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BACK TO THE FUTURE

Universal's "Time" Adventure

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Three lifesize DeLorean automobiles and two one-fifth-scale models were used in "Back to the Future."
Photo: Universal City Studios.

Virtually every major problem on "Back to the Future" (a summer release from Universal about a teenage time traveler) had something to do with time. How do you get a picture out by an iron-clad July 19 release date when you've recast the lead and had to reshoot the first five weeks of principal photography? How do you do that when the film contains fairly complex optical effects using animation and models as well as large scale stunts and mechanical effects? And since your script calls for several trips back to 1955, how do you shoot a period well remembered by many in the audience without conjuring up images of "Grease" or "Happy Days?" You move with controlled haste, swallow hard, spend more money and use a few tricks.

None of those troubles had yet confronted Bob Gale and Robert Zemeckis when they began kicking around time travel plot ideas five years ago. They wrote a script in which eccentric inventor Dr. Brown builds a time machine inside a nuclear-powered car (it became a DeLorean) and helps zap young Marty McFly 30 years into the past. Marty meets his parents when they were his age and changes their lives, and his, forever. At the same time he must also find the then-young Dr. Brown and enlist his help in getting "back to the future."

They couldn't sell the time travel idea then, but another script they wrote, "Used Cars," which Zemeckis directed and Gale produced, opened to good reviews and decent box office. Last year, Zemeckis directed "Romancing the Stone," the only substantial hit at 20th Century Fox in 1984. After that, Zemeckis could pick

Universal's . . . Here . . . There . . . Now . . . Experience has it all!

By SOLANGE DE SANTIS

what he wanted and brought "Back to the Future" to Steven Spielberg's Amblin Entertainment at Universal. Spielberg, Kathleen Kennedy and Frank Marshall became executive producers; Gale coproduced with Neil Canton ("The Adventures of Buckaroo Banzai").

The film was cast last fall with Eric Stoltz as Marty and Christopher Lloyd (of "Taxi") as Dr. Brown. Production began November 26, with Universal mandating a summer release date. But about five weeks into the film, Stoltz, Zemeckis and the producers realized something about Stoltz's performance wasn't working. "Eric's a very good actor. [He has received acclaim for his performance as Rocky Dennis in "Mask."] But his take on the part and his style ended up being different from what we wanted," Gale says. So Stoltz left and the filmmakers had to find another lead in a major hurry if they were to reshoot the Stoltz footage and still have the movie in theaters before high school kids across the country ran out of summer vacation. Michael J. Fox had been on the producers' original list of possibilities and was already a television audience favorite as the materialistic son on "Family Ties."

Production resumed with Fox (without the usual two-week break between principal pho-

tography and post-production—editing began during filming) and Gale estimates that the reshooting cost an extra \$4 million over the \$14 million production budget, with some additional costs for studio overhead. Cinematographer Dean Cundey, who also did "Romancing the Stone," says that while the reshooting posed special difficulties, it had its advantages, too.

"We were able to look not only at the dailies but at the sequences cut together and generally we made improvements. We were able to correct mistakes or work faster because we'd already solved the problems, we could see exactly what the editors needed to tell the story out of all the film we'd shot," Cundey says.

One night while filming the movie's opening sequence at Universal, he had to match new footage of Fox with film shot several weeks earlier. Sometimes Cundey makes detailed notes on how a set was lit but mostly, he says, he relies on memory. "I've developed an ability to construct a mental image not only of what the shots looked like but what the whole set looked like, where lights were put and why they were there. You know, generally, if you put lights in for a logical reason it's easier to remember than if you go in and blindly paint," he says.

(Continued)

It was tricky business—Cundey had to match parts of scenes involving other actors with closeups of Fox or other sequences, save other closeups and reshoot the master, or reshoot entire scenes. His shots also had to mesh with special optical effects that were to be added later by **Industrial Light and Magic** as well as mechanical effects created by **Filmatrix Inc.**

ILM's Ken Ralston, the supervisor of visual effects, estimates that the film contains about 25 effects shots, a relatively small number, but the production's accelerated schedule meant things were getting "very chaotic" by April.

One of the most spectacular animation effects occurs when the DeLorean bursts through the veil of time. "It's as if a slice of time opens in front of the car," suggests Ralston, adding that animation also enhanced the neon coils wrapped around the DeLorean that glow when the car is revving up to time-warp speed. Since the car supposedly heats up when it travels backward through time and cools down on the return trip, the animators used warm colors when it left the present and cool ones for its return.

The ILM crew also built two one-fifth scale models of the gadget-laden DeLorean for a special time-traveling effect at the end of the movie. One was kept whole, the other could be broken into sections for scenes in which the car reappears in the present.

The three lifesized DeLoreans (two mobile, one for inserts and cannibalized parts) were purchased and modified for the production at a cost of about \$150,000 and created a number of headaches. "We couldn't use front camera mounts because the angle of the DeLorean windshield reflects a hell of a lot more sky than a normal car," Gale recalls. So all shots featuring a driver were process shots.

Filmatrix's Kevin Pike, special effects supervisor on the film, devised a moving light apparatus that helped the process shots look more realistic. The crew set up a pole about two feet in front of the car on the stage, then mounted two free-swinging crossbars on the pole and attached a light at each of the bar's four ends. A couple of the lights had colored gels. Variable-speed motors swung the crossbars around the pole so the lights would whip across Fox's face, simulating the effect of driving under a row of streetlights at night. They also mounted flags cut in the shape of tree leaves and Cundey even waved tree branches across the windshield so it would look like Fox was driving down tree-lined streets.

They also dived into Universal's archives for some process footage. "A couple of times," reflects Gale, "we used stock process plates that were shot 30 years ago. We had the color retimed because they were all kind of pink, but we found some street runs and some farm plates that were just what we needed."

Before production began, Cundey and Zemeckis discussed what kind of look they wanted for the scenes set in 1955. "We wanted to contrast that time with the 80s, but not in the conventional way, using diffusion filters or anything like that," Cundey says. "So we decided to be very colorful in the approach to wardrobe and sets and to keep the photography of the period very clean and pleasant."

Zemeckis and Gale had to make a number of delicate decisions about sets, props and wardrobe, especially since that field had been plowed many times by "Grease" and "Happy Days" and a lot of kids today are wearing 50s-style jackets, slacks and shades. "The main



DP Dean Cundey (left) and director Robert Zemeckis (right) of "Back to the Future."

thing was, we didn't want to make it look stupid. We could have picked certain clothes that would have made the cast look ridiculous. Now that the 50s are back in again, we didn't want them to look to hip, either. The movie is not about nostalgia," asserts Gale. "I believe if you took anybody from contemporary times and put them back in time, they'd decide things are better now."

Producer and director used 30-year-old copies of *Life* and *Time* for much of their research, but not all the props used were of 1955 vintage. "Someone can say, 'here's a fire extinguisher they had in 1955', but what you really want is a World War II-era extinguisher, which would have still been in common usage. Same thing with the cars. How many cars around today were made this year and how many were made in the 1970s? So most of our cars in the movie were from 1953 and before," Gale explains.

Although the film does not emphasize nostalgia, Zemeckis and Cundey decided they wanted a warmer look for the 50s scenes. Cundey used a light amber gel to warm up interiors normally lit with white incandescent light, eliminating all conventional modern lighting sources such as fluorescent and mercury vapor lights—anything that might throw greens or blues on a scene. For night exteriors, he used warm light sources—streetlights, house lights and sign lights—rather than blue moonlight. Film used was **Eastman 5247** and **5294** for night exteriors and all interiors.

Night exteriors were lit by the "moon," not the one in the sky but a large square framework, about 10 feet on each side, holding eight 4kw **HMI**s and covered with a cloth. The unit was suspended by a large construction crane over exteriors shot at the Disney Ranch. "It enables you to light a large area, in this case, a barn, barnyard, ranch house and trees, with one overhead source which generally looks more realistic than trying to light with a lot of smaller units or parallels or by trying to hide them behind trees," Cundey says. No day for night was used.

The main square in Marty's town—Hill Valley—was built on Universal's back lot and dressed for the 50s (including a movie theater marquee showing a Ronald Reagan film) and then the 80s. Pleasant paint colors were chosen and since a lot of the street was lit by neon, "we used the signs as sources for colors at night," Cundey says. In the 80s scenes, "there was a slight aging or degrading of some colors to mellow them out, take them down, because now it's 30 years later. I overexposed the day exteriors of the street a stop to stop-and-a-half so that when its printed back down a lot of the color saturation will be decreased. You get a flatter look." He hopes the effect will show the 1980s possess "a little more heightened reality" and the 1950s come across as "a period of remembered color."

The producers chose to create Hill Valley's town square at Universal rather than take over a real town, because of the absolute control they could have on a studio backlot. "We felt we were better off sinking money into the backlot," opines Gale. "In a real town, we couldn't have controlled parking meters, gas stations, phone lines. It was easier and cost money but in the long run I think it was cheaper. We weren't interrupting anybody's business."

Technically, "Back to the Future" wasn't stuck in the past. "This is a film where we've used almost every kind of technical piece of equipment around in order to get shots we normally wouldn't be able to do other ways," Cundey says. To achieve a feeling of movement during a high school dance scene, for example, one operator moved around the floor with a hand-held camera while another camera, mounted on a remote-controlled head atop a **Matthews Tulip** crane, was pulled along the floor.

"We wanted the mobility of a Louma crane and Spielberg owns a **Hothead**—an English remote-controlled camera head. You mount any kind of camera on it and then, through a system of servo motors and so forth, the operator is able to sit away from it and pan and tilt the camera as he would with a conventional head," Cundey explains. He mounted a **Panaflex** on it along with **Panavision's** new **Super Panavid 1000** video assist for low light level situations, enabling the camera operator to look through the camera remotely through a TV monitor. Panavision's remote focus allowed the assistant to pull focus from the ground. At times, it seemed like every assistant director had a **Sony Watchman** to direct background.

Spielberg found the Hothead so useful that he shot 75% of "Indiana Jones" with it, according to Cundey. "It'll go on any sort of dolly or tripod and when the operator gets used to working with it, he can do conventional shots as well as exotic ones," he explains. It was one of the few pieces of equipment not rented from the usual sources like **Hollywood Rentals**. Amblin owns the unit and lends it to its filmmakers.

That's one advantage of working at Amblin. Another is having Spielberg as an executive producer, according to Gale, who worked for Spielberg on two previous Zemeckis-directed films, "I Wanna Hold Your Hand" and "Used Cars."

"He gets very much involved in casting and takes an interest in the script and then leaves us alone to make the movie. He's a great guy to have as a producer because he knows what it's like to be on this side of the fence," says Gale.

When Gale was interviewed during the last week of April, principal photography was winding down and the final gallop toward the July 19 release date was about to begin. Cast and crew were exhausted. For seven weeks in January and February, Michael J. Fox did both "Family Ties" and "Back to the Future." While he was at the television studio, the movie company would take noon calls and shoot around him—dining table cutaways, driving and POV shots. Fox would arrive at Universal about 6 p.m., shoot until midnight or so, go home for a few hours of sleep and return to the television show at 10 a.m. "Somehow he was able to come through for us," Gale marvels.

For Gale, Zemeckis and those involved in post-production, the crunch was getting even tighter. "I swear, I hope I never have to do it this way again. But you know what will happen? Everybody's going to think you can release a movie 12 weeks after shooting ends," Gale says with a hollow laugh. ●