



Above left: exposure tests of the prop laser cannons firing in the DEATH STAR trench, intriguingly referred to by ILM staff as “Wedge” shots. Above right: out in the Van Nuys car-park, unknown ILM technicians film direct hit explosions on a huge DEATH STAR model for scenes where the Rebel X-wing squadrons commence their diversionary attacks on the battle station’s surface.

The DEATH STAR originally had its laser eye along the equator, and one early matte painting of it would be abandoned, replaced with a model which had the laser eye moved above the equator. However, the computer graphics for the Rebel briefing room scenes had already been completed by this stage, and it was too late to change them, so the original design can still be seen in the film.

The eight inch tunnel built to represent the DEATH STAR super laser firing was originally conceived as the “*small thermal exhaust port*.” To repurpose the port as the interior tunnel, the model was dressed slightly with the addition of illuminated cylinders at the top and bottom. The eight inch long tunnel was made to look miles long through the use of mirrors: one mirror capped the end of the tunnel, and the camera shot through a second, half-silvered mirror. The two parallel mirrors create the “infinite tunnel” effect. When the weapon is fired, a laser beam shoots down the tunnel, and two technicians (played by Jonathan Erland and Joe Johnston) filmed in post production react to it’s brightness (Johnston would also play a space Stormtrooper for the exterior scenes, shot in February 1977, where the MILENNIUM



FALCON is seen entering the DEATH STAR docking bay from space).

High altitude shots of the DEATH STAR surface would require an enormous amount of detail in the model and it was therefore, potentially, a very time consuming one to build. However, a clever solution is implemented that allows the surface to be built quickly and inexpensively. Still photos are taken of the DEATH STAR surface and hundreds of prints made. These were then cut up and tiled together to achieve believability. The low altitude views of the DEATH STAR are created by first building masters of six different square tiles at three



Above top middle: an ILM test shot of the dangerous DEATH STAR trench. Opposite left: model-maker Steve Gawley at work on the thermal exhaust port. Above: the created port model (note the pitting from Red Leader’s failed torpedo attempt to destroy the planet killer).

different scales. The masters were moulded, and then thousands of copies were then cast in urethane foam and assembled as the DEATH STAR surface on very simple plywood forms. Parts of the assembled set, put on ping-pong tables, would often be blown up inside and outside the studios.

For the high speed flying effect of the X-wings making strafing runs along the DEATH STAR surface, a computer-controlled camera, was run along the 75-foot trench; the shots were programmed and the results viewed on a video monitor. The computer was then instructed to speed up or slow down the action, depending on the effect needed.



Above: at Rick Baker's make-up studios, a selection of handsome devils await their filming call for additional Second Unit photography.

Exposure tests of the prop cannons firing within the trench were intriguingly referred to as "Wedge" shots by Dennis Muren and Doug Beswick.

Of the huge amount of explosion work required, ILM would do some real-sized explosions and some miniature ones, experimenting using many different chemical, magnesiums, fuel oils,



**GALACTIC GRUESOMES!!** A rogues gallery of shady intergalactic life-forms in the Mos Eisley Cantina re-shoots utilising Rick Baker's mask. Above top level left to right: the Bith species-the Modal Nodes Band (played by make-up/effects men Jon Berg, Phil Tippett, Doug Beswick and Laine Liska), two Duros (from the Neimoidian race), Momaw Nadon/Hammerhead (an Ithorian). Second row left to right: Hem Dazon (an Arcona species) and Lak Sivrak/ "Hyena man"(a Shistavanen Wolfman), Labria "Kardue 'Sal' Malloc (a Devonarian), Djas Puhr (Saklyan) with Myro (Abyssin) and Muftak (a Talz). Bottom third row left to right: Elis Helrot (a Given) with Feltipern Trrevagg (a Gotal) and M'iiyoom Onith (an H'nemthe), Brainiac (a Siniteen-a picture taken from the STAR WARS HOLIDAY SPECIAL), Myo with Muftak, a Bith and Djas Puhr.



Working with a minute amount of funds, and with the time-table to the film's theatrical release gaining momentum, George Lucas and a small crew, which includes Gary Kurtz, also acting as stills photographer, and old UCLA film-making friend Carroll Ballard, direct the various new Mos Eisley Cantina insert shots needed that involve masks from the creative make-up studios of Rick Baker. The sequences are shot on one small alcove set in a studio a short distance away from the KODAK theatre in downtown Los Angeles, California.

dynamite caps and all sorts of other materials. About 27 different kinds of explosion would be used in the final film.

In the creation of the all important Star Destroyer chasing Blockade Runner shot, Richard Edlund would recall the challenges of creating the sequence: "The opening shot in STAR WARS was, to my way of thinking, definitely the most important visual effects shot we were going to have to do. Because if we didn't get the audience with that shot, and hook them into the fantasy and the action through it, we were in real trouble. The thing about that sequence is that we only had about 38 feet of track movement for the entire fly-over, which was very limiting in designing the shot.

The other related issue was: how do you know how big something is, especially if it's a spaceship you've never seen before? How do you establish the scale? In the first film we only had one model of the Star Destroyer, and it was about 30 or 36 inches long. It had an opening in the bottom that was about 5 inches by 3 inches. So I asked Grant McCune to get his best guy to detail the hell out of that part of the model.

Then, for our visual effects test of this particular sequence, I asked the model makers to make a finely detailed, two-inch long model of the Rebel Blockade Runner, which I attached to a paper clip. I stuck it out on the nose of the Star Destroyer, and then attached a 24mm wide-angle lens to a tilting lens board on the camera—in order to hold focus and maintain depth-of-field—then shot the sequence upside down, with the camera under-swung and practically scraping the bottom of the underside of the Star Destroyer. I think there was maybe 1/30 of an inch clearance and oftentimes I'd hit the model and have to call the model shop and say, "You guys have gotta come and fix this!" So they'd come fix it and we'd carry on. Keep in mind too, that this was one of the later shots we did, about three-quarters into the production.



Lorne Petersen's highly bloodied severed arm for Ponda Baba/Walrus Man is now filmed as an insert as part of additional Second Unit filming work somewhere during early February 1977.

Anyway, when we looked at the test sequence the next day, it looked utterly fantastic; we were awestruck by it, with this little two-inch model. Everybody was just shocked that this actually worked. I sent it up to George, and George said, "Well, it looks like you solved our problem." I did about four more test takes, though we ultimately didn't use the

two-inch Blockade Runner model. The actual Blockade Runner model we used was about four or five feet long." The four to five feet long Blockade Runner was also used for the scene where it is being pulled near the Imperial Star Destroyer's underside area—literally composited over the 30 inch Star Destroyer

US RE-SHOOTS/  
NEWLY SHOT  
SCENES JANUARY  
TO MARCH 1976  
(EXACT DATES  
UNKNOWN)

The need to make STAR WARS a coherent film continues with the creation of the urgently needed new make up effect inserts shots required for the Cantina alien sequences. Rick Baker, assembles a talented crew of assistants: Doug Beswick, Laine Liska, Jon Berg, Phil Tippett, alongside underground comic and magazine conceptual artist Ron Cobb and Ralph McQuarrie, to work on the new alien creatures needed for the insert shots that couldn't be done in the UK back in May 1976. All the team members would provide contributions and some original sketches for the aliens, and they would have only six weeks to create them all before shooting (utilizing a budget of \$20,000). Rick clarifies which are his and what was Stuart Freeborn's -shot at ELSTREE: "Any Insert with just monsters and no principles or the bar is our stuff." Recalls Phil Tippett of the insert filming to STARWARS.COM: "It was very informal and a lot of fun. We got a bunch of the people that built the suits and performed in them. I was the lead band guy, and I was the cyclops thing. And then there were two blue bubble-headed guys that were arguing; I was one of those. There was a



With the need for more articulation in the original Stuart Freeborn mask, new scenes with the revised Greedo are shot in early 1977, with George Lucas supervising the sequences with Maria De Aragon now playing the character. Above top left: Greedo arrives on set, pointing a gun at Duros. Middle left: George inspects Greedo's mouth (note the newly built hands for the character). Opposite top right: Lucas assists Maria De Aragon on the small soundstage. Above: directed by Carroll Ballard, and assisted by Miki Herman, George Lucas keenly watches the filming of the Greedo/Han Solo confrontation insert shots.



Having been impressed with their puppet work, George Lucas hires Phil Tippett (far left) and Jon Berg (far right) to come up with a stop motion sequence to represent the Holo-chess scene aboard the FALCON, between Chewbacca and the droids See Threepio and Artoo Detoo.

thing that had kind of a yam-nose. And then there was a.... I don't know what. It looked like a big tapeworm or something. That's all I remember at the moment."

A take of the wormlike creature puppet Dice Ibegon showing it spewing some viskis goo or vomit onto the Wolfman (later replaced by the alien Ketwol in the 1997 SPECIAL EDITION) never made the final film.

Looking back, Baker would tell CINEFANTASTIQUE in 1977: "Actually, this stuff wasn't really make-up. Since we only had six weeks and a limited budget, we could not do anything outstanding or complicated. With a lack of time and money creating artistic compromises he continues: "Old masks that had been sitting on my shelf for years were thrown in the day they were shot as filler for the background. Much to my dismay, they ended up being very much in the foreground..." One of the stock items used turns out to be a werewolf mask that had been designed a mass market production mask to be sold in toy shops-Rick Baker, not around to supervise the

filming of the monster shots, due to heavy work commitments on the challenging make-up work for the horror film THE INCREDIBLE MELTING MAN, is not happy to see the masks inclusion in the final film (Lucas, desperately needing to use any masks available for inserts, would also be unhappy with it as the year's roll-on, making it disappear from the film when it was re-released in cinemas as a SPECIAL EDITION in 1997).

In addition to the use of masks, a new bloodied (made from numerous