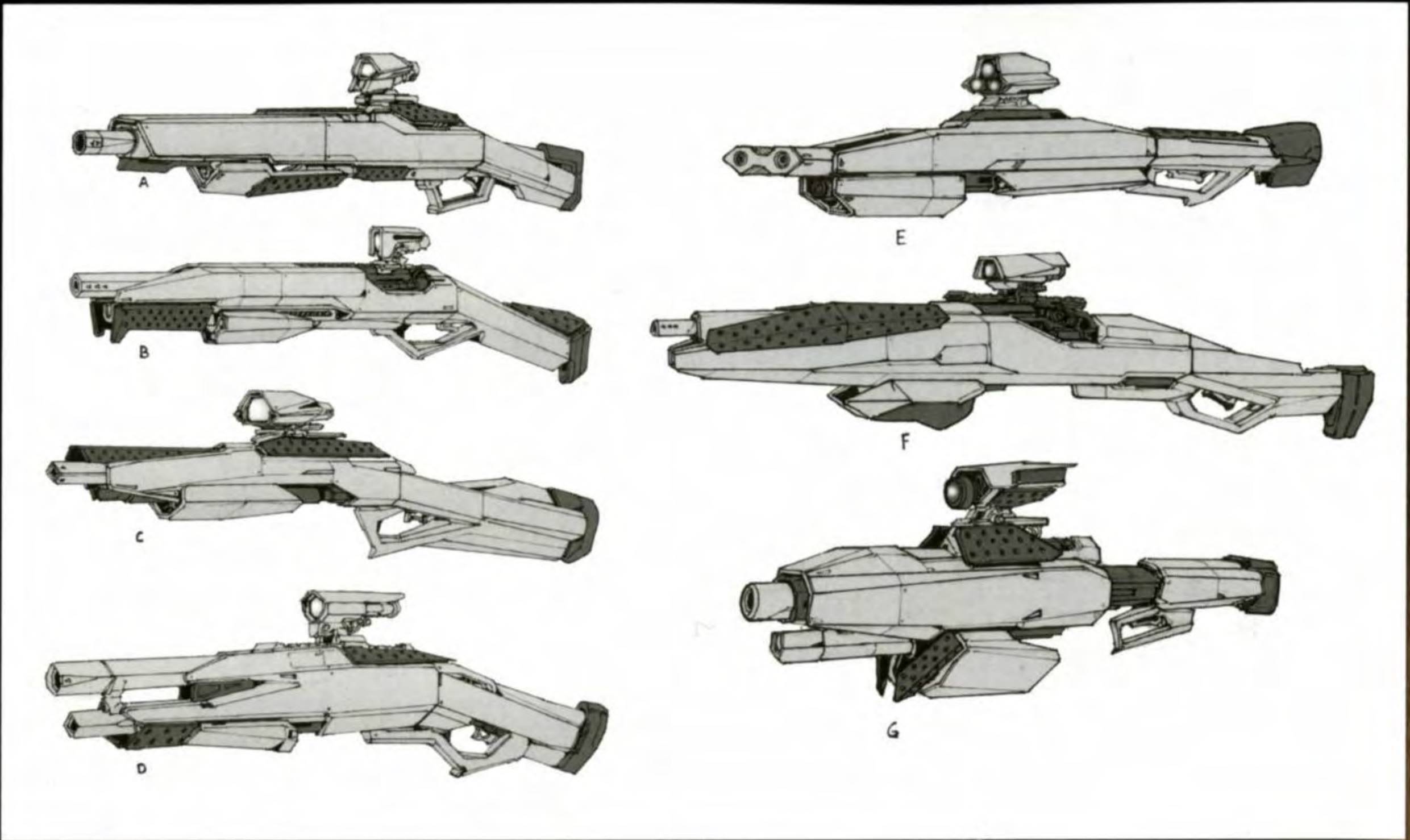
SMG Models [Liquid] *Below*

SMG Breakdown [Kevin Duc] *Bottom*

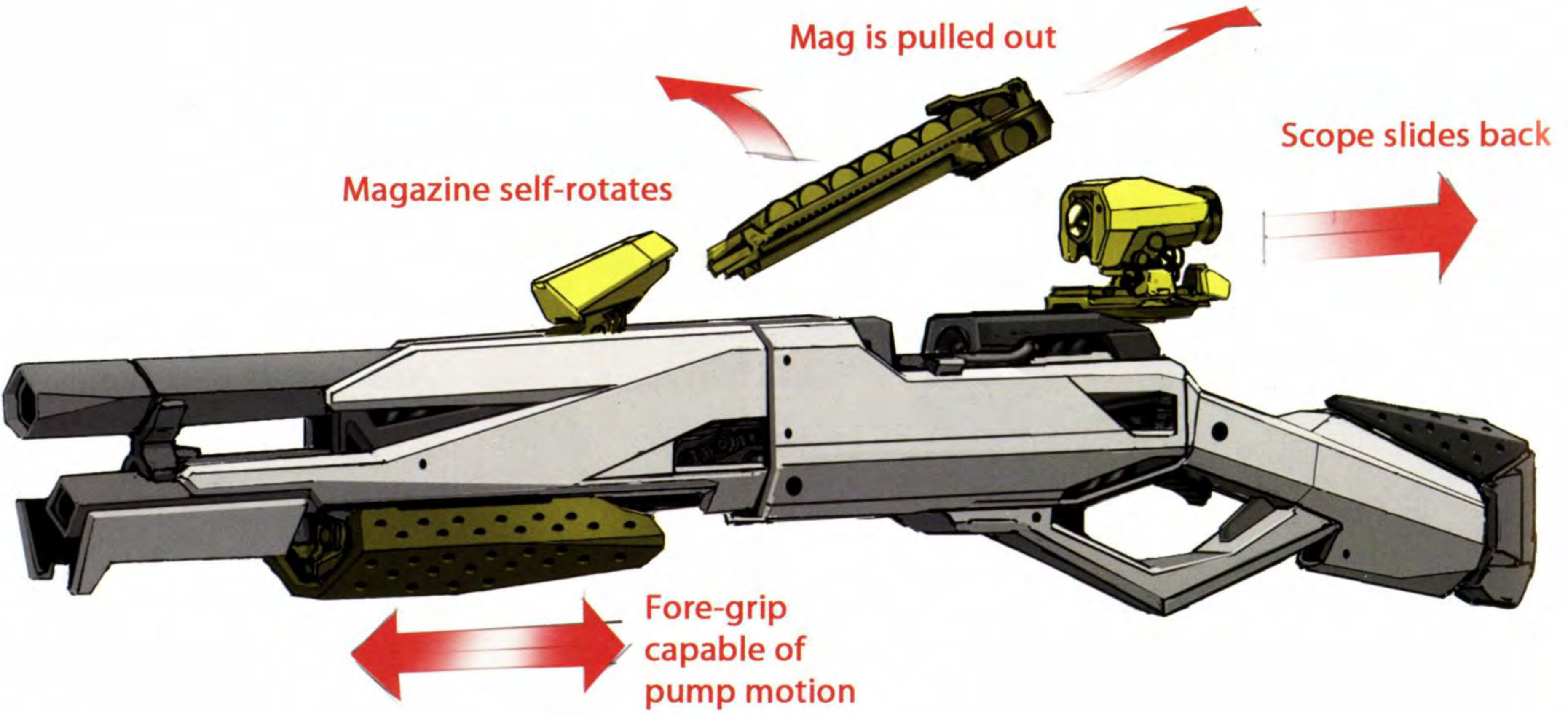


SHOTGUN

“Hyperion shotguns continue the top-loaded, electro-mechanical theme derived from our SMG and pistol designs. We wanted a lot of movement during firing, so we exposed the shells and animated them loading into the chamber,” says Kevin Duc. “These auto-loading features played well with the automatic firing of Hyperion shotguns.”

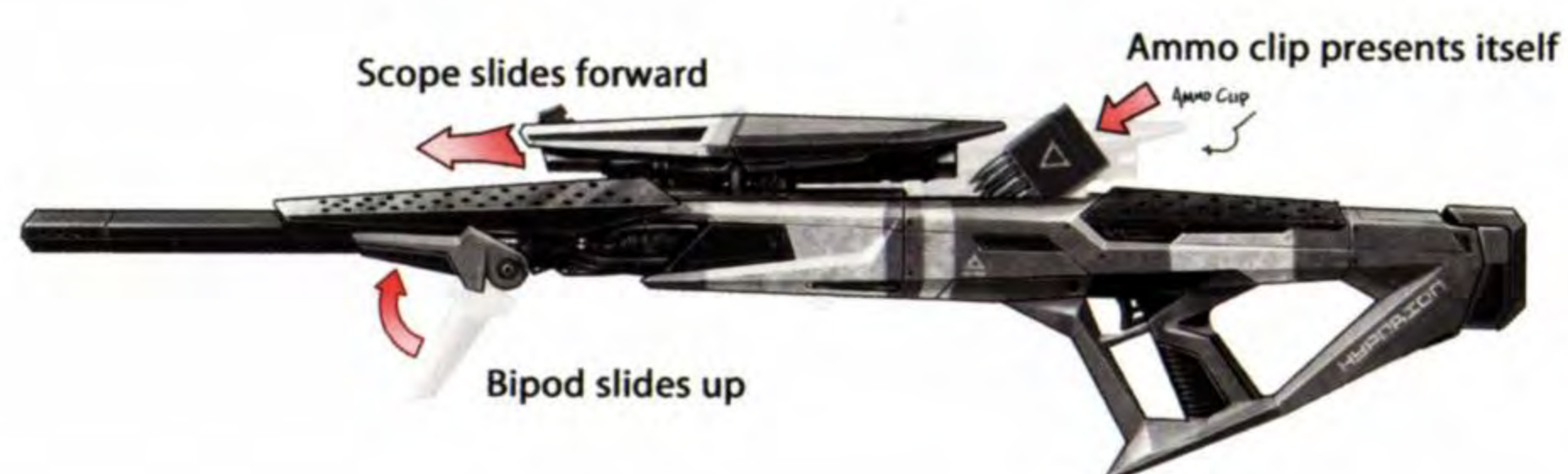


Shotgun Concepts [3Point] *Top*
Shotgun Models [David May, 3Point] *Above*
Shotgun Animations [3Point, Kevin Duc] *Below*





Sniper Rifle Model [Jimmy Barnett]



Default



With Barrel Shroud



Body options



Body options
With Barrel Shroud

SNIPER RIFLE

"The Hyperion sniper rifle is also an electro-mechanical top-loading weapon. We integrated the typical Hyperion shapes including slab sides, angular cuts, and waffle pattern metal plates covering a wired interior. The Hyperion sniper rifle reload proved very unique and noticeable with its long slide forward of the scope and ejection of the spent magazine," explains Kevin Duc.

"The Hyperion sniper was by far the most intense, fun, and demanding undertaking of the whole project for me," says Jimmy Barnett. "It was the first weapon I worked on so it definitely came with the learning curve of producing a weapon for *Borderlands 2*. As soon as I saw the final concept for this thing I knew I really wanted to do it. Luckily everything worked out!"

Sniper Rifle Concepts [Shane Nakamura] Above and Right

Revised 1st Person View

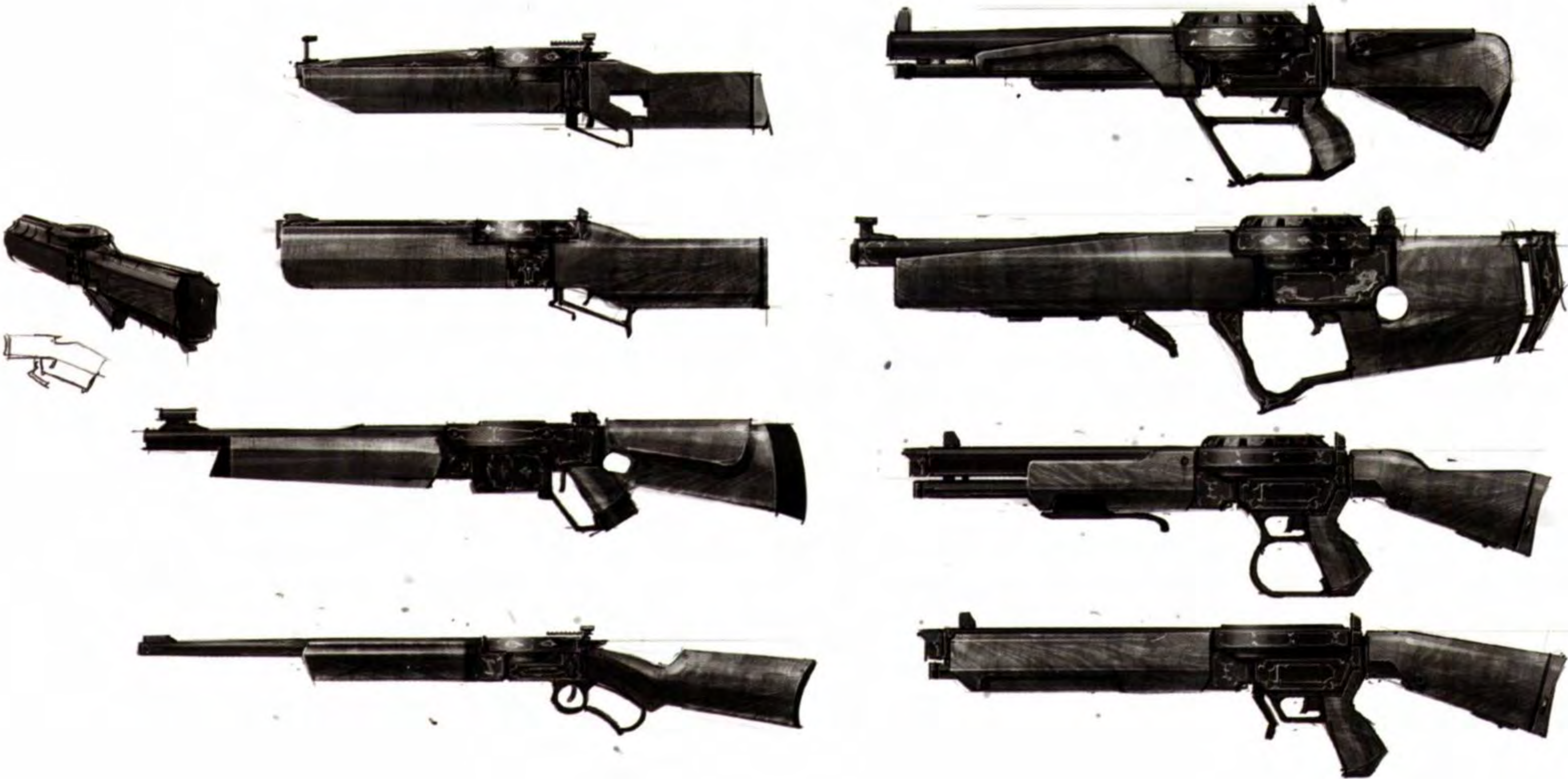


JAKOBS



OVERVIEW

Jakobs represents Old World craftsmanship mixed with slight *Borderlands* tech. "Metal sections are composed of forged and machine-cut steel and stocks and grips are made of wood. In these early drawings, we explored a top-loaded drum magazine that sat horizontally on the top of the weapon. This evolved into the more traditional placement in the final design."



Jakobs Explorations [Kevin Duc] Top
Jakobs Explorations [Kevin Duc] Middle
Aesthetics Pass [Kale Menges] Below



PISTOL

"The Jakobs pistol was envisioned with a variety of reloads," says Duc. "Depending on which body attachment was present, the pistol could reload like a break barrel, a side-loading cylinder, or a single cartridge reload. Because of game constraints, the single reload was dropped in favor of the other two."

"Jakobs scopes are designed with Old World methods in mind. Here the pistol scope has traditional circular glass optics encased in brass bands."

"I had first dibs on this gun since we share the same name," says Jacob Christopher. "I don't know if this name sharing had any effect on the final artwork though."

Pistol Concept [Kevin Duc] *Top*

Pistol Model [Jacob Christopher] *Middle*

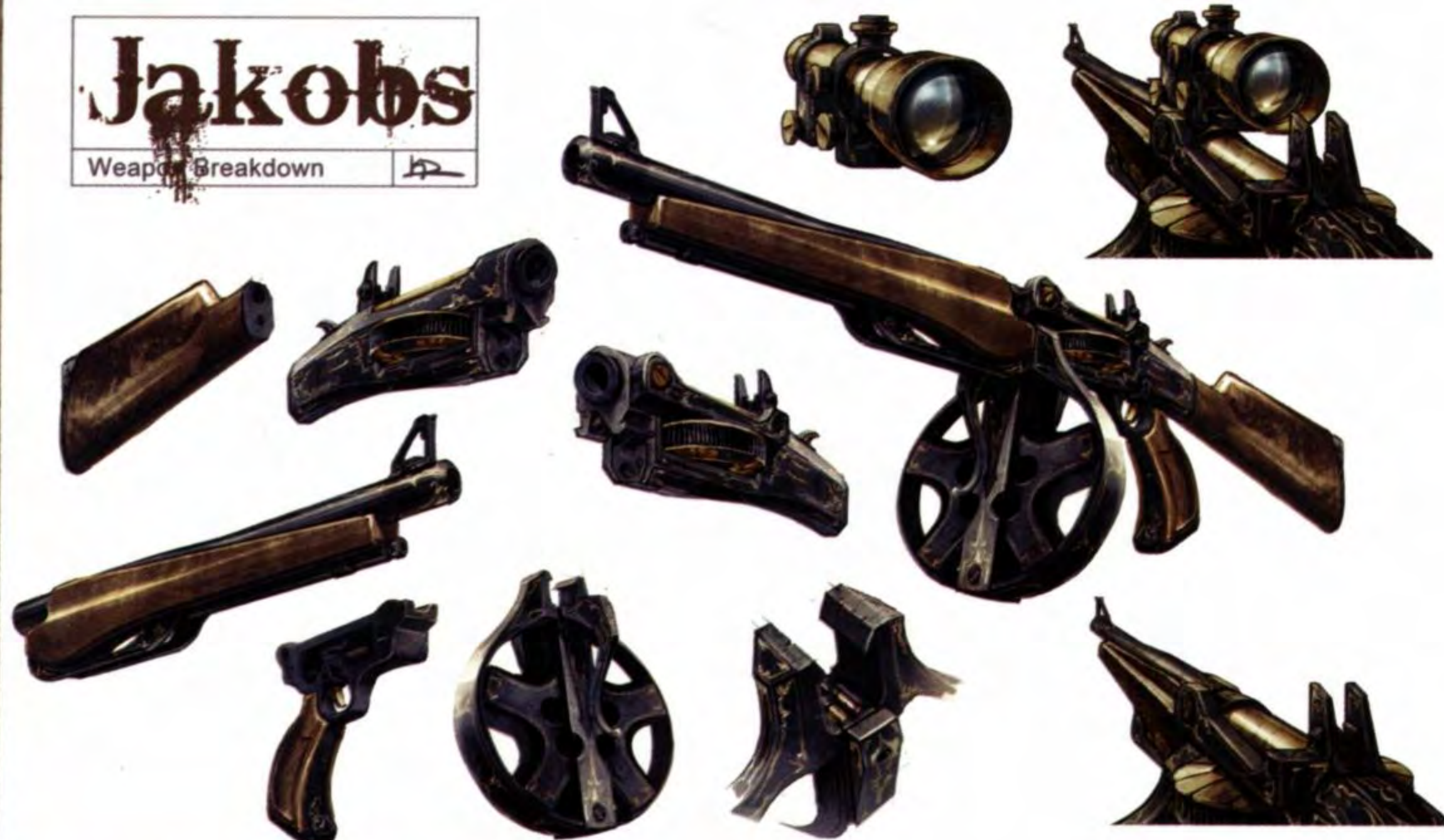
Pistol Scope Concept [David May, Kevin Duc] *Right*



ASSAULT RIFLE

The Jakobs assault rifle was one of our first Jakobs designs. We pushed the Old World craftsmanship concept by integrating polished woods, blued metals, and silver and gold inlays. The mechanism in the large wheel magazine is actually five magazines in one rotating housing. With each trigger pull, the housing rotates to another magazine while loading a round into the chamber.

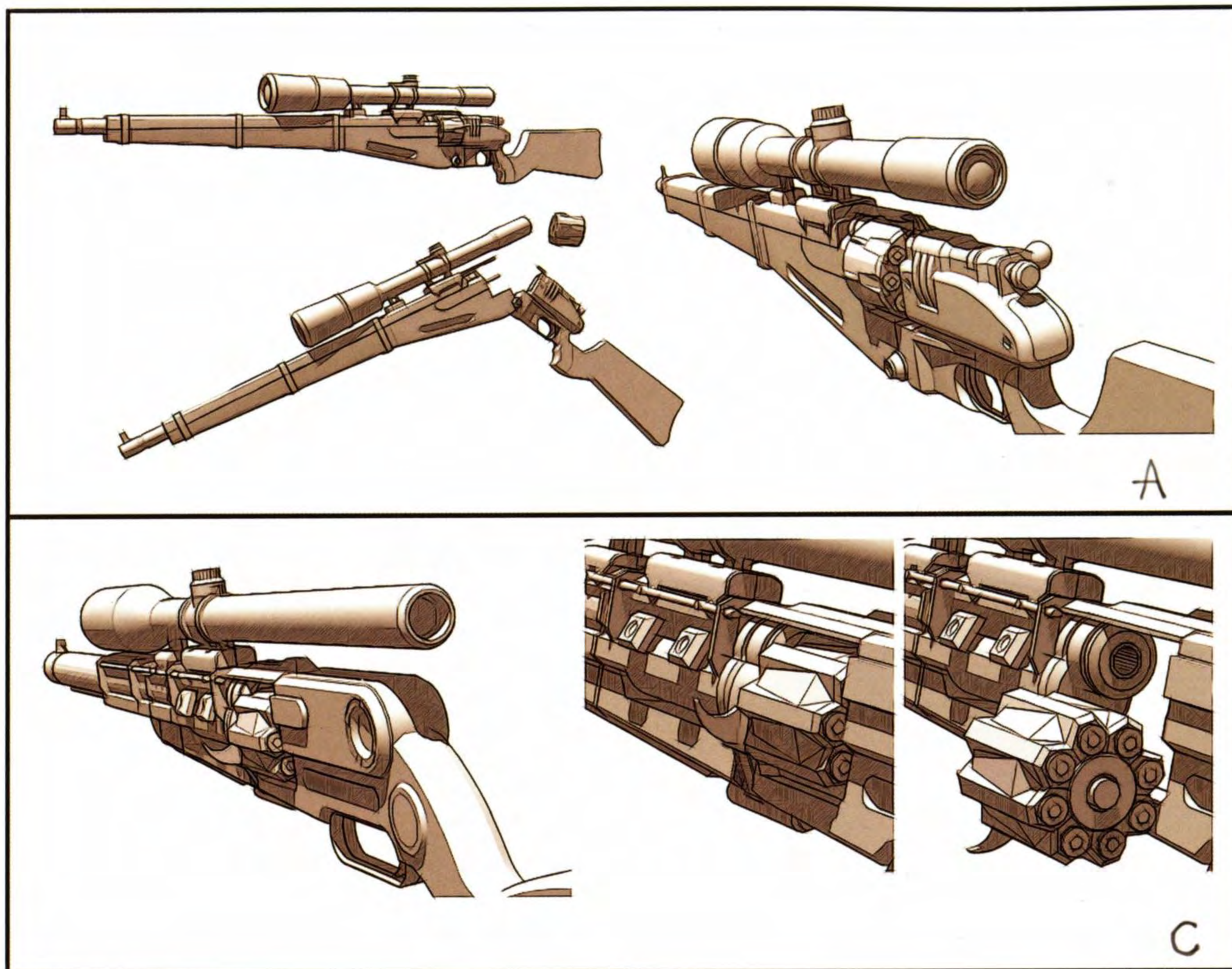
"The Jakobs scope needed to look both traditional but also have aspects of a *Borderlands* tech level. By integrating the switches and imbedding a tech piece, we can pull the scope design into a mix of the two."



Weapons Breakdown [Kevin Duc] *Above Left*

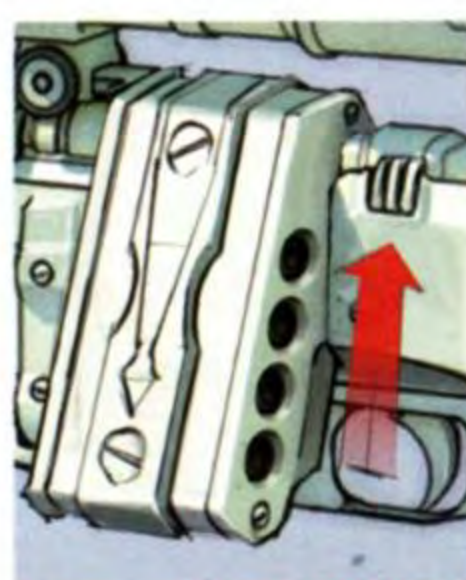
Rifle Model [Ricky Oh] *Above Right*

Rifle Scope Model [Kevin Duc, Ricky Oh] *Left*

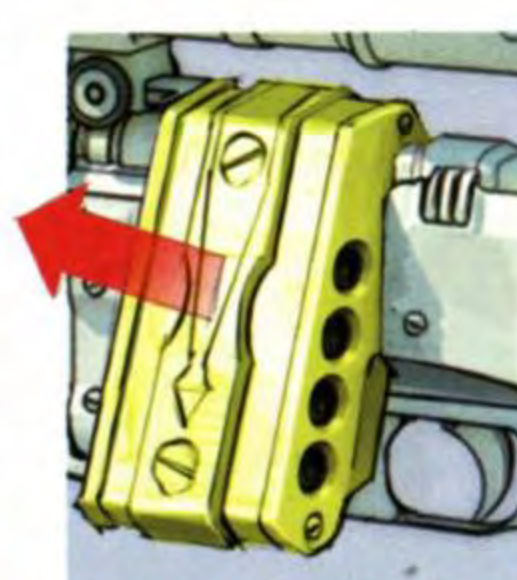


SNIPER RIFLE

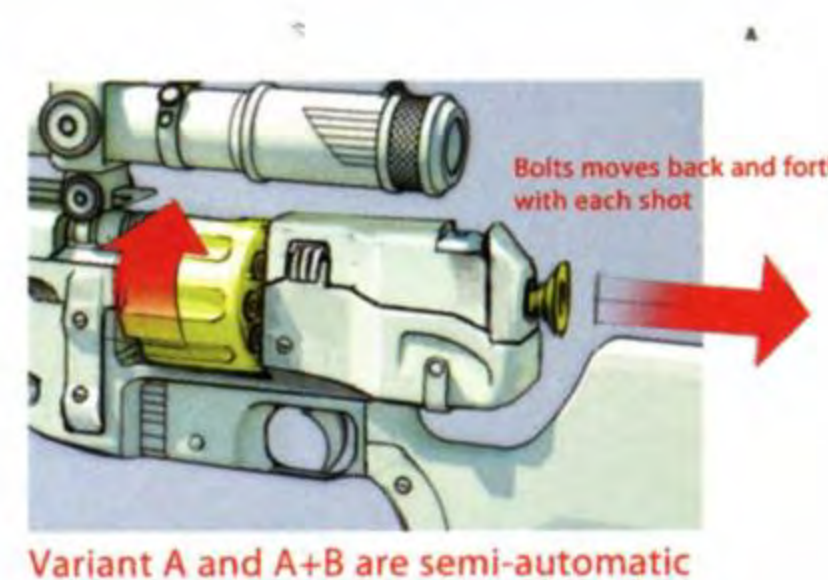
“The Jakobs sniper rifle is our only bolt-action rifle in *Borderlands 2*. Dependent on which body variant is present, the rifle can also be a semi-automatic rifle. We had to explore animations for both variants, including firing and reload animations.”



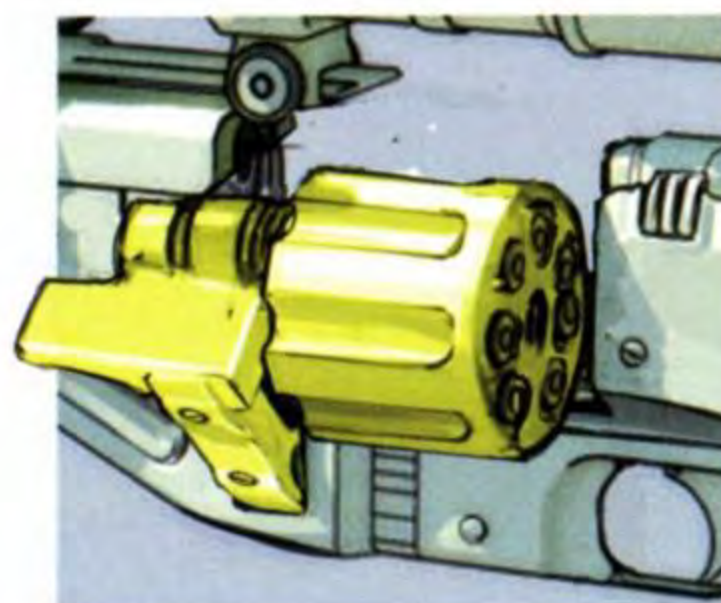
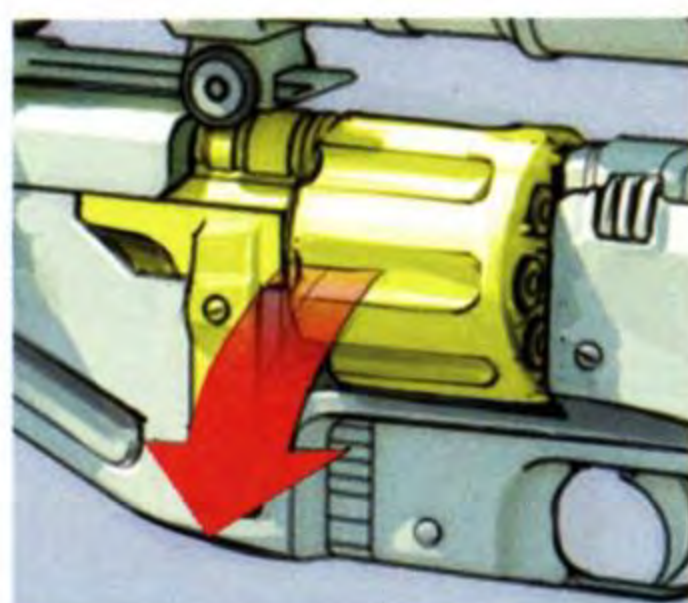
Bullets move up within magazine



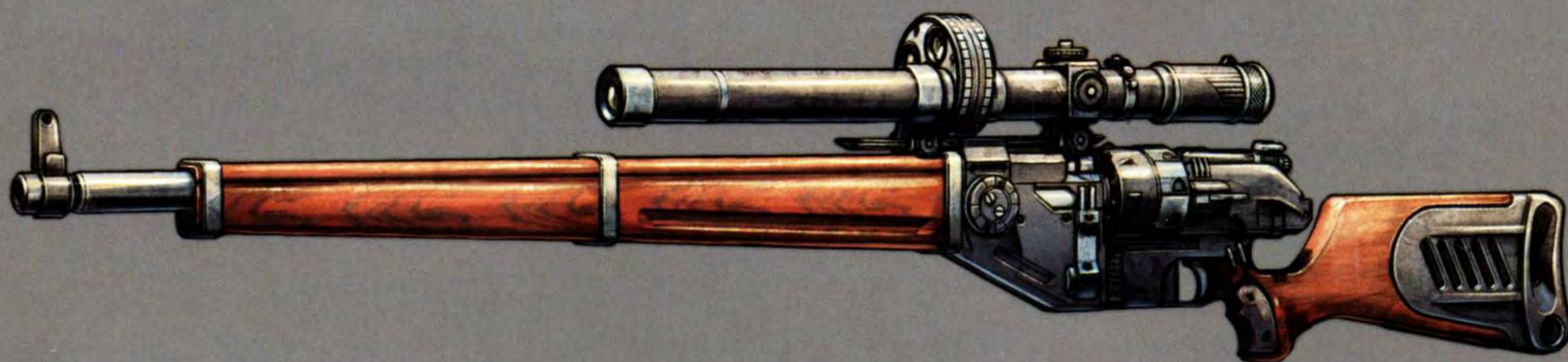
Removed and replaced during reload

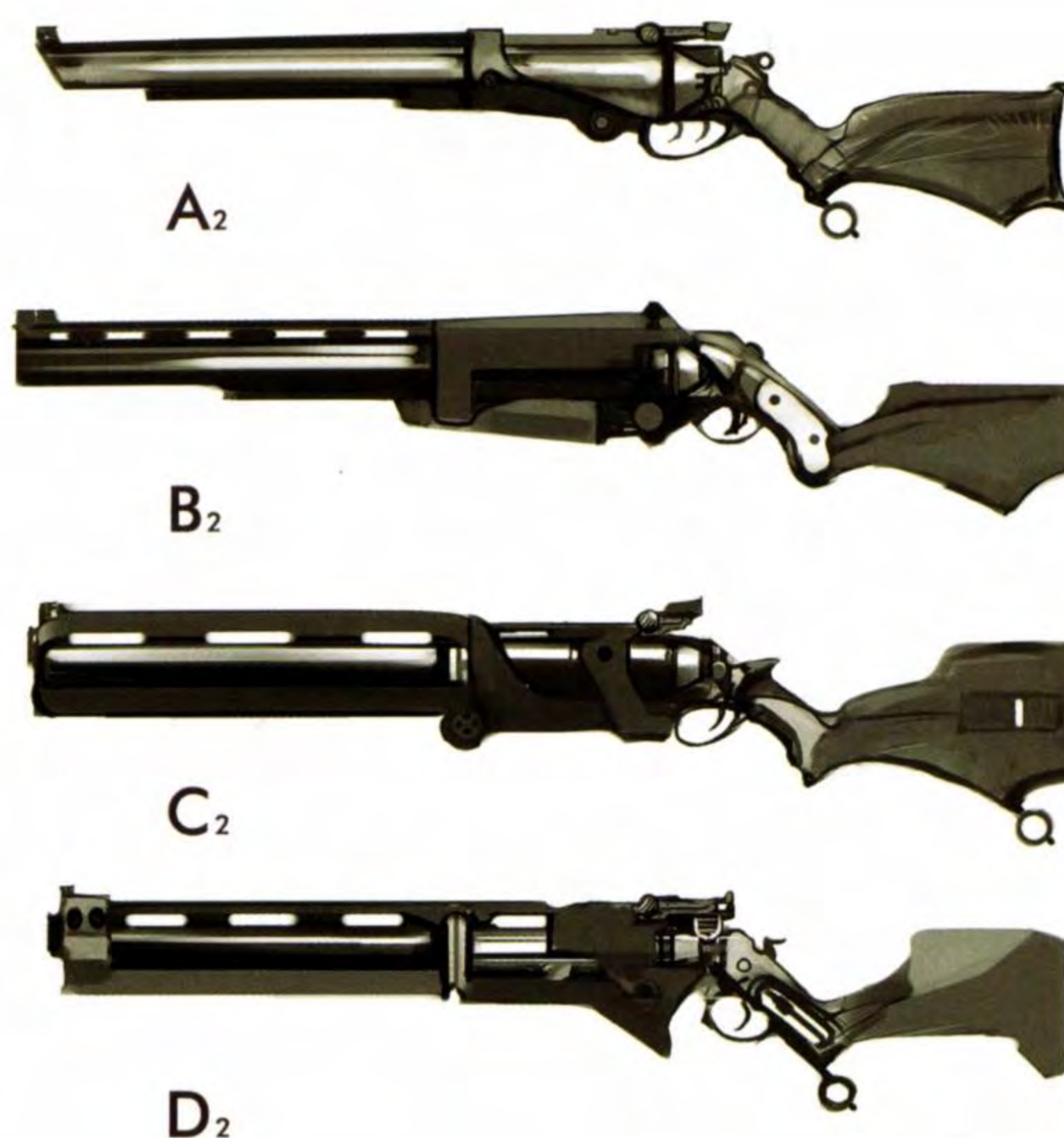
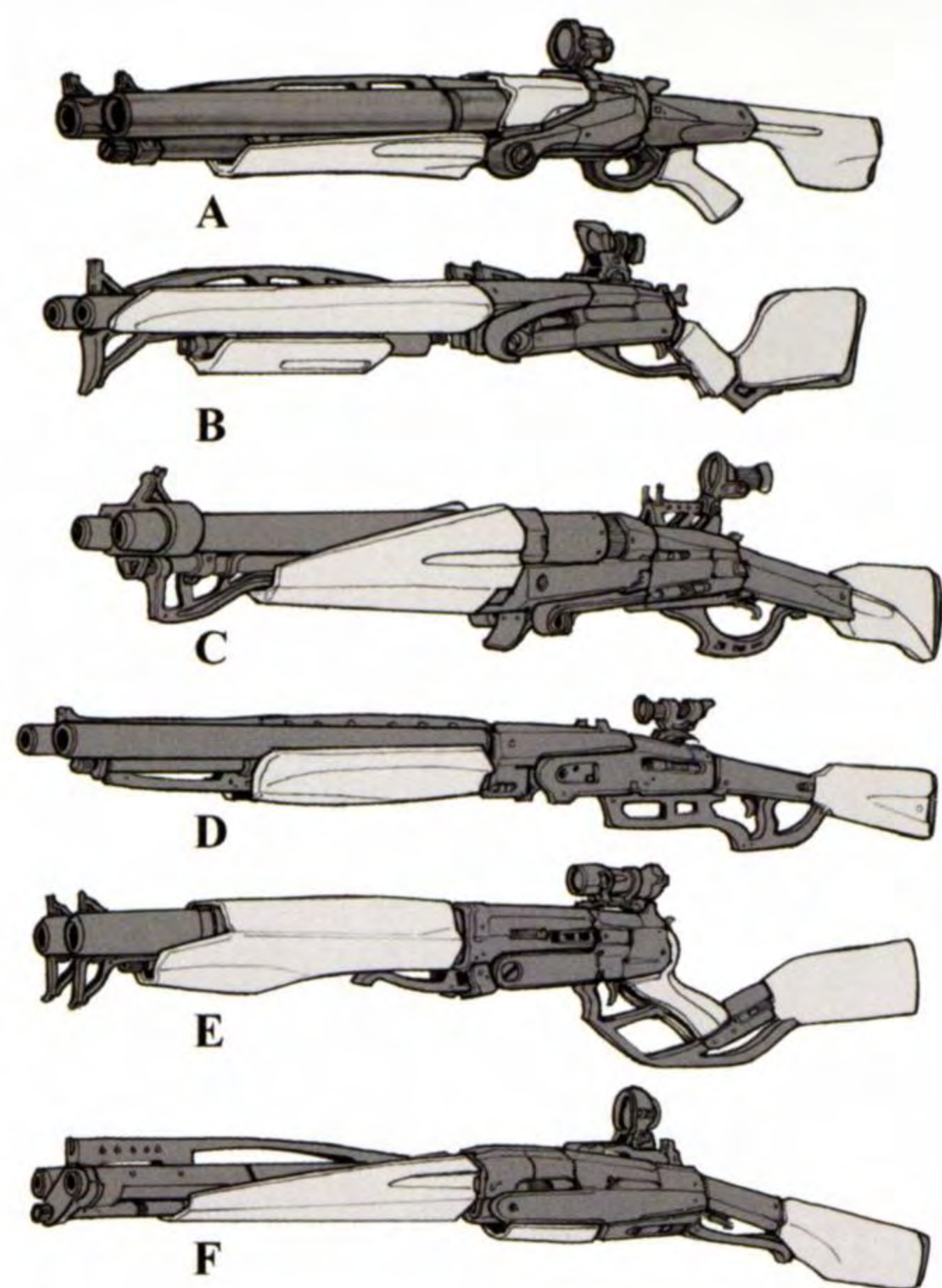


Variant A and A+B are semi-automatic



Rifle Concepts [Virtuous] Top
Rifle Anims [Kevin Duc, Virtuous] Right
Rifle Scope Model [Virtuous] Below





JAKOBS

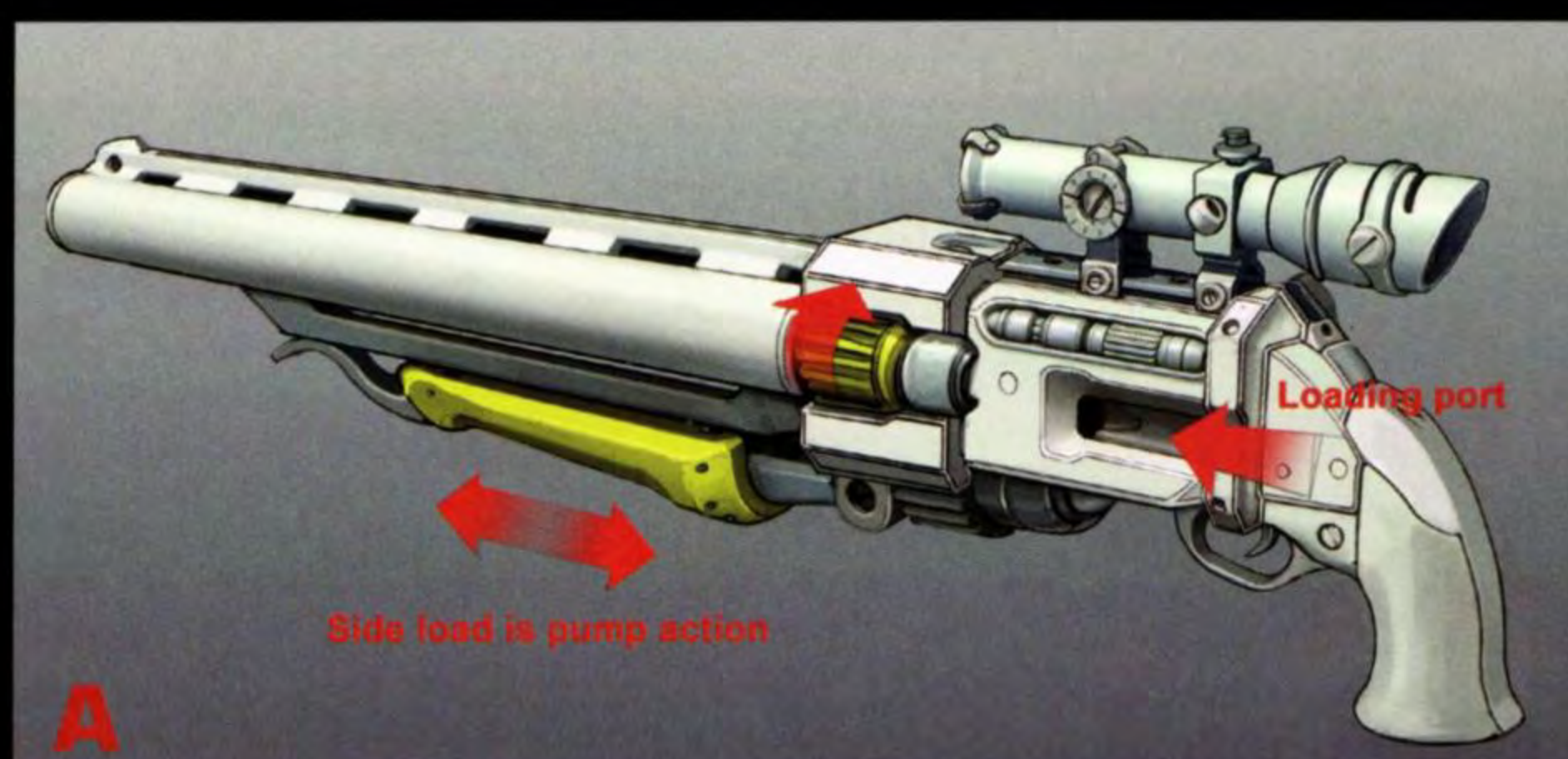
SHOTGUN

Of the breech-loaded Jakobs shotgun, designer Matt Armstrong says, "We wanted a classic-feeling shotgun. That's fundamentally what was kind of missing from Jakobs in the first game. I always intended to get the double-barrel in the game and make it feel like the one in *Doom*."

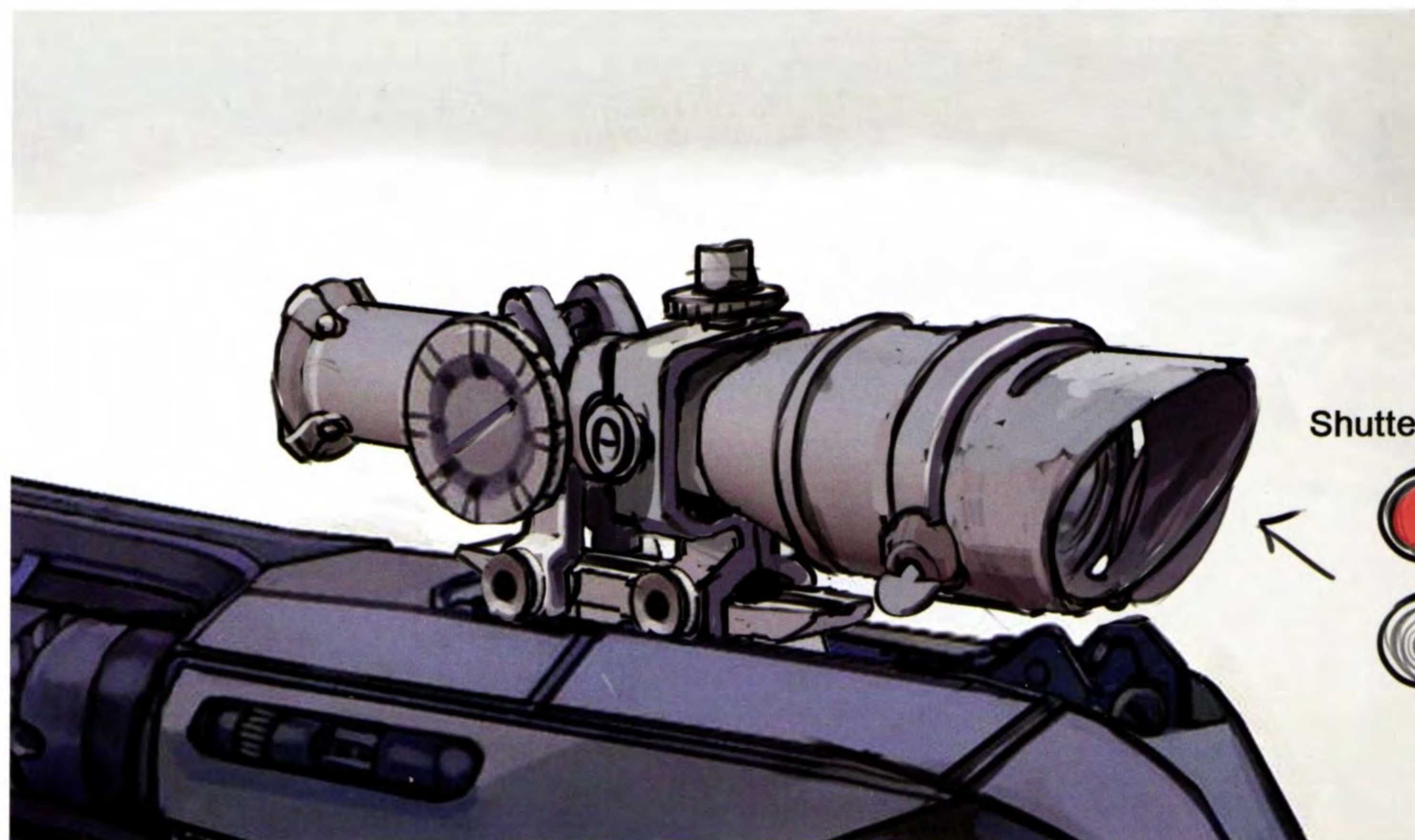
Shotgun Concepts [3Point] Top

Shotgun Anim Design [Kevin Duc, David May] Right

Shotgun Concepts [Kevin Duc, 3Point] Below



A



Shutter rotates out

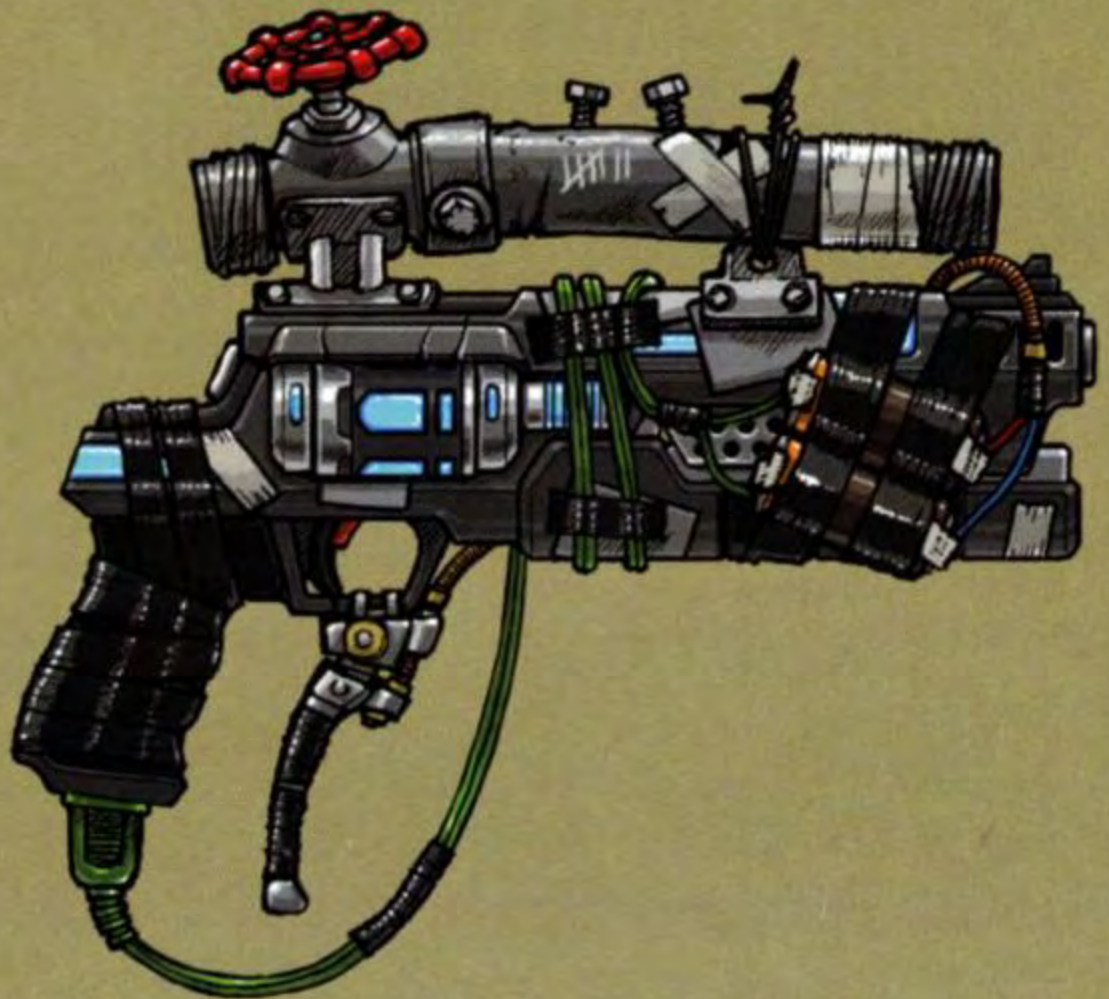
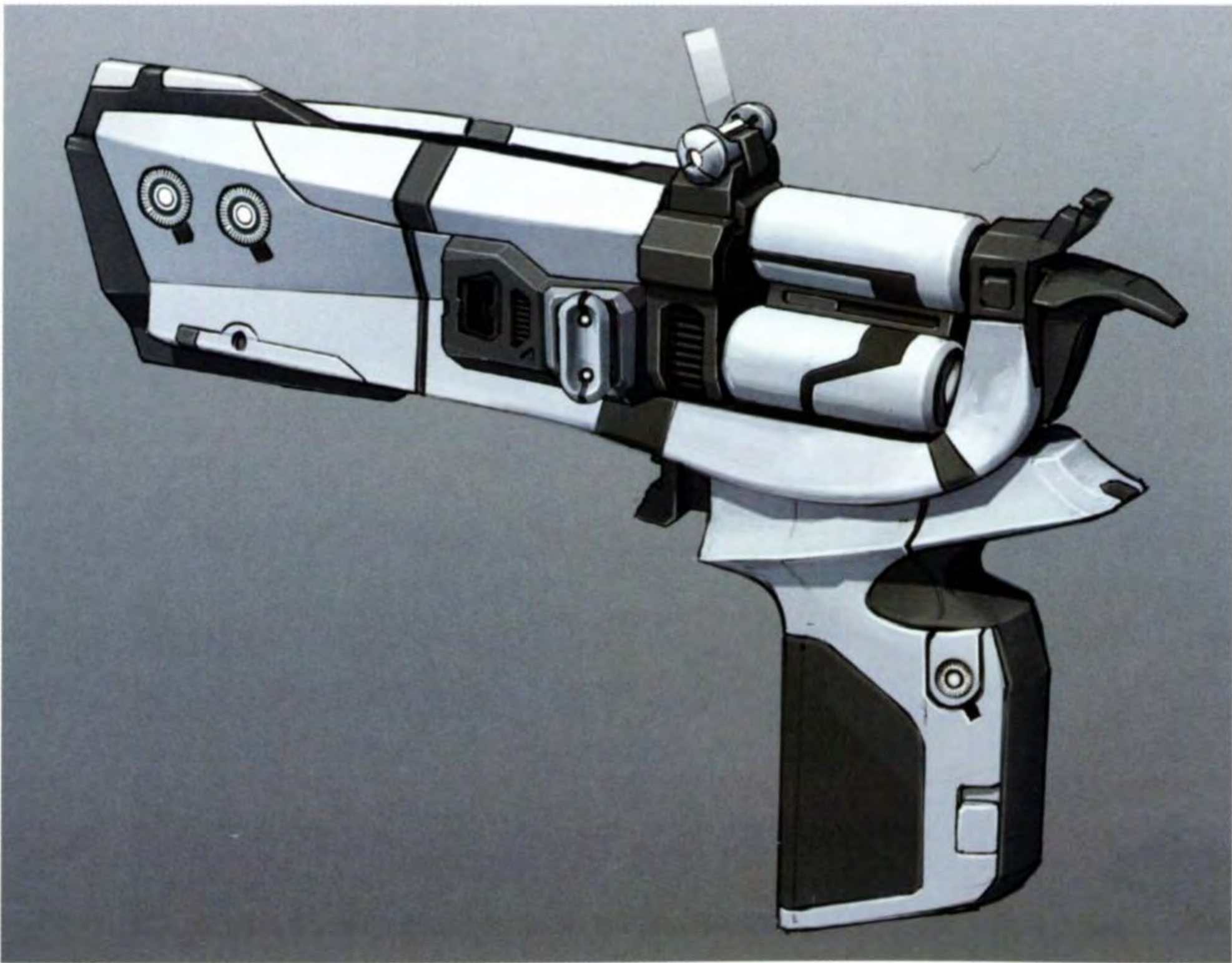
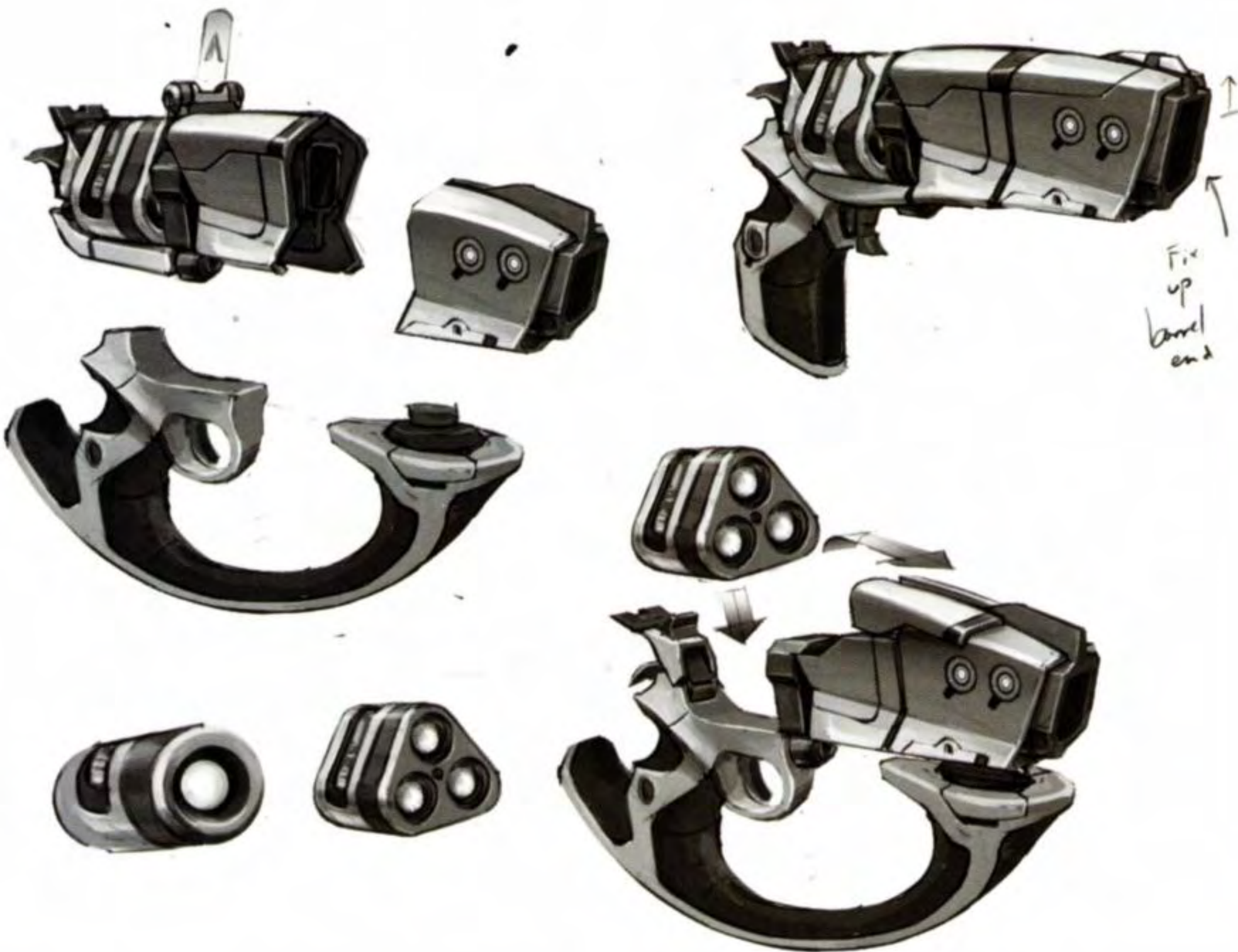


MALIWAN

OVERVIEW

Maliwan's design language evolved from the decision to make them our highest technology manufacturer. Maliwan is defined by long, arching lines bisected by straight line cuts. We looked at a lot of modern electronics and automotive design for the shapes of Maliwan.

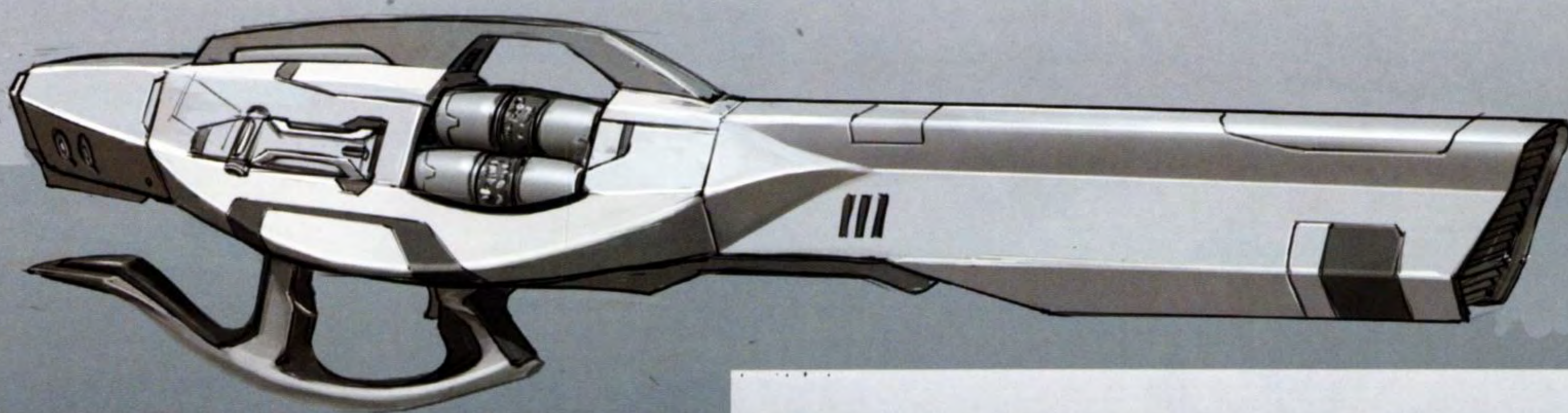
"We made Maliwan's magazines energy sources. When the weapon is reloaded and the power source is removed, the weapon shuts down and its glows dim. When the new magazine is inserted, the glows flicker back online and scopes light back up," says Kevin Duc.



PISTOL

These Maliwan pistol explorations show a slightly boxier, more vent-themed direction the manufacturer could have taken—something that says *futuristic*, but without the smooth, sleek, and visually distinctive curves that the team eventually settled on.

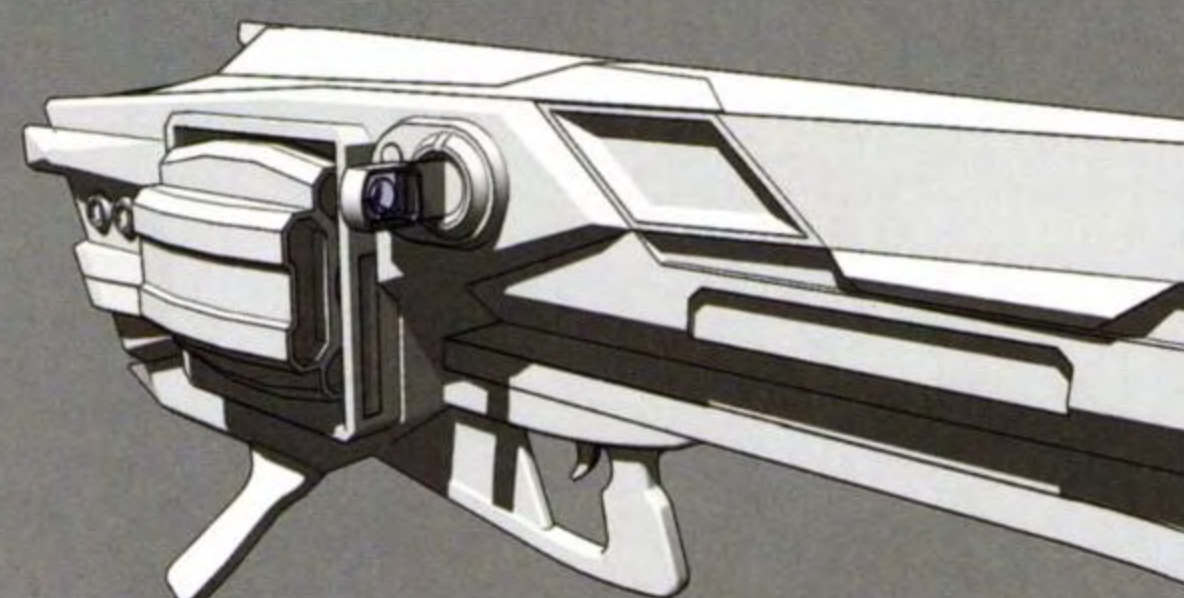
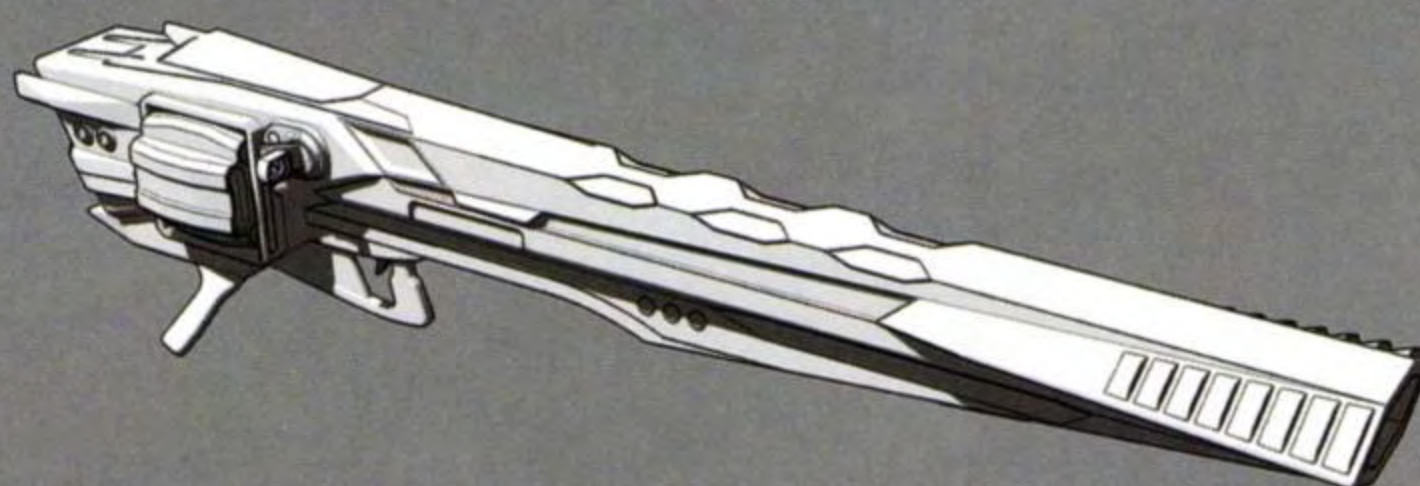
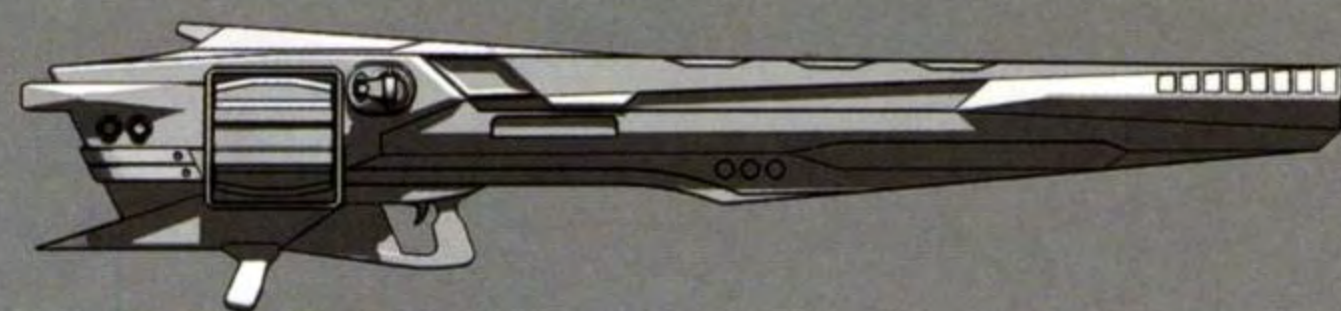
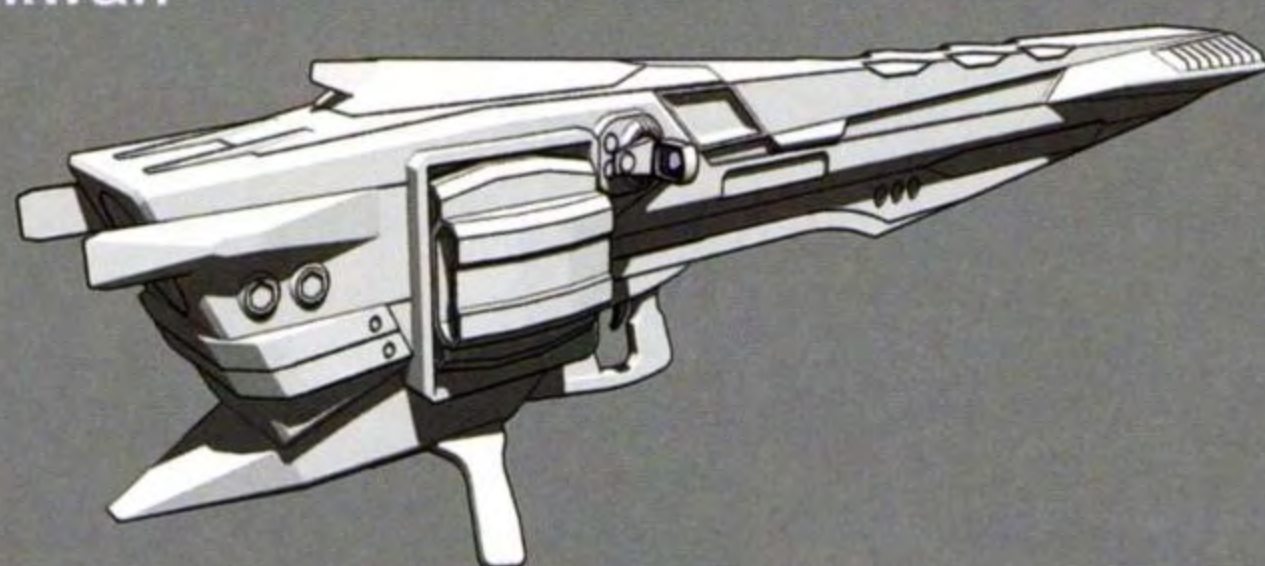
Maliwan Explorations [Kale Menges] Above
Pistol Concepts [Kevin Duc] Above Left
Pistol Paintover [Kevin Duc, David May] Left



ROCKET LAUNCHER

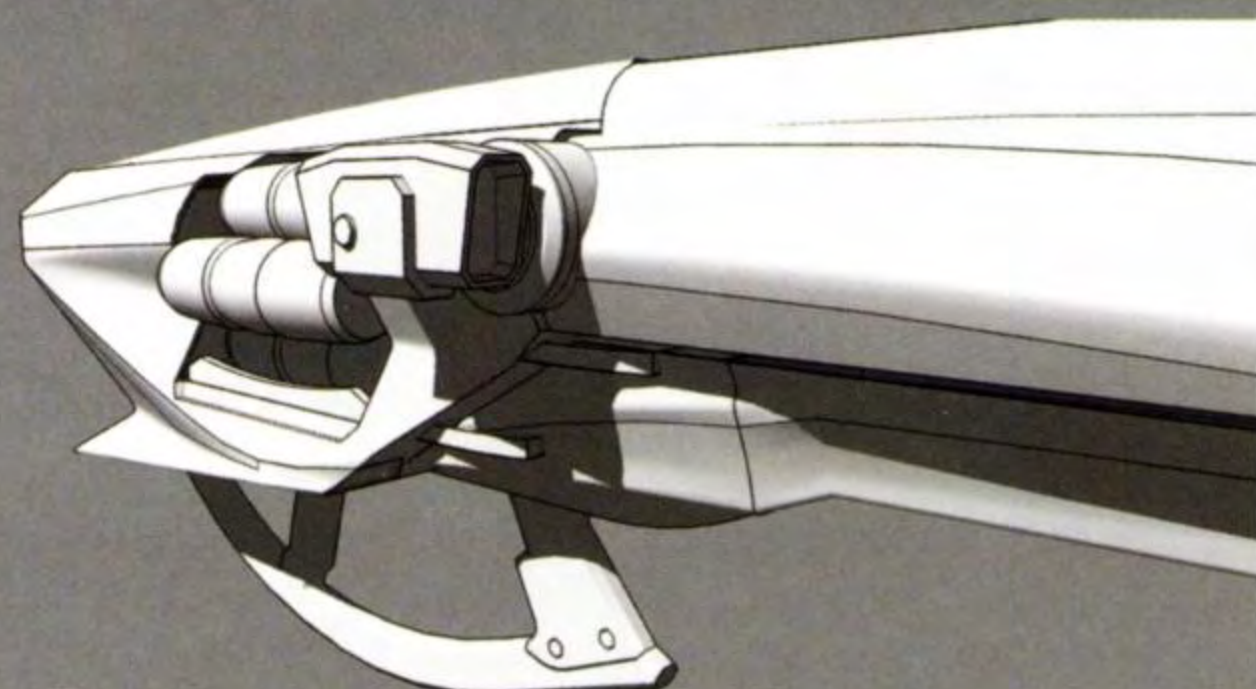
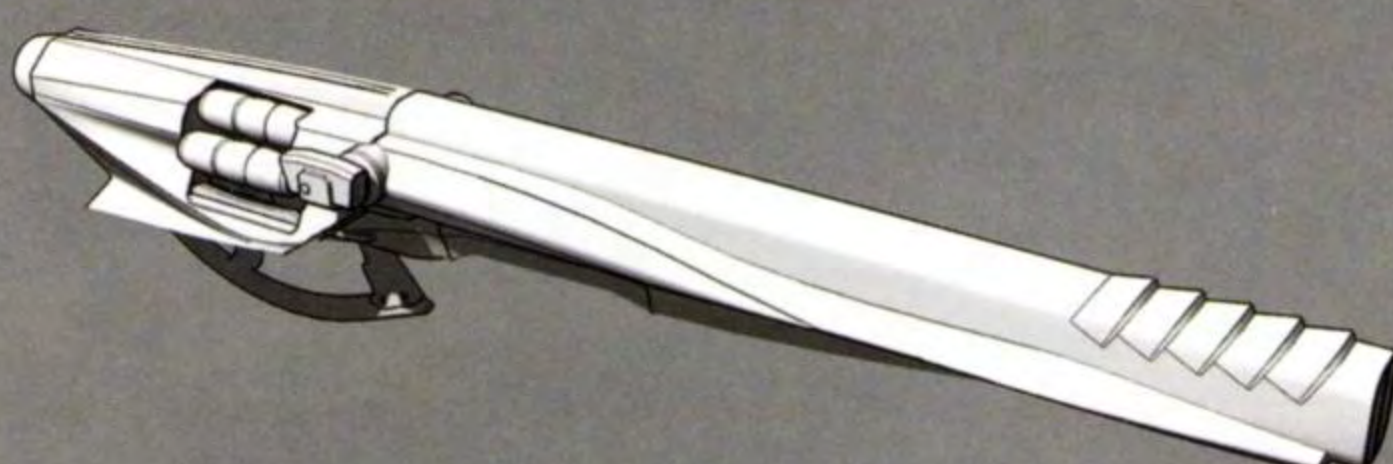
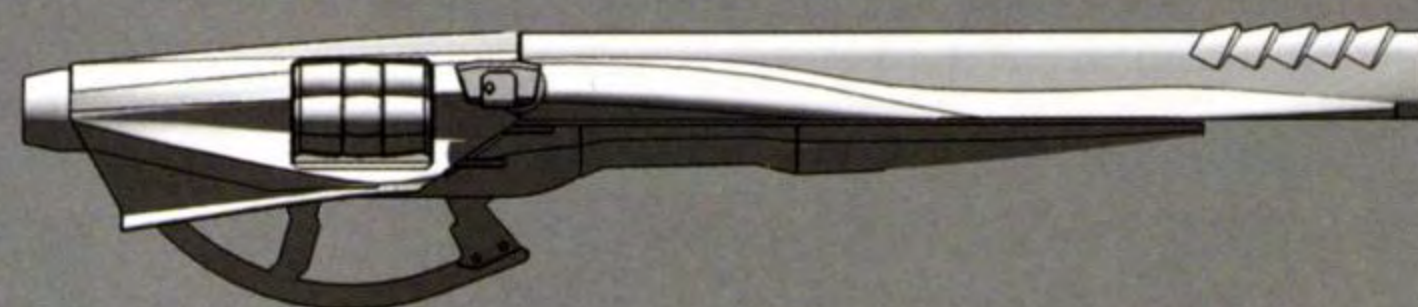
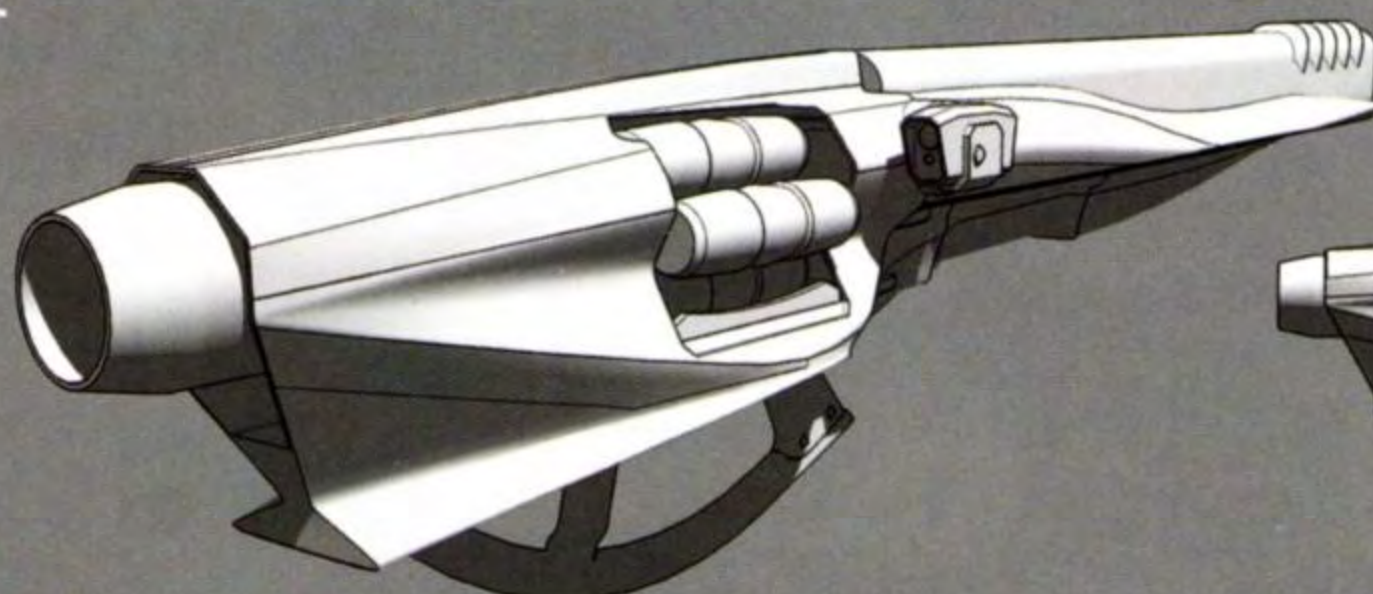
The Maliwan rocket launcher continues the high-tech smooth shapes of the pistol. It's powered by the three pods inserted into the central body of the weapon. In the image above, you can see the family resemblance between the SMG and the rocket launcher.

Maliwan



1

2

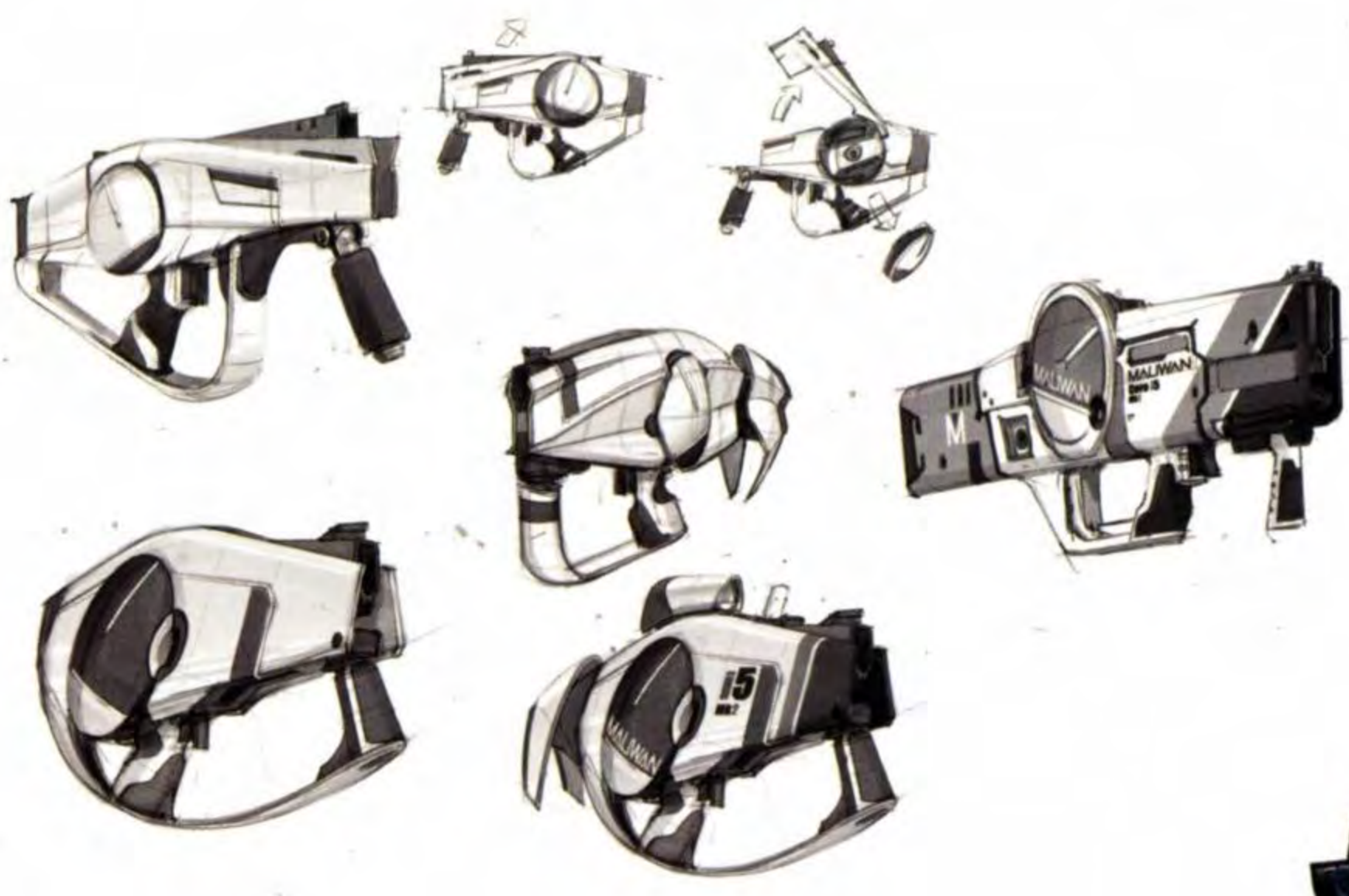


Launcher Concept

[Kevin Duc, David May, Virtuous] *Top*

Launcher Models

[Virtuous] *Right*



SMG

The Maliwan aesthetic was first explored in these SMG concepts. We knew we wanted some arching, circular shapes, and the first design we settled on had a circular magazine, but then much more linear shapes surrounding it. In the end we found a good balance between arches and straights and settled on what you see in game. Another aspect of Maliwan is the emissive surfaces and information panels throughout.



SMG Concepts [Kevin Duc] *Top*
SMG Model [David May] *Above*

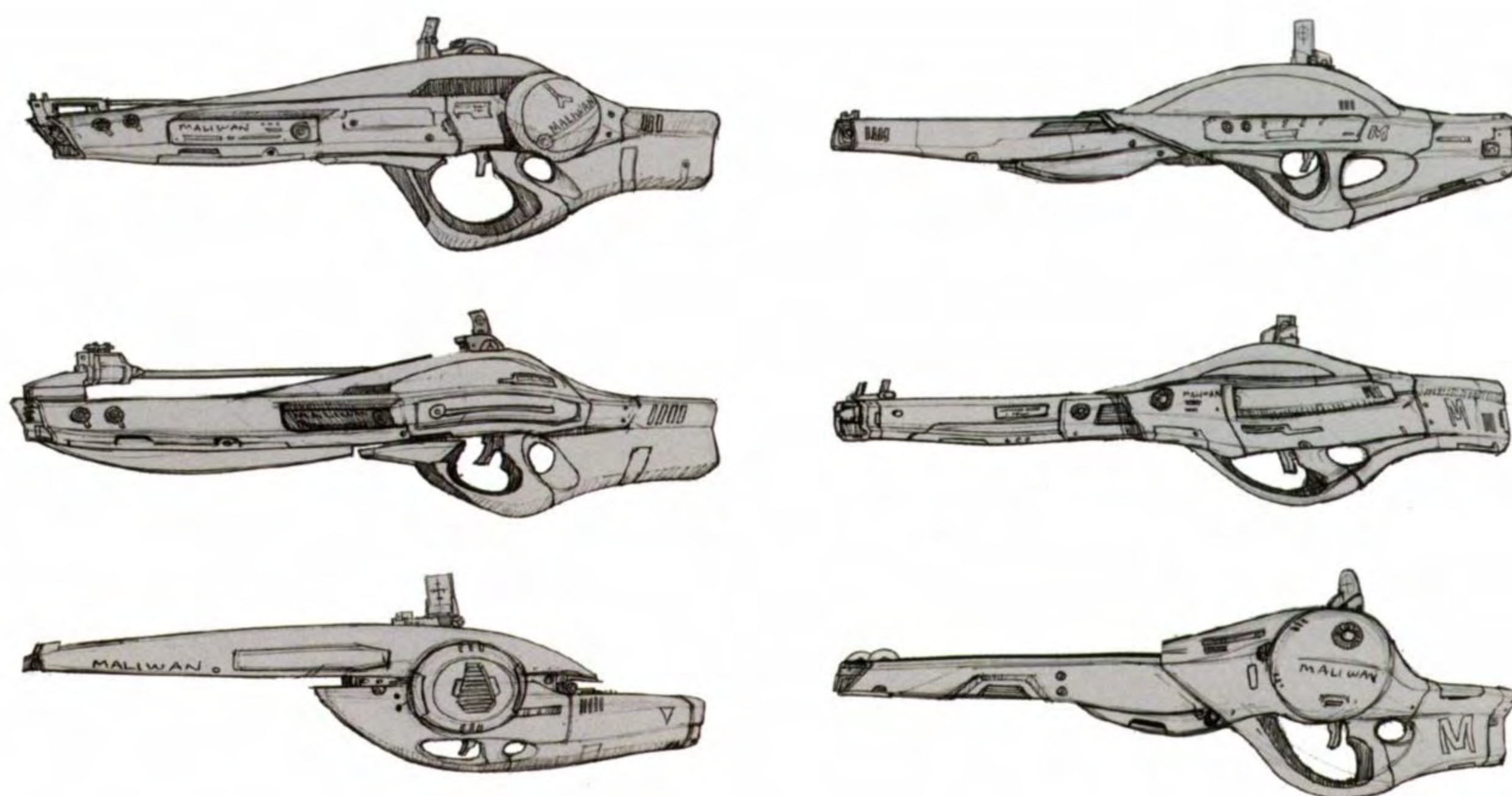
SMG Model [David May] *Above*
SMG Concepts [Kevin Duc] *Below*

MALIWAN



SNIPER RIFLE

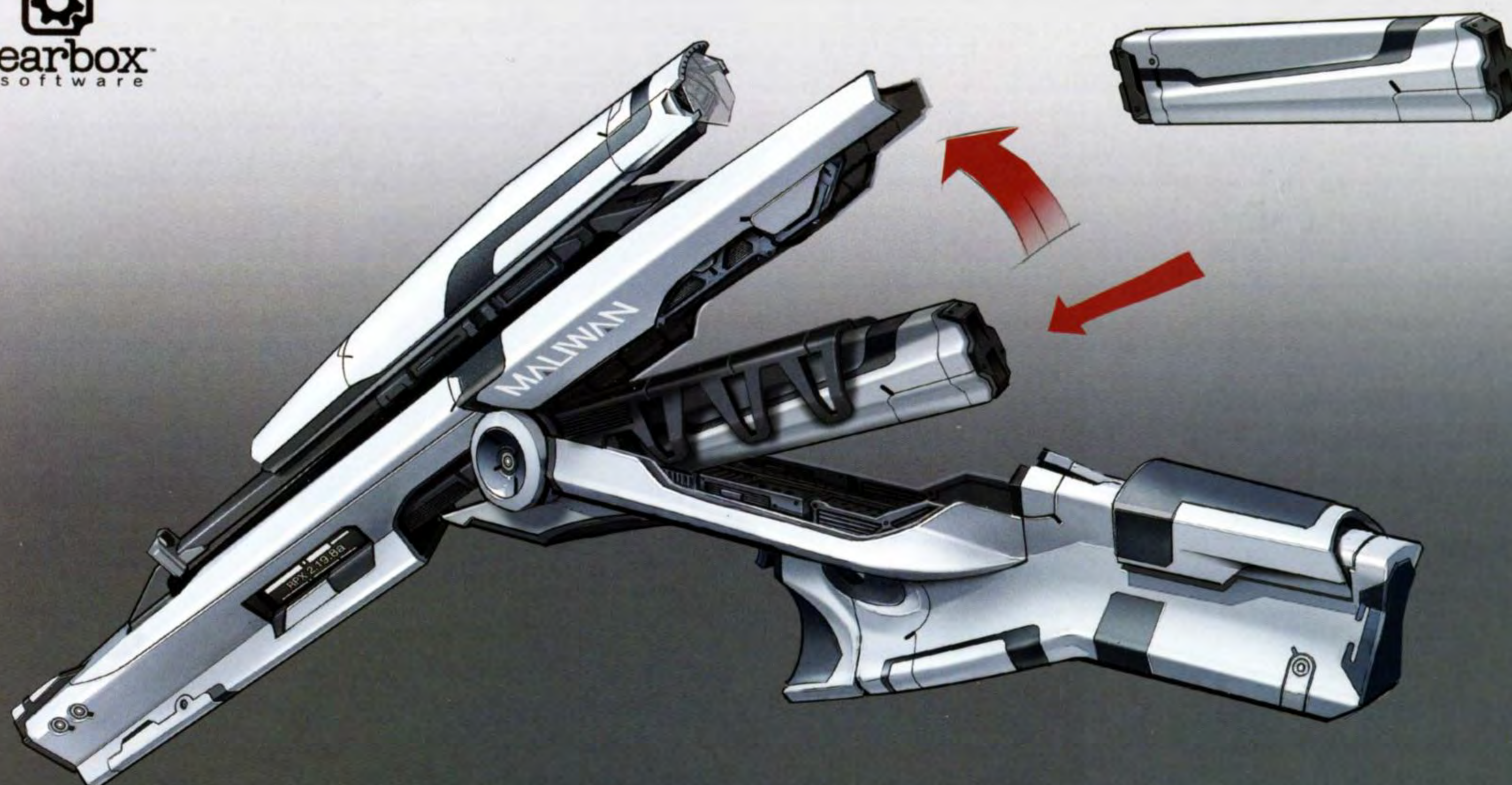
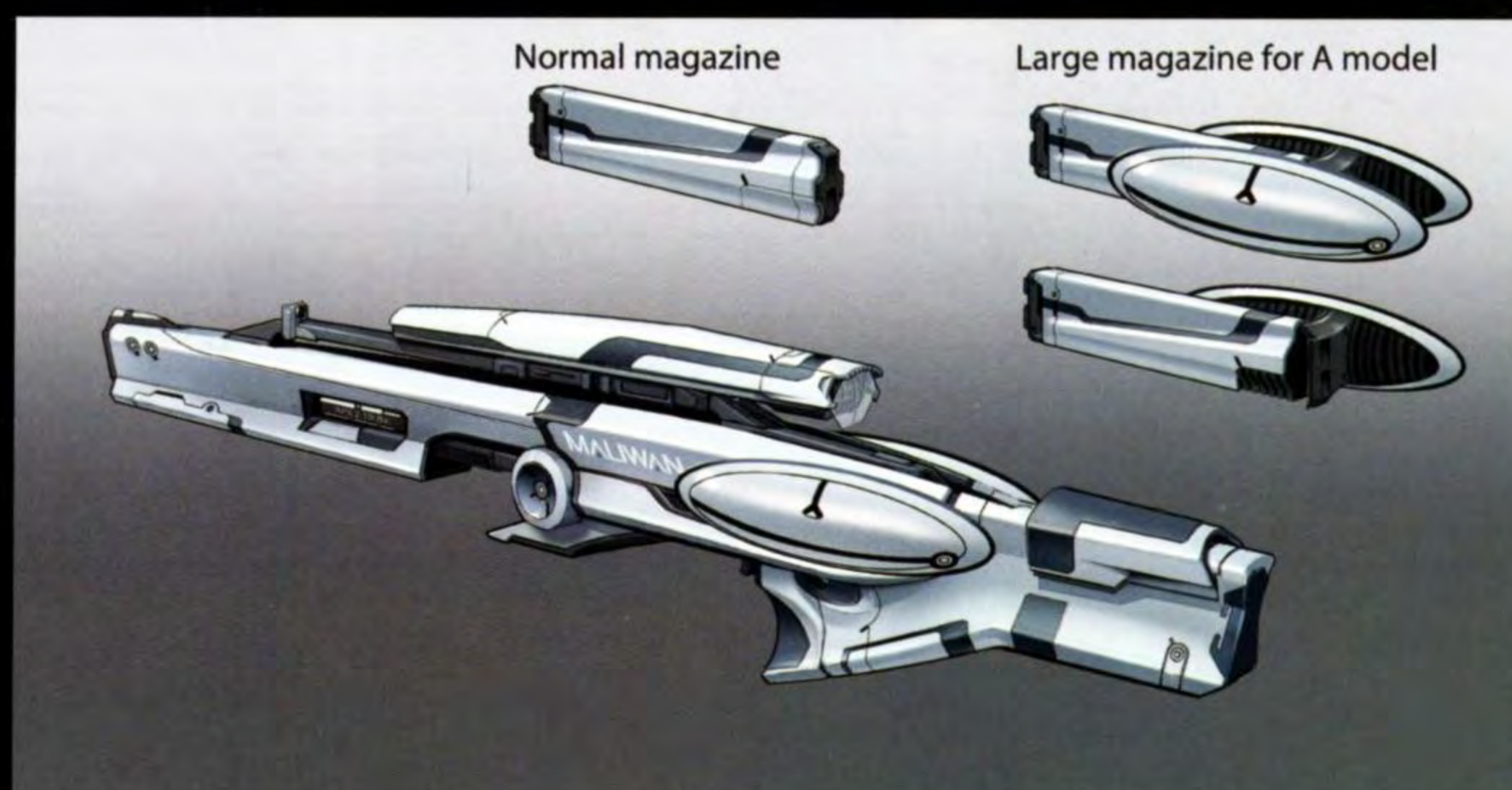
The Maliwan sniper rifle continues the long arch aesthetic. We carry the arch from the stock all the way to the front of the barrel. In first person this is very apparent, but subtle in the profile view. The Maliwan reload is a variation on break-barrel reloads in that the rifle breaks in half, exposing the power core for reloading.



Sniper Rifle Concepts [Robert Simmons] *Right*



Sniper Rifle Concepts [Kevin Duc, Robert Simmons] *Above*
 Sniper Rifle Models [David May, Robert Simmons] *Right*
 Sniper Rifle Models [David May, Robert Simmons] *Below*



MALIWAN
 Maliwan Sniper Rifle

TEDIORE

OVERVIEW

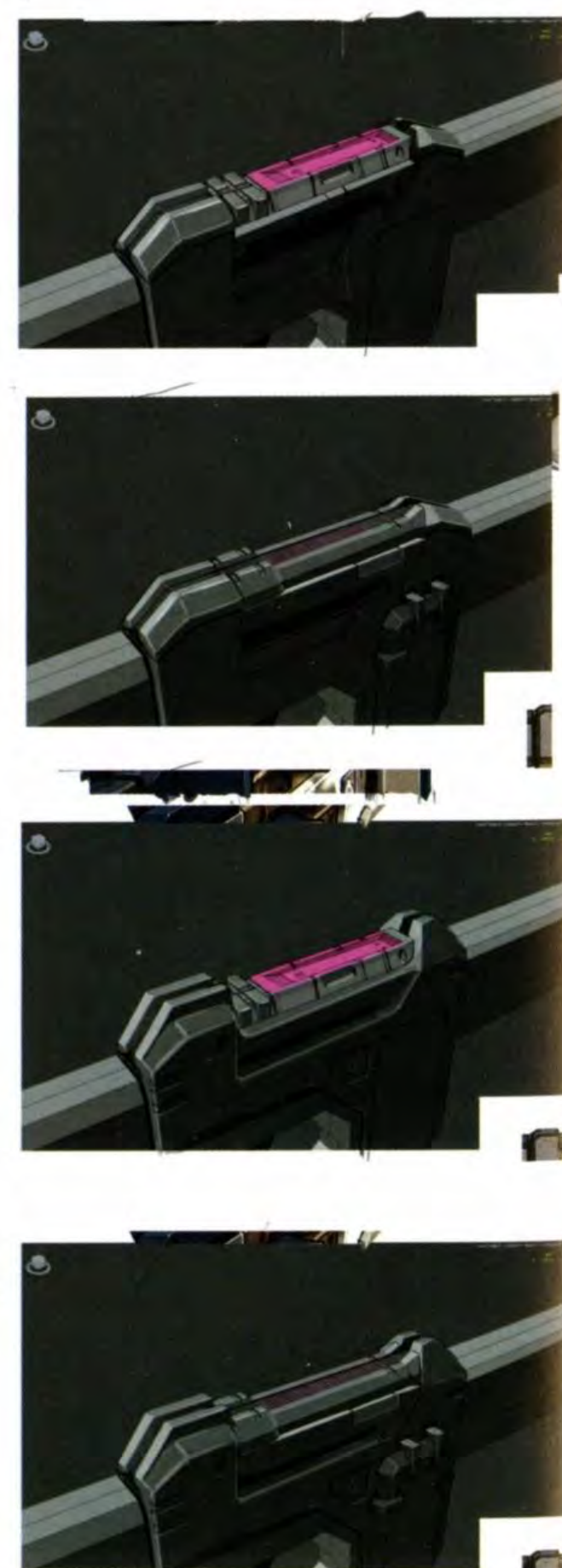
Tediore is our cheap, throwaway manufacturer. We use simple shapes and details that suggest a mass produced, vacuformed manufacturing process. We have injection mold marks and cheap, LCD displays.



Tediore Breakdown
[Kevin Duc] Left

AUTOMATIC RIFLE

The Tediore assault rifle actually didn't end up making it into the final game. "The first thing we did was build out the assault rifle variations," designer Matt Armstrong says. "And then we planned out where the manufacturers would go and what they'd feel like. And it became clear, very quickly, that we'd have to make hard decisions for memory reasons and to reflect personality as best we could. And when we came down that path, we felt like Jakobs would do more interesting stuff with assault rifles whereas Tediore assault rifles might be more of the same. So we gave up Tediore assault rifles in favor of the Jakobs repeater rifles."



All built in
like an iPhone
- no user access
- no maintenance



Tediore Rifle Concepts
[Jeremy Cooke, Kevin Duc] Above
Tediore Rifle Variations
[Kevin Duc, Liquid] Right





PISTOL

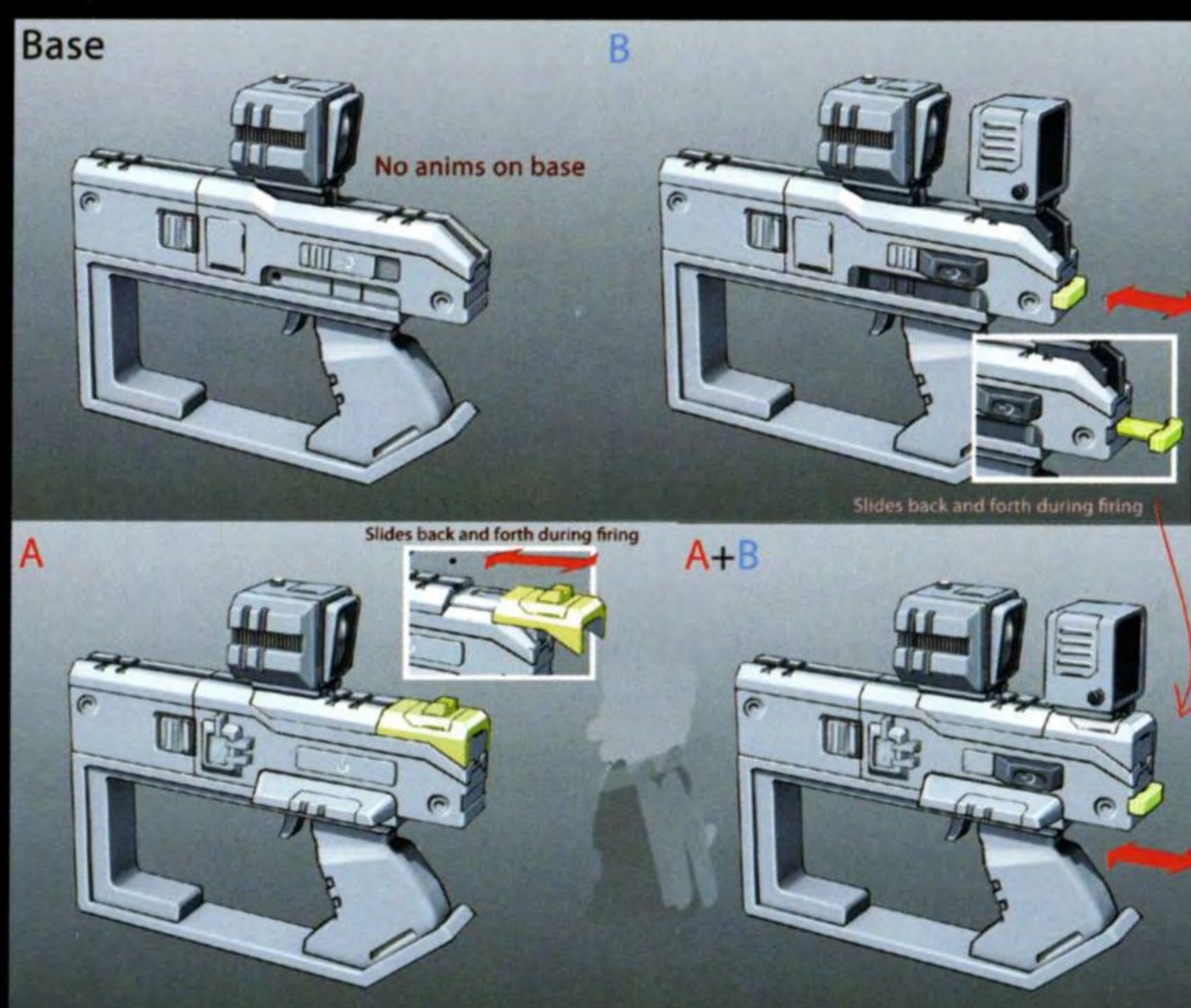
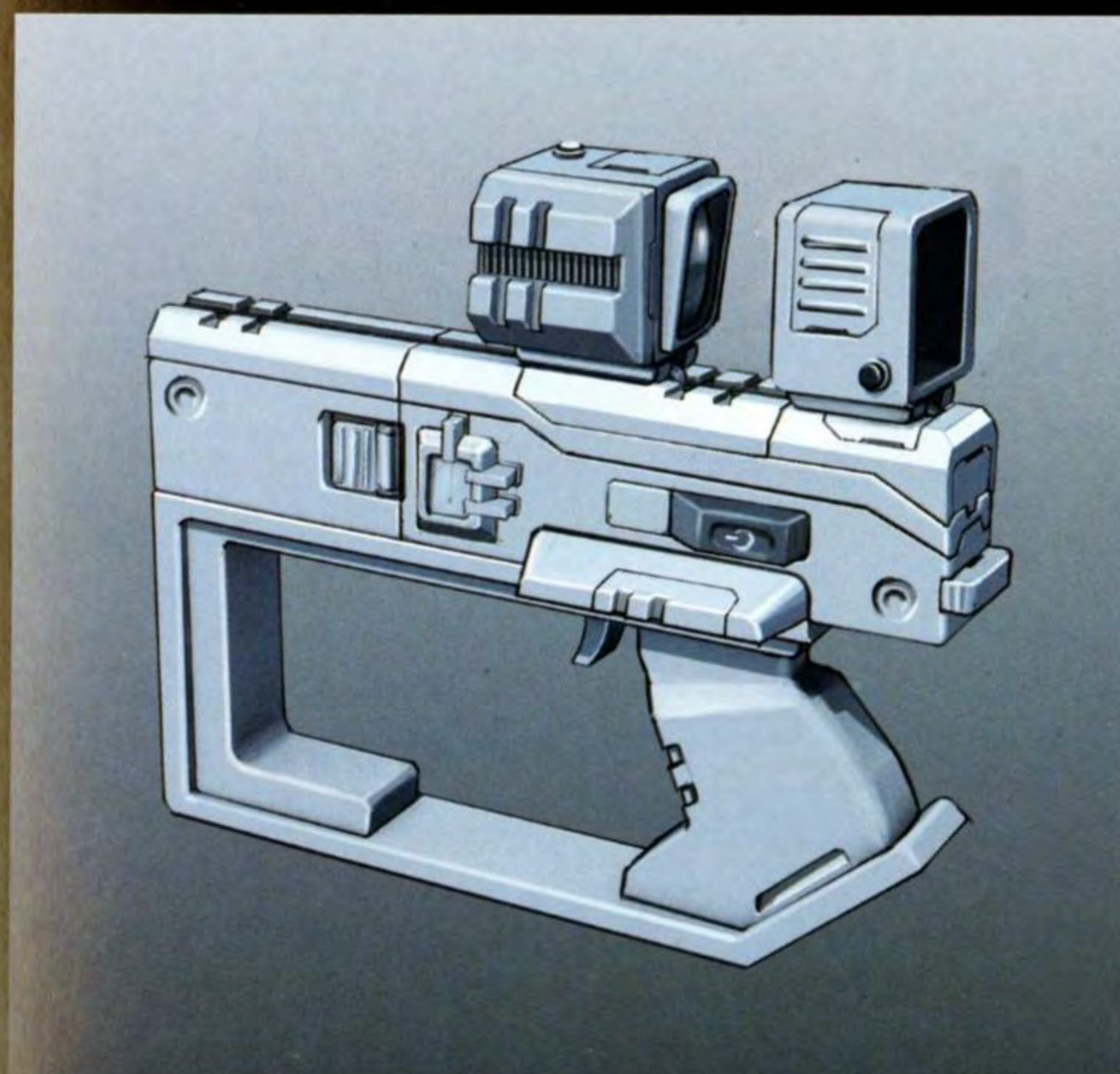
Tediore weapons are throwaway, and hence, lack the magazine that is removed and replaced in a typical weapon reload. This allowed us to imply a magazine space, and moving parts are limited to the bolt-ejecting spent cartridges. The lack of large screws and bolts reinforces the one-time use guns' non-serviceable nature.



Tediore Aesthetics Pass [Kale Menges] *Top*

Pistol Concepts [Kevin Duc] *Right*

Tediore Concepts/Models [Kevin Duc, David May, Liquid] *Below*

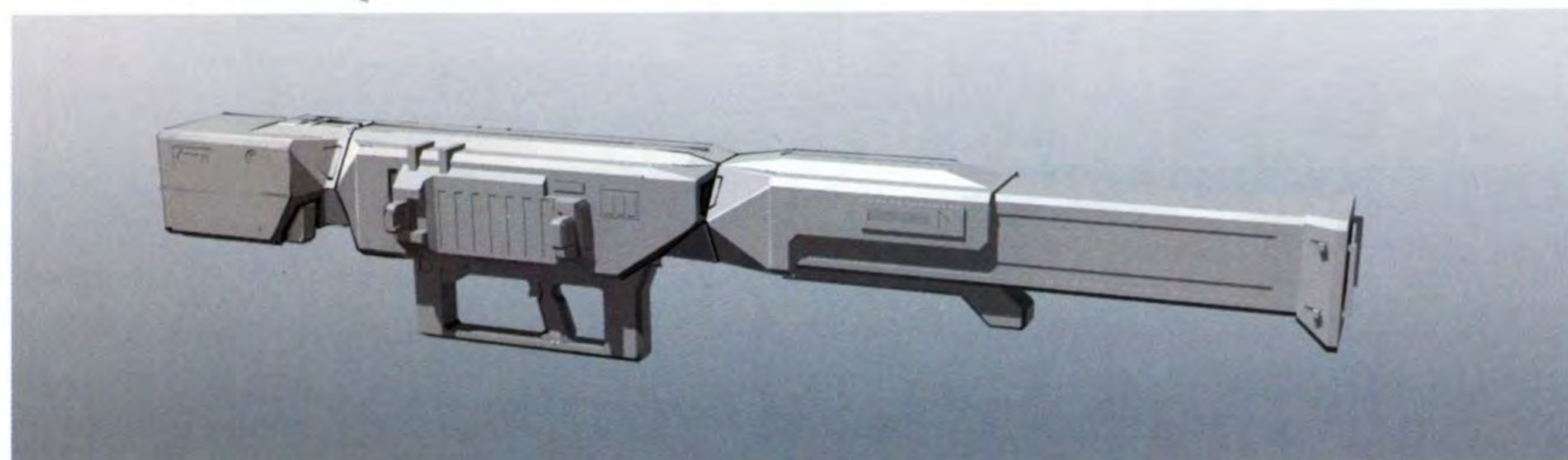
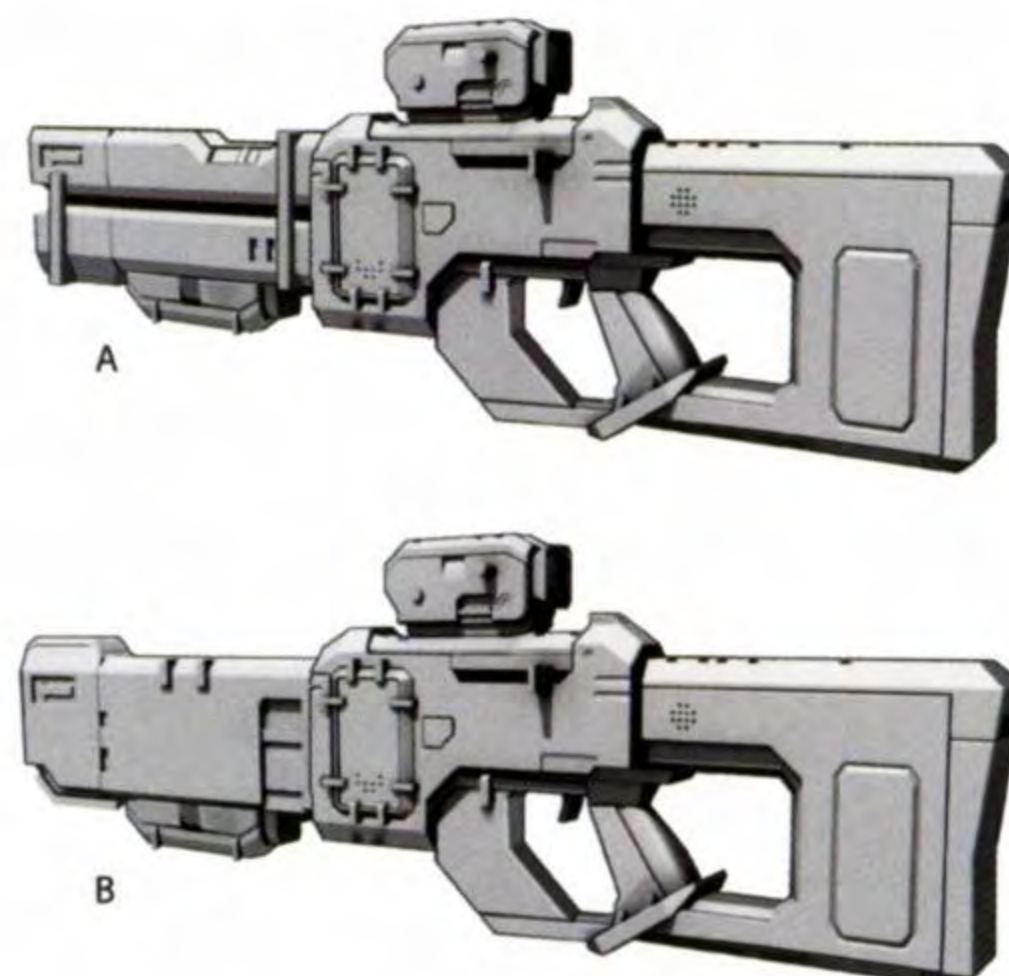
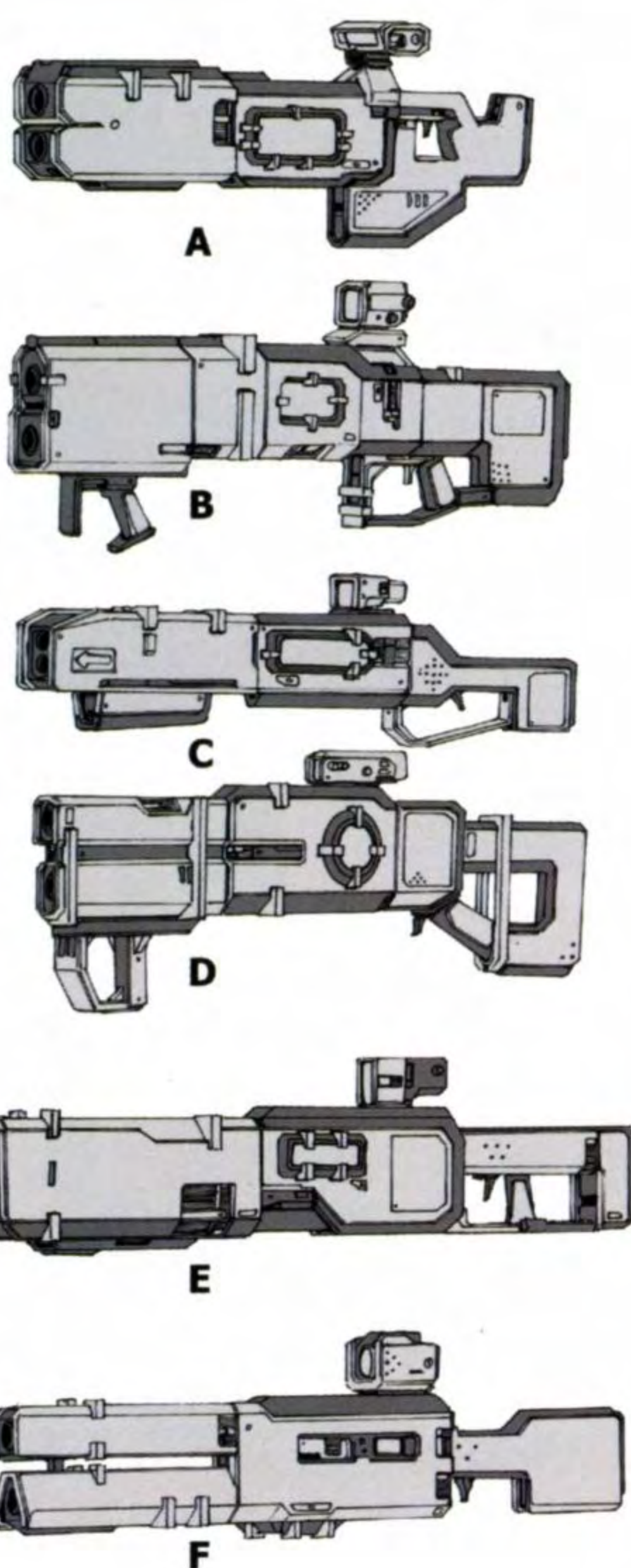


SHOTGUN

The Tediore shotgun perhaps best encapsulates the manufacturer's visual themes. It's perfectly flat, perfectly boxy, and perfectly disposable-looking—basically, it's just a big, plastic rectangle that kills people.



Shotgun Model [3Point] *Above*
Shotgun Concepts and Variations [3Point] *Right*
Rocket Launcher Models
 [Kevin Duc, David May, Virtuous] *Below*

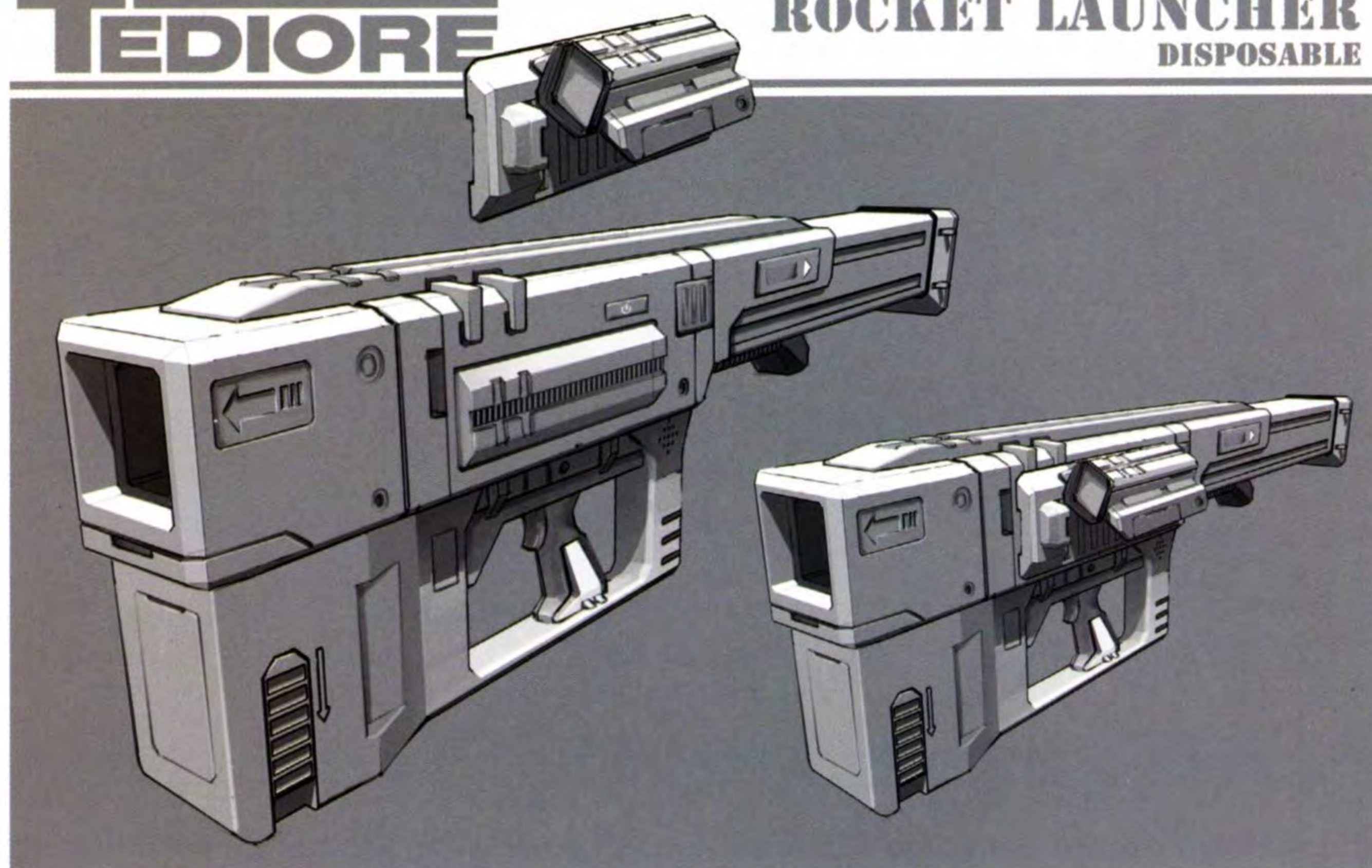


ROCKET LAUNCHER

Perhaps the most interesting aspect of the Tediore rocket launcher is that it was designed to look as if it, itself, could be a rocket. Since you throw the entire rocket launcher upon hitting the reload button, the launcher itself had to look like something that could plausibly fly through the air and explode upon smacking into an enemy's face.

TEDIORÉ

ROCKET LAUNCHER
 DISPOSABLE



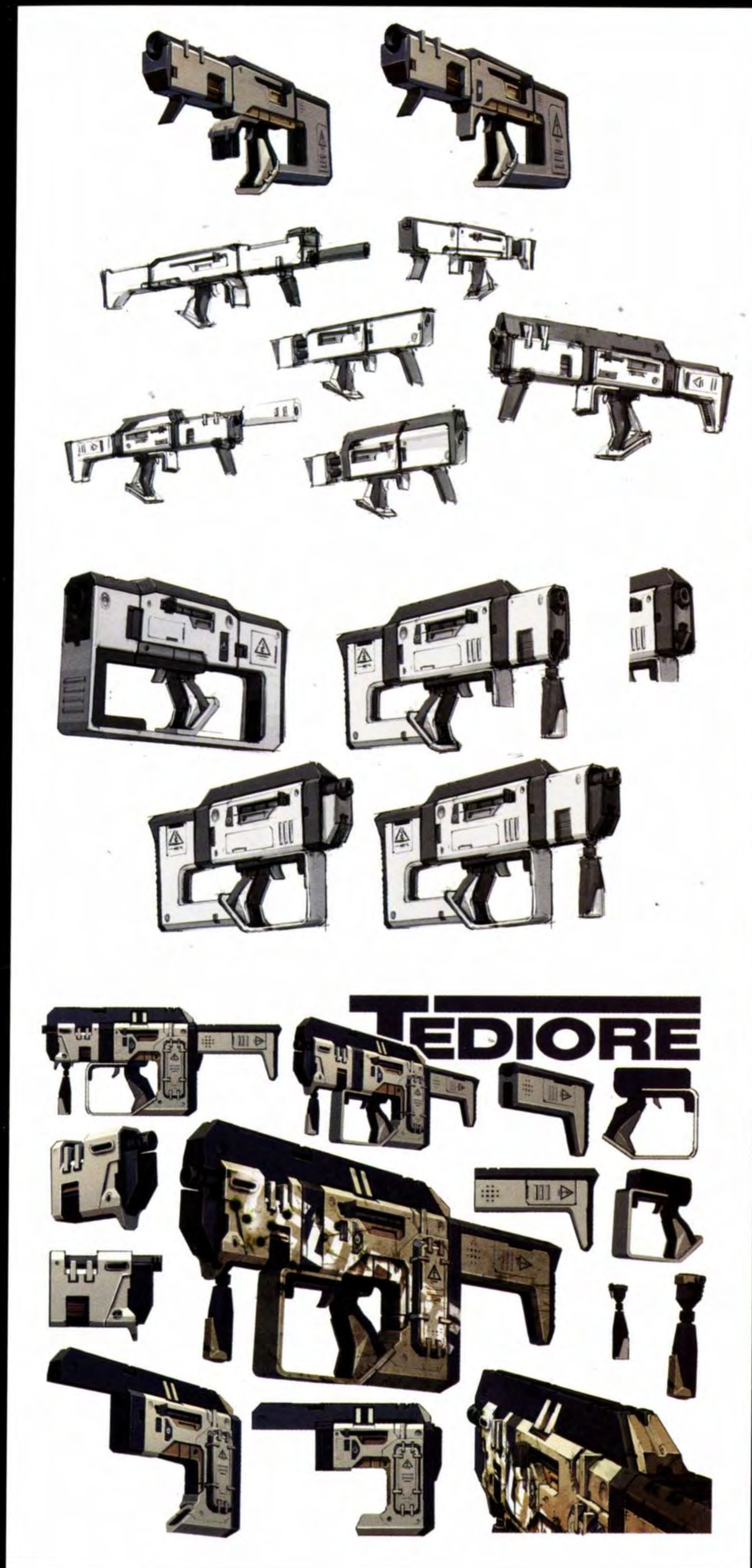
SMG

To the right, you can see some explorations of the Tediore SMG that attempt to determine exactly how boxy a gun can look before it ceases to look like a gun anymore. Of all the Tediore weapon types, the SMGs visually share the most in common with the disposable Bic lighters that the art team used as a basis for the brand's identity.

SMG Concepts [Kevin Duc] *Right*

SMG Models [Liquid] *Below*

SMG Texture [David May, Liquid] *Bottom*





TORGUE EXPLORATION



OVERVIEW

Torgue design is heavily influenced by WWII fighter planes and big, beefy engine blocks. We drew inspiration from fighter aircraft markings and applied these themes to our various Torgue rarity levels. Cowlings and base materials move from rusty steel to highly polished aluminum.

Torgue Concepts

[Kevin Duc] Top

Pistol Breakdown

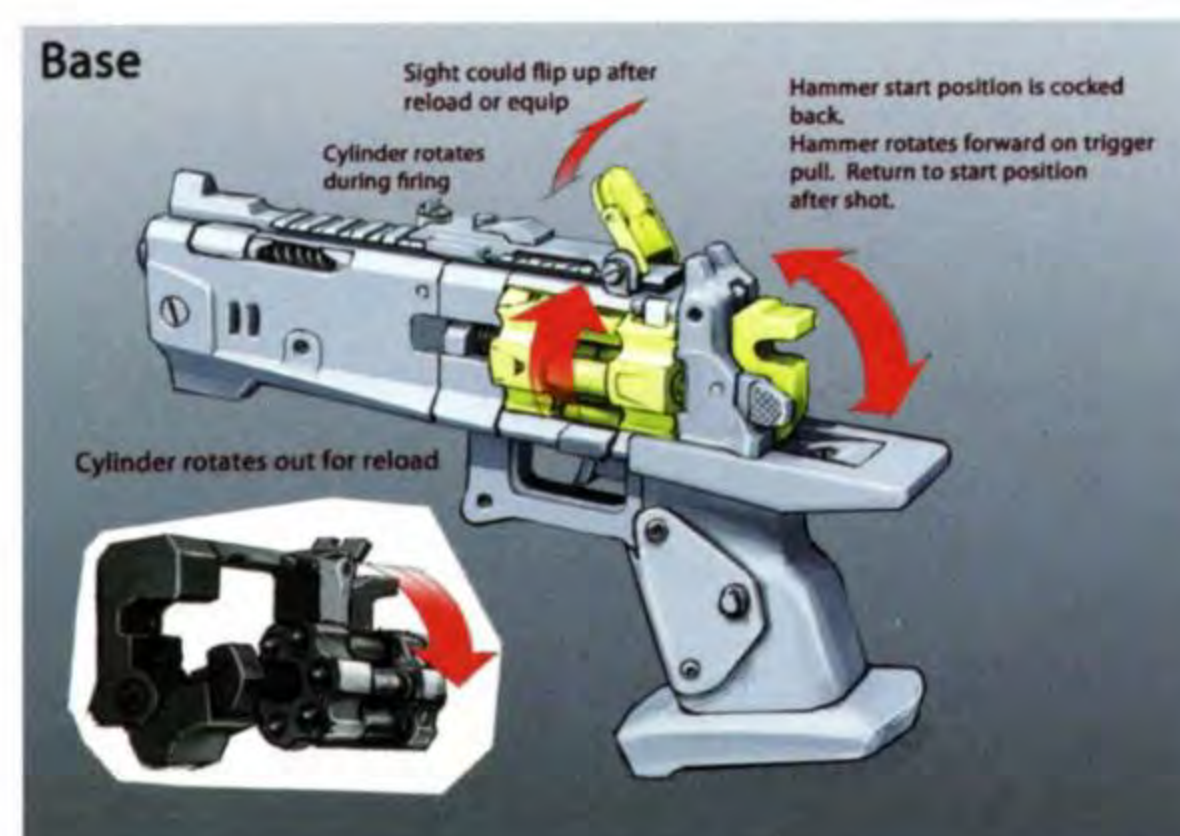
[Kevin Duc] Right



PISTOL

"The Torgue pistol embodies a meaty, larger than life design," says David May. "The concept artist, Kevin Duc, created a stunning visual guideline which was iterated on throughout blockout, high poly, and low poly phases."

The Torgue pistol needed to be massive. We took advantage of a monobloc style shape in that the barrel is just as tall as the body. This gives a massive presence to the pistol. Details infer that the weapon is cut from solid billet steel.



Pistol Anim [Kevin Duc, David May] Above
Pistol Models [David May] Left

Common



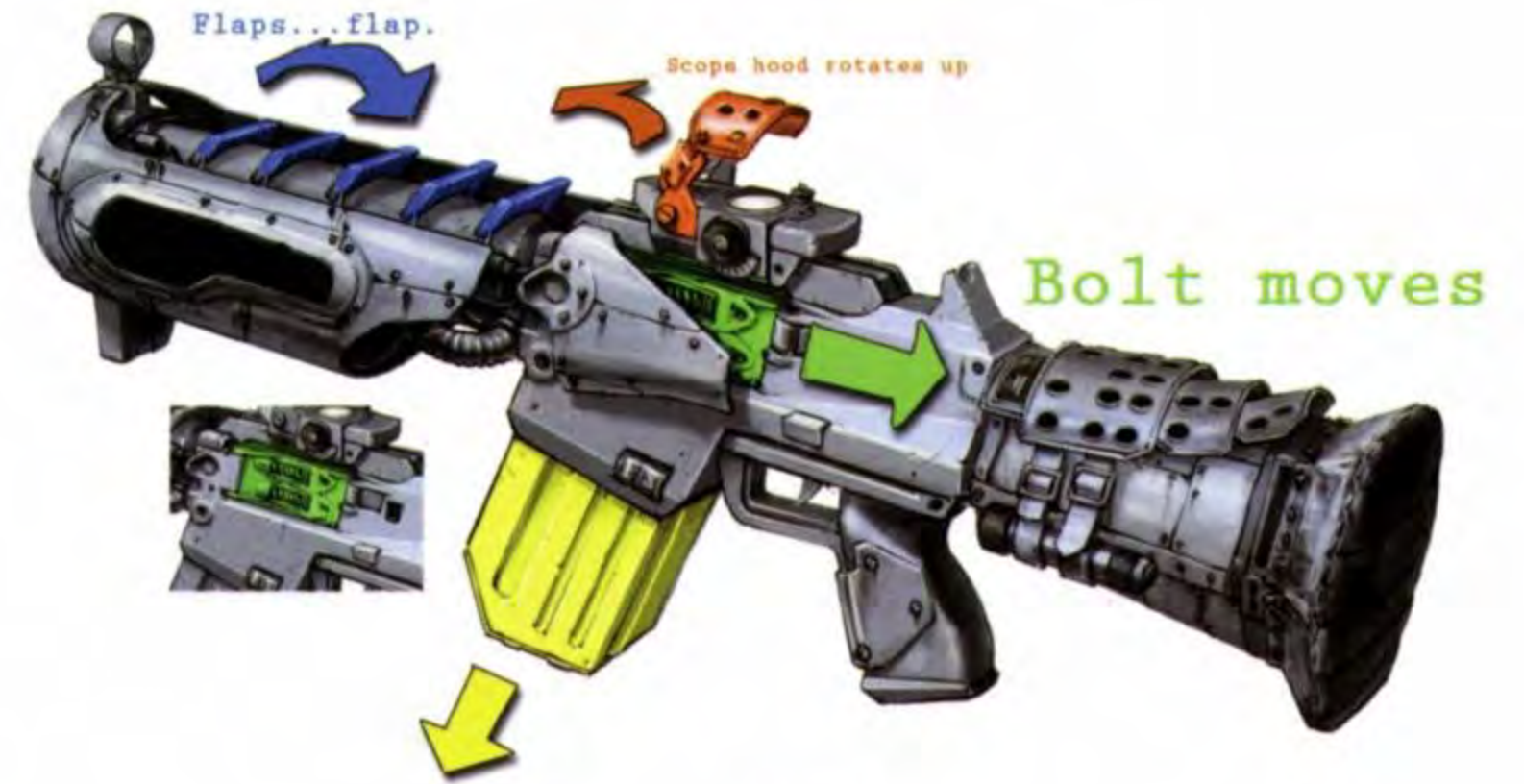
Primary: Main body, Patterned Area (Camo, wood, etc.)
Secondary: Scope, Sight, Barrel, Mags, etc.
Tertiary: Trigger, Receiver, Bolt, and other parts



Uncommon



Primary: Main body, Patterned Area (Camo, wood, etc.)
Secondary: Scope, Sight, Barrel, Mags, etc.
Tertiary: Trigger, Receiver, Bolt, and other parts



Rare



Primary: Main body, Patterned Area (Camo, wood, etc.)
Secondary: Scope, Sight, Barrel, Mags, etc.
Tertiary: Trigger, Receiver, Bolt, and other parts



Epic



Primary: Main body, Patterned Area (Camo, wood, etc.)
Secondary: Scope, Sight, Barrel, Mags, etc.
Tertiary: Trigger, Receiver, Bolt, and other parts

AUTOMATIC RIFLE

The pieces making up the Torque assault rifle needed to look extremely distinct. Since any non-Torque assault rifle with a Torque barrel fires rockets instead of bullets, the visual design needed to clearly communicate this fact. Upon looking at a Jakobs repeater rifle with a Torque barrel, the player is thus able to, without even picking up the gun, know that the rifle will spit rockets instead of lead.

Automatic Rifle Concepts [Kevin Duc, David May] *Left, Above*
Automatic Rifle Models [Ricky Oh] *Above*
Automatic Rifle Variations [Kevin Duc, David May] *Below*

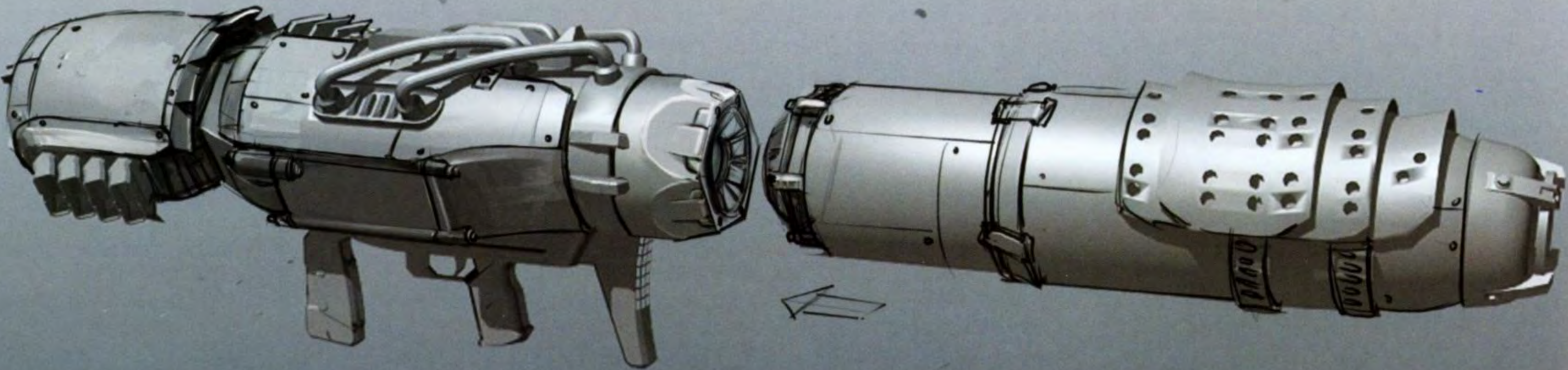
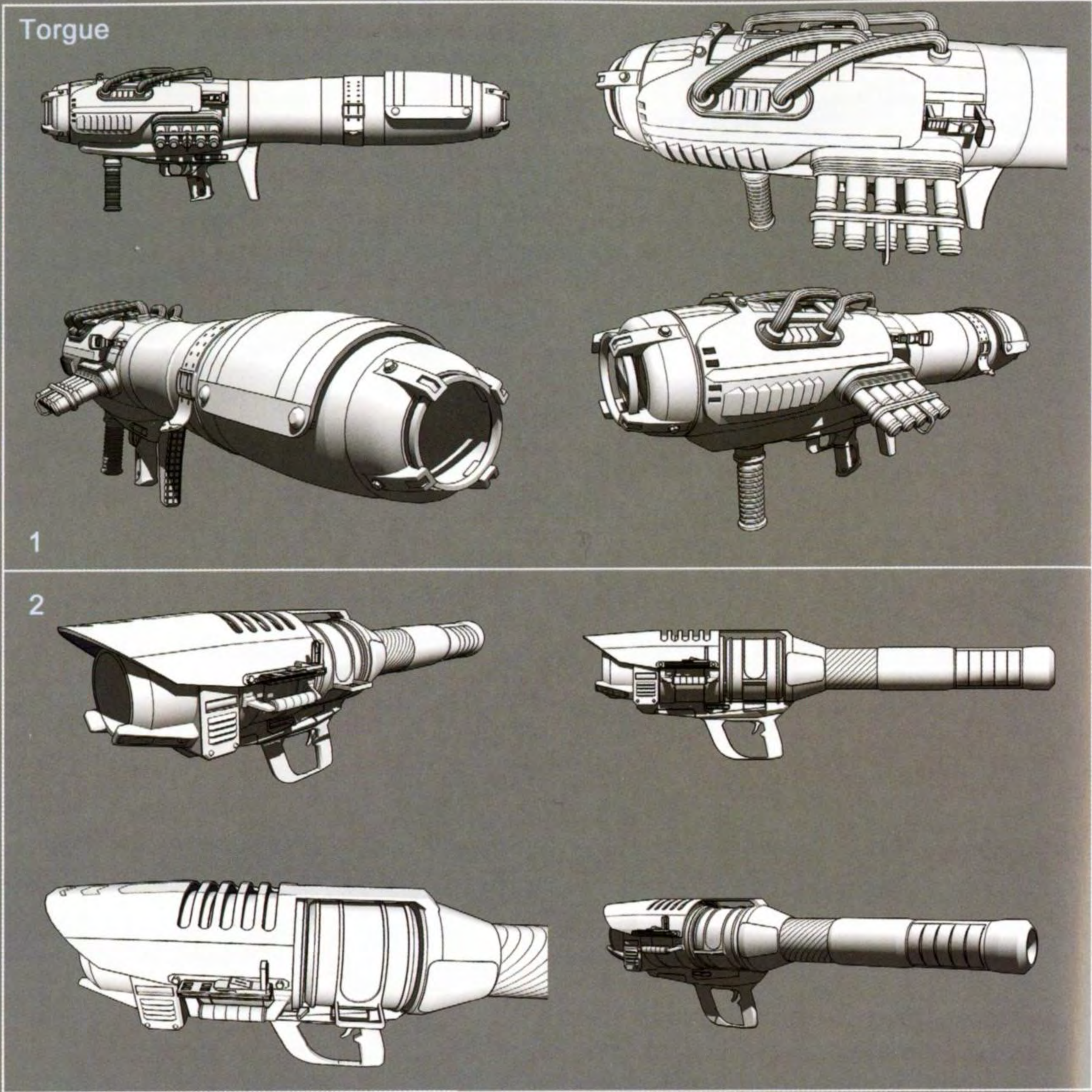


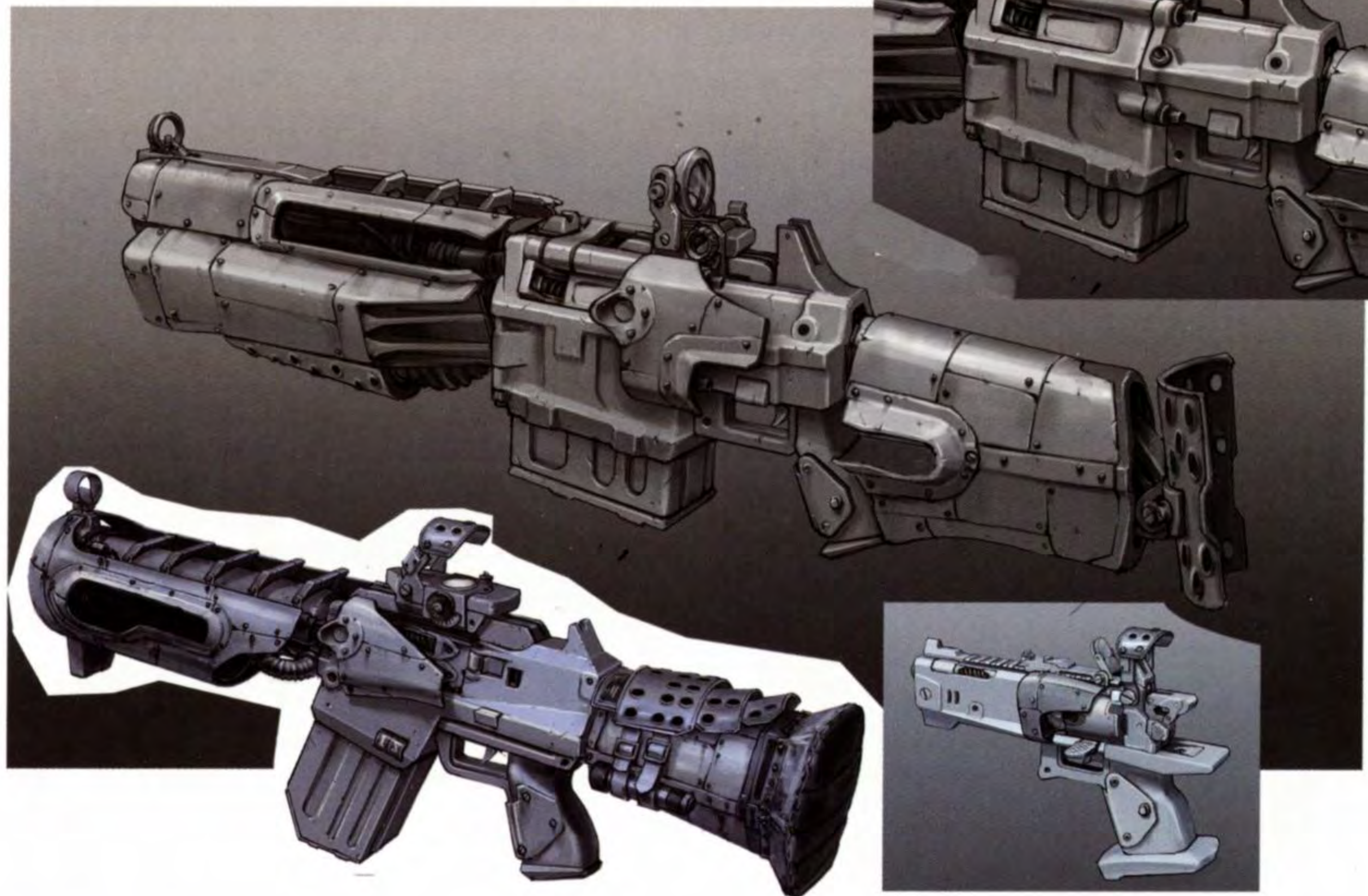
ROCKET LAUNCHER

“The Torque rocket launcher looks like a massive ‘50’s jet engine,” says Kevin Duc. “It includes our typical Torque cowlings and the forged, machine-cut solid steel substructure.”

“Most of the weapons were arduous endeavors. Rocket launchers were put in near the end so there were some pretty tight time, poly, and texture budgets. In fact, several artists worked through Christmas break to deliver these on time,” says Jacob Christopher.

Rocket Launcher Concepts
[Virtuous] *Right*
Rocket Launcher Models
[Jacob Christopher] *Below*
Rocket Launcher Concept
[Kevin Duc, David May, Virtuous] *Bottom*

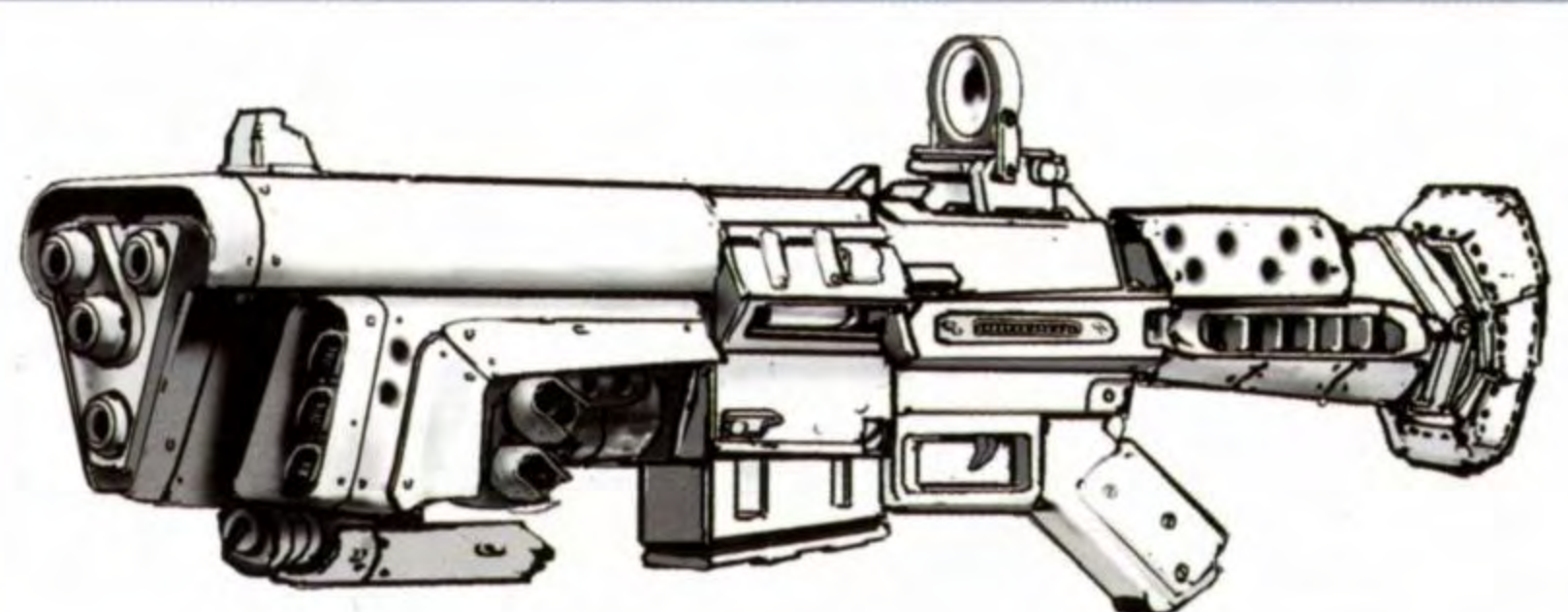
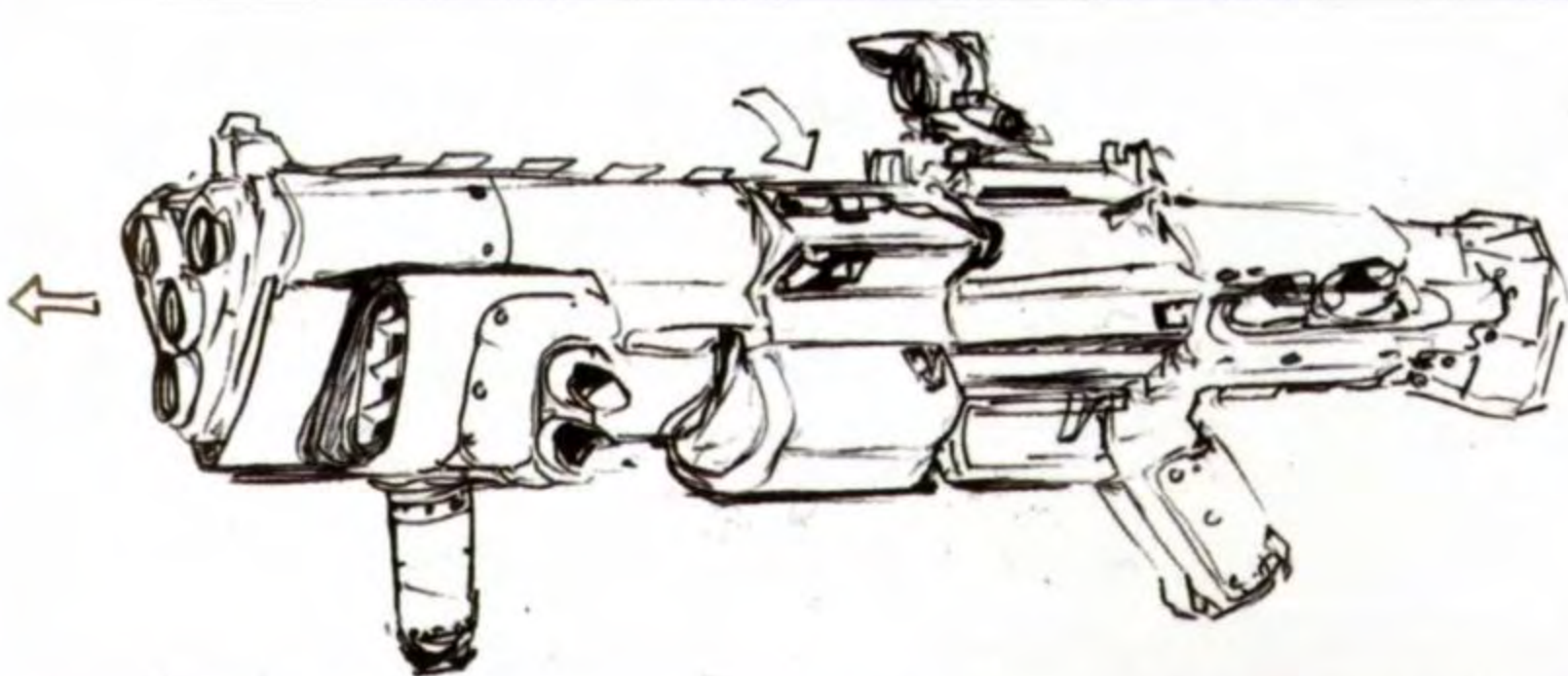




SHOTGUN

"The Torgue shotgun shows our engine block influence in the cutlines of the body," explains Kevin Duc. "The cowlings are used on the barrel and stock to cover up an interior substructure."

Shotgun Concepts [3Point] *Top, Below*
Shotgun Concepts [Kevin Duc, David May] *Above*
Shotgun Concepts [Martin Sawkins] *Left*



VLADOF



VLADOF Exploration

OVERVIEW

Vladof is pure Russian influence: stamped steel, rusty bolts, tall thin shapes. We wanted a very fast firing weapon, and what better way to infer fast fire rate than to use a Gatling barrel? While the Gatling barrel worked, we also designed a less recognizable multi-barrel solution with the over-under alternate design.

Vladof Explorations
[Kevin Duc] *Right*
SMG Concepts
[Kevin Duc] *Below*



RUSSIAN
COLD WAR
STEEL/CARBON
FIBRE



SMG

The Vladof SMG never survived the concept phase. "Early on, we did concept art for all kinds of stuff," designer Matt Armstrong said. "And then it was just coming down to thinking, 'what does it bring to the table?' Vladof is 'high rate of fire,' and submachine guns are 'high rate of fire.' So a Vladof submachine gun wouldn't actually bring anything new to the table."



ASSAULT RIFLE

"The Vladof AR was designed off of an AK47 base, with an added spinning triple barrel," says David May. "The undermounted barrel caused a host of issues with design, animation, and modularity, which we had to make several times before finding the correct formula. In the end we had a barrel so unique and interesting we had to make an alternate barrel to ensure visual variety."



Assault Rifle Models [David May]



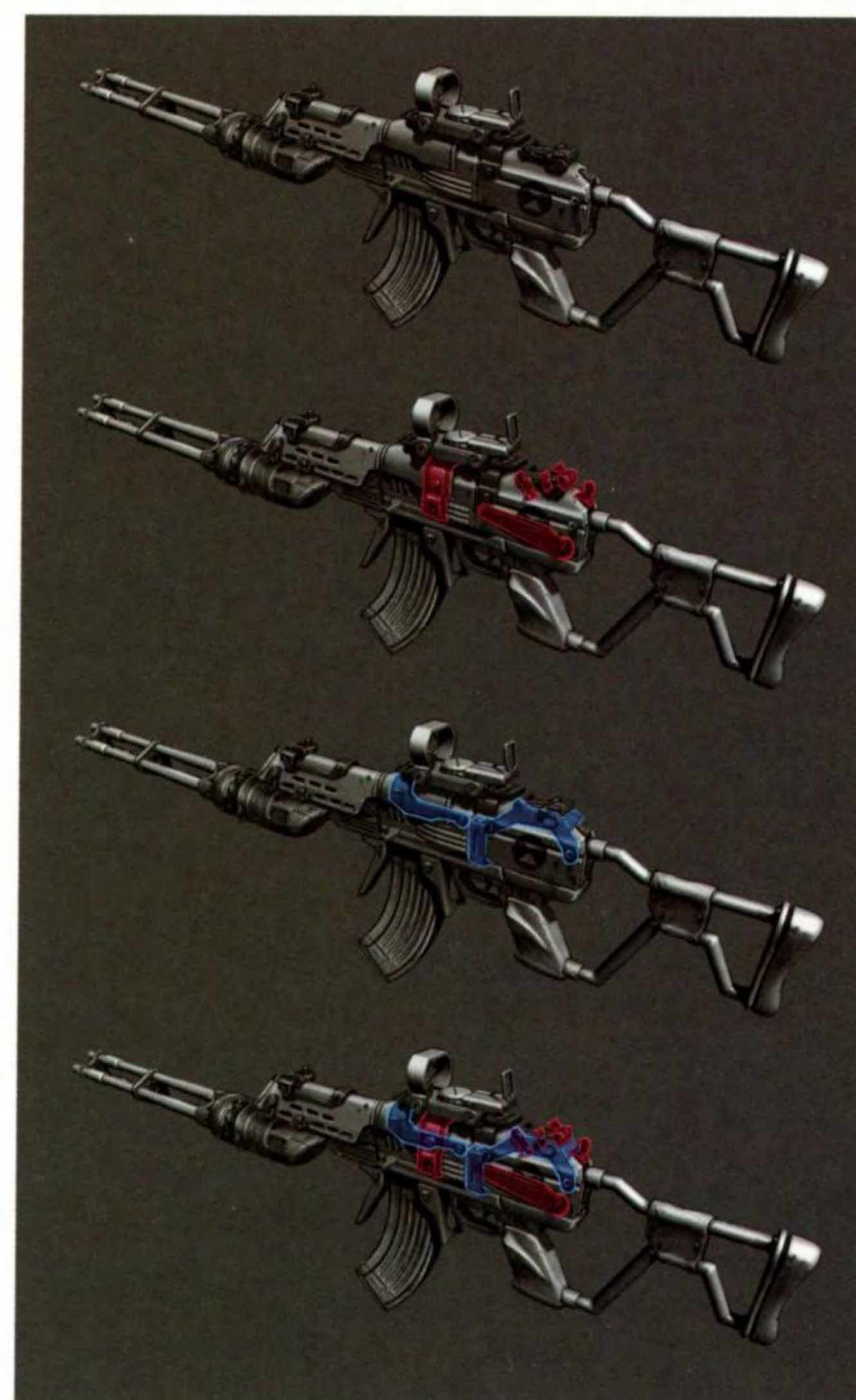
Assault Rifle Model [David May]



Charging handle moves during reload and with each shot

Magazine replaced during reload

Barrels rotate according to fire rate



Assault Rifle Anims [Kevin Duc, David May] Above

Assault Rifle Variations [Kevin Duc, David May] Right

VLADOF



PISTOL

The Vladof pistol continues the multi-barrel approach of the assault rifle. The pistol is magazine loaded, but rather than loading into the grip, we pushed the magazine into a front position. The scope is Russian influenced and uses a Cold War style scope held in place with a stamped steel base.

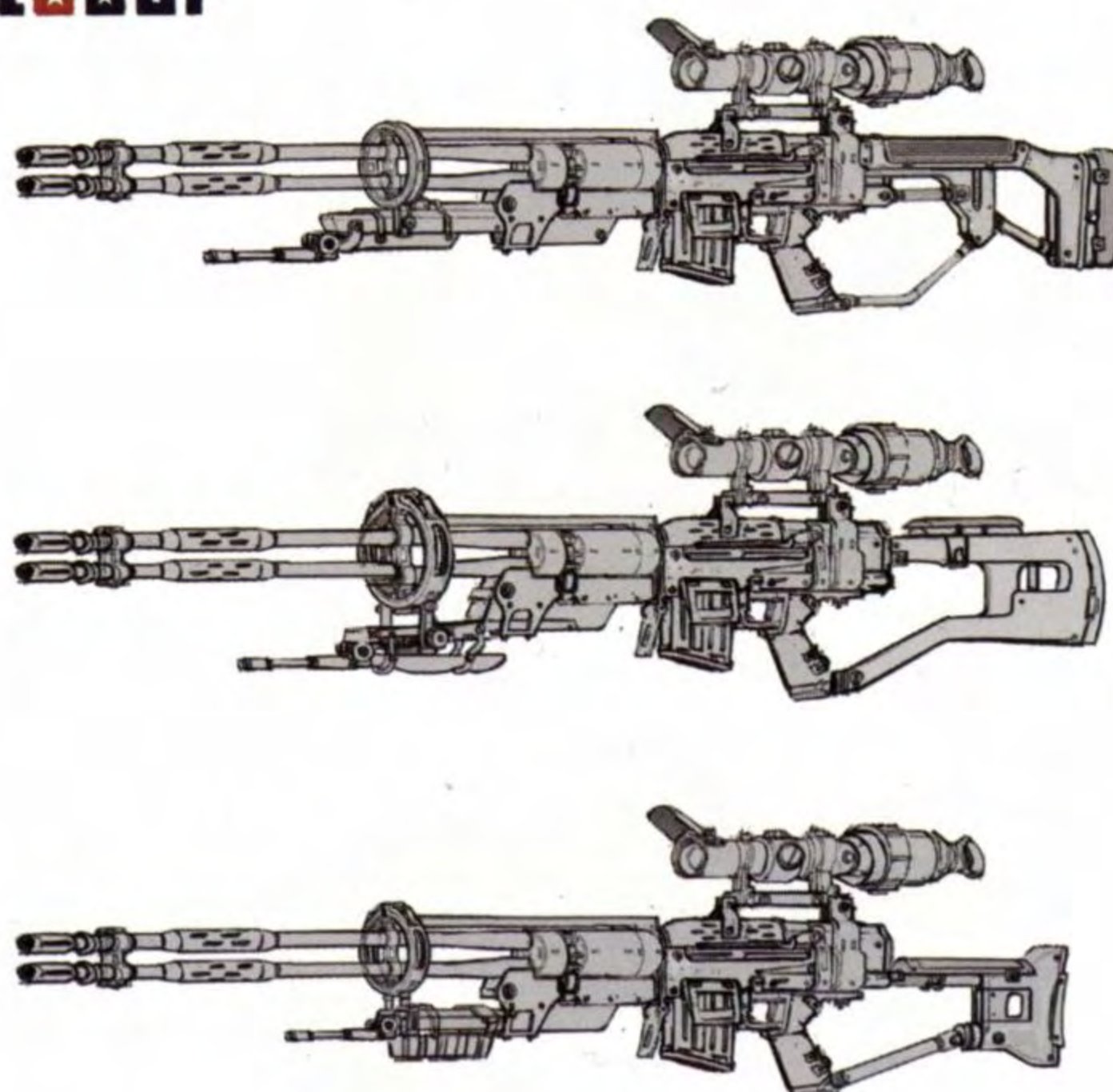


Pistol Breakdown [Kevin Duc] *Left*
Pistol Concept [Kevin Duc] *Above*

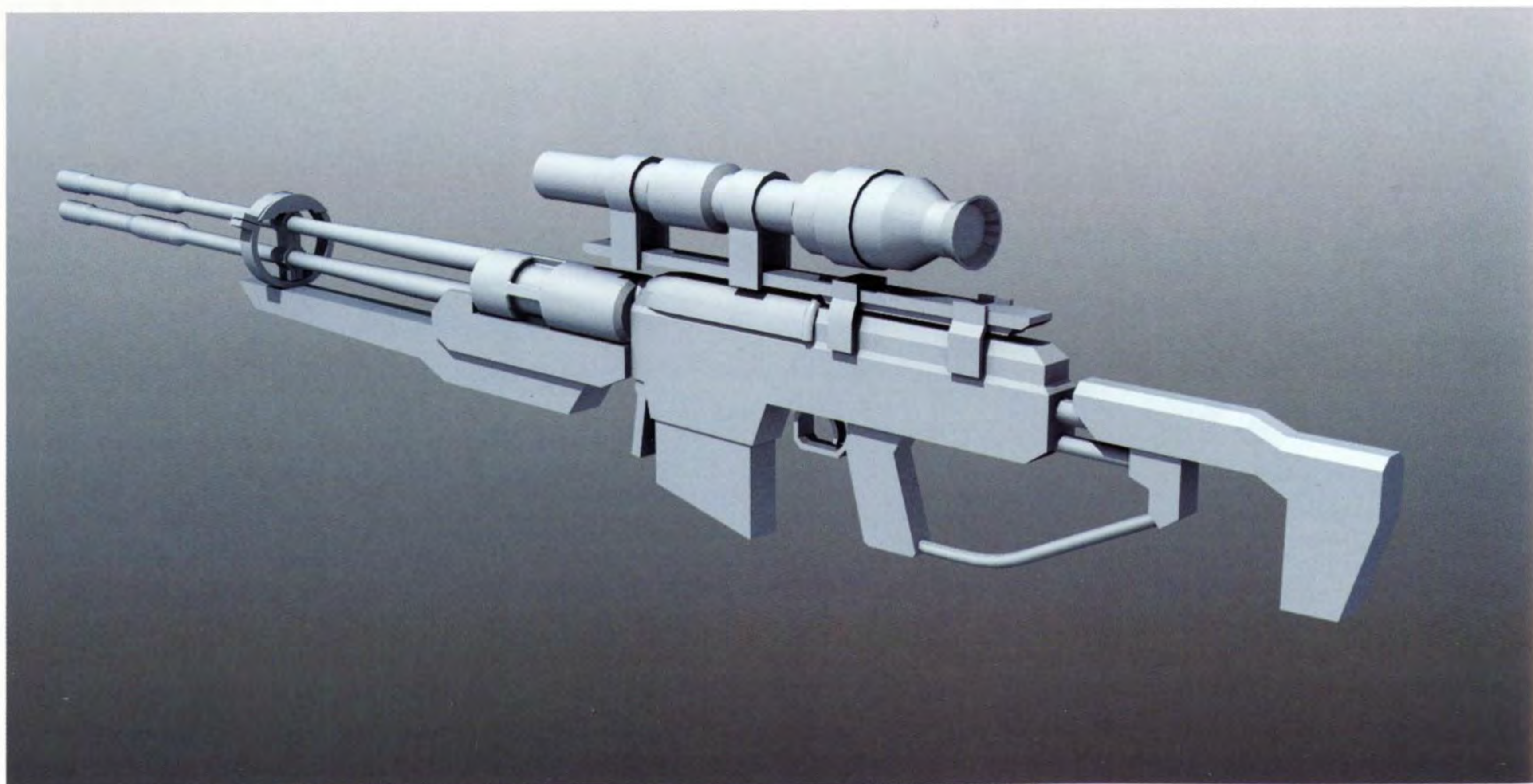
SNIPER RIFLE

When the defining characteristics of your weapons manufacturer are *high rate of fire* and *rotating barrels*, how does that visually translate into sniper rifles—a weapon type with a stereotypically low rate of fire and a non-rotating barrel? Interestingly, the sniper rifle landed in a place where it takes many of the visual cues from an assault rifle—the large clip, for instance—but still visually reads as a sniper rifle.

VLADOF



Sniper Rifle Concepts [Robert Simmons] *Right*
Sniper Rifle Model [David May] *Below*



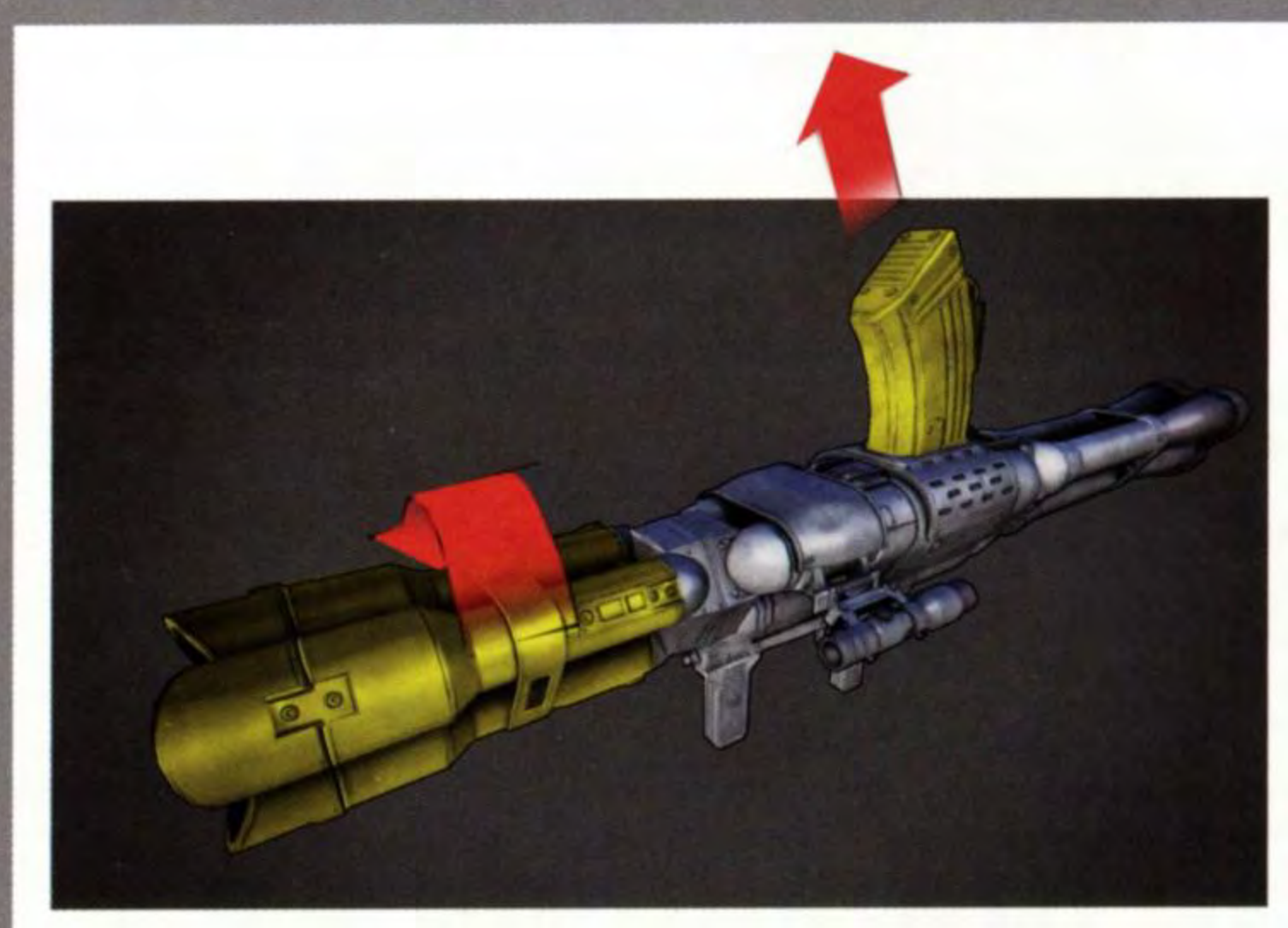
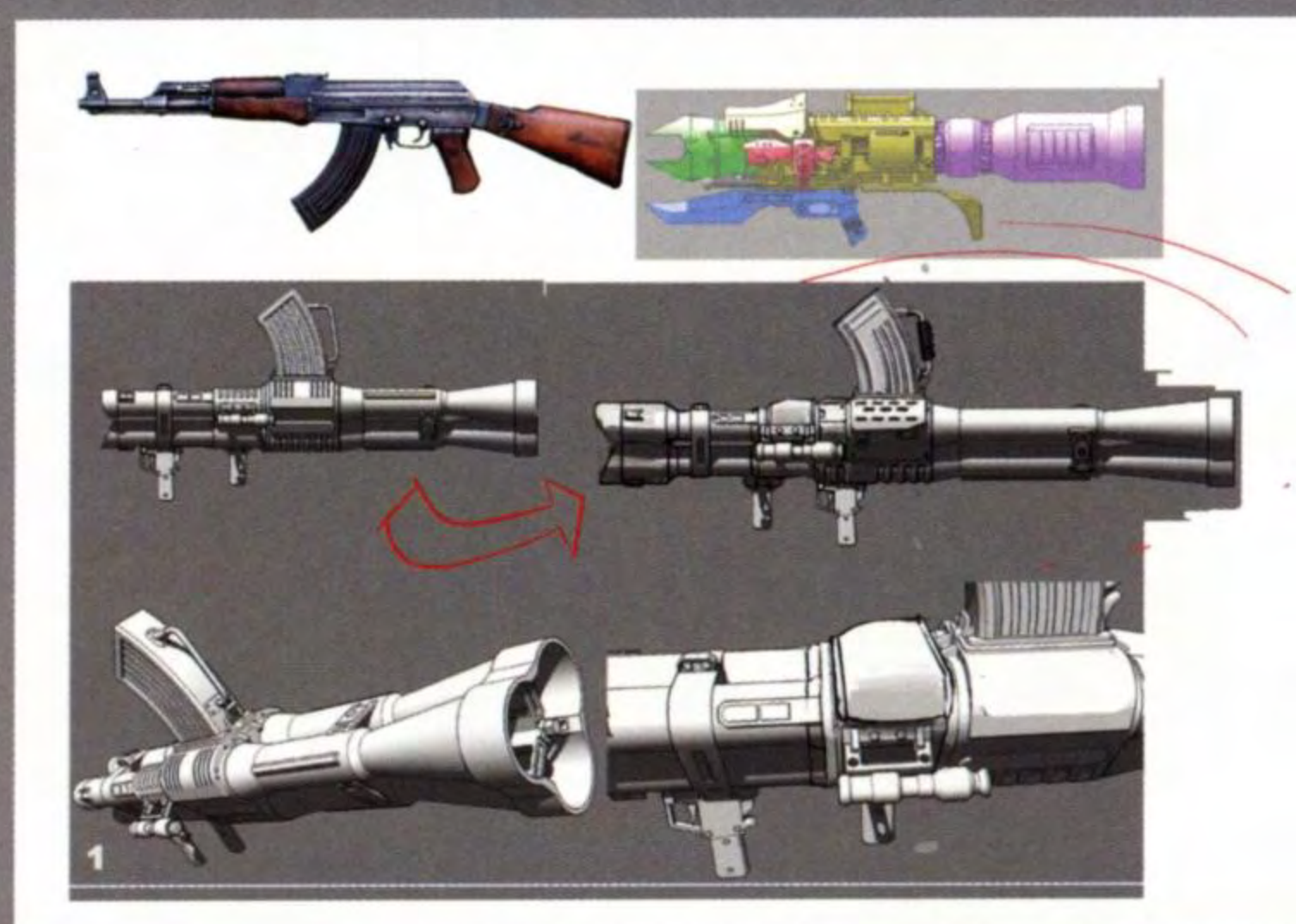
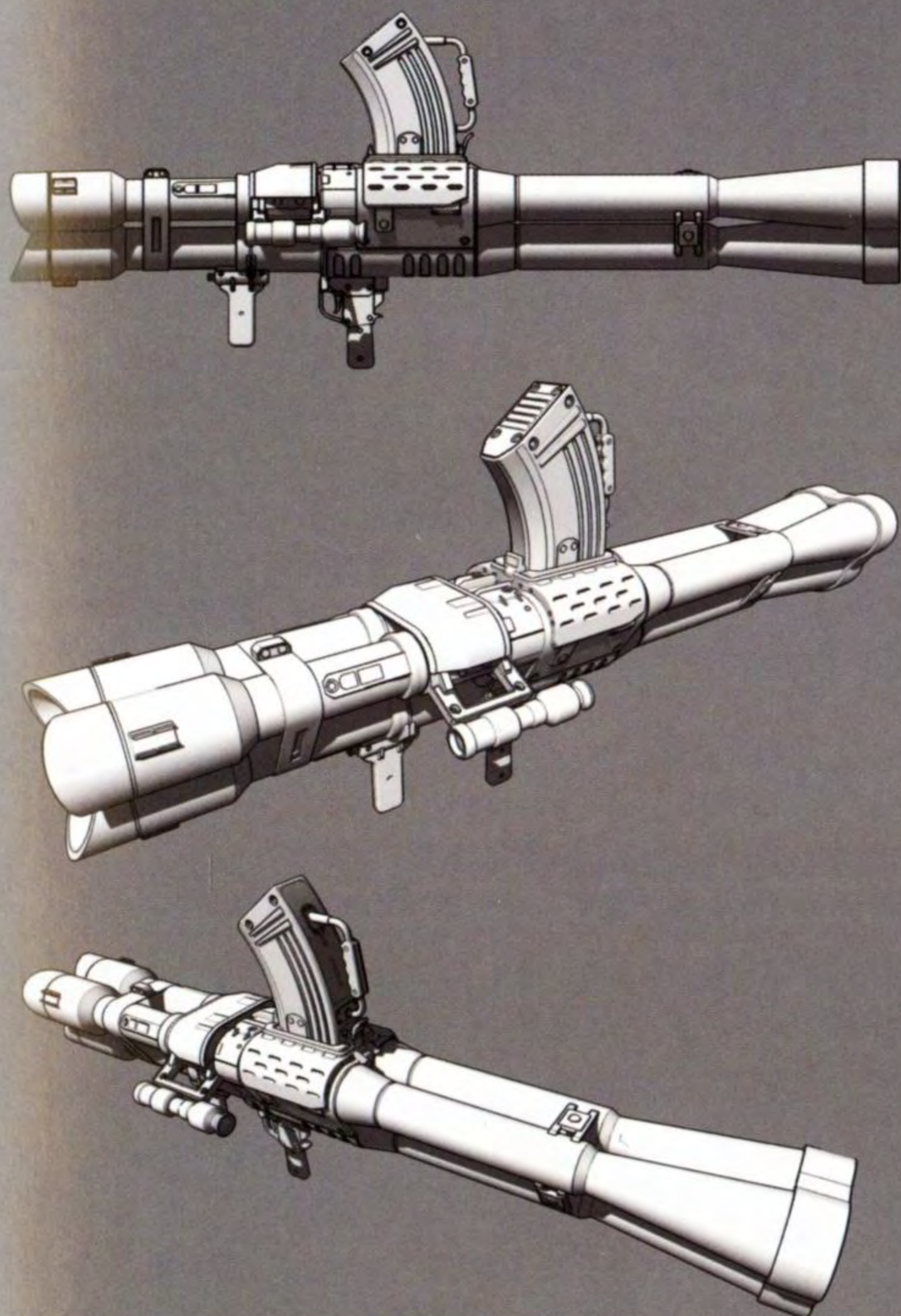
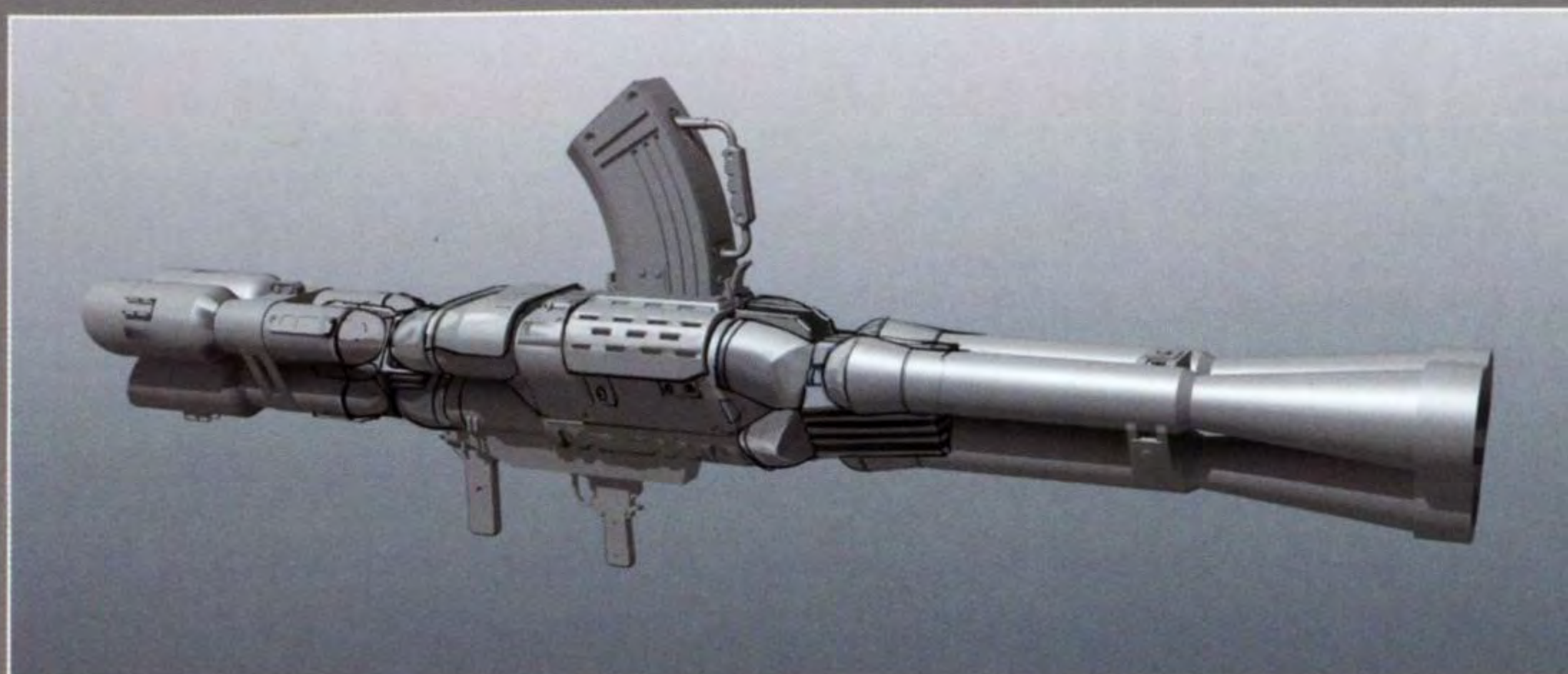
ROCKET LAUNCHER

Multi-barrel design continues with our Vladof rocket launcher. A curved banana magazine is brought from the assault rifle and the barrel rotation continues what had become a Vladof theme.

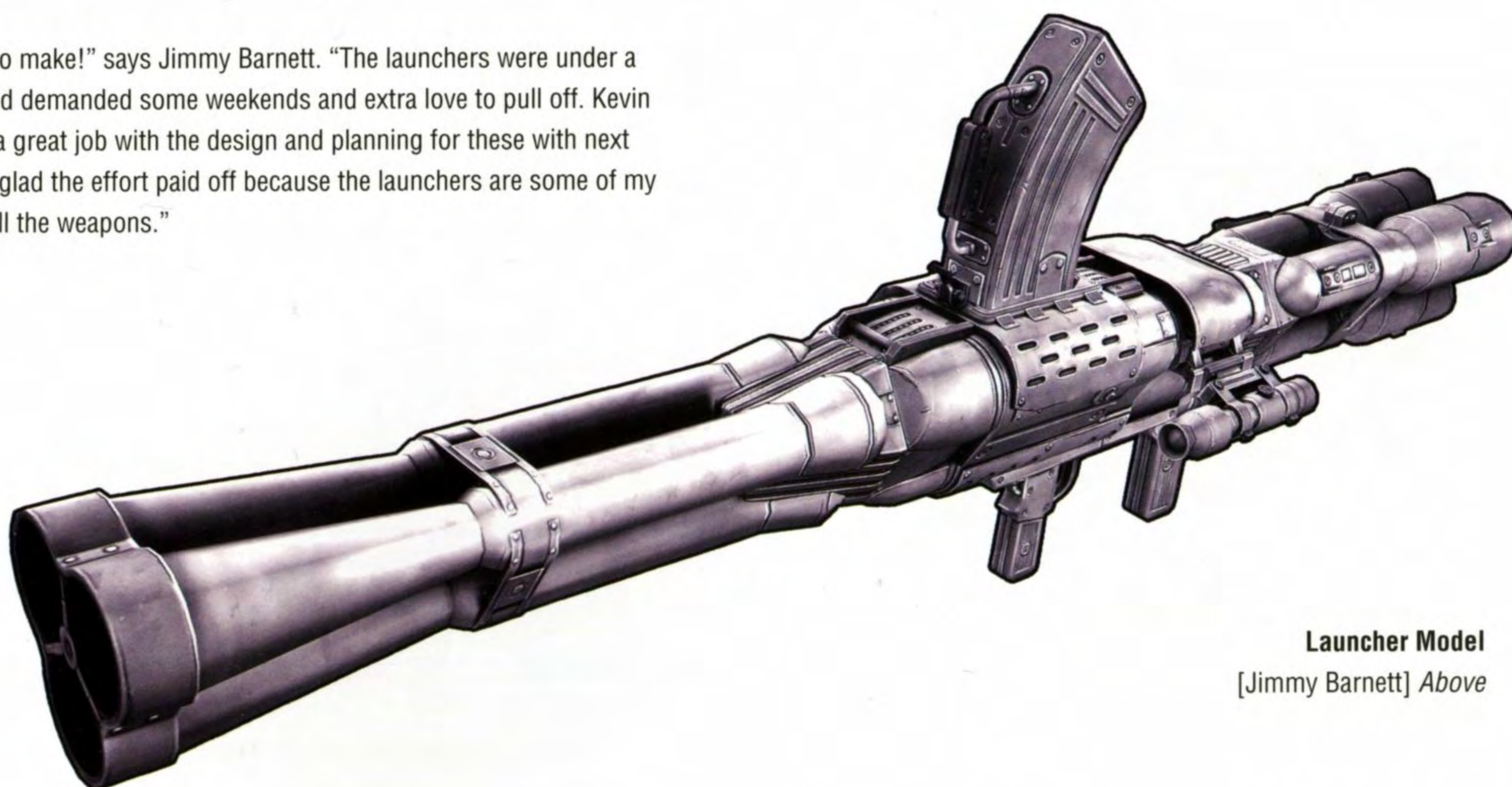
Launcher Transition [Kevin Duc, David May, Virtuous] *Right*

Launcher Concepts [Virtuous] *Below*

Launcher Anims [Kevin Duc, Virtuous, Jimmy Barnett] *Below Right*



"This asset was a blast to make!" says Jimmy Barnett. "The launchers were under a pretty hectic deadline and demanded some weekends and extra love to pull off. Kevin Duc and David May did a great job with the design and planning for these with next to no time to do it. I am glad the effort paid off because the launchers are some of my favorite designs out of all the weapons."

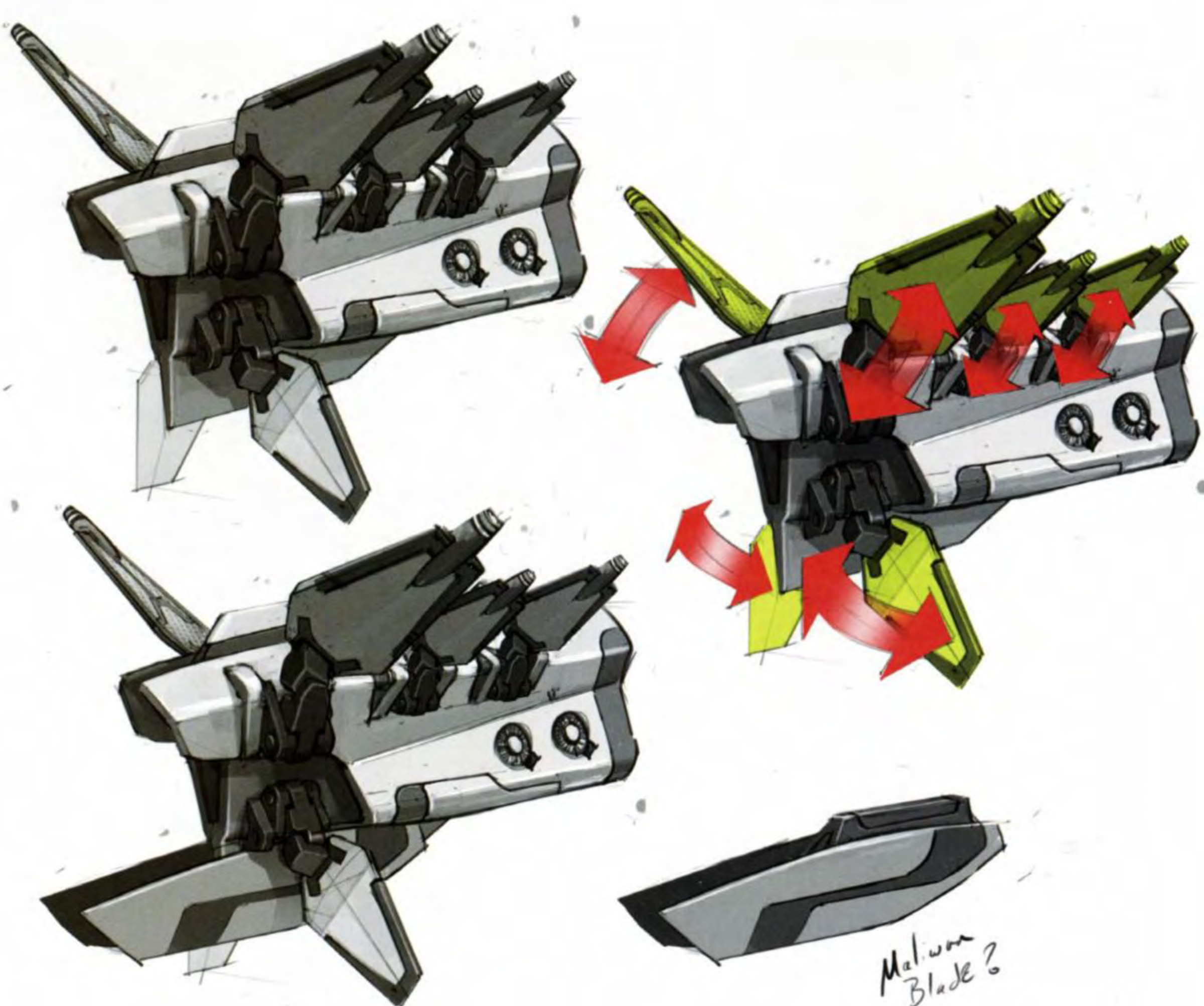


Launcher Model
[Jimmy Barnett] *Above*

e-TECH

OVERVIEW

With e-Tech, we chose a Hyperion inspired flap design to be a consistent theme of e-Tech enhanced weapons. These flaps were then integrated into the shapes of various manufacturers who would have licensed the e-Tech technology from Hyperion. The design of our pistol e-Tech barrel is based on Maliwan's licensing of e-Tech. The typical Maliwan shapes are present, and the e-Tech flaps are attached in a high-tech, maneuverable fashion.



PISTOL

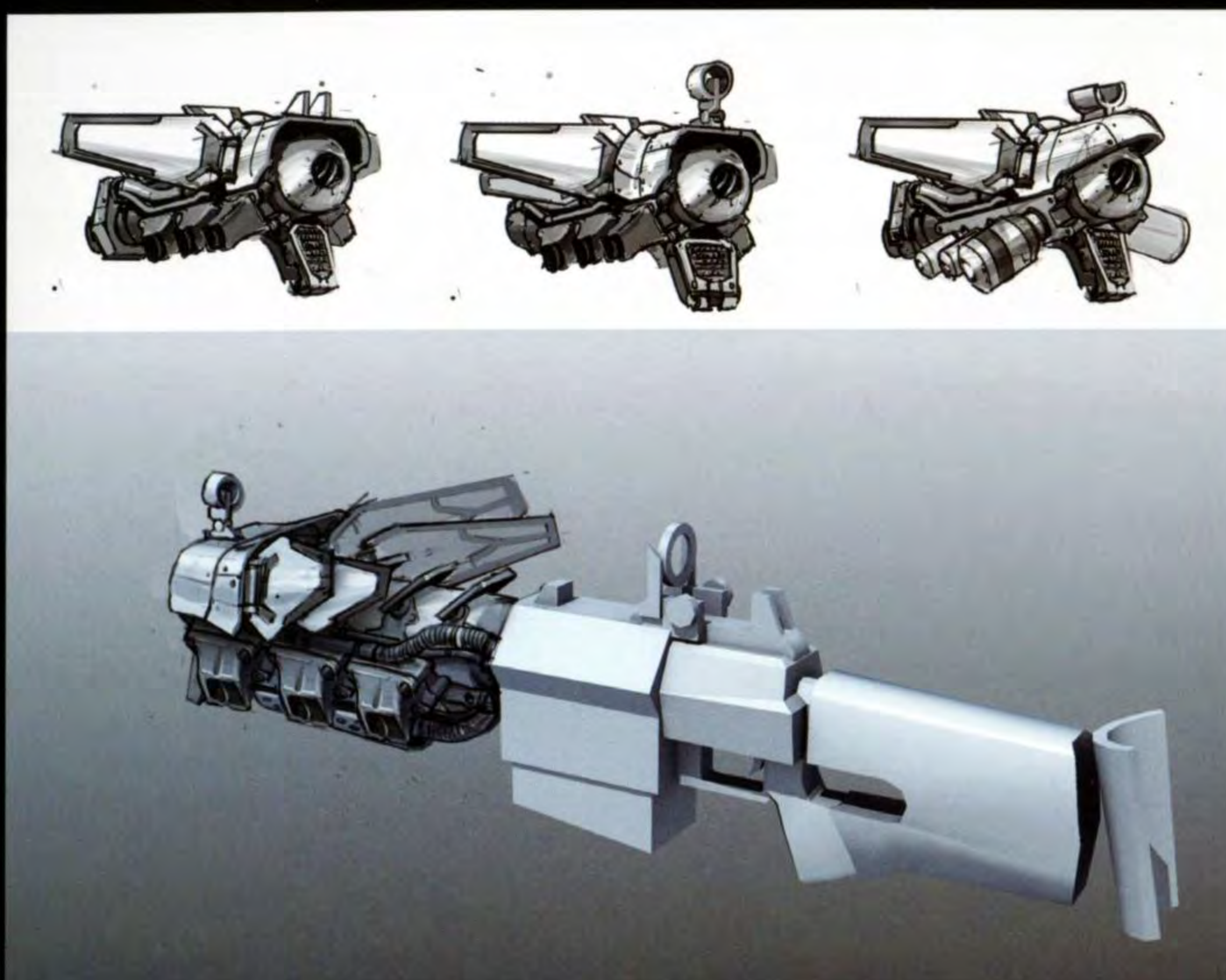
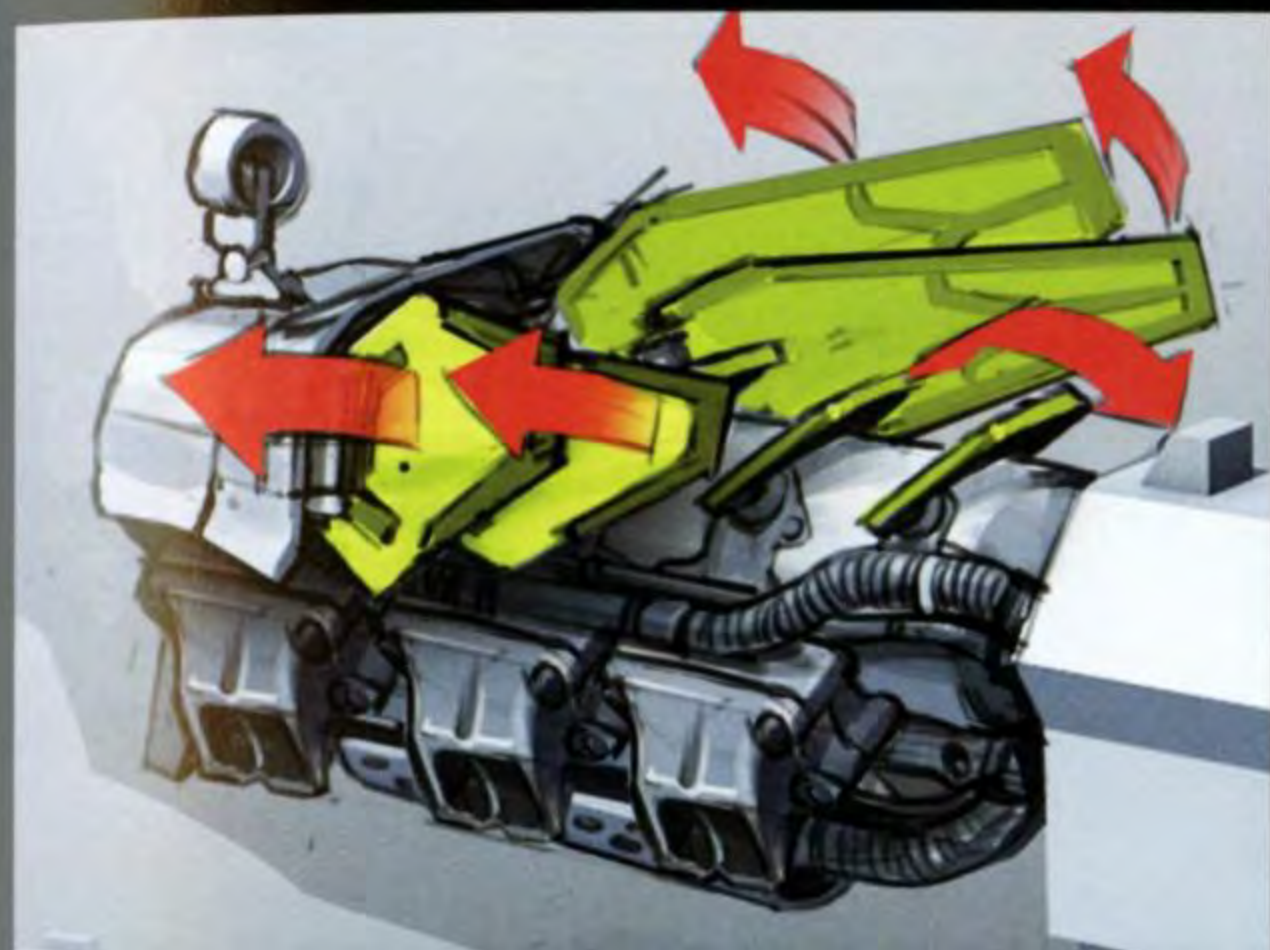
"This sheet illustrates pistol accessories that are shared between all pistol manufacturers," explains Kevin Duc. "Their placement and volume is based on the least amount of intersection between parts. These accessories had to work on a variety of surfaces with a variety of moving parts. Dave blocked out the placement and I painted out the final design over these blockouts. One of the fun things we really wanted to bring back was bayonets on pistols."



e-Tech Pistol Barrel Concepts [Kevin Duc] Top
Pistol Accessories [Kevin Duc, Jacob Christopher] Bottom

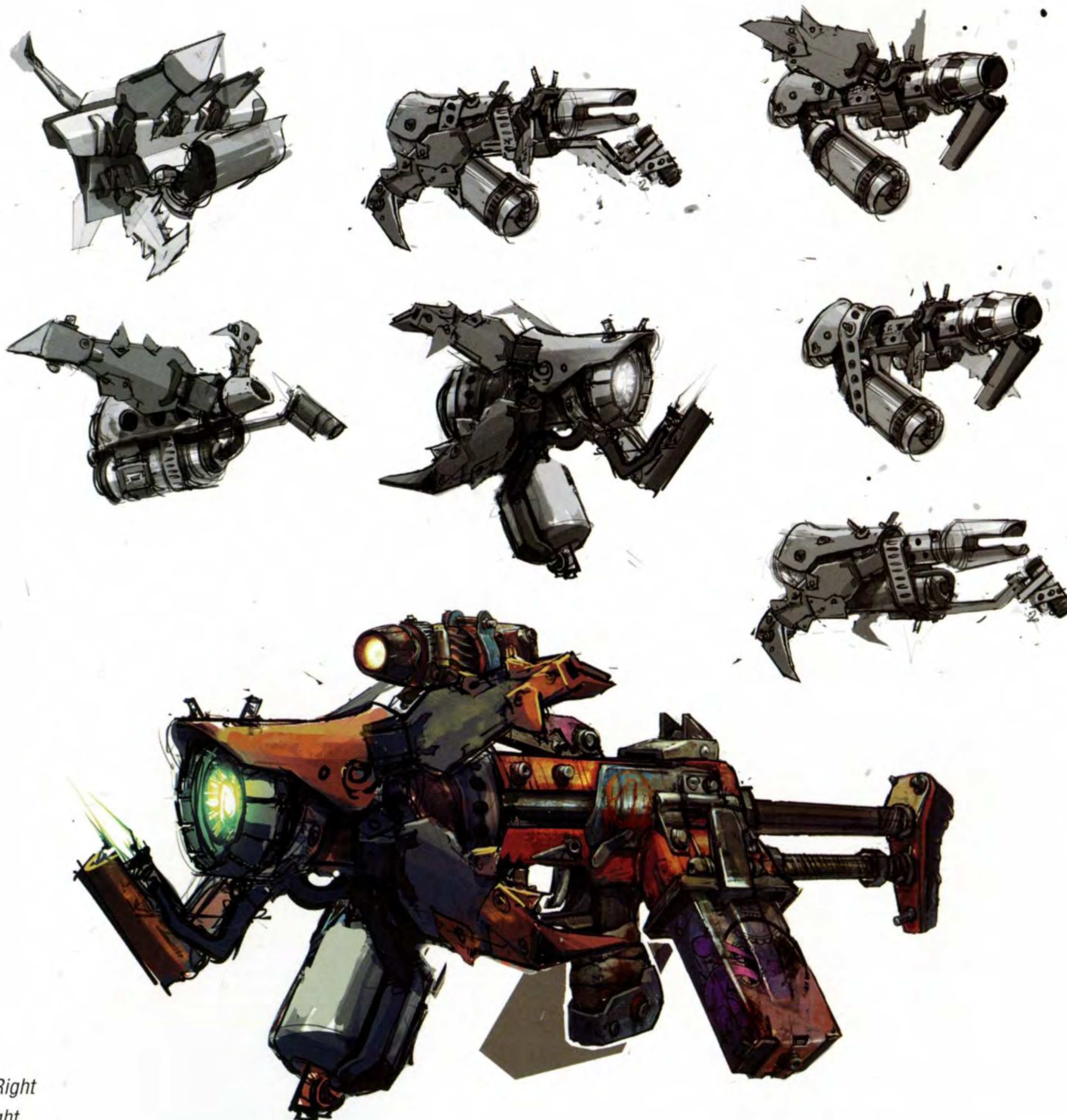
SHOTGUN

The shotgun e-Tech barrel design is based on Torgue licensing Hyperion's technology. Torgue has integrated four huge flaps onto their barrel design. Again, we wanted to capture the essence of a base manufacturer and apply the Hyperion accents into it.



SMG

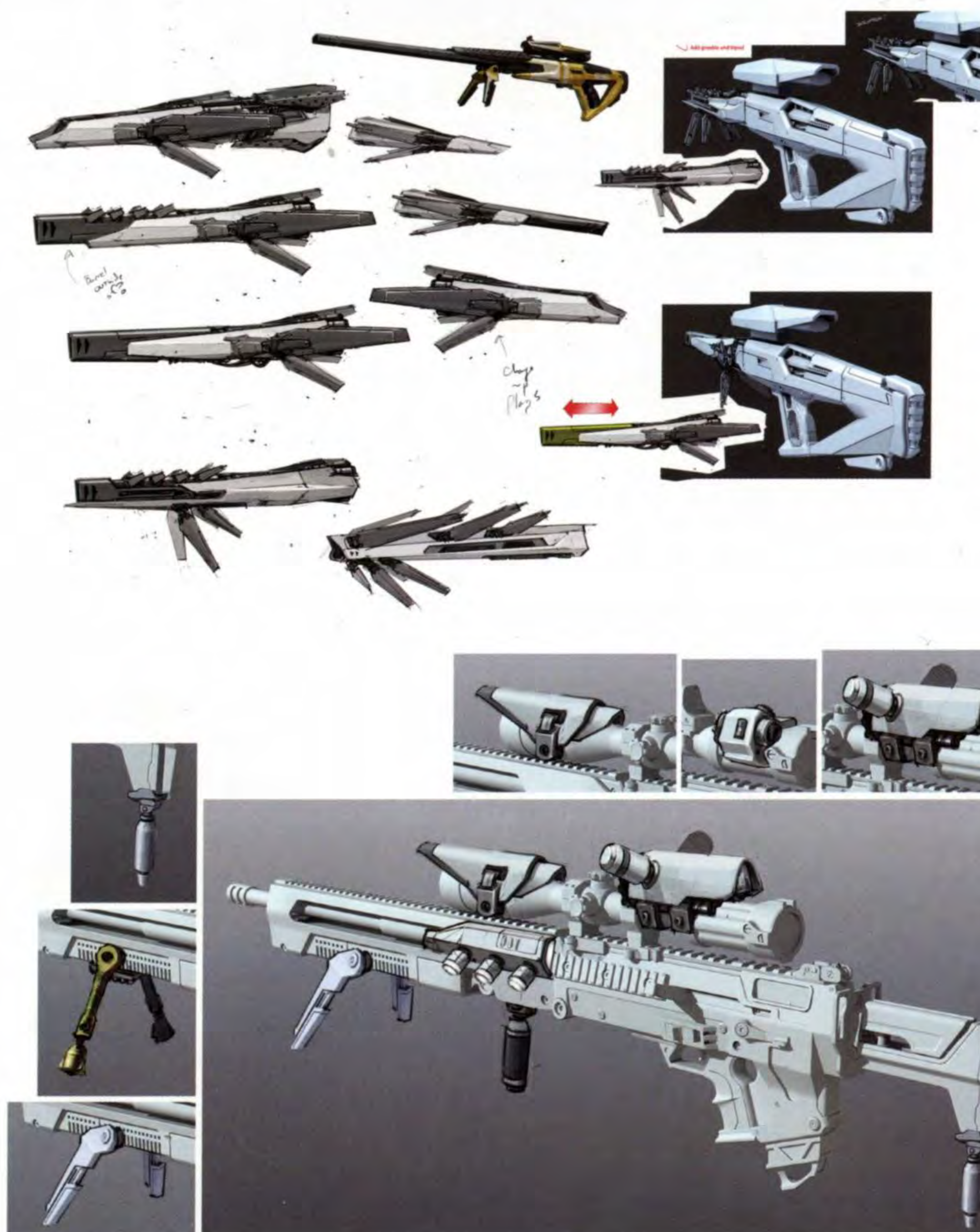
The SMG e-Tech barrel is based off of the Bandit manufacturer licensing Hyperion's tech. We explored different levels of crude, thrown-together parts. One early idea was a flamethrower type of solution; hence the tank and the pilot light in the front. We eventually settled on a mix of high-tech plasma blaster and low-tech flamethrower.



e-Tech Shotgun Barrel Concepts

[David May, Kevin Duc] *Top Left, Top Right*

e-Tech SMG Concepts [Kevin Duc] *Right*



SNIPER RIFLE

Our Hyperion e-Tech barrel is a Hyperion designed rail gun. This was to be our most high-tech sniper barrel, and we concentrated on long, almost spaceship-type shapes to find the final design. Here you can see the various iterations of flap placement, shroud amount, and bore shape.

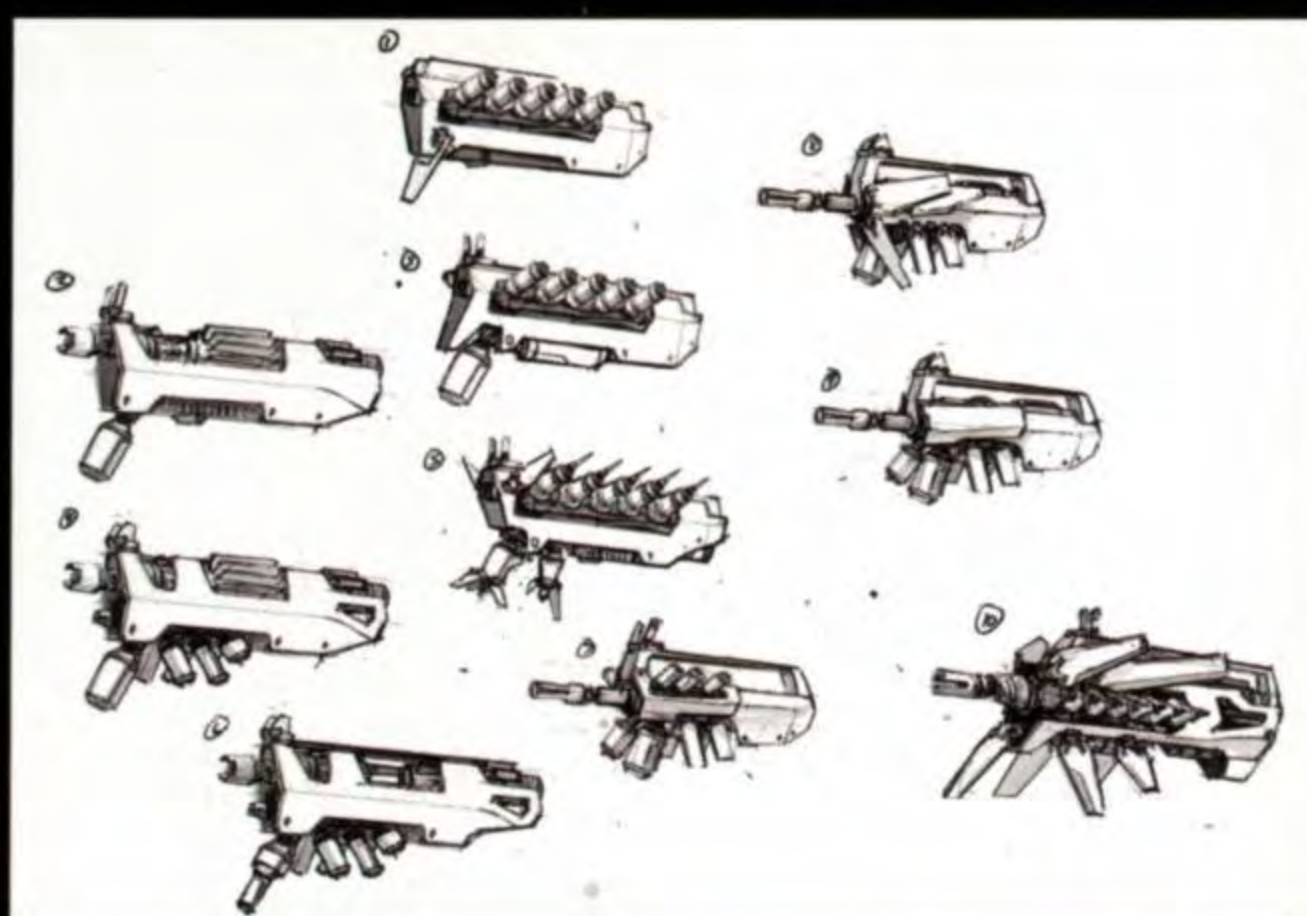
The sniper accessories were laid out and designed in a similar fashion as our other guns with the exception of the scope accessories. Because sniper rifles have scopes almost 100% of the time, we were free to make attachments to the scopes. These accessories still needed to be placed and take up a volume that worked with every sniper scope.

e-Tech Sniper Rifle Concepts

[Kevin Duc, Shane Nakamura, Jimmy Barnett] *Top*

e-Tech Sniper Rifle Accessories

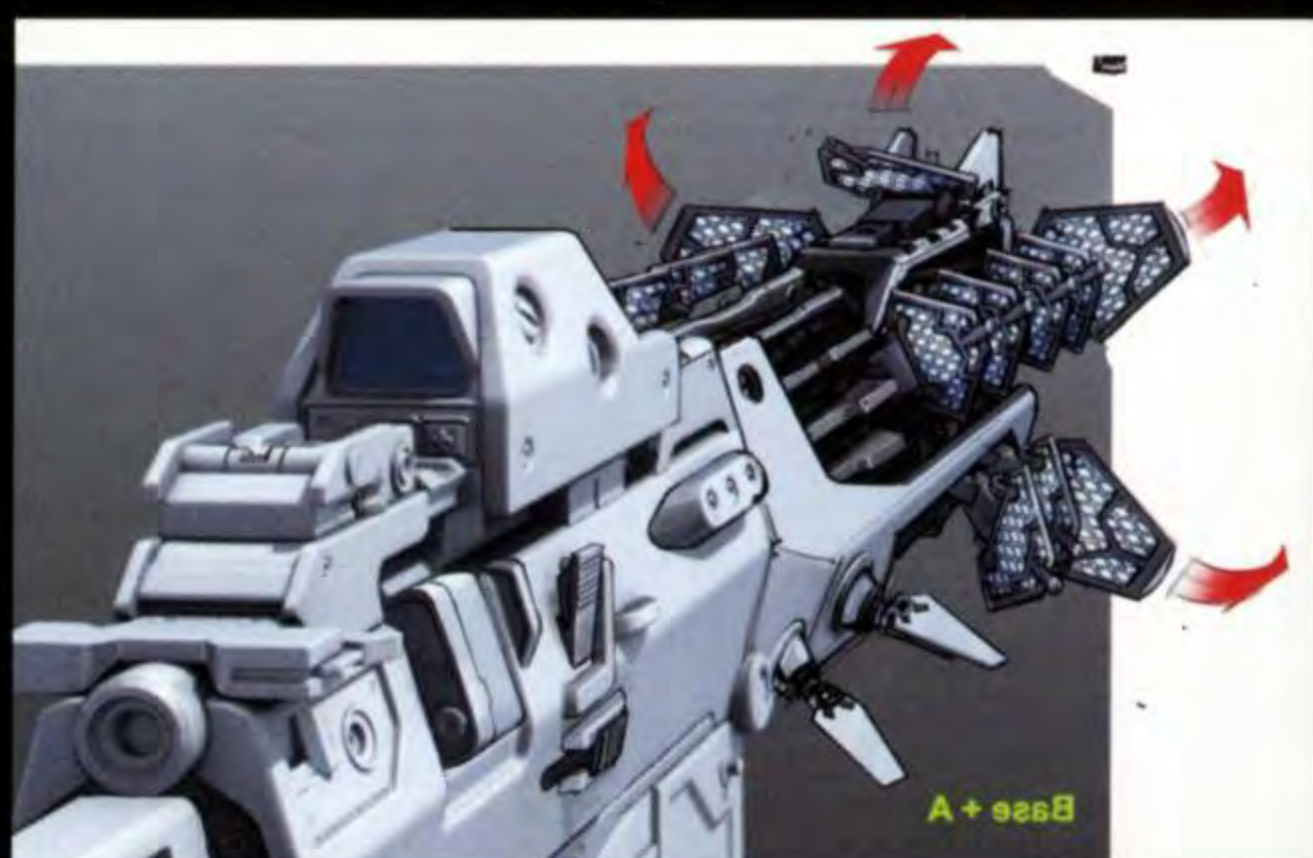
[Kevin Duc, Jett Sarrett] *Left*



ASSAULT RIFLE

The e-Tech assault rifle barrel is based on Dahl licensing Hyperion's e-Tech panels. These illustrations show some of the early explorations for what a laser blaster barrel in the Dahl style could look like.

Once we narrowed down the design of the Dahl e-Tech barrel, we defined animations for the flaps. This illustration conveys a possible "overheat" sequence that was thought up but ultimately not included in game. The "overheat" design did, however, influence the flaps opening and closing on firing.

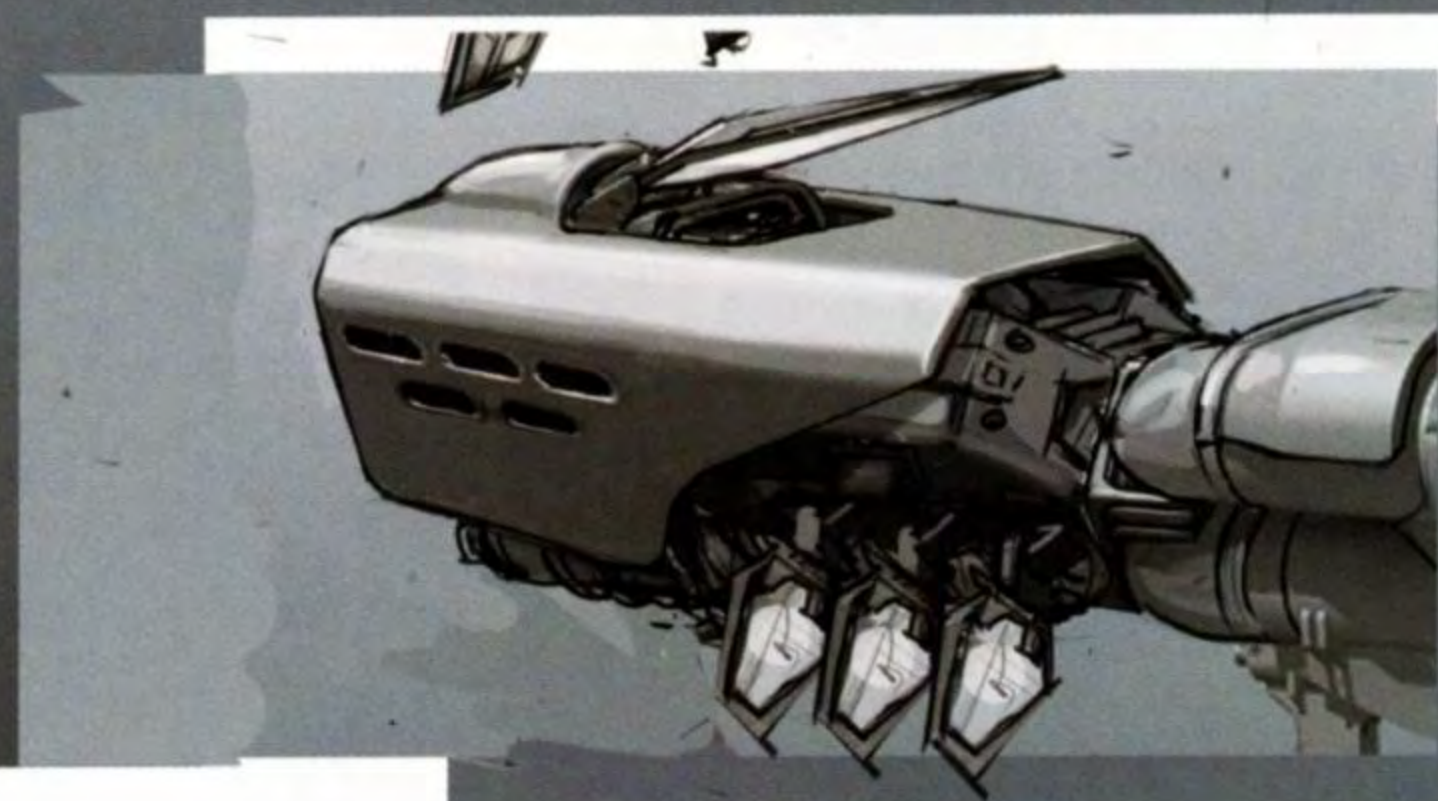
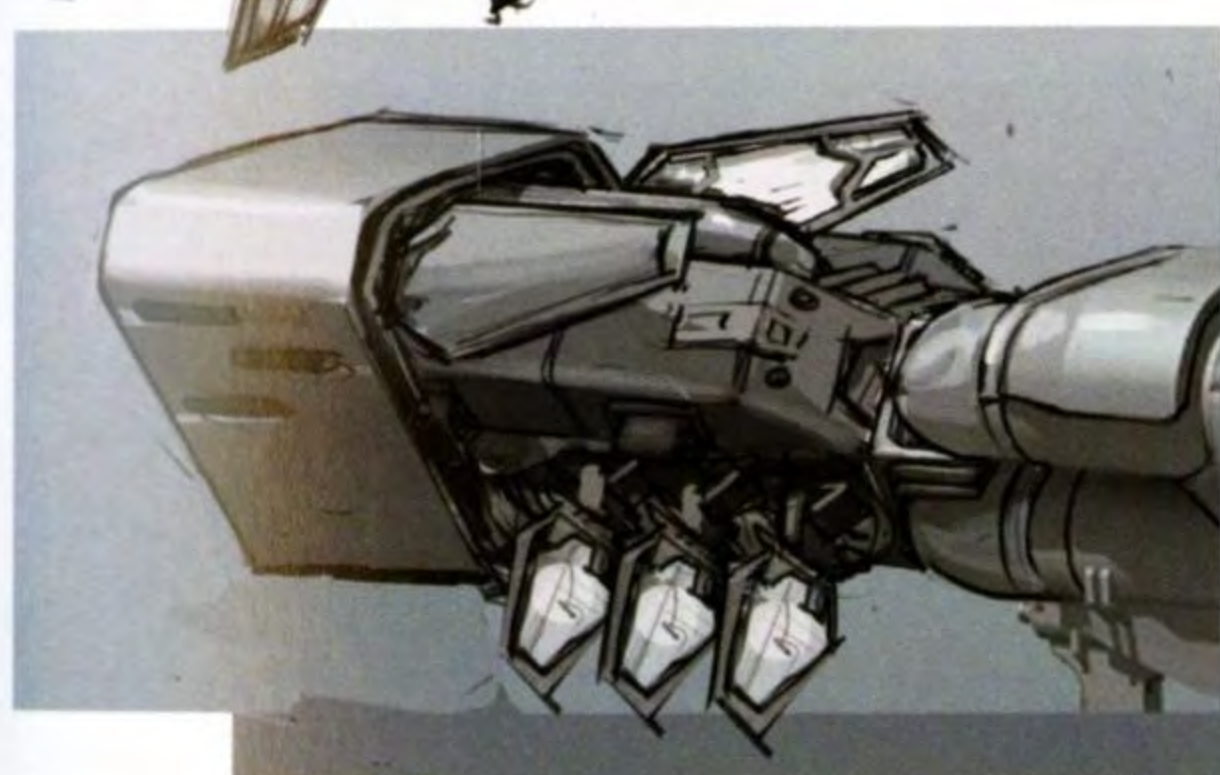
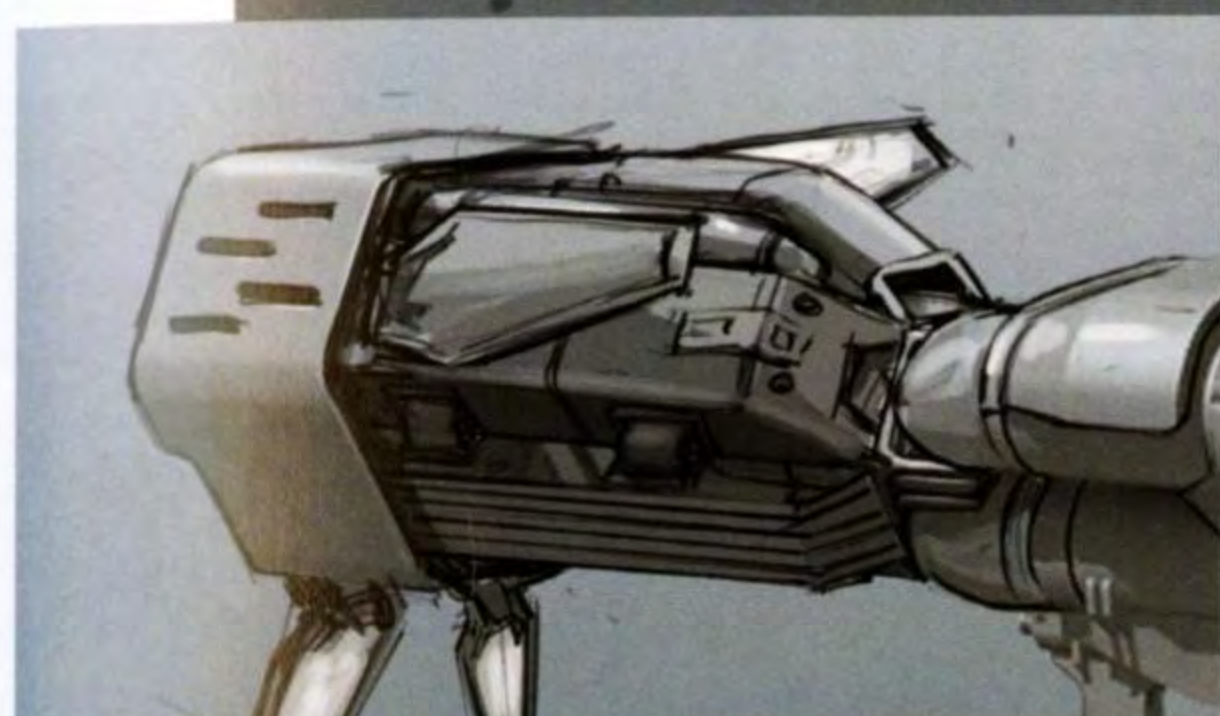
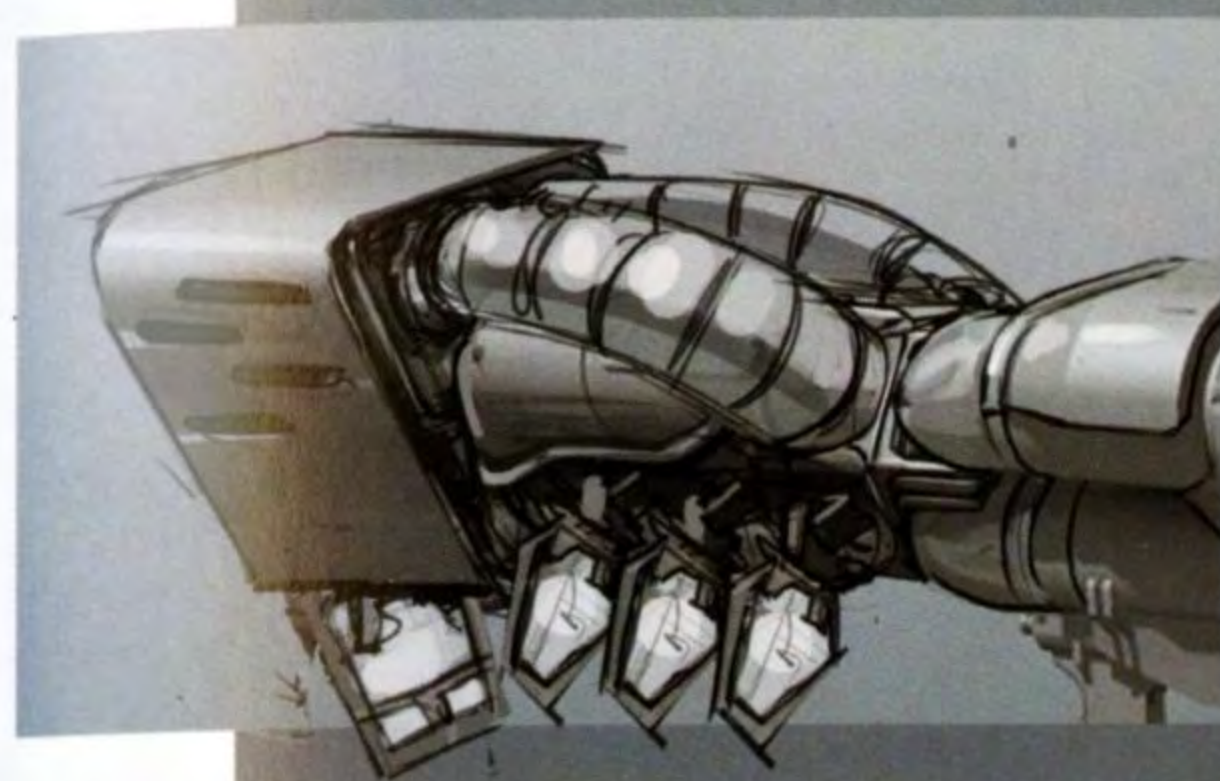
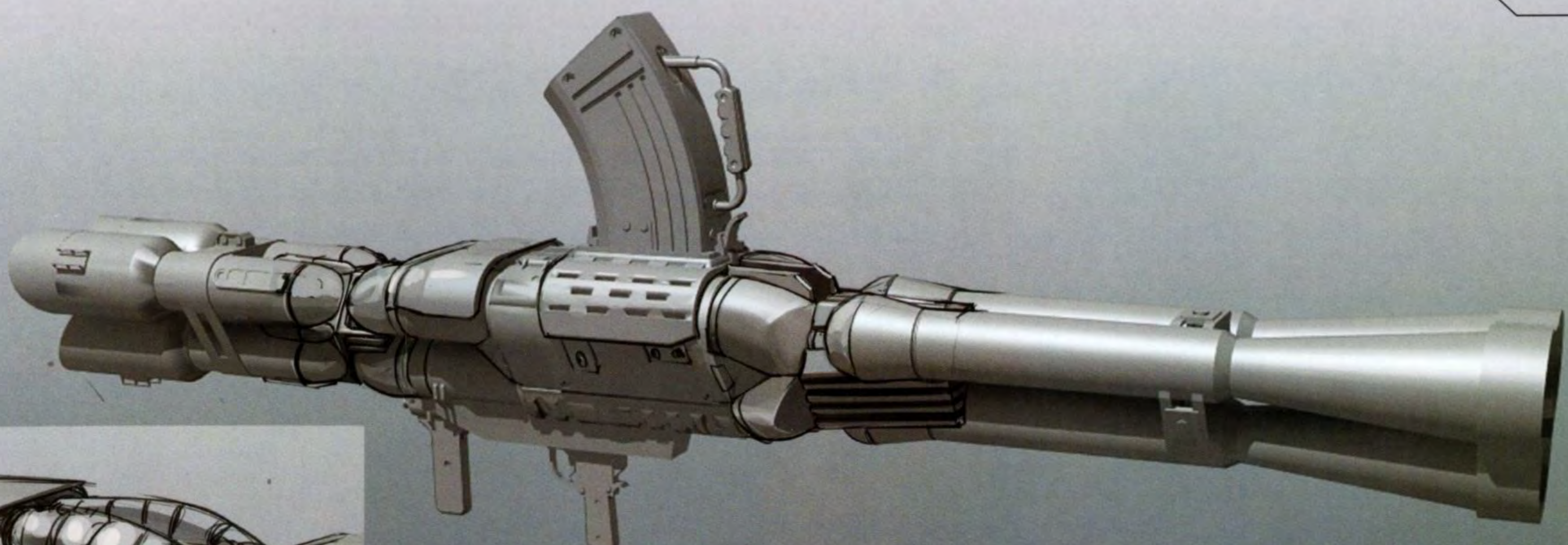


Alien Assault Rifle Concepts [Kevin Duc] *Top*

Alien Assault Rifle Anim [Kevin Duc, Liquid] *Above*

Alien Assault Rifle Barrel Models [Ricky Oh] *Right*



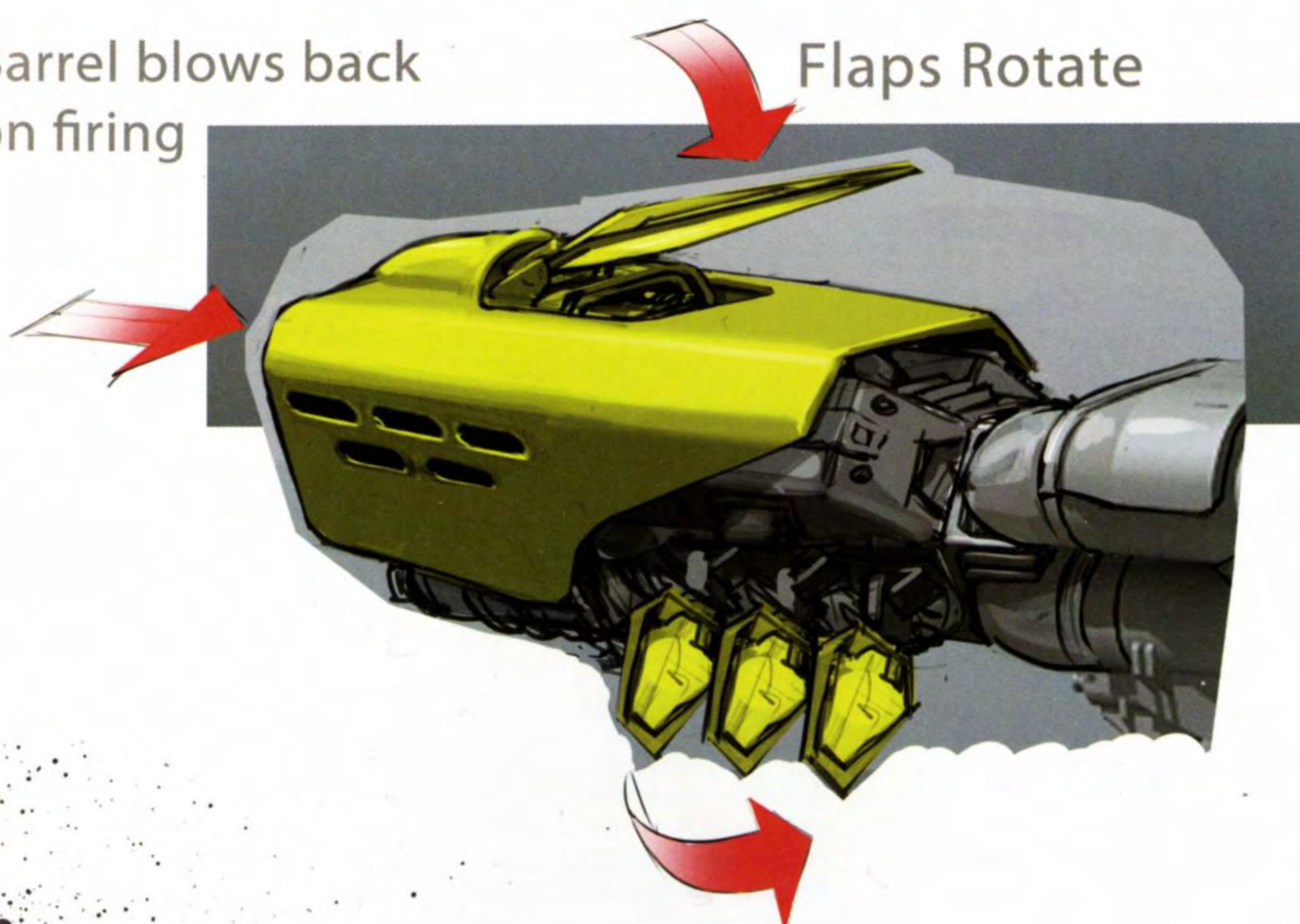


ROCKET LAUNCHER

The e-Tech rocket launcher barrel is based on Vladof's licensing of the Hyperion technology. These explorations show various panel placement and slight variations on the cowling design.

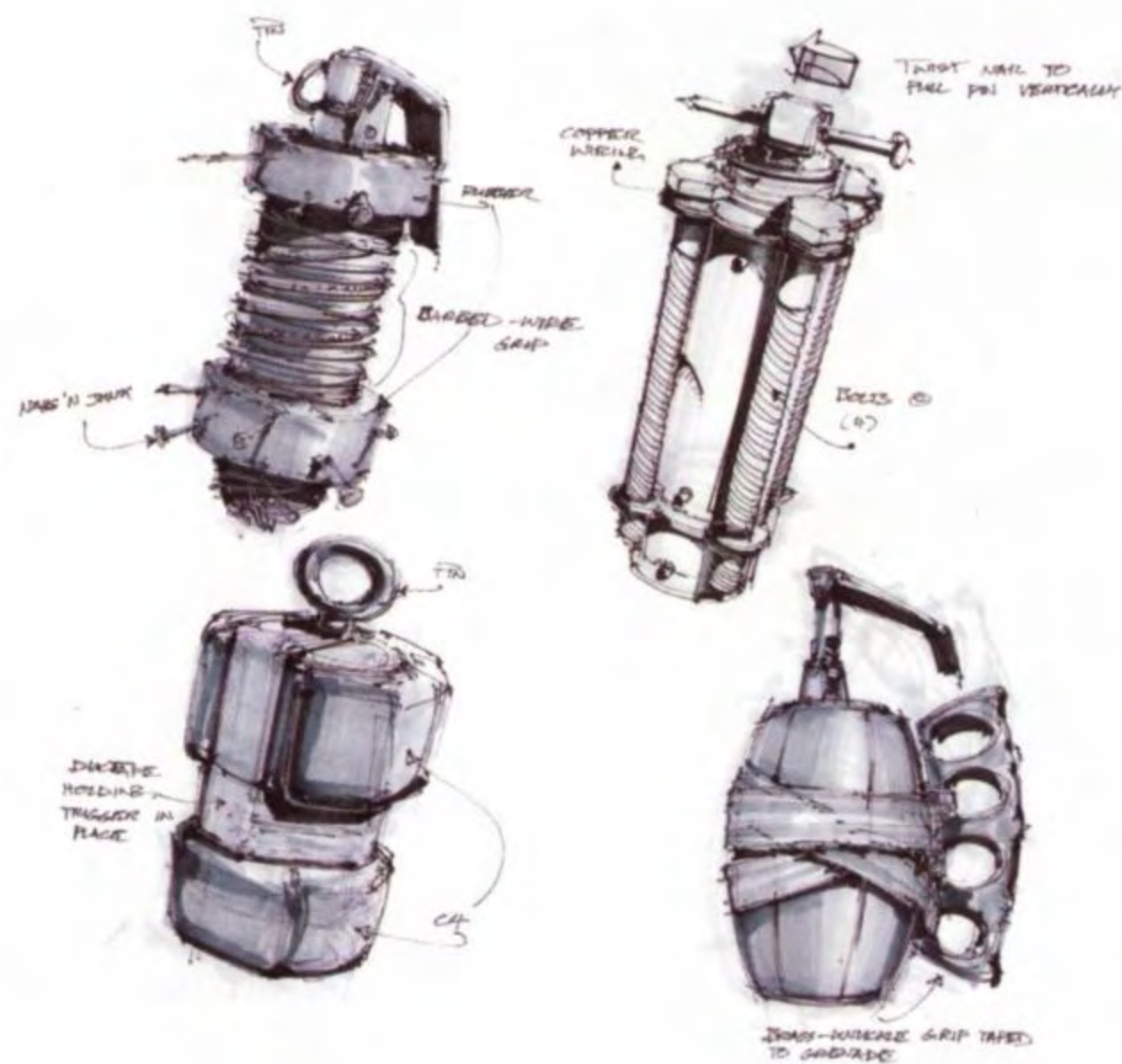
Barrel blows back on firing

Flaps Rotate



Once we decided on a design, we worked out the animation for the firing sequence. In this image, you can see that we made the entire cowling slide back from recoil on firing.

e-Tech Rocket Launcher Concepts
[Kevin Duc, David May, Virtuous] *Top*
e-Tech Rocket Launcher Concepts
[Kevin Duc, David May] *Bottom*



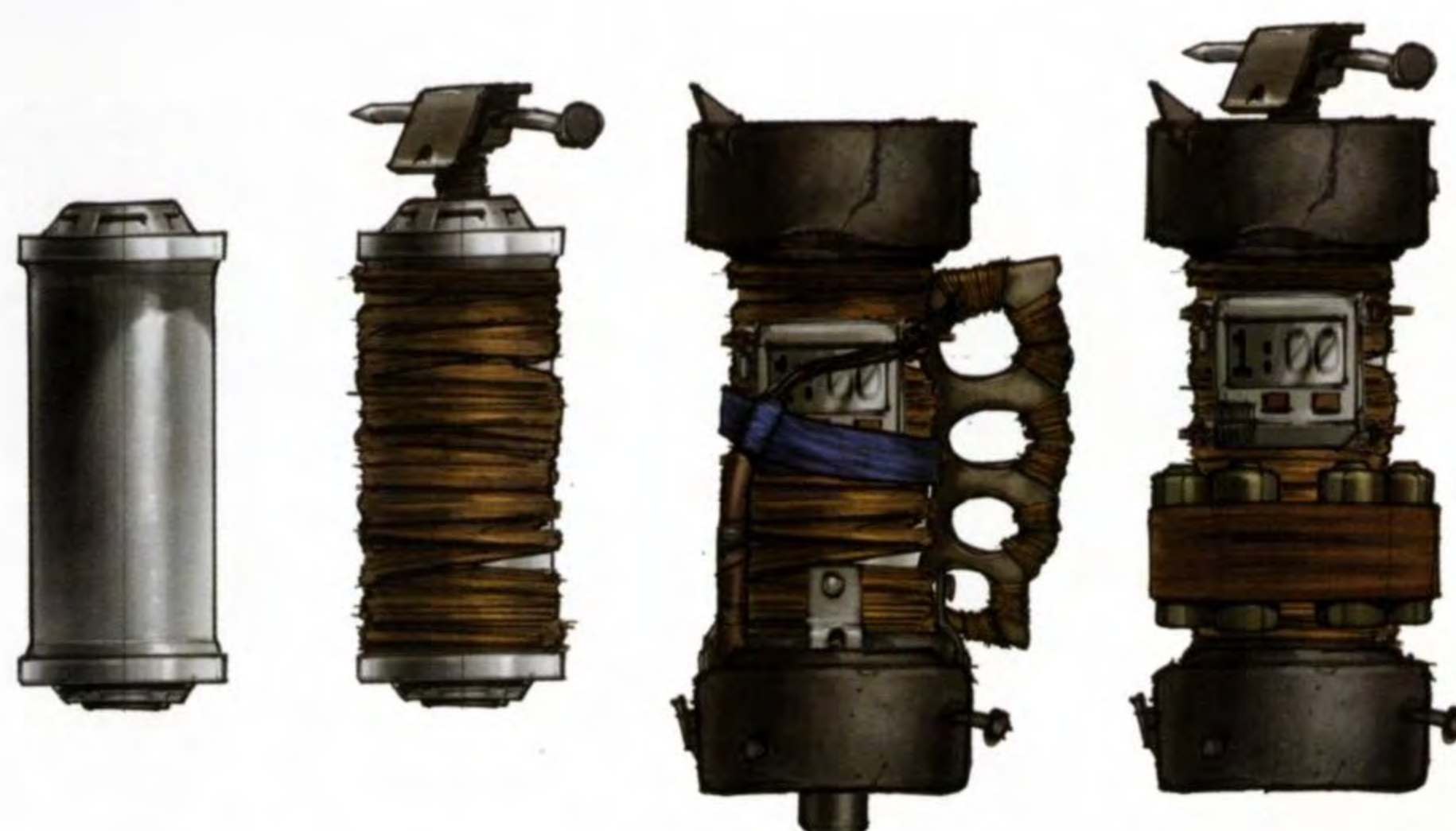
GRENADES

While the grenades in the first *Borderlands* may have done different things, they all looked identical. For *Borderlands 2*, however, the team wanted to make the grenade types as visually distinct from one another as the guns are. Tediore grenades are boxy, Bandit grenades look like they've been duct-taped together, and so on.



Grenade Concepts [Lorin Wood] Top, Middle
Grenade Models [Liquid] Bottom
Grenade Concepts [Lorin Wood] Next Page, Top

BANDIT



DAHL



HYPERION



MALIWAN



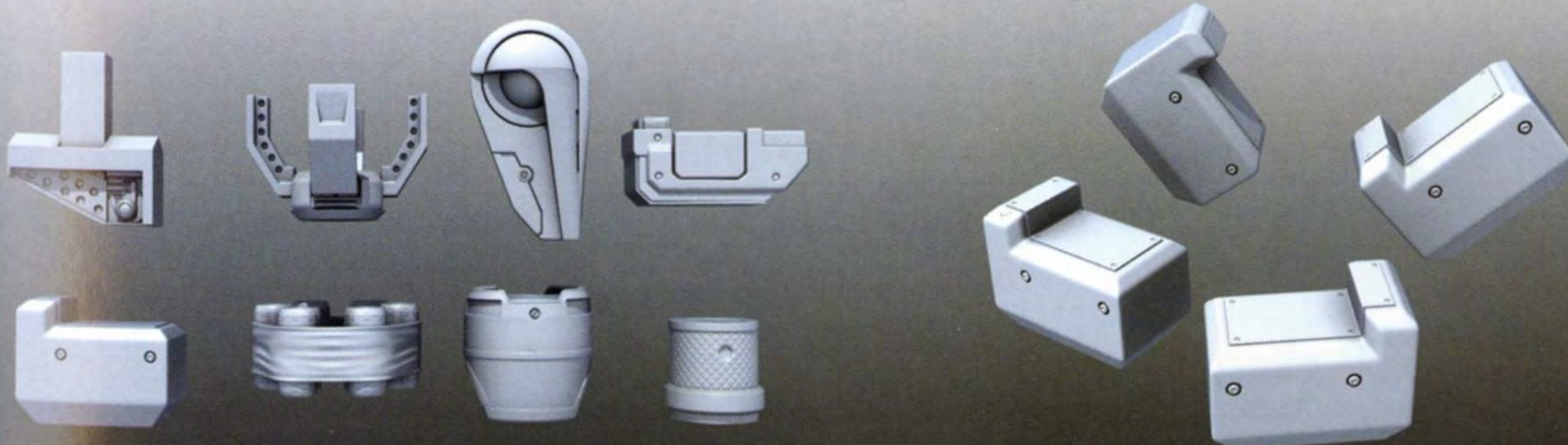
TEDIOR



TORQUE

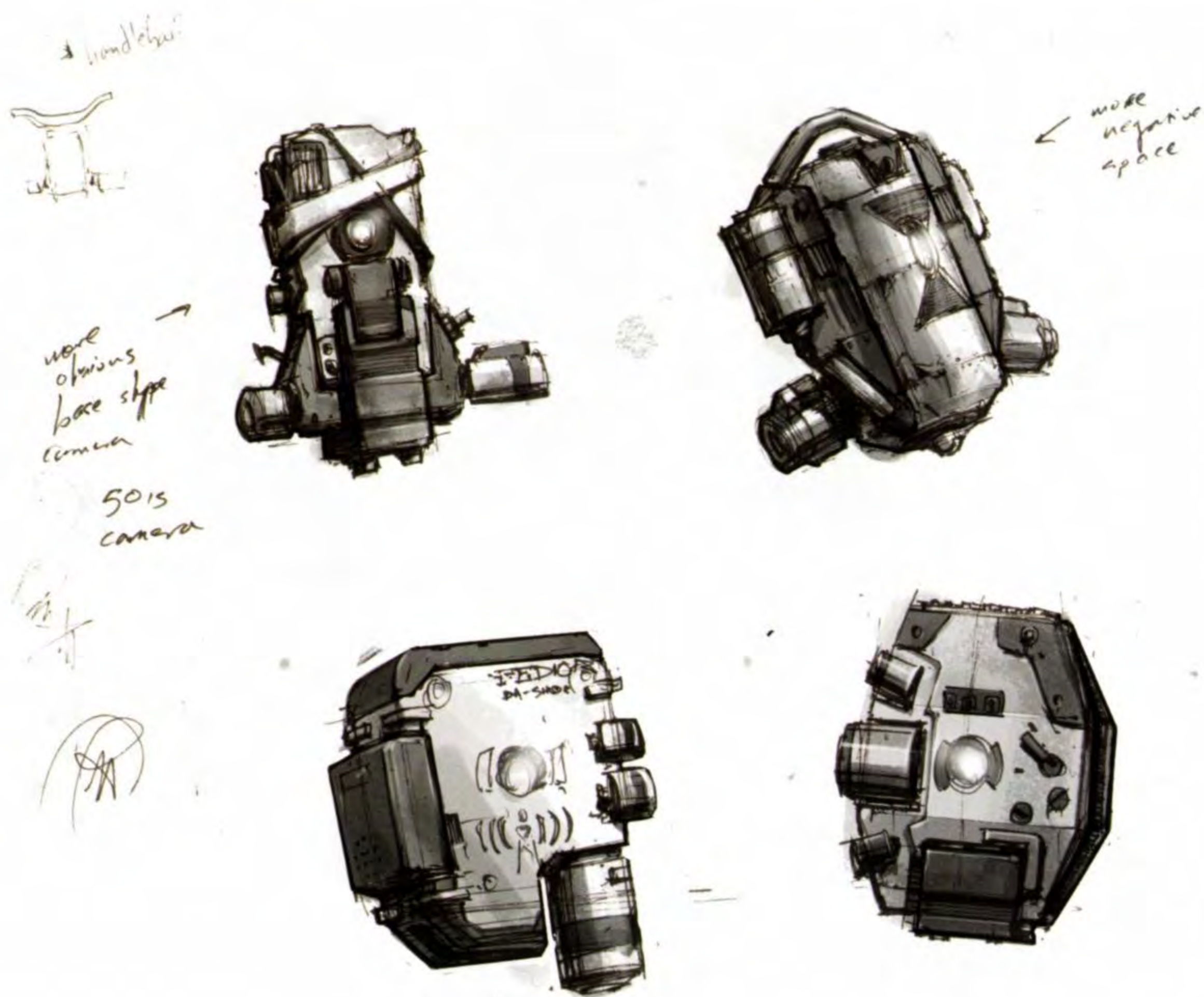


VLADOF



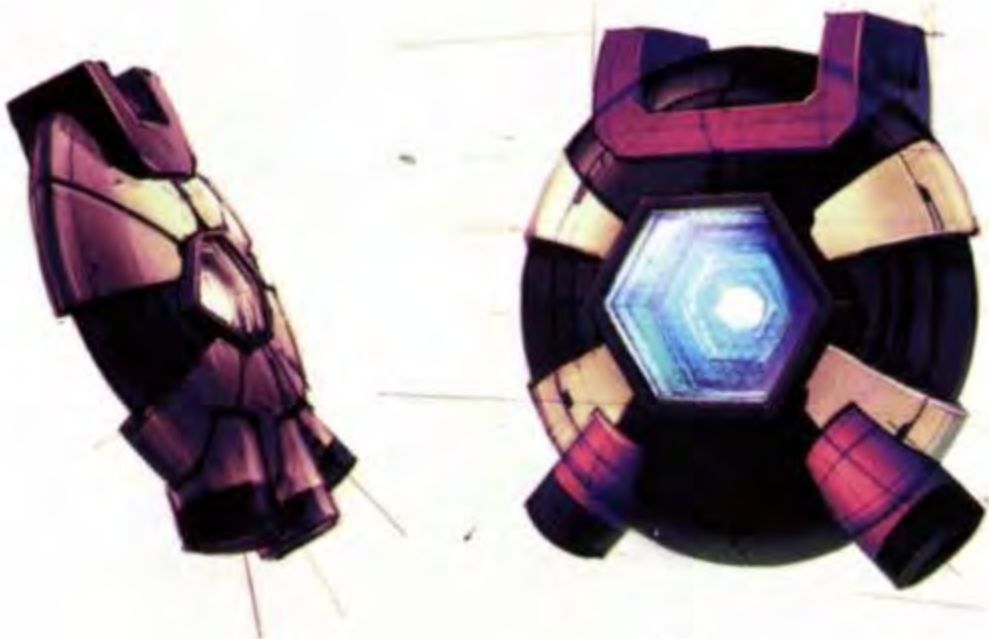
SHIELDS

“Shield designs were also influenced by our weapon design languages, with the exception of Anshin and Pangolin. Anshin drew inspiration from Japanese designs, and are the only shield with a rounded profile. Pangolin, one of the strongest shield manufacturers, uses the hexagon shape of the shield effect as influence,” says Kevin Duc.



Shield Concepts [Kevin Duc]

ANSHIN



BANDIT



DAHL



HYPERION



PANGOLIN



TEDIORE



TORGUE

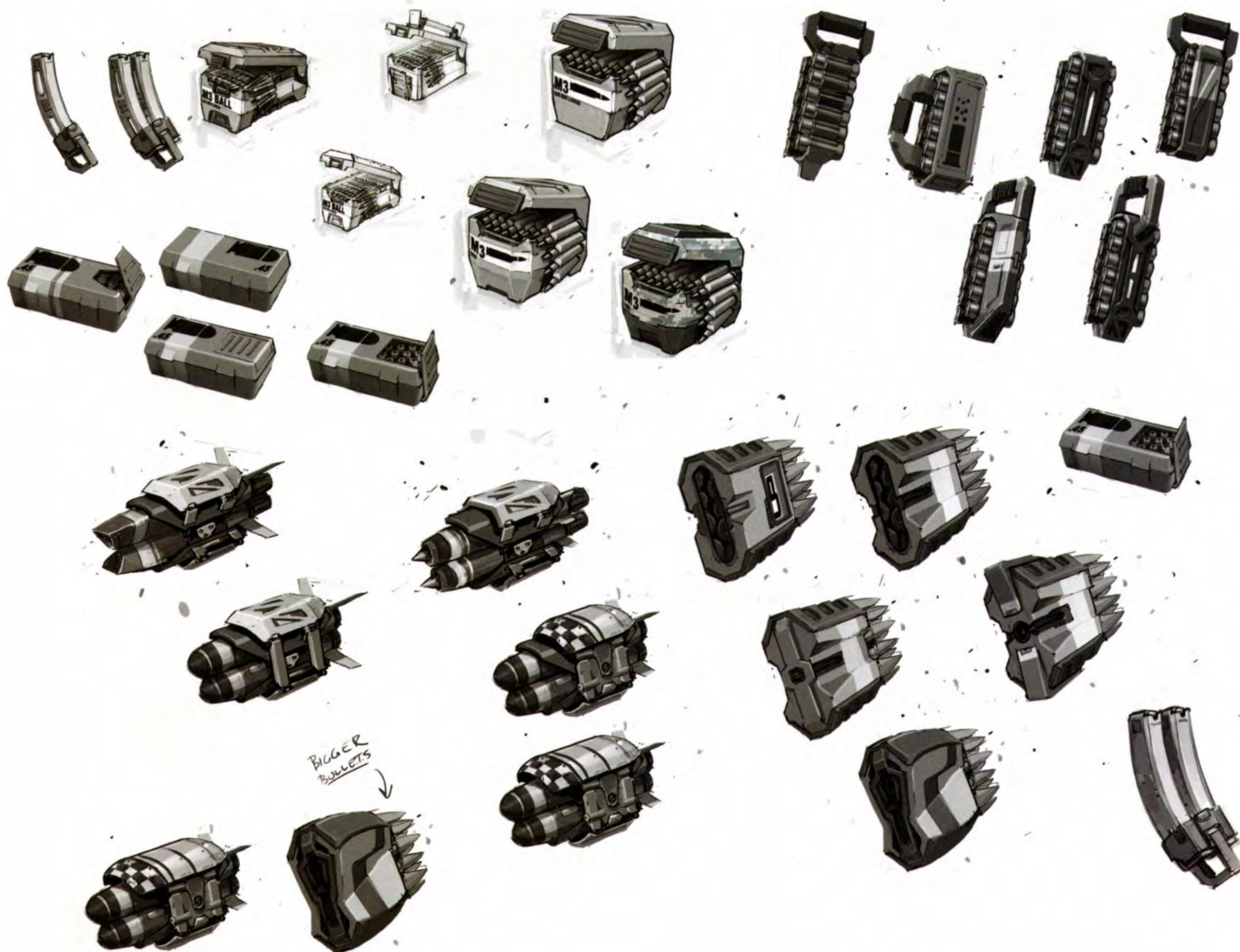


VLADOF





Shield Models
[Jimmy Barnett]



AMMO

Ammo pickups needed a refresh for *Borderlands 2*, and we chose to use the manufacturer design themes in creating these pickups. Maliwan shapes are used for the sniper pickup, Hyperion for the pistol, Vladof for the SMG, Bandit for shotgun, Dahl for assault rifle, and the explosive Torgue for rockets.



Ammo Concepts [Kevin Duc] Top
Ammo Models [Kevin Penrod] Middle
Ammo Revisions [Kevin Duc, Kevin Penrod] Above
Ammo DIF [Damien Kim, Kevin Penrod] Right

ENEMIES

What's the point of wielding bazillions of guns if you don't have anything fun to shoot at? (Don't answer that. It's hypothetical.)

Fans of the first *Borderlands* grew to love many of Pandora's enemies—the flesh-stripping Psycho, the vertically-mouthed Skag—but they wanted more. “More variety,” they requested. “More complex AI,” they shouted. And really, who were we to say no? (Again, hypothetical. Don't answer.)

In this chapter you'll witness the birth of the Bullymong, the rise of the Rats, and you'll find out the Goliath's favorite internet meme (it's the most offensive one you can think of).

So, turn the page—what are you waiting for? (You can answer that question if you want.)

Illustration

[Scott Kester] Right

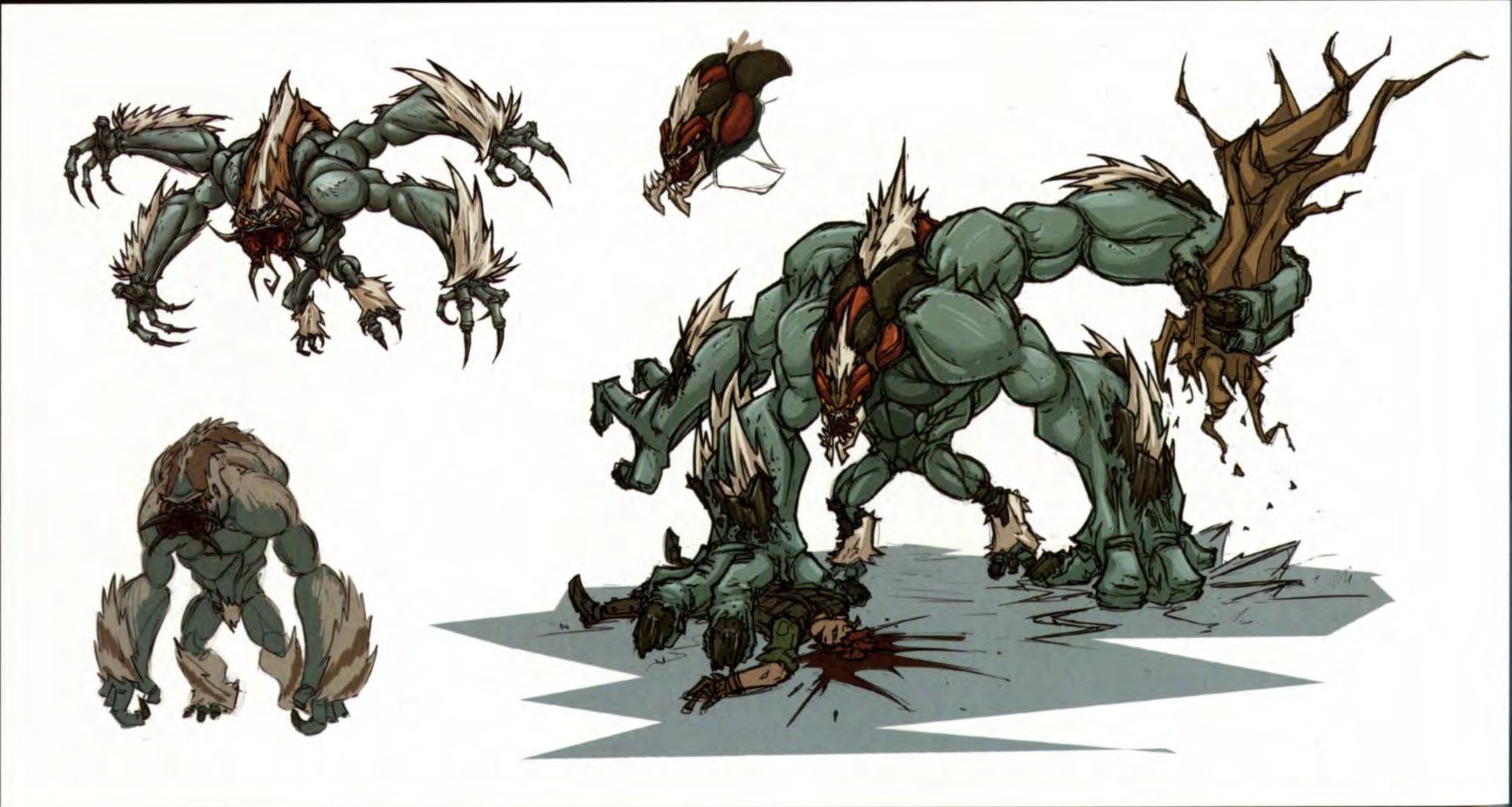
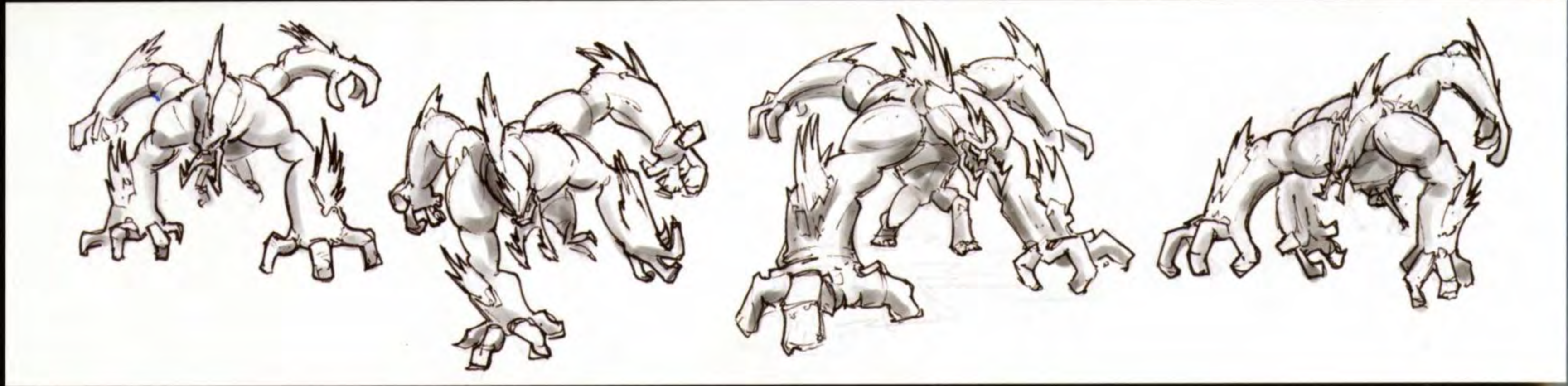




BULLYMONG

“The Bullymong was basically our stab at adding a Yeti into *Borderlands*,” Scott Kester says. “A primate of sorts with four arms—very barbaric and primal. We tried to make him alien, but with enough of a familiarity to apes from our world.”

“He basically walks on his arms, using his legs very little, creating a unique movement suite for him.”



"The Bullymong's arms were a particular challenge to sculpt and to model with animation in mind," according to Wes Parker. "We wanted the place where they joined to look like the muscle was almost woven together, and not to stretch too bad when the arms are in extreme poses. Another issue we had in the creation of this model is what to do with the uh, pubic region. There were a lot of interesting 'Too Hot for TV' concepts running around for a while. After trying a lot of different 'solutions,' we decided, for the sake of everyone, just to Ken doll him."

Bullymong Concepts [Scott Kester] *Previous Page*

Bullymong DIF [Wes Parker] *Right*

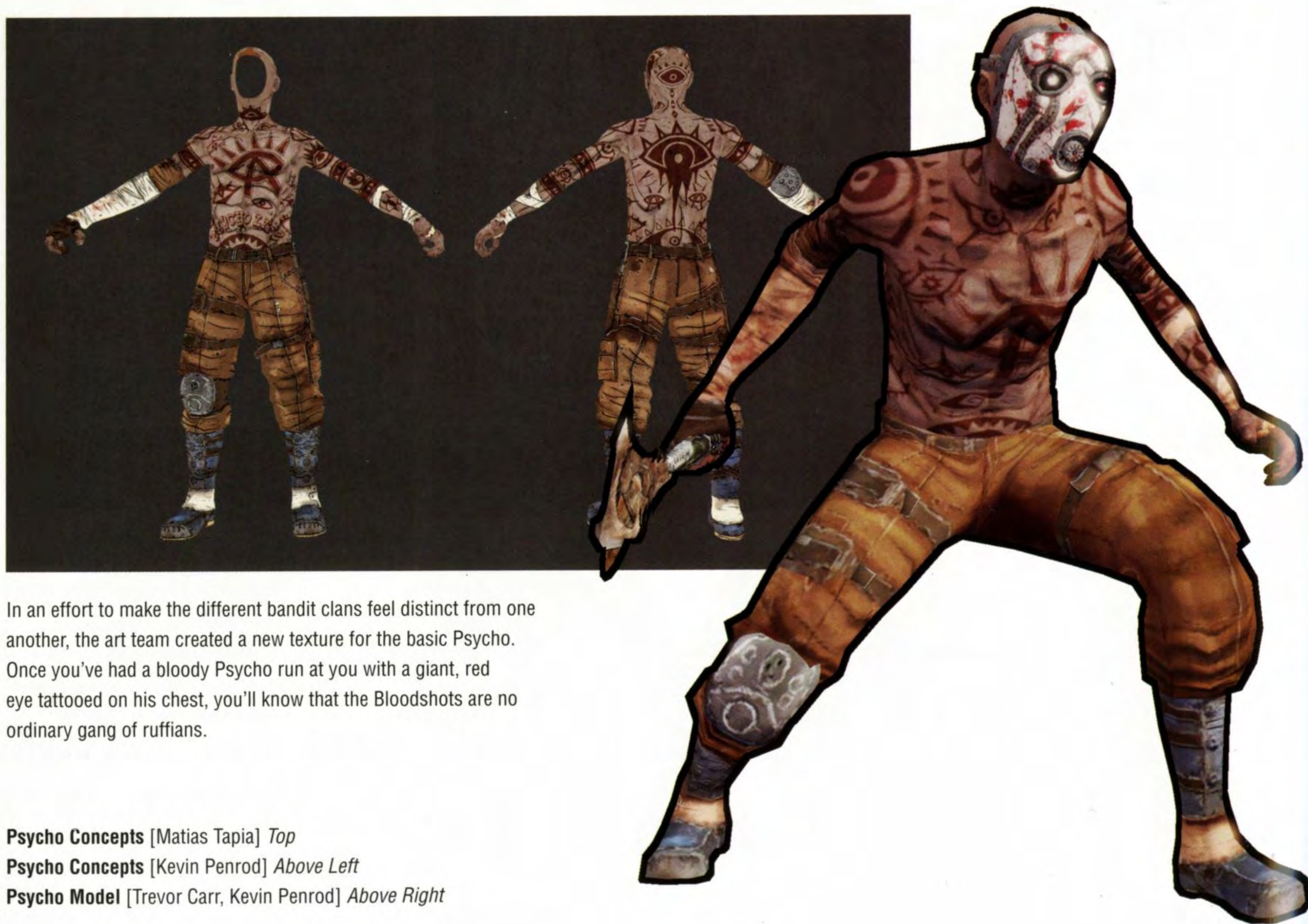
Bullymong Model [Wes Parker] *Below*

Bullymong Model [Adam May, Wes Parker] *Bottom*



BANDITS: PSYCHO

If you were to pick an enemy that players most closely associate with *Borderlands*, it'd probably be the Psycho. Below are some explorations of alternate looks for our beloved meat bicyclist.



In an effort to make the different bandit clans feel distinct from one another, the art team created a new texture for the basic Psycho. Once you've had a bloody Psycho run at you with a giant, red eye tattooed on his chest, you'll know that the Bloodshots are no ordinary gang of ruffians.

Psycho Concepts [Matias Tapia] *Top*

Psycho Concepts [Kevin Penrod] *Above Left*

Psycho Model [Trevor Carr, Kevin Penrod] *Above Right*



Psycho Concepts [Matias Tapia] Top
Psycho Models [Eric Sexton] Right



BANDITS: RAT

For the new Rat bandits, the team wanted a humanoid enemy that somehow felt even more feral and savage than the psychos. The idea, to put it in the simplest and most horrifying terms possible, is that the Rats are cannibalistic murderers who live underground, and brainwash anyone they don't eat into becoming just like them. Notice the Rats' white eyes, implying that most of their number have actually gone blind from spending so much time in pitch-black darkness under Pandora's surface.

Rat Concepts [Matias Tapia] *Top*
Rat DIF [Liquid & Shadows in Darkness] *Middle*
Rat Models [Shadows in Darkness] *Left*

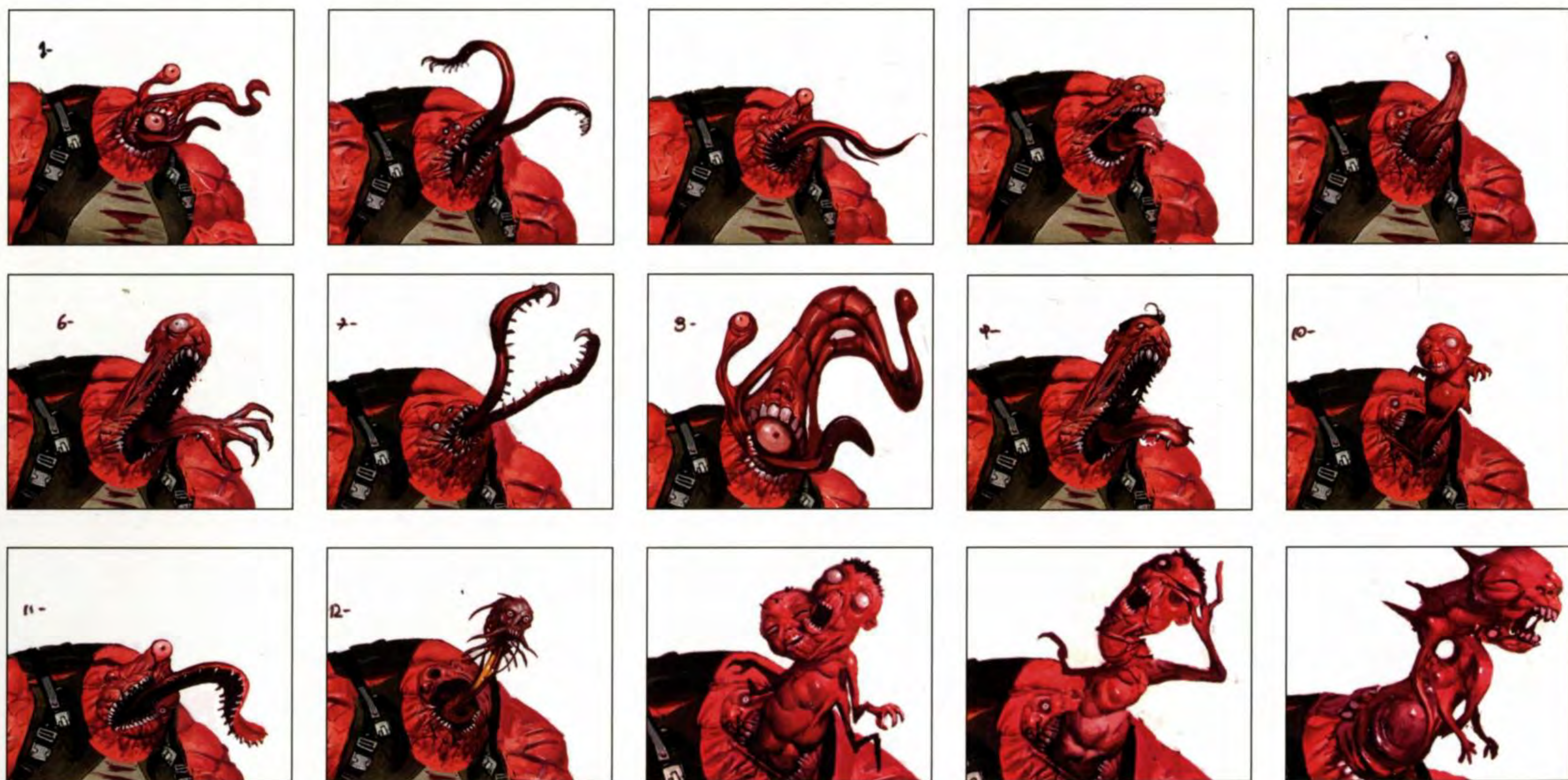


BANDITS: MARAUDER

"The core Bandit in *Borderlands 2* is the Marauder," Scott Kester says. "I tried to add a bit more of an urban look to him: a hoodie, baggy jeans, tennis shoes and such. I wanted him to feel more like a common guy—not some space/sci-fi enemy. He should feel like part of the world, a common scrub."



Marauder Concepts [Scott Kester] Top
Marauder Models [Kevin Penrod, Eric Sexton] Right



BANDITS: GOLIATH

"I had a TON of fun with the Goliath's head," Wes Parker said. "I wanted the skin on his face to look deflated and the skull to be gruesome. I also had to worry with all of it fitting under his helmet! Lots to think about, but I think it came together really well. I also sculpted it with some sort of procedural transformation in mind, so I tried to straddle between the pre-transformation fatness with the post-transformation bulk. I was really proud when I saw the finished Goliath, beating the hell out of his friends and allies before rushing over to punch me in the face."

Goliath Concepts [Matias Tapia]



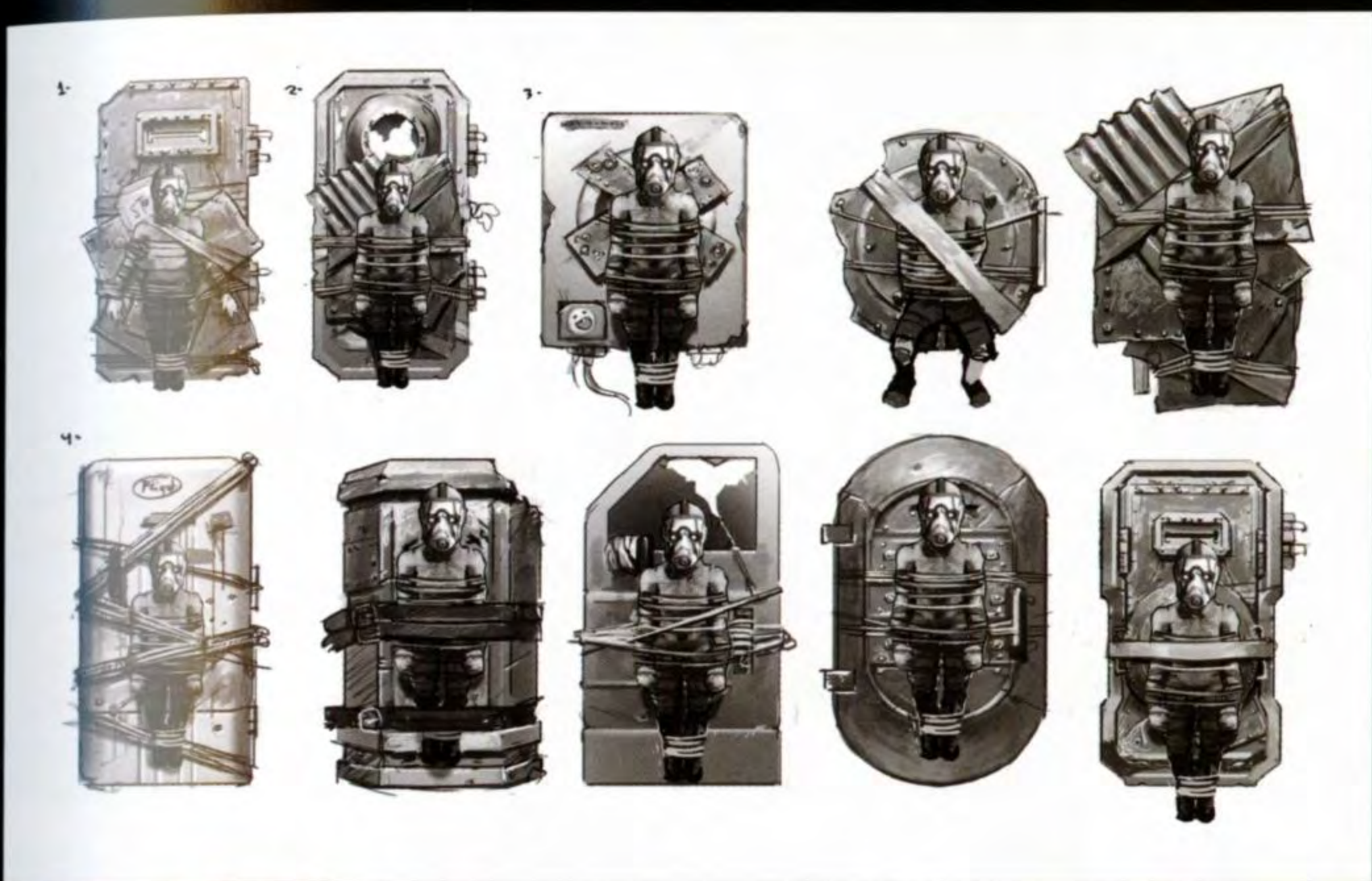


Goliath Models [Wes Parker] Left
Goliath Models [Wes Parker, Ruben Cabrera] Above

BANDITS: NOMAD

Wes Parker on the Nomad, "The Nomad was one of the first enemy characters modeled for *Borderlands 2*. We had a hard time trying to get him to not look doofy in his costume; he either looked too fat, or weirdly hourglass figured. Eventually, with help from Jeramy Cooke, I took it further into the 'A' shape that is the current Nomad."

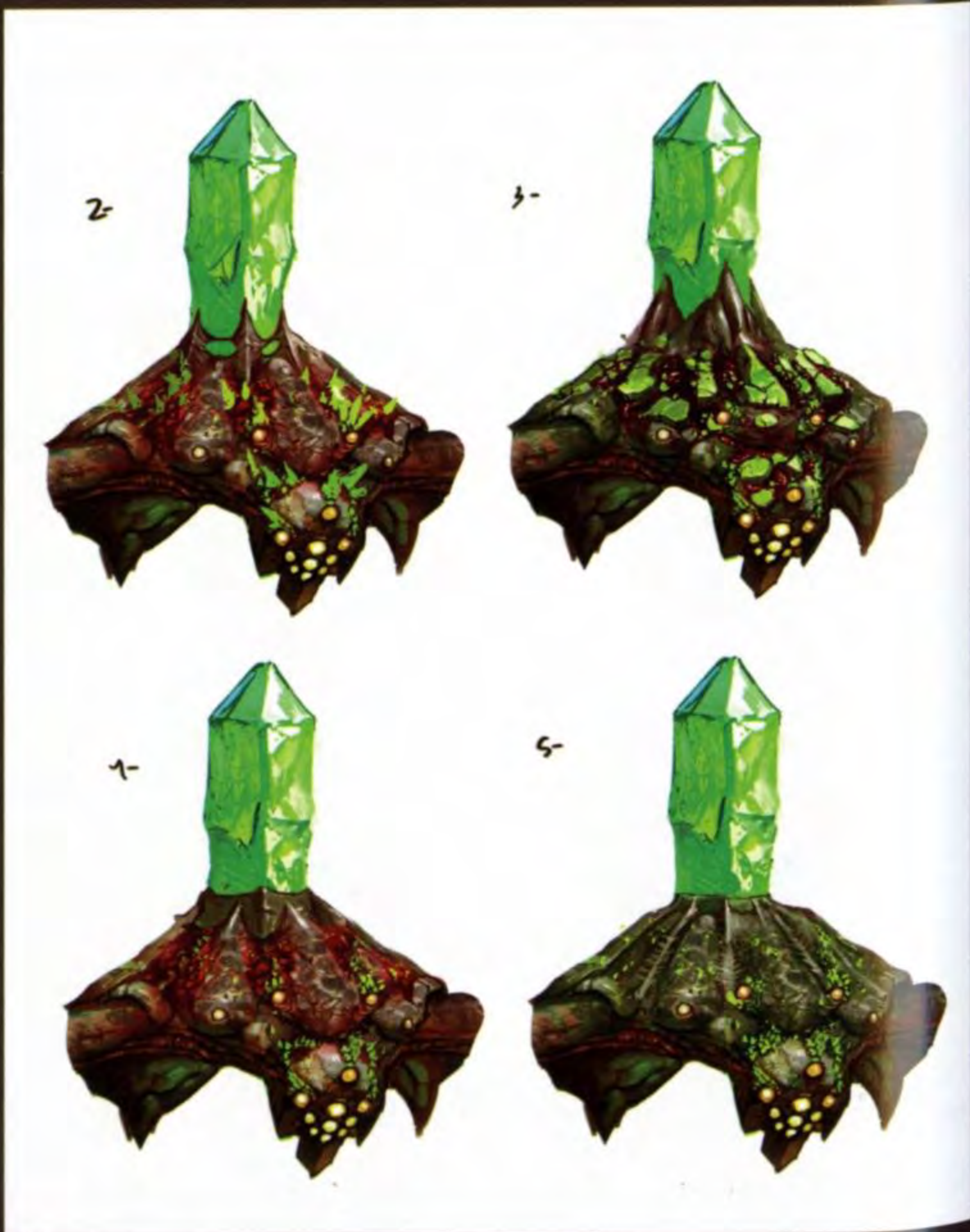
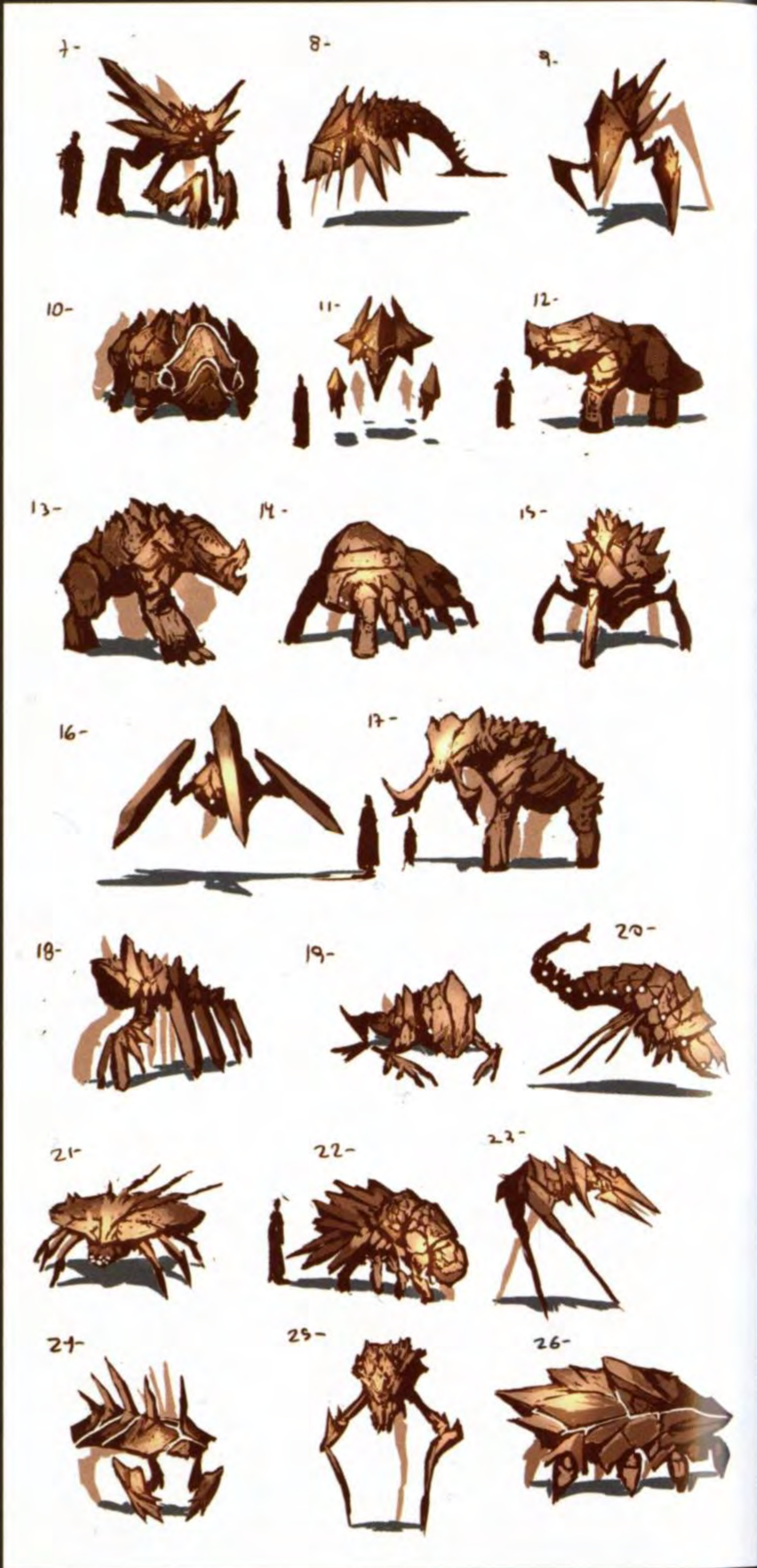
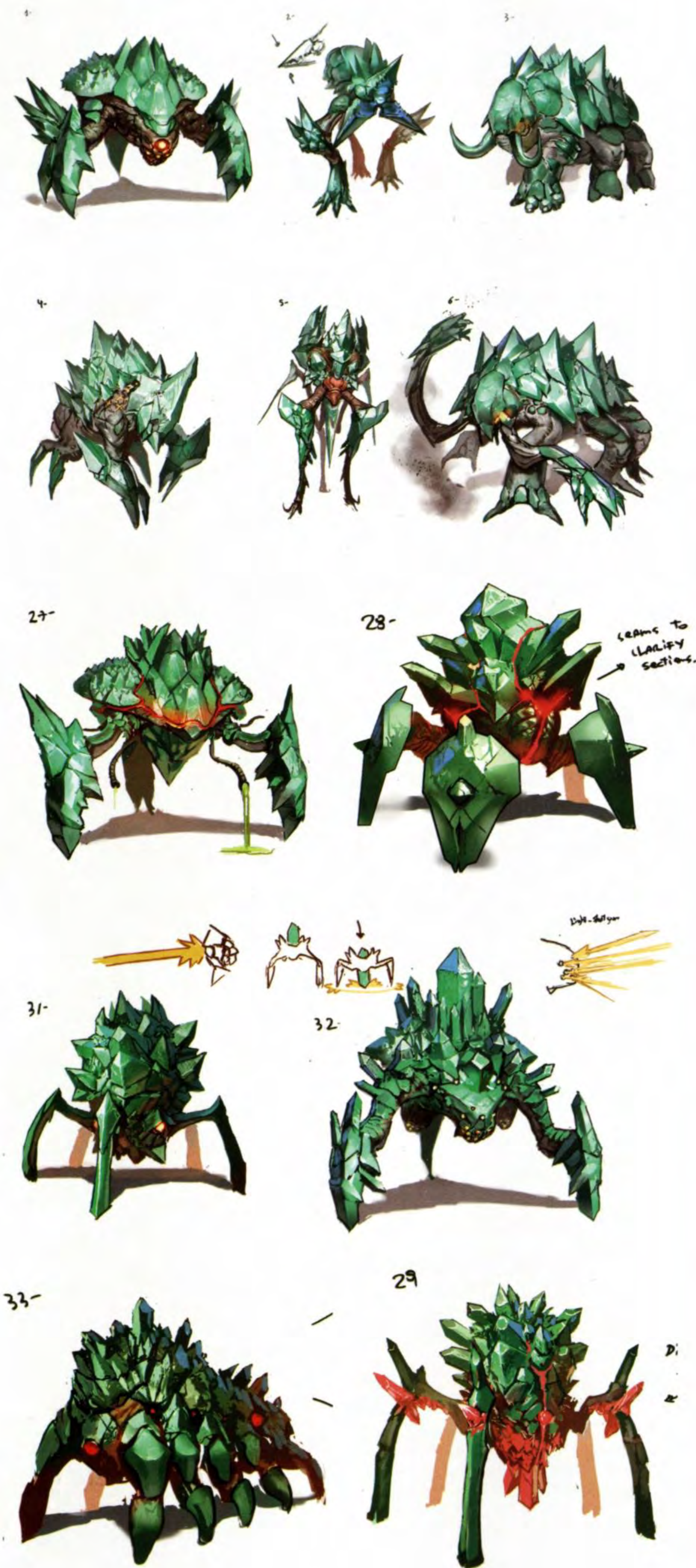




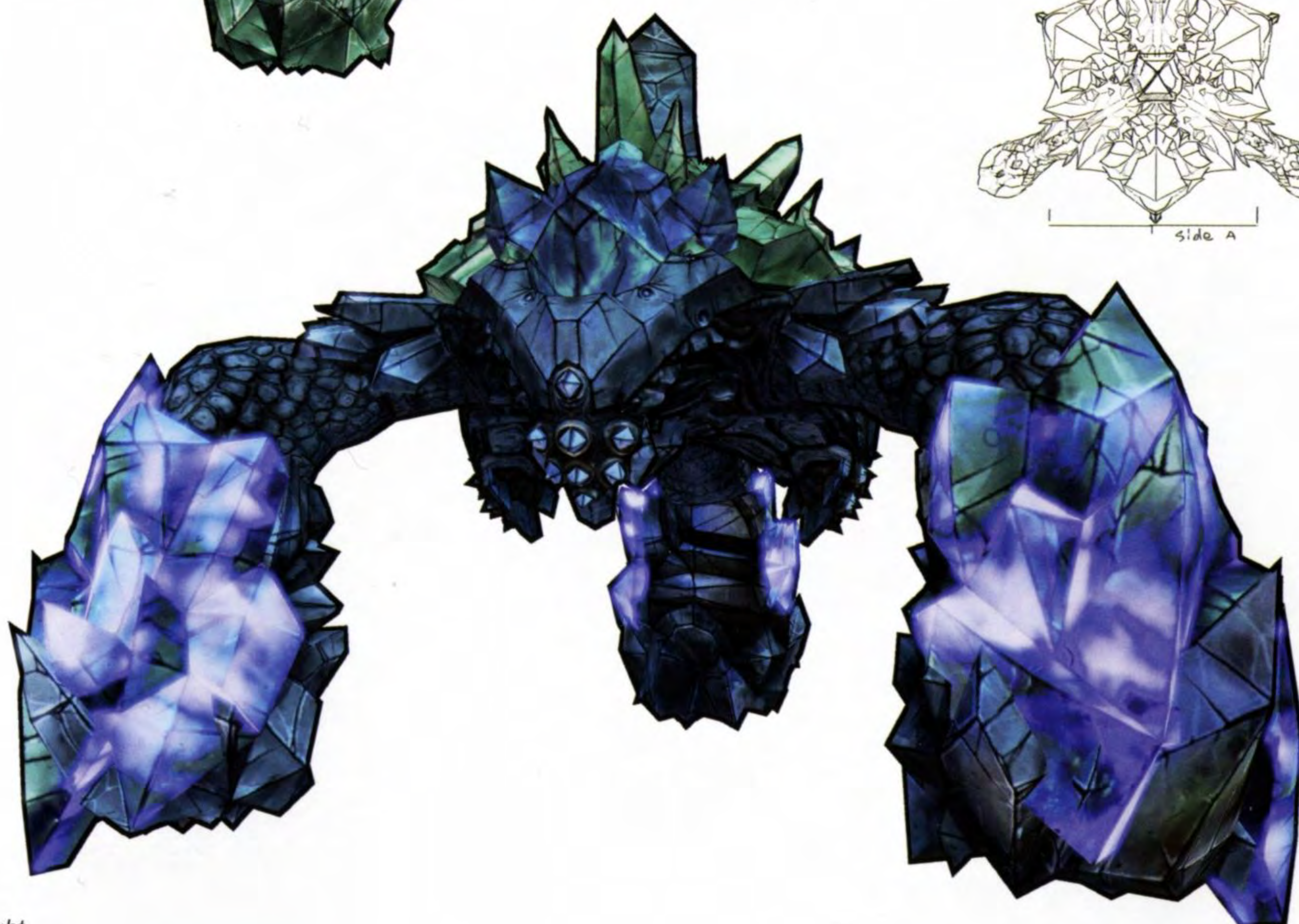
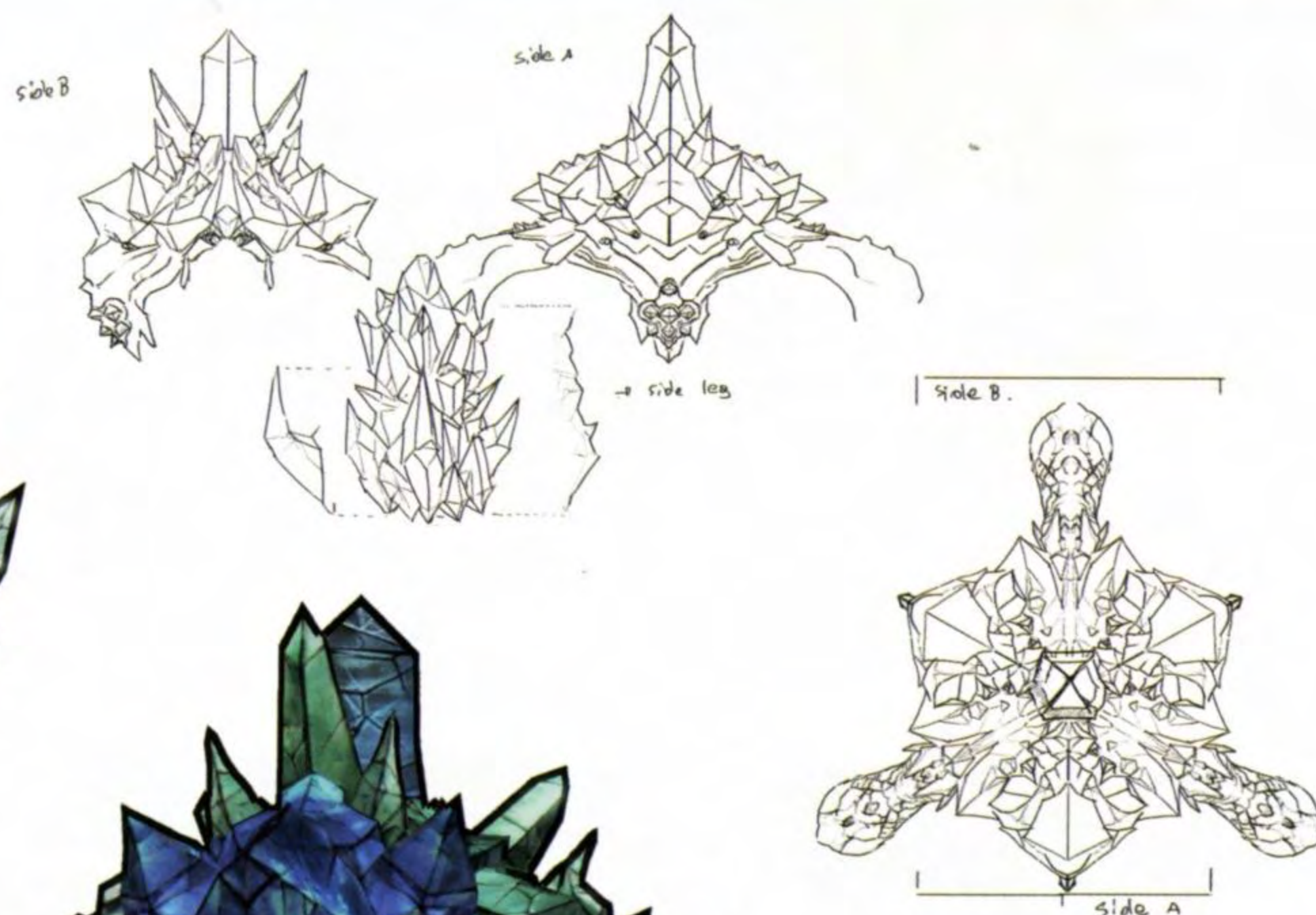
Nomad Concepts [Matias Tapia] Above Top, Above Middle
 Nomad Models [Wes Parker] Above Bottom
 Nomad Models [Wes Parker, Ricky Oh, Ruben Cabrera] Right

CRYSTALISK

For the Crystalisk, the team wanted a creature that looked completely and utterly different from any other creature in the series so far—one that looked more elemental and, for lack of a better term, *rockier* than the softer, squishier, more organic enemies that populate Pandora.

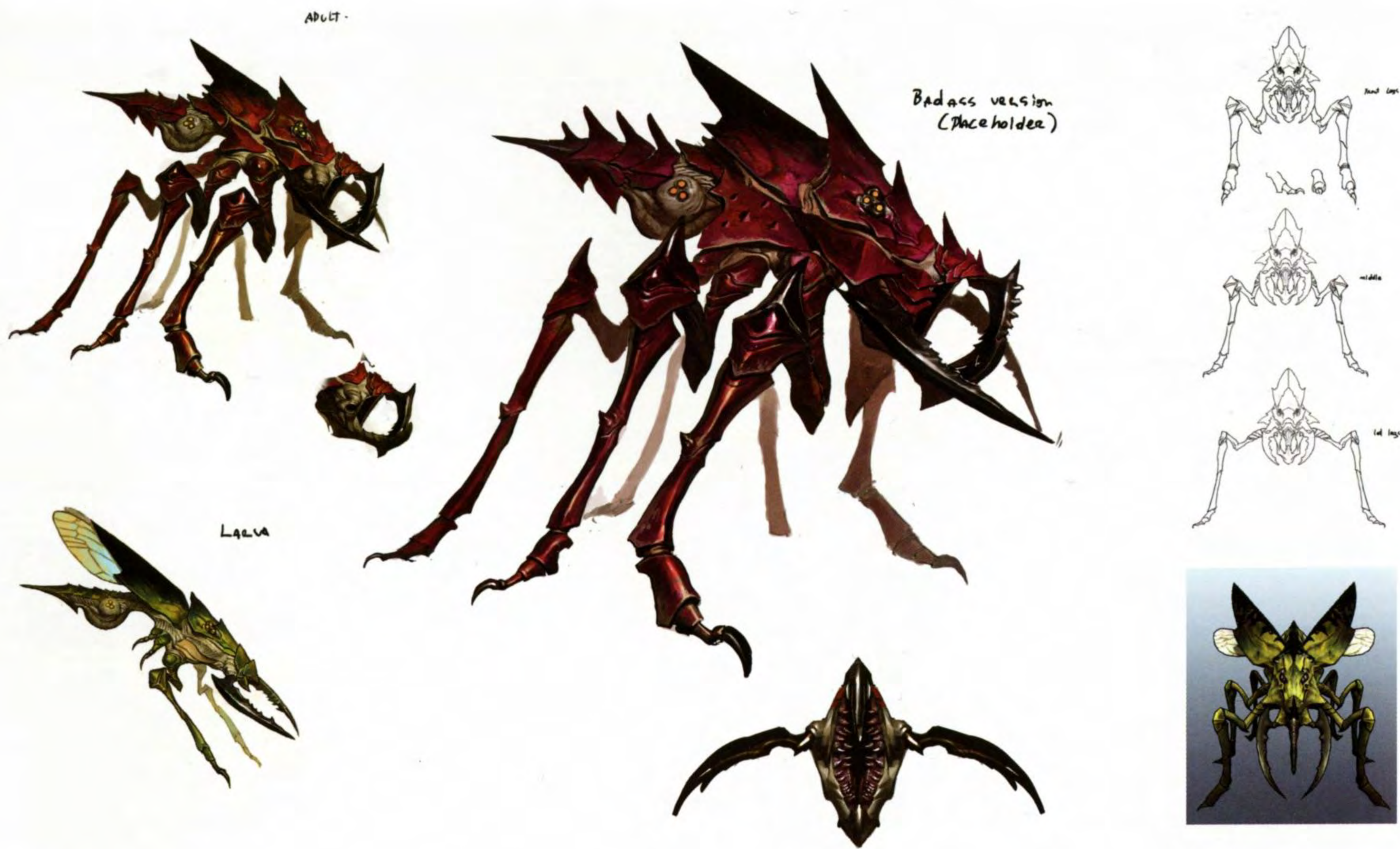


Crystalisk Concepts [Matias Tapia]



Until very, very late in development, Crystalisks were effectively invulnerable to gunfire—you could only kill them by meleeing their crystals off, then shooting the fleshy bits beneath. After seeing people naturally and consistently shoot at the glowing crystals during focus tests, however, the team turned this into a viable means for fighting the creature.

Crystalisk Concepts [Matias Tapia] *Top*
Crystalisk Model [Piranha, Wes Parker] *Right*



VARKID

Early on, the team knew they wanted a creature that would provide challenging and interesting gameplay thanks to a new metamorphosis mechanic. Given this basic idea, it's not hard to see why the Varkid ended up looking like the horrifyingly deadly insect it is.



Varkid Concepts [Matias Tapia] Above
Varkid Cocoon Model [Tris Baybayan] Below





STALKER

Wes Parker describes the Stalker as "Some sort of a mix between a bat, a panther and a Skag; the Stalker was the first bad guy made for *Borderlands 2*. It really is a weirdly proportioned monster, but it worked really well in the game! His arms were my favorite part of the sculpt, joining skin with bone in an interesting way. His texture was also a lot of fun to make too, with so many colors."



Stalker Concepts [Matias Tapia] *Top, Middle*
Stalker Models [Wes Parker] *Above, Right*

THRESHER

"I wasn't sure about the Thresher when I first saw the model," Wes Parker says, "but the second I saw what animation did with him, I was so pumped! Seeing him swim through the ground for the first time was one of the more satisfying moments in development for me."



7-



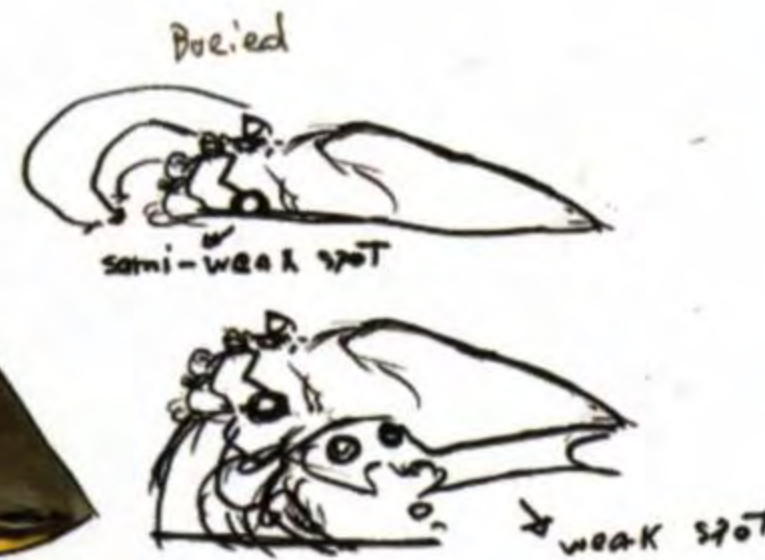
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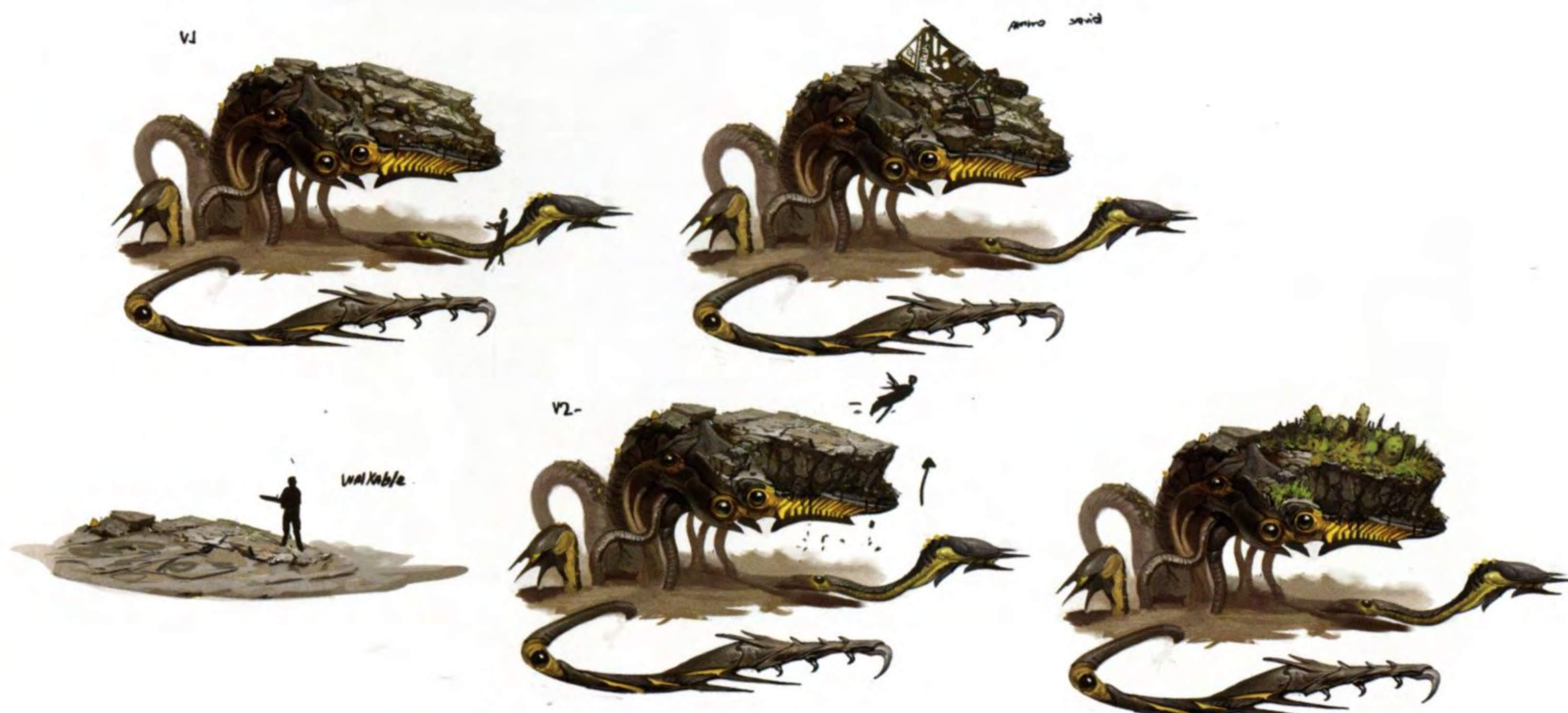


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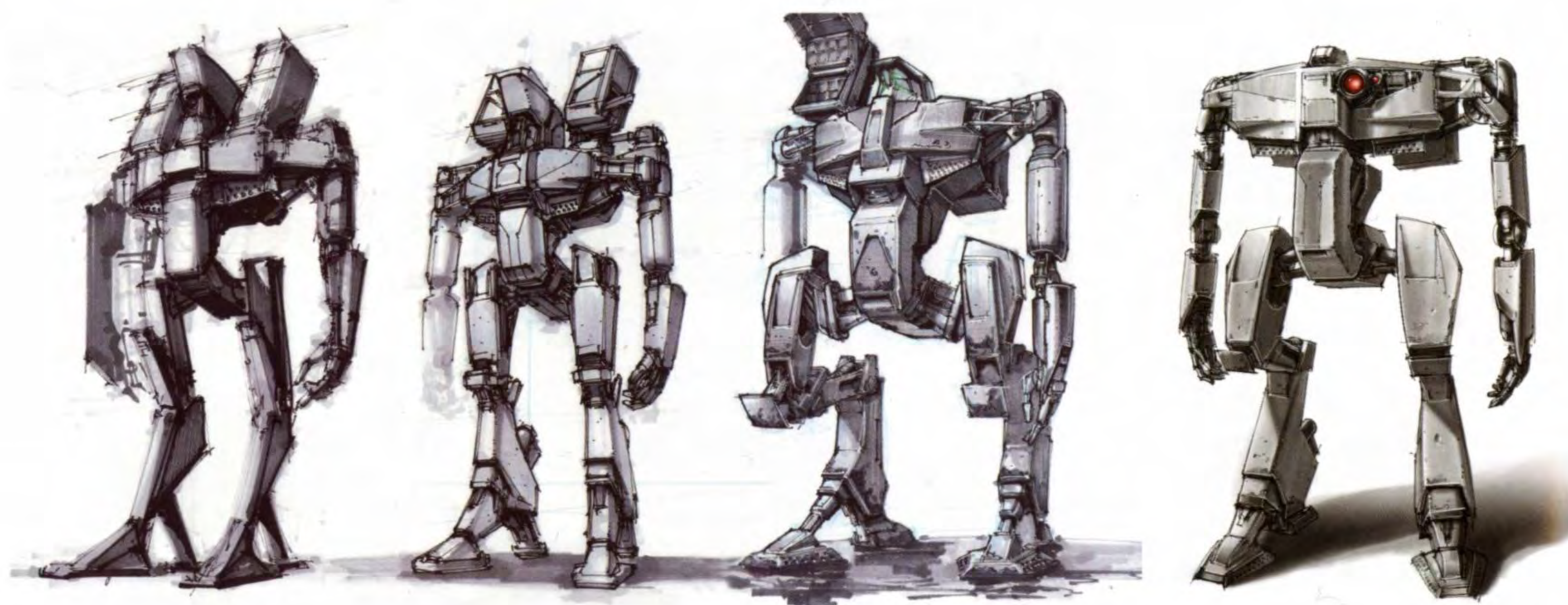
8-





Thresher Concepts [Matias Tapia] Above
 Thresher Model [Wes Parker] Below Left
 Thresher Model [Ruben Cabrera] Below Right





HYPERION LOADER

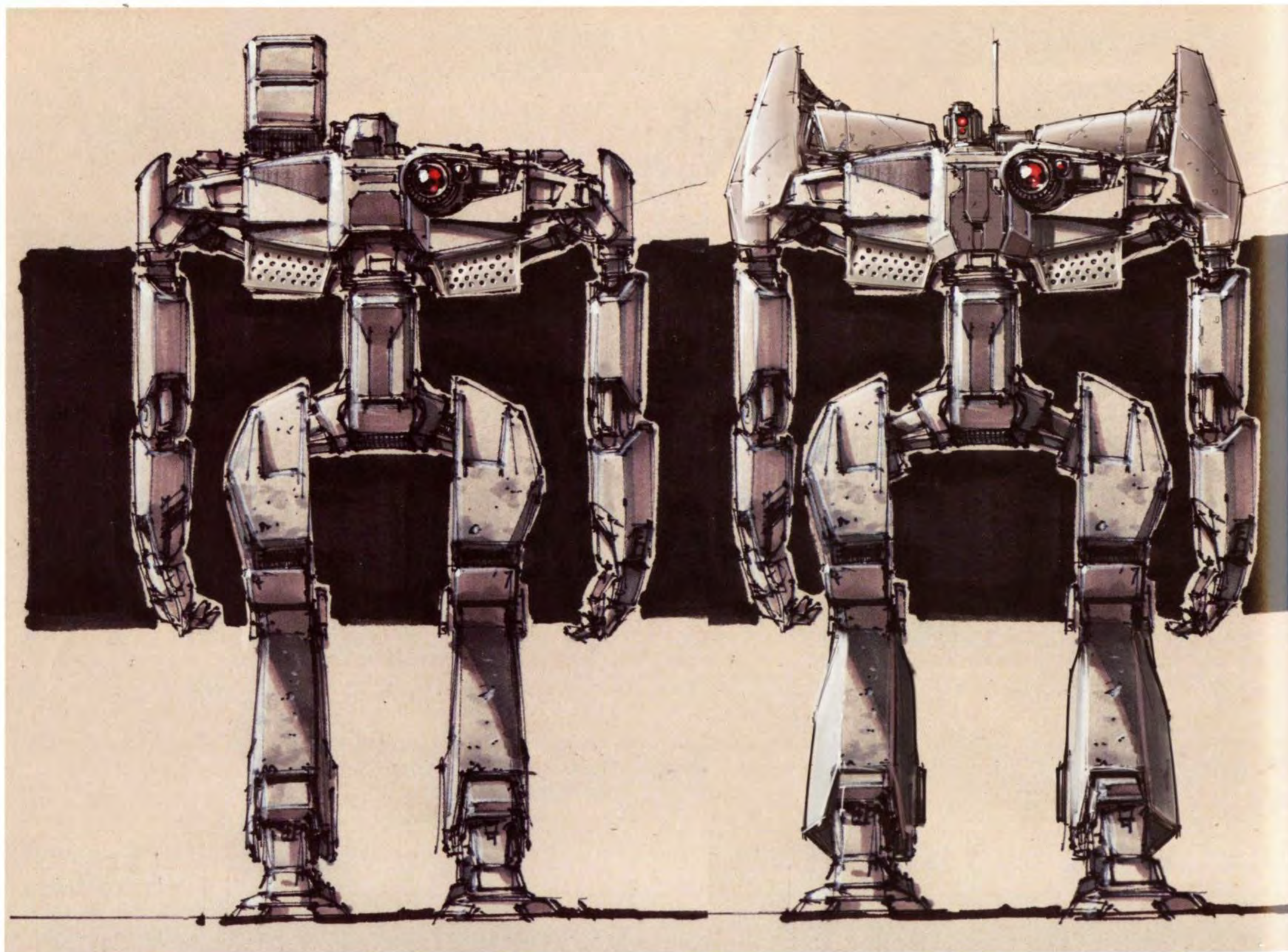
Once the team knew that Handsome Jack and the Hyperion Corporation were to be the main antagonists of *Borderlands 2*, it was time to design some badass Hyperion enemies. Lorin Wood says, "I was asked to come up with something akin to the dumb droids from *Star Wars Episode I*; pawns that would just come in waves against the player."

"I liberally lifted inspiration from my adolescence. You should be able to see *Robocop*, *Robotech*, *The Terminator* and *Transformers* influences. I love our mechanical brethren. The art director suggested further connecting these automatons to Hyperion; we needed the ubiquitous 'eyeball.' We decided to remove the head module and shove the primary sensor in the chest."

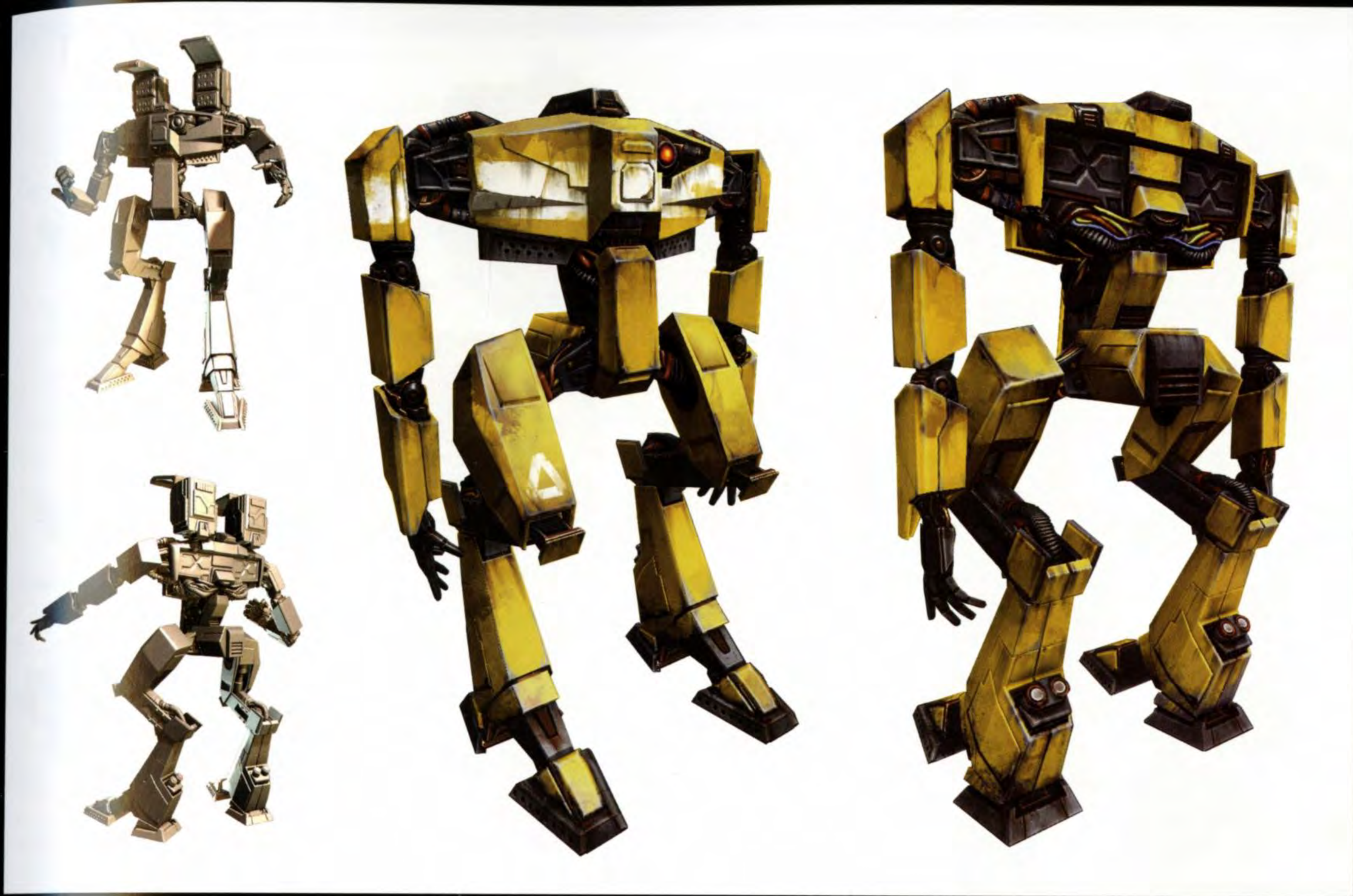
Wood continues, "As these guys would be in virtually every environment under every condition, I had to come up with some modular pieces that could be used to create entirely new variations of the base loader model. Most of them were initially inspired by construction site equipment."



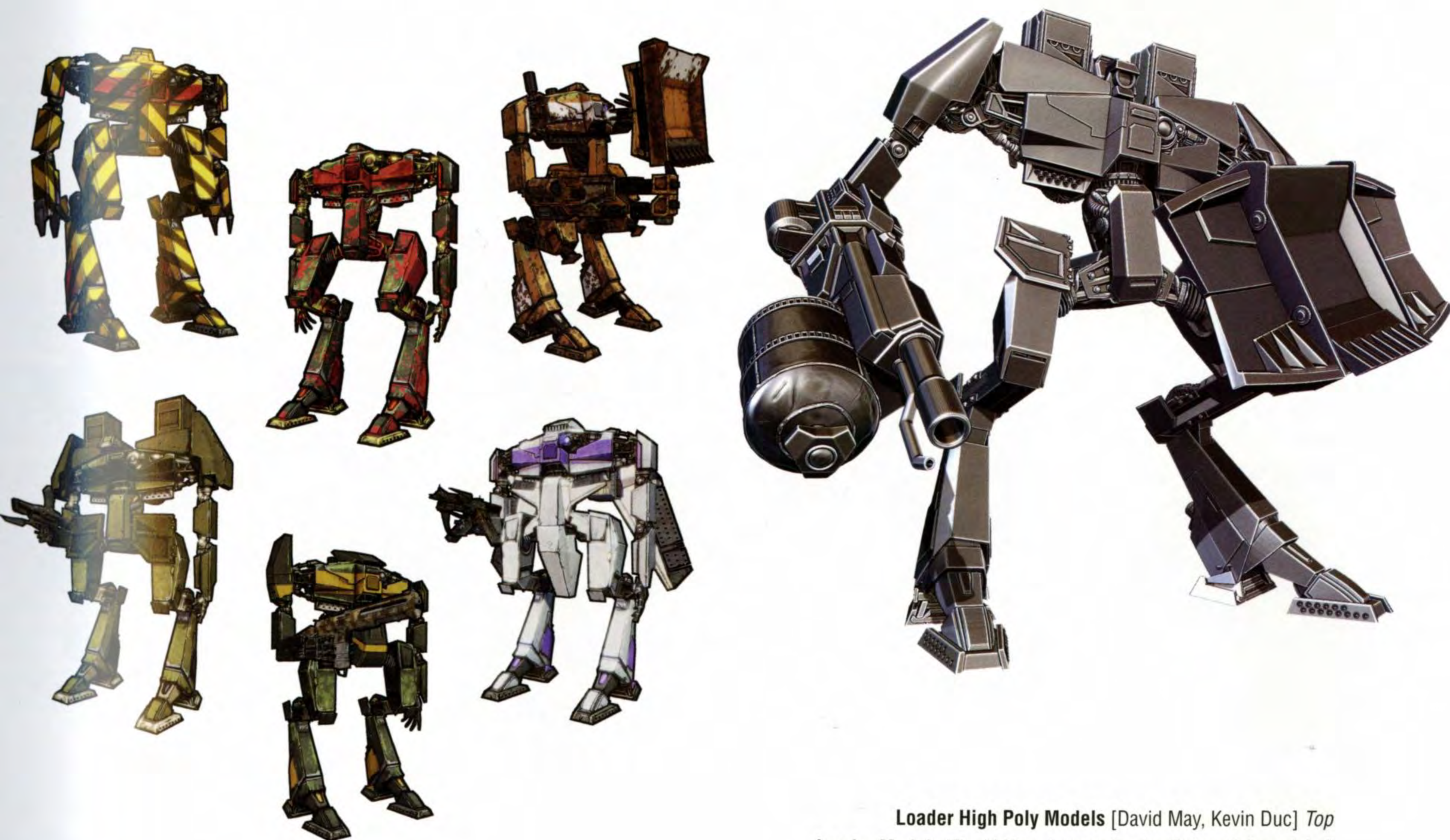
"The 'badass' version had to visually read as a different beast altogether, so I exaggerated the shoulder pieces which added increased height and girth to its torso to create a menacing profile."



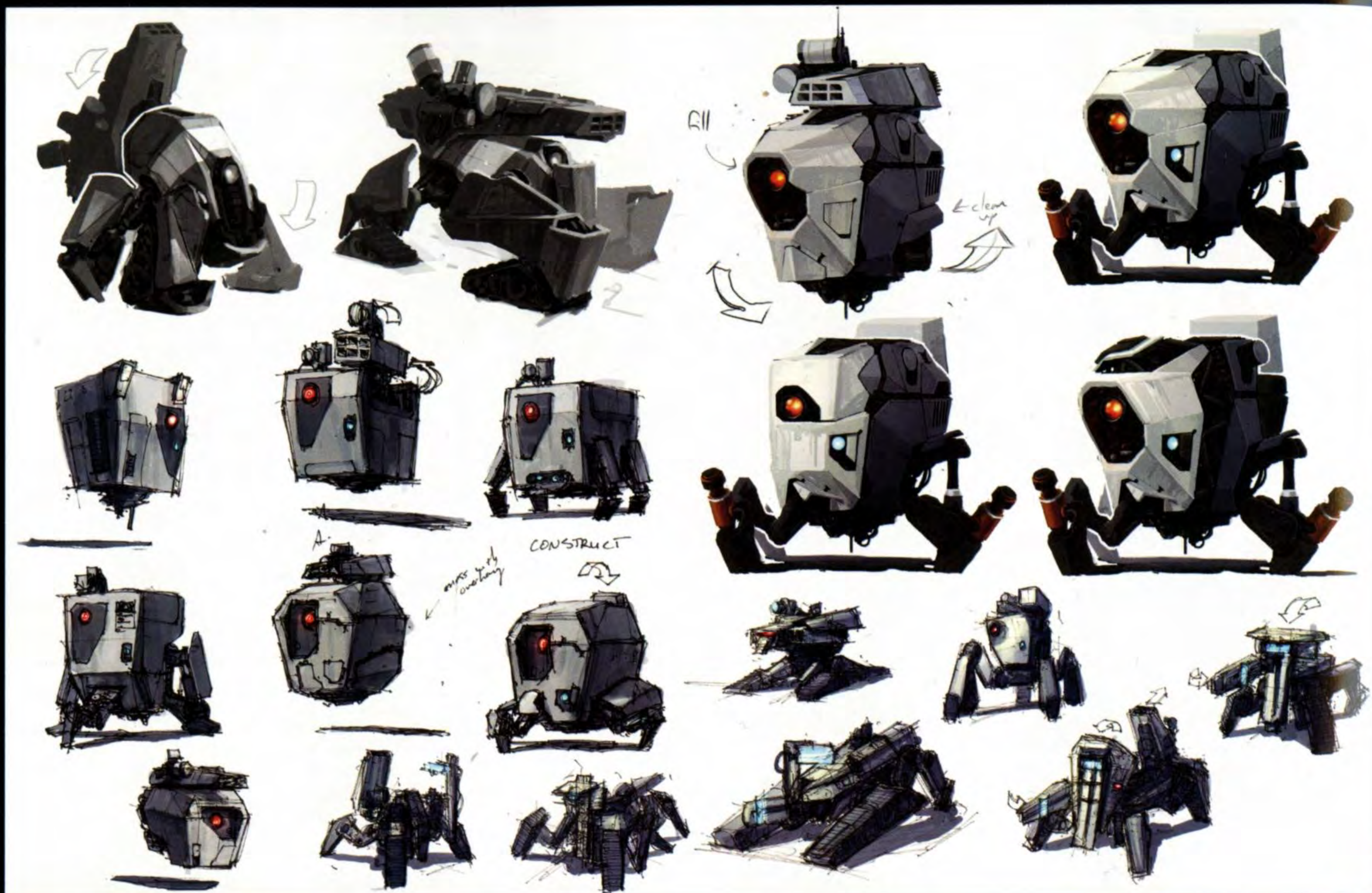
Loader Concepts [Lorin Wood]



"For the XP-Loader we first created a base mesh for the mech, then added a set of attachments for the designer, Ruben Cabrera, to work his magic," says David May. "The extra pieces allowed Ruben to design a wide array of enemies that both look and behave very differently."

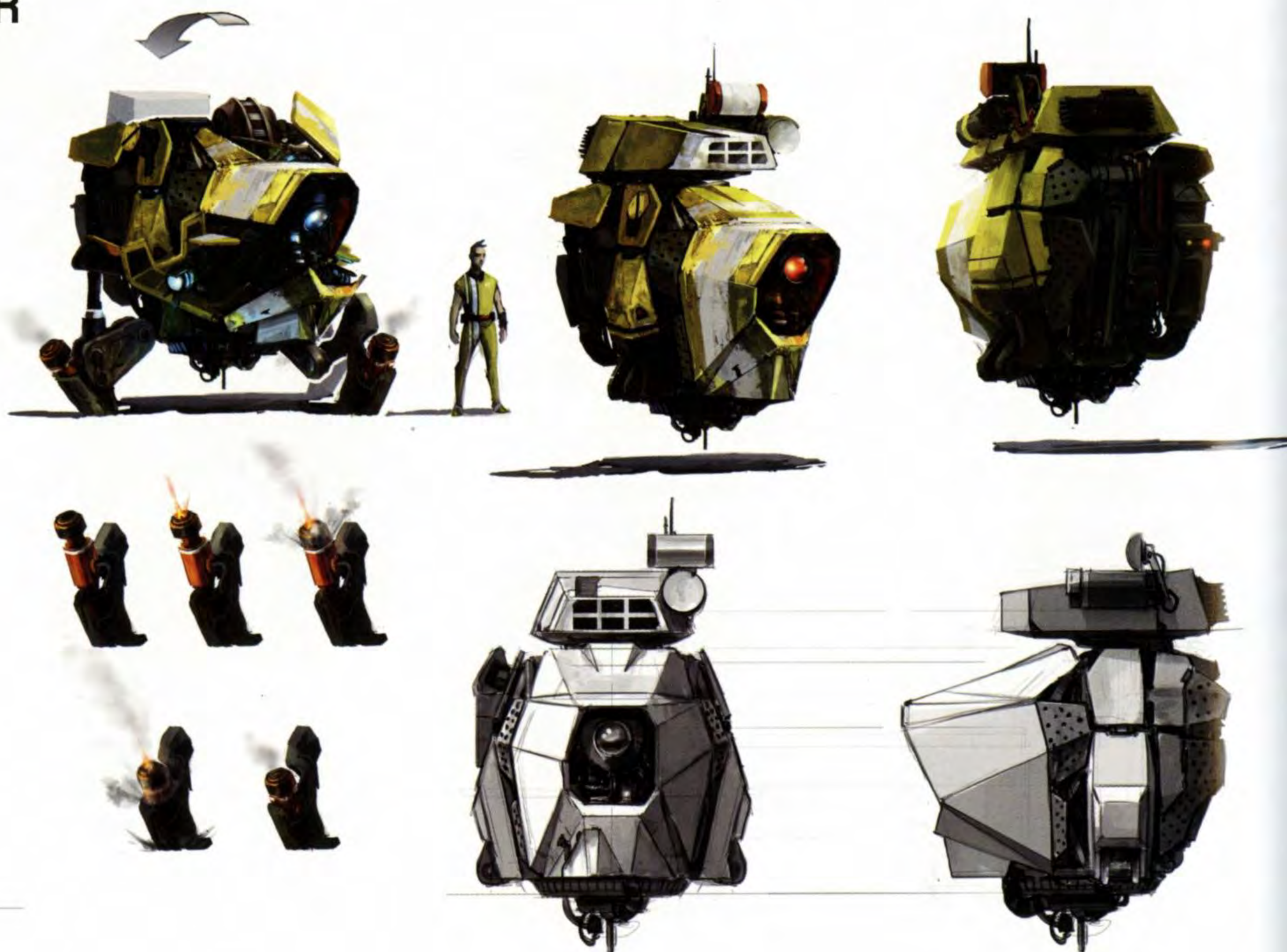


Loader High Poly Models [David May, Kevin Duc] *Top*
Loader Models [David May, Jeremy Cooke, Ruben Cabrera] *Left*
Loader Model [David May] *Above*



HYPERION CONSTRUCTOR

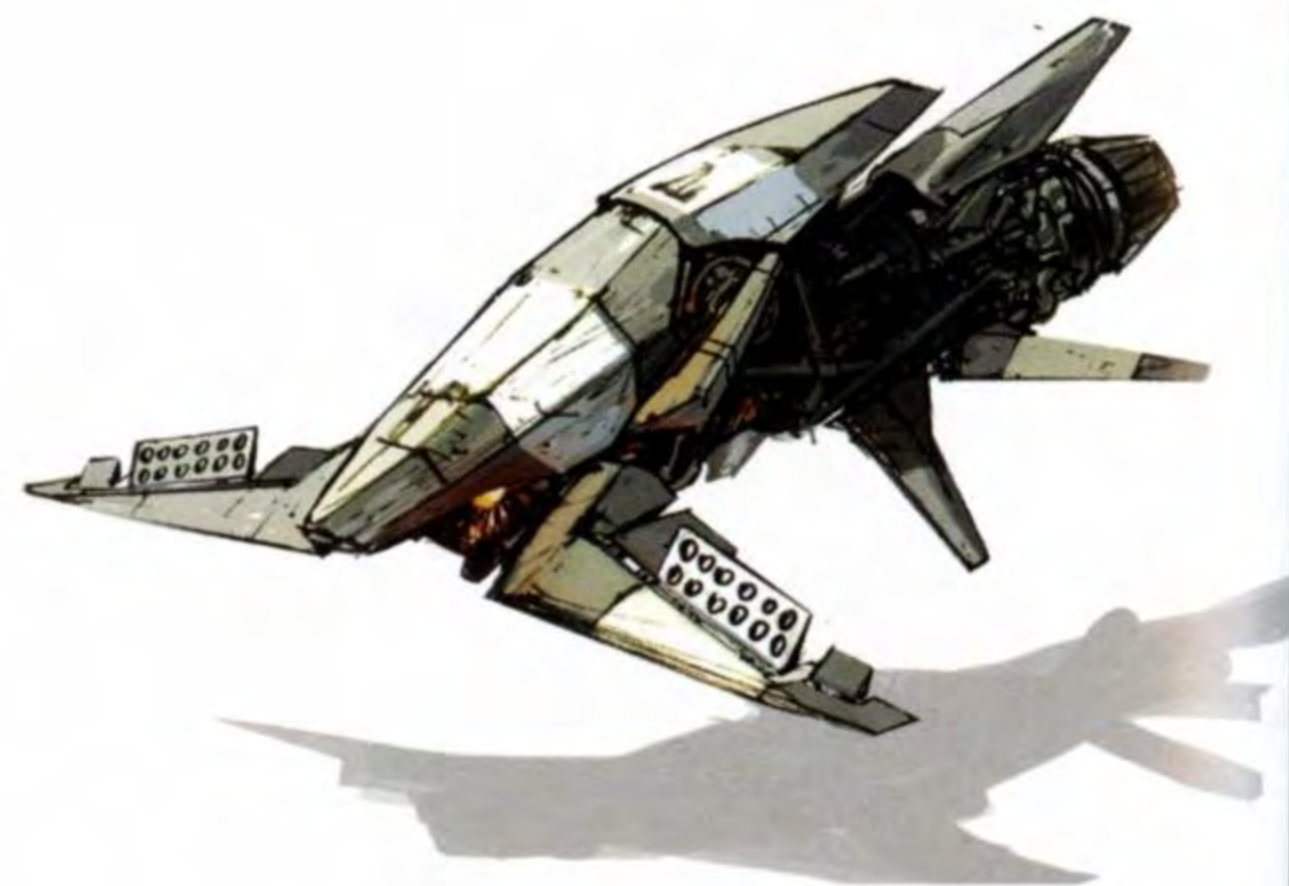
The Hyperion Constructor was always an integral part of the Hyperion "circle of life," as the team called it. The Constructor would build more bots, which would protect the Constructor, which would then create more bots. Given how dangerous a foe the Constructor is, then, it's no surprise that it has an absolutely massive weak spot in the center of his face, so players can quickly take it down from a distance.





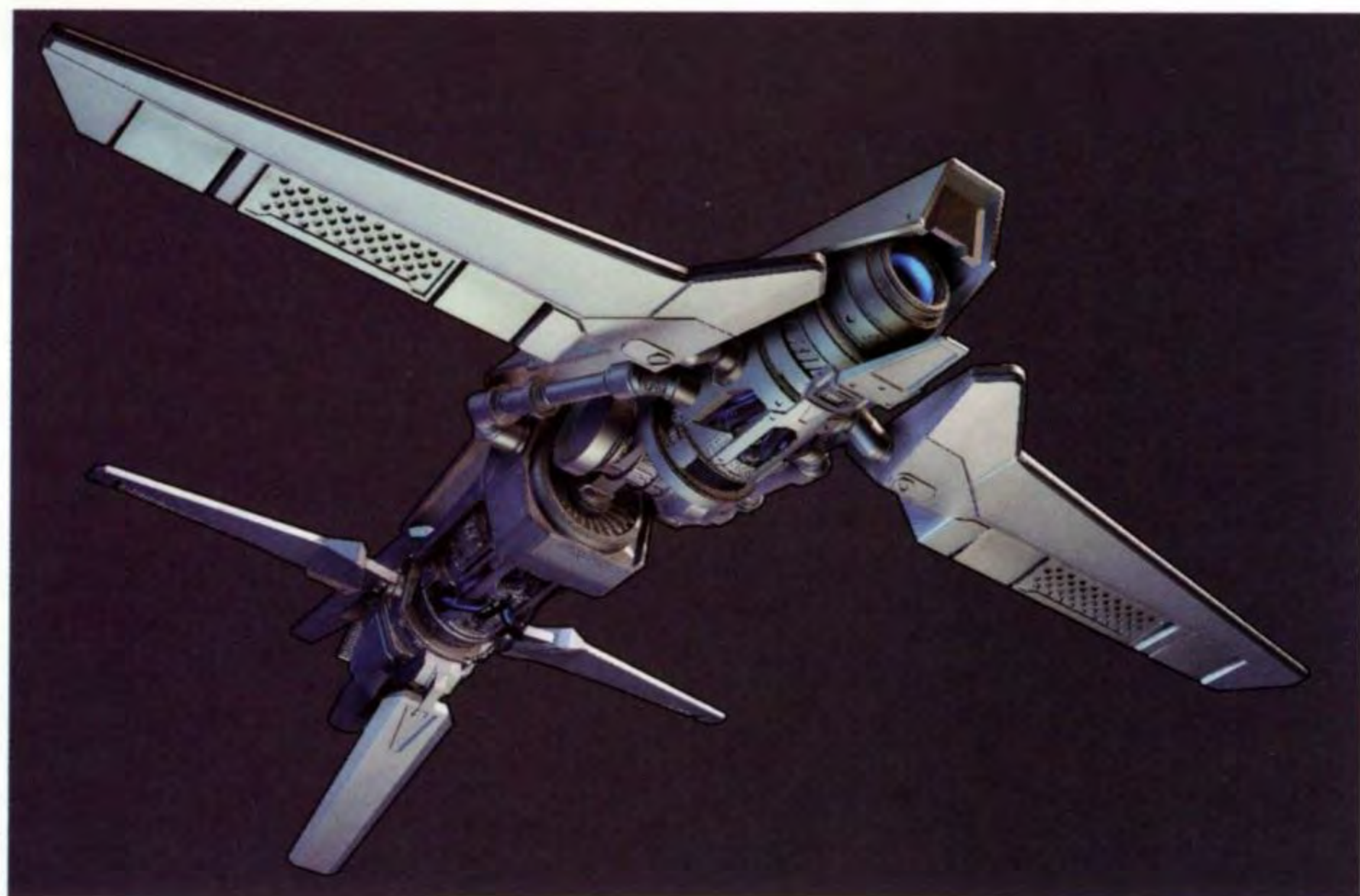
Robert Santiago says, "The Constructor bot was made from an awesome concept design by Kevin Duc. This is the first enemy character I made for any game, so it was fun to make, animate, and texture."

Constructor Bot Concepts [Kevin Duc, Rob Santiago] *Top*
Constructor Bot Models and DIF [Rob Santiago] *Above*

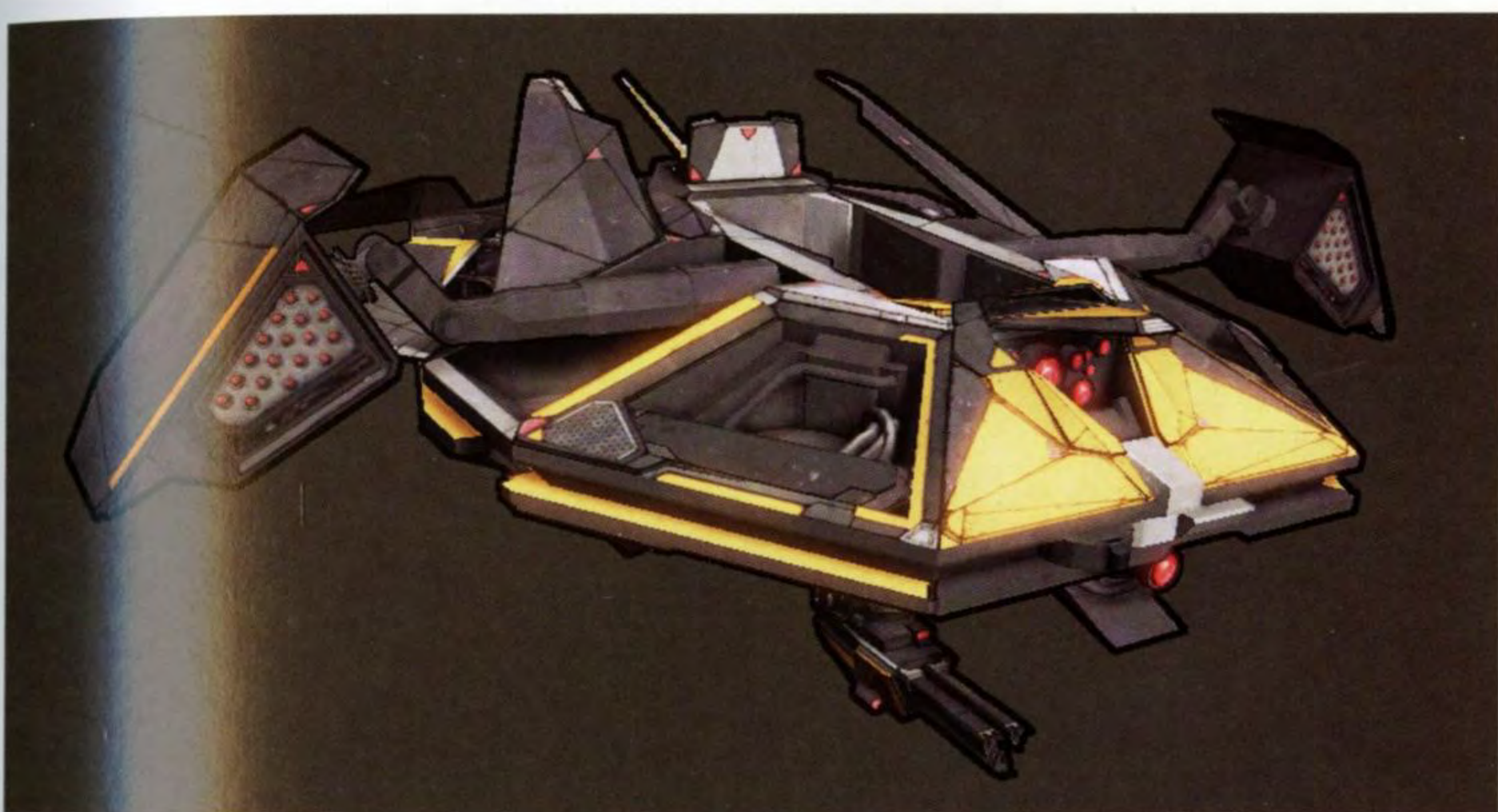
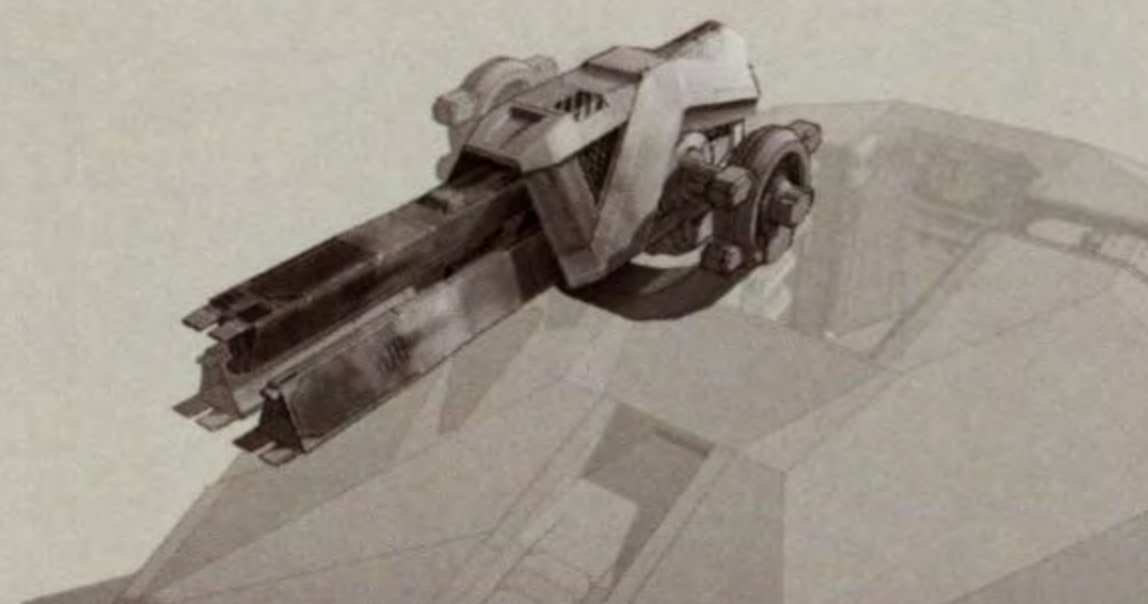
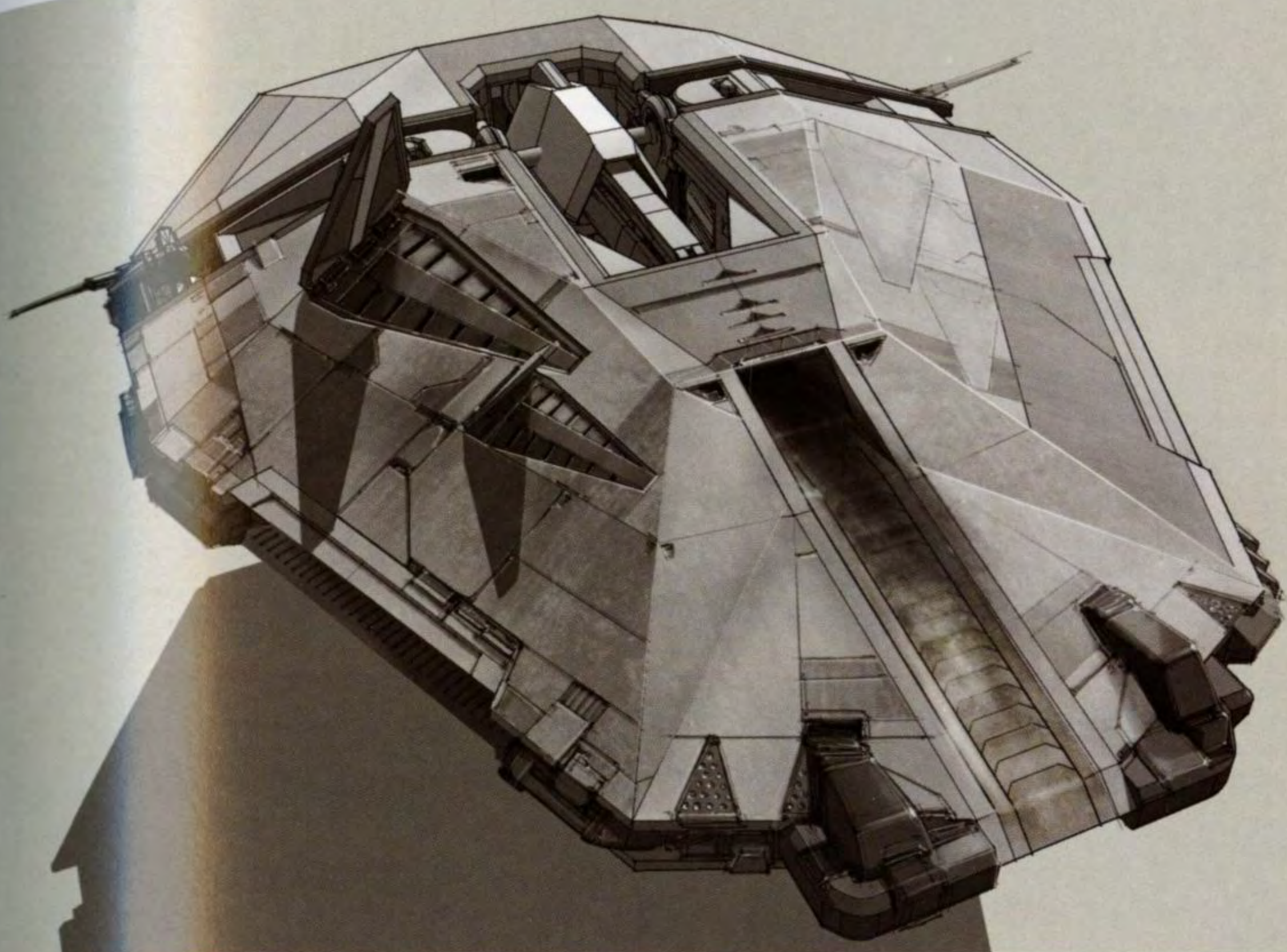


HYPERION SURVEYOR

As the Hyperion Surveyor is more of a support enemy than a significant threat in and of itself, its design needed to reflect that. Its part in the Hyperion "circle of life" is as simple as it is potentially infuriating: if you leave a Surveyor alive for too long, it will repair other robots and even re-grow their limbs.



Surveyor Concepts [Kevin Duc] *Top*
Surveyor Models [Brent Hollon] *Above, Right*



BNK-3R

"A good rule in design is to reference nature," says Wood. "The BNK-3R is a horseshoe crab. Like most of the tech in later areas of the game, you are facing the 'black projects' of Hyperion: their most advanced technology."

"The Hyperion line of robotics began with Claptrap, then evolved to the Loaders and culminates with this boss-bot, as seen with the Hyperion eye sensor," Wood says.

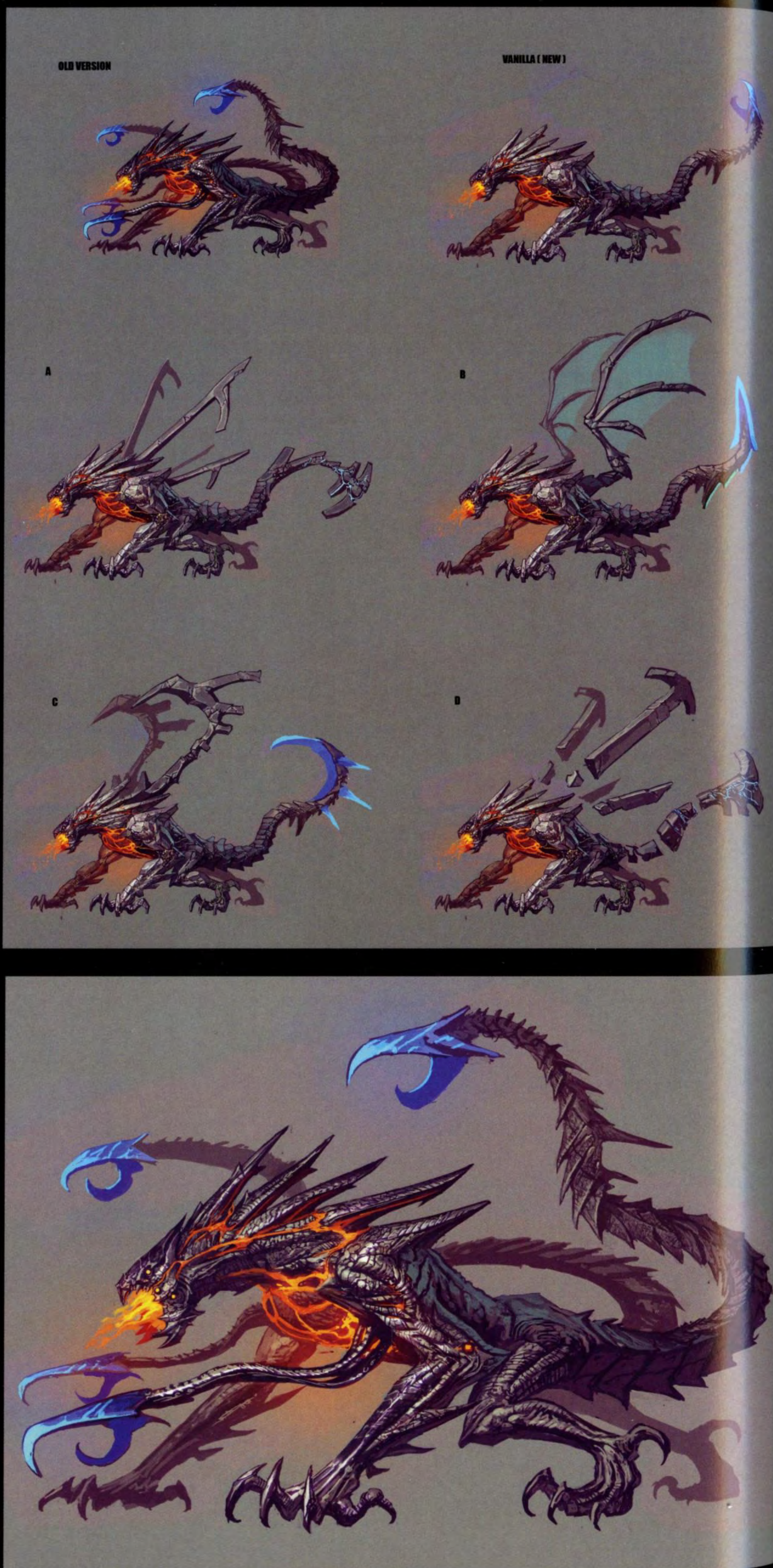


BNK-3R Concepts [Lorin Wood] *Top*
 BNK-3R Model [Brent Hollon] *Middle*
 BNK-3R Model [Brent Hollon, Ashley Rochelle] *Bottom*

THE WARRIOR

"A Skag and a Dragon had a baby," Adam May simply states of the endboss. "The Warrior was born."

Warrior Concepts [Matias Tapia]





Warrior Concepts [Matias Tapia]
Warrior Models [Adam May]



ITEMS & PROPS

While the guns, enemies and environments are out hogging all the glory, it's the props of *Borderlands 2*—the little chests, objects, and items—that truly make Pandora feel like a real, lived-in place. The glint off a Bullymong pile. The diodes on an electrical box. The “no fapping” sign on a dook hut.

In this chapter, you'll see the incredible amount of work that went into the bits and bobs that make up the bandit hovels, fascist cities, and slag-filled science labs. And you'll be like, “wow, I didn't know THAT much effort went into making a single loot chest” and Lorin Wood will personally come to your house and be like “WELL NOW YOU DO. GIVE ME A HUG.”

And then he'll hug you.

And it'll be weird.

Illustration

[Scott Kester] Right





LOOTABLES

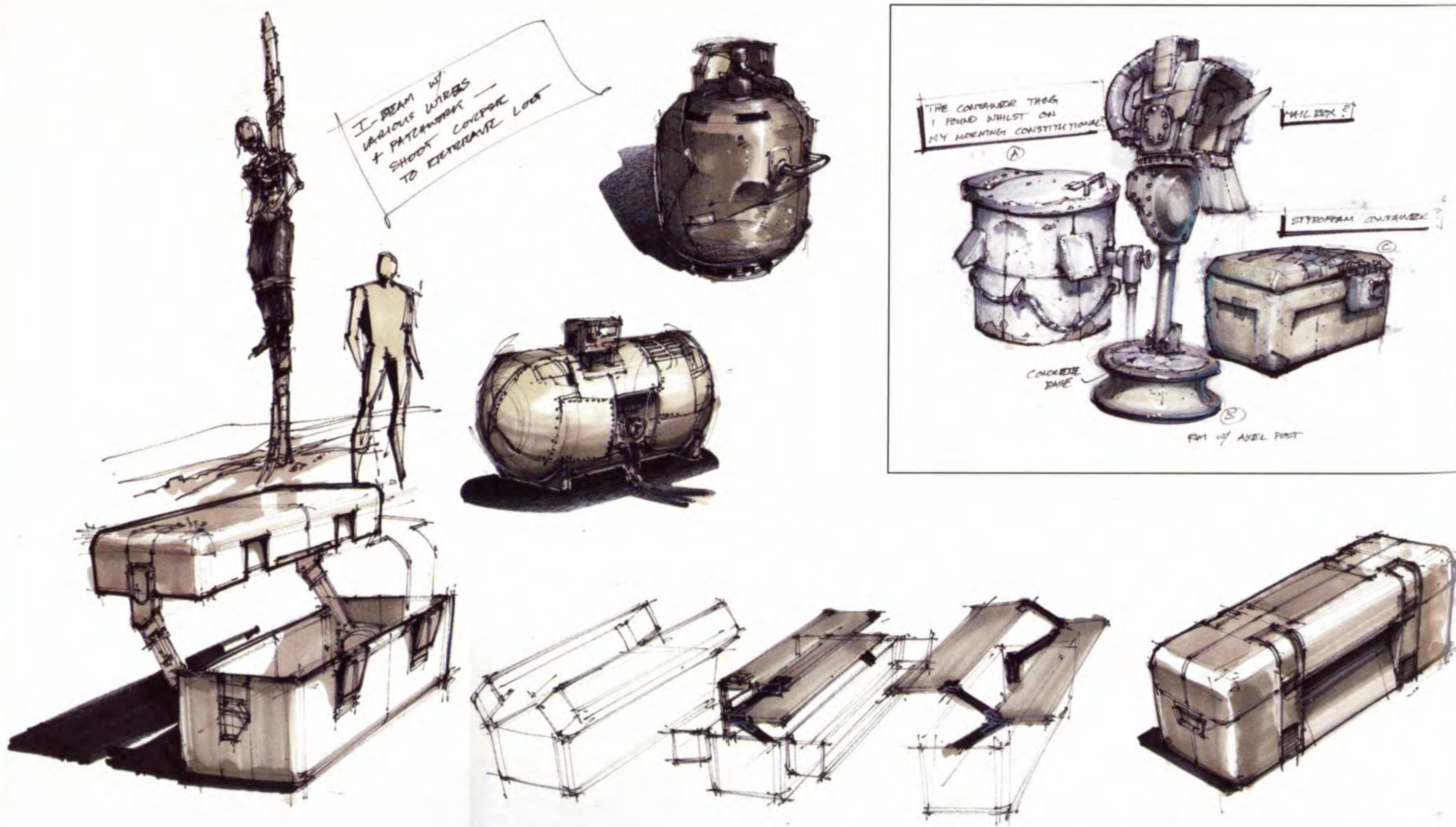
WEAPONS LOCKERS

With a new *Borderlands* adventure comes, invariably, a new set of chests and lockers and other goodies to open up. "I developed a new series of lockers based on the design language of a few of the primary manufacturers," Wood says. "They would be spread through the world in every environment, so rather than a box, we elected for some real diversity (i.e., the impaled corpse).

"The Bandit lockers were especially fun because their 'style' is to use found objects and augment them like crazy; everything from the aforementioned corpse, to an outhouse. There is also a car trunk with spring-loaded robotic arms that hands you the weapons. One idea that cracked us up was the propane tank. The bandits were so stupid that they put loot/weapons in this thing without any idea of how to extract them (how did they get them in there in the first place?). So, the only option is to shoot and explode them, hopefully not taking damage yourself."

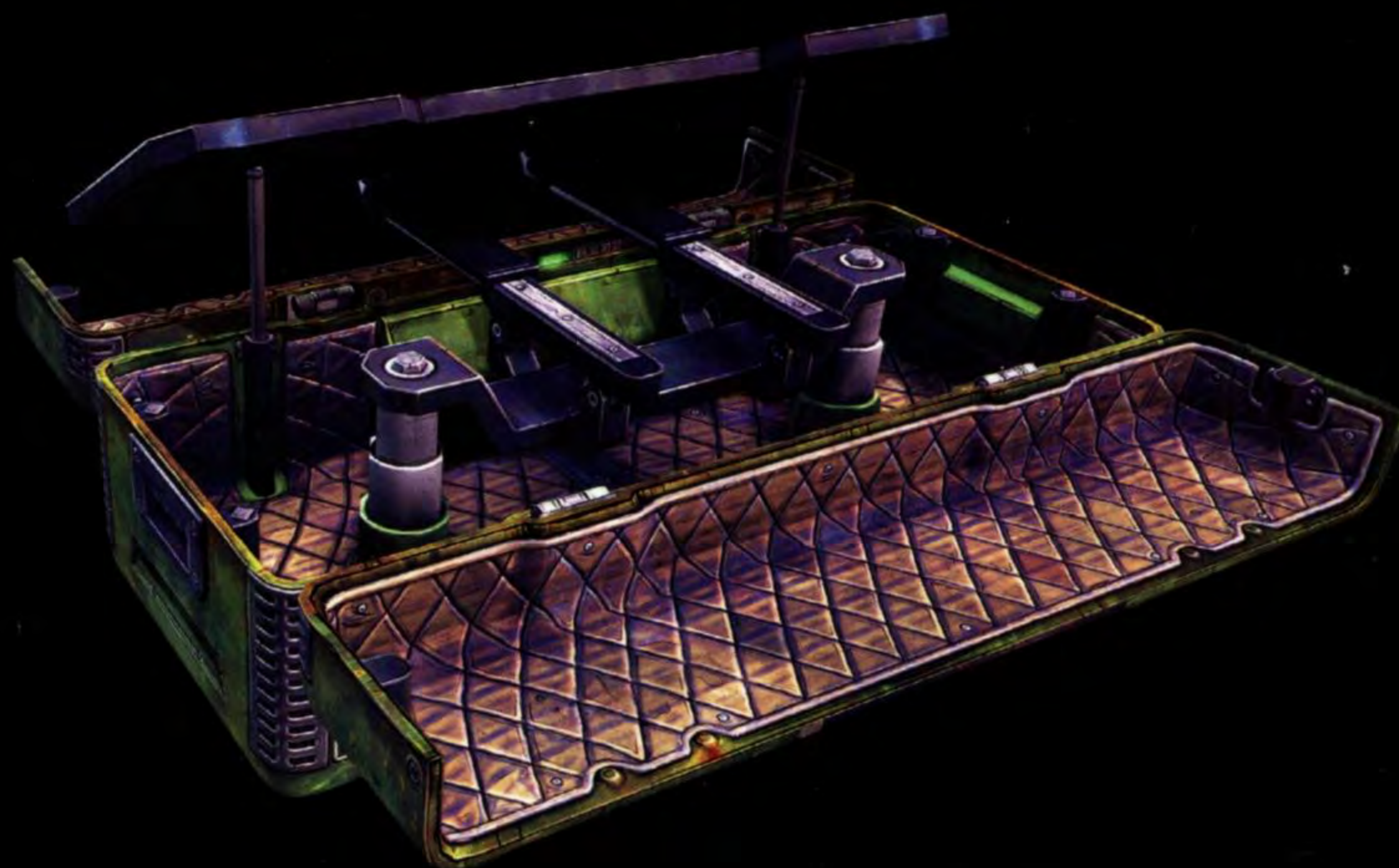


Lootables Models [Evan Gill, Sloan Hood, Jacob Christopher, Ricky Oh, Jett Sarrett] *Above*
Weapons Lockers Concepts [Lorin Wood] *Below*



"This weapon crate... I love this thing," says Jimmy Barnett. "Lorin Wood did the original concept which was awesome. The great part about working with Lorin is that he gives you a lot of freedom. He loves to iterate and bounce ideas back and forth and I think that is key to the creative process. Because of that freedom, this is probably my absolute favorite asset from the whole project—especially the texture! I think I was finally starting to find my rhythm within the *Borderlands* style. Also, this is the one asset in game that I can claim that I animated as well!"

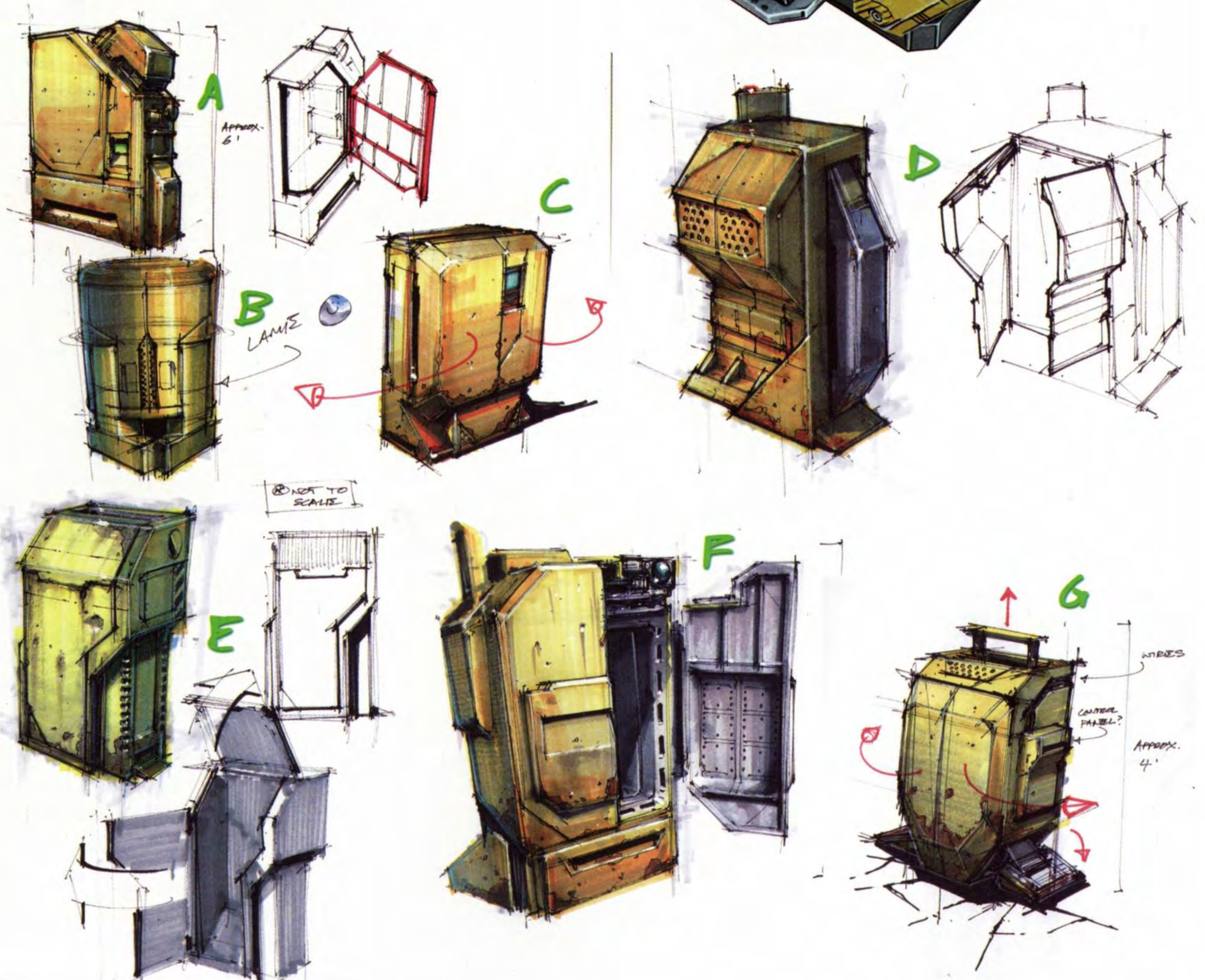
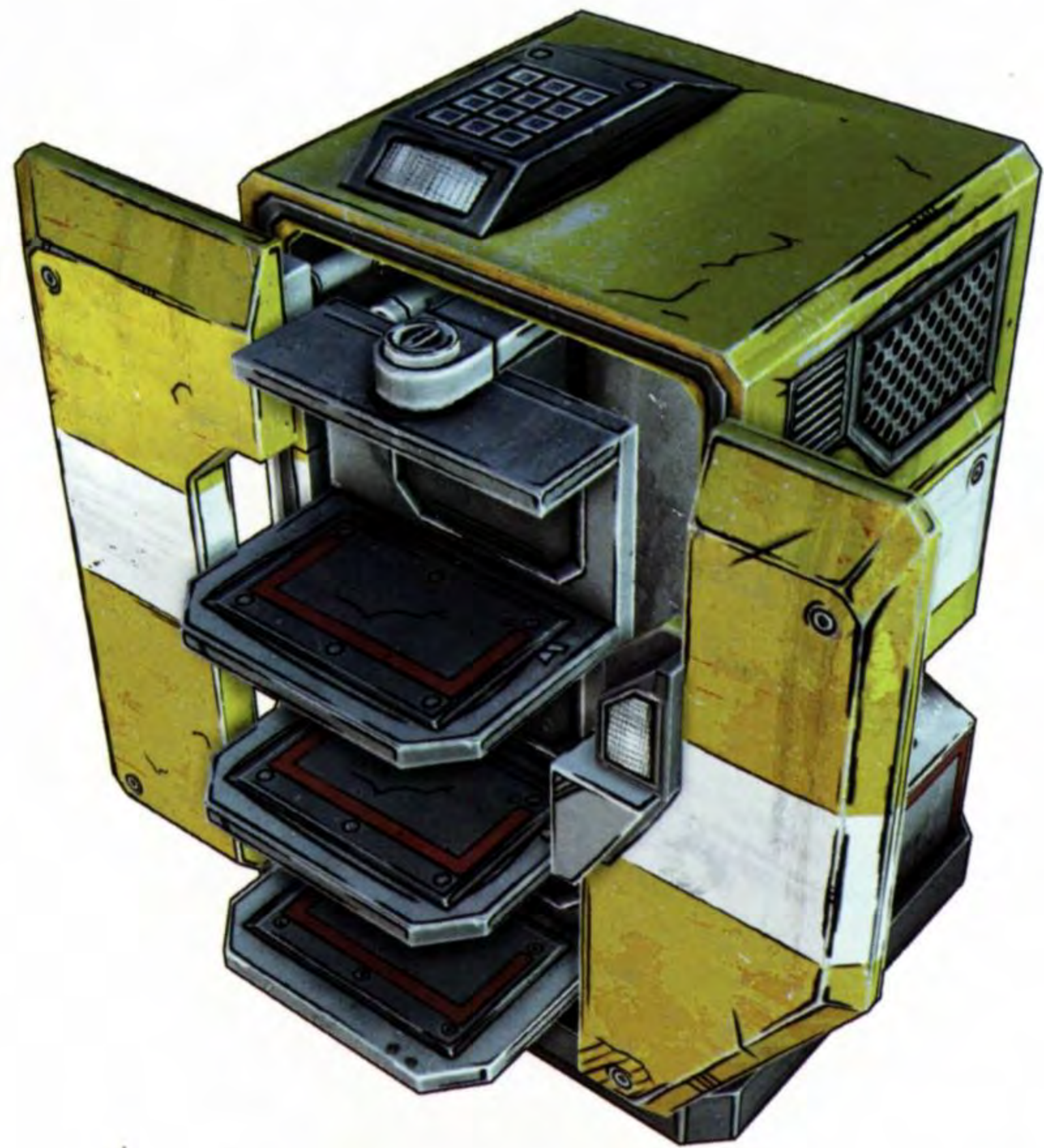
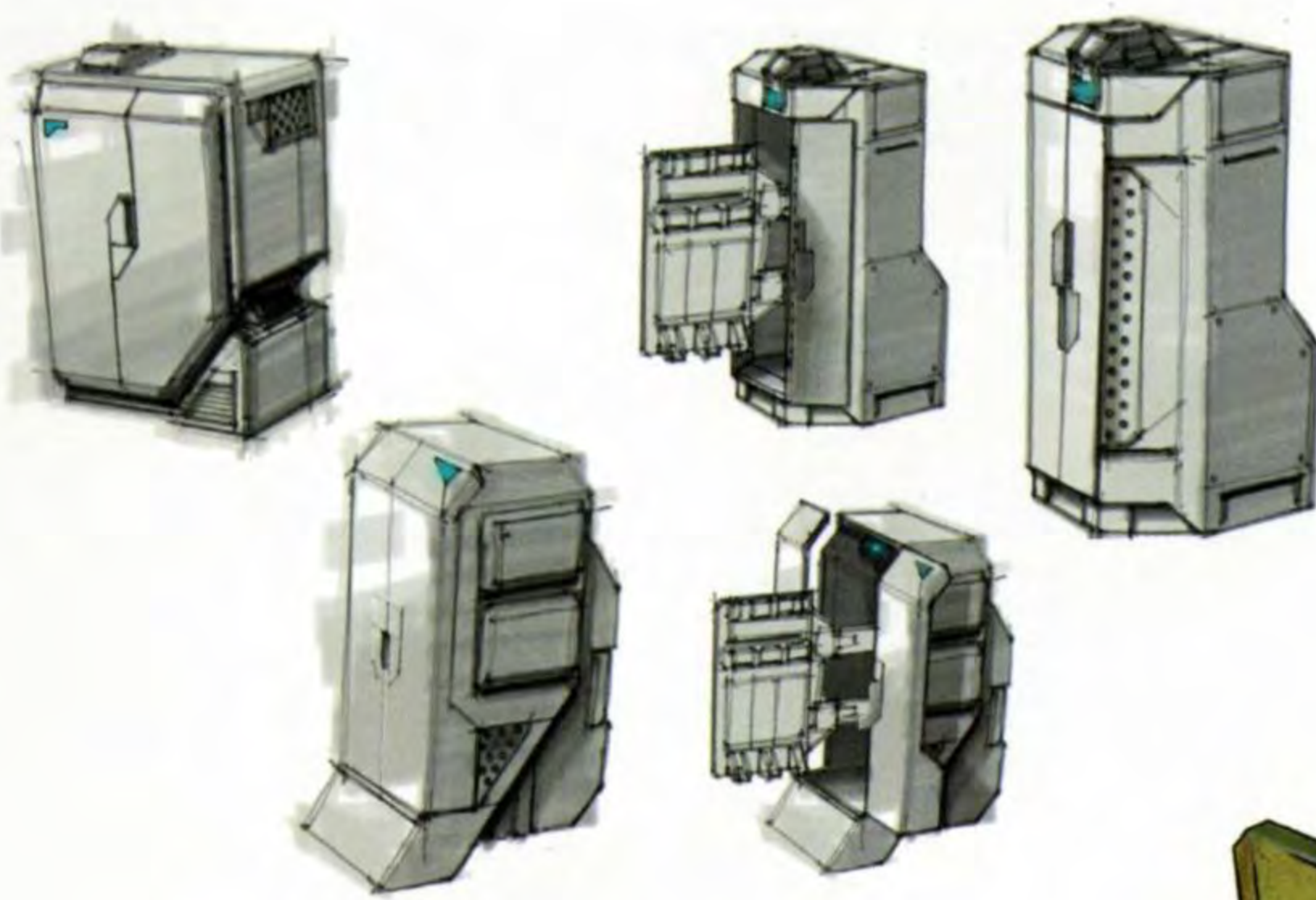
Robert Santiago says, "One of the things I loved about *Borderlands* was those amazing loot chests, so making one for *BL2* was awesome."



DAHL Weapon Crate Models [Jimmy Barnett] *Top*
Red Loot Chest DIF and Models [Robert Santiago] *Above and Right*

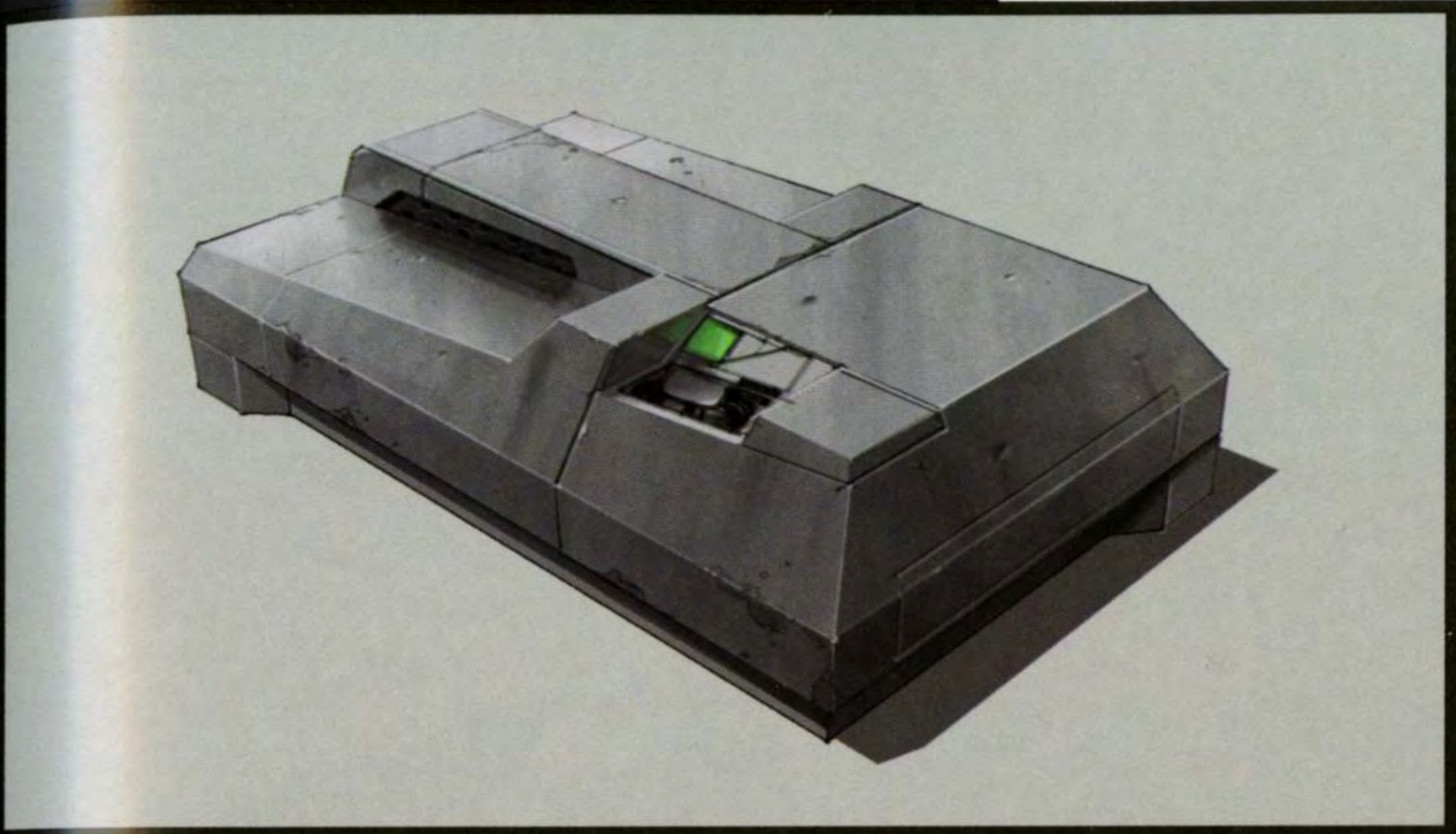
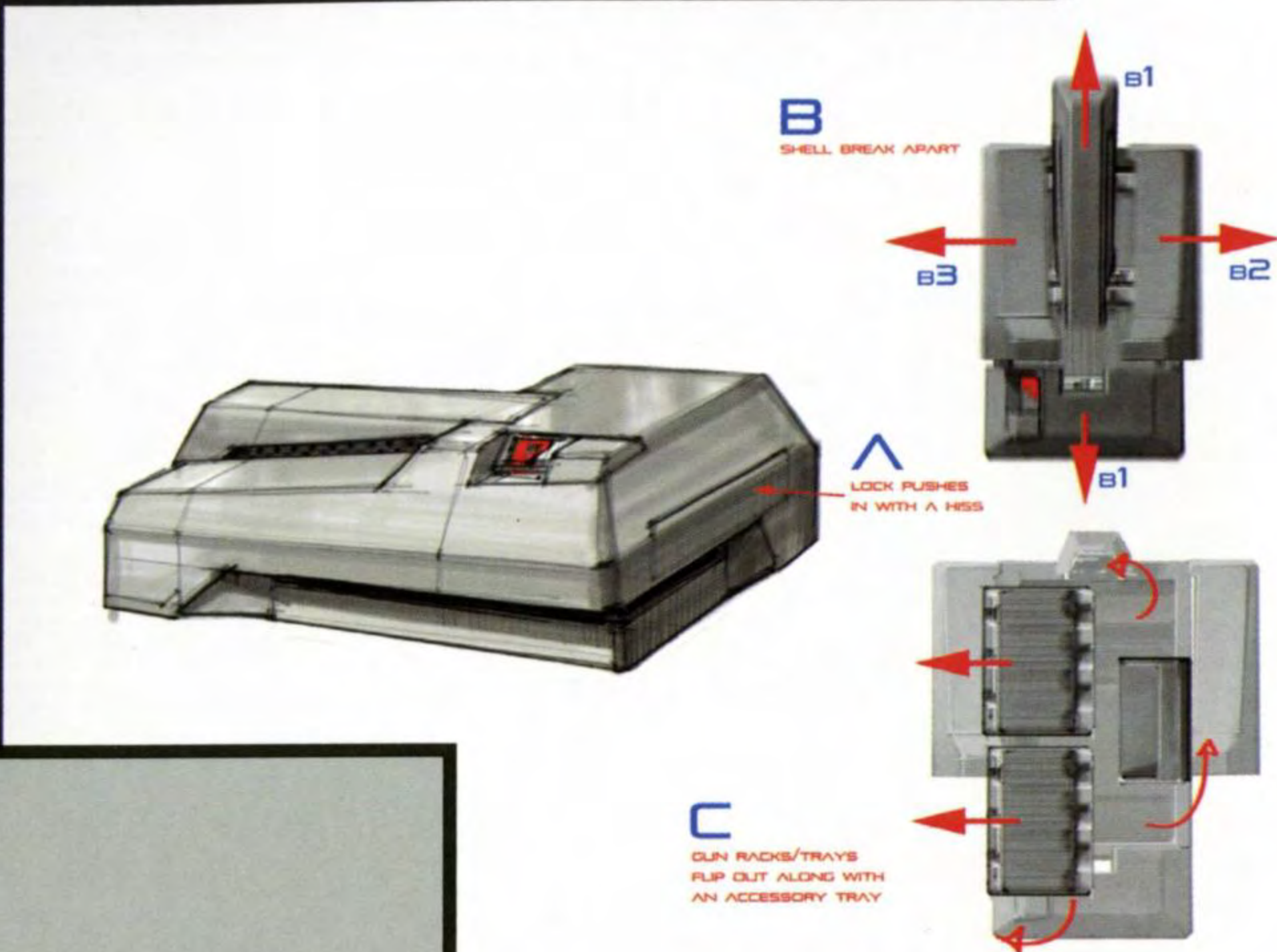
"I like how loot chests dedicate most of their space to mechanical shelves rather than the loot itself," says Jacob Christopher. "Think of all the loot that people are missing out on."

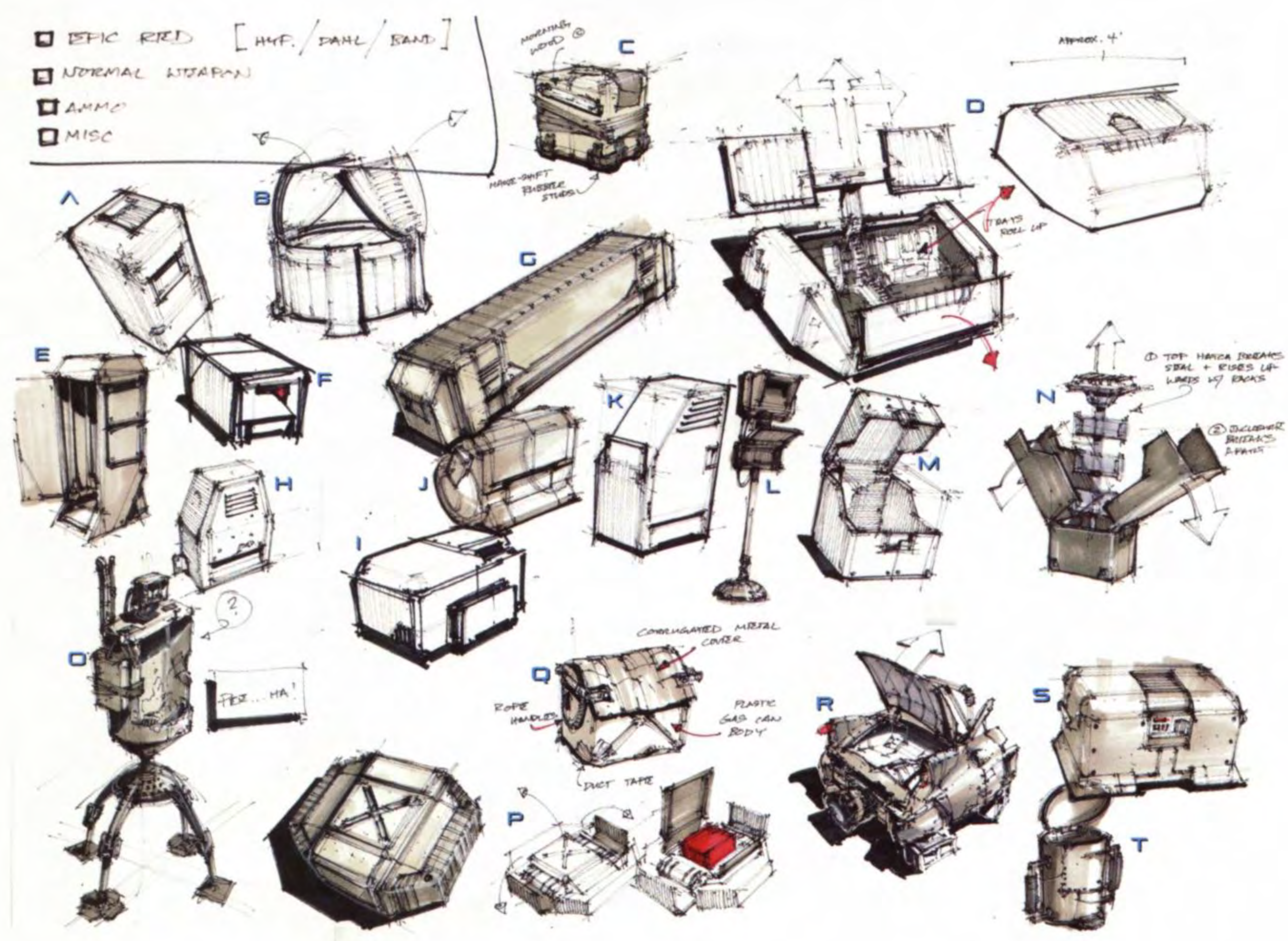
Weapons Lockers Concepts [Lorin Wood] *Left, Bottom*
Hyperion Ammo Crate Models [Jacob Christopher] *Below*



As this Hyperion locker was ready to be modeled, Lorin Wood, in his words, "supplied a final design and series of sketches breaking down how it would unfold and reveal its goods."

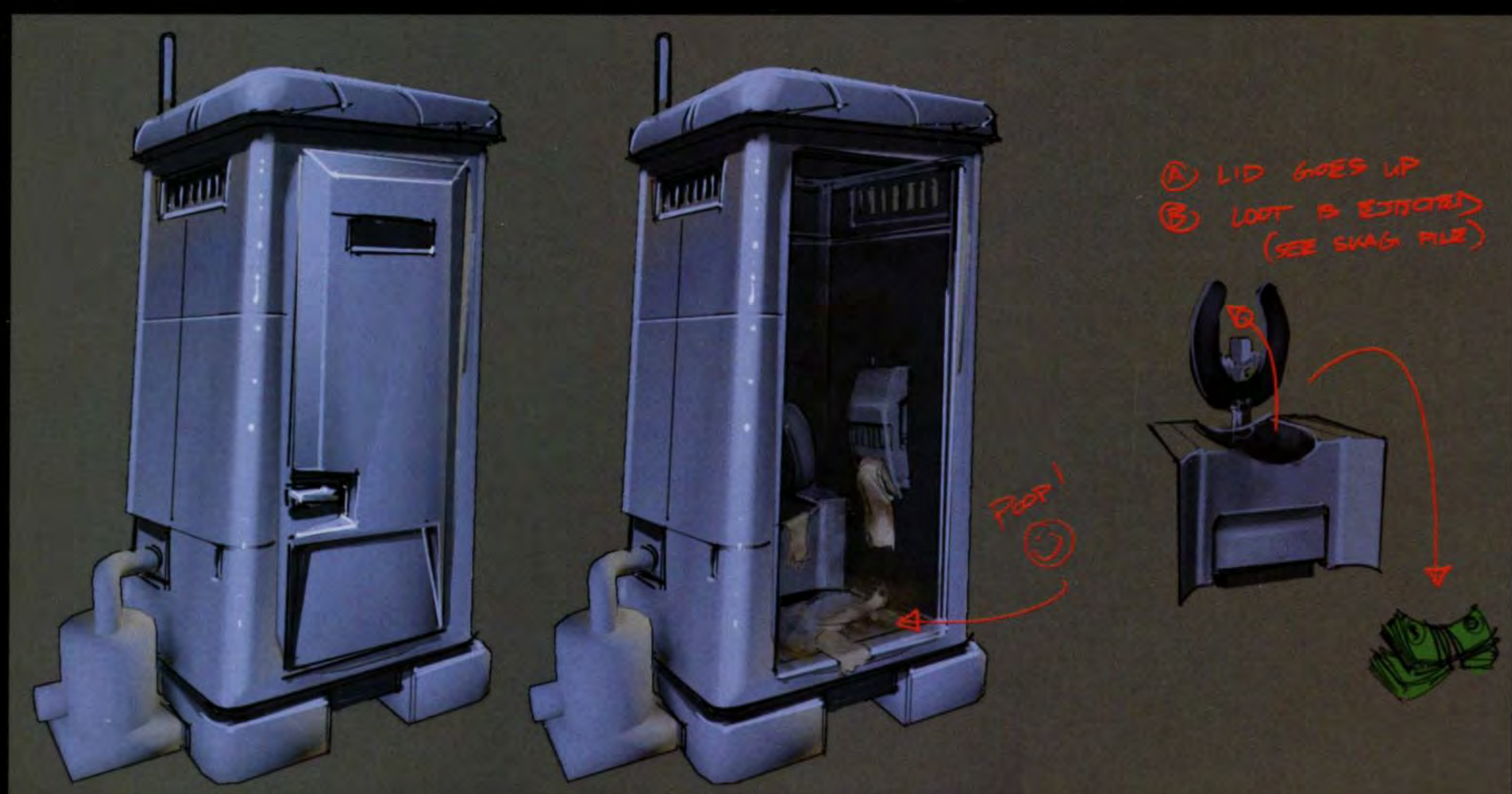
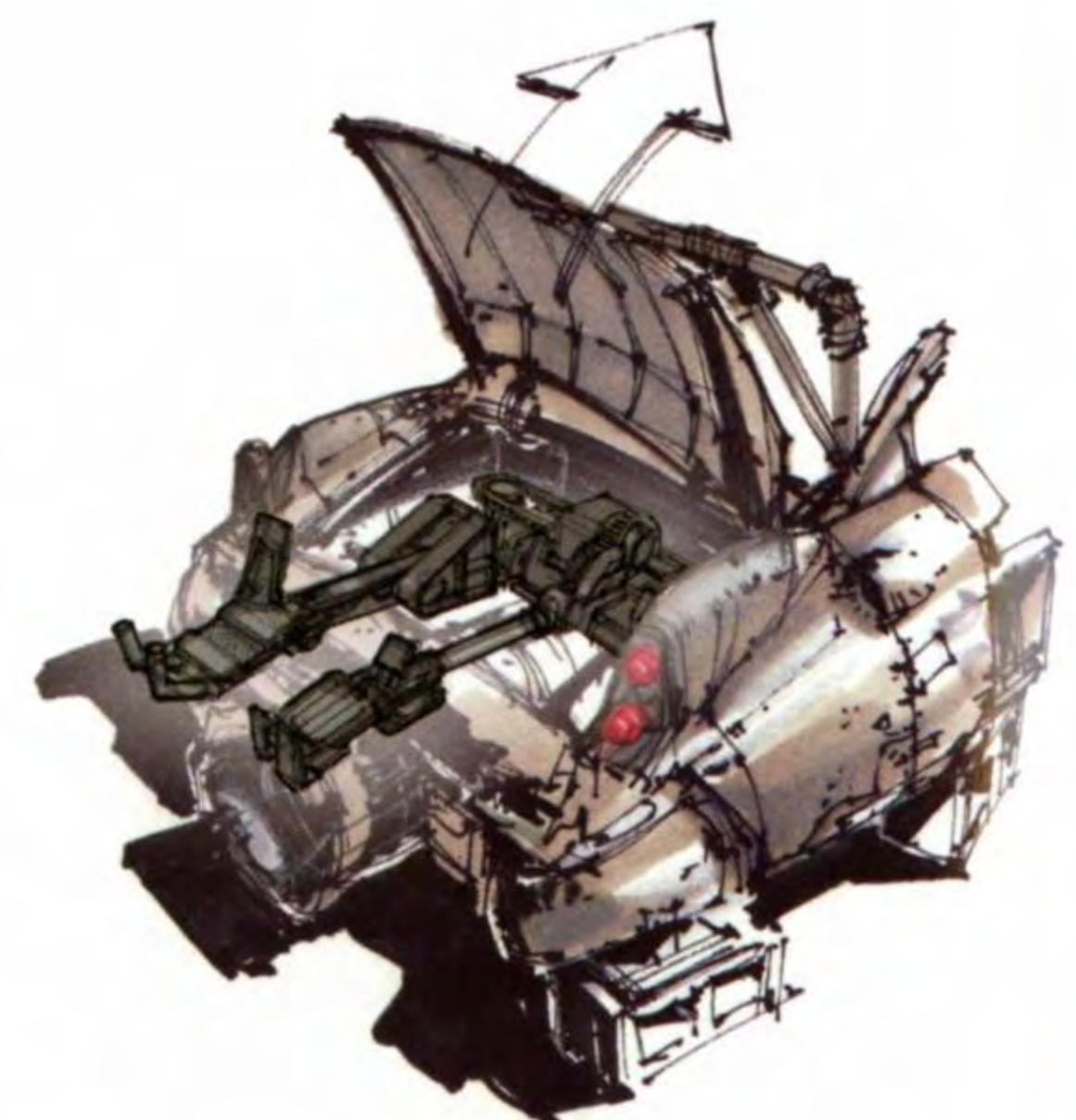
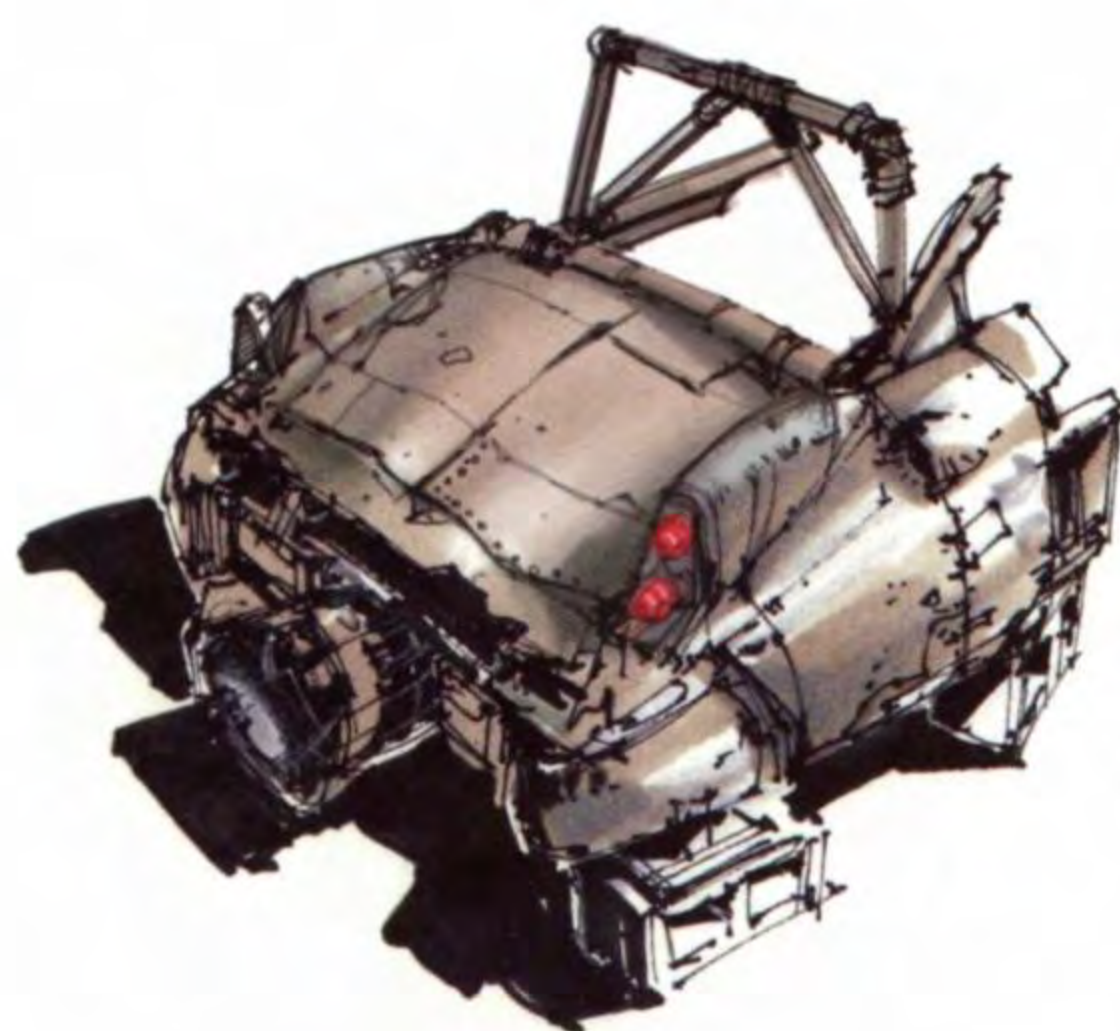
Weapons Locker Diagram [Lorin Wood] *Right*
Weapons Locker Model [Lorin Wood] *Below*
Weapons Locker Model [Jett Sarrett] *Bottom Left*
Weapons Locker Models [Ashley Rochelle] *Bottom Right*





Here you can see more bandit concepts, including a car trunk. "It had features of the rear of a car," Lorin Wood says, "just so you can grasp what it is in a matter of seconds and then move on." You may also note the infamous Dook Hut before its "no fapping" sign was added. "This is where we were allowed to bring out the high-brow humor of the game," Wood says. "A used outhouse wherein you lift the toilet seat and money poops out... and it is still green somehow."

Weapons Lockers Concepts
[Lorin Wood] *Left and Below*
Bandit Ammo Models
[Jett Sarrett] *Below Left*
Weapons Locker Concept
[Lorin Wood] *Bottom*



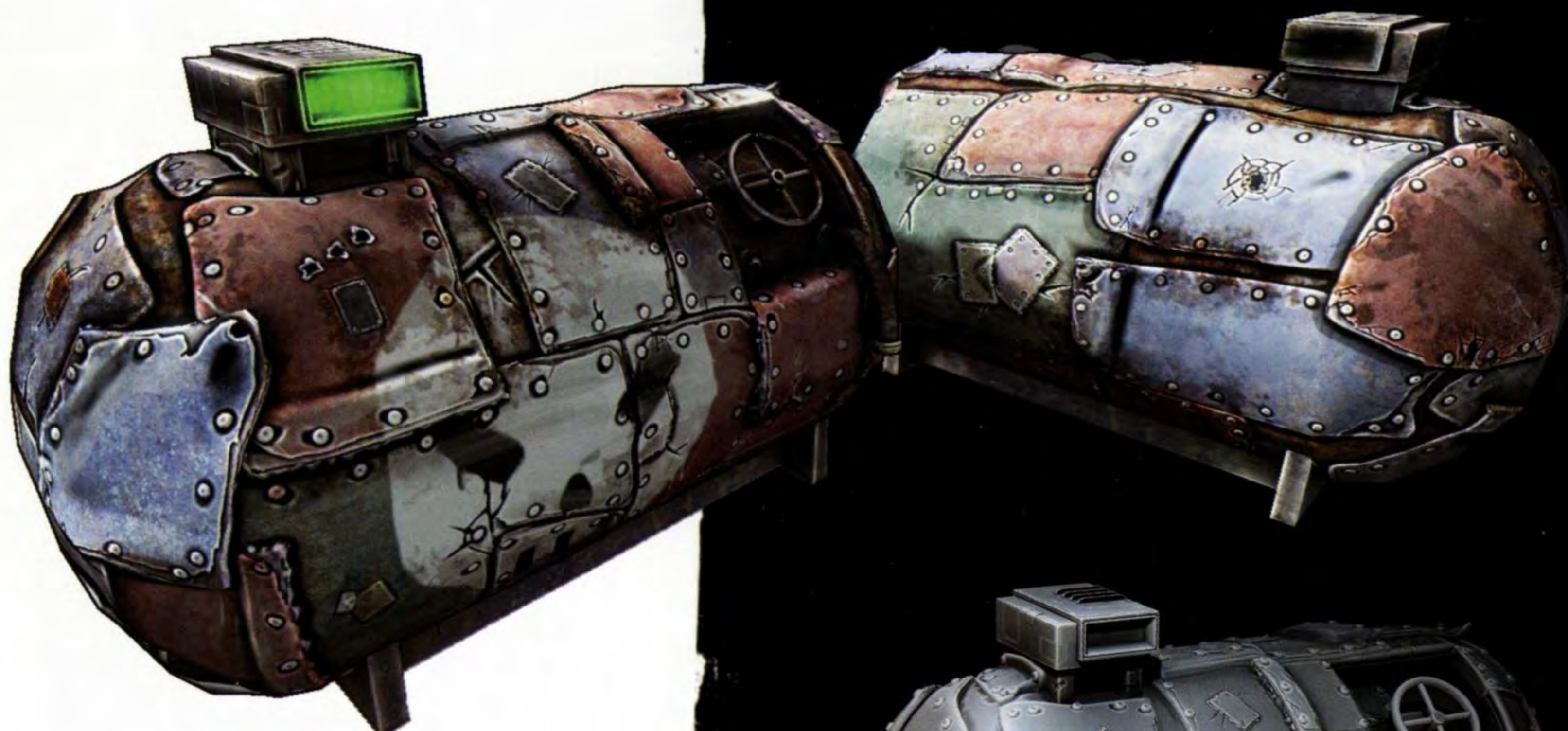
DOOK HUT

According to Jacob Christopher, "It took numerous suggestions from coworkers before finally settling on calling it a 'dook hut.' Considering the game's numerous references to internet culture, 'No fapping!' became the obvious witticism to put on a bandit outhouse. I mean there are only a handful of women on the entire planet—what else are they going to do?"

Dook Hut Models

[Jacob Christopher]





"This was one of the first exploding lootables," says Evan Gill. "Thus there was some initial confusion about how it would actually open. Later it was clarified that it just explodes like a hurty piñata. I used 3D Studio Max to model the base shape and add all the plates and bolts, the details were then sculpted in Zbrush."



Gas Tank Models

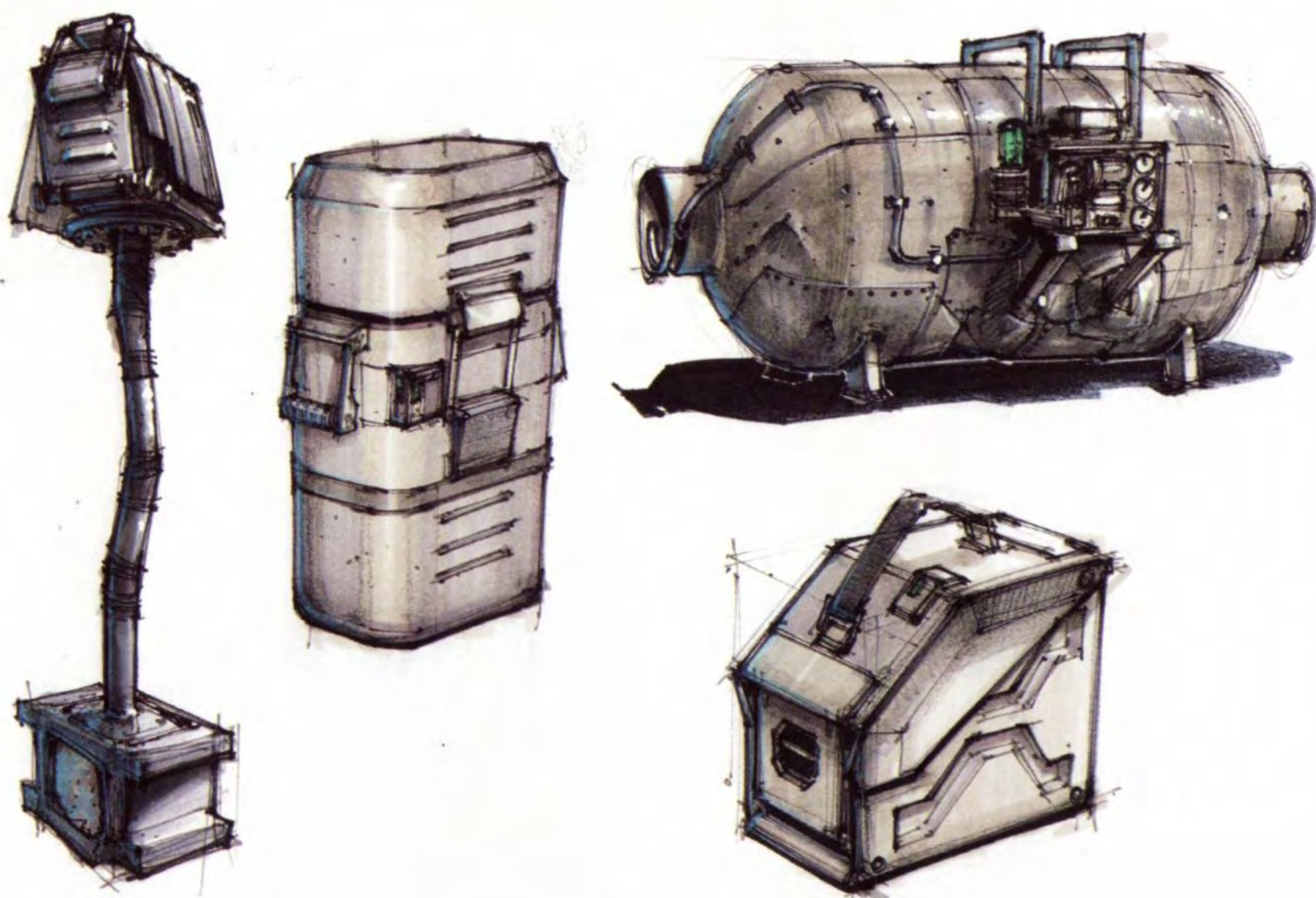
[Evan Gill] *Above*

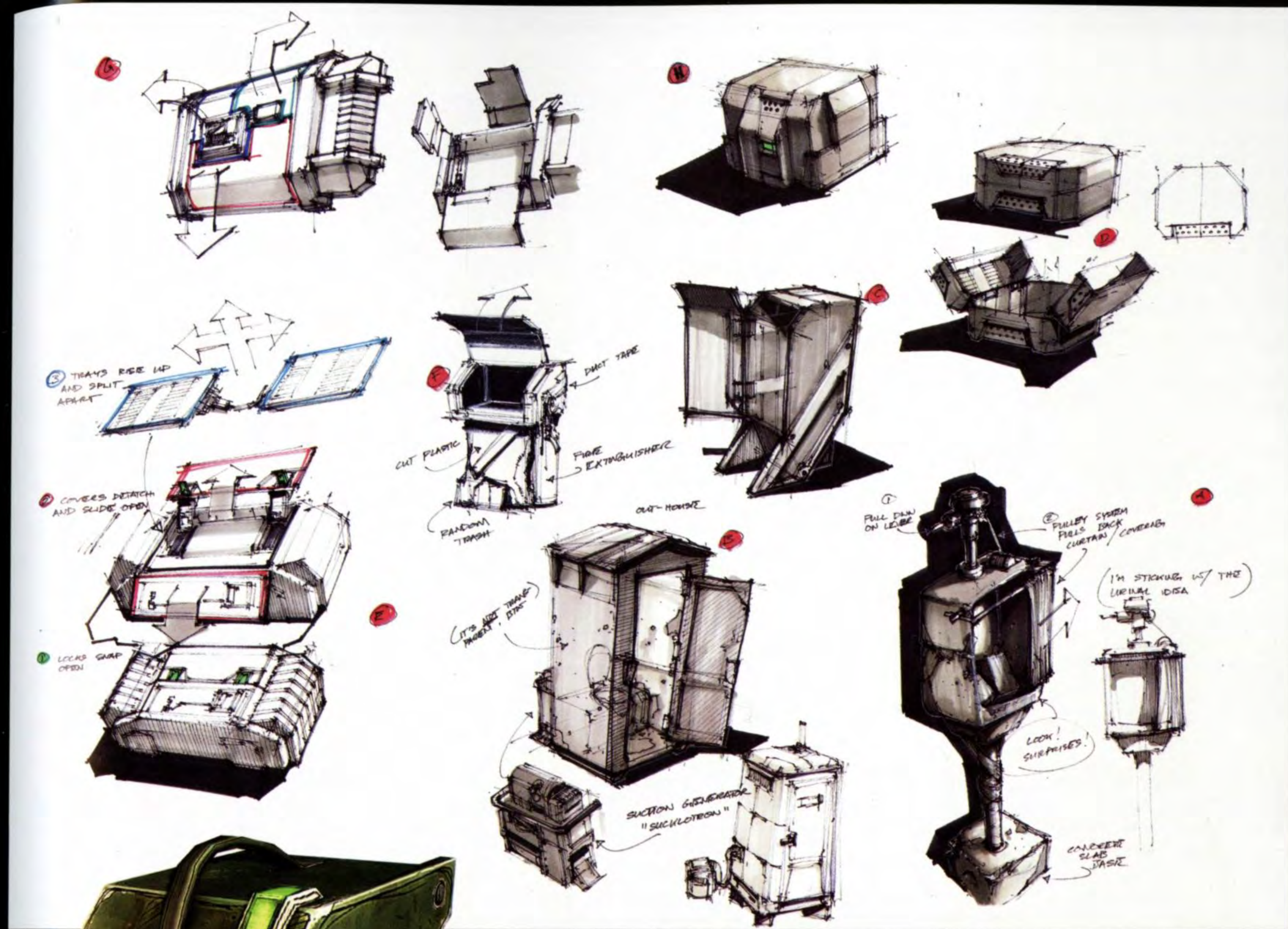
Golden Key Chest Models

[Ricky Oh] *Right*

Weapons Lockers Concepts

[Lorin Wood] *Below*





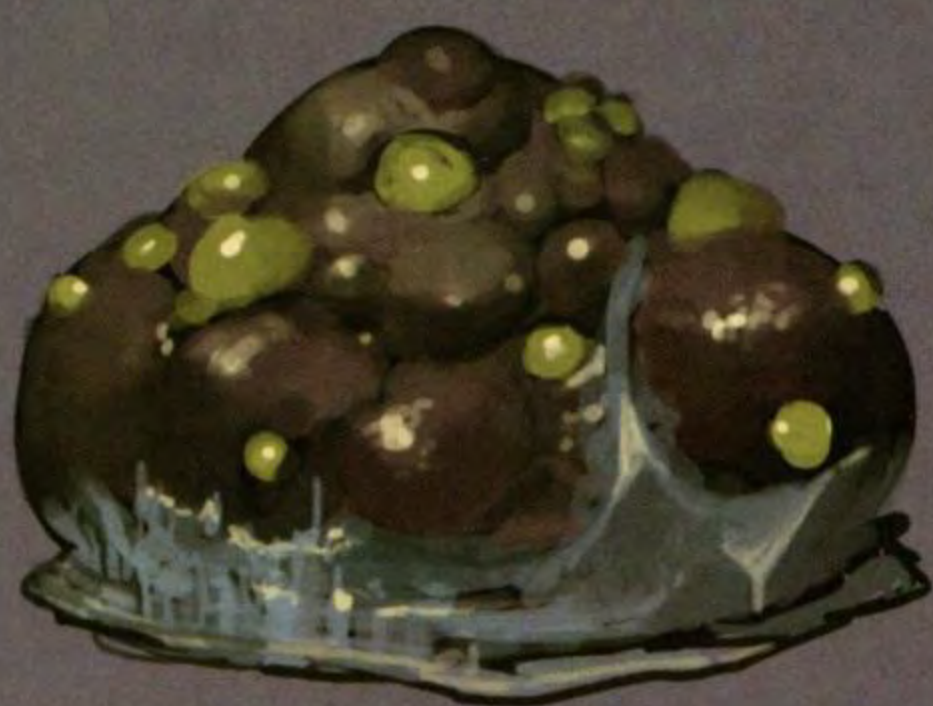
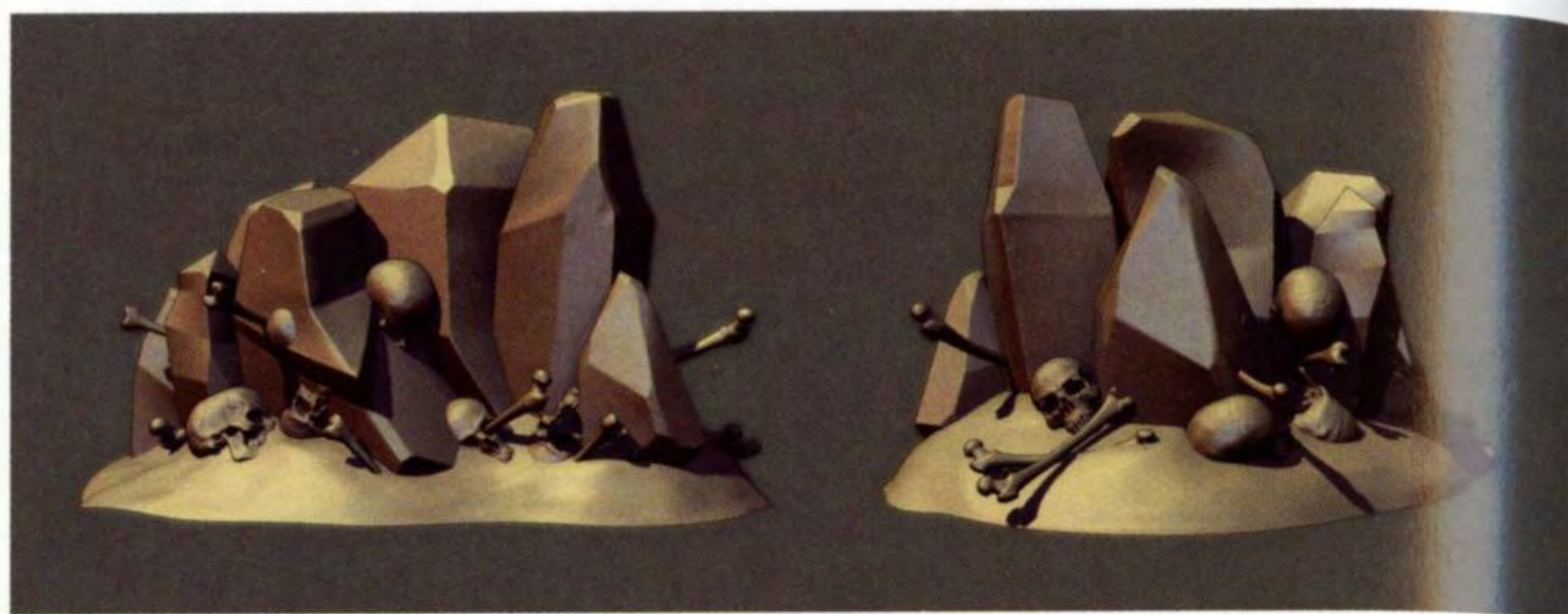
Jett Sarrett says, "The DAHL lootables were sweet because Jimmy, Jacob, and I were all sitting in the same room making these roughly at the same time; it was cool to bounce ideas off each other on how we thought DAHL should look, and what each person was doing unique on their asset."

Weapons Crate Concepts [Lorin Wood] Top
Dahl Lootable Models [Jett Sarrett] Above
Clap Stash [Ricky Oh] Right

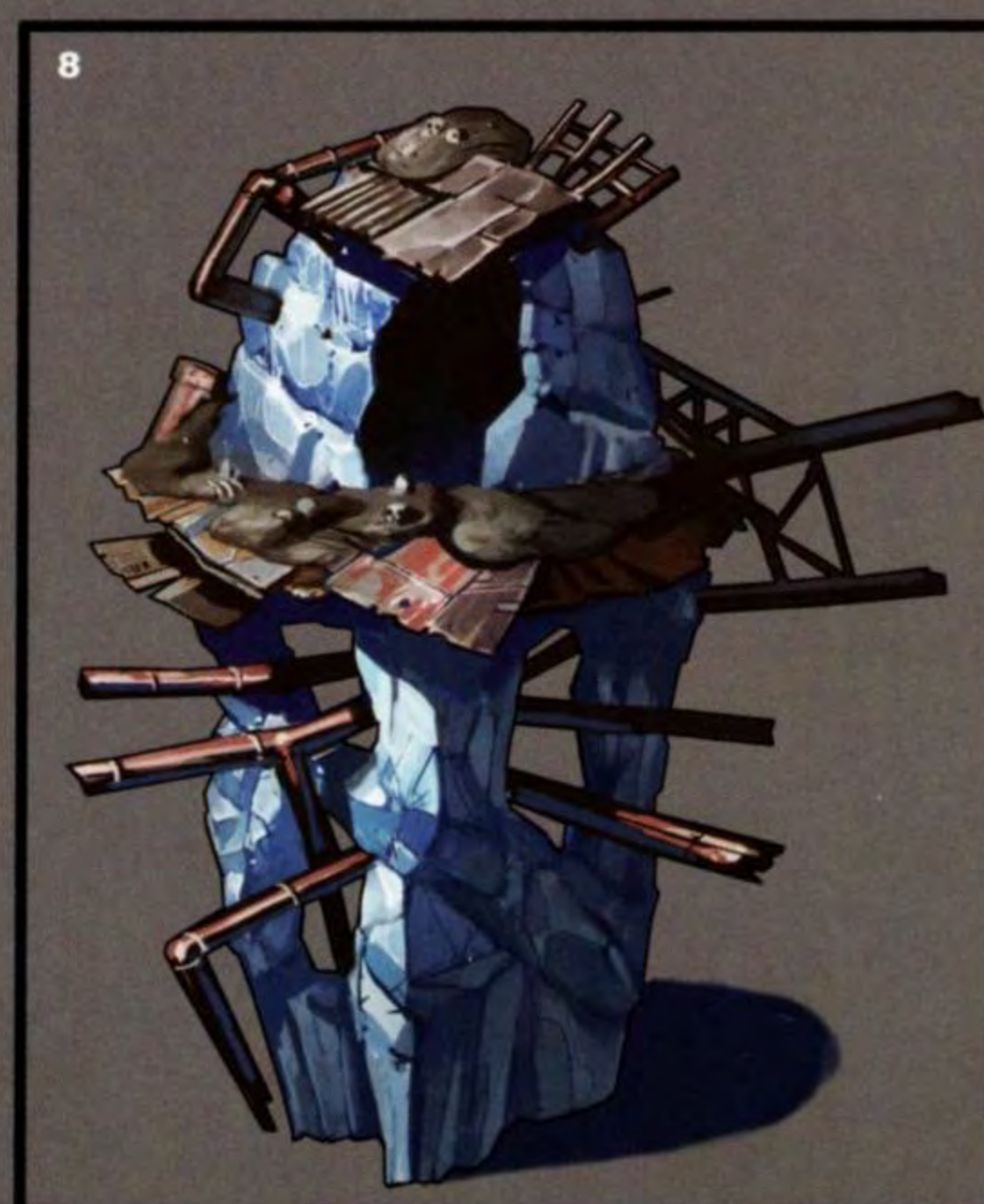
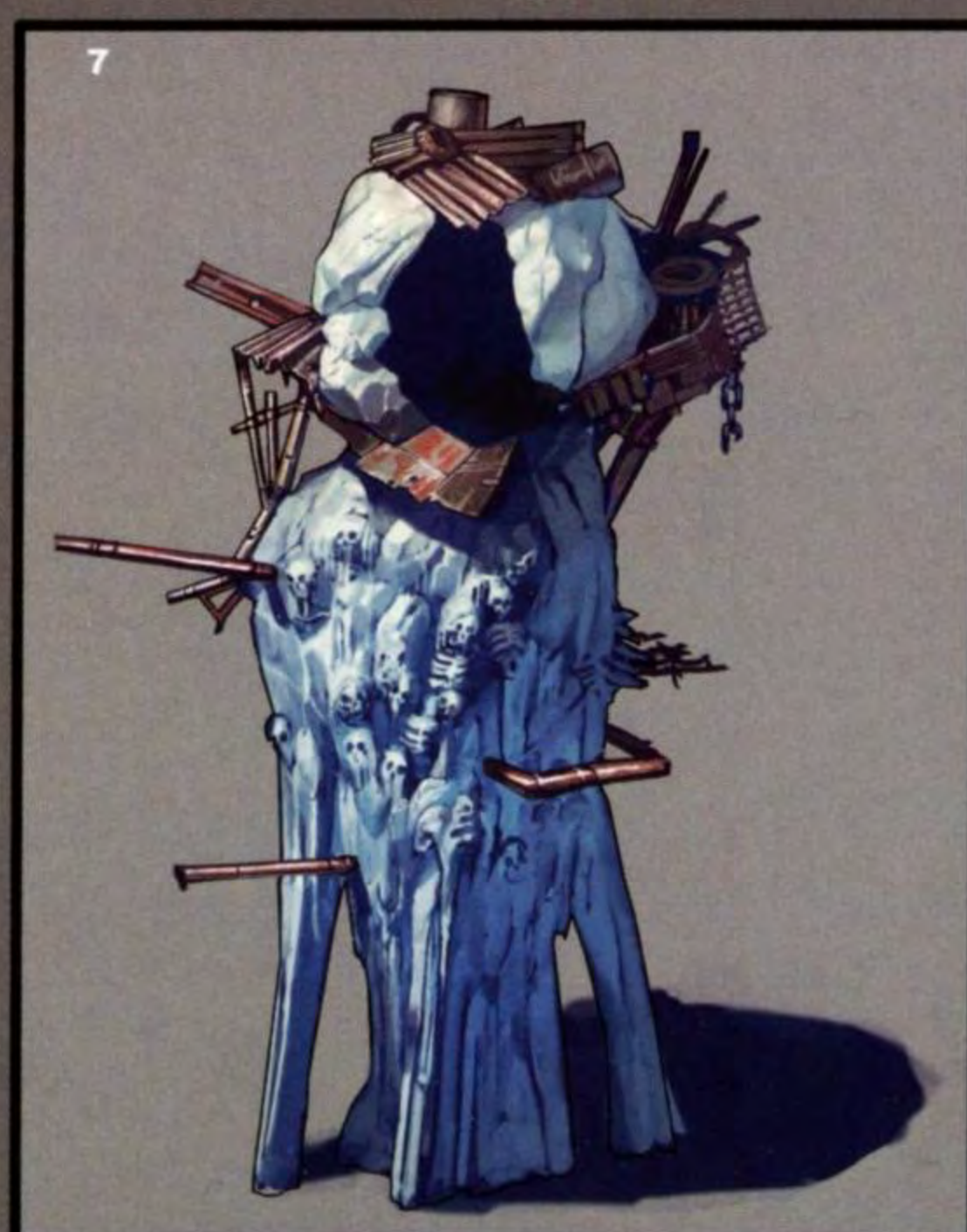
BULLYMONG LOOTPILE

Every creature in *Borderlands* needs a “loot pile”—some sort of item the player can break open to get ammo, health, and cash. For the Bullymong, concept artist Matias Tapia opted for a...somewhat stinky structure. “People say that you can’t polish a turd, but sometimes you have to,” Tapia says. “In this case, a whole pile of them.”

Lootpile Models [Kevin Penrod] *Right*
Lootpile Concepts [Matias Tapia] *Below*



BULLYMONG PILE SKETCHES



Lootpile Texture

[Tris Baybayan,
Matias Tapia] *Top*

Lootpile Models

[Tris Baybayan] *Middle*

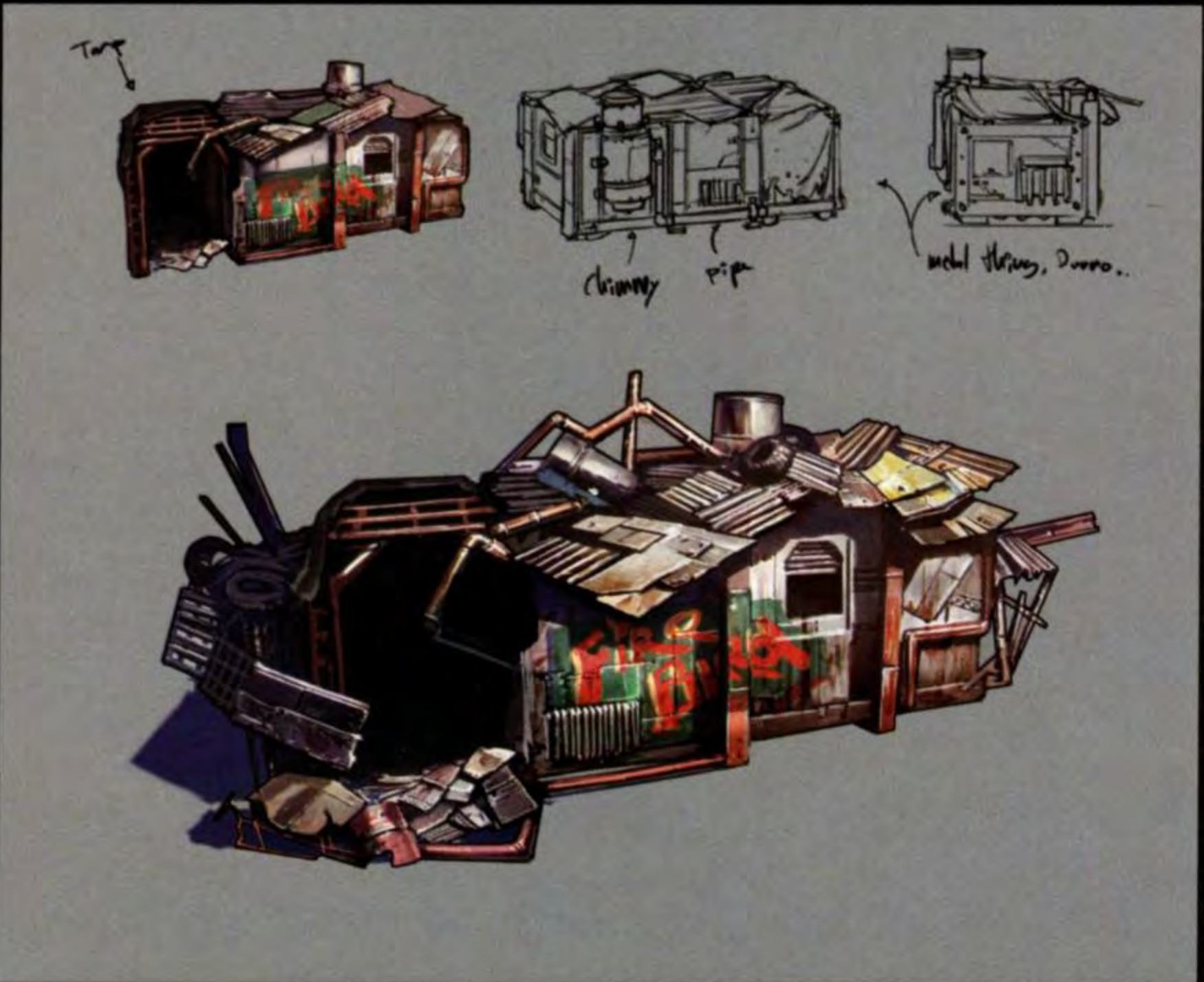
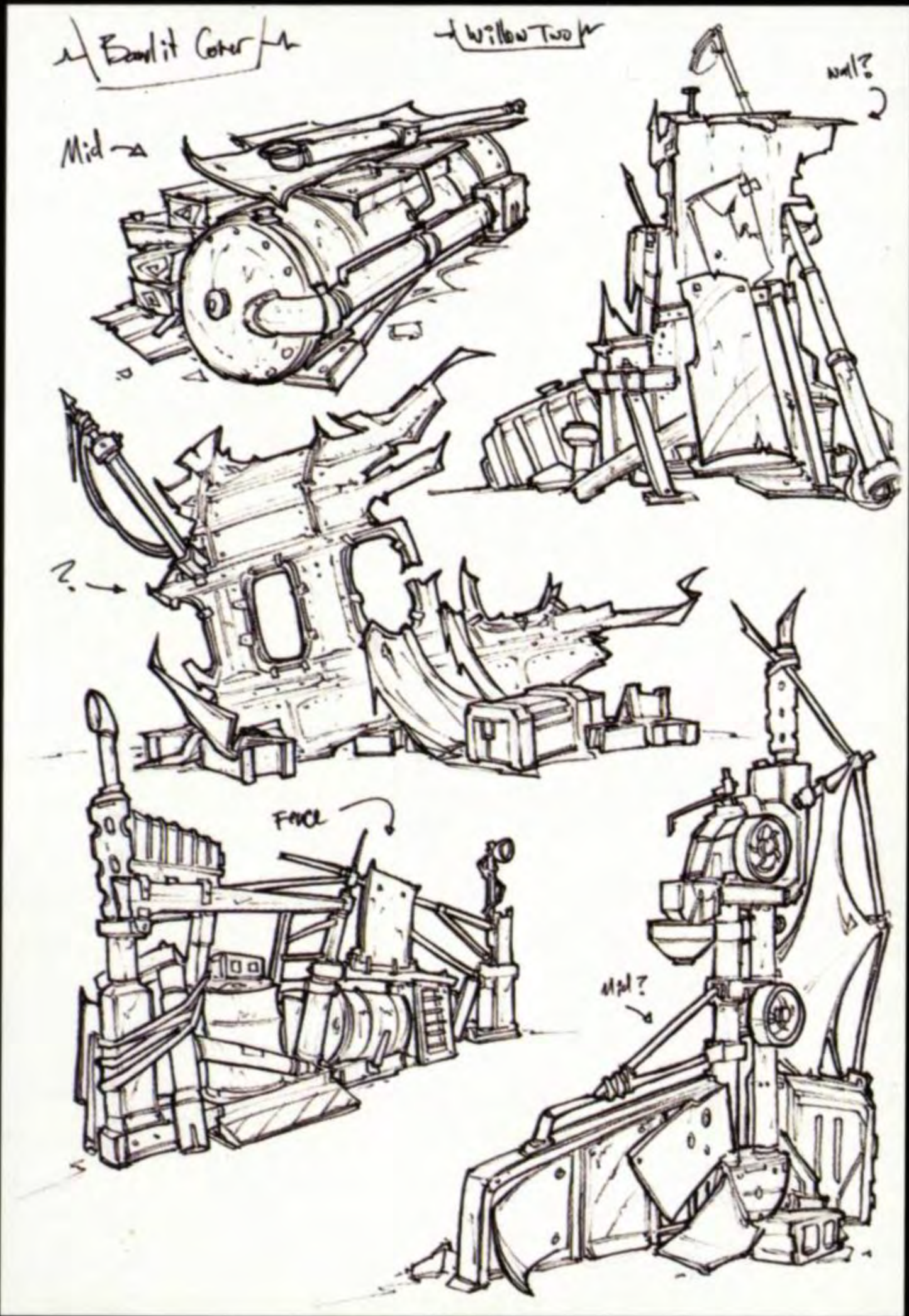
Lootpile Concepts

[Matias Tapia] *Bottom*

BANDIT STYLE

In general, the bandits of Pandora are all about kitbashing stuff—taking pieces of scrap and junk and repurposing them into something ramshackle, yet functional. Visually, these structures tend to be rusty and as unsafe-looking as possible.

The bandit style, nearly ubiquitous in the first game and used frequently in the second, is one of the iconic visual signatures of *Borderlands*—it communicates danger, and harshness, and the edge-of-civilization feeling that *Borderlands* is known for.

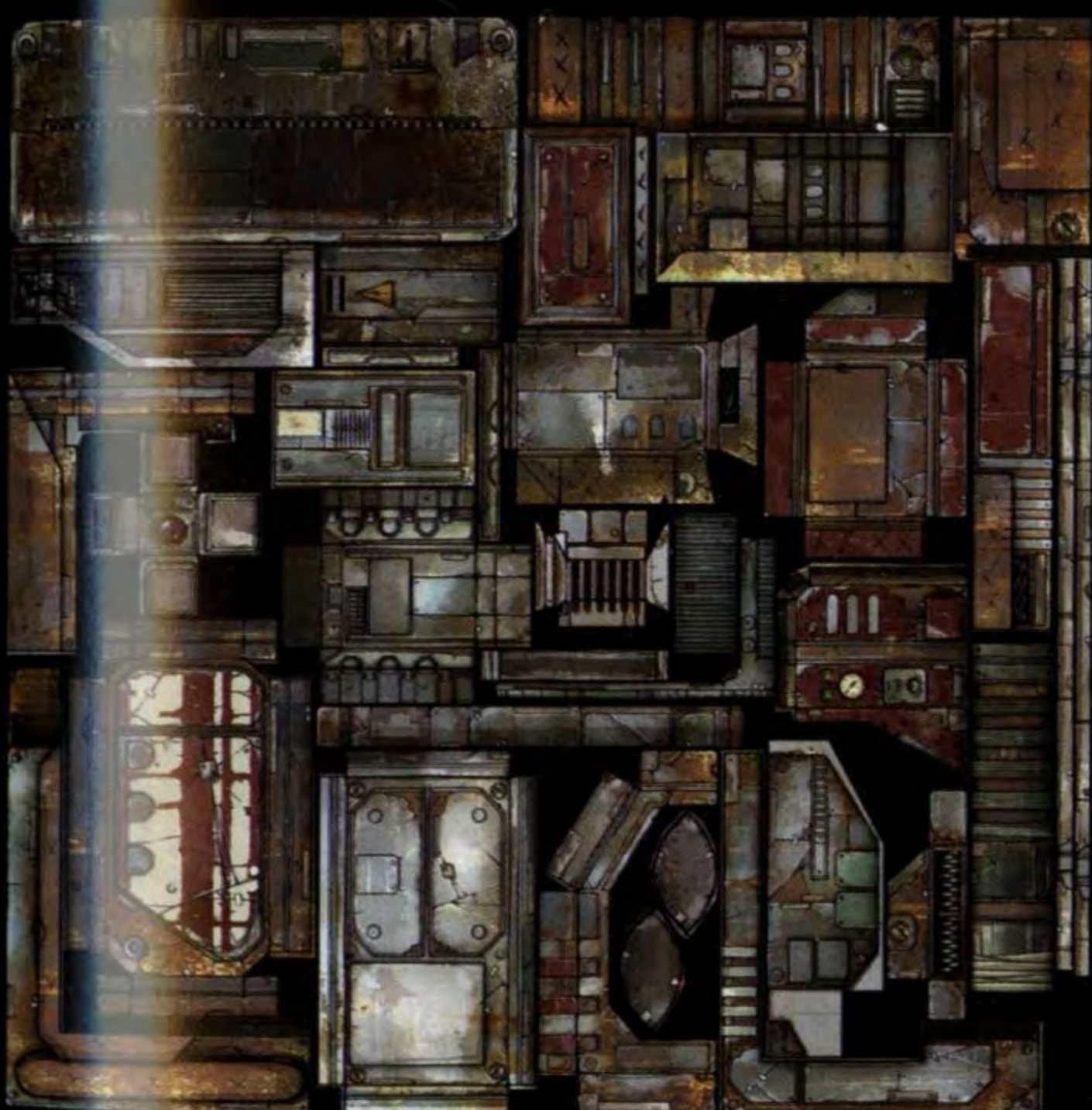


Bandit Cover Concepts [Scott Kester] Top Left
Bandit Hovel Concepts [Matias Tapia, Scott Kester] Top Right

Bandit Hovel Models [Tris Baybayan] Above



"This was a fun exploration in texturing in the *Borderlands* style without doing a highpoly," says Jimmy Barnett. "Sometimes the schedule would not allow for us to go all out. In this case I think the result actually benefited from not being constrained by the highpoly rips. I was able to go in and re-work whole areas without changing or redoing normal maps and detail specific rips."



"This asset was designed as a tech piece," says Robert Santiago. "It's visually different from all sides which is great for jamming into walls or kitbashing with other props."

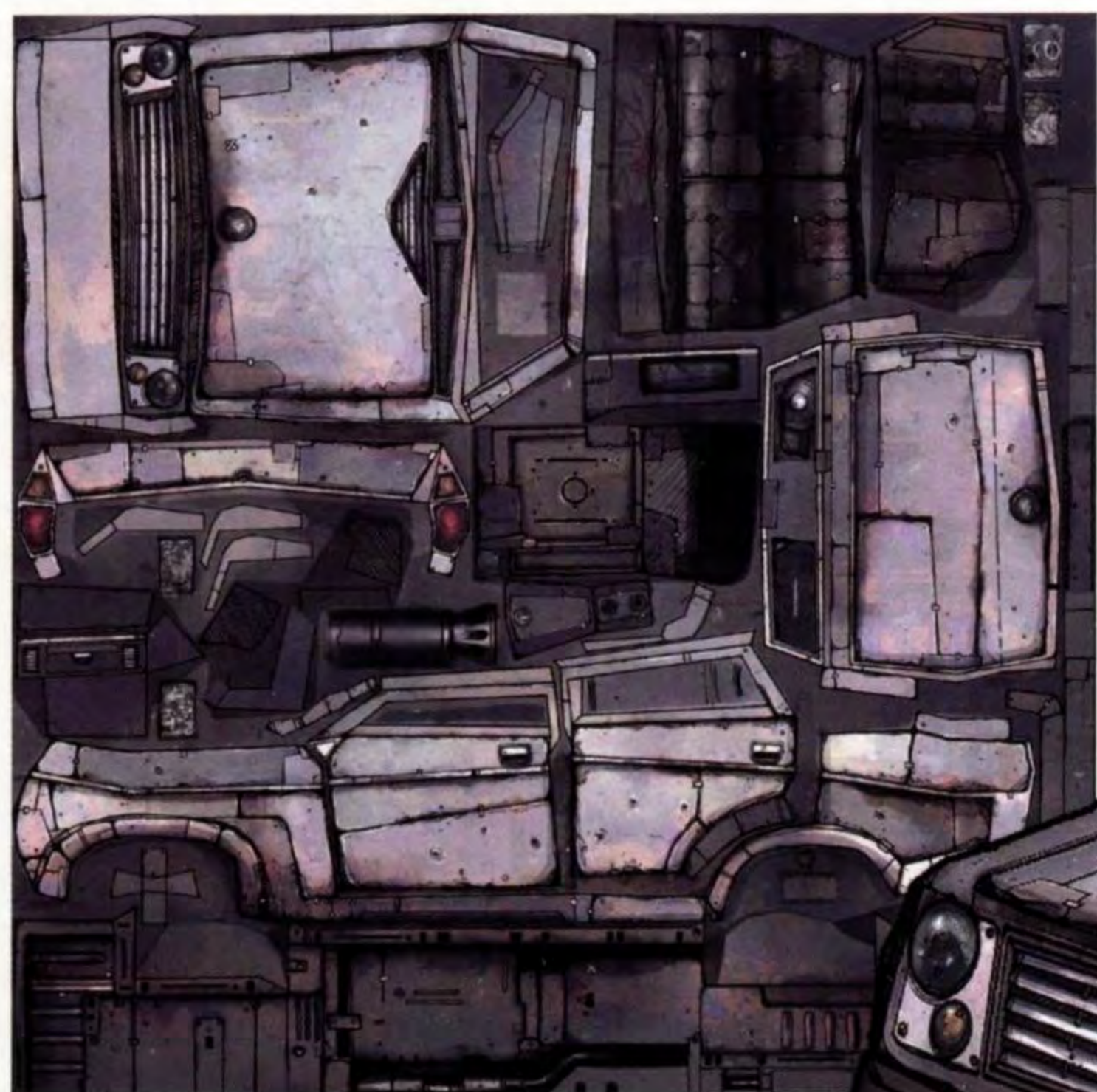


Refueling Station Model [Jimmy Barnett] Top
Tech Piece Models and DIF [Robert Santiago] Above

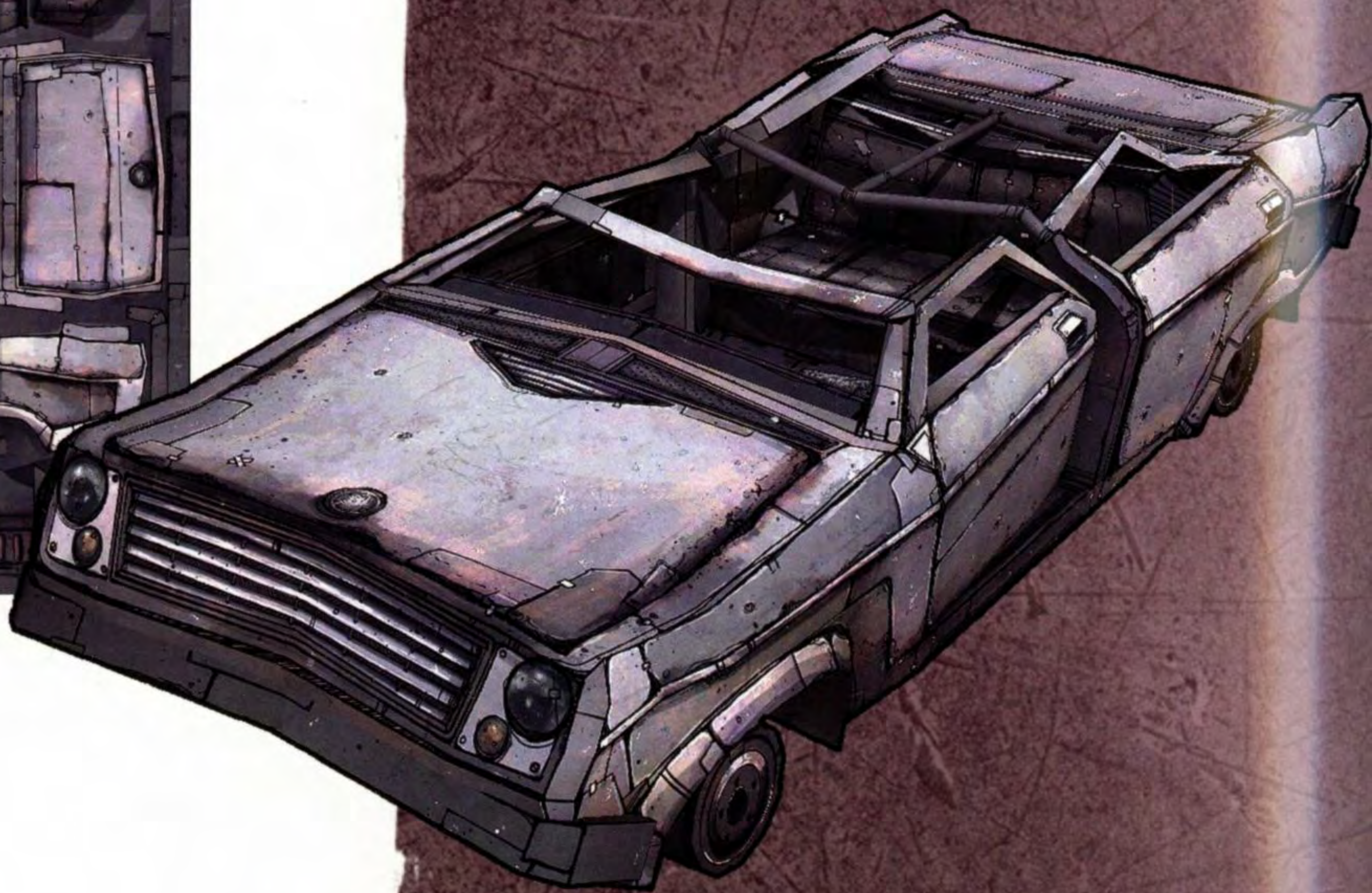


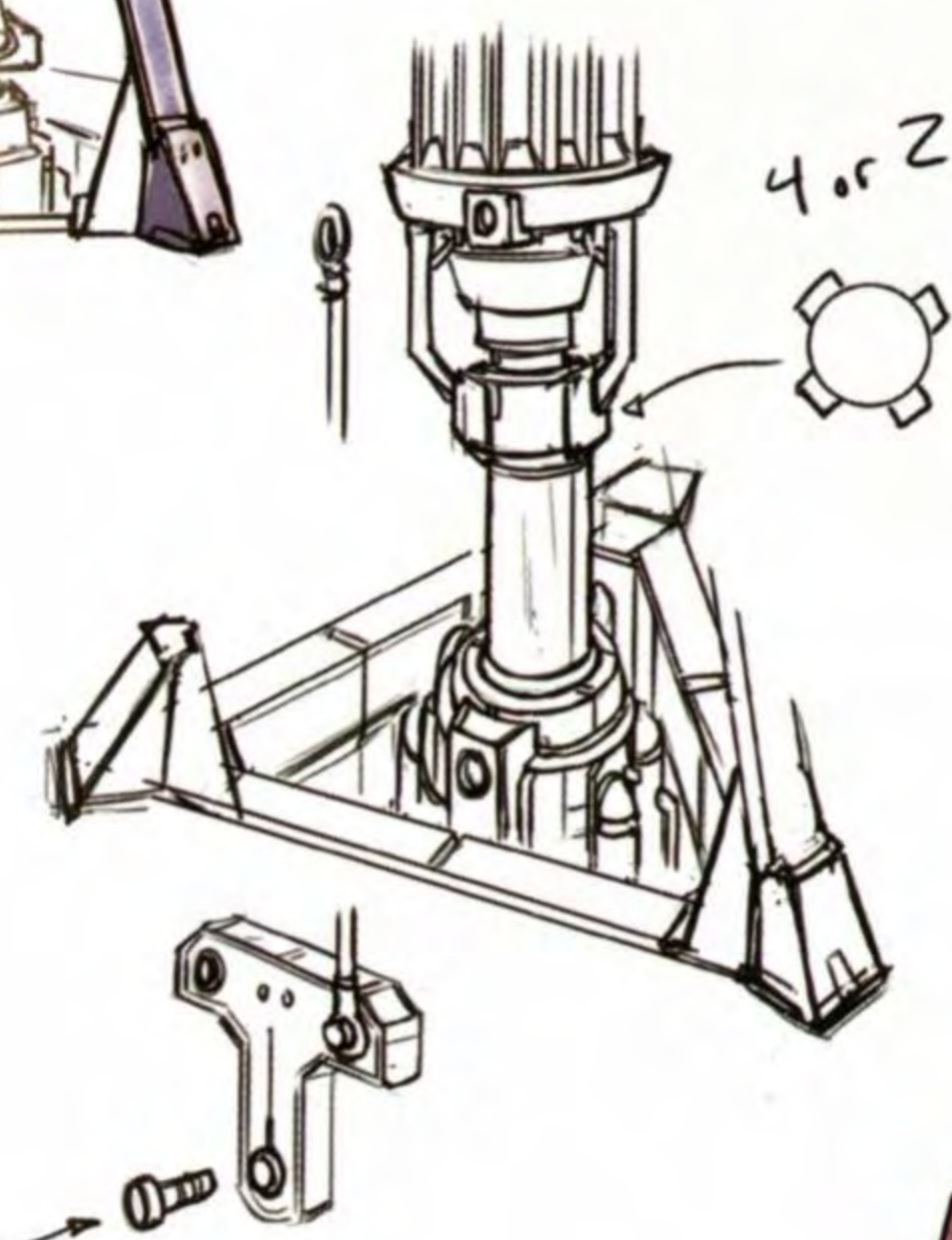
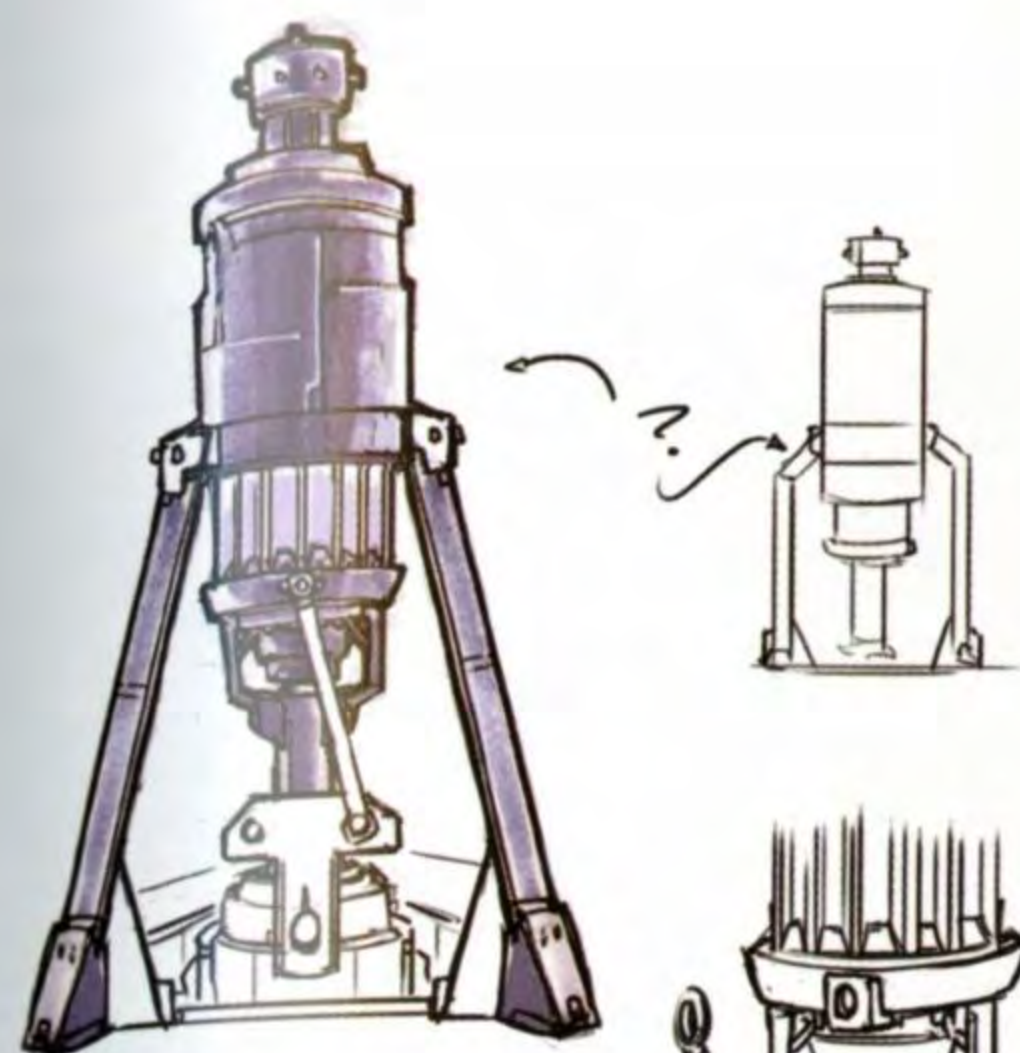
WRECKED VEHICLES

What use is a totaled car? A heck of a lot of use, as it turns out. Level designers placed wrecked vehicles for cover, for platforming, or to hide quest items.

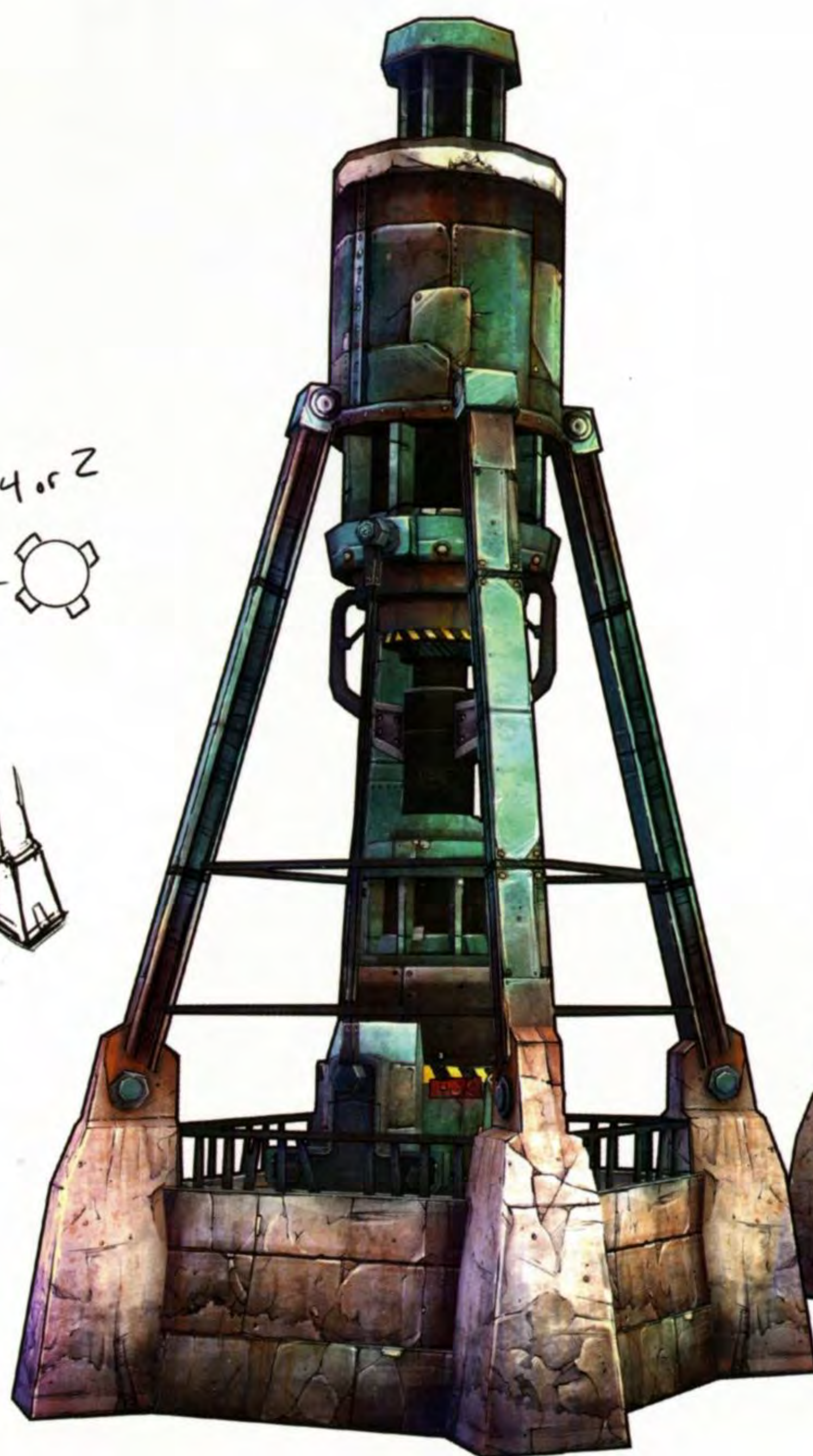


Wrecked Vehicles Models and DIF
[Brent Hollon]





Pump Concepts [Scott Kester] Above
Pump Models [Shaylyn Hamm] Right

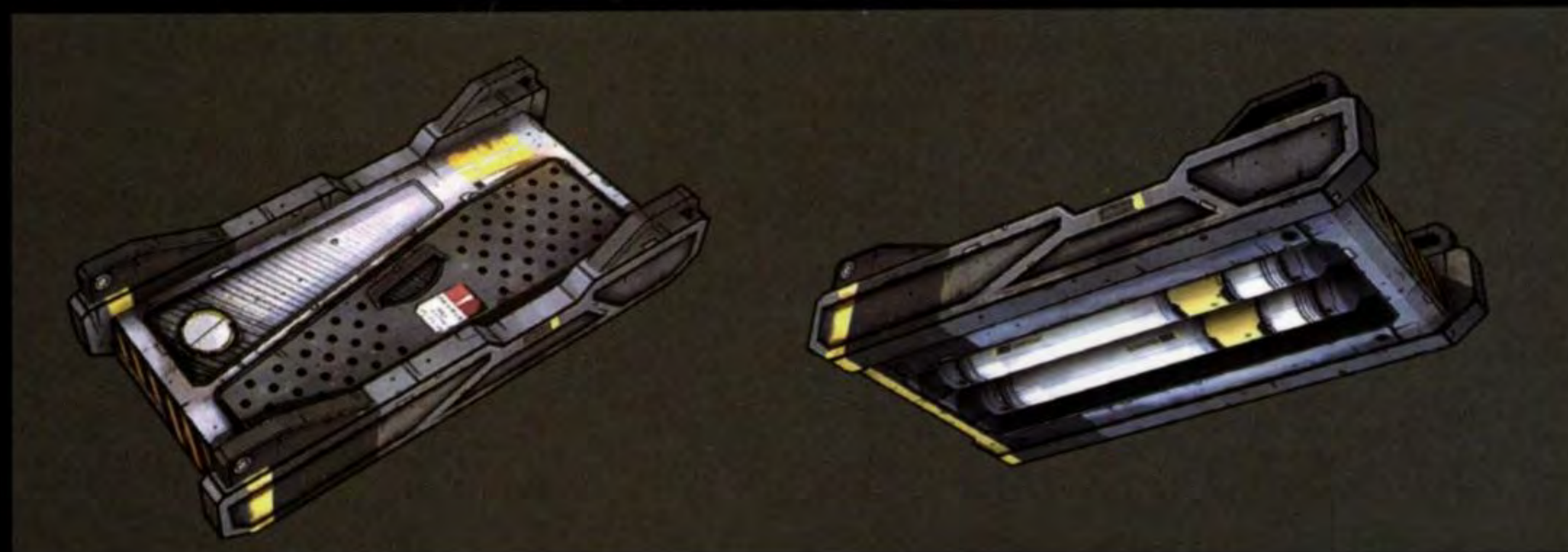
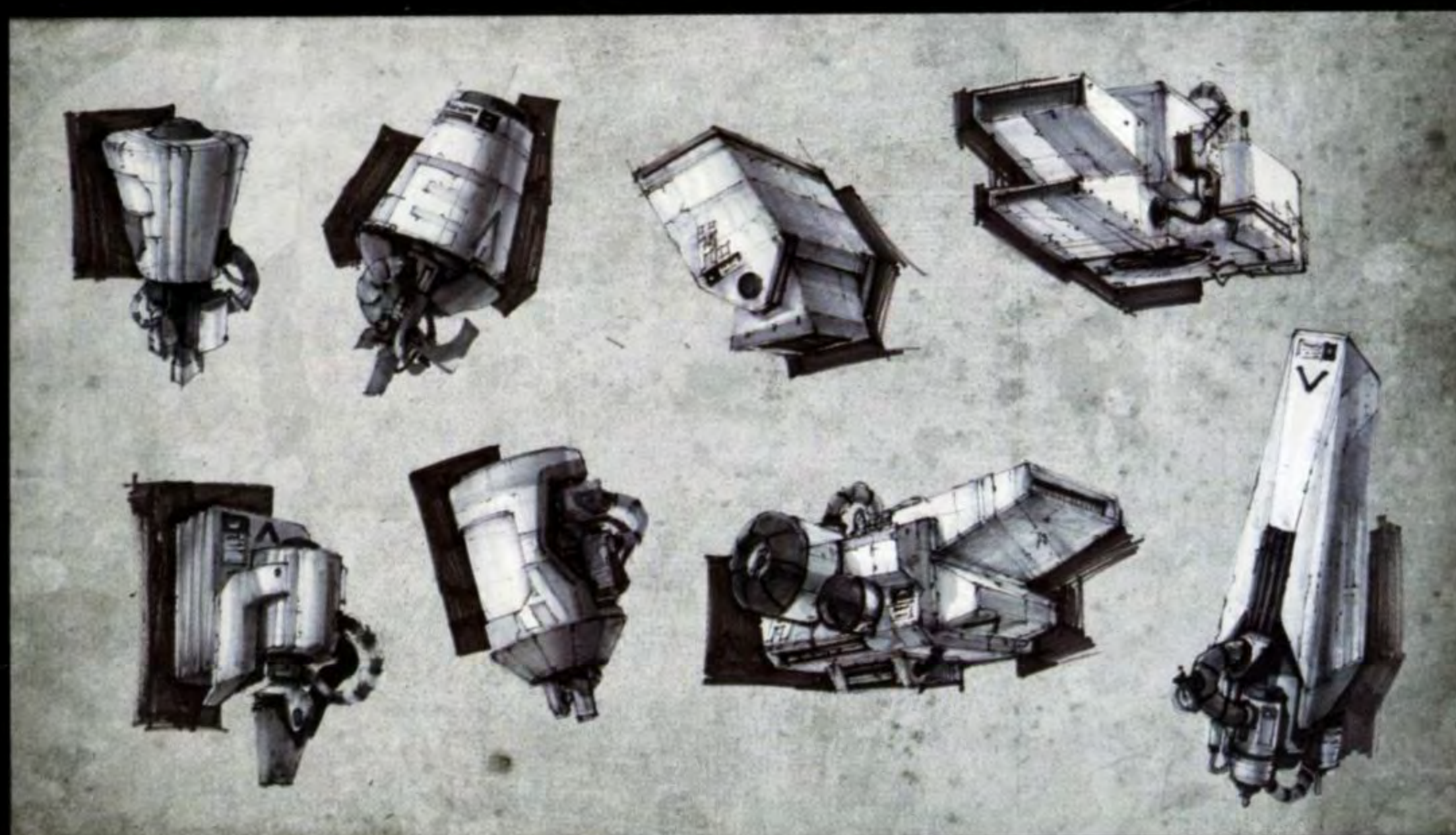
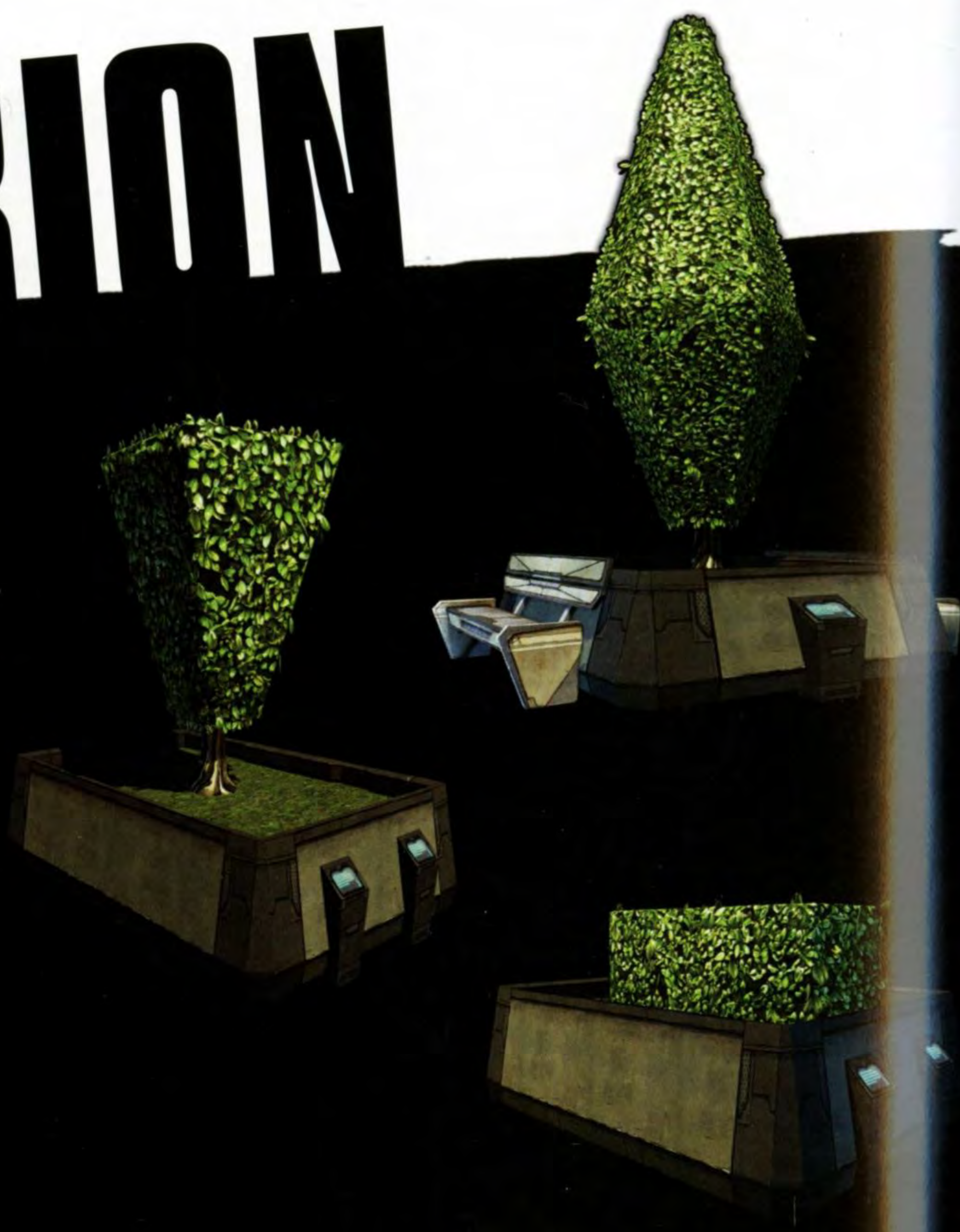


"This is the radio you will find in various parts of Pandora. It also appears as part of a big stereo system in Moxxi's Bar," says Evan Gill. "It was originally designed to be a modular set of components our level designers could put together in a number of different ways. That idea ended up being overly complicated and expensive, so we just stuck everything together to make a boom box. I used 3D Studio Max and Zbrush to make it."

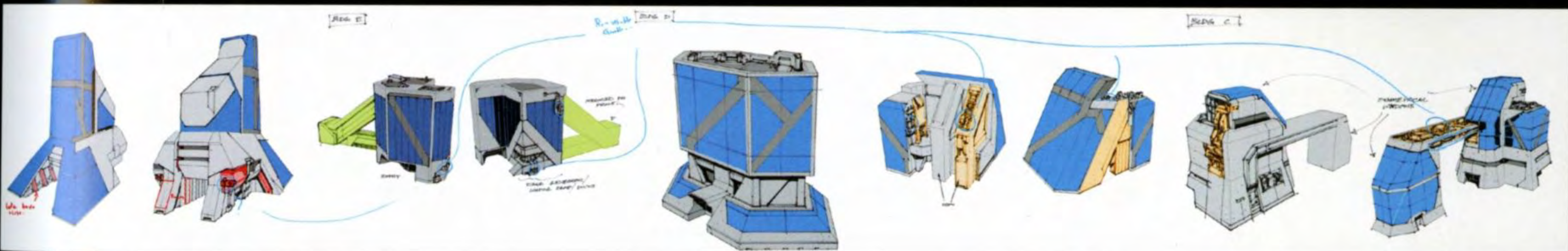
Radio Models [Evan Gill] Right

HYPERION STYLE

"I wanted the Hyperion foliage to feel neat and clean," says Jett Sarrett. "Like Jack was trying to make Opportunity look. The challenge was making them not look like green boxes. Getting the silhouette looking cool with some stray leaves here and there was not easy, especially making it within the budget. In the end I really like the result, but I'd prefer not to do any type of shrubbery ever again."

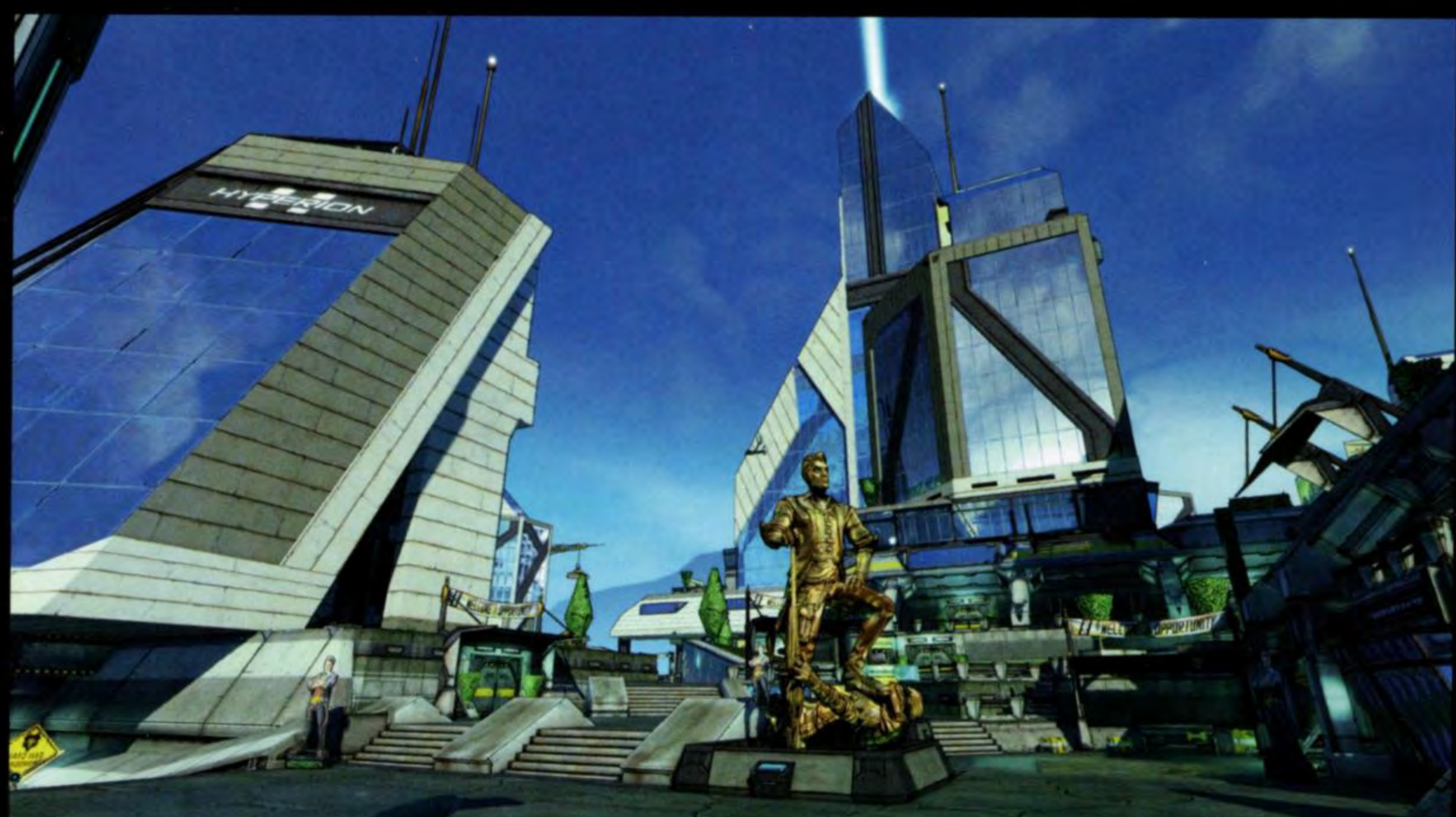


Hyperion Foliage Models [Jett Sarrett] *Top*
 Mechanical Doodads Concepts [Kevin Duc] *Above*
 Hyperion Recorder Models [Brent Hollon] *Left*
 Hyperion Light Models [Brent Hollon] *Right*

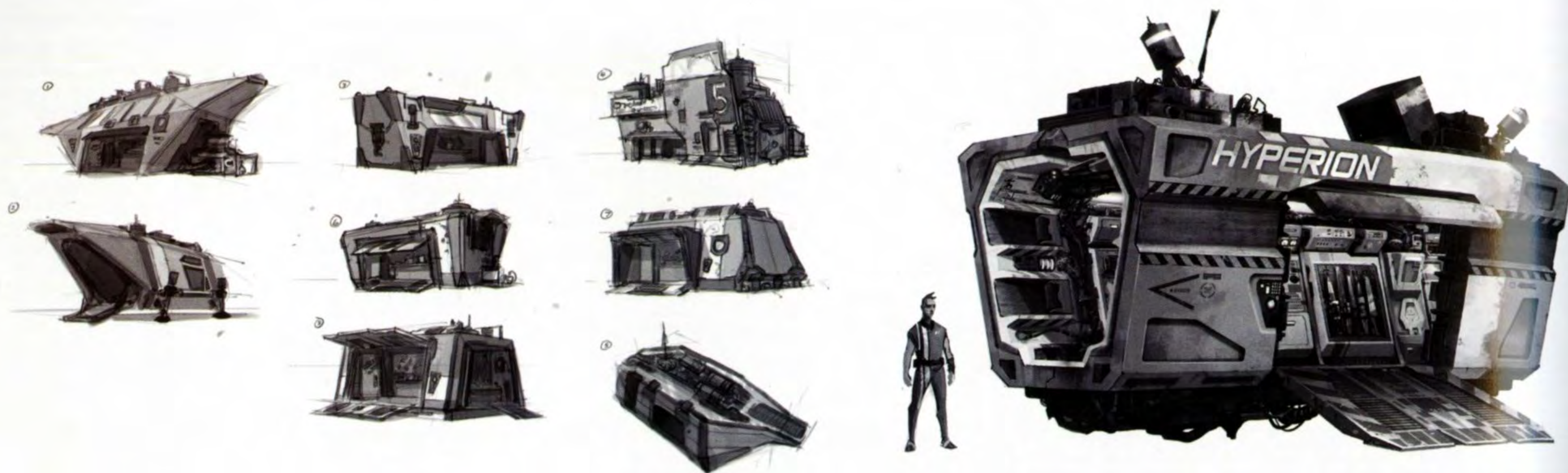


"This was the largest undertaking I had in this game; these buildings are huge, doing a 1:1 texture was not even an option," says Jett Sarrett. "Lorin's concepts were amazing, and Zach had a great layout, but actually building these bad boys, and making them still look good, that just about killed me. Plus even the most trivial changes on these took tons of work, and don't even get me started on collision..."

"The windows were pretty cool though. I was outside of our building and looked up and noticed that the windows appear to bow out from the extreme angle I was at. I immediately started planning out how I was going to do this, it's a minor detail but it is my favorite part about the buildings, plus they are huge and shiny, and who doesn't love that?"

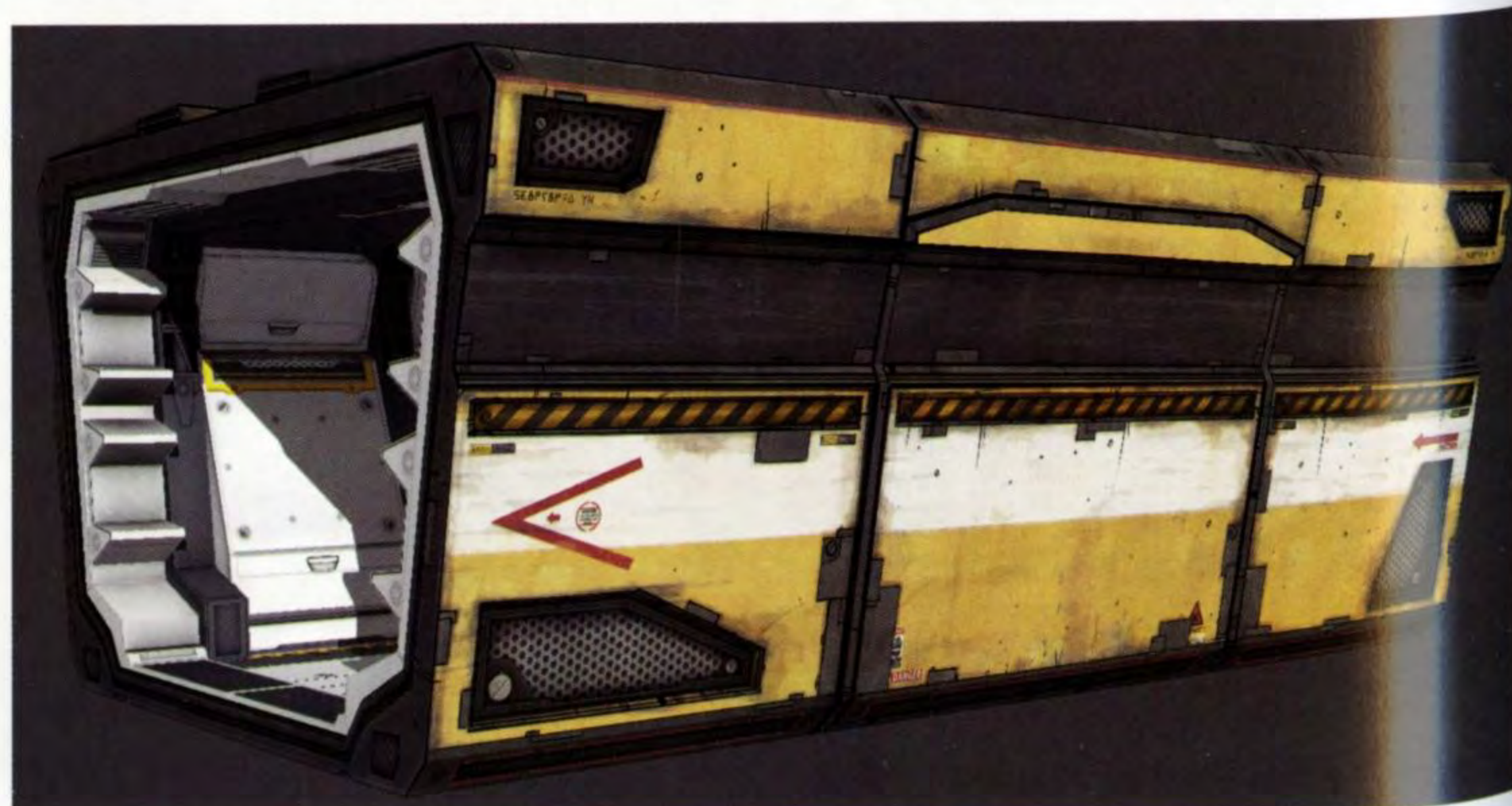
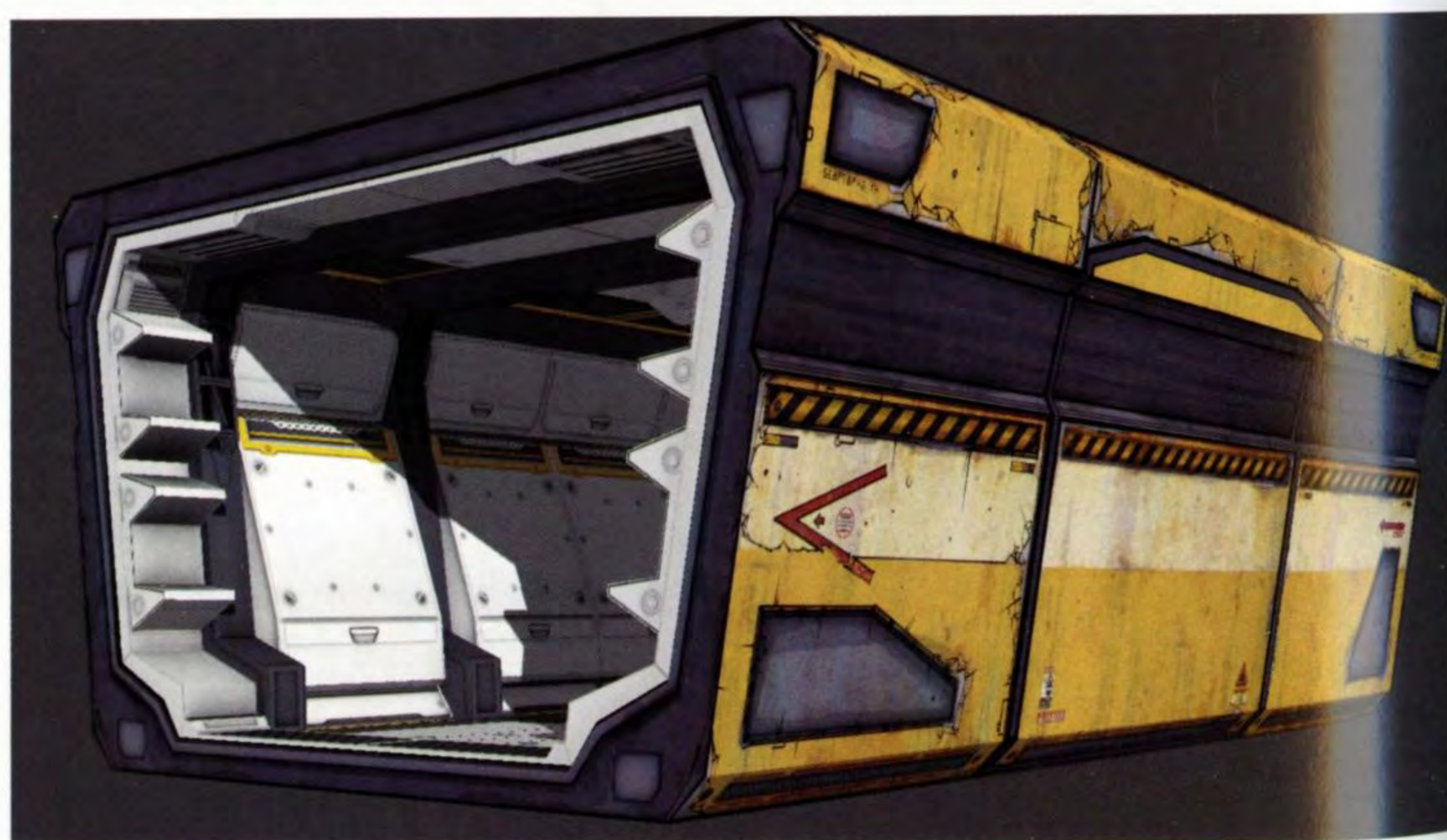
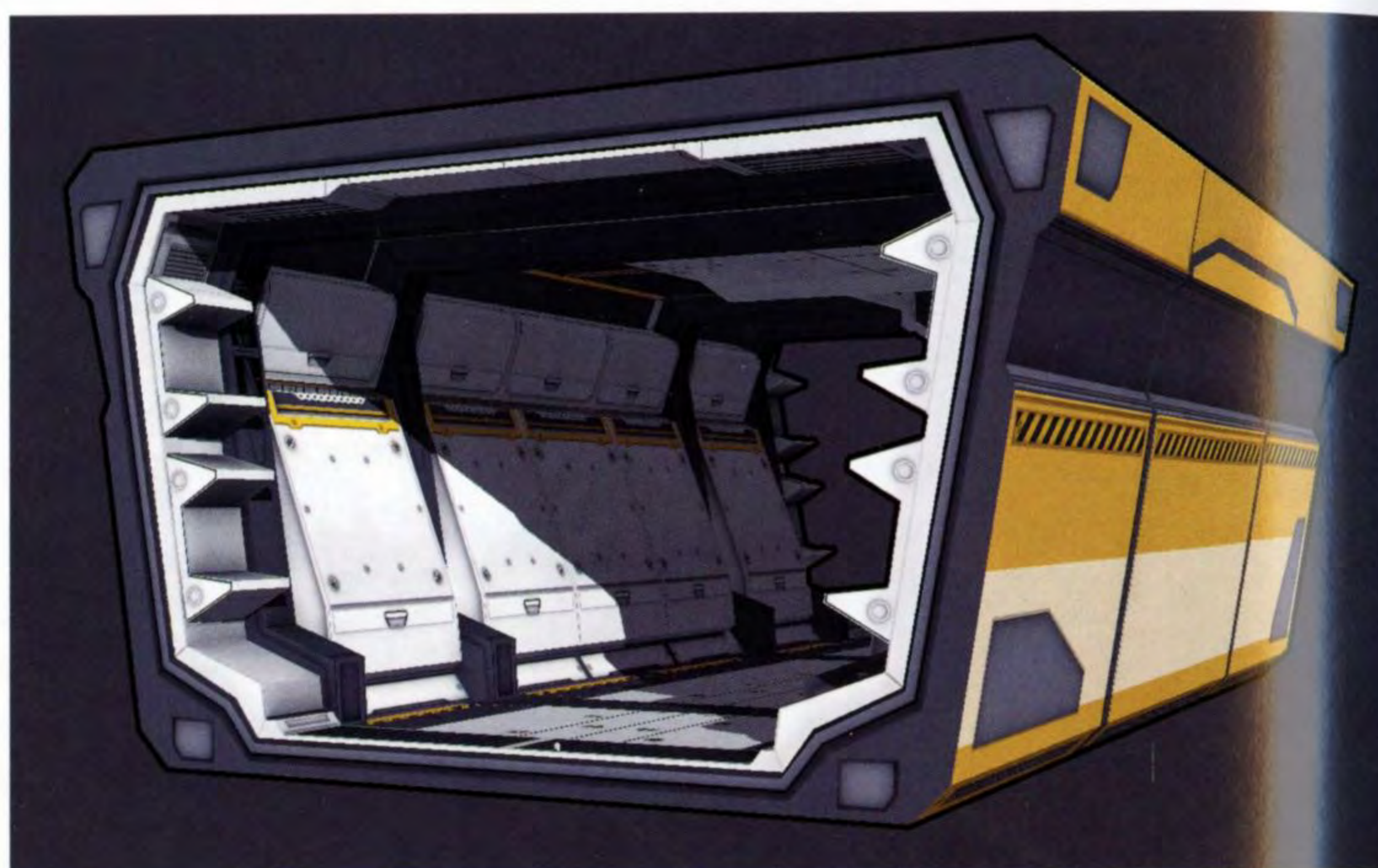
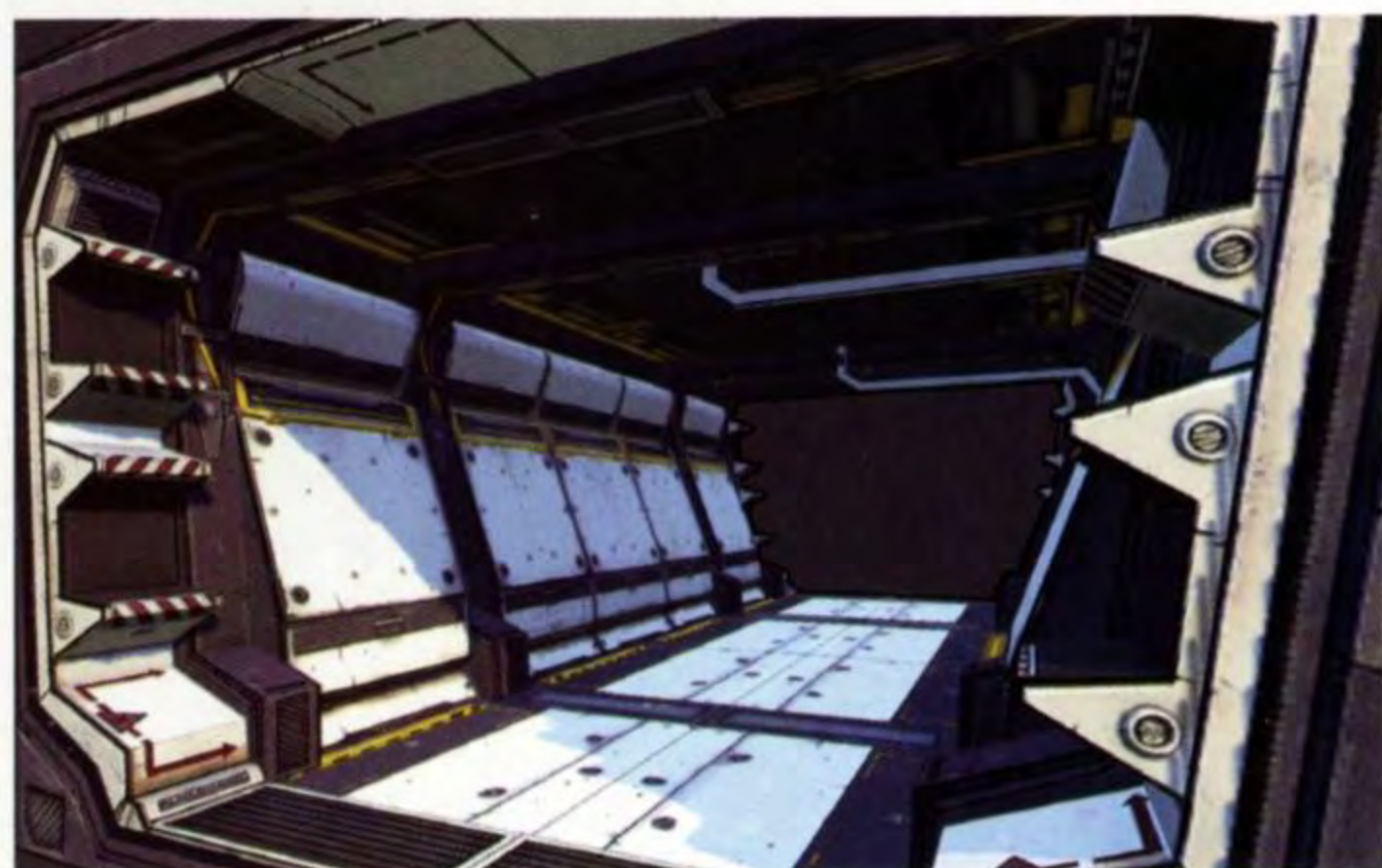
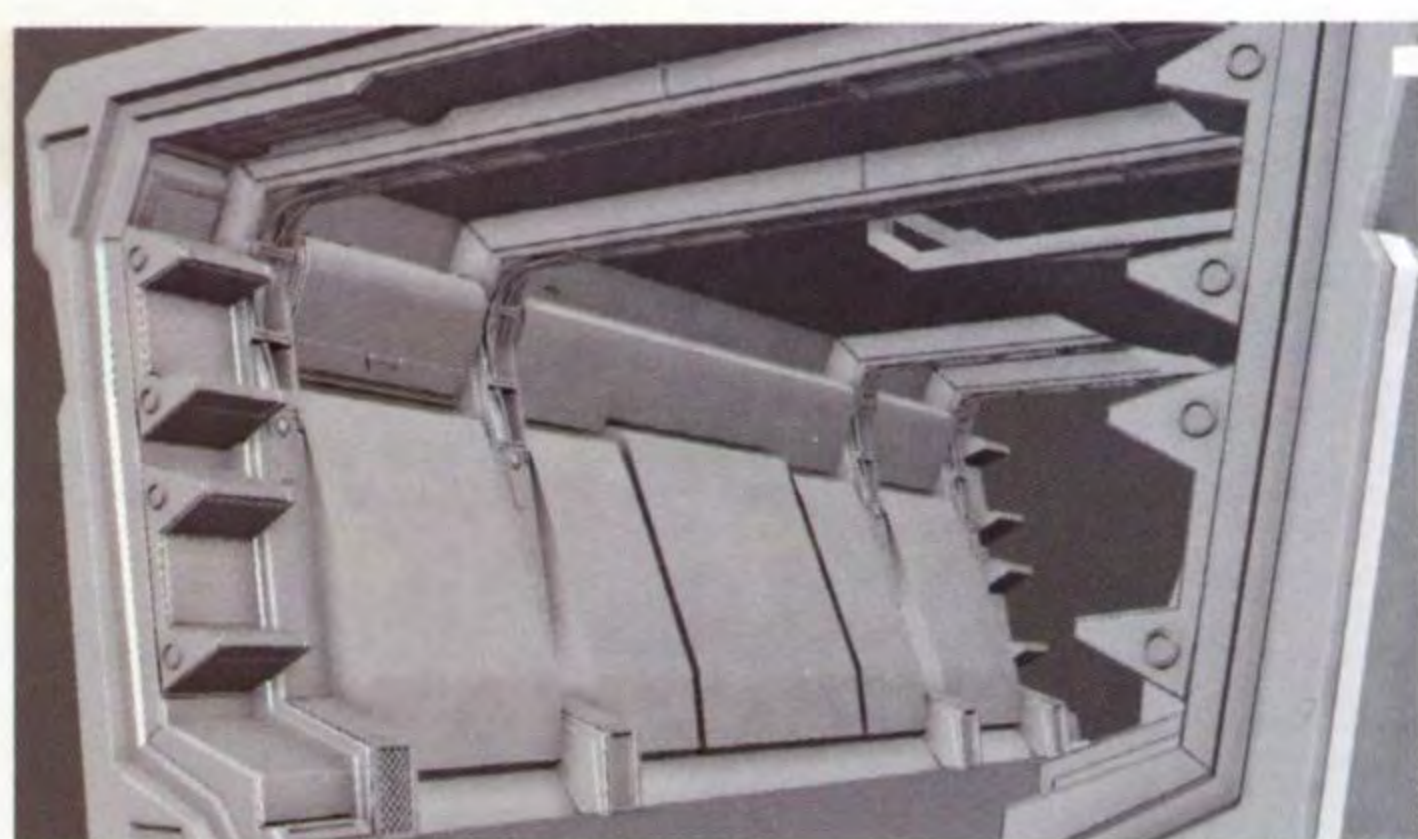


Hyperion Building Models [Jett Sarrett, Zach Ford] *Top, Right*
Hyperion Building Breakup [Jett Sarrett] *Middle*



MODULAR BUILDING

This modular Hyperion structure implies that the corporation is only in its early stages of taking over Pandora—that they're still relying on temporary module buildings rather than complete, self-sufficient structures.



Modular Building Concepts

[Kevin Duc] *Top*

Modular Building Interior WIP

[Brent Hollon] *Above*

Modular Building Model

[Brent Hollon] *2nd from Top Right*

Modular Building Texture

[Brent Hollon] *3rd from Top Right*

Modular Building Final Model

[Brent Hollon] *Bottom Right*

"This is one of those two-in-one assets I like to make. Got the idea from an old concept we had, added some bulk and a lot of moving parts," says Robert Santiago.



"This is one of, if not my favorite asset, I made for this game," says Jett Sarrett. "Lorin had the basic design made, and I looked at a lot of Brent's Hyperion stuff and riffed off of that to fill out all the details on this guy, I think this was the first asset I did that I made a low and then painted it without any high poly work, I was pretty proud of that at the time."



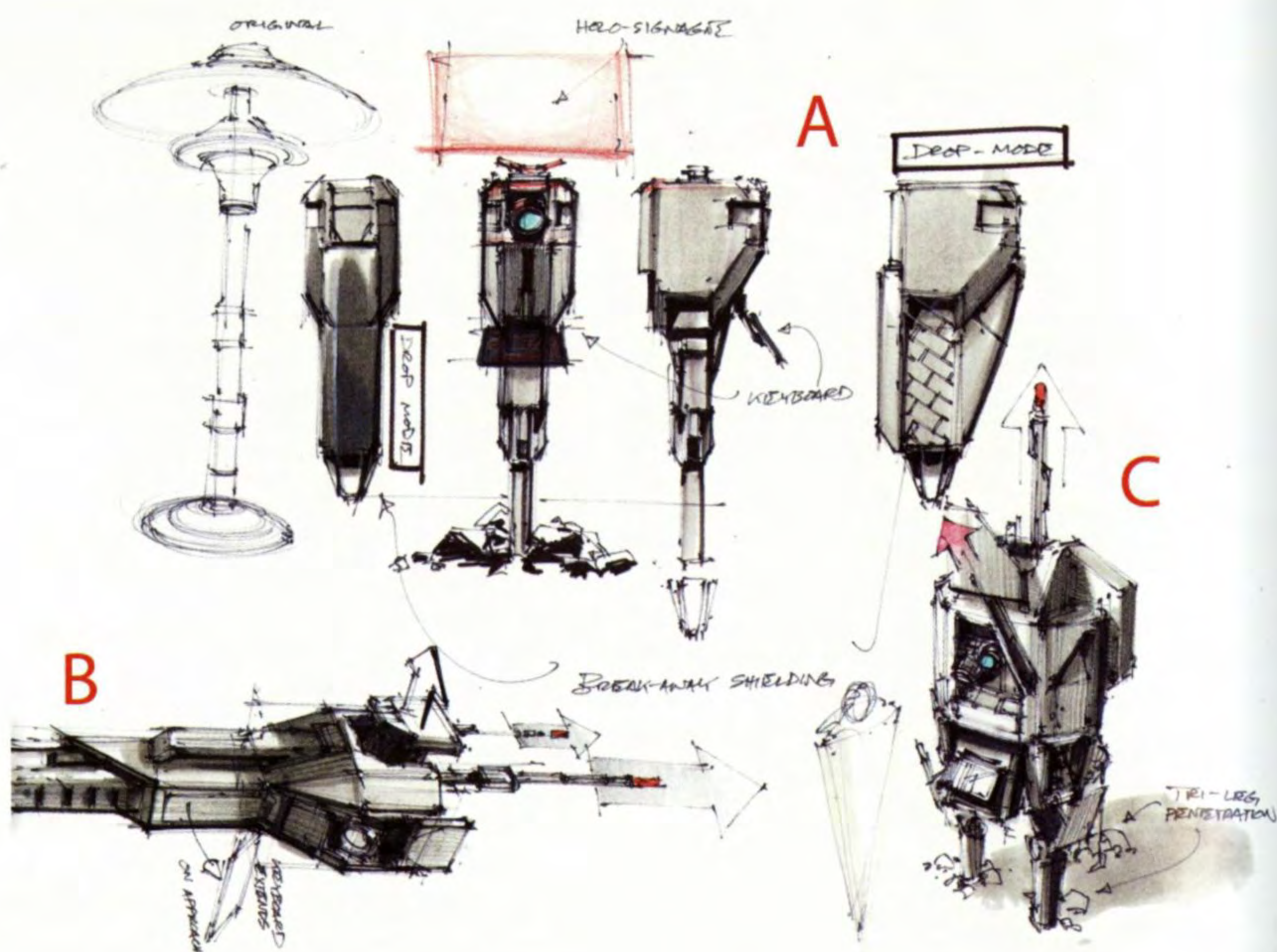
"I really liked the tower, it just had such a cool shape and design; I really enjoyed making this asset," says Jett Sarrett. "The helipad and netting was the bigger challenge here."



Hyperion Turret Model [Robert Santiago] *Top*
Hyperion Tower Model [Jett Sarrett] *Middle Left*
Hyperion Lamp Models [Jett Sarrett] *Middle Right*
Hyperion Chair Model [Jimmy Barnett] *Bottom*

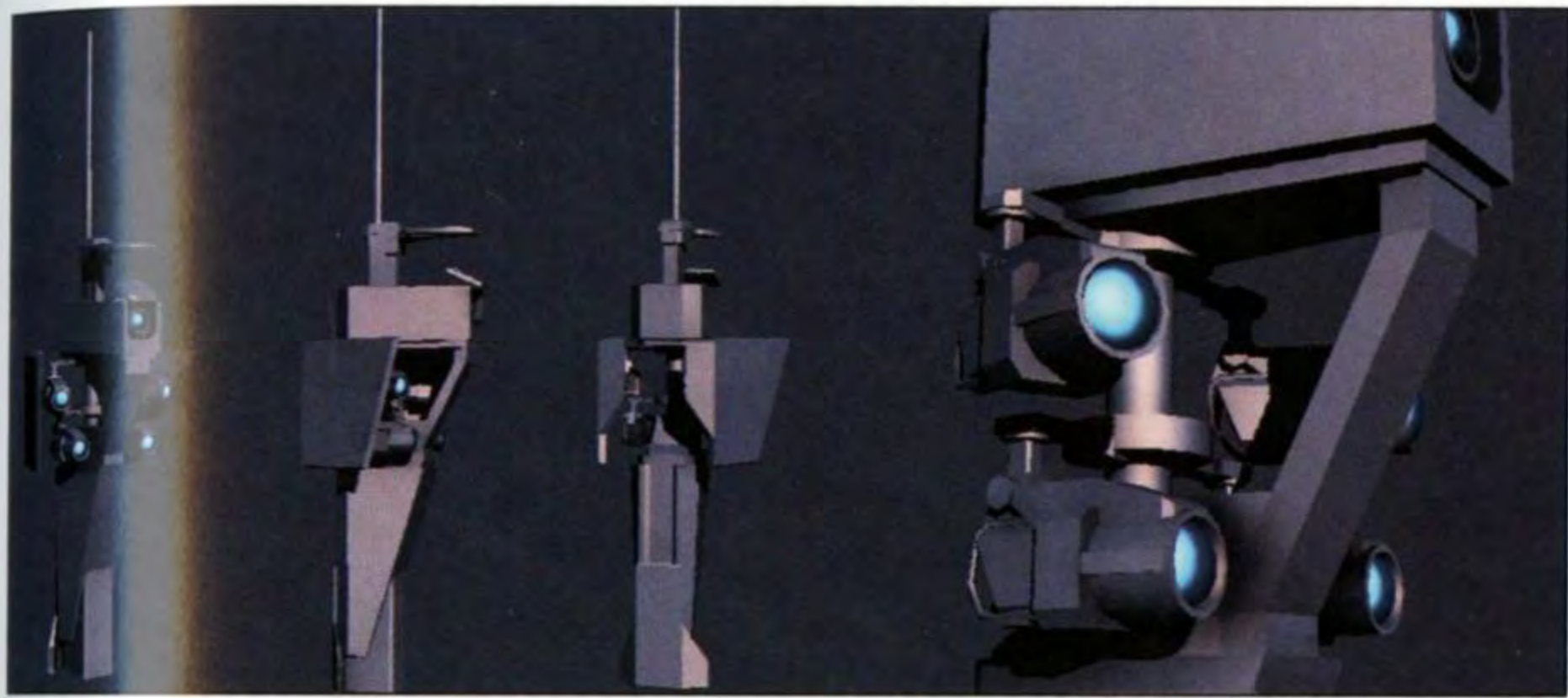
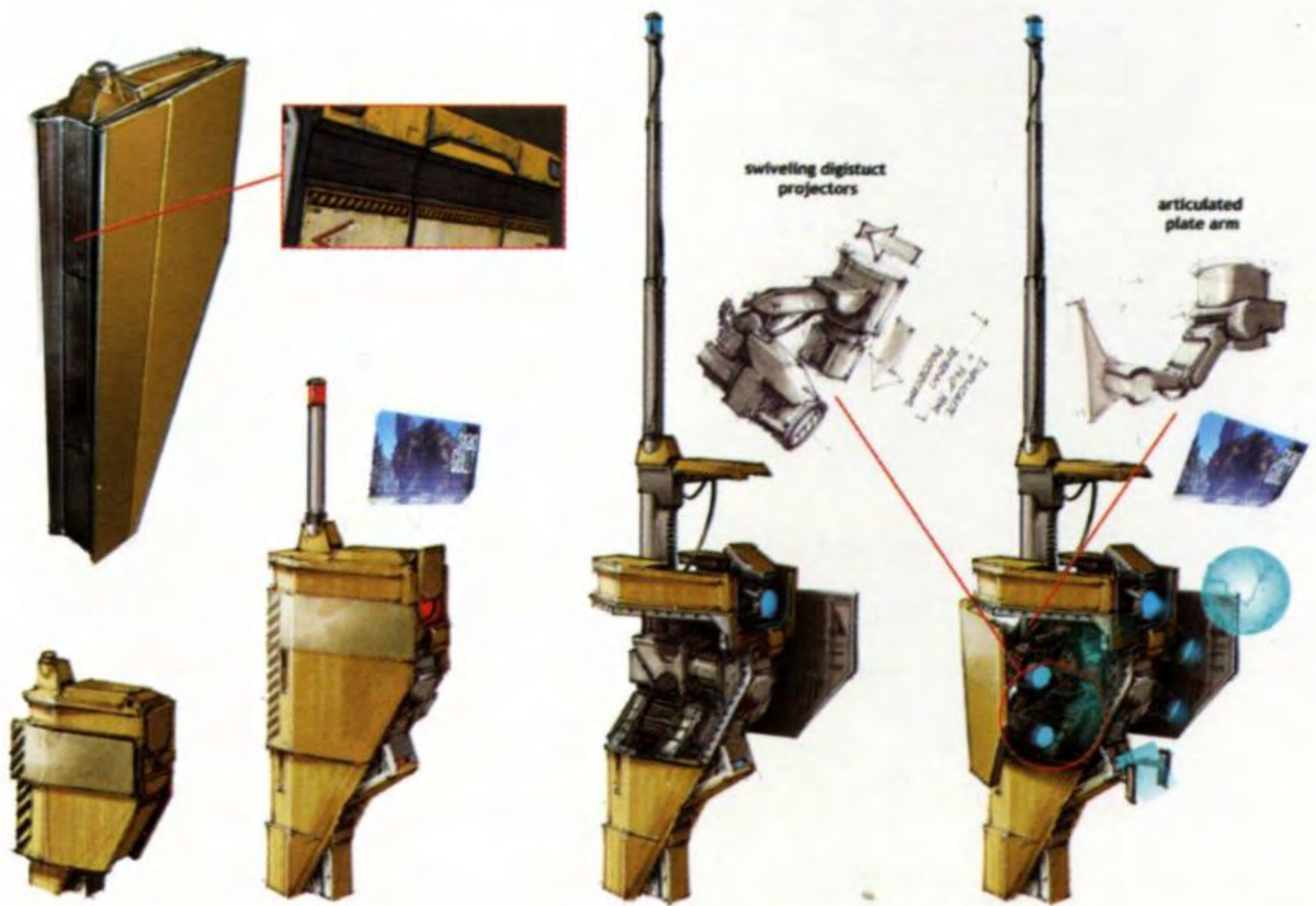
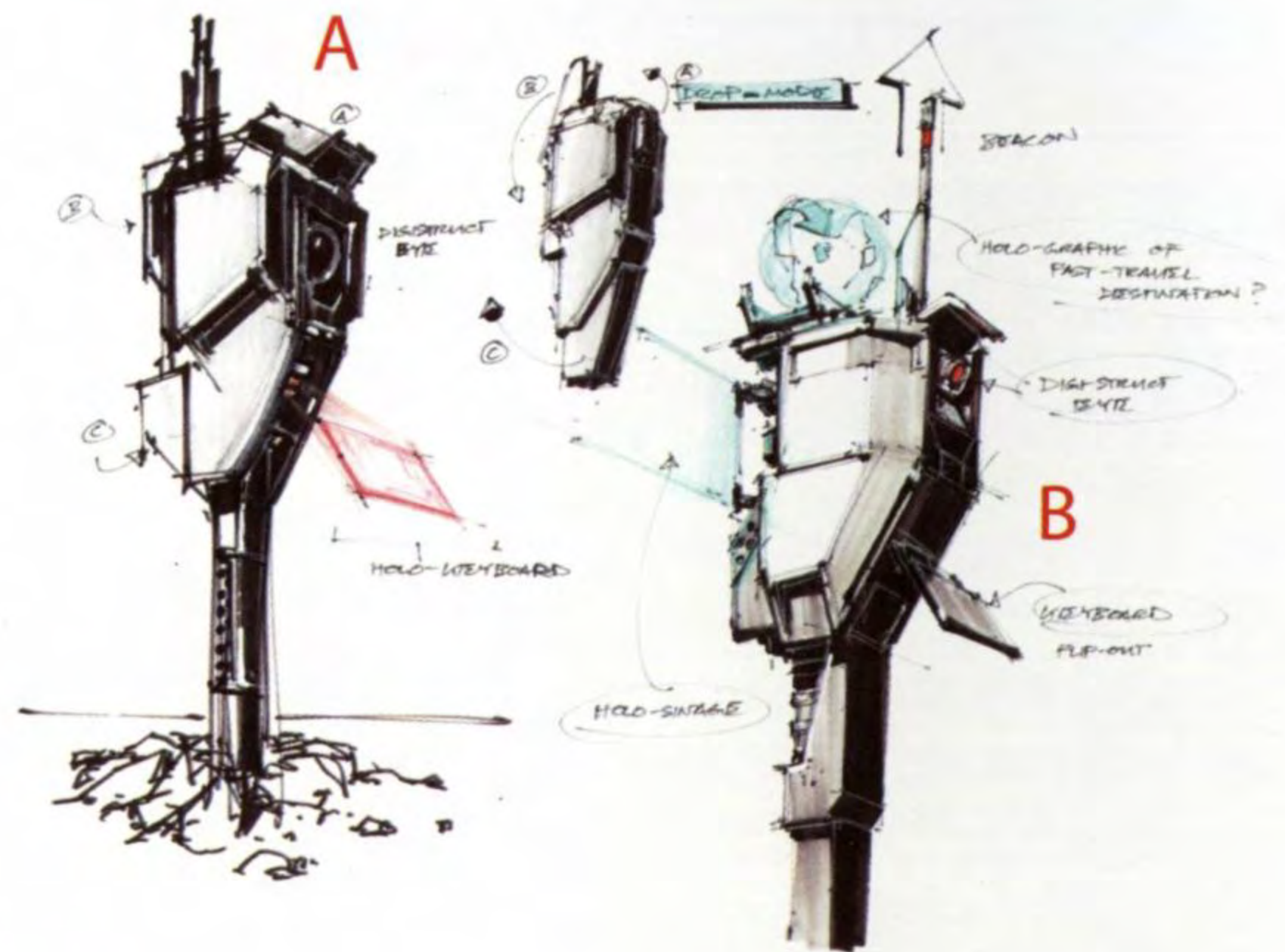
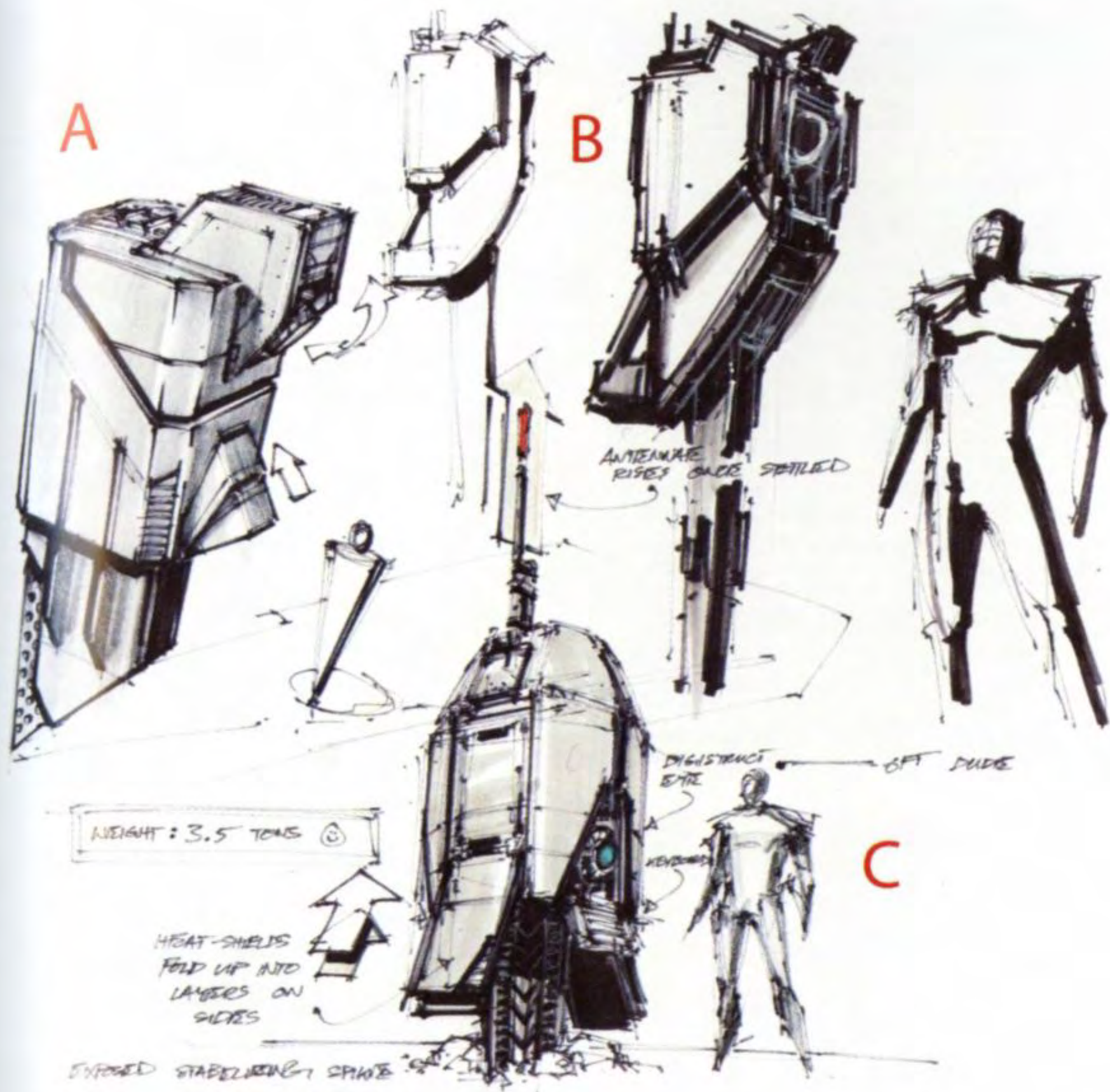
FAST TRAVEL MACHINE

At one point, it was decided that the Fast Travel—the ubiquitous teleportation system that the player uses to quickly move across the planet—needed a visual upgrade. “In the first it was a pole with a domed cap,” says Lorin Wood. “Under the Hyperion regime of this new Pandora, the design needed to reflect that aesthetic, so I brought out more of a Claptrap inspired body shape. The scenario would be that these stations are shot in from the orbiting Hyperion platform and remain dormant until the player approaches, at which point they elaborately unfold to provide direction.”



Fast Travel Machine Concepts [Lorin Wood] *Above*
Fast Travel Machine (BL1) [Brent Hollon] *Below Left*
Checkpoint Model (BL1) [Robert Santiago] *Below Right*





Fast Travel Machine Concepts

[Lorin Wood] Top

Fast Travel Machine Models

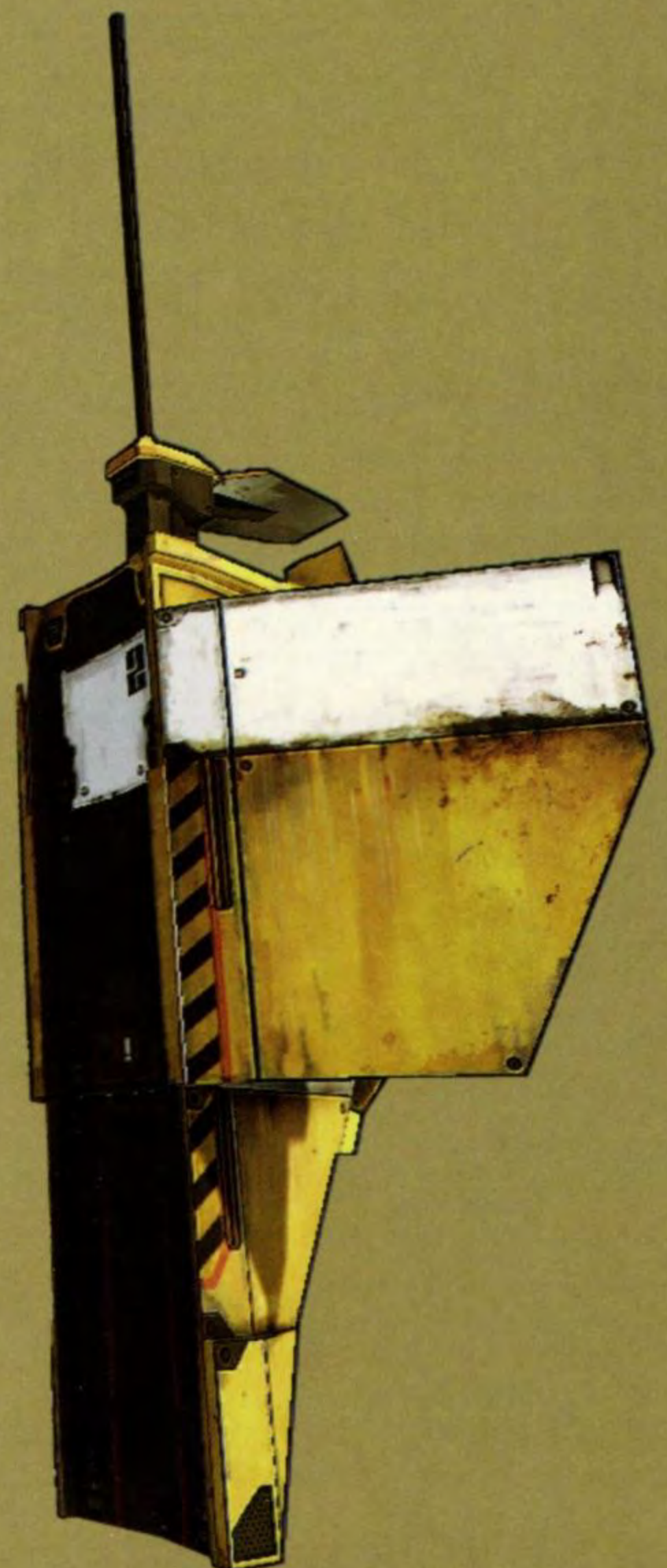
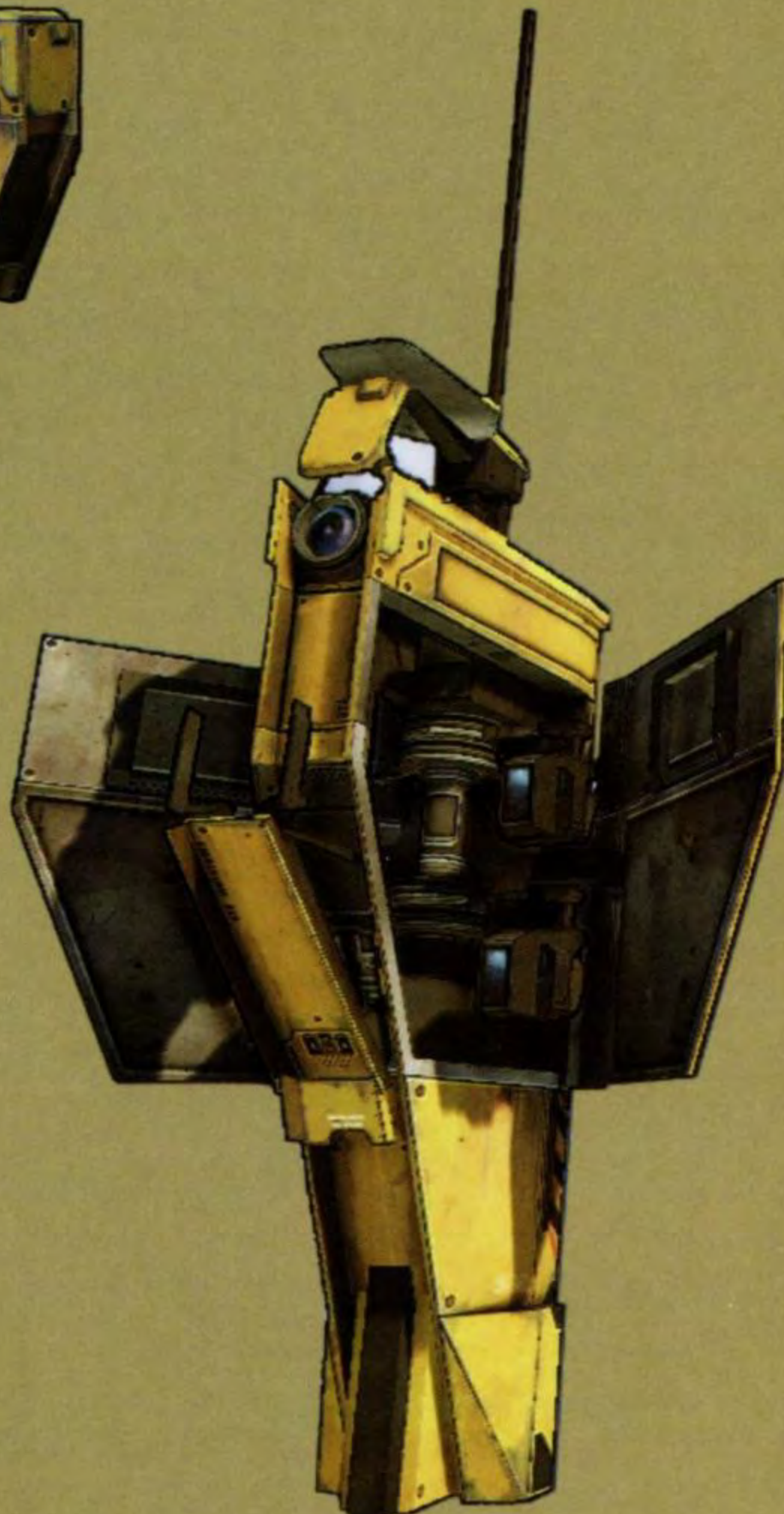
[Brent Hollon] Middle Left

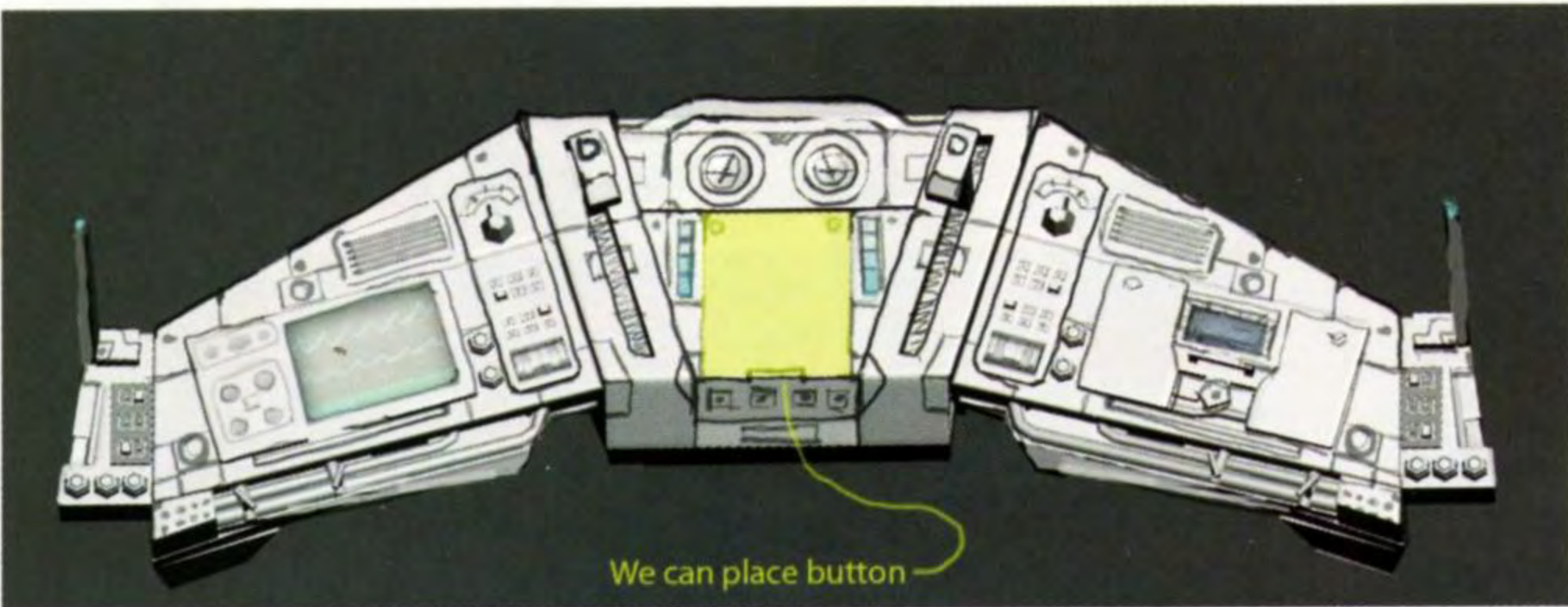
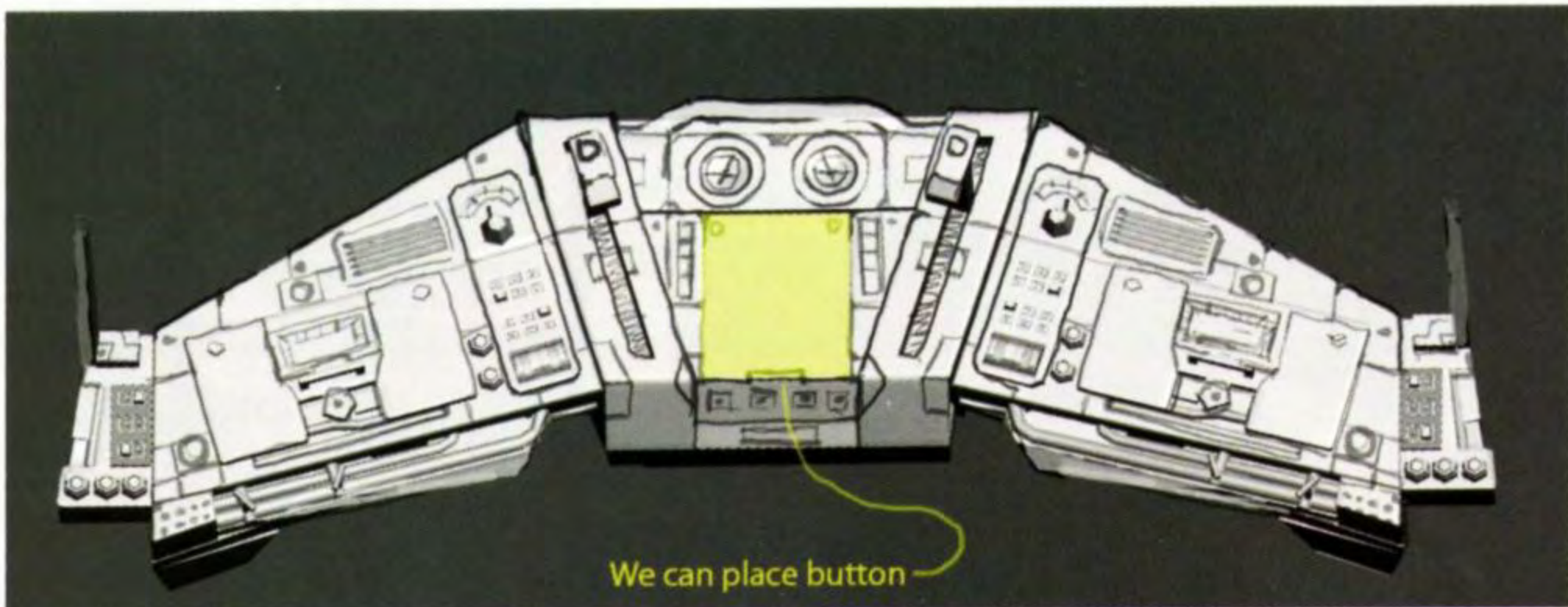
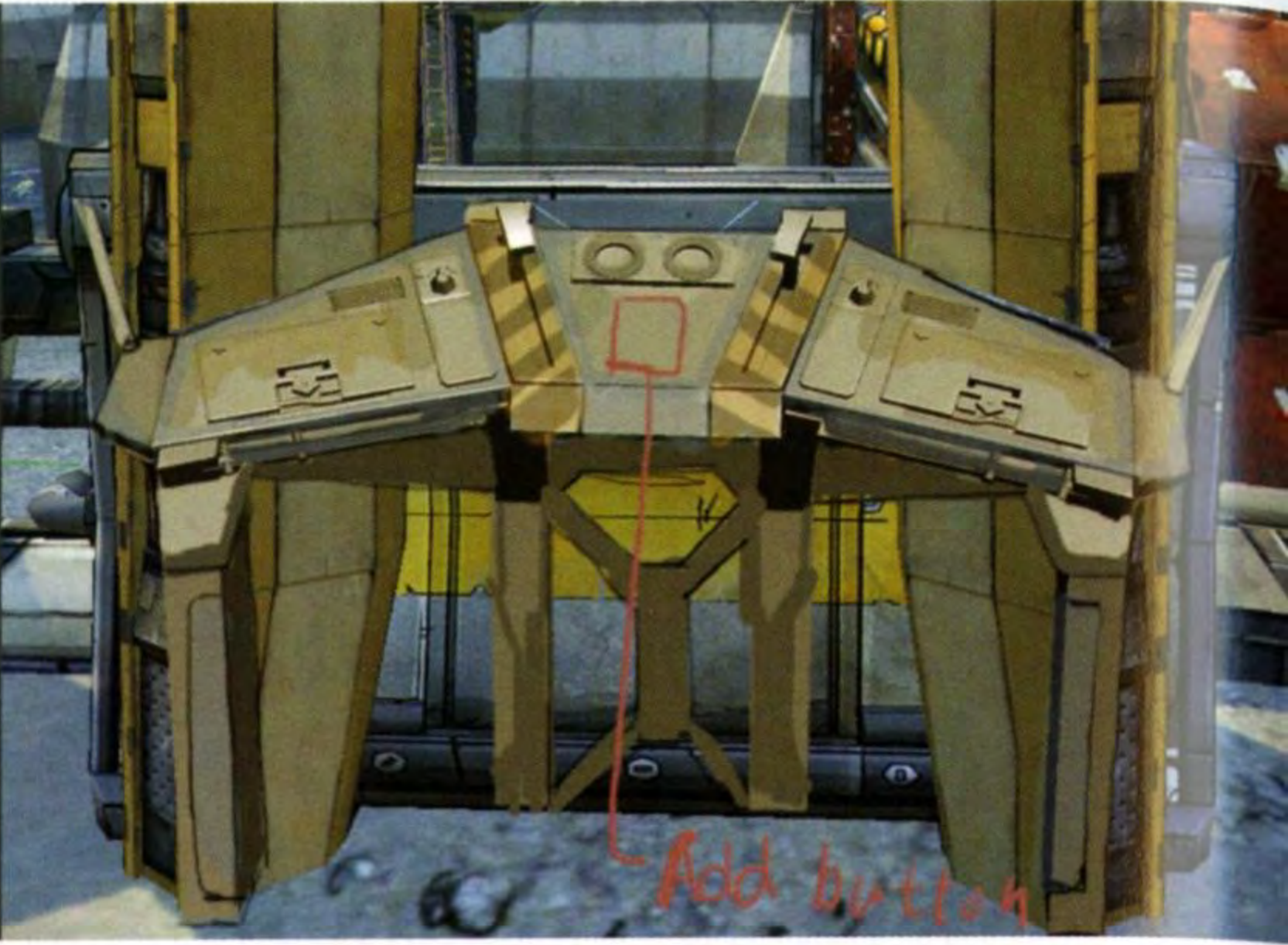
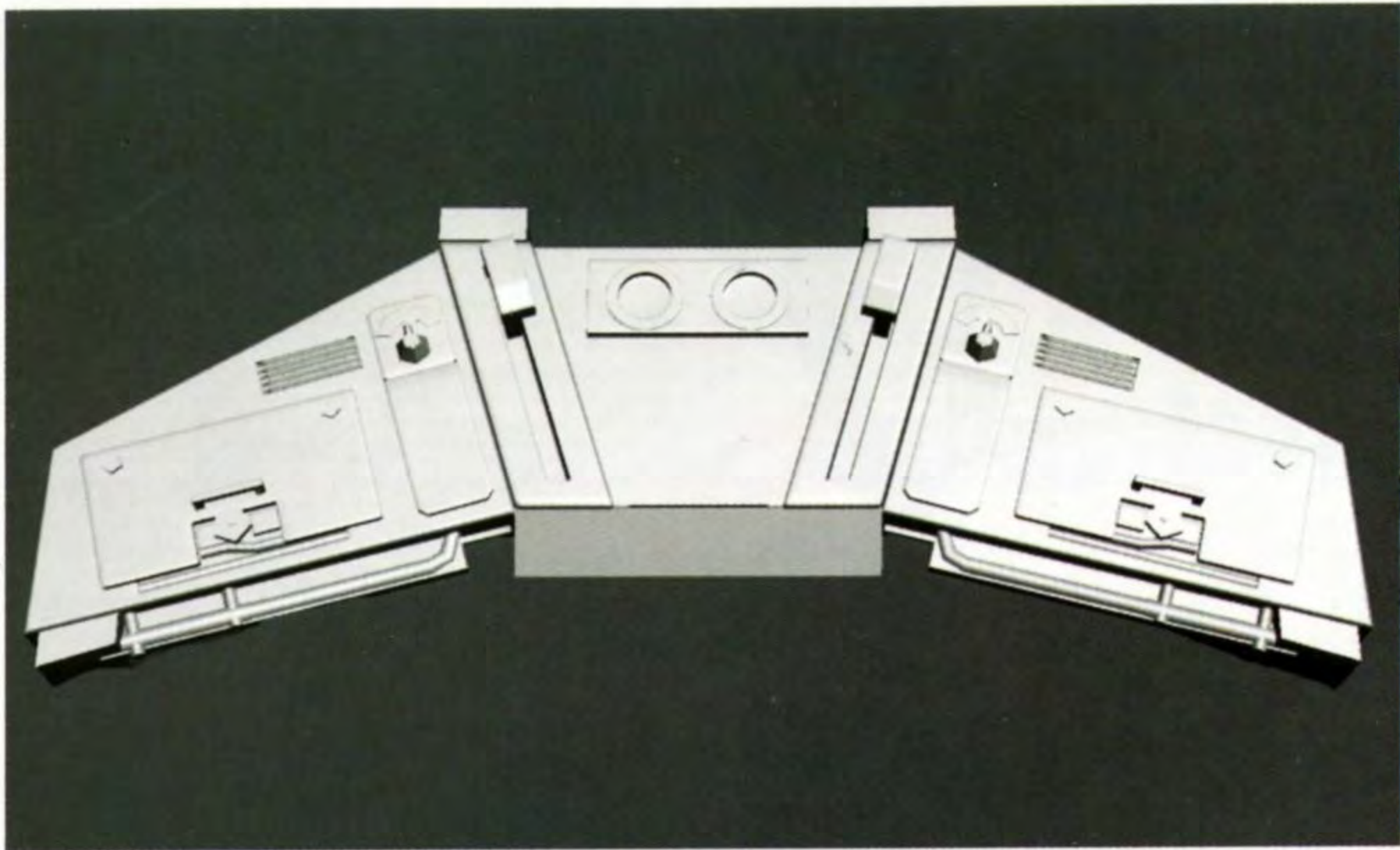
Fast Travel Machine Concepts

[Lorin Wood] Middle Right

Fast Travel Machine Model

[Brent Hollon] Bottom

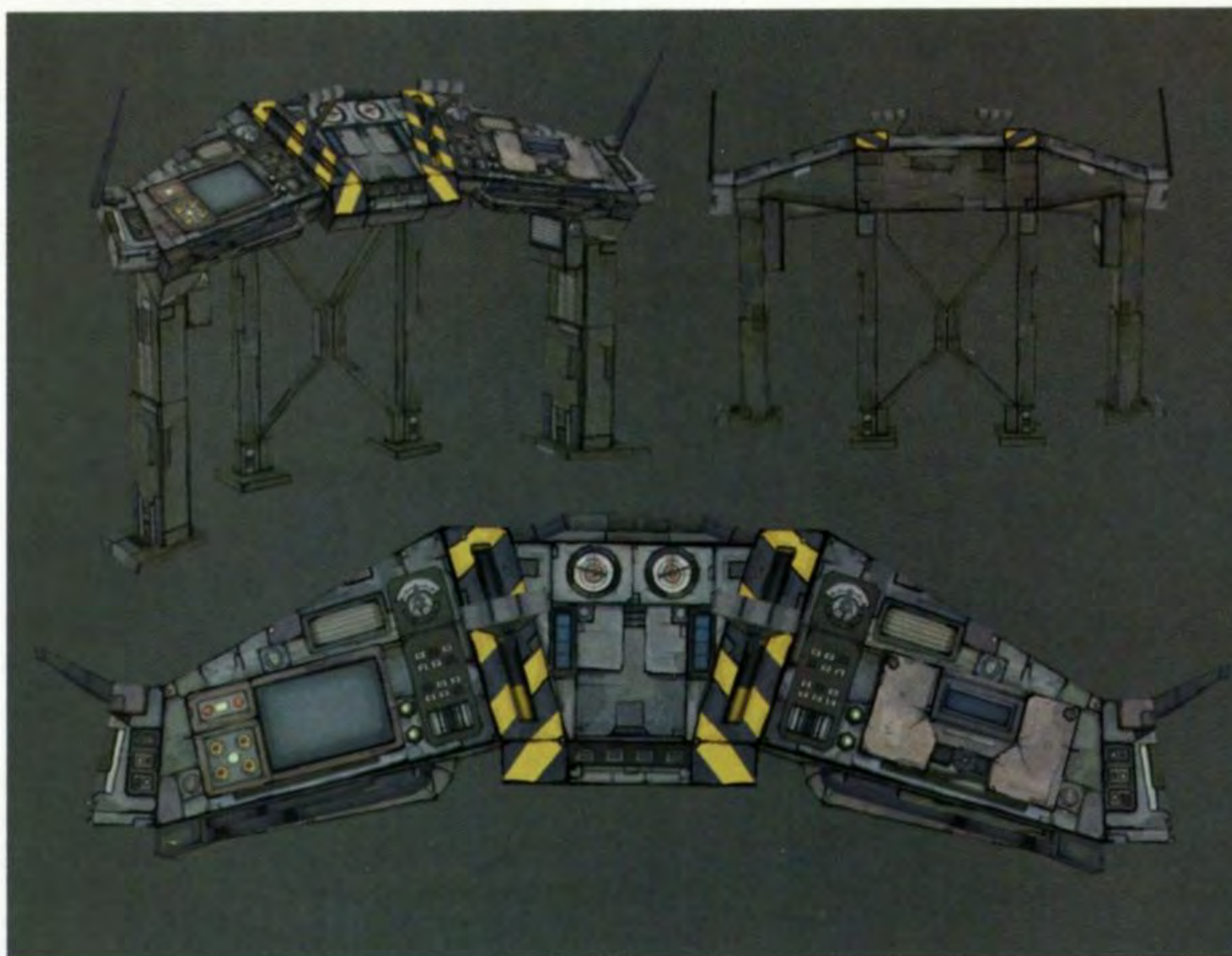


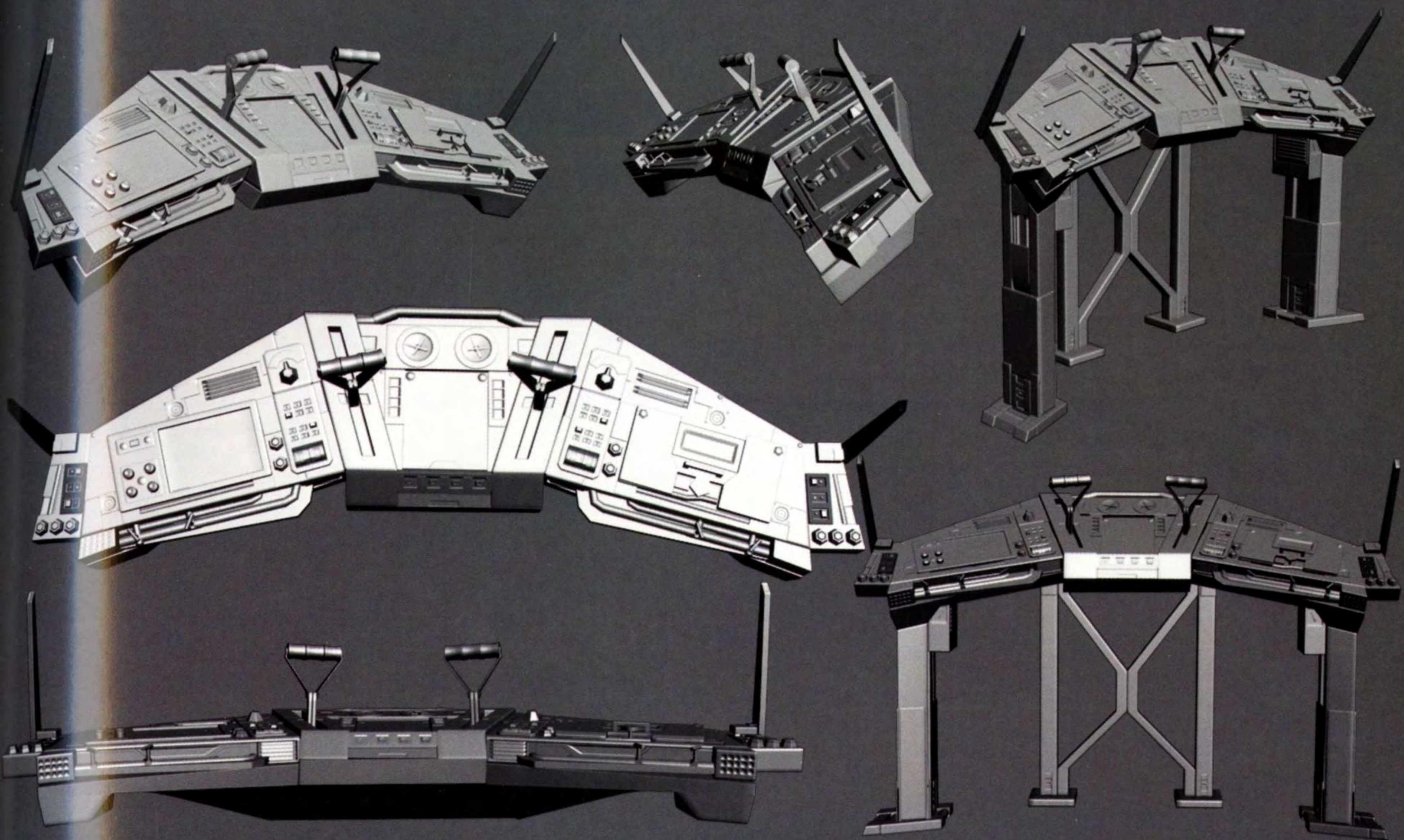


GENERAL KNOXX'S CONTROL PANEL

“General Knox’s control panel from *Borderlands 1*’s DLC has a visually readable and goofy element,” Damian Kim says. “But we needed a more serious control panel compared to [the] assets of *Borderlands 1*. So, the block out mesh from the silhouette of General Knox’s control panel was [the] starting point for [a] new control panel of *Borderlands 2*. I checked rough outlook after exporting this rough mesh into our actual game and adjusted basic elements such as scale and proportion. After I got a proper block out mesh from Max, I did line drawing on Photoshop for both better high poly development and the next step was estimating the final inking feeling from the actual texture.”

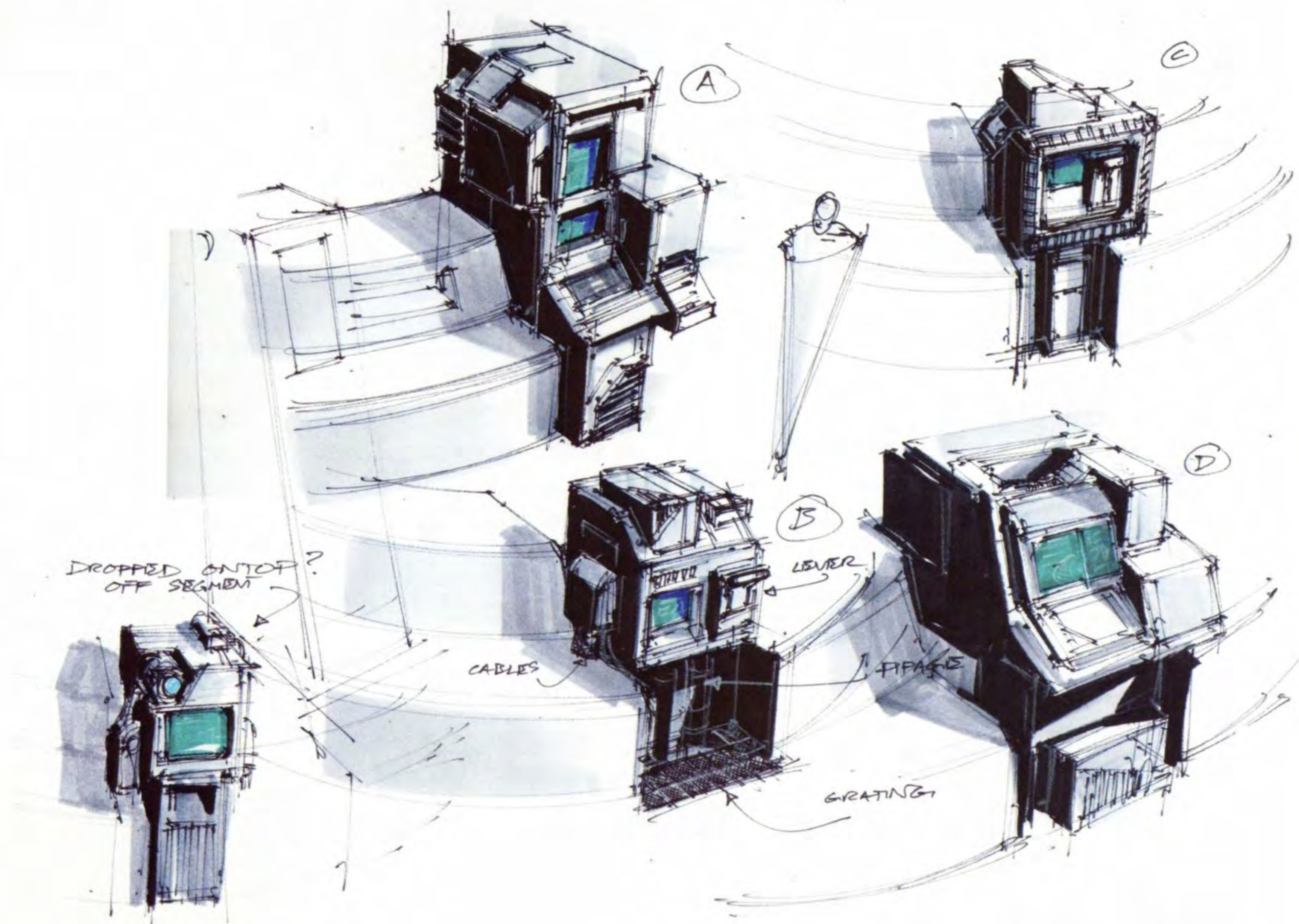
Control Panel Model [Damian Kim] *Top*
Control Panel Concepts [Damian Kim] *Middle*
Control Panel Model and DIF [Damian Kim] *Below*





Control Panel Models [Damian Kim] *Top*
Control Panel DIF [Damian Kim] *Below*

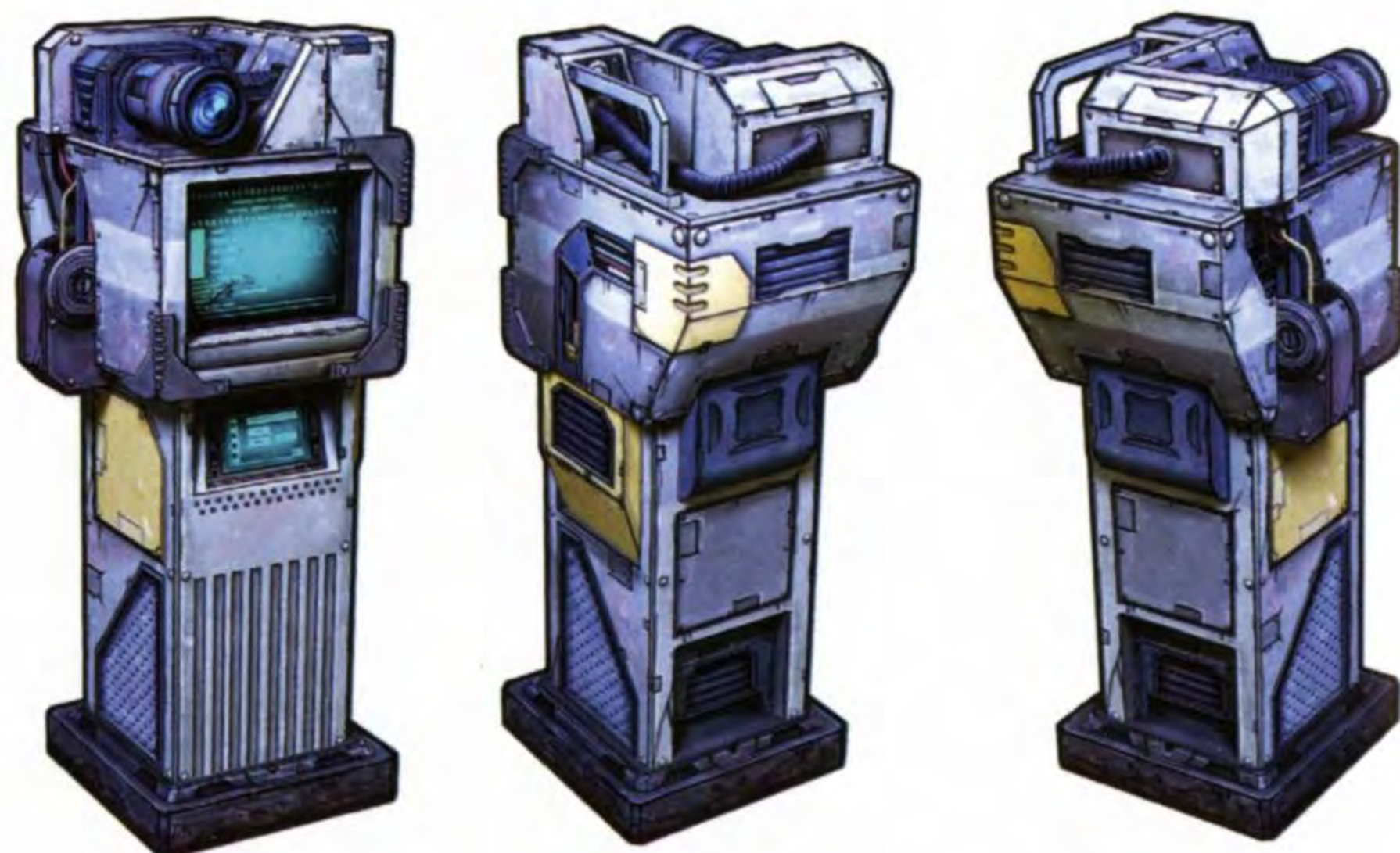




CONTROL CONSOLES

"Kevin Duc designed some of the animal pens, so I designed around his work and embedded the accessible control panels into the framework," says Lorin Wood.

"With certain designs I tend to provide rough 3D concepts (or work in 3D primarily if it feels right) using SketchUp. This allows me to move around the design quickly, which makes for an effective communication tool. From this stage I can then export a rough mesh to hand off to the modeler to reference when making the final asset."



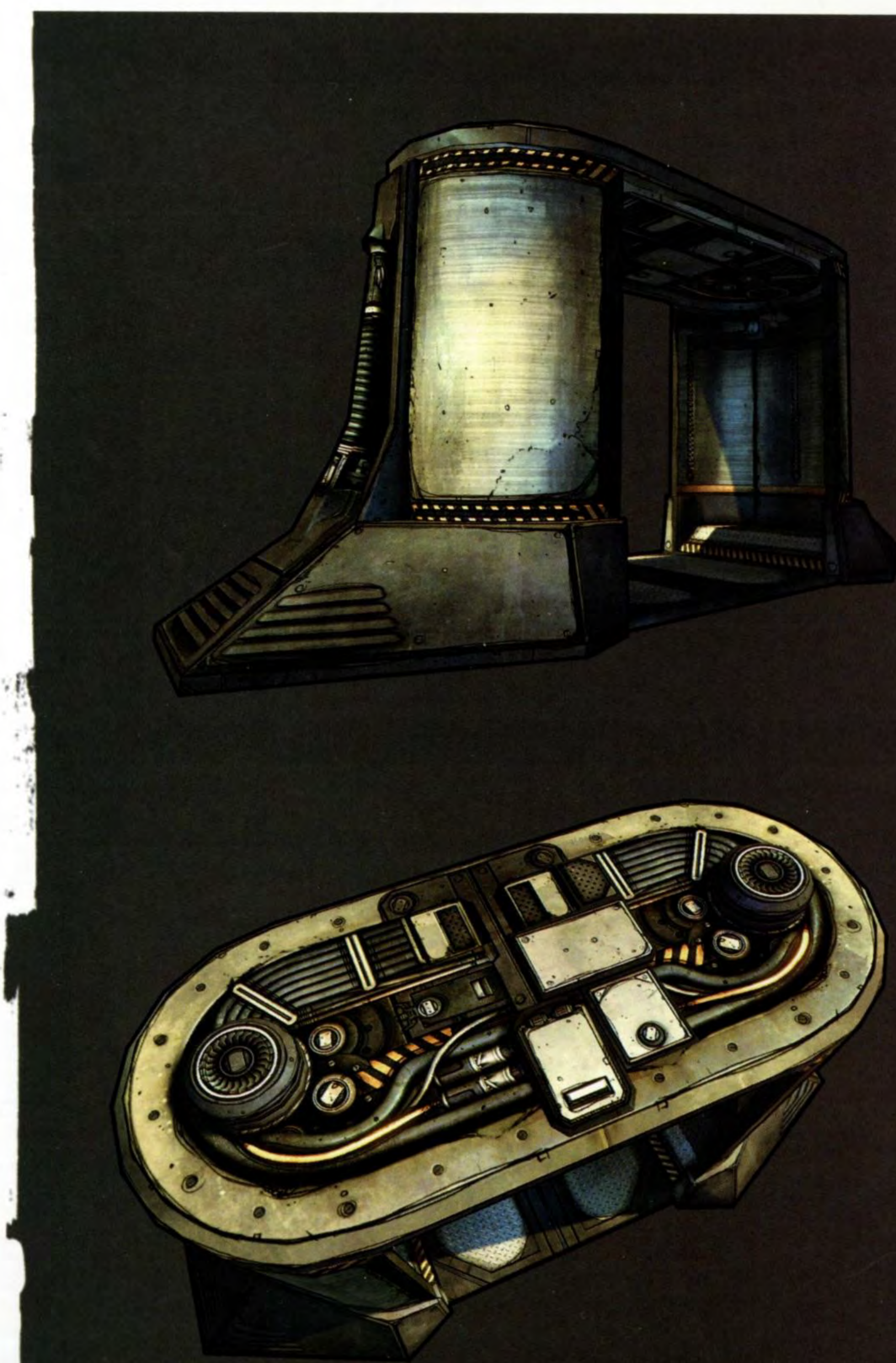
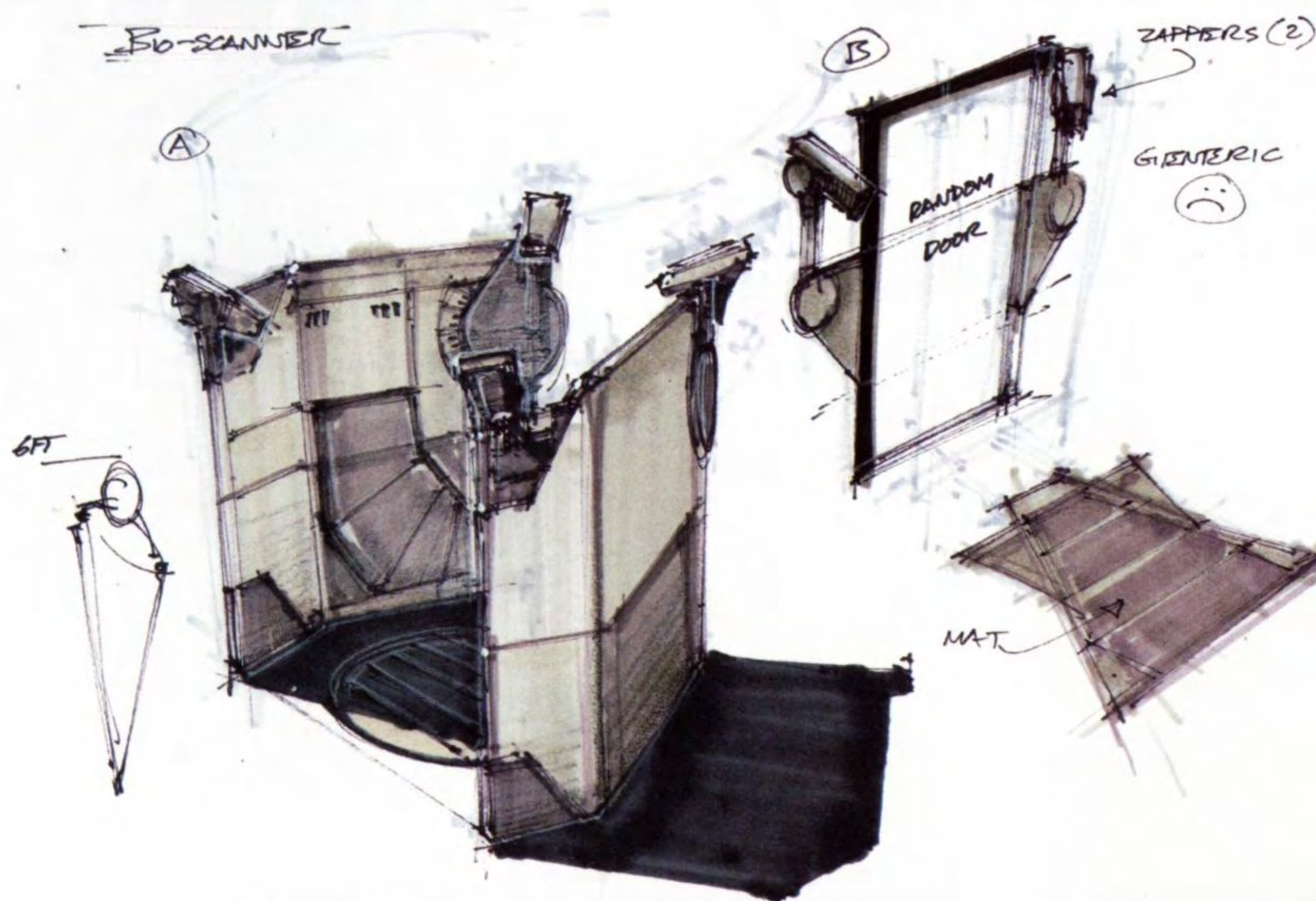
"This was the first piece of art I created from scratch for *BL2*," says, Jason Neal. "I had [a] really nice concept to work from with the idea that it would resemble an old early computer terminal mixed with a Toughbook. I really liked the small subtle shapes the Toughbook has, so I created a lot of those for smaller details. I looked at old CRT monitors and other early computer tech for the larger details."

Control Console Concepts [Lorin Wood] *Top, Left*
Control Console Models [Jason Neal] *Above*

BIO SCANNER

Possibly one of the most important props in the story, the Hyperion Bio Scanner is the last piece of defense standing between the Vault Hunters and Jack's most precious treasure—Angel. "As this device would be used in only one area accessible to Jack, it stood to reason that Jack would reserve his most sophisticated technology for it," says Wood.

"Once I found the most appropriate shapes, I took this into SketchUp and created a layout model to hand off to Brent Hollon who worked his magic on it. It was a simple enough task that I created three different variations for the art director to choose from."



Bio Scanner Concepts [Lorin Wood] Top
Bio Scanner Model [Lorin Wood] Above
Bio Scanner Models [Brent Hollon] Right

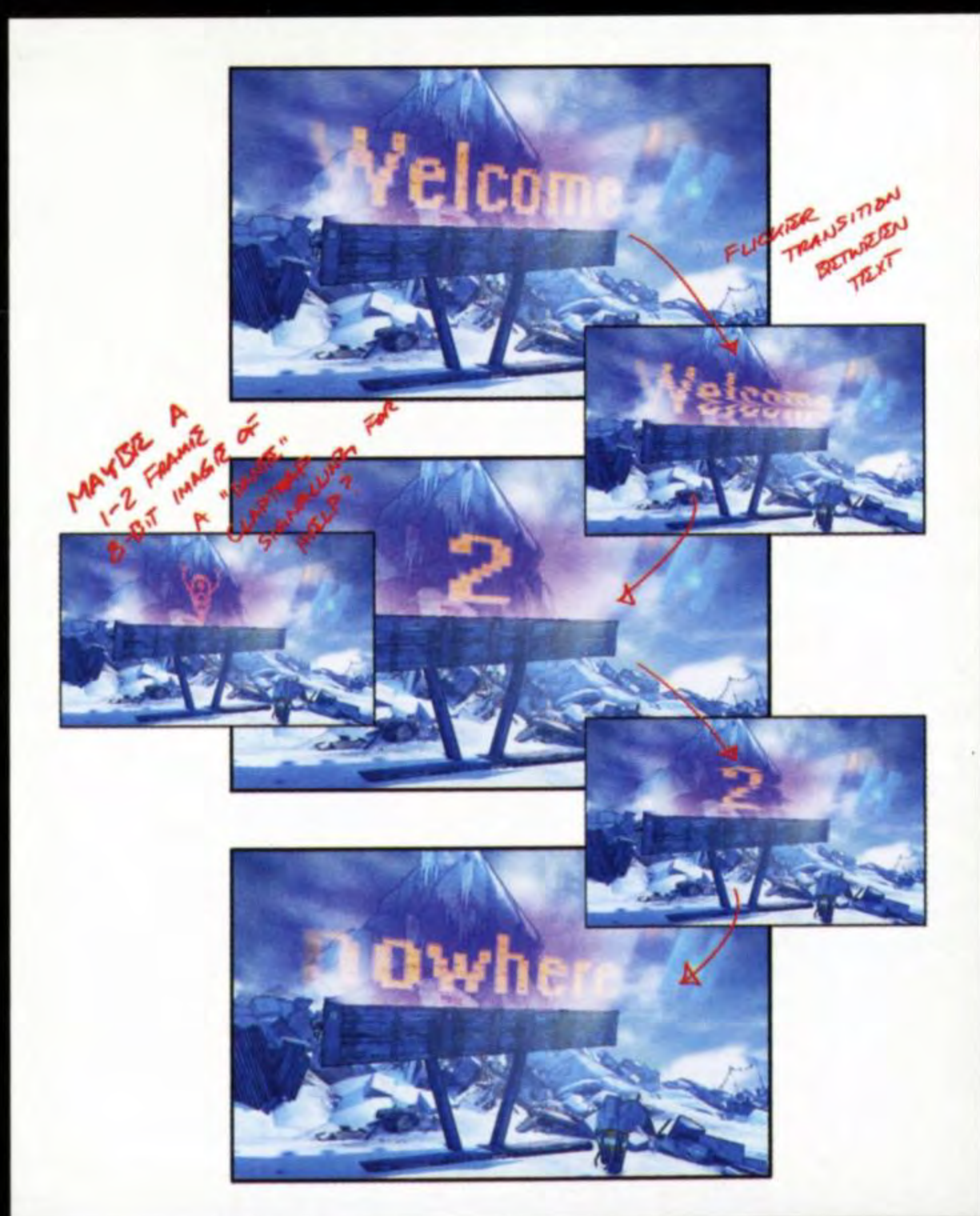
ENVIRONMENTAL PROPS

WELCOME SIGN

"We wanted something that harkens back to the beginning of the first game, when you step off of the bus and are greeted by the flickering 'Welcome' sign at the rundown Fyrestone station," Lorin Wood says.



Welcome Sign Concepts
[Lorin Wood]

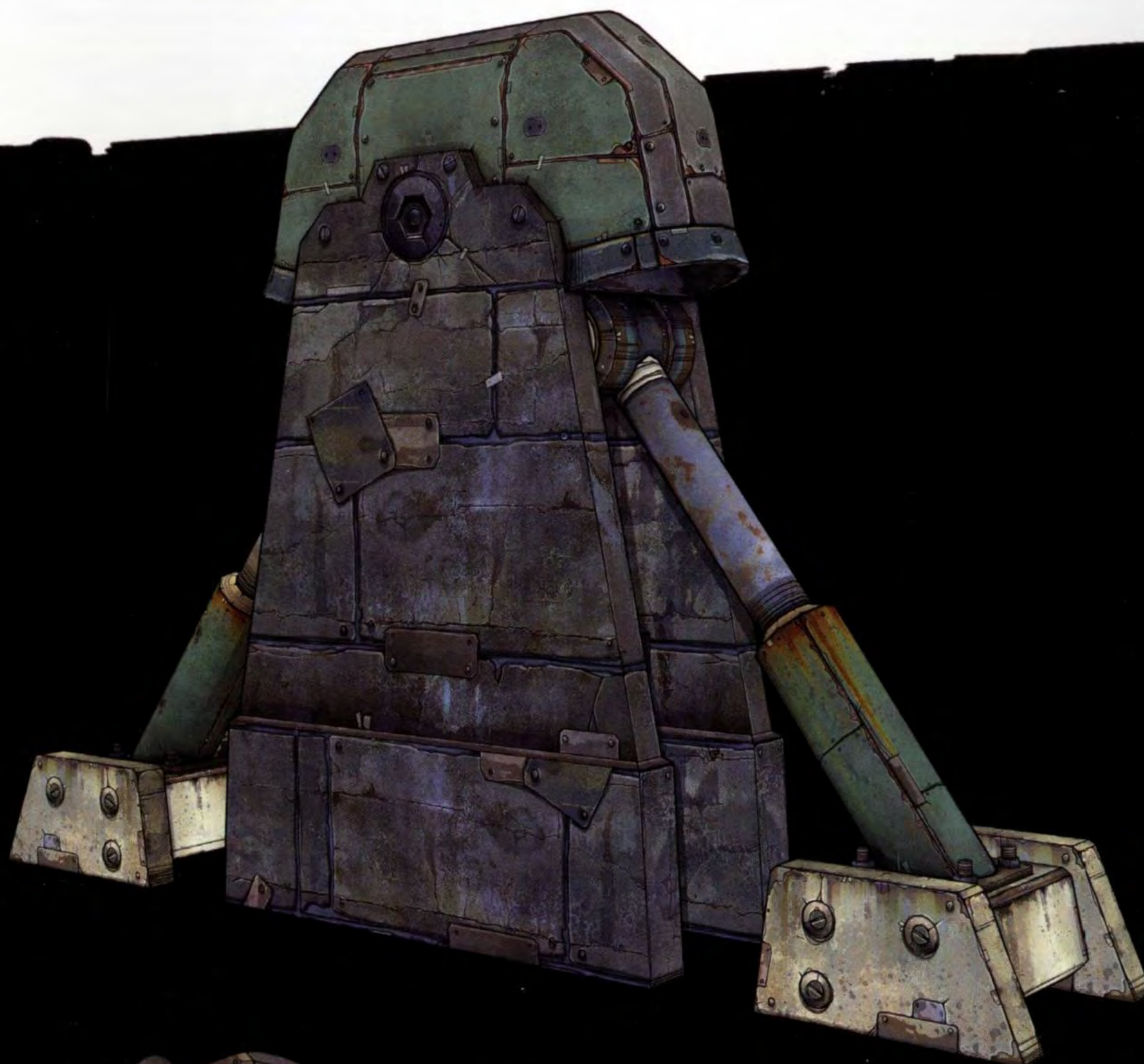


SANCTUARY

"This cool piece was used as a wall and gate support, a must have for all home owners," says Robert Santiago.



Wall Support Model and DIF
[Robert Santiago] Above



"This monument that sits in the middle of Sanctuary went through several revisions because of its complex opening animation," says Robert Santiago. "But when the moment comes you will see it open."

Pillar Models
[Robert Santiago] Left

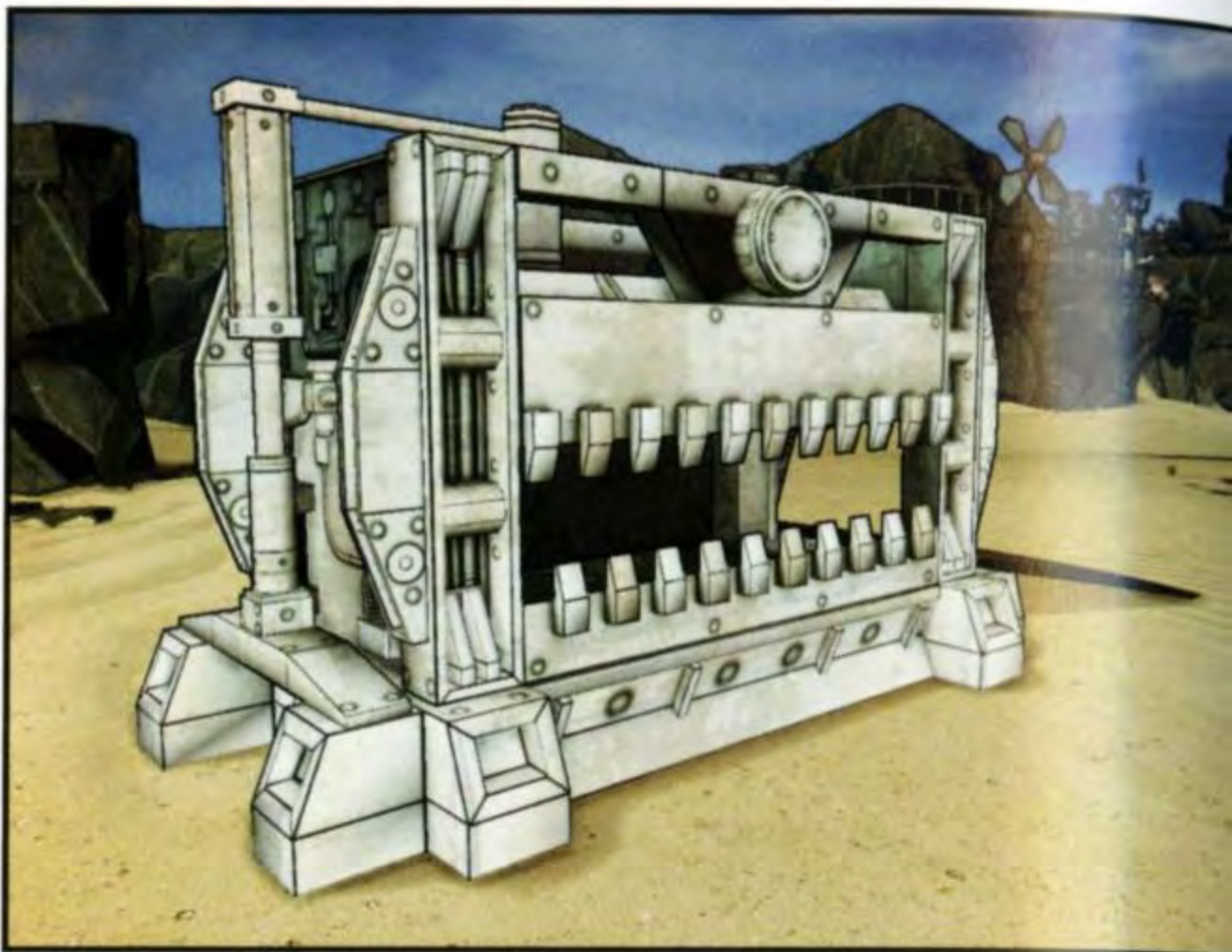
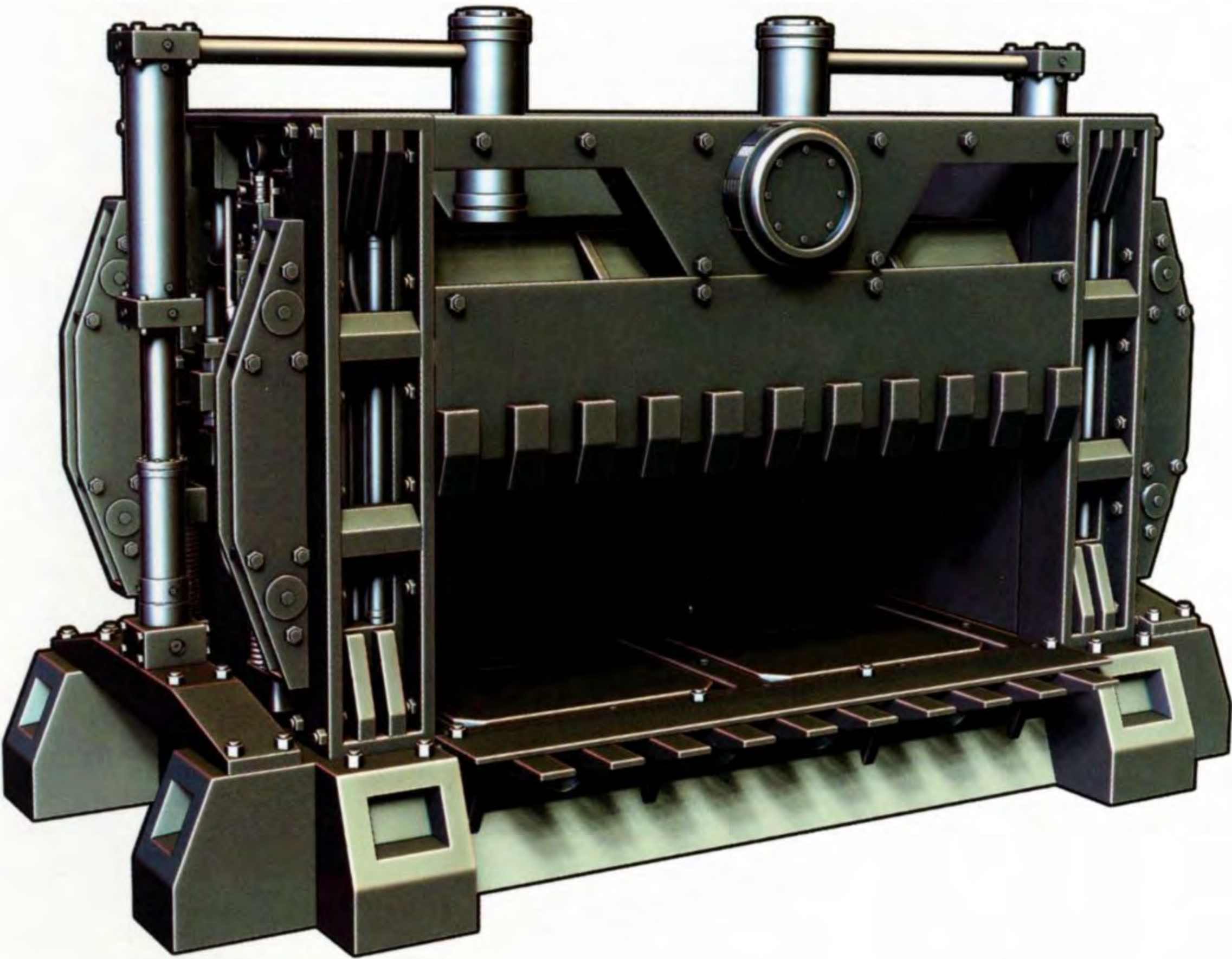


Arch DIF and Model
[Shaylyn Hamm] Above and Right



CAR CRUSHER

Jason Neal says, "This was my favorite piece to work on during the production of *BL2*. I had the opportunity to concept out the look and feel of the crusher for the junkyard early on. I started looking at hydraulic presses and typical car compactors to get an idea of where I wanted to go. I wanted it to look very heavy duty. I also had the idea of making the crusher look menacing and 'mean'. I came up with an idea that when the crusher is closed and munching down on its prey, the front would resemble a face with large interlocking teeth and angry eyes."

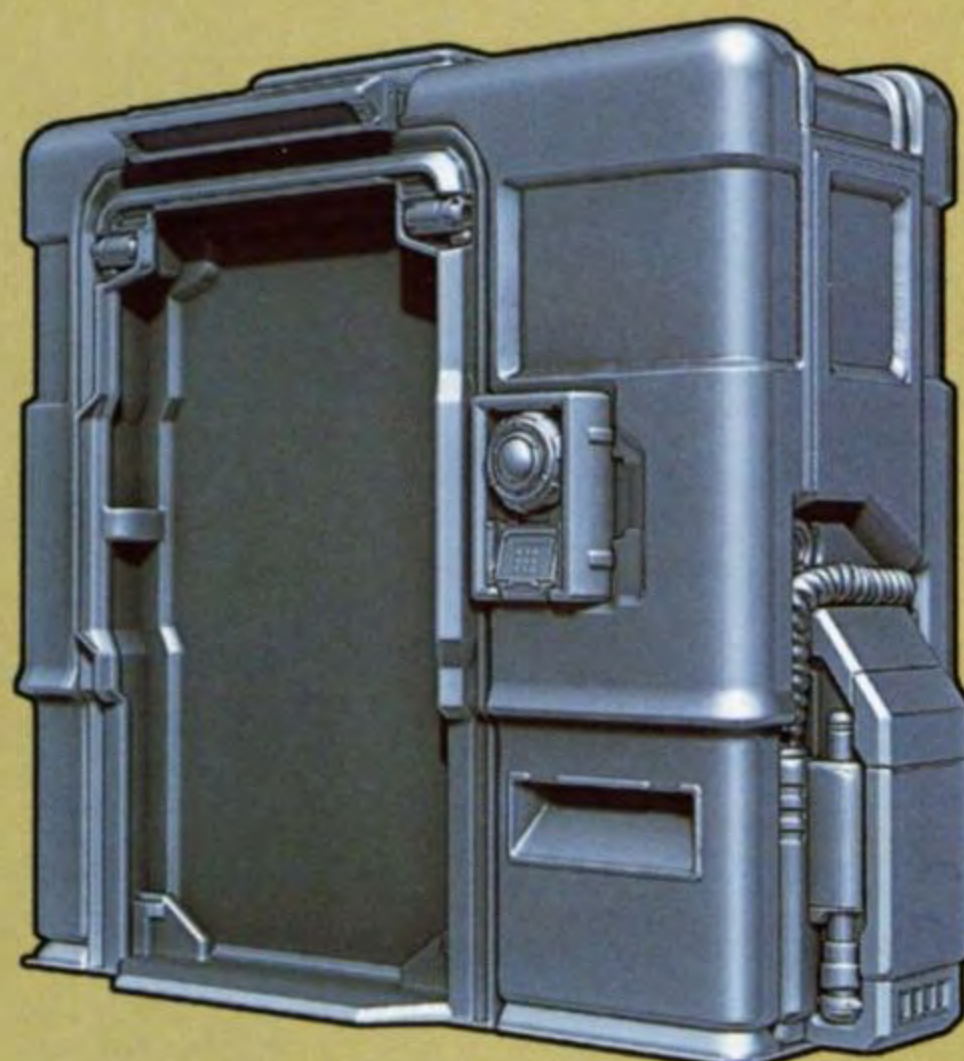


Car Crusher Models [Jason Neal]



VENDING MACHINES

The imagery adorning the vending machines also changed from *Borderlands* to *Borderlands 2*. Zed's injured hypodermic needle became a peppy pill bottle, while Marcus's suicidal grenade and self-pleasuring shotgun became a juggling shotgun shell and a flirtatious revolver.



Vending Machine Models

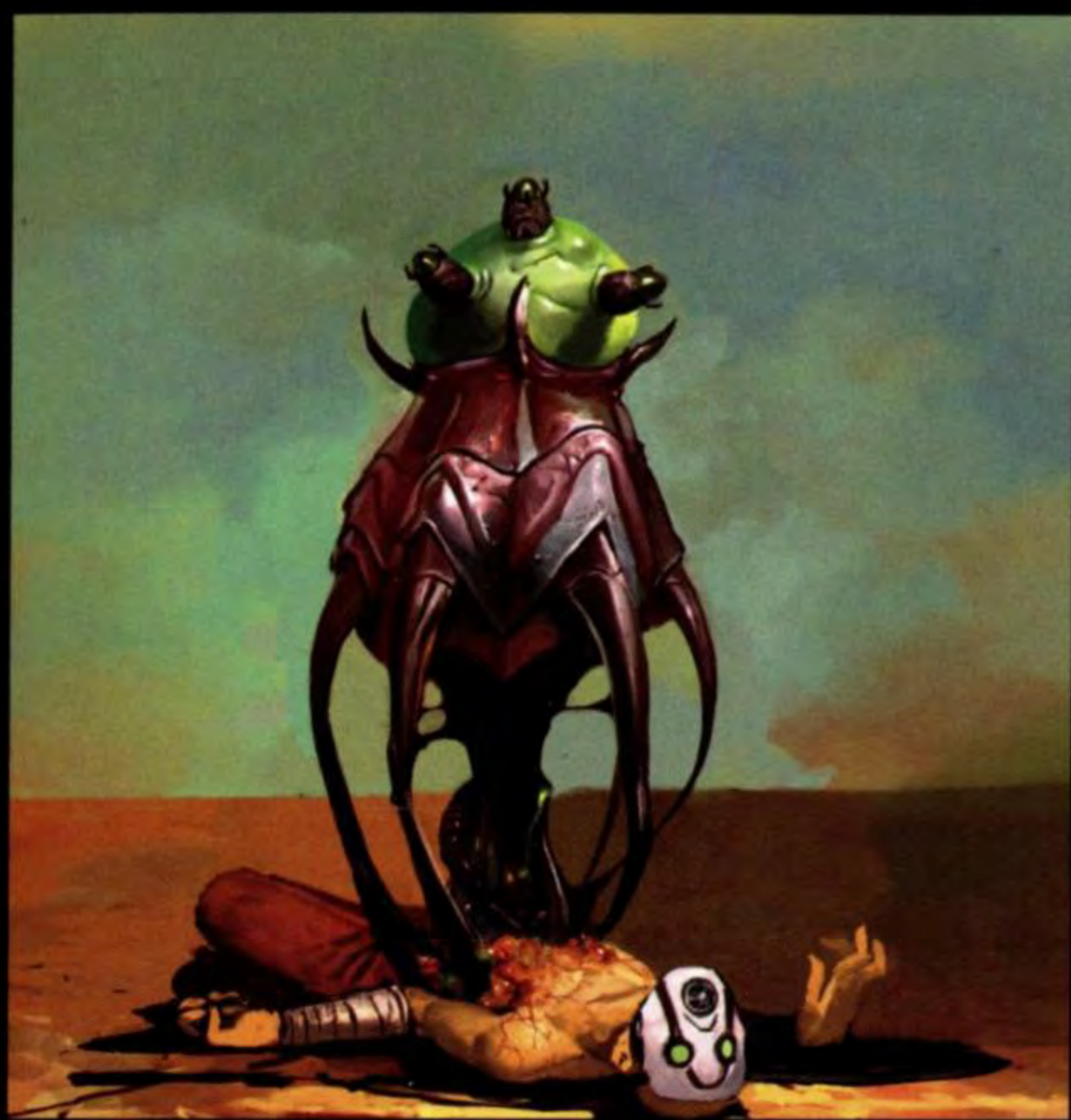
[Kale Menges, Ricky Oh, Jeremy Cooke] *Top*

Vending Machine DIF

[Ricky Oh] *Middle*

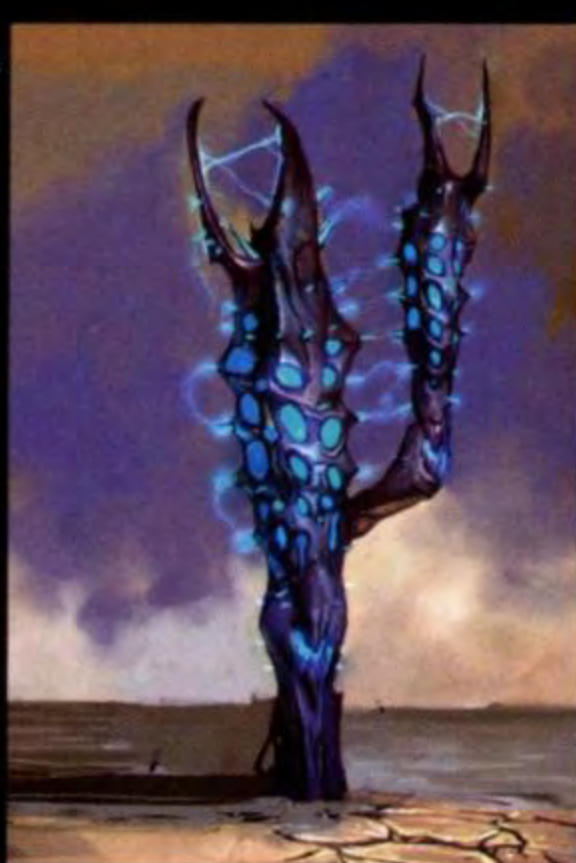
Customization Machine

[Ricky Oh] *Bottom*



ELEMENTAL PLANTS

Elemental Plant Sketches
[Matias Tapia] Above, Below
Elemental Plant Models
[Damien Kim] Left





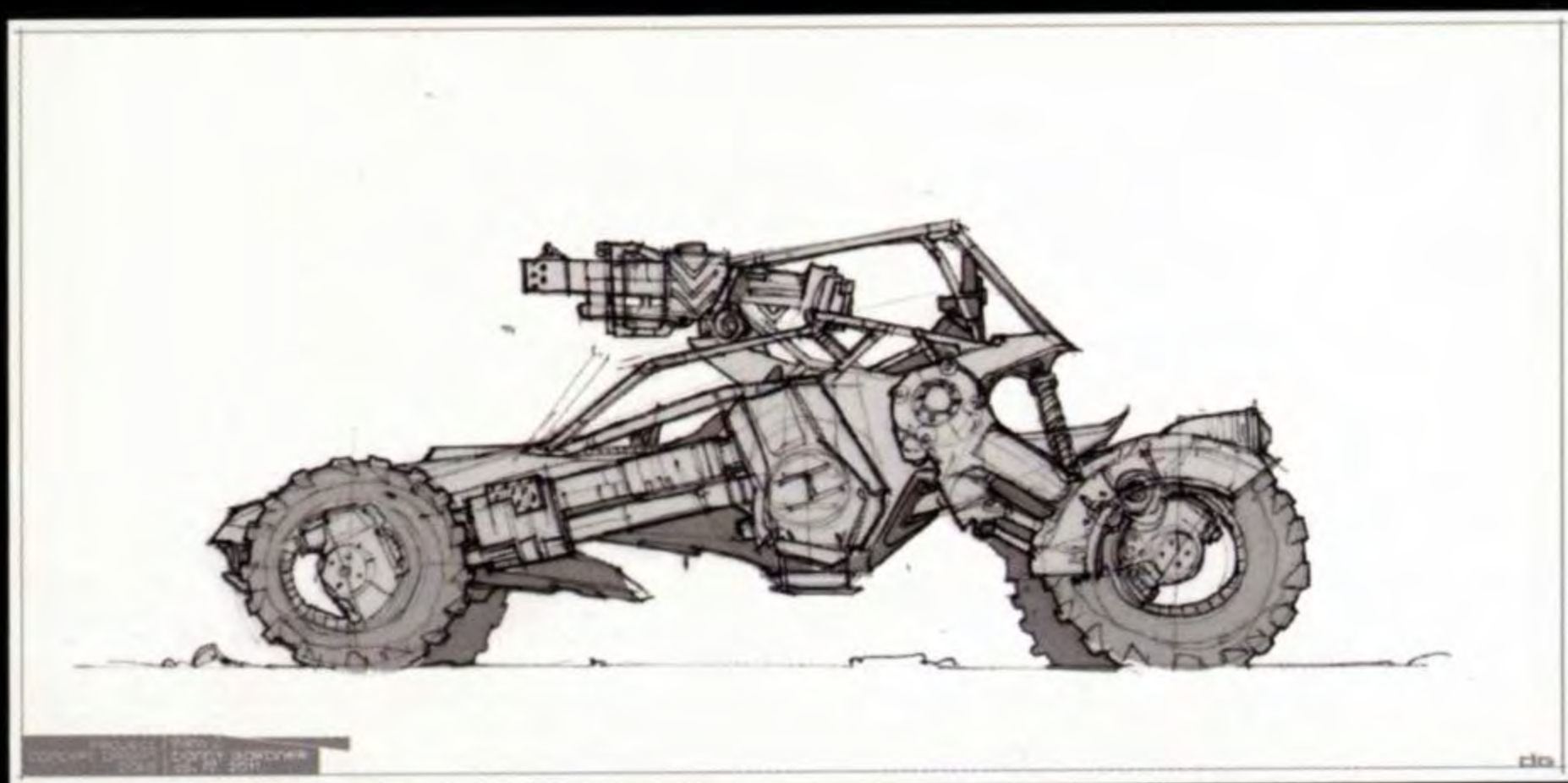
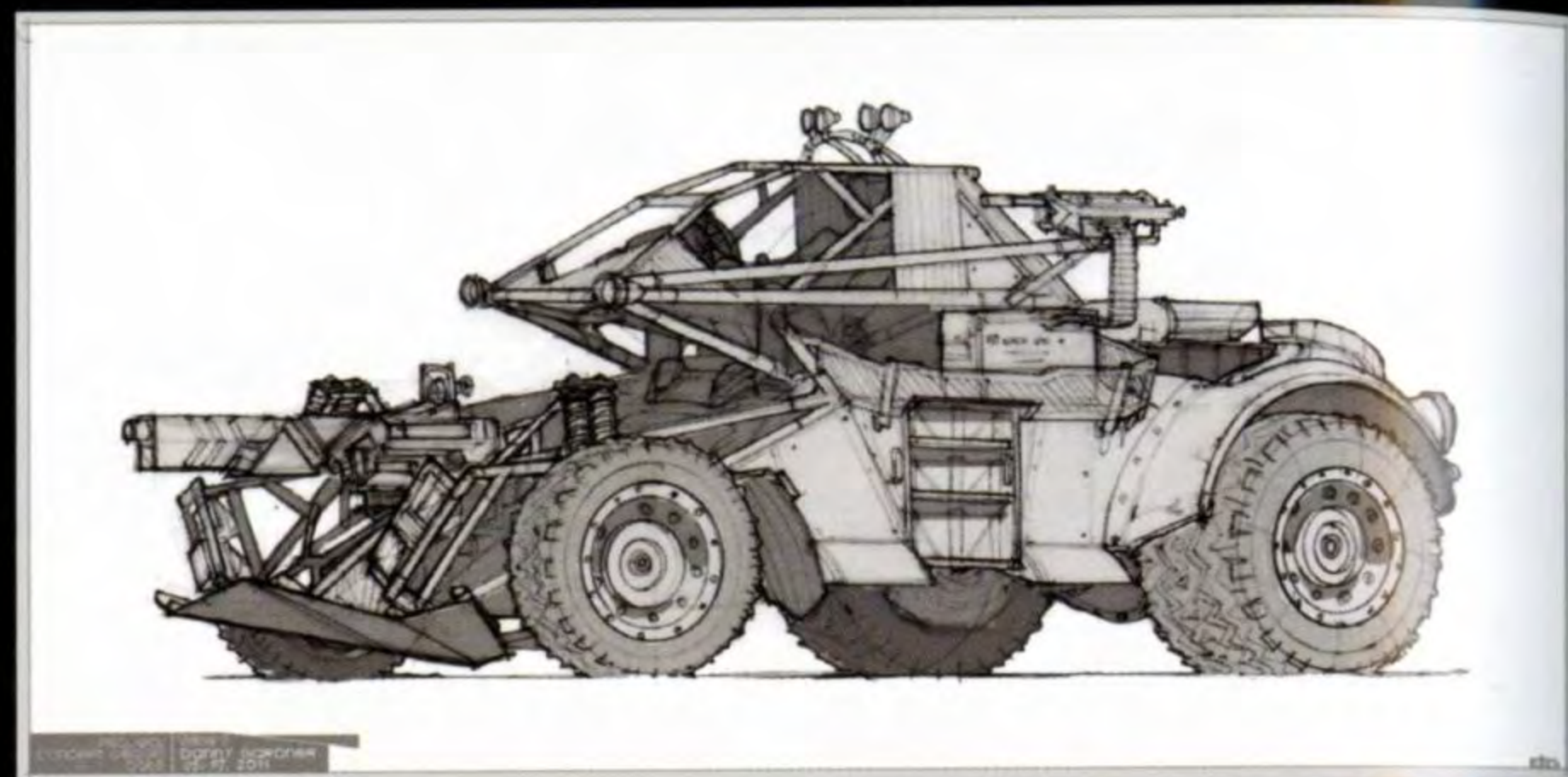
Elemental Plant Sketches [Matias Tapia] Above and Left
Spiky Plant Model [Lori Wilson] Below



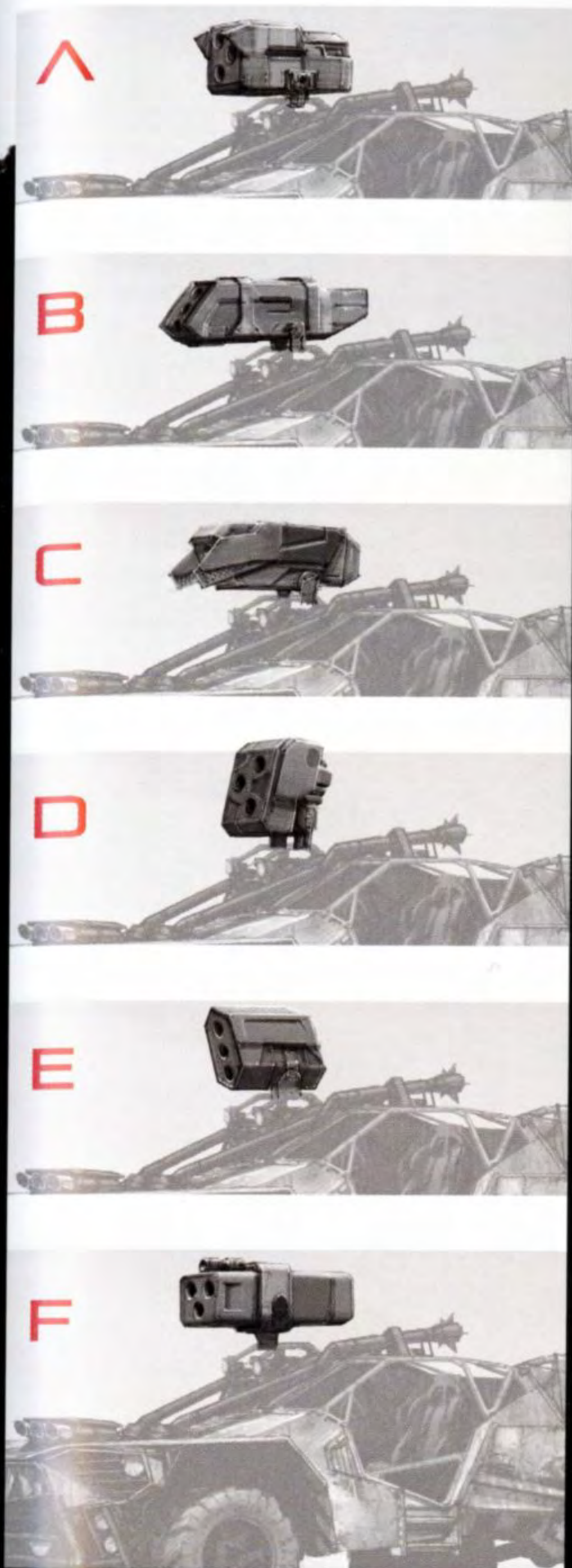
VEHICLES

BANDIT TECHNICAL

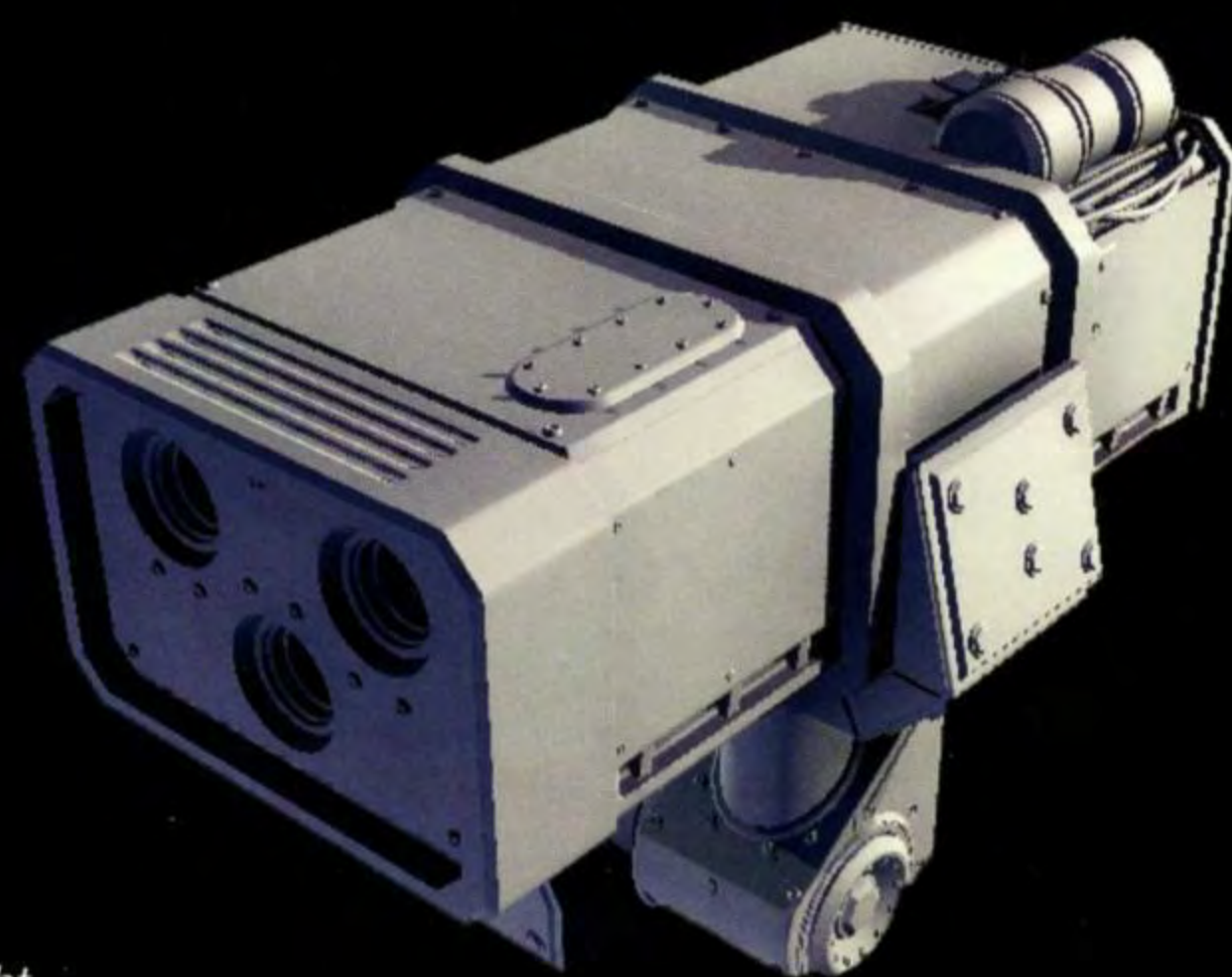
With the Bandit Technical, the art team sought to create a ride that looked makeshift, but still badass. Of the Technical, concept artist Danny Gardner says, "A lot of junkyard-bashed vehicles or props look beefy but for some reason always have unintentional weak areas. A huge junkyard mech might have a big brute silhouette but have the legs attached with a couple tiny pistons...which annoys the biscuits out of me. I wanted to design something from the junkyard that looks solid and rugged. Simply a beefed up muscle car with a mean face and some crazy ground clearance. It's just my version of badass."



Bandit Truck Concepts [Danny Gardner]

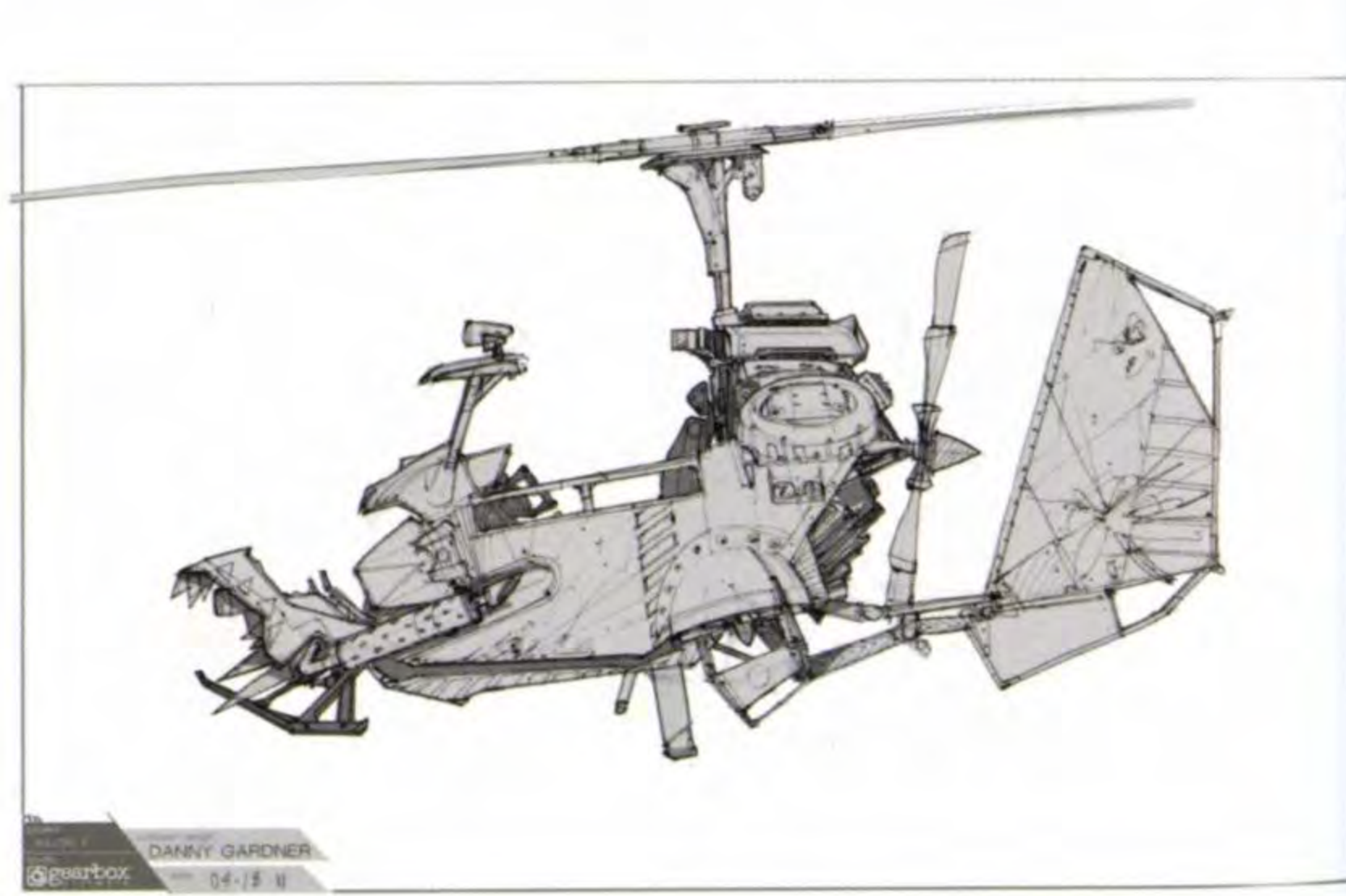
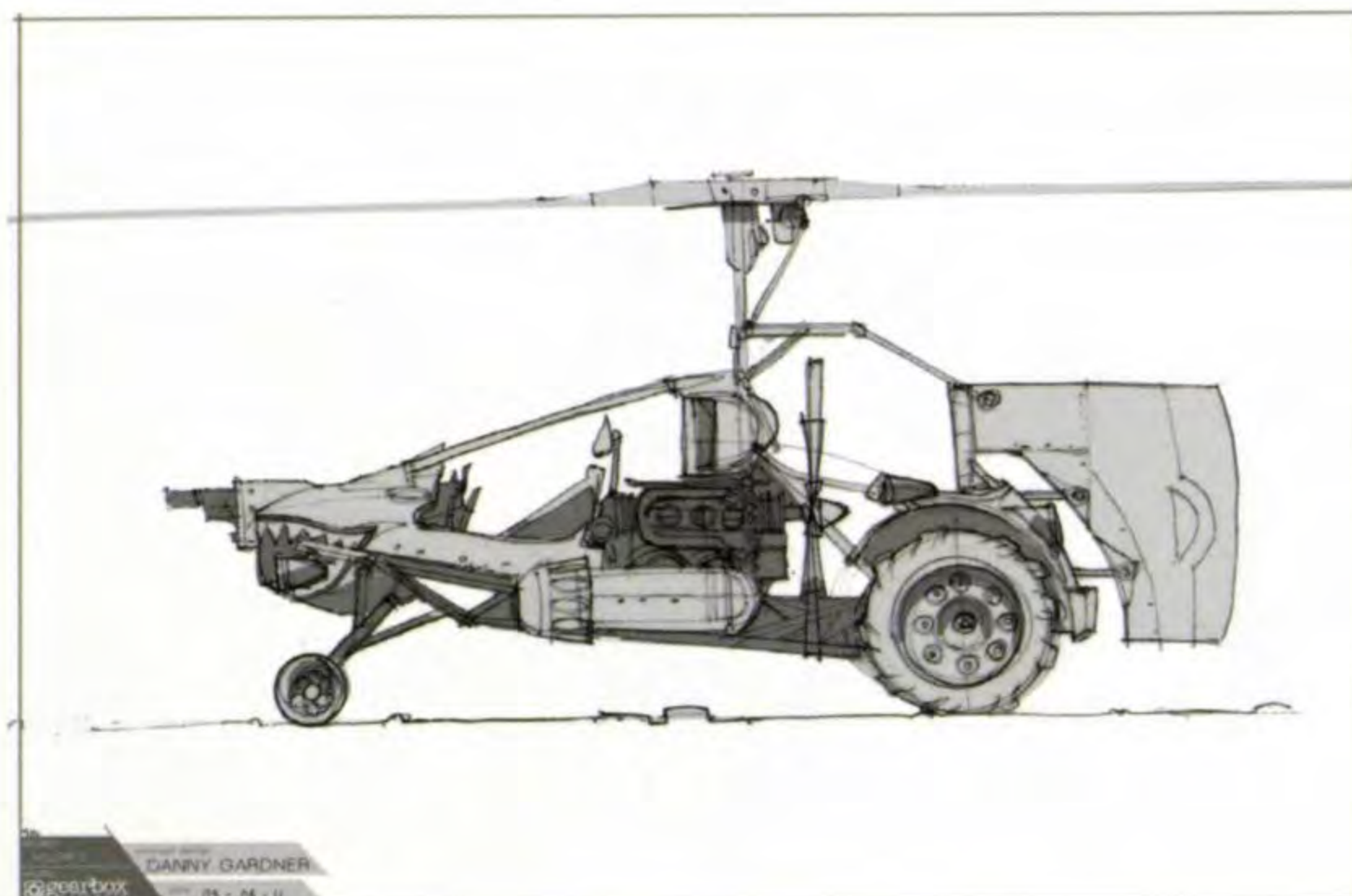
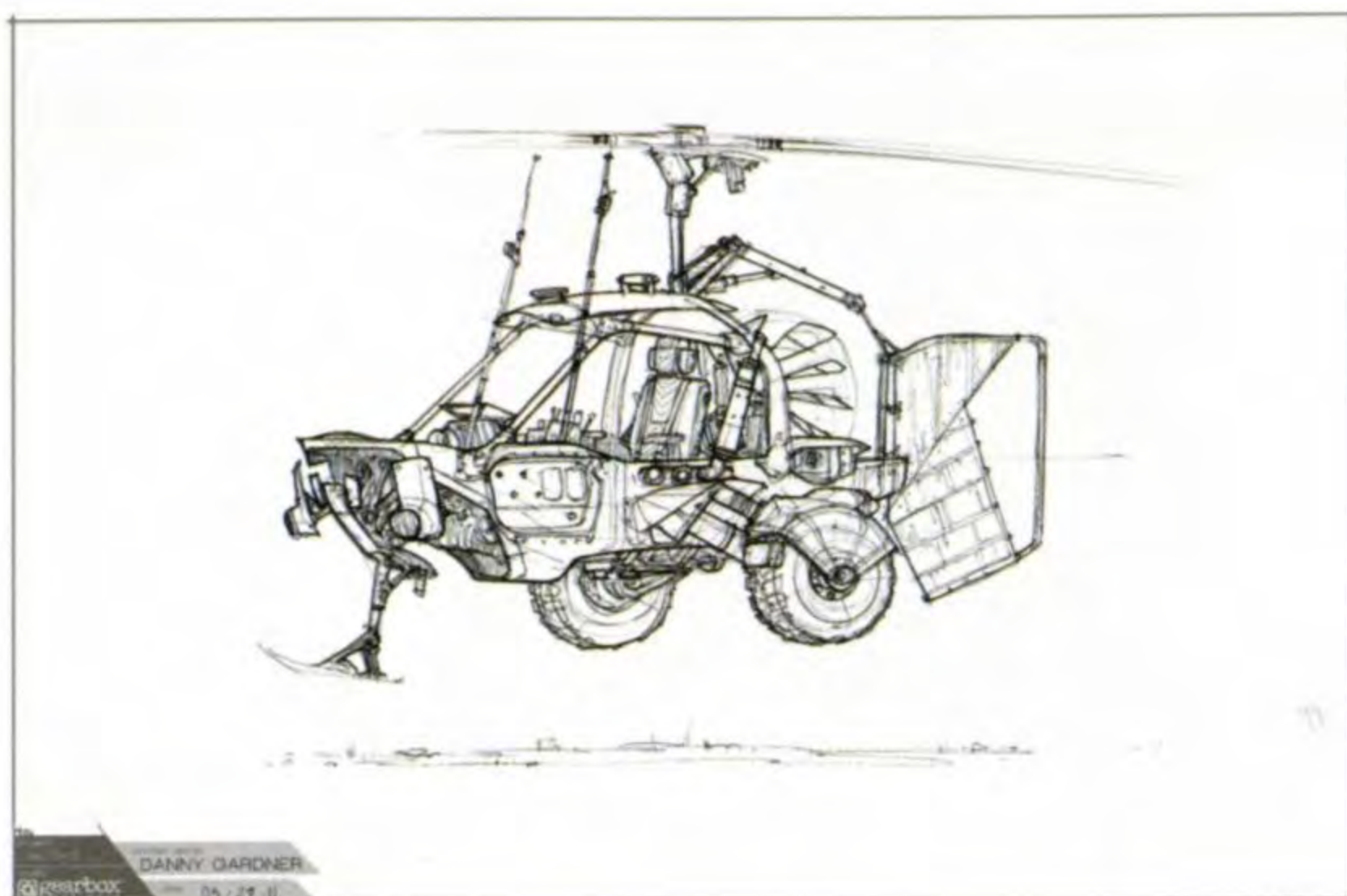


Here we see some possible weapons that could be added to the Technical. "My focus here," Lorin Wood says, "was to create a rocket launcher that matched the amazing design Danny [Gardner] came up with for the main body."



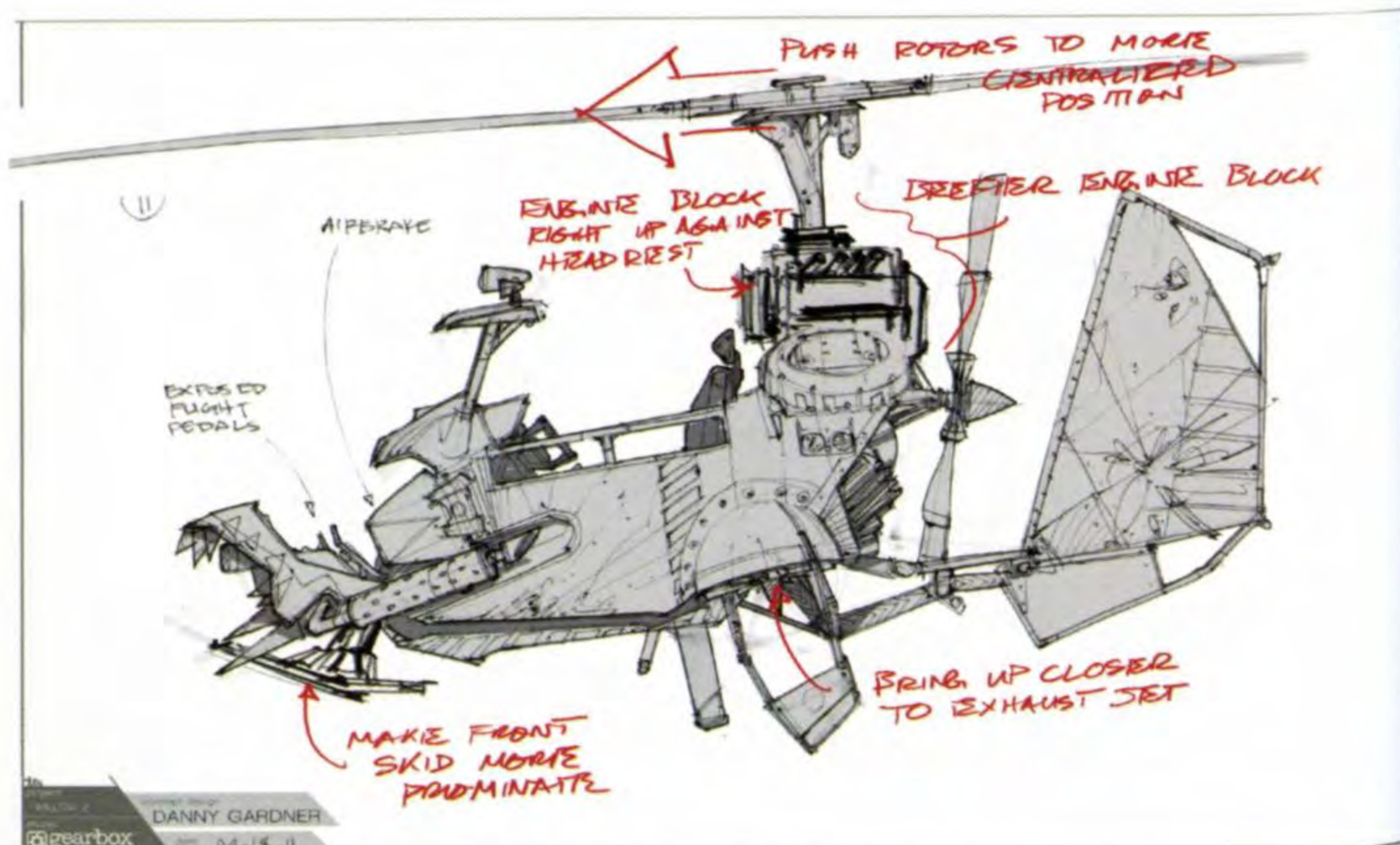
Bandit Rocket Pod Concepts [Lorin Wood] *Left, Right*
Bandit Truck Mesh [Brent Hollon] *Below*
Bandit Truck Texture [Brent Hollon] *Bottom*

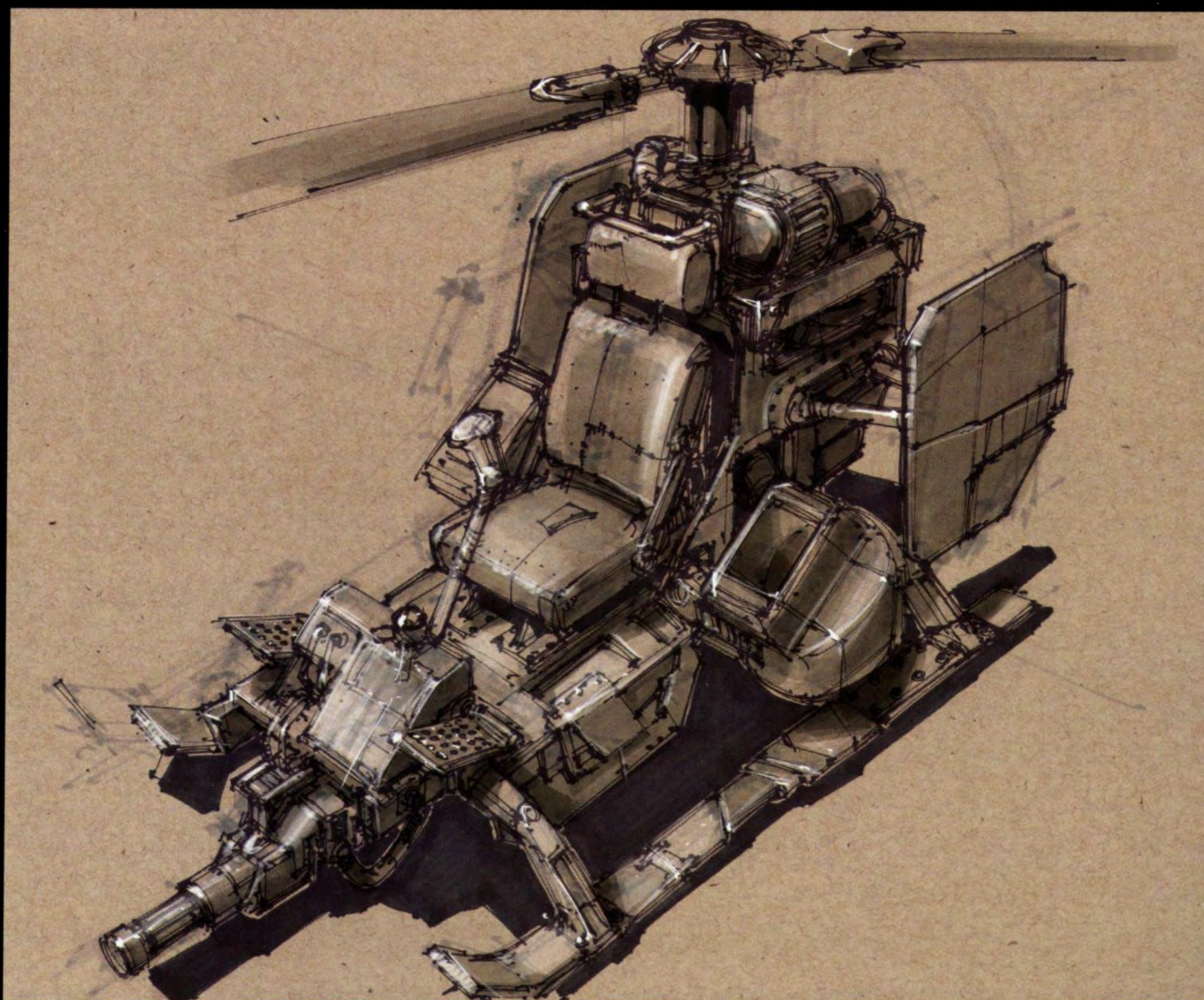
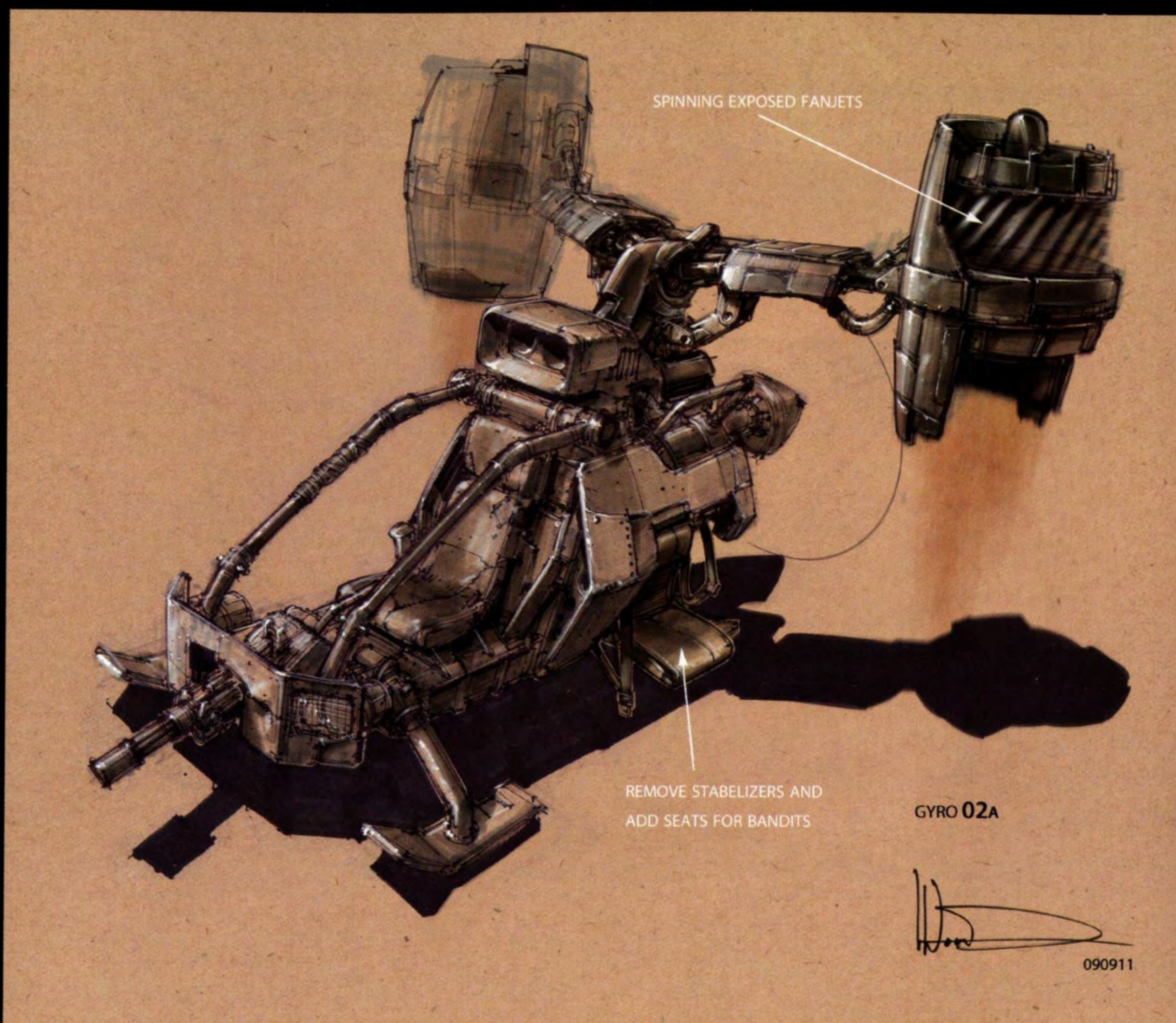




BUZZARD

The bandits of Pandora needed a new form of transportation, which is where the Buzzard (which was initially referred to as the Gyro Copter) came into play. "I took some of the basic shapes Danny developed and massaged them; keeping what he initially created. We were going back and forth on the roll cage, but adding it back in won-out, as did dropping the literal Gyro Copter details; the rotors were replaced with articulated turbines," says Lorin Wood.







“Creating the Buzzard was one of my most memorable experiences throughout the entire project,” says Tris Baybayan. “Bandit technology has so much personality with the way it appears to have been built with a crow bar.”

Buzzard Concepts
 [Danny Gardner] *Top*
Buzzard Models
 [Tris Baybayan] *Middle, Left*

VEHICLE SPAWN PAD

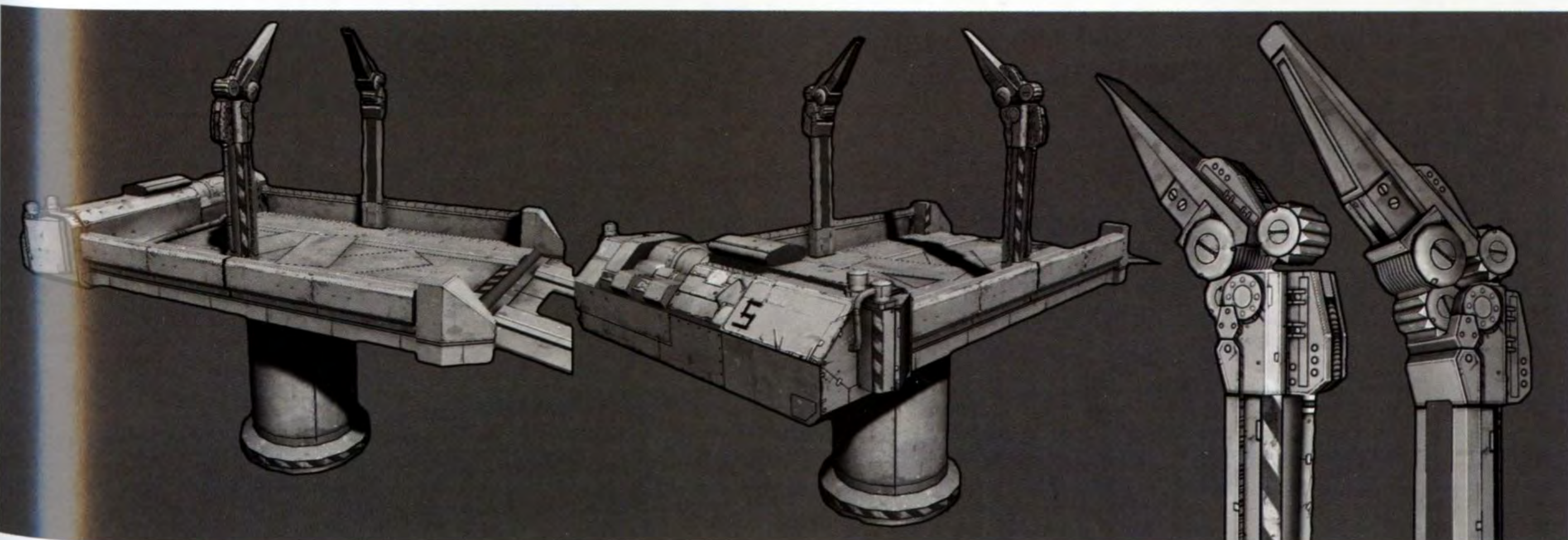
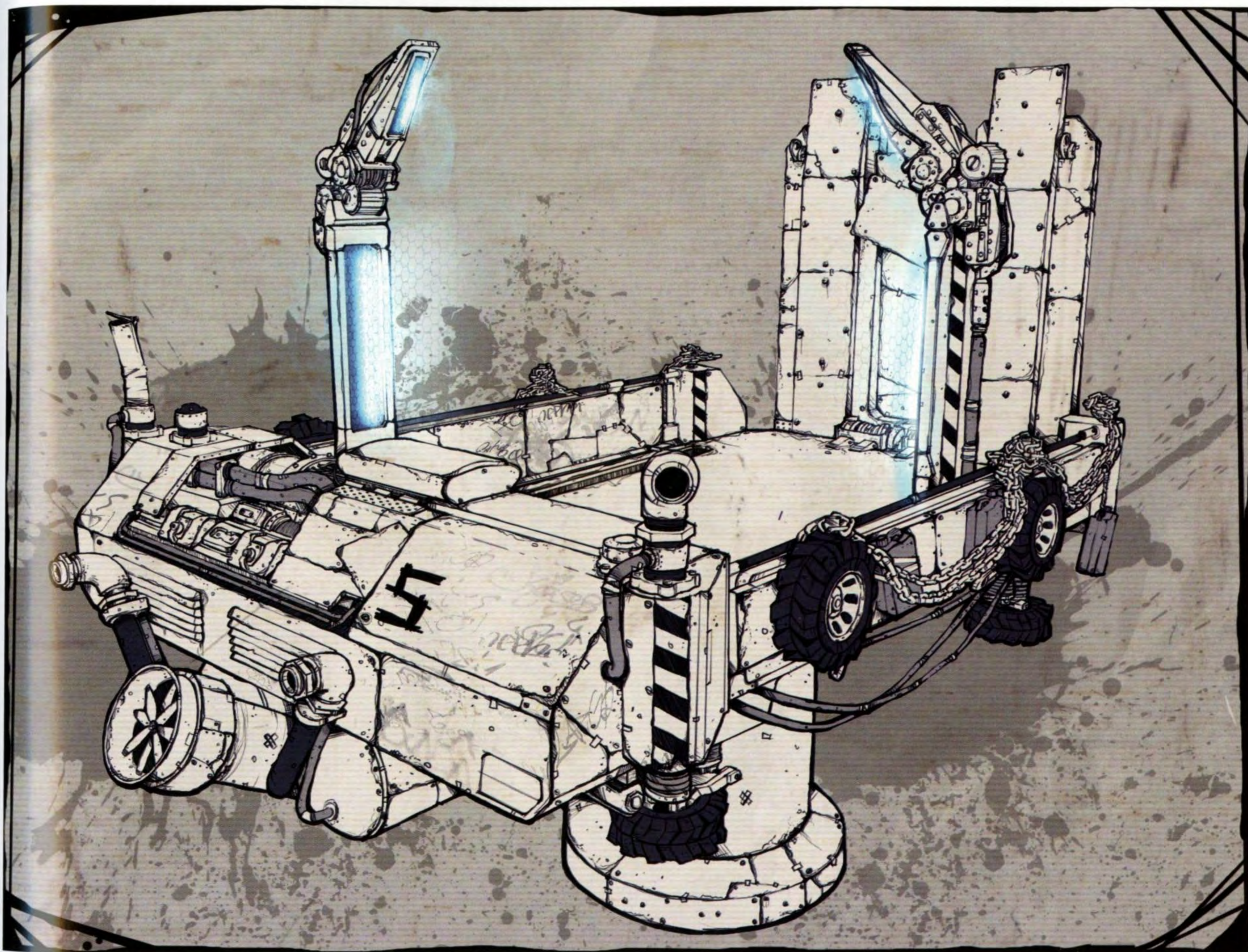
This is where the cars were going to live. Brent Hollon explains that the glowing pylons “were gonna turn on and scan in the vehicle, and then the platform would lower and as it lowered, the ramp would fall and then you could drive the vehicle off.” Unfortunately, this spawn station was cut due to memory restrictions.

Spawn Pad Concept

[Brent Hollon] *Below*

Spawn Pad Model (Old Version)

[Matt Stock] *Bottom*

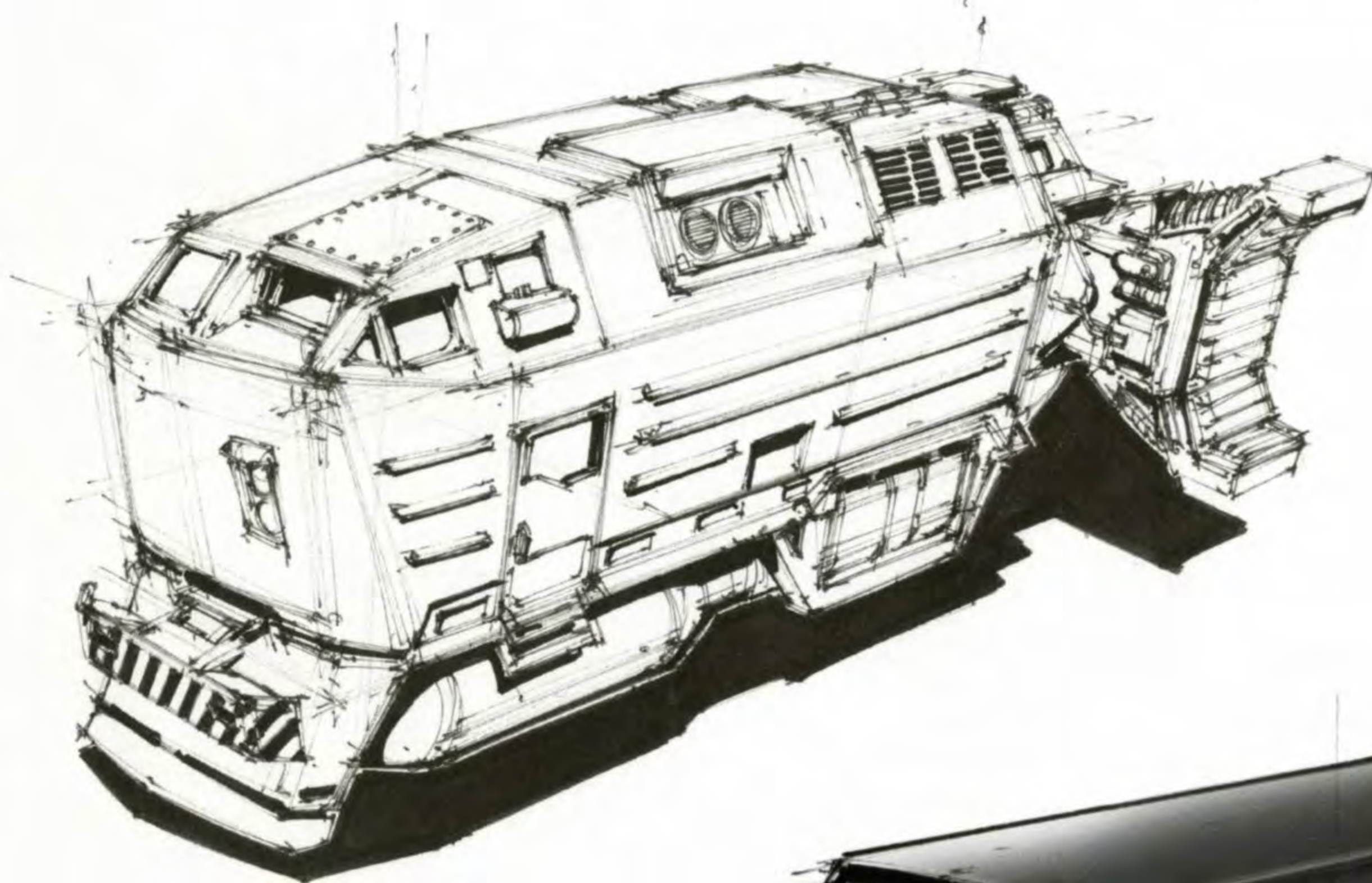
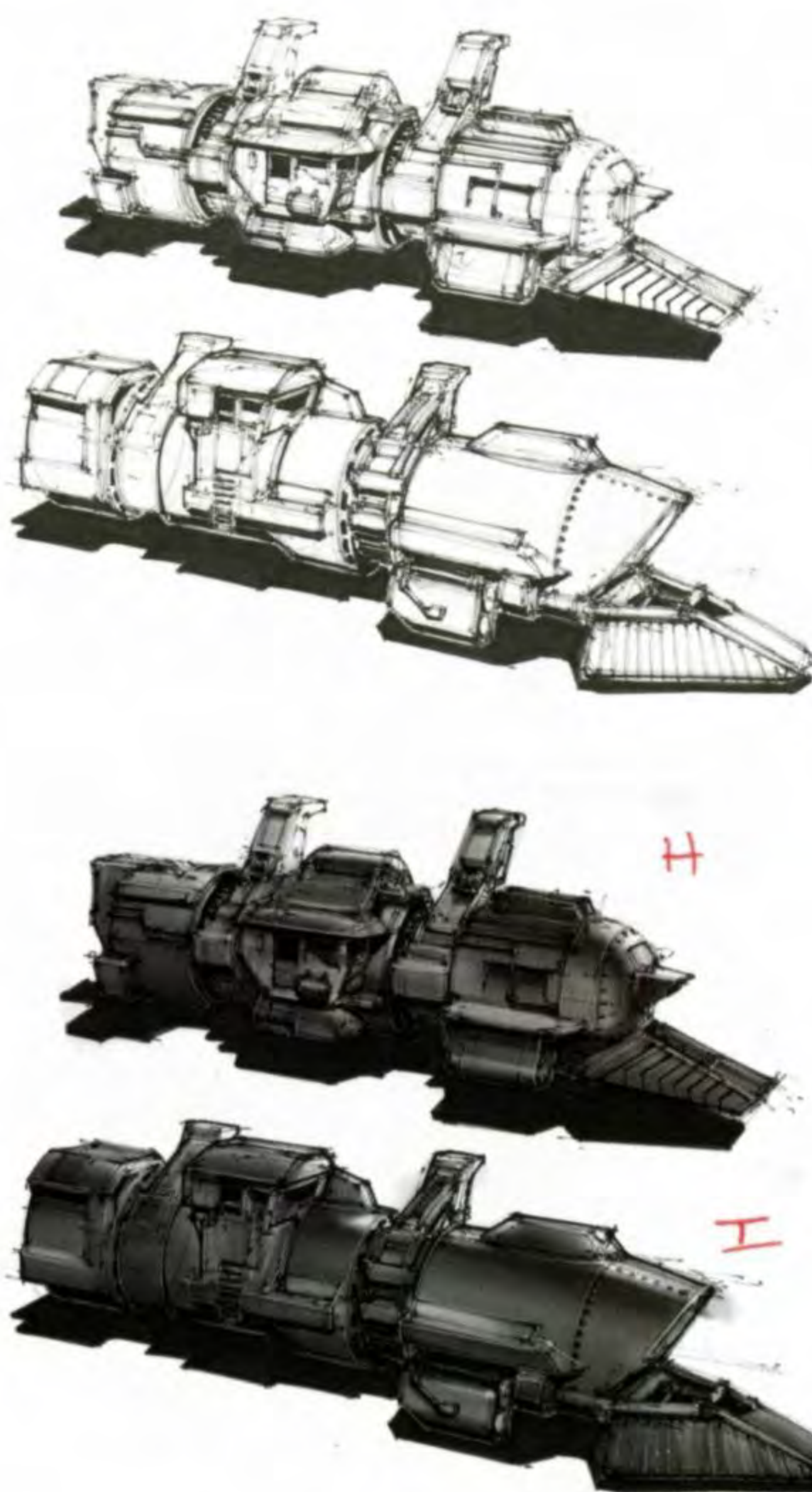


HOVER TRAIN

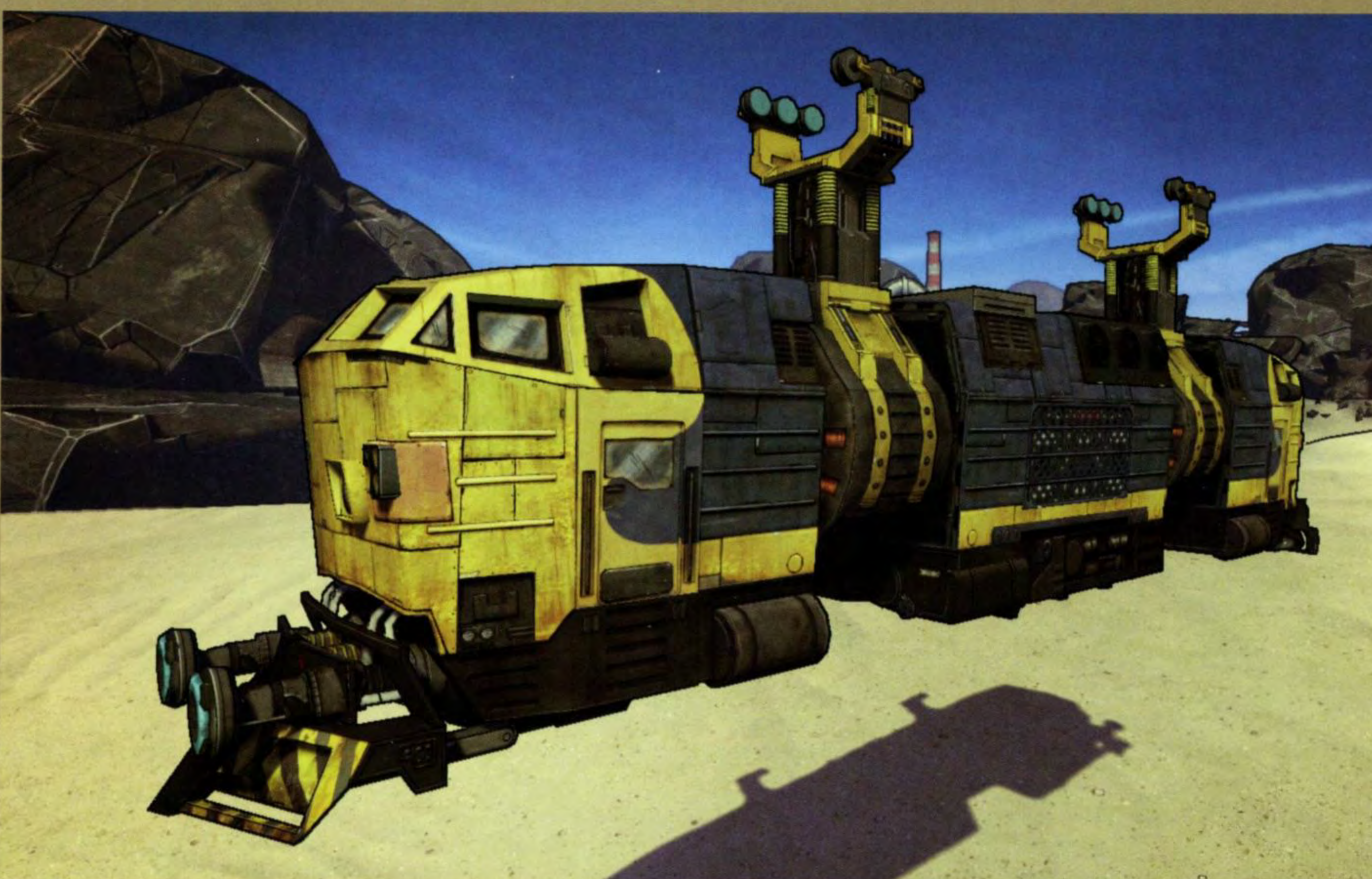
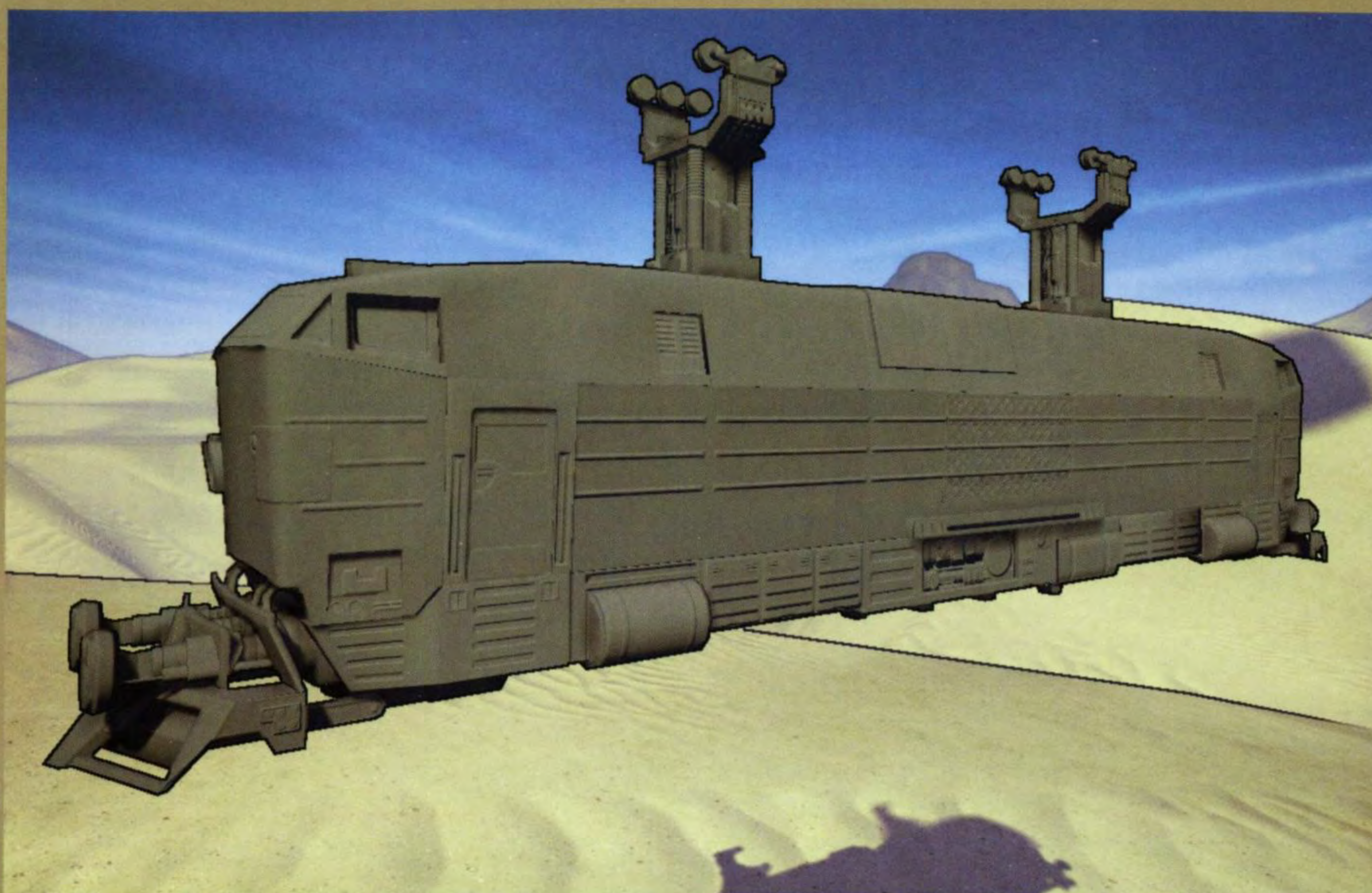
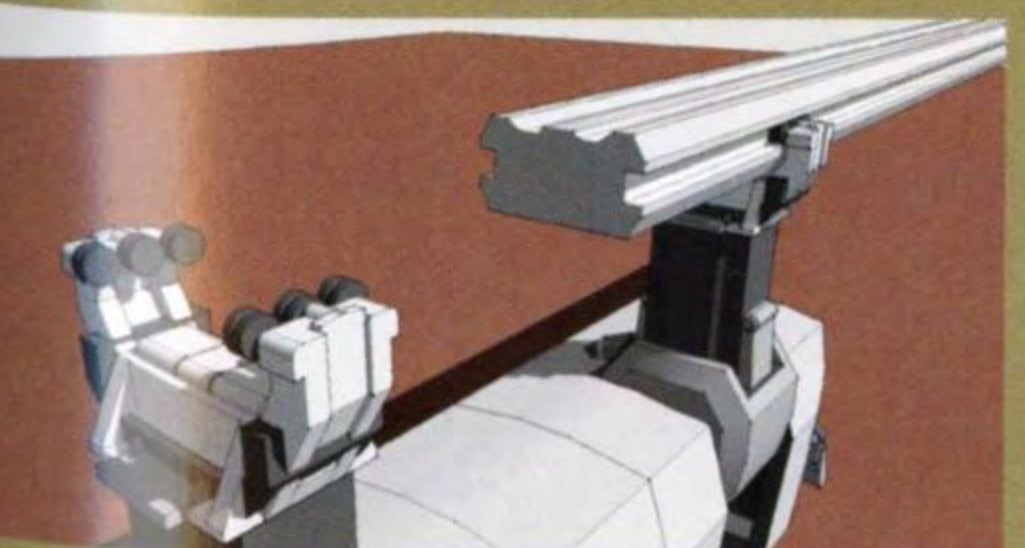
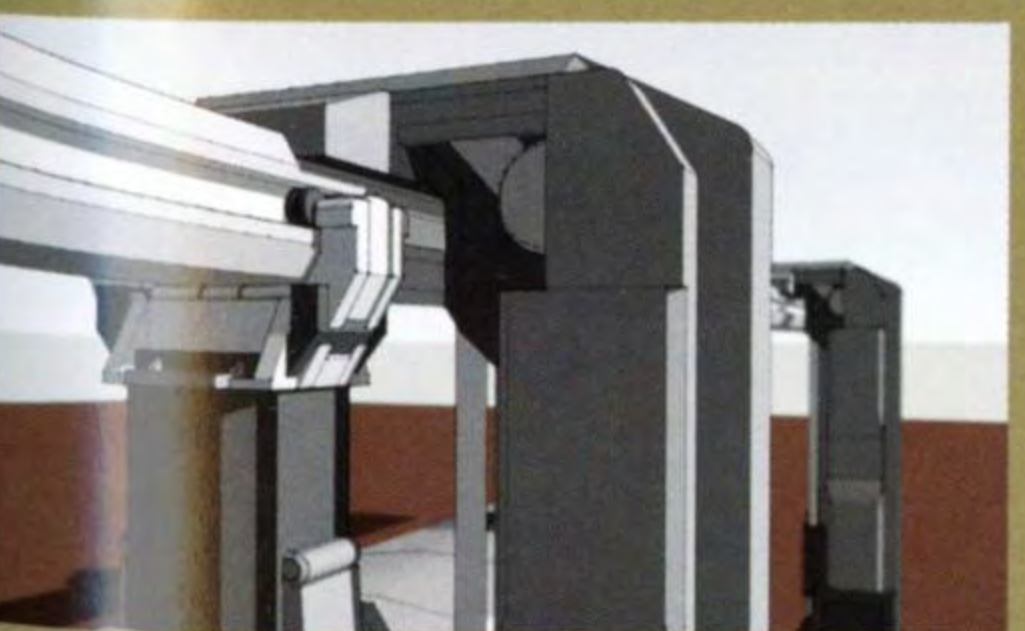
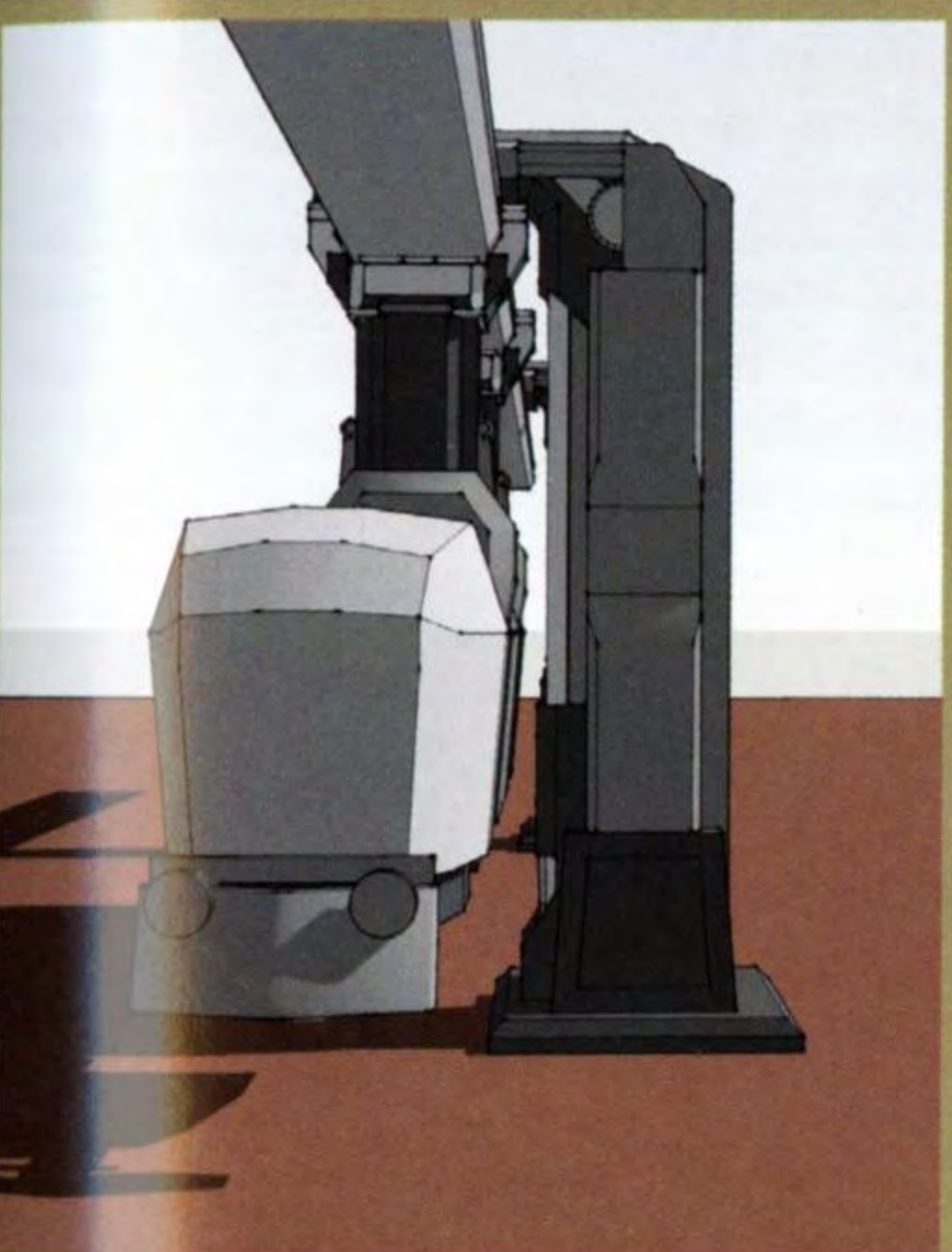
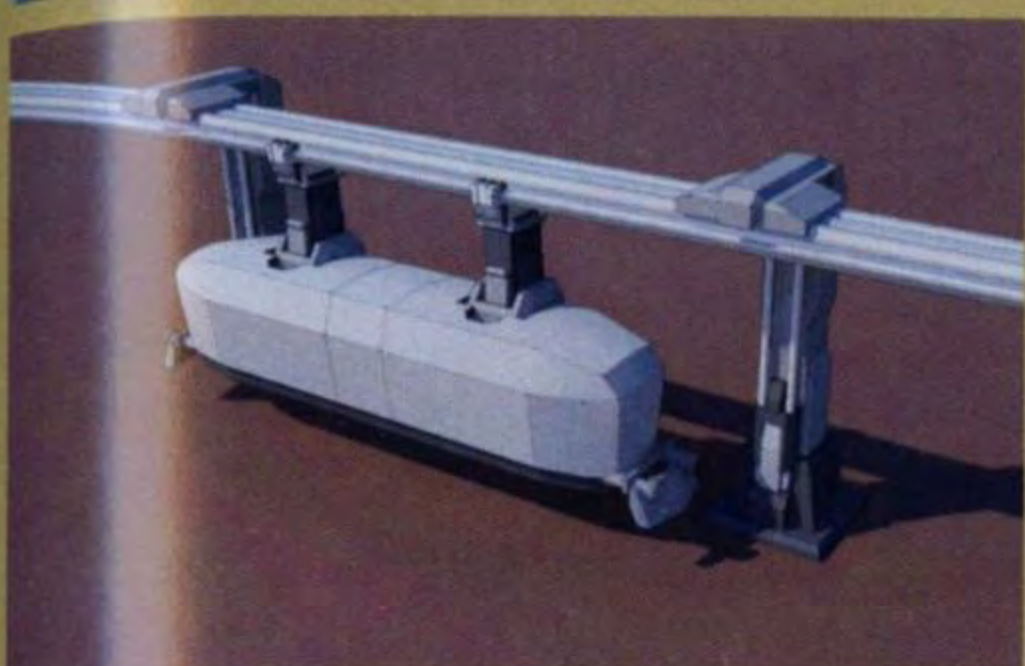
The intro to the game needed a train—just as the first four Vault Hunters arrived on a bus, the team wanted the four new Vault Hunters to arrive via train. “All I was given was a quick storyboard from Scott Kester to work from for the train,” says Lorin Wood.

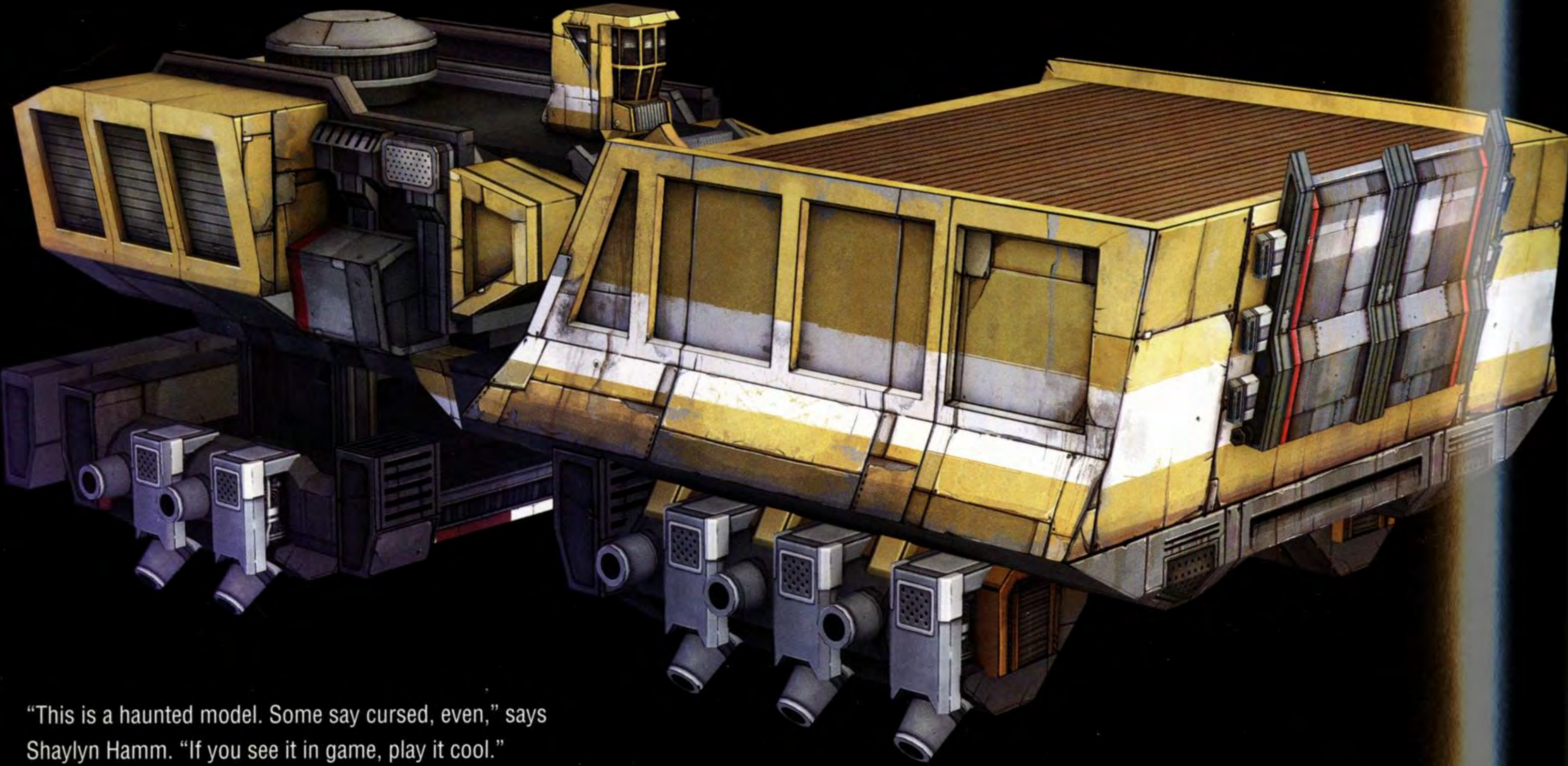
“This vehicle would be ubiquitous in the world so some effort was needed in fleshing it out to withstand scrutiny. My original approach was a traditional steam locomotive with a futuristic twist (ala *Back to the Future III*). I went down this path for a bit, but we felt a more modern and brutish engine was more appropriate; something you’d find in an Eastern Bloc country. In addition to the engine I created two more cars that were in the same design language as the engine.”

“The other detail to distance this train from reality was the fact it would ride on articulating arms on a track system that would be able to be placed on any surface at any angle, in the same vein as a roller coaster.”

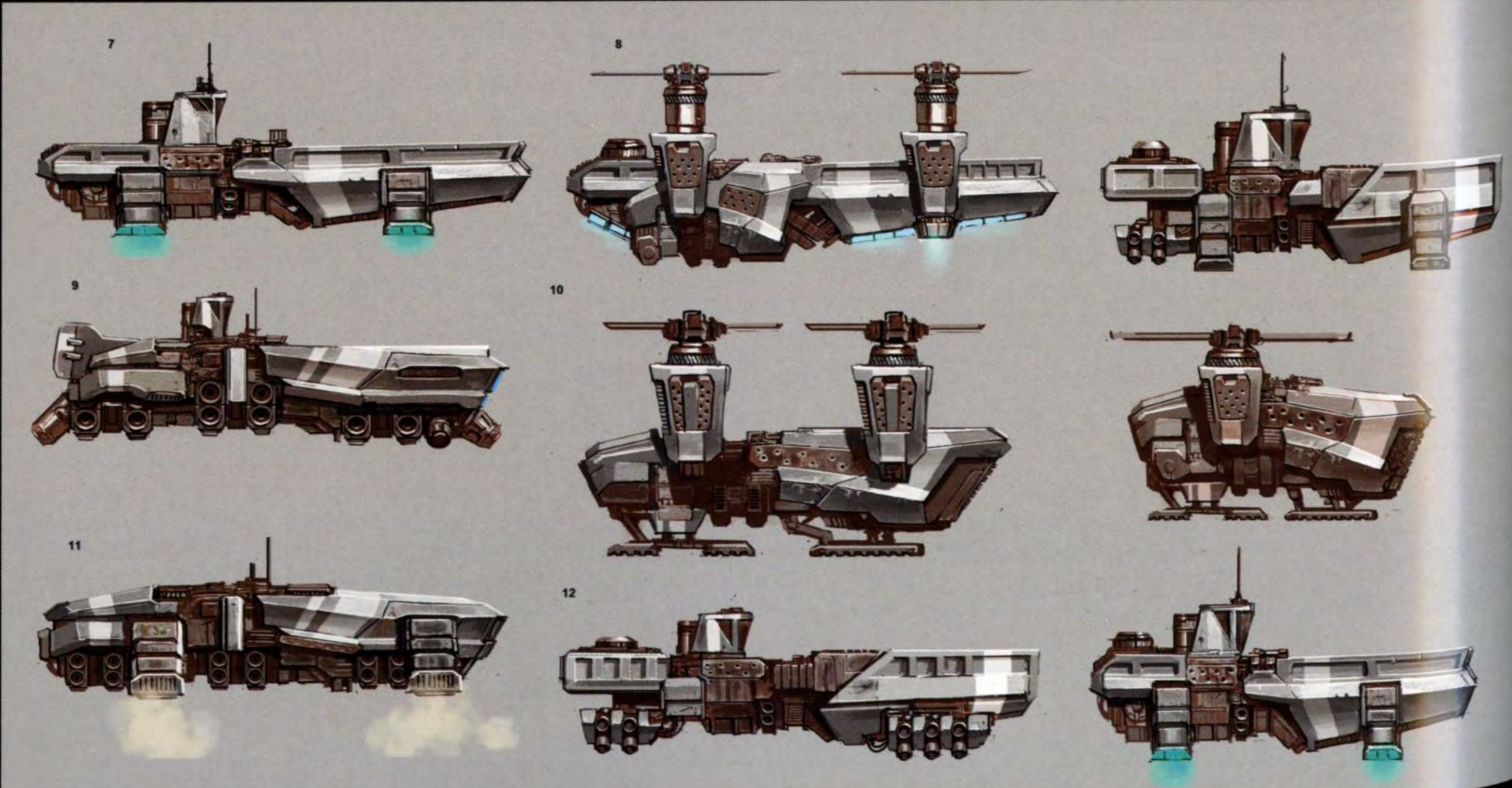
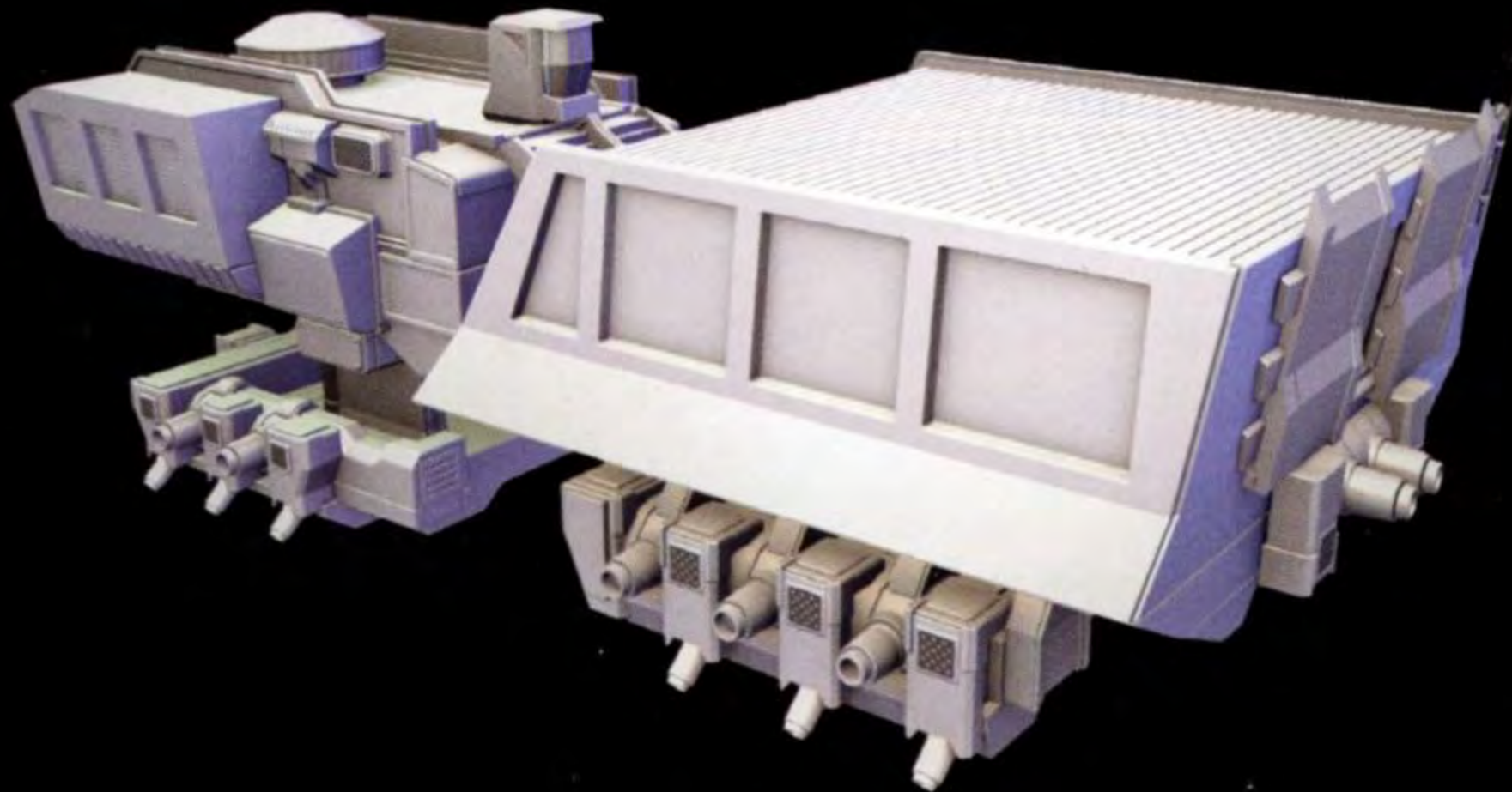


Hover Train Concepts [Lorin Wood] *This Page, Next Page, Left*
Hover Train Model [Sloan Hood] *Next Page, Right*





"This is a haunted model. Some say cursed, even," says Shaylyn Hamm. "If you see it in game, play it cool."



HYPERION DROPSHIP

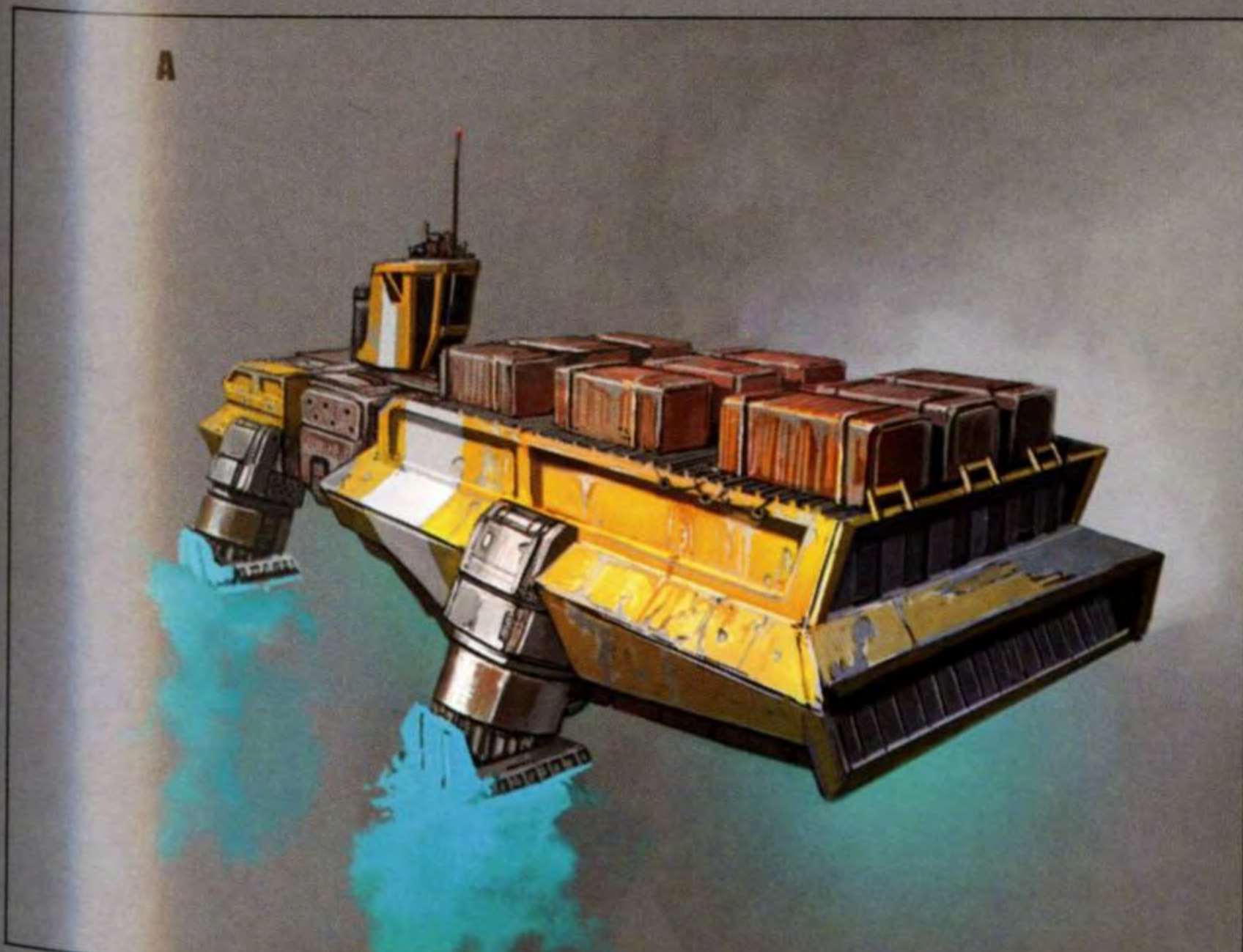
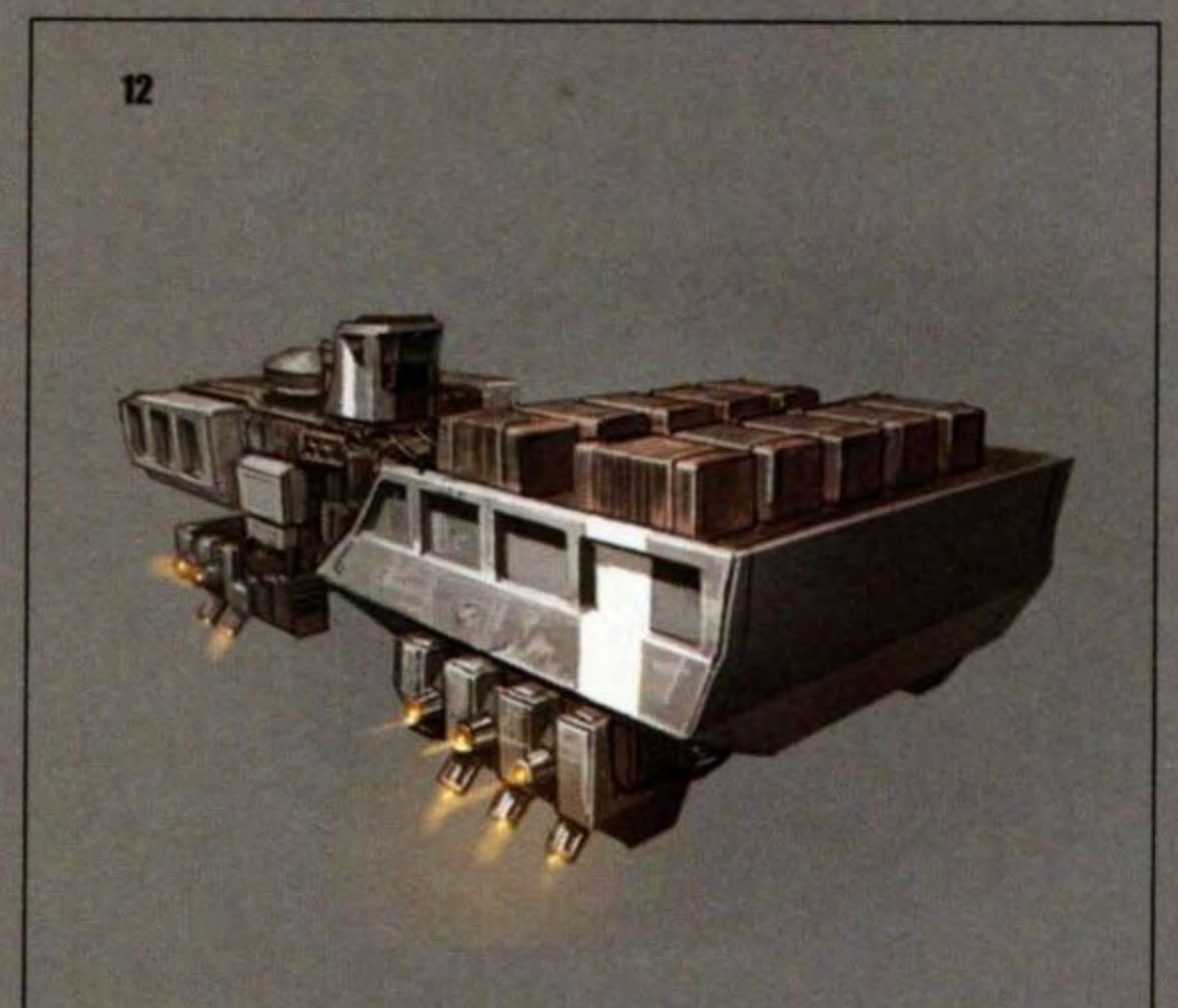
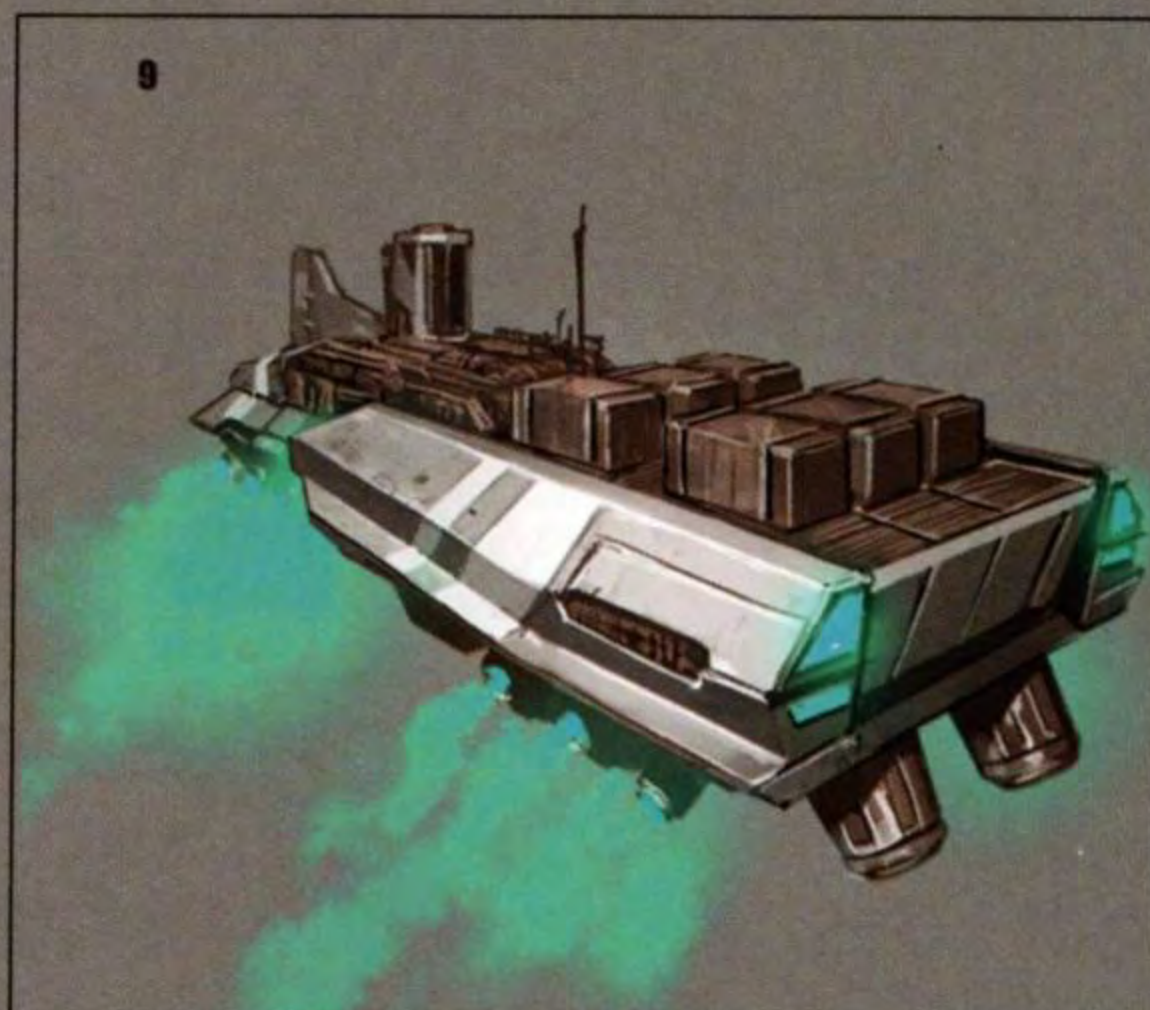
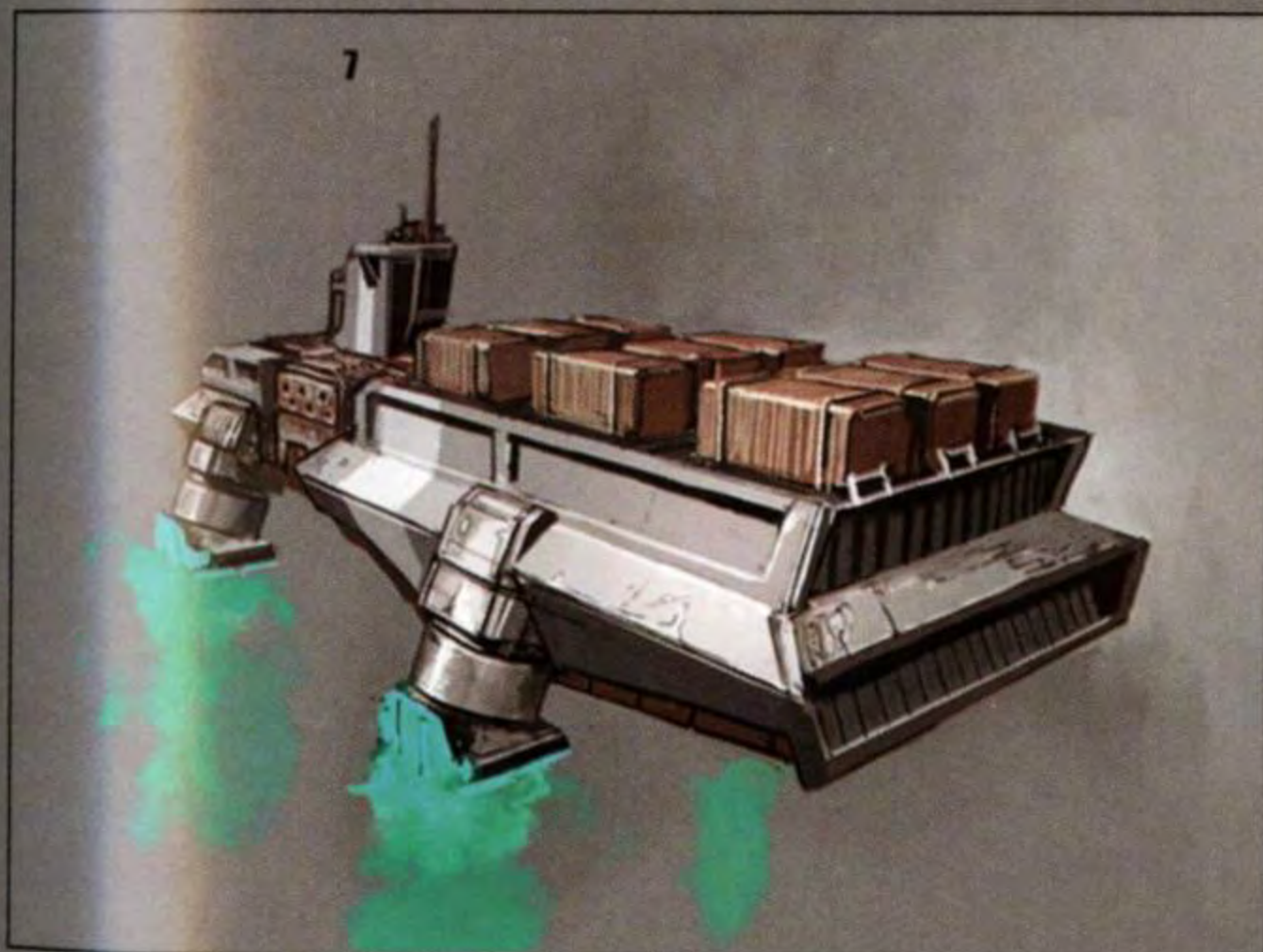
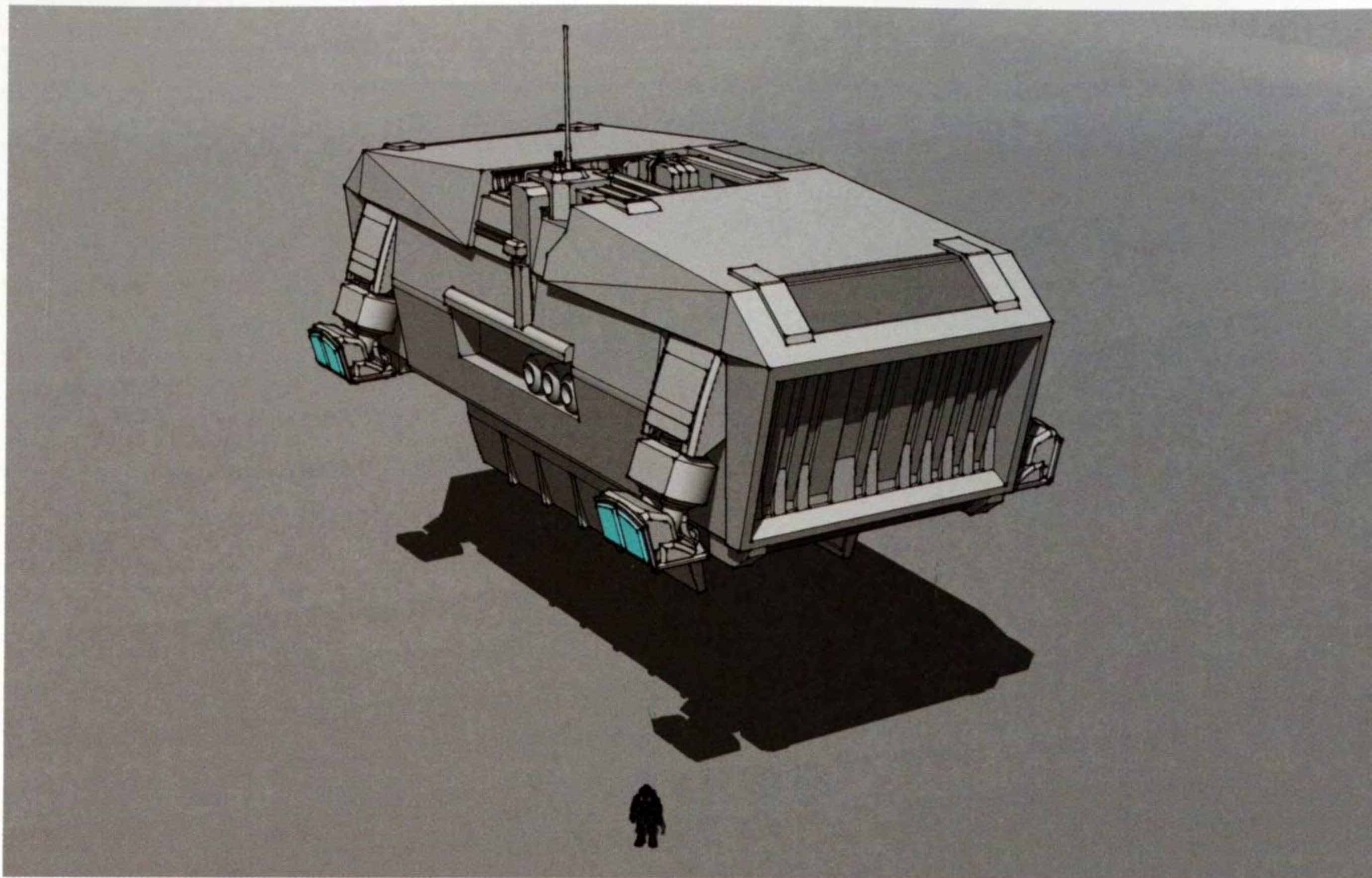
For various reasons, the design team needed a Hyperion dropship for several missions on the plot. It had to look big and imposing, but not too space opera-ish—not too clean or interplanetary or sci-fi. “This was a very early SketchUp concept I did for the dropship late during the first *Borderlands*,” says Wood. “When Matias came on board to tackle this design, I sent him the model to work from and further develop.”

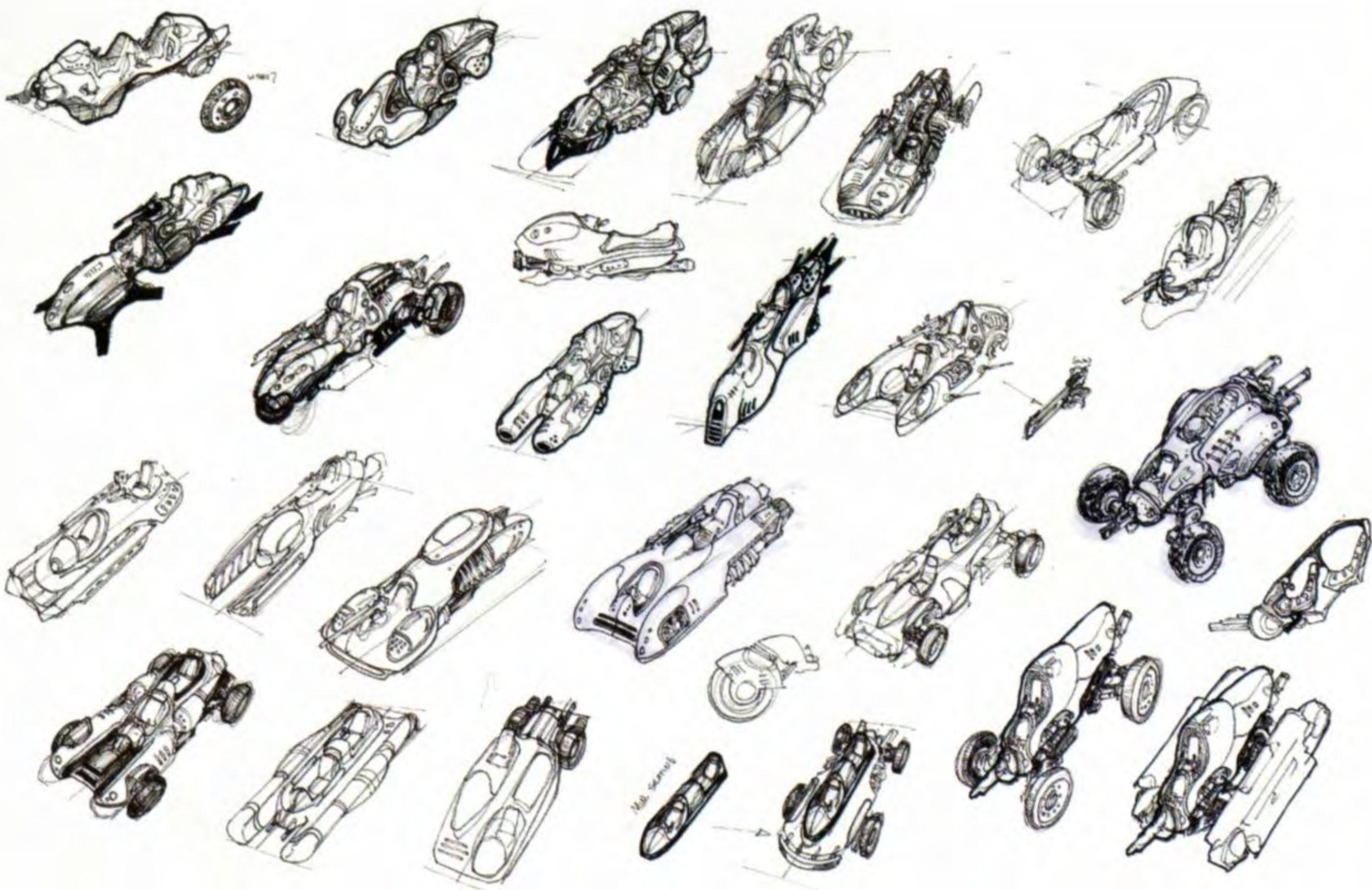
Dropship Models

[Shaylyn Hamm] *Previous Page Top*,
Previous Page Middle

Dropship Concepts

[Matias Tapia] *Previous Page Bottom*, *Below*
Dropship Model [Lorin Wood] *Right*

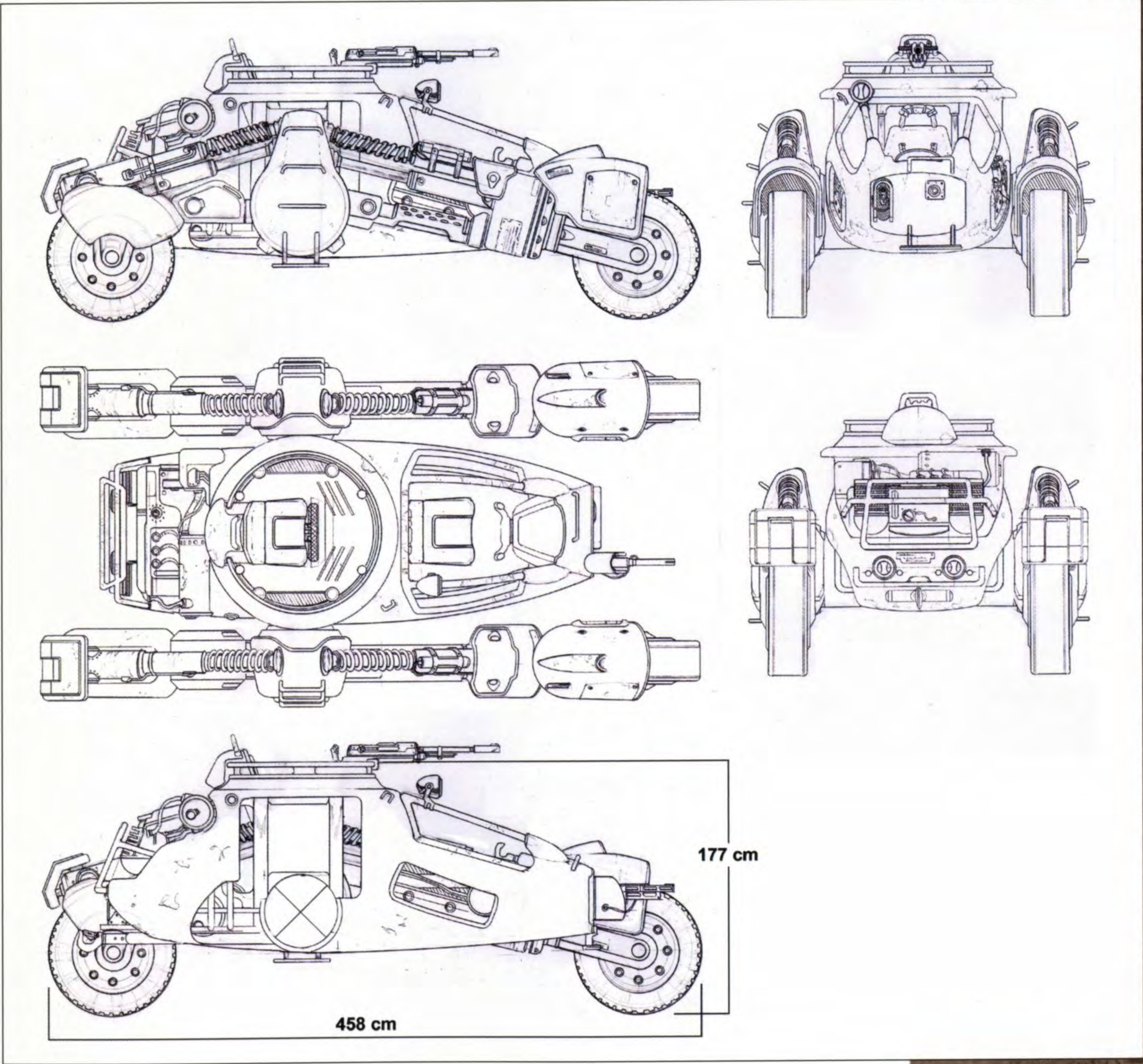




RUNNER

The Runner may be one of the oldest pieces of *Borderlands* art that can still be seen in the series. The runners pretty much existed even before the art style change late in the first *Borderlands* development cycle.

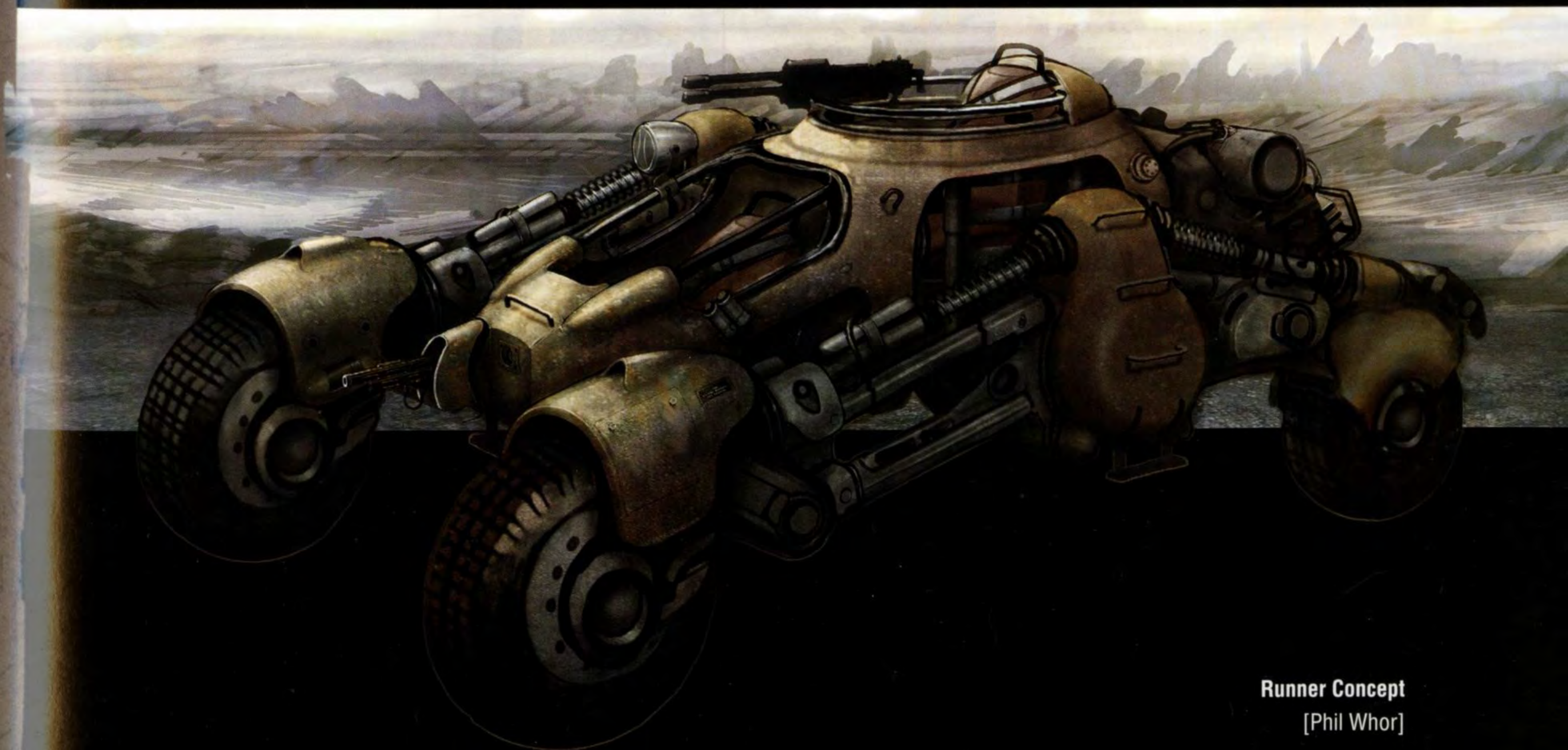
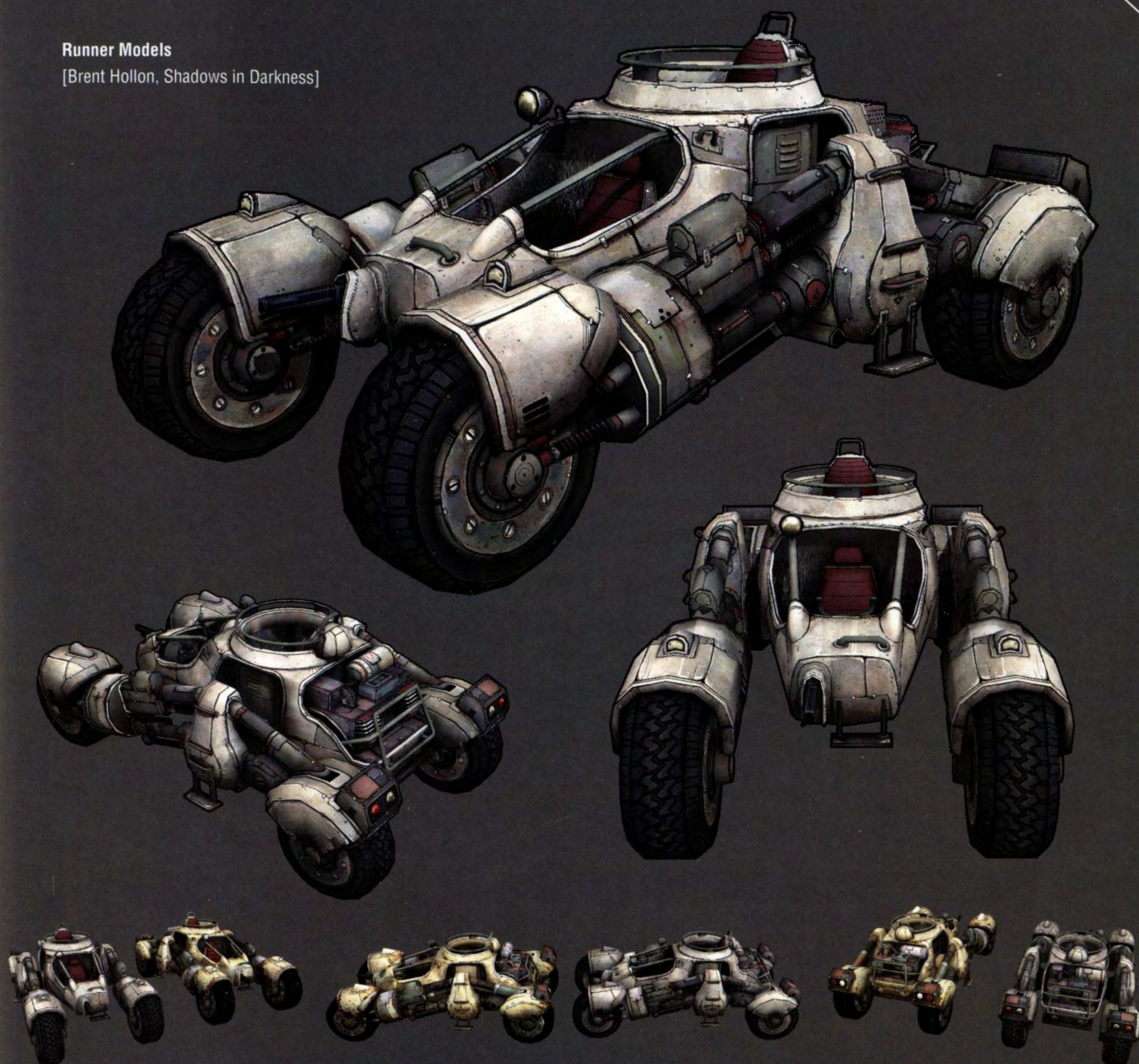
Looking at it now, one can understand why it managed to stick around for so long—it's sleek and cool, but a bit kitbashed and unsafe-looking. It has sleek curves that evoke futuristic sci-fi, but its rough-and-tumble body bring to mind post-apocalyptic imagery.



Runner Concepts
[Gearbox]

Runner Models

[Brent Hollon, Shadows in Darkness]



Runner Concept
[Phil Whor]

MARKETING

So—you've been working on a game for a couple of years, and it's time to start showing it off to the world. What sorts of images can you create that'll excite your audience? Something that says "this game is really cool," while also conveying "and it's got a lot of guns," as well as "it's way better than the first game" and "don't worry, we've still got psycho midgets"?

In this section, you'll see the various concept drawings that went into the creation of our *Game Informer* cover, as well as a truly staggering number of potential box art sketches and logo designs. There's also a really big scan of the official *BL2* box art, without all that pesky text.

Enjoy!

Illustration

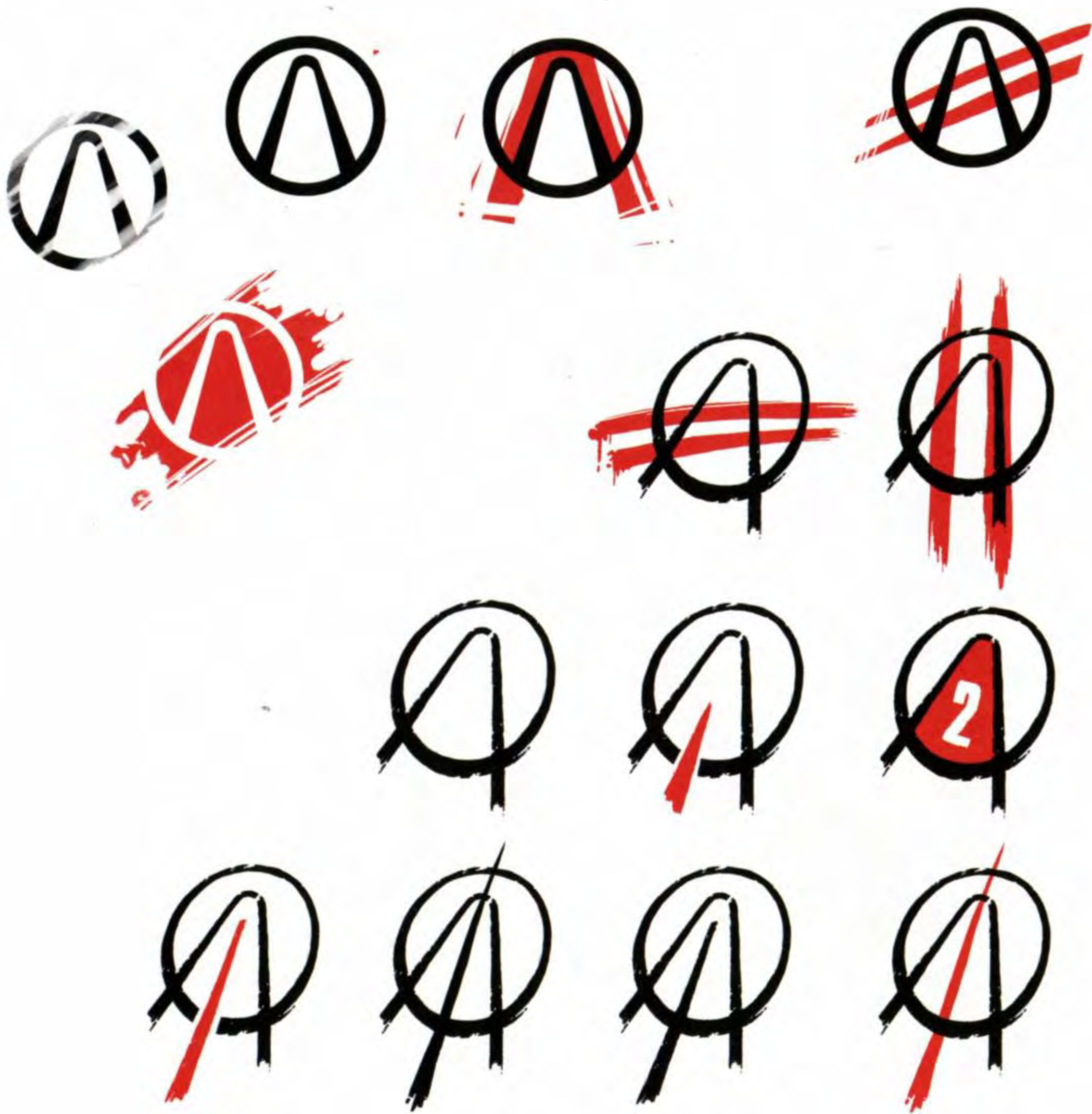
[Scott Kester] *Right*



BORDERLANDS 2 LOGO

Before settling on the final logo, the art team made many attempts to create a logo that would express the idea of “sequel” or “two,” but without using any words. That’s where the numerous strikethrough and bisecting lines you see below came from—an attempt to visually convey the title of the game through imagery alone.

In the end, though, the art and marketing teams decided it was a better idea to enhance the original Vault Symbol and let the game’s title speak for itself.



BORDERLANDS 2
BORDERLANDS II
BORDERLANDS 2



Logo Art and Concepts [Jeremy Cooke]



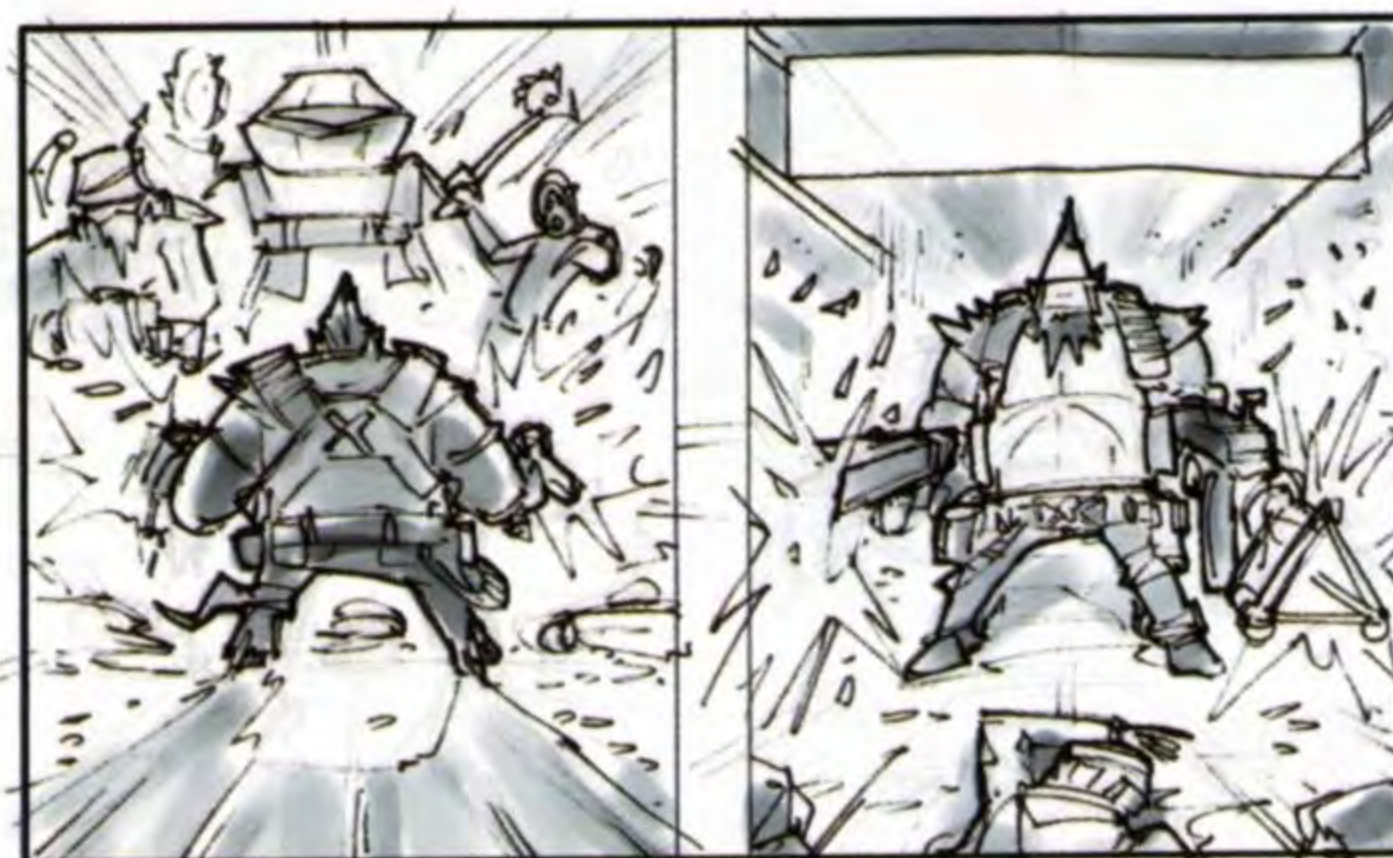
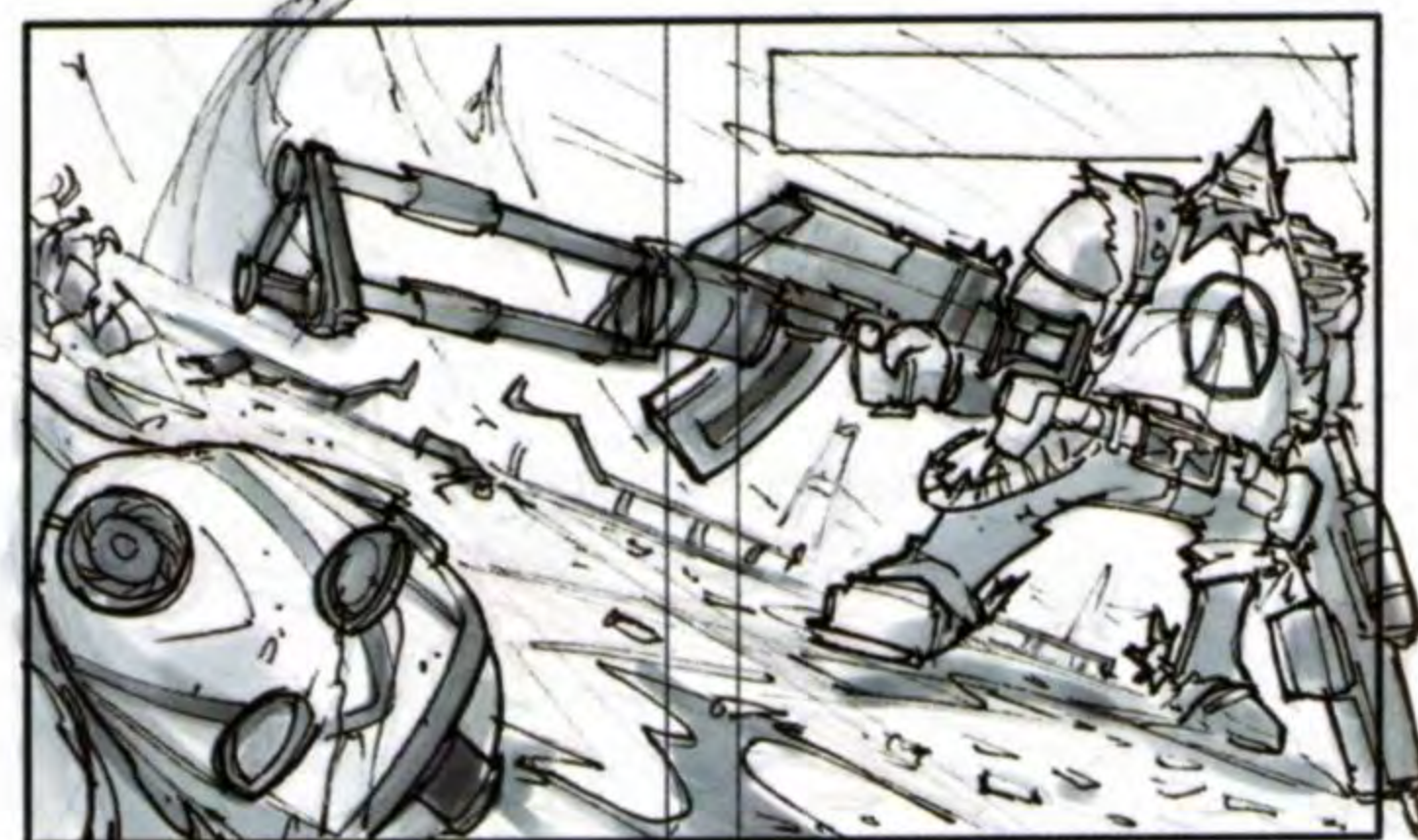
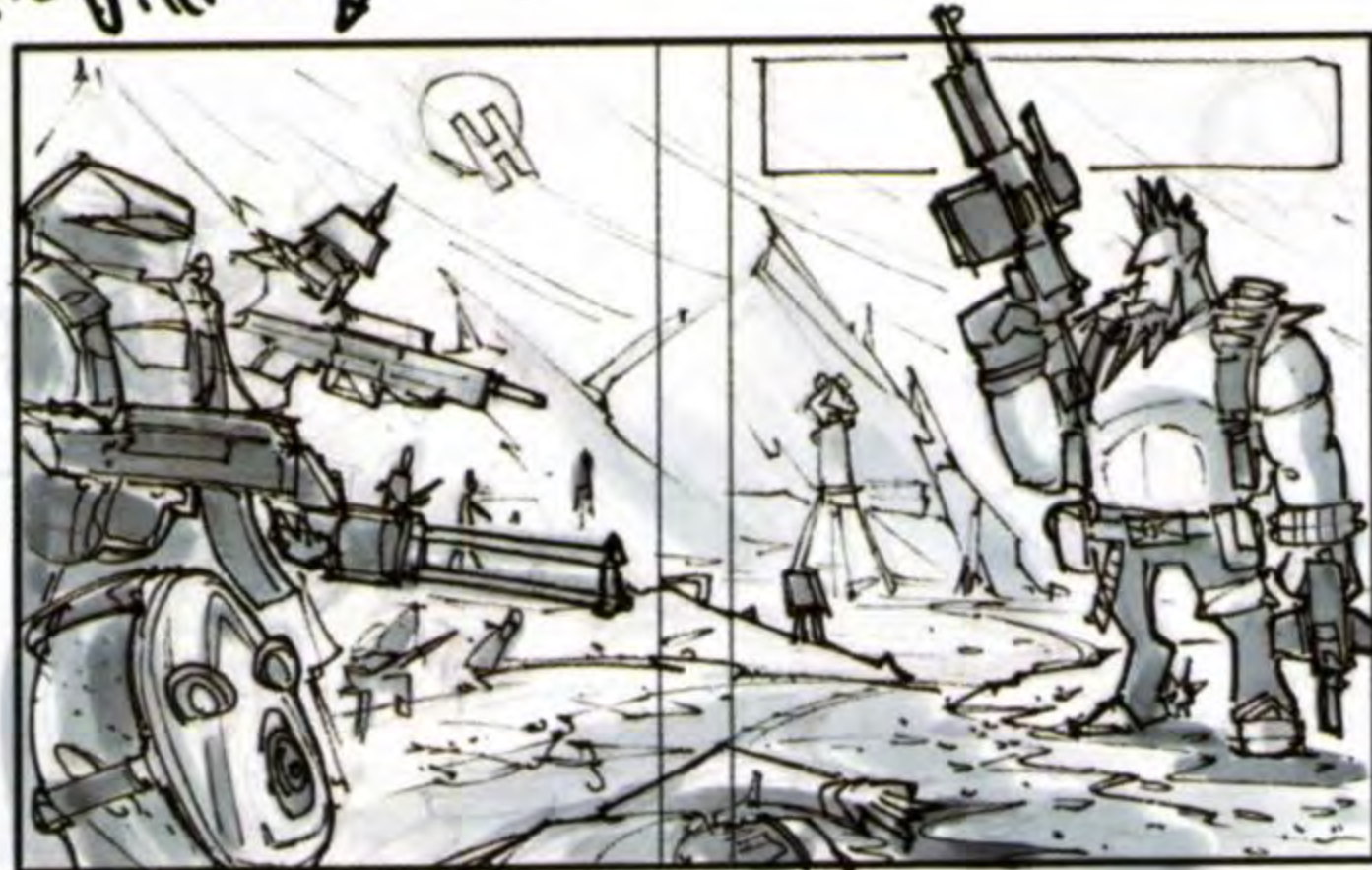
GAME INFORMER COVER

Scott Kester conceptualized out the very first image of *Borderlands 2* the world would see—the *Game Informer* debut cover.

“I’ll typically just draw a lot of different ideas,” he says. “The more ideas, the better. We gravitate towards what works, and I refine that until it looks right, from that point, we start to pose it and assemble it with real in game assets. It all starts with a doodle, then the models get placed and the magic starts to happen.

“We put a lot into that *Game Informer* cover—it was our big reveal, and I’m really happy with the way it came out. It was a defining piece for *Borderlands 2*.”

Mike Williams ↗



↖ From Merc view

↘ From Bandit's eye



△ Swap Bandits? ↗

Game Informer Cover Concepts [Scott Kester] Above

Game Informer Cover Art [Richard Jessup, Kevin Duc, Jeremy Cooke] Right



PACKAGE ART

These various explorations show numerous intriguing possibilities for what the first *Borderlands* box art might have been. "I initially wanted to explore a broad spectrum of what *Borderlands* is and what it consisted of," Scott Kester says. "How many ideas can you get across on a cover for a game? Is it an action shot with baddies everywhere getting blasted? A team shot of the characters looking tough together? Is it more high brow and atmospheric? Is it design heavy and very graphic in approach? Collages? Panels? Simple? Busy? In the end, it seems attitude reigns king and the more 'in your face' we are, the better."



Package Concepts

[Scott Kester]

This Page

Package Art

[Russell Perkins]

Next Page



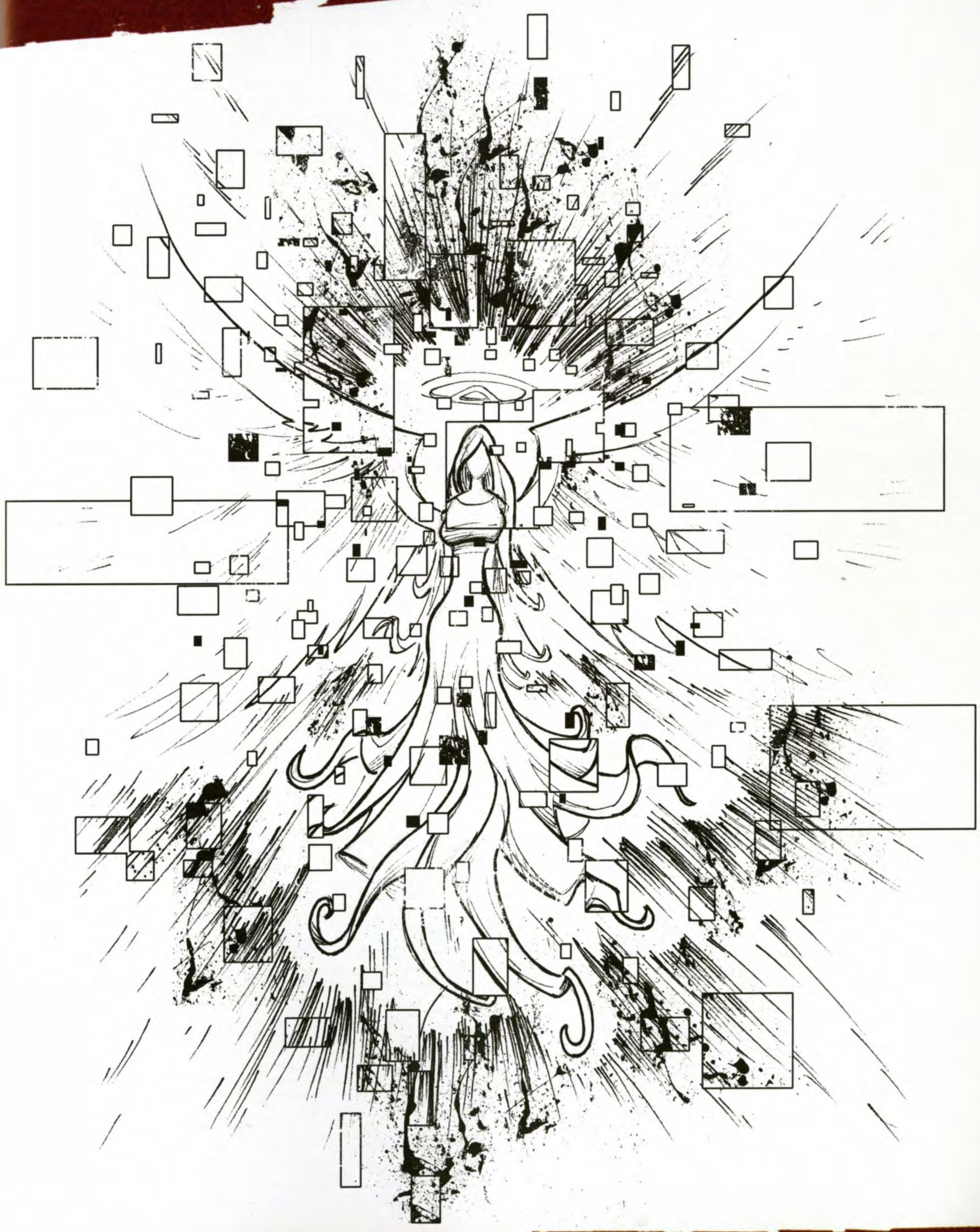
TECH ART

As insane as the world of *Borderlands* may be, it adheres to its own internal logic. Why can Vault Hunters just summon vehicles out of nothingness? Why does an average Pandoran day last twenty minutes? How the heck can guns fire off elemental effects, and who the hell is putting lightning into barrels and just leaving them around for anyone to blow up?

Through visual design, the *Borderlands* team sought to answer all but one of those questions (nobody knows why the hell bandits leave those barrels around).

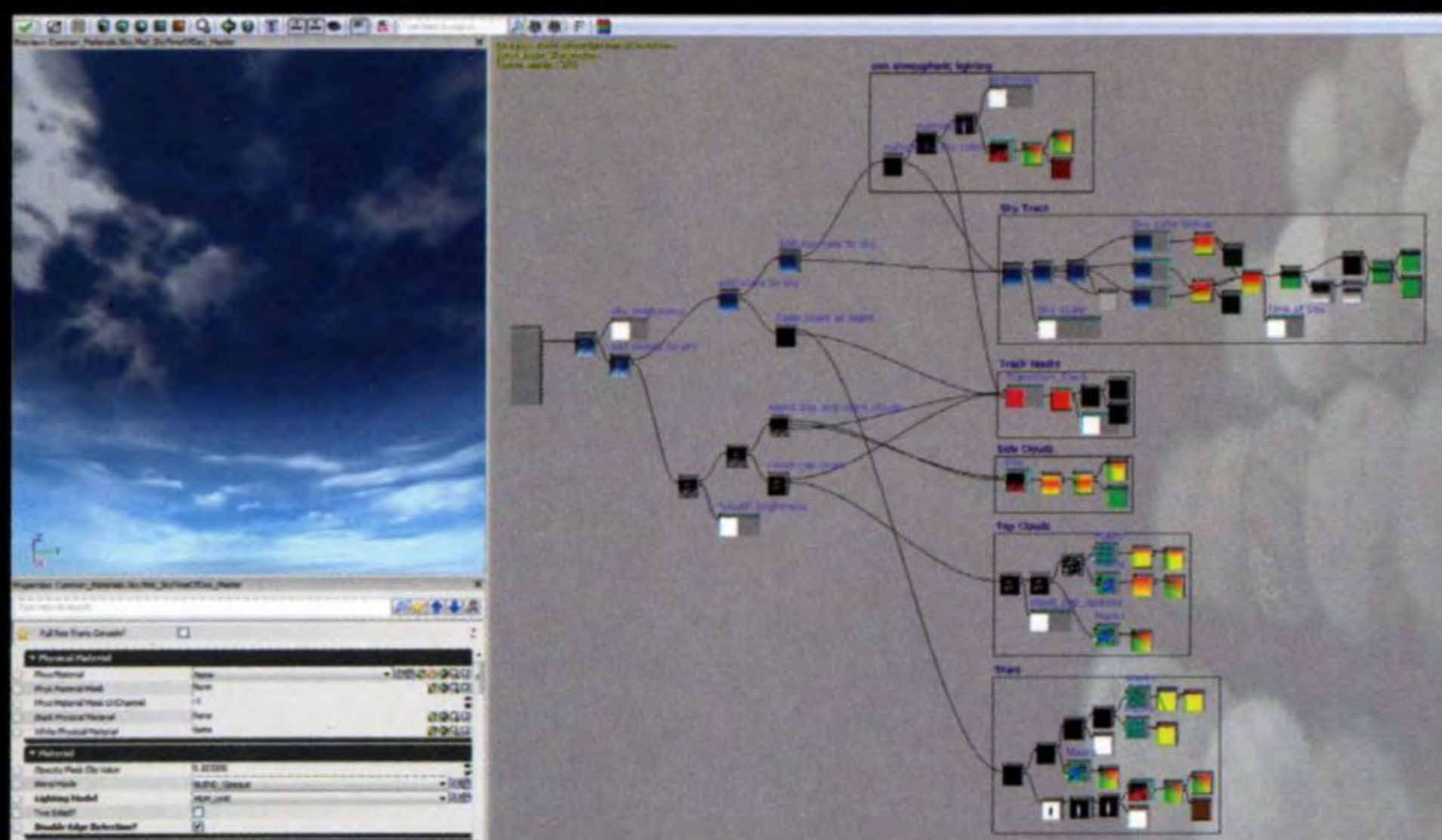
Illustration

[Scott Kester] *Right*



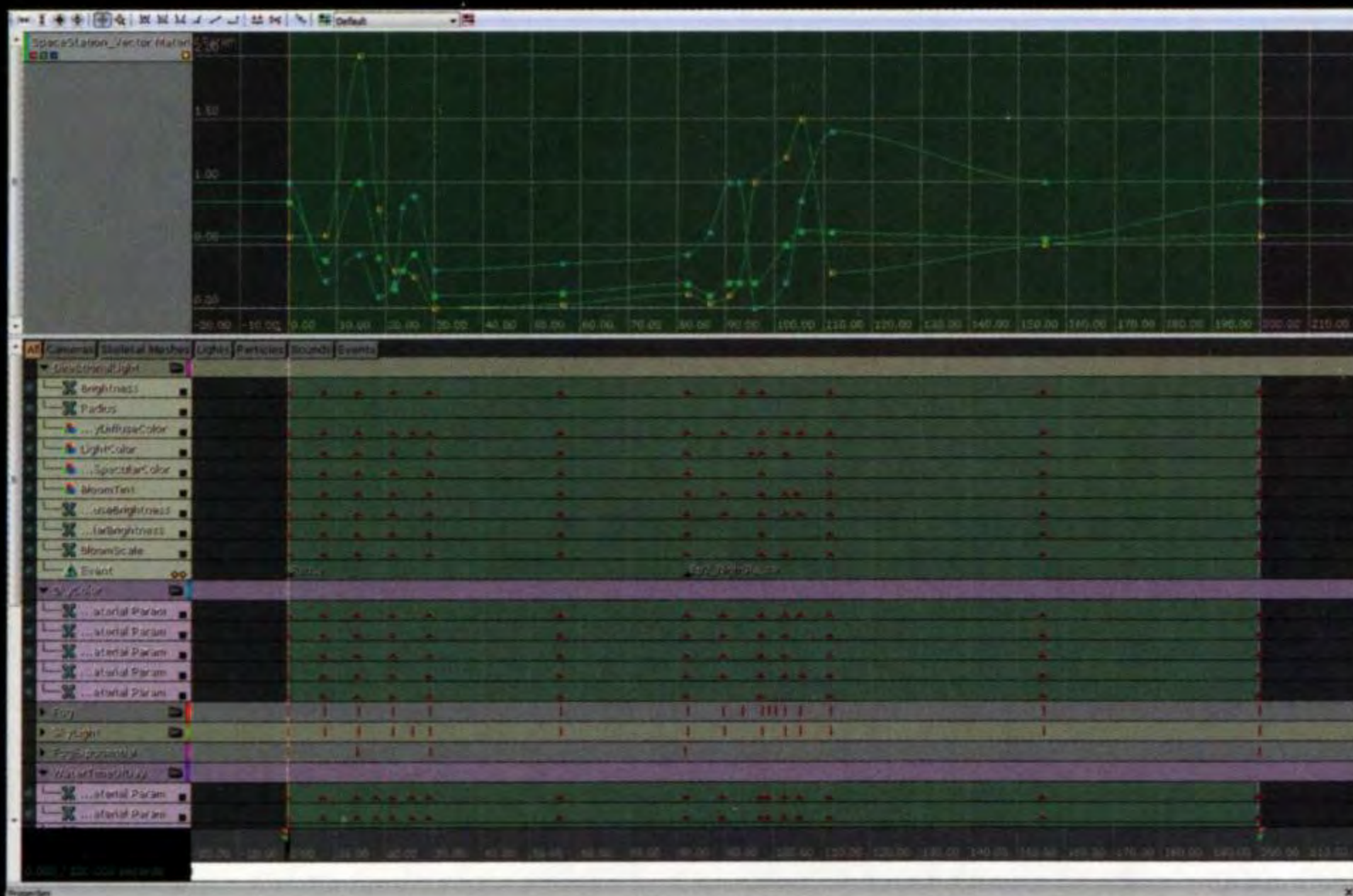
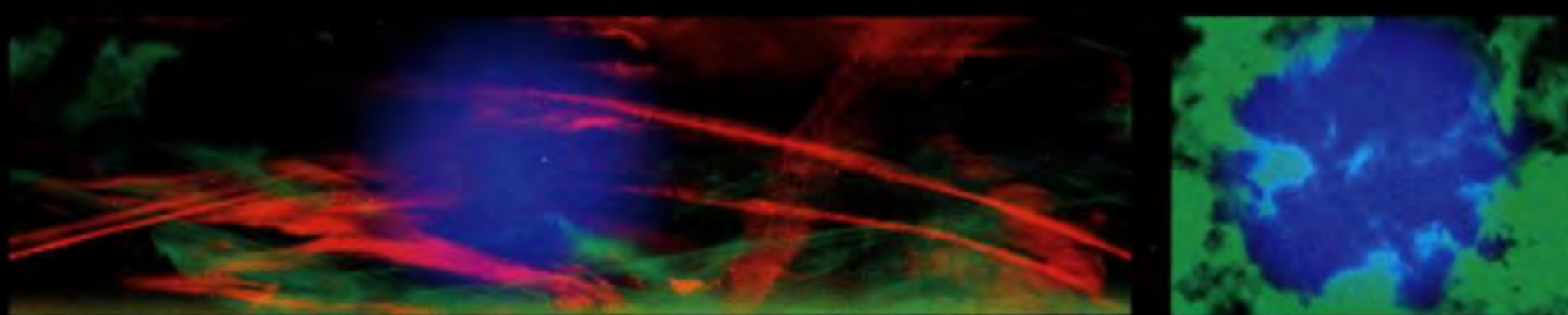
DAY NIGHT CYCLE

Day and night on Pandora is dictated by the spinning of a mysterious Pandoran moon. As the moon rotates it reveals its light and dark sides creating an earth-like day and night cycle but with the odd side effect of the shadows never moving! This effect is achieved by combining Unreal 3's dynamic lighting solution, custom dynamic colorization code and some clever shaders and Matinee work done by design.

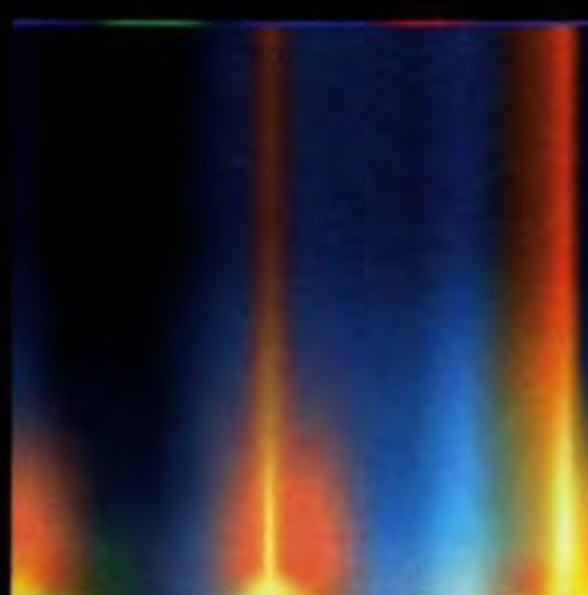


The foundation of this technology is some custom rendering code that splits out the lighting information from the sun as separate from lighting in the world into two separate textures. This allows the engine to dynamically change the color of the light cast by the sun without affecting the light created by static sources like flaming barrels or street lights.

From there we carefully key frame the colors of the sun, ambient light, fog, and light shafts to reflect the mood and lighting color at each time of day. Then the game code sets the current frame of the matinee to match the current time of day.



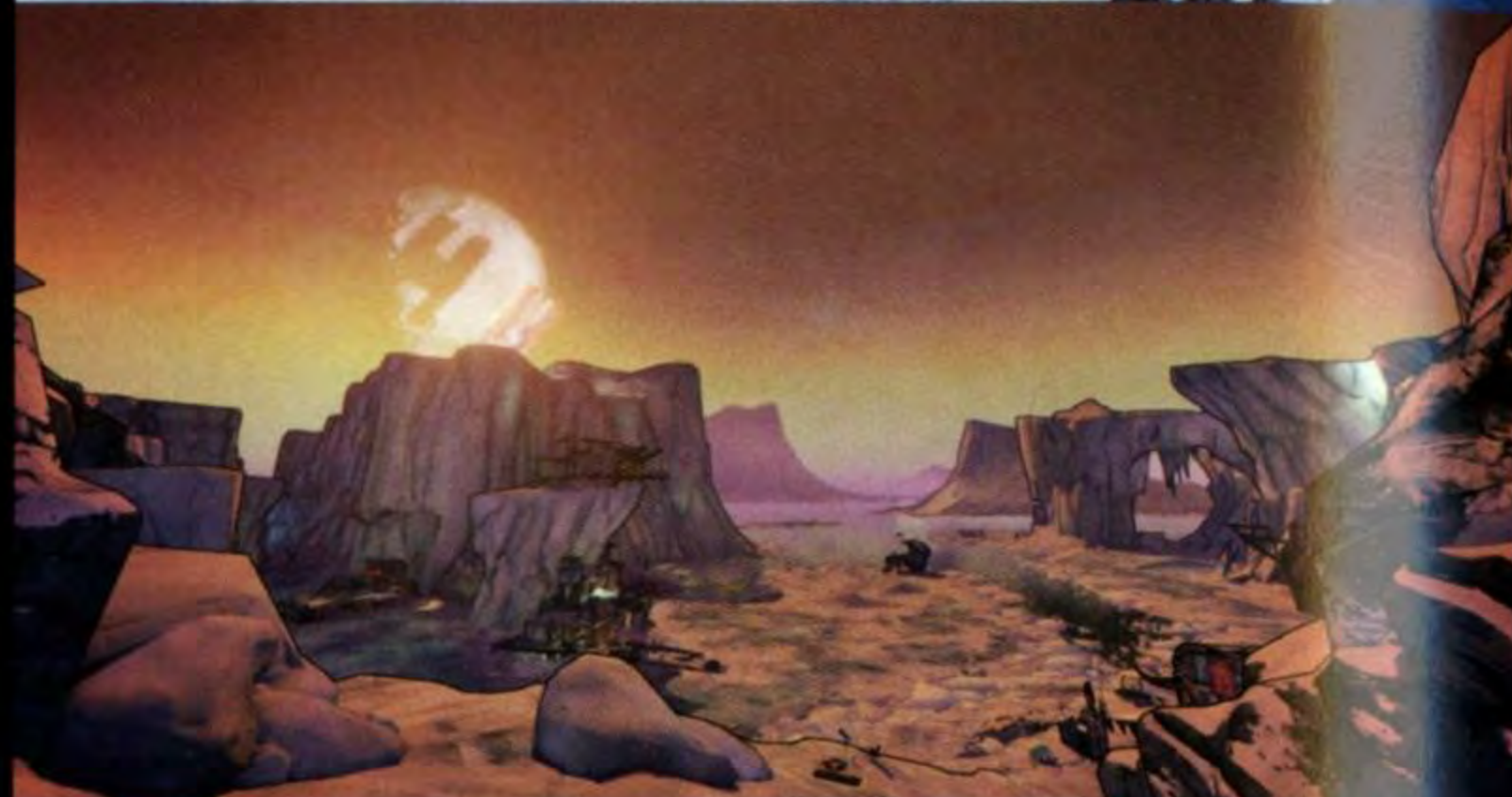
The last piece of the puzzle is the sky itself. The sky backdrop uses a special texture that encodes the color of the sky over the course of an entire day into a special gradient where each column of pixels represents the gradient that would appear in the sky at a certain time of day. That strip of color gets stretched across the entire sky and then blended with the glow of the sun, clouds and stars. Also, the shader uses a small strip of pixels at the top of the texture that reveals the clouds during the day and stars at night.



Day Night Cycle Image [Jeremy Cooke] *Top Left*

Day Night Cycle Image [Wes Girdler, Carl Shedd] *Middle Left*

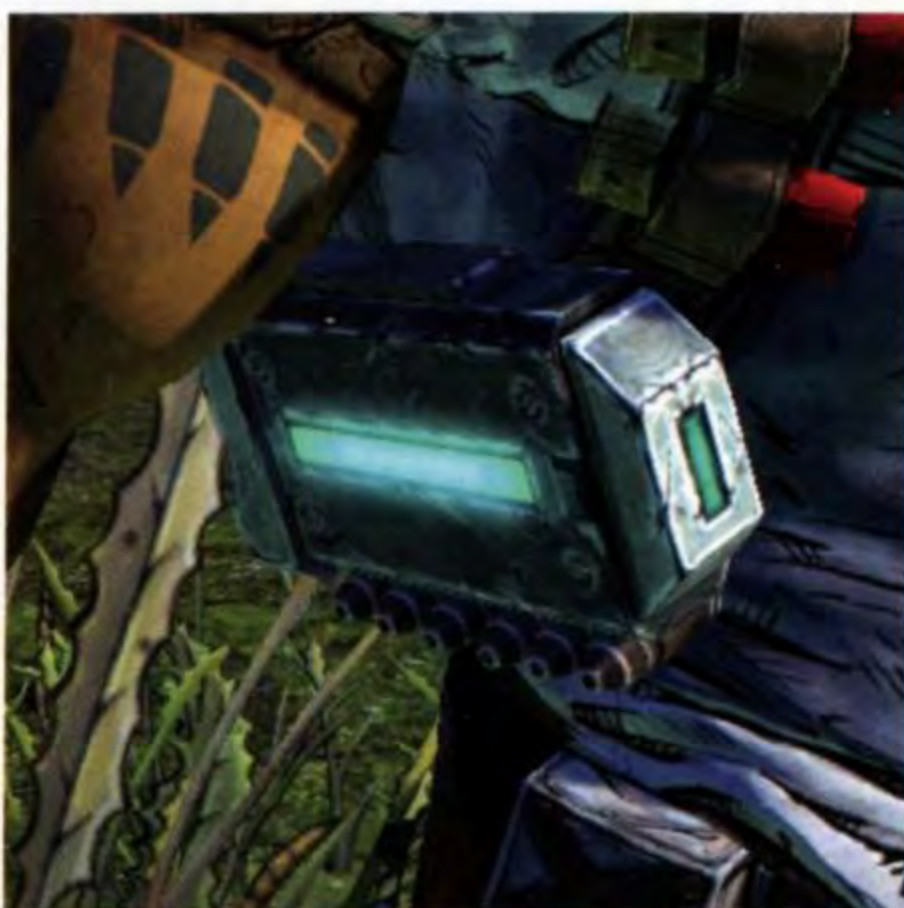
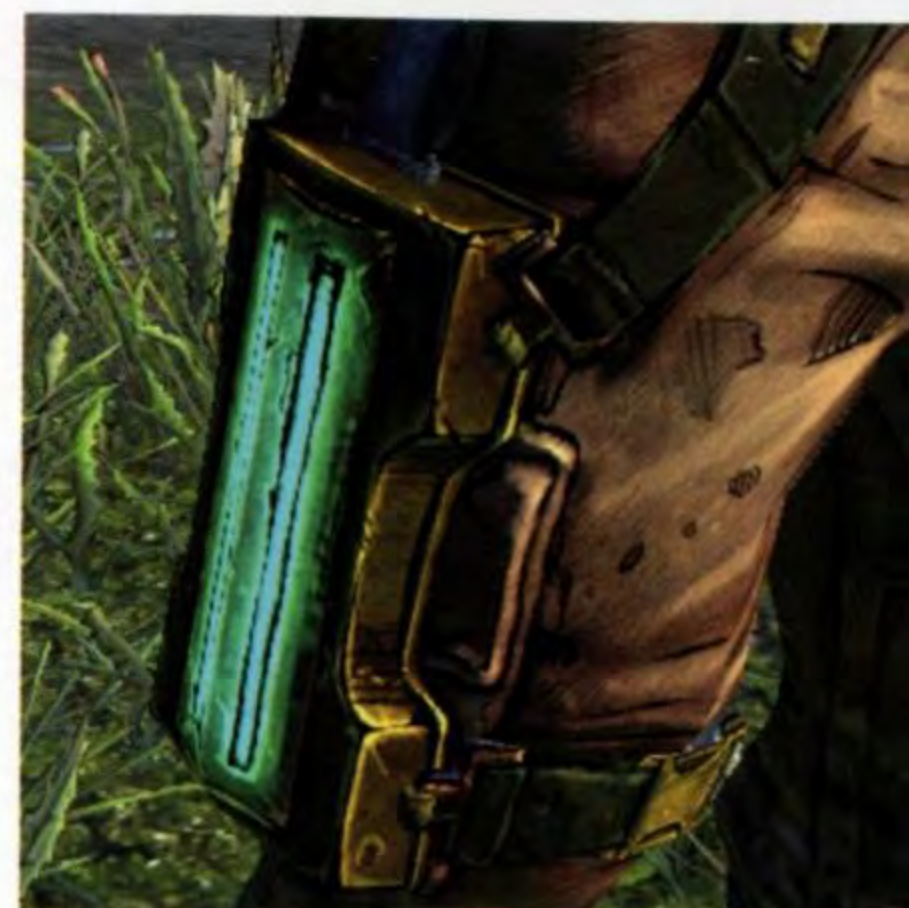
Day Night Cycle Image [Jeremy Cooke] *Bottom Left*



Day Night Cycle Image [Carl Shedd, Jeremy Cooke] *Above Right*

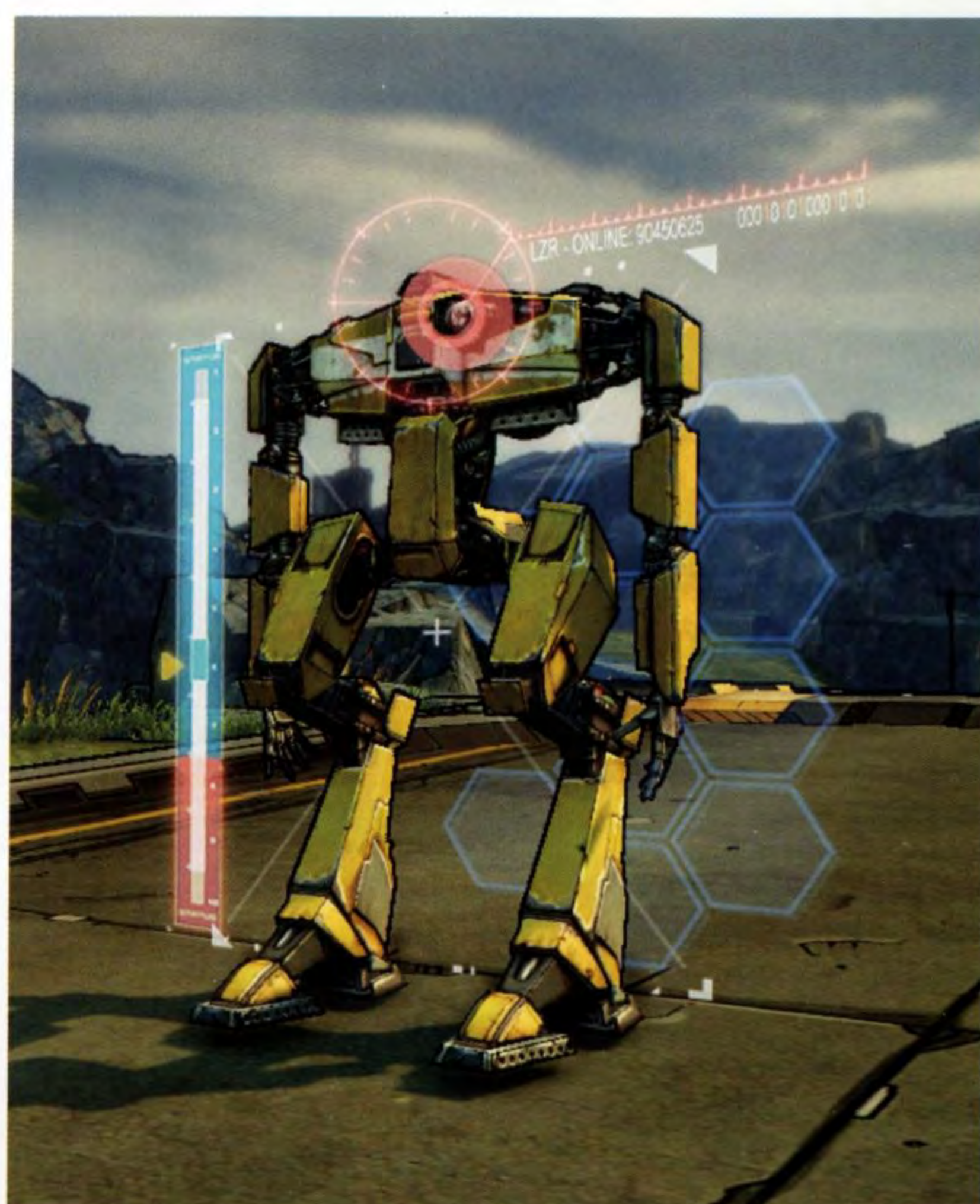
DIGISTRUCT

Digistruct is one of the core fictional technologies in *Borderlands*. Just about everything in our world gets Digistructed at one point or another. The cars, guns, vehicles, enemies, and even players that populate the world of Pandora rely on Digistruct technology to work. The core premise of Digistruct being that if you have the plans for an object you can use a digistruct module to "Digitally Re-Construct" it at will! This technology was originally invented in the universe of the original *Borderlands* to help explain why players could carry around 30+ weapons without getting overloaded. This can be seen on *BL1* and *2* characters in the form of their glowing "Digistruct Module." Eventually it was used for vehicle spawning stations, character death and respawn, and even became the core of Tediore's reload mechanic.



Digistruct Images [Adam May, Jim Sanders, Nick Peterson, and Steven Strobel]

In the first *Borderlands*, Digistruct as a concept came online fairly late in development and, as such, it didn't have a lot of visual support throughout the game. In general, small bursts of bluish light were the only indicators that something had Digistructed into existence. For *Borderlands 2* we put a lot of effort into crafting a unique look for the Digistruct effect and made sure it was consistent throughout the game. At its core we started with a neon blue-green glow and added high tech symbols along with lots of floating voxel shapes to fill in the background. Some of our earlier designs were centered around blueprints that came to life but those eventually began to feel a bit old fashioned. We did however like the idea of seeing the objects built up from nothing which eventually led us to the design today where objects "wipe" up from top to bottom or front to back.



THE FIVE ELEMENTS

In the original *Borderlands* the weapons and enemies had a chance to spawn having one of four elements: Fire, Corrosive, Shock, or Explosive. Each element had its own strengths and weaknesses depending on the situation. In *Borderlands 2* we decided to add a fifth element to the mix known as “Slag.” In the game story, Handsome Jack was refining Eridium so he could control Sirens and eventually use their power to open the Vault. When designing Eridium we wanted to get across the idea that it was extremely powerful so we imbued it with an almost radioactive glow. We knew using green was out of the question since that color was already part of the visual language for the corrosive element. A deep blue-purple that transitioned to neon pink seemed like a good fit.

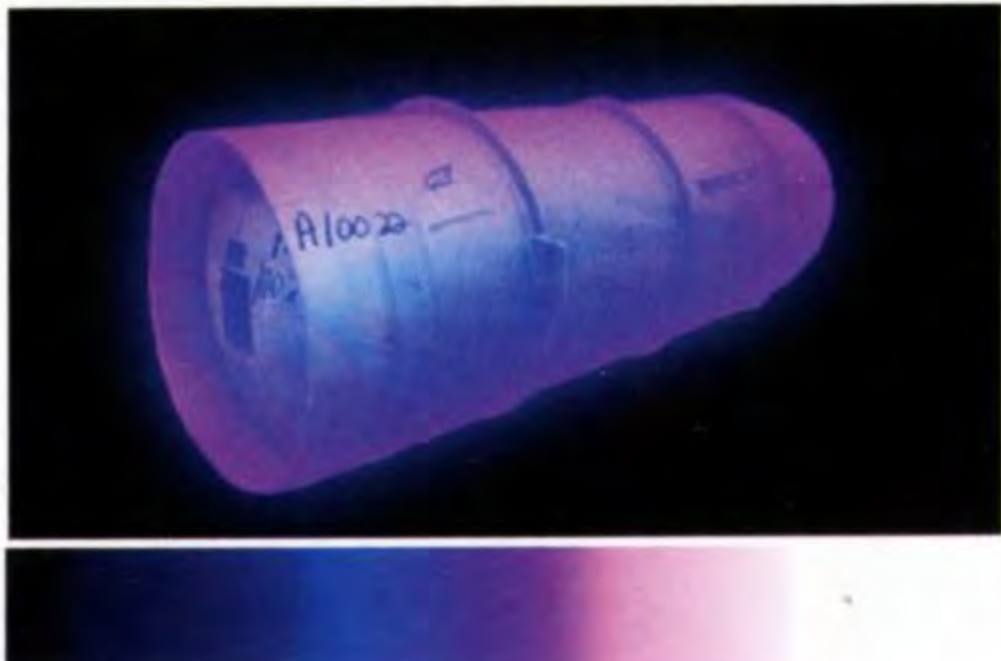
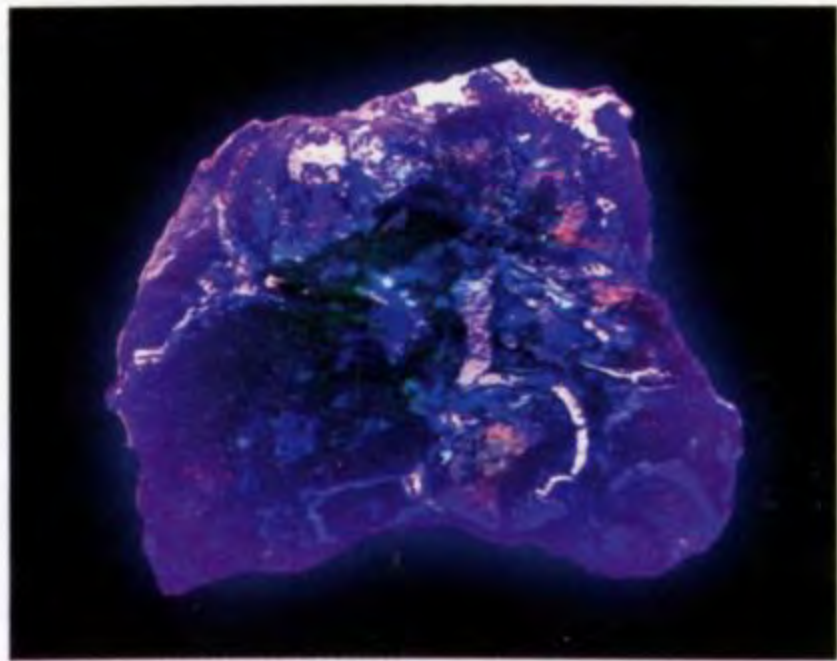


Barrels [Gearbox] Right



Elemental Effects [Jeremy Cooke, Mark Forsyth, Paul Hellquist, Jim Sanders, and Nick Peterson] Above

Of course the refining process for creating Eridium is unsafe and resulted in a deadly byproduct called “Slag.” The basic idea being that getting “slagged” rendered players and enemies alike vulnerable, taking massive damage from further incoming attacks. Since Slag was a byproduct of Eridium and we wanted them to be related but not identical, eventually we ended up shifting Eridium’s color palette towards blue and then adding copious amounts of black splatters to communicate its evil “cursed” intent.



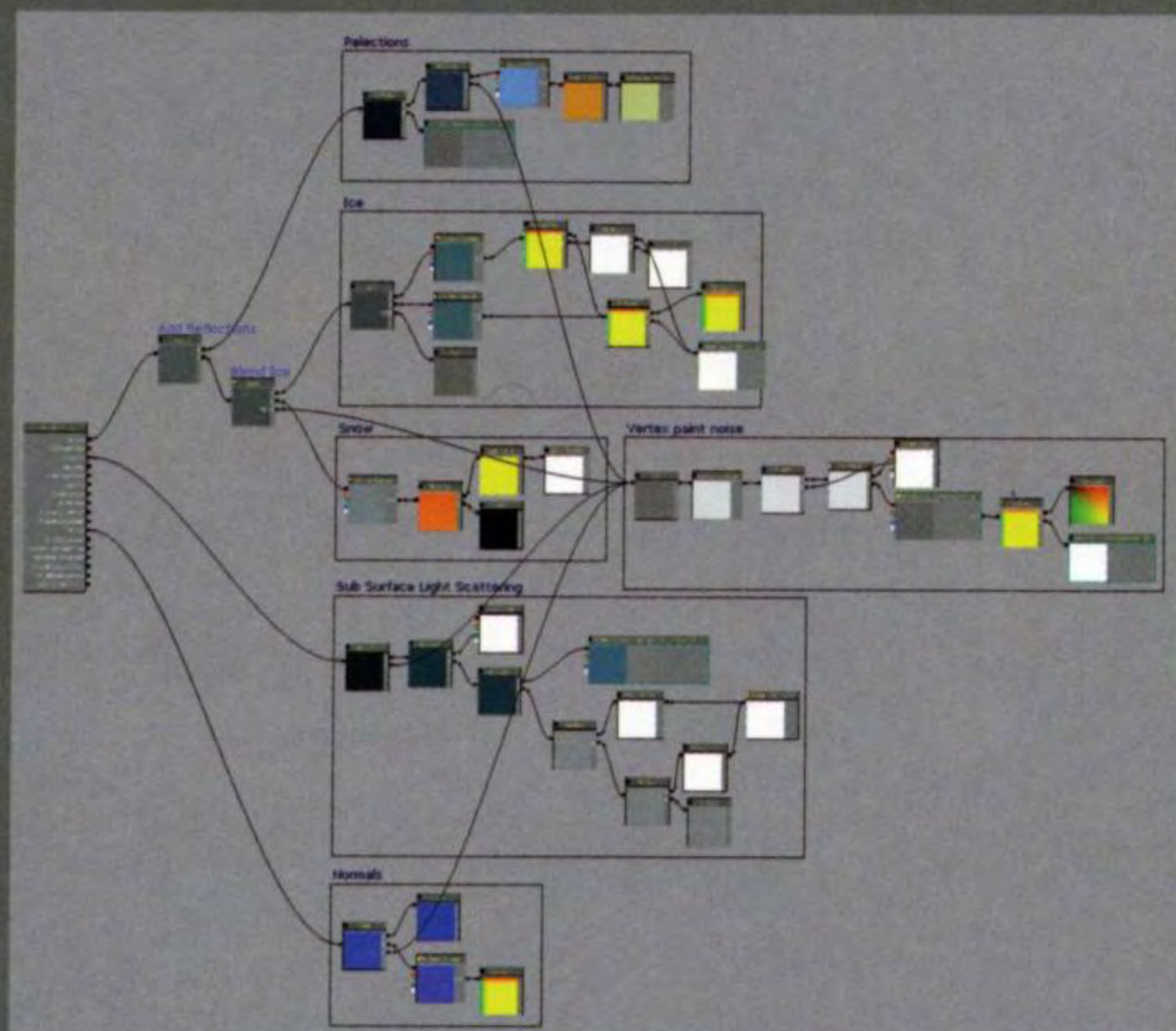
Eridium Ore Concepts [Jeremy Cooke] Right

ICE AND SNOW

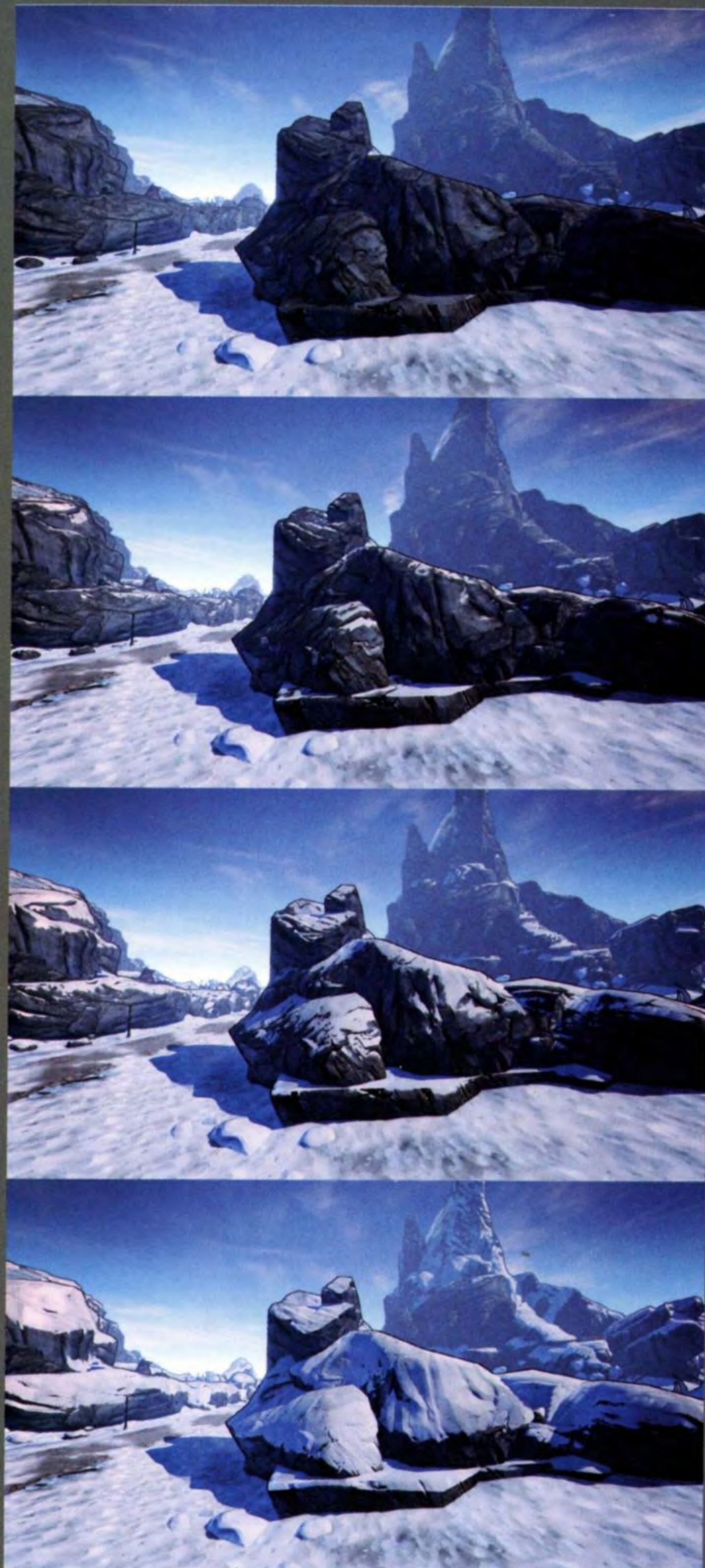
As we embarked on *Borderlands 2* one of our biggest goals was to visit other parts of Pandora and vary our color palette. We were all feeling a bit burnt out on brown desert environments and traveling through icy northern lands, volcanic craters, and corrosive caverns sounded fun and fresh.

Of course when tackling new environments we immediately ran into some new challenges trying to translate them into the *Borderlands* style. Some surfaces like snow and ice proved to be really challenging because our normal techniques weren't capable of representing the complex surface characteristics that these materials had. We always try to strike a balance between realism and a painterly feel as we texture any surface and we achieved a stylish interpretation of these elements while still capturing the aspects that make them unique.

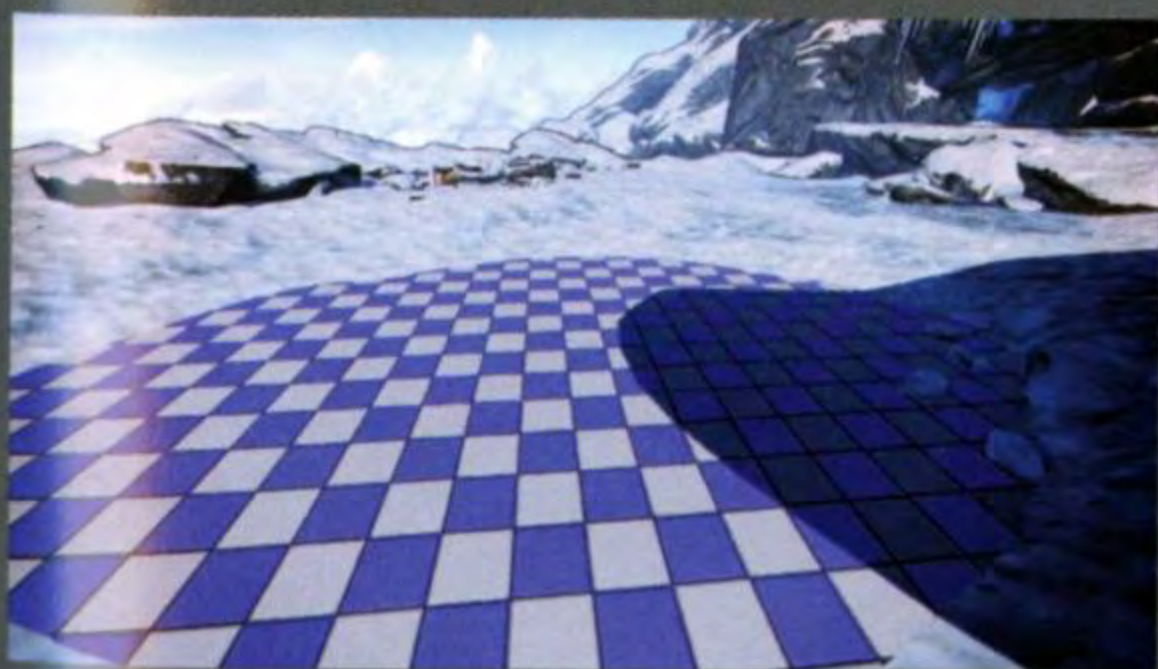
For snow we developed a shader that would identify the surfaces of objects that were facing upwards and dynamically apply snow to only those surfaces. By then using painterly normal maps we achieved snow that felt "hand painted" onto each rock, shed, and hut in the scene. Designers were then able to control the amount of snow that landed on each object to simulate accumulation that was appropriate for the level and for where the asset was placed.



Ice Lake Shader
[Jeremy Cooke,
Ryan Smith] *Right*



In the case of ice, we really wanted to create a sense of depth and dimensionality when players were walking across the surface. To this end we used a technique called "parallax offset mapping" to create an imaginary layer of ice that appeared to be below the surface the player was walking on. All objects that were made of ice could also have a cool inner glow that simulated the light passing through the ice and bouncing back out to the viewer. This not only added realism to the surface but added much needed color variety in scenes that would otherwise have ended up being dominated by snow.



In the images above you can see we first add a layer of snow to the frozen lake. This uses the same texture coordinates as the terrain so it blends seamlessly with the rest of the world.

Then we use a mask that is painted by the level designer to reveal icy areas. If you look closely you can make out the second layer of ice.



Next we add an environment map to simulate objects reflected in the ice.

Further, we add the blue green inner glow of light scattering inside the ice.

Finally we add a crackly ice normal map that makes the ice surface more dimensional and enhances the look of the reflections.

Snow Progression [Jeremy Cooke] *Above Right*
Snow FX [Nicholas Wilson] *Above Right*

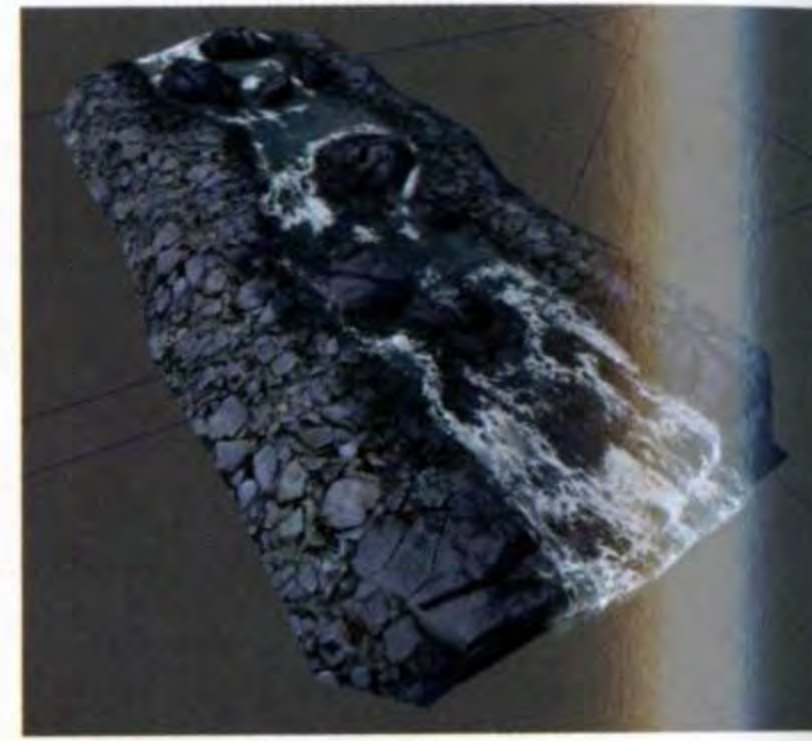
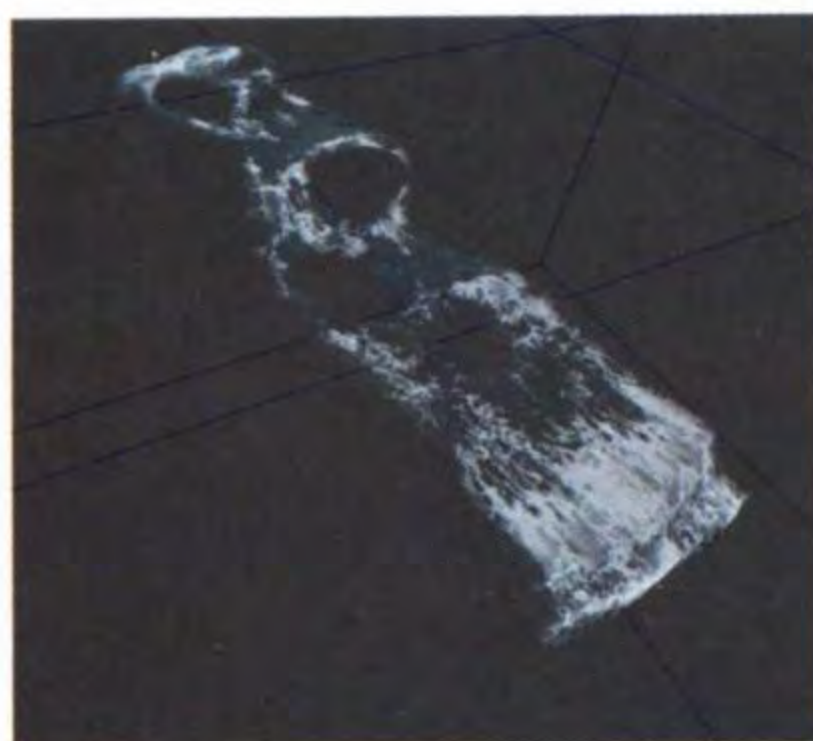
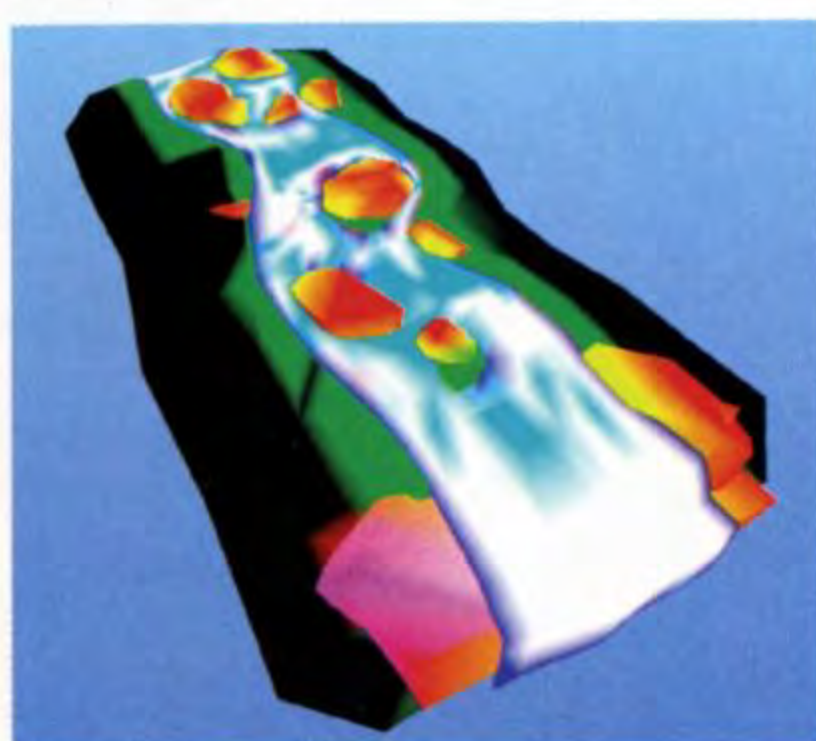
Shader Progression [Jeremy Cooke, Ryan Smith] *Above*

RIVERS AND STREAMS

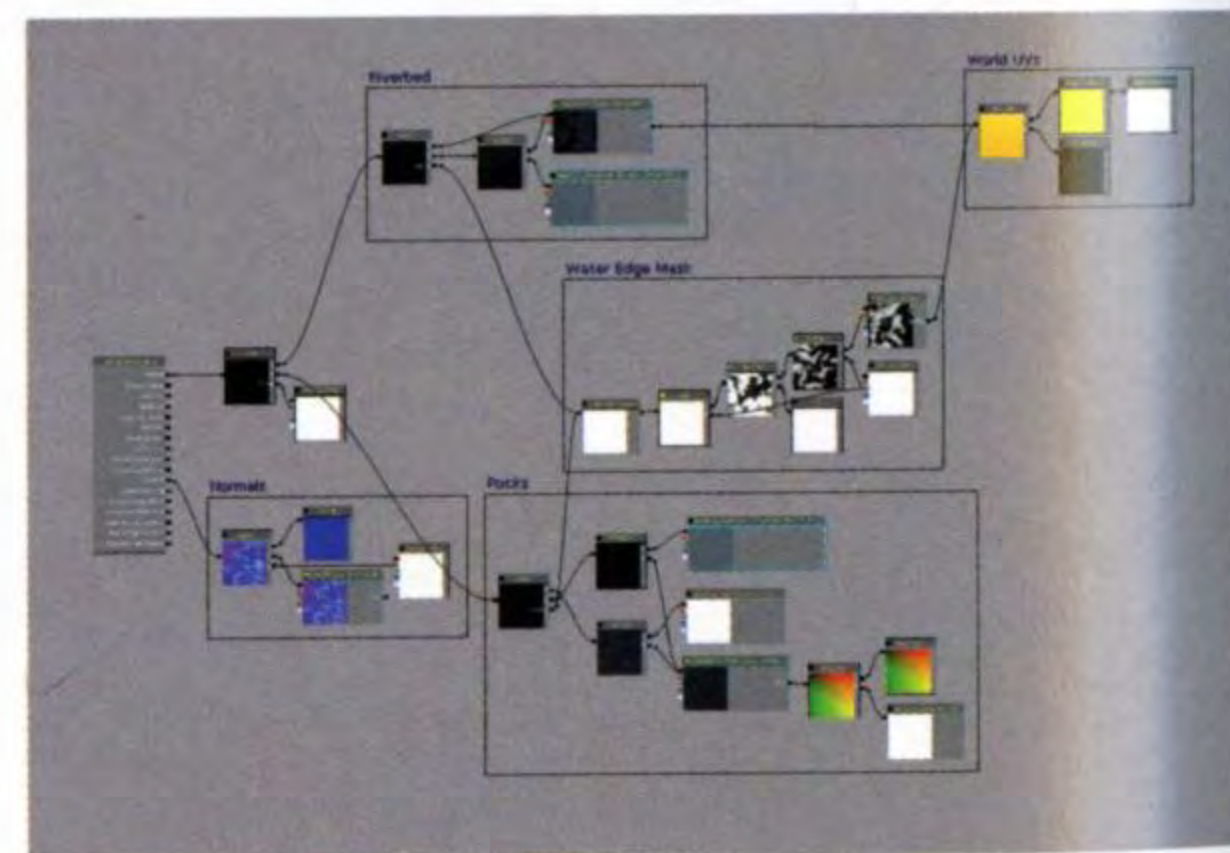
Another challenge we took on in the development of new environments on Pandora was streams and rivers. For many months in development we were using our tried and true methods of creating water surface models and then wrapping terrain around them to create the look of rivers. Unfortunately, this was extremely time consuming to implement and did not work very well. Eventually we began to notice that rivers and streams weren't being included in map design very often as designers tried to work around the problems. We knew something had to be done or rivers weren't going to make the cut for *Borderlands 2*.

The main technical challenge lay in merging the rivers with the underlying terrain. Because our worlds were so large the terrain used relatively large polygons and as a result, the river meshes never quite fit naturally into the surface of the ground. The solution we eventually settled on was to create a chunk of mesh that represented some terrain, as well as the riverbed, and then perfectly fit the river surface to that.

River Images [Jeremy Cooke]



Once we had this solution in place it was a matter of making the river look cool. The first piece of this puzzle was using a vertex color mask to blend a wet look into the areas of the river that were supposed to look wet. In addition, a tiling detail noise texture was blended in to make the water look like it had splattered onto the nearby rocks. The most time consuming part of the process was making the water's surface carefully "flow" around each rock and curve of the river bank. The UVs of the surface were then squashed and stretched to make the water appear to flow faster and slower as the texture panned across the surface. Another key element we added was foam that also used a vertex color mask to appear and disappear naturally so as to simulate the water being churned up as it went over falls and around rocks. Last but not least, we added some specular reflections, refraction, and environment maps to really sell the wet look.



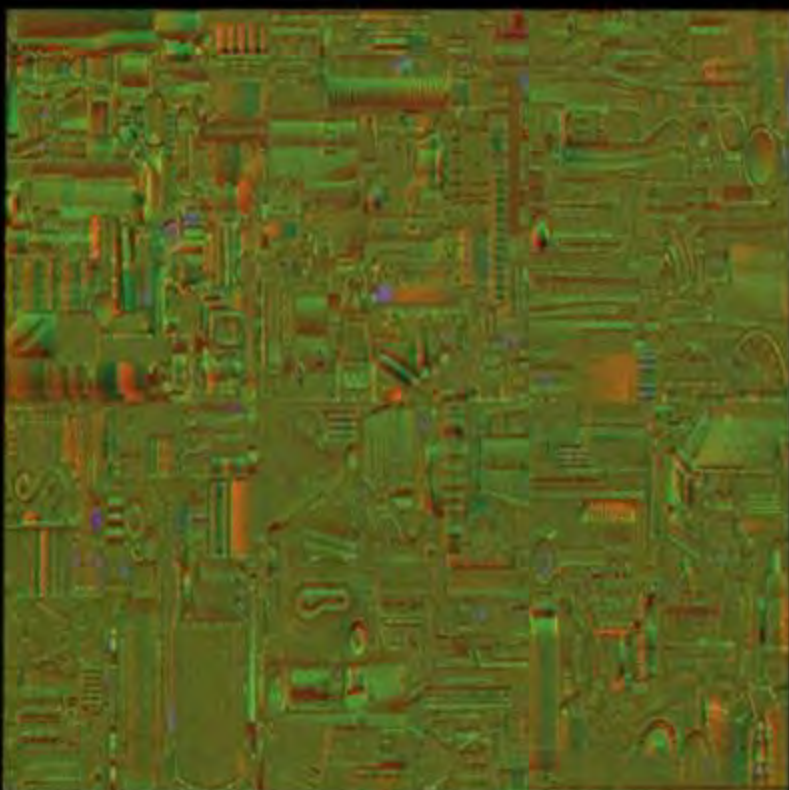
87 BAZILLION WEAPONS

Guns were at the core of *Borderlands 1* so we knew we had to up our game. That meant creating new technology and shaders to add even more style and variety to the guns in *Borderlands 2*.

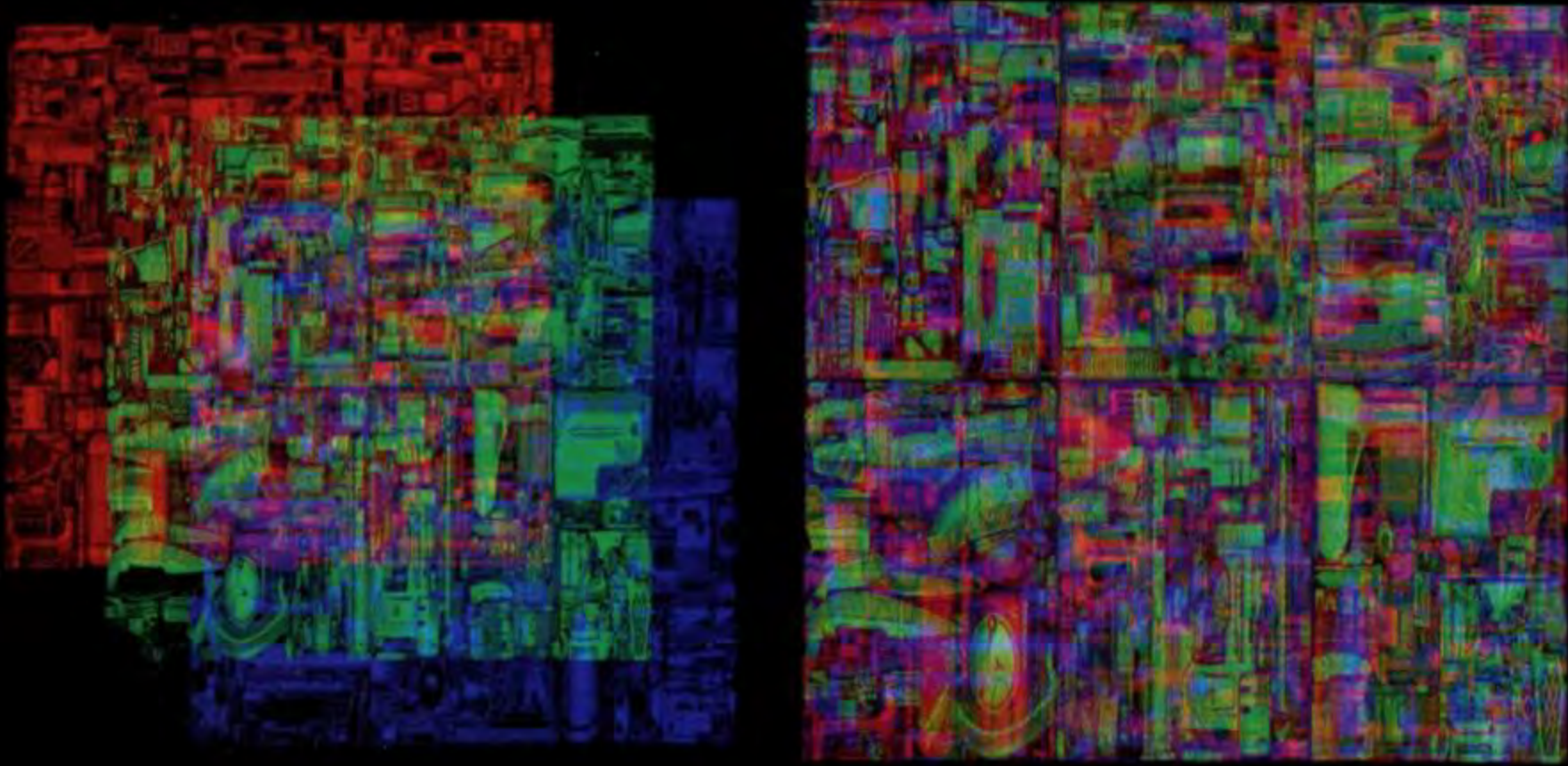
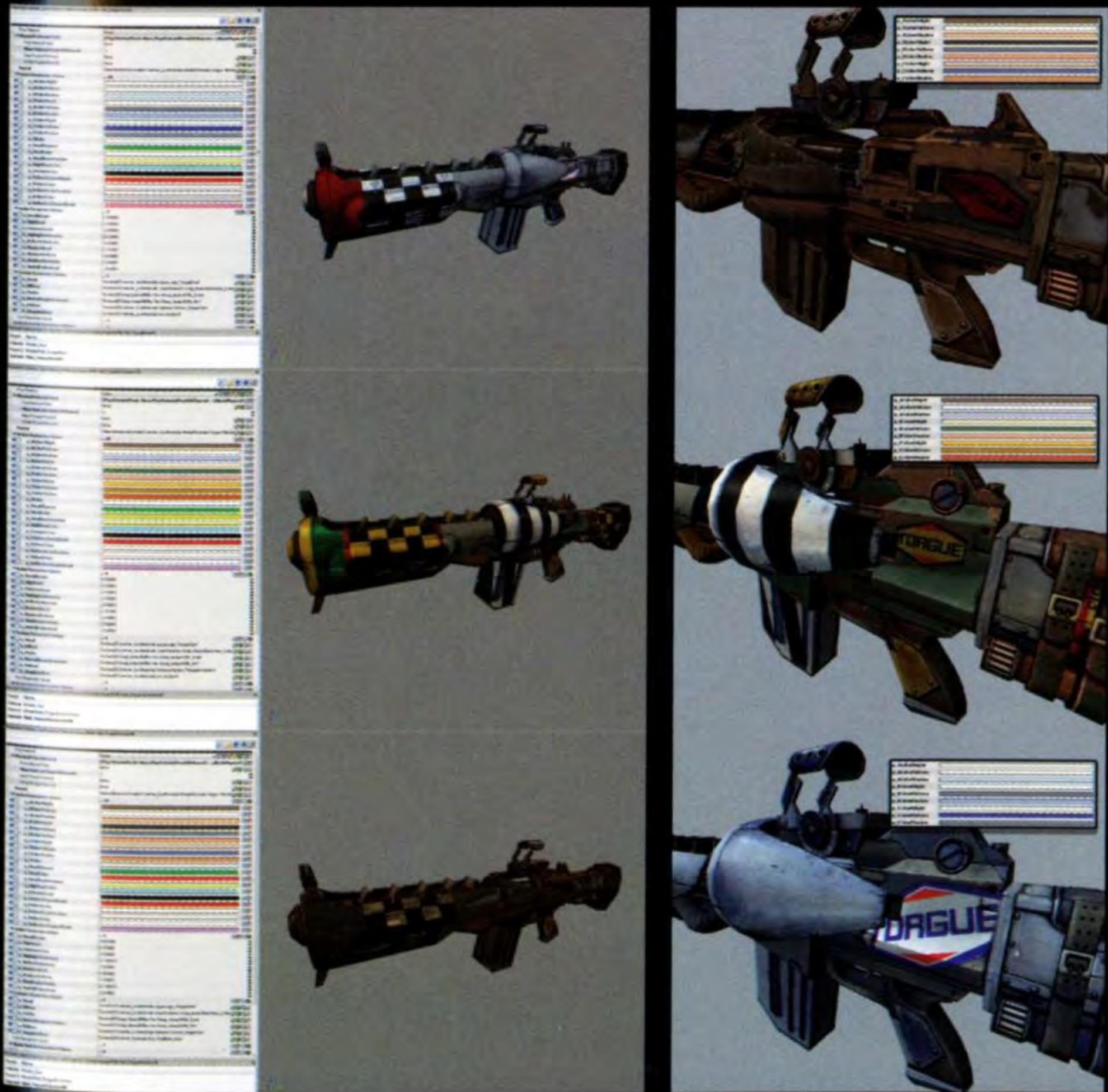
The first step in this process is very similar to creating a weapon in other games. We first build a high poly model and then texture it in the *Borderlands 2* style. From there we pack all the weapons of a particular class (for example all Assault Rifles) into one huge texture. Then we go through the same process for two more classes of weapon and pack all the resulting textures into one color channel each. The result is a rainbow looking monstrosity that the shader will eventually deconstruct back into individual weapons. The reason we go through all this trouble is to save texture memory since we need huge textures to draw all the zillions of different parts from which each gun is made.

From there we create two new textures: one that masks out the different materials a gun is made of and one that masks out highlight and shadow areas. These textures are combined with the grey packed diffuse textures to create the final weapon look. As you can see from the examples, changing the nine input colors for each material gives each manufacturer distinct colors and surface properties.

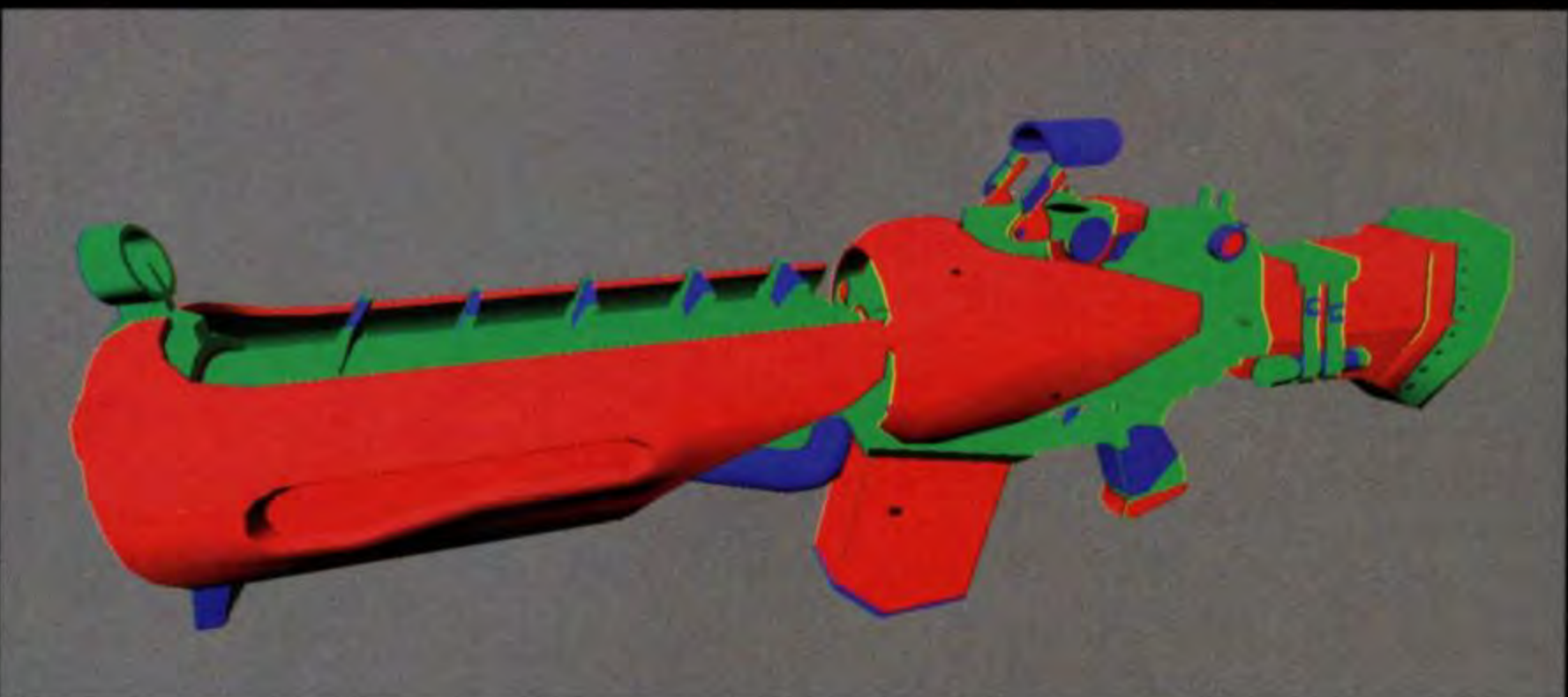
Next we create a texture that contains the high polygon normal map and emissive areas of the weapon. Again we channel packed these to save texture memory. Elemental weapons use the emissive channel of this texture to determine what parts of the weapon will glow.



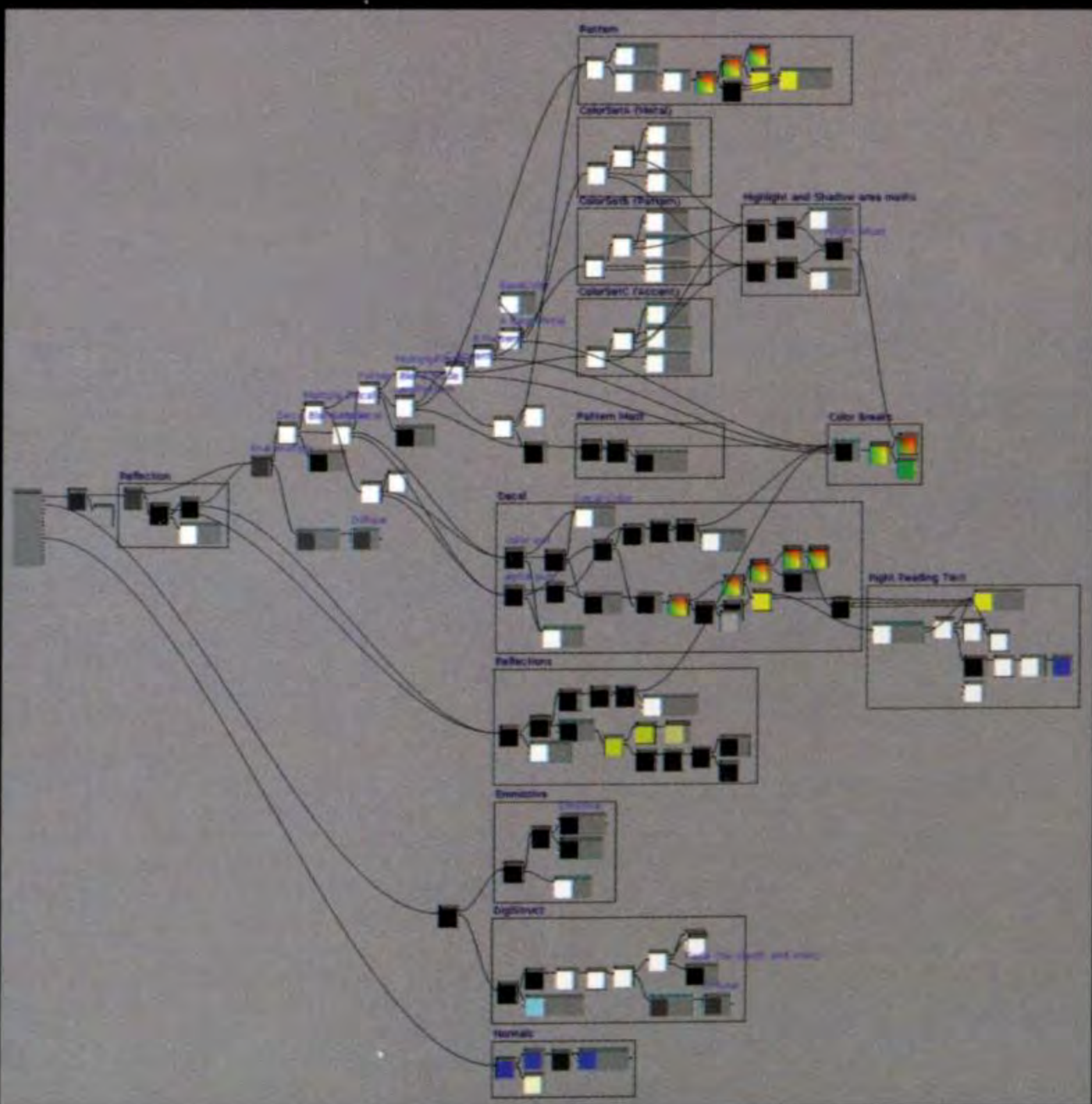
Lastly, our shader supports blending decals, patterns, and reflectivity to give further personality to each weapon. Each of these can be independently scaled, rotated and masked to different areas of the gun.



Channel Packing [Gearbox]
Normal Emissives [Gearbox]
Color Break Mask [Ricky Oh, Gearbox]
Highlight Shadow Mask [Ricky Oh, Gearbox]



Weapon Shader [Jeremy Cooke]
Weapon Material [Jeremy Cooke, Kevin Duc]
Weapon Colorization [Jeremy Cooke, Ricky Oh]



All this is truly only the tip of the iceberg when it comes to the weapon technology that was created for *Borderlands 2*. Our weapons were a labor of love and were in development for almost the entire length of the project.

USER INTERFACE

Fans of the first *Borderlands* wanted a lot of things for the sequel. "More enemy variety," they demanded. "Pictures of Moxxi's breasts. An improved User Interface."

"We'd be happy to deliver two of those three things," we responded, right before we started work on an improved UI and chastised our receptionist for not screening our calls.

Nearly every aspect of the first game's UI experienced massive improvements from the first game to the second. Things got shinier, and cleaner, and more three-dimensional—but the process of getting there took a lot of work.

Illustration

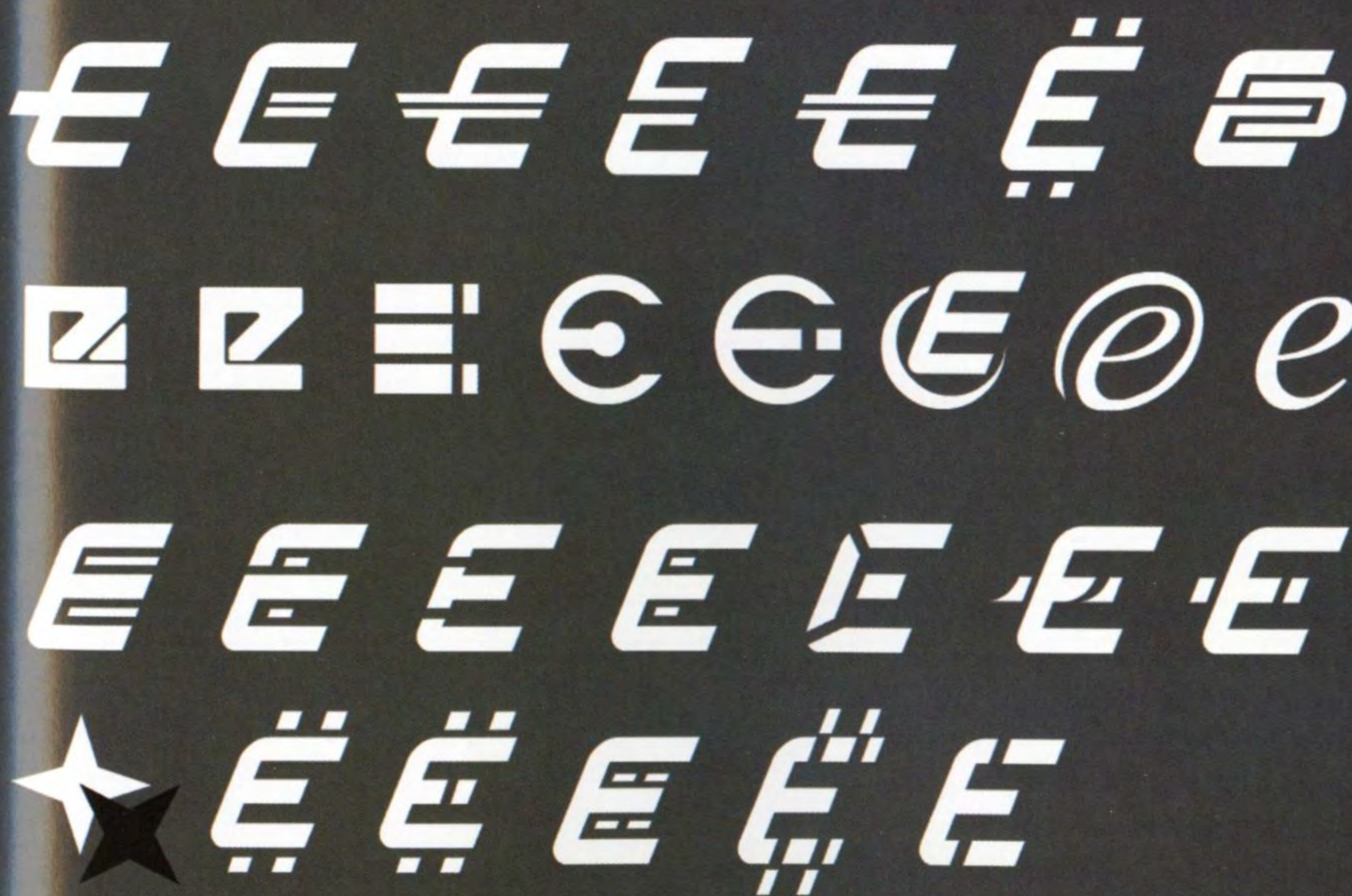
[Scott Kester] Right





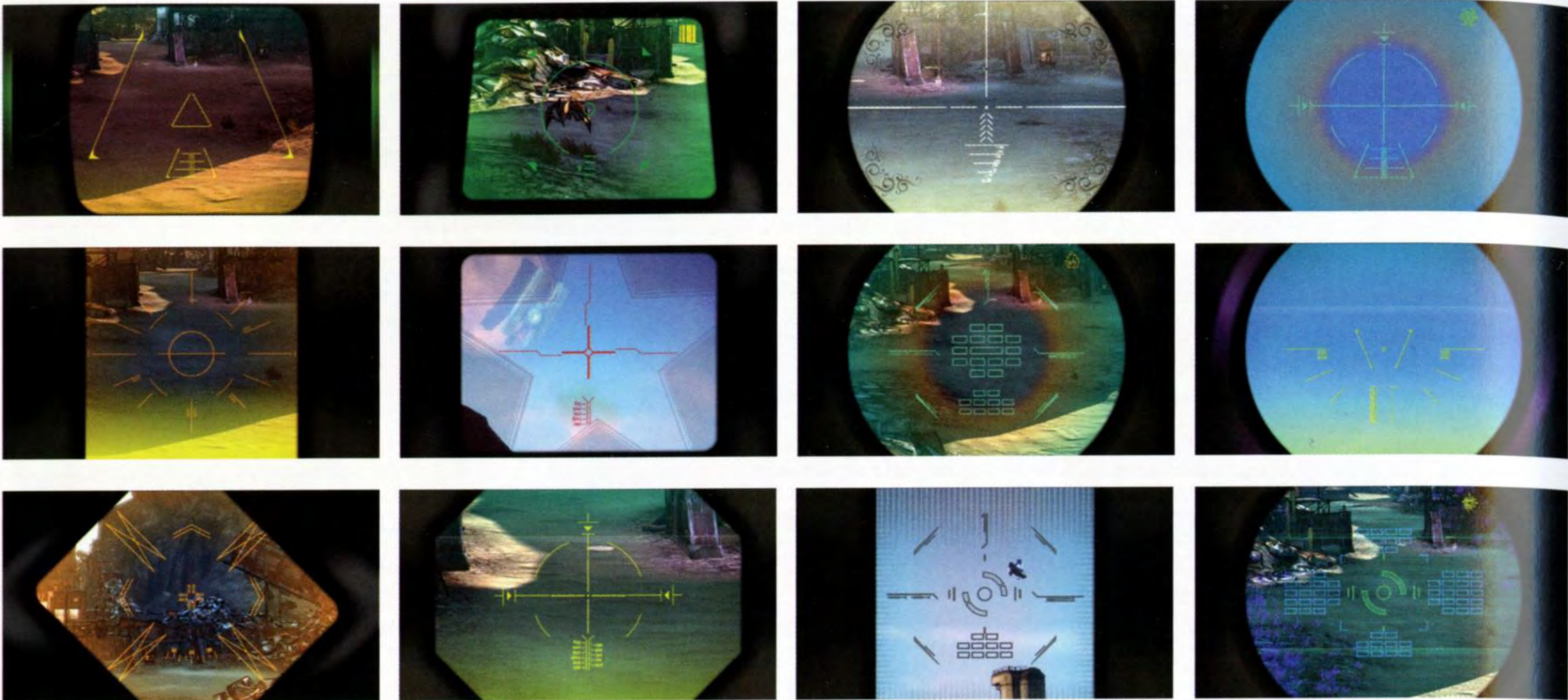
These are all the ECHO portraits that appeared in *Borderlands 1* and *2*.

ECHO Portraits [Matias Tapia, Kale Menges]



"For *Borderlands 2* we added a new currency called Eridium. This was some of the exploration I went through to get to a final icon," says Jason Shields. "It was important to make an icon that felt like some sort of money, but still felt different enough from the main currency in the game."

Eridium Currency Concepts [Jason Shields]



“One of the things I had a lot of fun with was designing the pieces that would make up the 87 bazillion varieties of first person weapon scopes in *Borderlands 2*,” explains Shields.

Weapon Scopes [Jason Shields] Above
HUD Designs [Jason Shields] Below

HUD

The first *Borderlands 2* HUD prototype took the *Borderlands 1* style and skewed the elements and added the minimap. Also shown here is the first Salvador Active Ability prototype, which had names for his dual wielded weapons. “I knew I wanted to make the HUD feel new and progressed from the *BL1* HUD but yet keep most of the familiar elements and placement for returning players,” says Jason Shields.



The arted up HUD source mid-way through production.



We tried a lot of shapes and sizes for the minimap. The first implementation was large and round, but playtesting revealed that players were paying more attention to the minimap than the game world and it was negatively impacting their experience. In the end we opted for a more rectangular minimap which fit the HUD’s visual aesthetic better and solved the “playing the minimap” issues we saw during playtesting.

We had a great solution for showing the player's character model in UIs that related to the character, but the player's vehicle wasn't spawned yet, so it created a bit of a problem for the Catch-A-Ride stations. We decided it'd be cool to show the player's vehicle choices with customization options as well.



"I wanted to give a little bit of visual identity to the vehicle weapon selection for *Borderlands 2* rather than just a choice in a text list," explains Jason Shields, "so I created some faux technical readouts for all the various vehicle weapon classes."

VSS Designs [Jason Shields] Above

"I also prototyped a lot of ways to indicate enemies on the radar. We thought maybe if we could abstract the enemy locations a bit it would help keep the player engaged in the world a little more. But in the end we decided to go with the tried and true 'red dots.'"



Minimap Prototypes [Jason Shields] Above
Early UI Mockups [Jason Shields] Below



A very early version of the map screen already shows some of the elements we knew would be important to *Borderlands 2* such as contextual map information.



First prototype of the buddy "in menu" display.



So many Claptraps!

Claptrap Illustrations [Kale Menges]

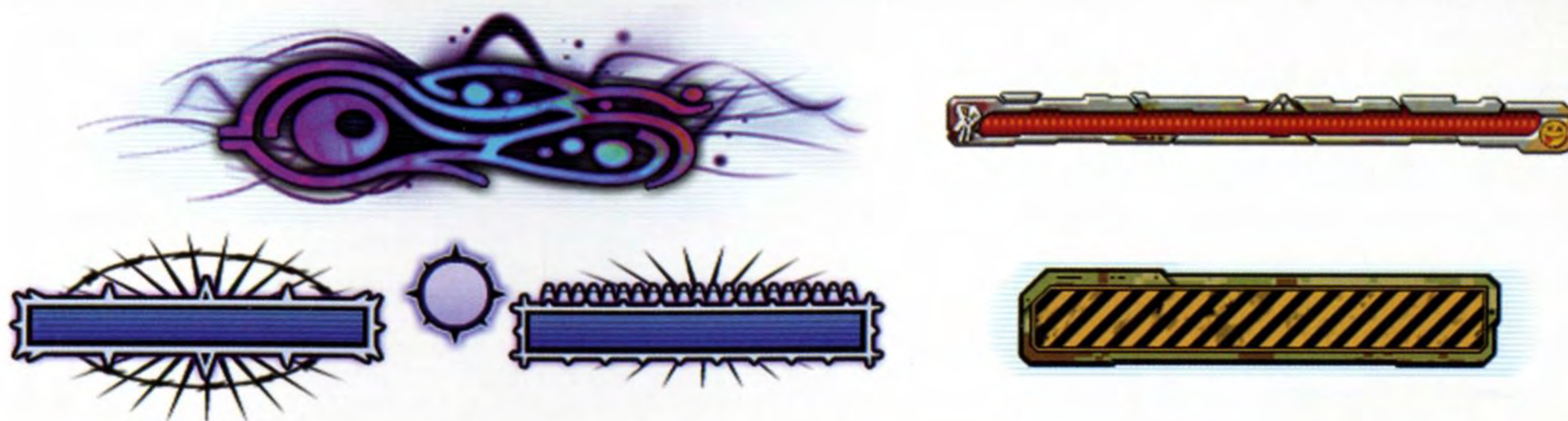


"An unused lobby visual design that I always thought was kinda cool," says Shields.

Lobby Mockup [Jason Shields]



Some of the exploration of the new 'money spinner' for *Borderlands 2*.



The Active Ability bars provided an opportunity for a little identity and diversity on the HUD for the different character classes. Here is the final artwork for the various classes, including the Mechromancer. Of course Zer0 had a full screen display to really make his Active Ability feel different.

AA Bars [Jason Shields]



SKILLS

The first skill tree prototype for *Borderlands 2* shows the stacked panel idea. It ended up being pretty close to what was finally shipped, although with a different visual style.



This is the Skill Tree visual treatment mid-way through production. We also explored the idea of collapsing the minimized panel into something more abstract to really prioritize what the player was looking at, but focus testing revealed that players preferred seeing more of an overview of all their skills.



The *Borderlands 2* Skill Tree has probably become the most iconic piece of the *Borderlands 2* UI.

Skill Tree Designs [Jason Shields]



ASSASSIN SKILLS

As Zer0's skills are themed around either sniping or ninja awesomeness, you'll notice imagery one would generally associate with that particular variety of badassery—bloody katanas, crosshairs, and explosive ninja poses.



Skill Tree Icons [Kale Menges]

GUNZERKER SKILLS

We could talk about any number of things when discussing Salvador's skill icons, but only one thing truly matters: one of his skills is called "The Bus That Can't Slow Down," and the icon is just a big-ass bus.

That is awesome.



Skill Tree Icons [Kale Menges, Jason Shields]



SIREN SKILLS

Maya's skill tree is full of satisfyingly ironic imagery—hummingbirds, and flowers, and rabbits instead of, say, bandits screaming their lungs out as they die a prolonged, painful death while temporarily trapped in an alternate phase dimension.



Skill Tree Icons [Kale Menges, Jason Shields]

COMMANDO SKILLS

As the Commando was designed to be the most intuitive and easy-to-grasp of the four characters, his icons also have some of the most straightforward symbolism.



Skill Tree Icons [Kale Menges]

CINEMATICS

For the Rock N' Roll intro for *Borderlands 2*, we wanted to create a sense of going "back to the beginning." We very purposely recreated a Skag, in a desert, walking up to an old sign. All of us wanted to create a sense of the familiar, a sense of going home again when they booted up the game. From there, it was about twisting that idea into something the audience had never seen before. We don't remember exactly where the idea of "skag fishing" came from, but in a post-Jack world, it stood to reason that even the Bandits would need to find alternate sources of food. From there it was a fish eaten by bigger fish scenario, insofar that the Skag is killed by Bandits, and the Bandits are killed by the train (which represents Jack).

We saved the biggest surprise for last—giving the feeling that all the Vault Hunters we spent all those minutes introducing, were killed by Jack at the start of the game. There was a strong push from those of us on the ground to end with a massive and unexpected event. Jack is in control and you can't win.

Illustration

[Scott Kester] Right





Establishing shot



Skag enters from screen right, walking towards sign



Skag is parched, dying



Reaches down to lick some rocks



Shot of dirt cloud



Cloud fades to reveal skag



Skag stands up awkwardly and camera lifts up with him



Telephoto shot over back of skag looking at truck into distance



Skag hears something and lifts and turns head



Dust cloud from car in distance
Camera trucks in slightly

Slow truck in



Telephoto shot of truck
Ground is moving under very fast



Truck zooms towards skag



Dirt cloud lingers behind skag as he cleans his front paw
Chain is being wound up under his feet



Chain is being taken up
Skag is unaware



Skag begins to take notice of moving chain



Shot of chain between skag's feet looking down



Camera from hood of car
Car is moving very fast towards skag



PROBABLY
DON'T
USE



Pull back to medium shot and show
truck zoom past with a trail of thick dust cloud



Skag looks down at chain
Camera is below looking up



Camera moves to back of Skag
Quick launch to high speed
Lots of motion blur



Skag trails behind truck, bouncing off the ground
moving all over the screen



Moving forward towards truck and the dust trail



"Pre-visualization is an important step to a successful cinematic," explains Kevin Duc. "Laying down camera angles, choosing what objects and characters are seen within each shot, and roughly visualizing timing is figured out in a quick, easily edited way. In storyboarding the intro cinematic for *Borderlands 2*, we wanted to remind players that they are still on Pandora, but that they are entering an expanded, all new part of that world. We start in a familiar area, the desert, with a familiar enemy, the Skag. The similarities end there with the introduction of our new vehicle, new Bandits, and new environments."

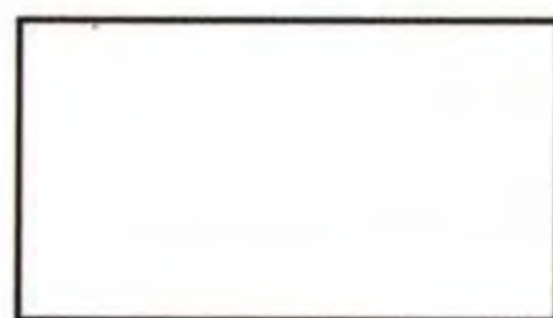
Intro Movie Clips [Richard Jessup, Mike Neumann]
Story Boards [Kevin Duc]
Character Animation [Josh Rearick, Kyle King]



Camera catches up to skag and begins moving up chain



Hard cut to bandits on back of truck activating wench



Establishing shot
 Saving Private Ryan style
 shell shock audio

Train supports are flying by
 Muffled wooshing sound
 Shadows pass over scene
 with each pillar



Camera lifts as bandit lifts head



Camera pans left as rail support FLIES by



Hard cut to establishing shot of train roof.
 Ambient Noise and Volume is restored
 PUNCH



On the roof of train
 Camera shake
 Horizon line sways back and forth





On the roof of train
Camera shake
Horizon line sways back
and forth



Bandit blasts into sign, pressing his
face into the image of Jack



Camera pulls back and begins to
rotate around sign



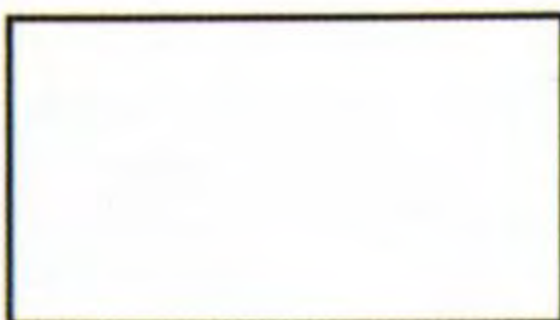
Camera pulls down to side
of train flying past sign



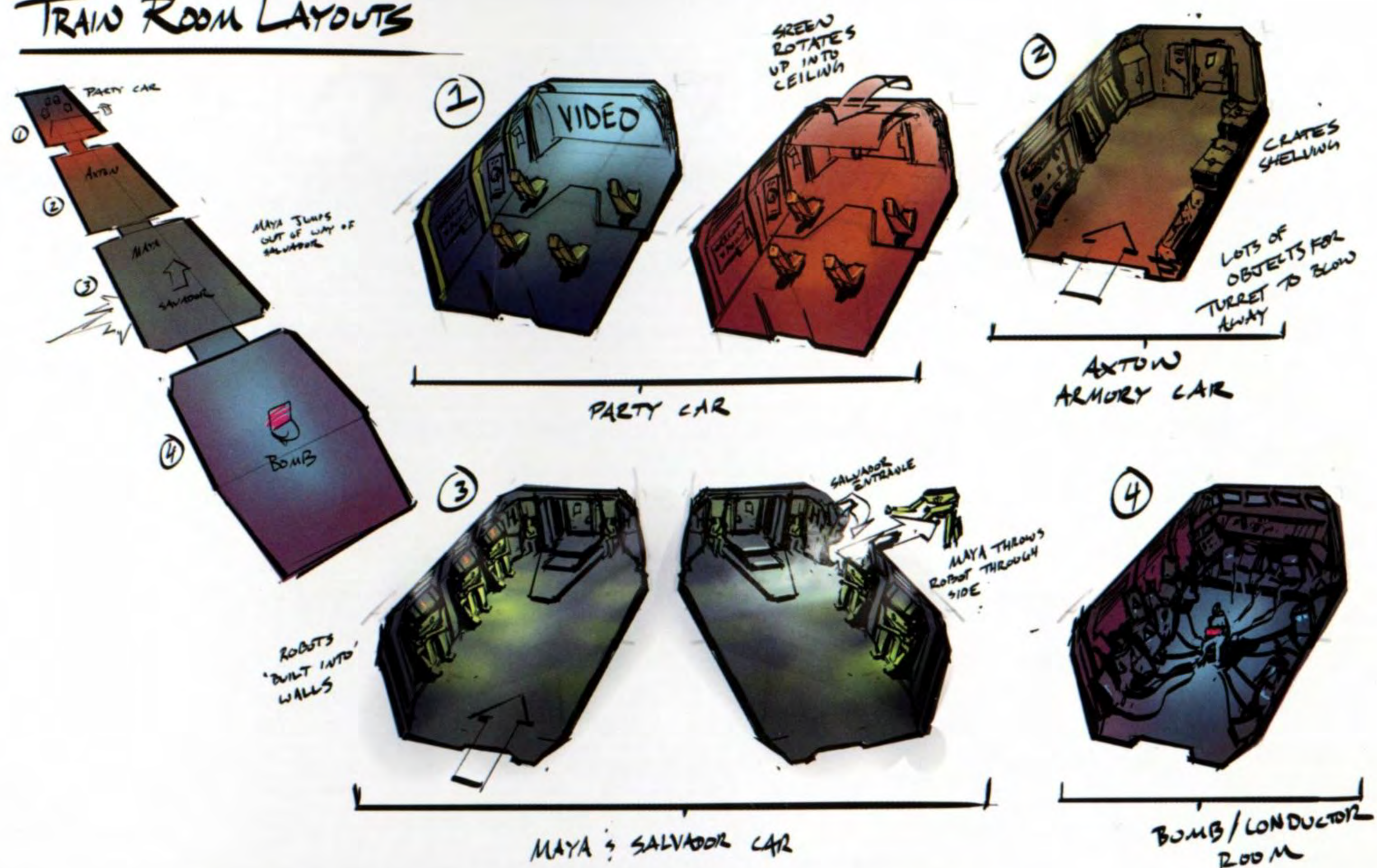
Camera locks onto a
window and suddenly
moves with train



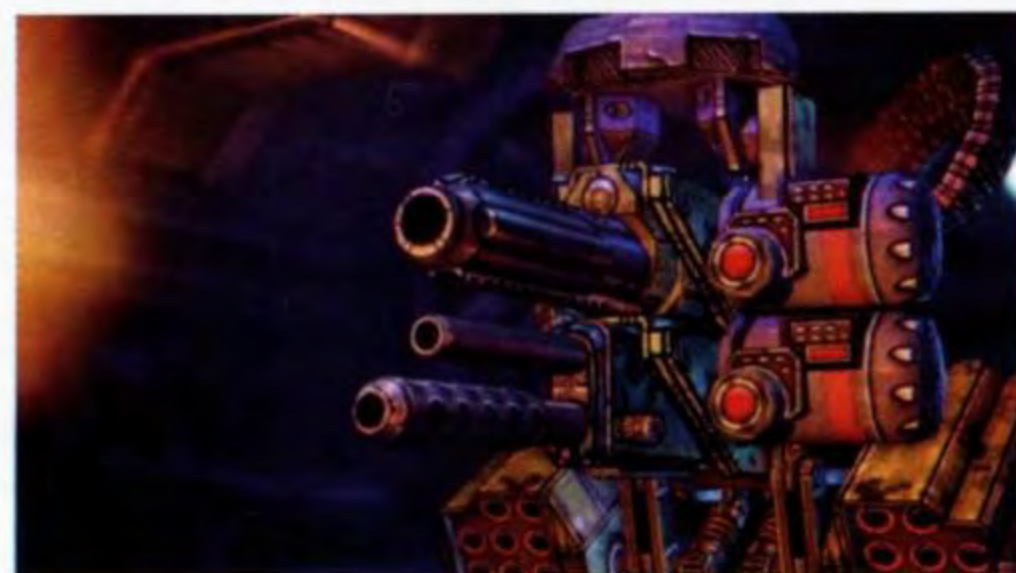
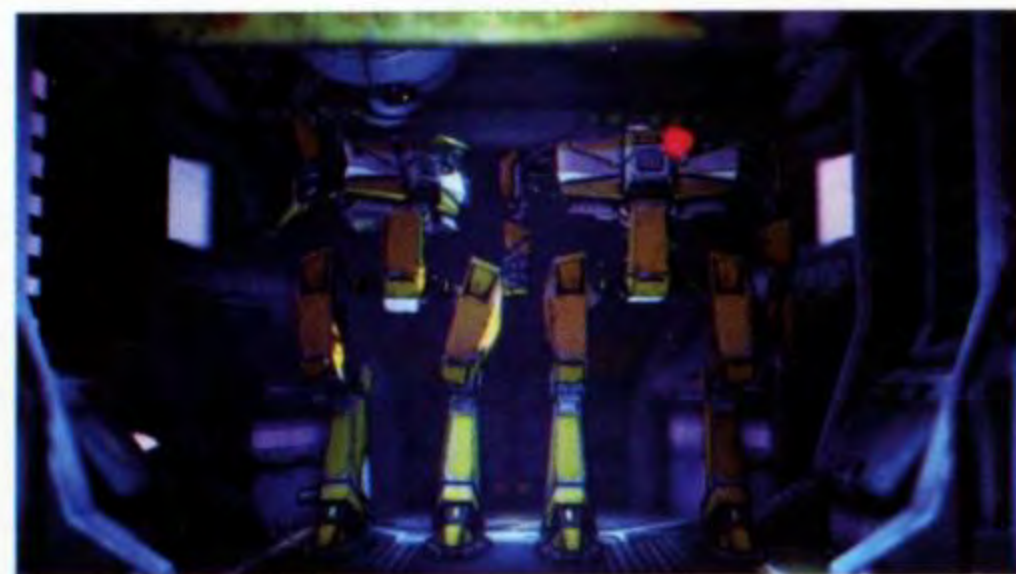
Camera moves into and
through window

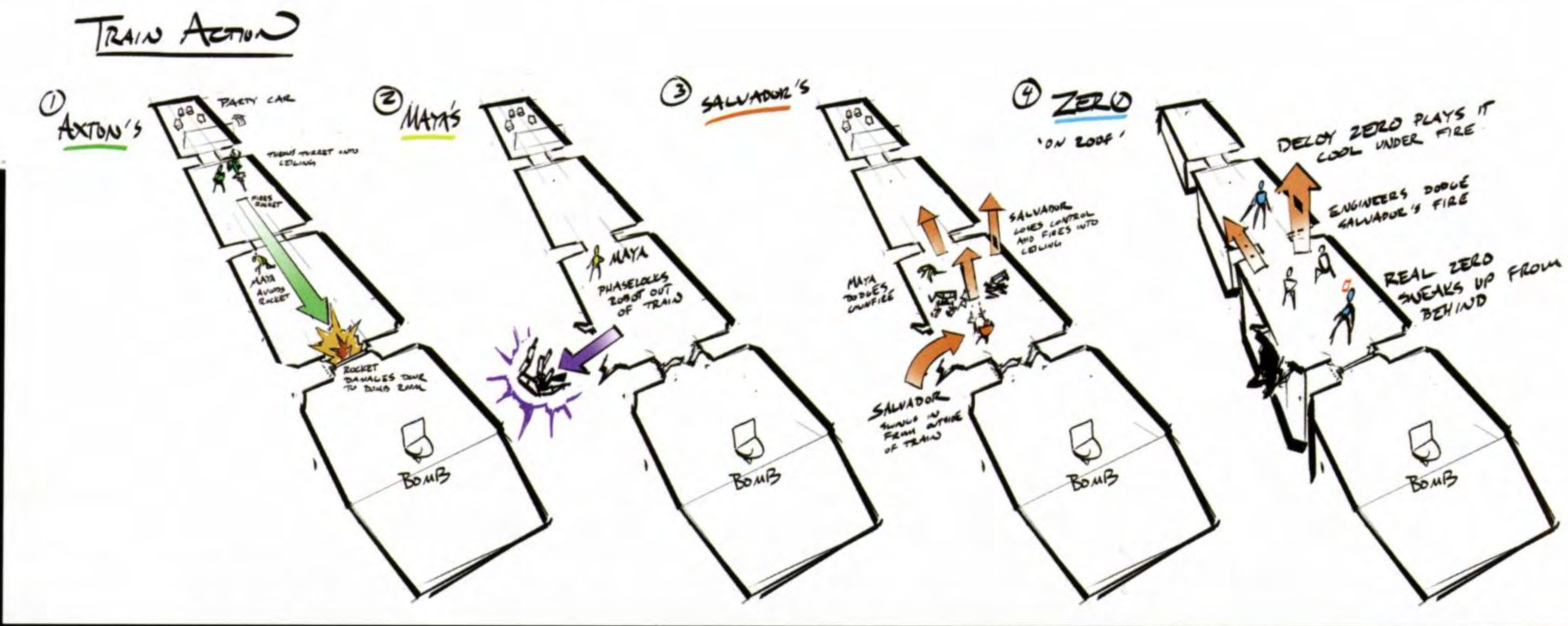


TRAIN ROOM LAYOUTS



We like the idea that Jack hired an artist to draw an additional propaganda poster just for the sake of that joke.



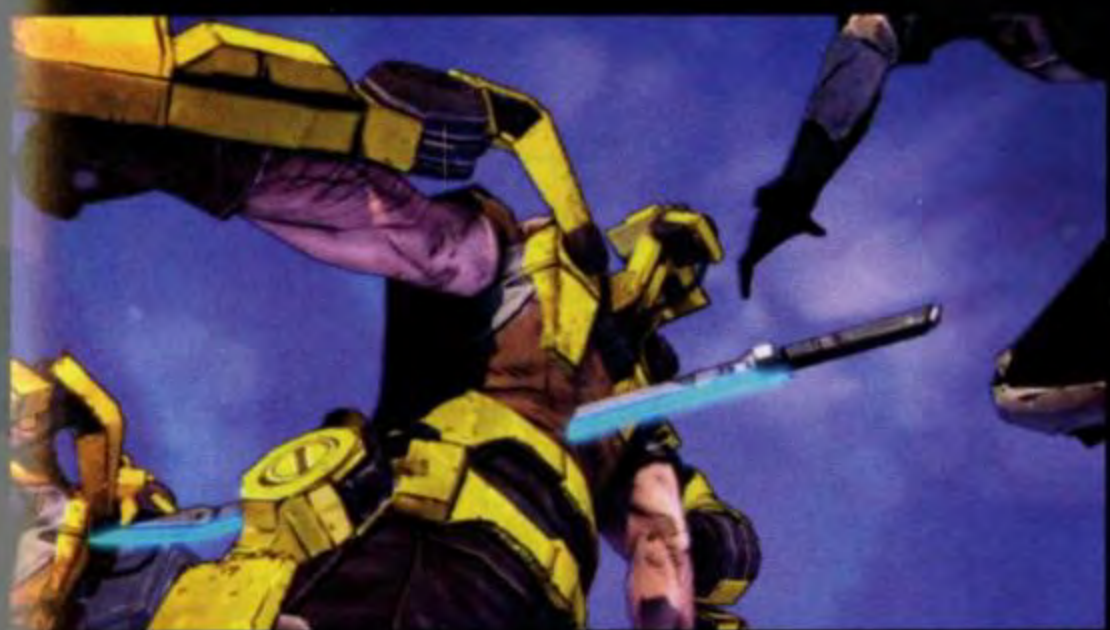
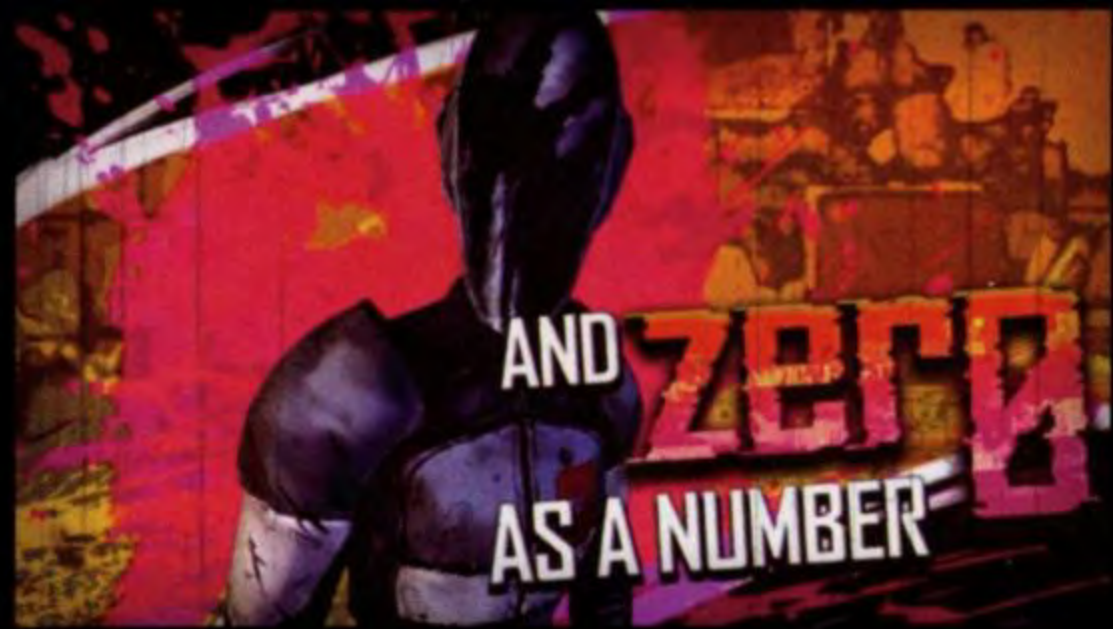


On the first game, the title cards came about as a way to introduce bosses and important characters in a memorable, and brief, way. With the sequel, there was a concerted effort to expand the idea and instead of using a simple freeze frame, simply slow down the action so the game never “stops” so to speak.



Title Cards [Raul Aparicio, Mike Neumann, Jeremy Cooke, Brian Thomas] Above

For a long time, the plan for the intro is that Jack would actually be present on the train, monologuing at the Vault Hunters before shooting them and dumping their bodies. The idea of Jack being absent and the train crashing didn't come up until fairly late in development.





Prison Car Concept (Detail)
[Kevin Duc]

THE ART OF BORDERLANDS 2

Additional Text by Anthony Burch

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Penguin Group (USA) Inc.
800 East 96th Street, 3rd Floor
Indianapolis, IN 46240

ISBN: 978-0-7440-1437-2

Printing Code: The rightmost double-digit number is the year of the book's printing; the rightmost single-digit number is the number of the book's printing. For example, 11-1 shows that the first printing of the book occurred in 2011.

15 14 13 12 4 3 2 1

Printed in the USA.

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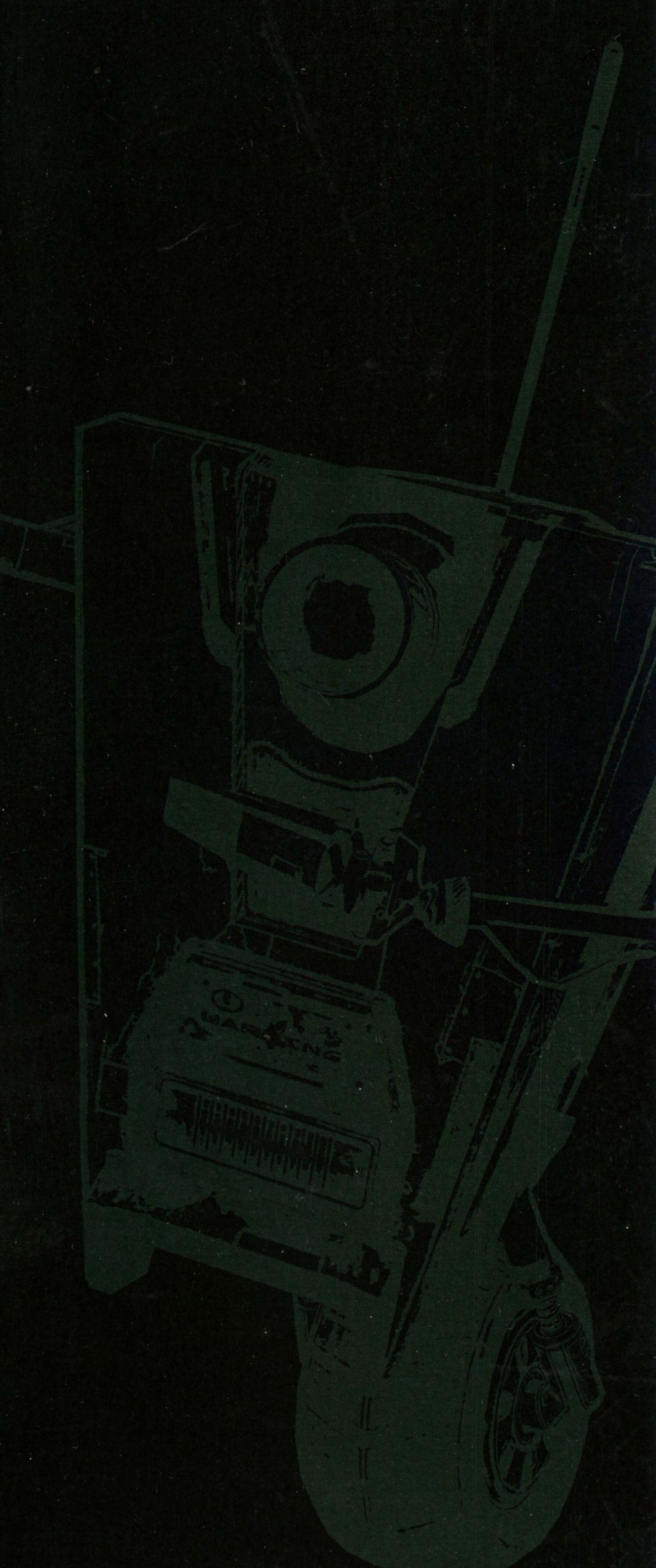
PANDORA HAS CHANGED.

In the fall of 2009, Gearbox Software released what was arguably its largest and most ambitious game yet. *Borderlands* released to both critical and commercial success, thanks in no small part to its addictive role-playing-shooter gameplay and its unique, eye-popping art style.

Fast-forward three years. It's September of 2012, and Gearbox has once again unleashed another action-packed, visually stunning, hilarious Pandoran adventure in the form of *Borderlands 2*. Over *BL2*'s three-year development, the team improved upon literally every aspect of the first game—including, most notably, the art. Fans of *Borderlands* demanded more varied locations, enemies, and visual spectacle, and if you're holding this book in your hands then that means we either succeeded, or you got this as a gift from someone who doesn't know you very well.

Nonetheless, we hope you enjoy this behind-the-scenes look at some of the art that went into *Borderlands 2*. As you go through the book you'll see commentary on our goals, our inspirations, and a few ideas that didn't make it into the final release. But enough of this introduction crap—turn the page, and feast your eyes on some badass art!

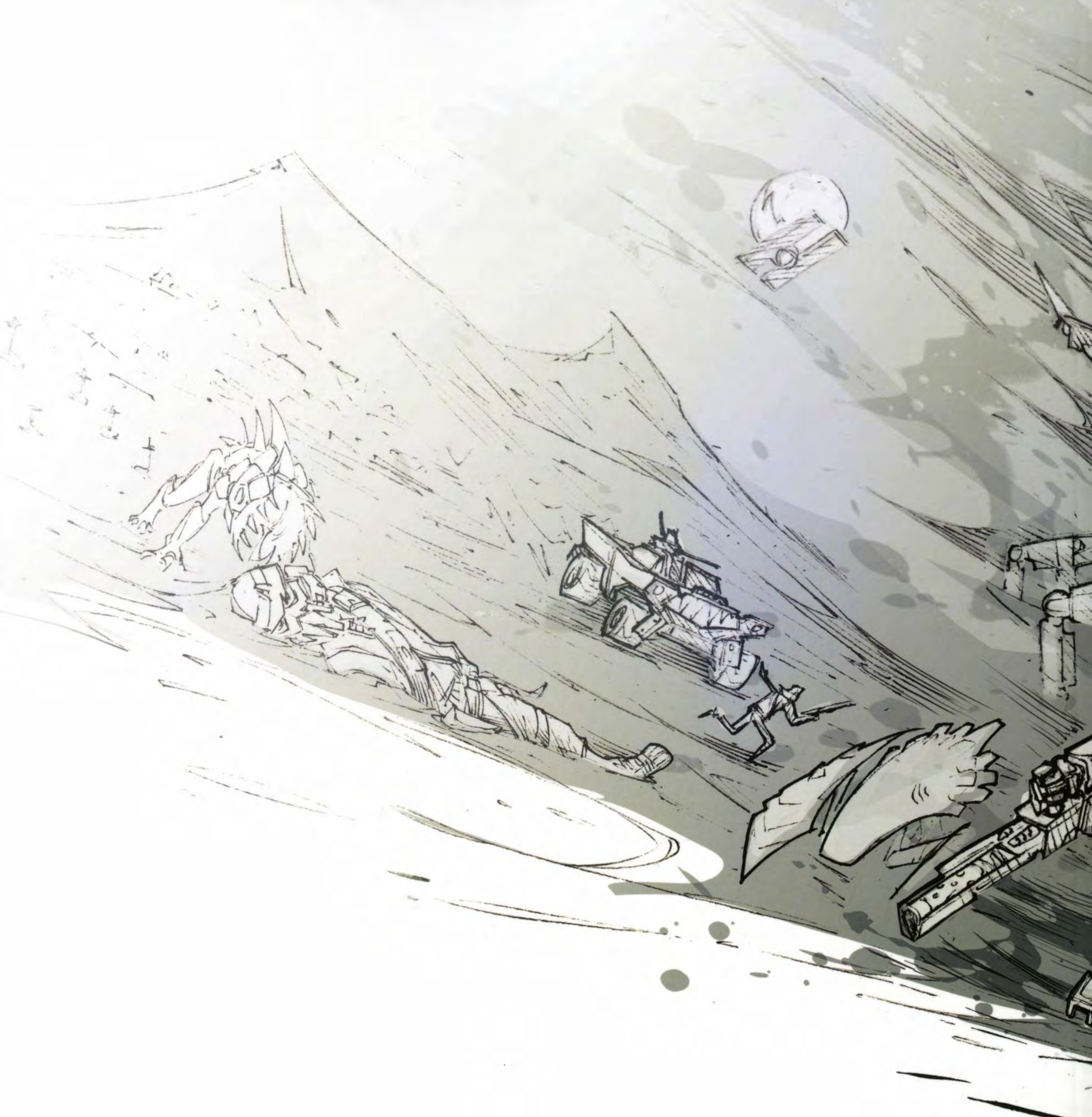




SPECIAL THANKS

BradyGames would like to thank David Eddings, Chris Faylor, Jeramy Cooke, Anthony Burch, Rich Fleider, Josh Vilorio, and the rest of the dedicated and creative teams at Gearbox and 2K. Without their constant input and support, this project would not have been possible.





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ISBN-13: 9780744014372

