Title: Taking on Water

Director of photography John Seale, ASC, ACS returns to the deep for the adventure epic Poseidon.

"My approach to cinematography is really very simple," explains John Seale, ASC, ACS, who has taken leave from a digital-timing suite at Warner Bros. Motion Picture Imaging to discuss his latest picture, Poseidon. "I use one stock throughout the entire picture, I always use zoom lenses, I never use softening filters, and if you look at my lighting carefully, you'll see it's really quite straightforward." But of course, mere looks can be quite deceiving.

A big-budget remake of 1972's The Poseidon Adventure - which essentially launched the 1970s "disaster film" craze - Poseidon hews closely to both the original movie and the 1969 source novel by Paul Gallico, in which a towering tidal wave capsizes a luxury liner. In the new film, a small band of survivors (played by Kurt Russell, Josh Lucas, Richard Dreyfuss, Mia Maestro, Emmy Rossum and Kevin Dillon) must make their way through the upside-down U. S. S. Poseidon before it takes its final plunge to the bottom of the sea.

The ambitious project reunited Seale with German director Wolfgang Petersen (Dos Boot, Air Force One, Troy), with whom he previously made waves on The Perfect Storm (see AC June OO). The two filmmakers, accompanied by a hard-working cast and crew, wisely chose to wade into their latest oceanic odyssey on the relative safety of the Warner Bros. lot. Like the 100' waves seen in Perfect Storm, the deadly water in Poseidon will be rendered digitally; Seale and special-effects director John Frazier provided the in-camera magic, while visual-effects supervisor Boyd Shermis marshaled an armada of effects houses, among them Industrial Light & Magic, Moving Picture Co., CIS Hollywood and Hydraulx.

Seale, whose extensive credits include Dead Poets Society, Gorillas in the Mist, Witness (AC April '87), The Firm (AC July '93), The English Patient (AC Jan. '97), The Talented Mr. Ripley (AC Jan. '00), and Cold Mountain (AC Jan. '04) - welcomed the obvious challenges of shooting Poseidon. And despite the project's blockbuster-scale budget, the cinematographer found the need for production efficiency and speed to be as overriding as it might be on a far more modest picture. "Wolfgang worked very hard to keep this film on schedule and on budget," says Seale. "That put some of the onus on me to be very prepared and to use our time on set very effectively. The camera department really does set the pace for production shooting, so it was our responsibility to keep everything moving. I suppose that's where my experience came into play, as most foreign cameramen like myself learned our trade while working on very limited productions. In Australia, we couldn't go over schedule or over budget - there just wasn't any more money. I believe Wolfgang also went through that aspect of filmmaking while working in Germany. That experience has always held me in good stead, even on larger pictures such as this. You can go in with the mindset of, 'Well, the studio has lots of money, so let's just concentrate on making everything perfect,' but that abuse of the schedule isn't something I approve of. The cinematographer is paid to make a picture look as good as it can within the time and budget limitations. I feel that's part of our job. I love backlight, but if we have to shoot in frontlight because we won't otherwise make our day, then I'll just make it look the best I can."

For Seale, this responsibility entails carefully analyzing each scene to determine not only the necessary coverage, but the dramatic weight and relative value of each shot. This will help him decide how his time and resources will be budgeted throughout the day. "For example, you can look at a given scene and say, 'This sequence will last about a minute, and each shot maybe onscreen no more than eight seconds,'" he says. "So the relative pain of a less-than-perfect shot will only last about eight seconds. It's not the whole movie, just eight seconds. Well, I don't mind that. I'd rather spend extra time on the most important or dramatic shots of a scene, the ones that leave a lasting impression on the audience and therefore create the overall 'flavor' of the film, instead of equally distributing my resources across every shot and possibly blowing the schedule. And, generally, those magic shots in a scene are predetermined in a production such as this.

"This approach also applied to scenes. A director might study a script and see that there are ¢ scenes' and 'B scenes.' The A scenes may get more time and care, whereas the B scenes could be done faster but well. They may be done with a little less coverage, but they'll still look good. You can't give any scene short shrift, but you have to choose your battles. Also, B scenes often have a way of not making it into the final cut of a picture, so envisioning the editing process can help you plan your approach."

On Poseidon, this process began in preproduction. Although the picture was fully storyboarded and "the boards served as a very good guide through prep," says Seale, "we basically threw them out just before shooting, as the actors came into the picture. The cast had a substantial amount of input, as the physical demands on them were quite rigorous. They had to not only help determine what their characters would do, but then try to perform what they themselves could do. That's not easy, especially if you have to repeat the action take after take."

The resultant need to maximize coverage while maintaining production speed played directly into Seale's penchant for employing multiple-camera coverage. "We had a similar situation on Perfect Storm" he recalls. "The cast and crew can only take a physical beating for so long, and Poseidon called for some very physical work. Our approach on Perfect Storm of never having the camera mounted to the boat - as that would take away the sense of rolling movement we were trying to maintain throughout the picture - forced us to use cranes for just about every shot. And we could really only get two cranes angles in at any time, sometimes a third.

"Poseidon was a similar situation, but we had three cameras all the time, four a lot, five consistently, and six very occasionally. We often got entire scenes in one hit. After blocking a scene, the A camera was Wolfgang's bank - he got his movie with the A camera. Then B and C would be crosscutting the action and D might be covering the scene from another room, capturing the actors as they approach, and E could be in the mix, getting a little shot from another angle. It was a juggling act, but I loved working out how to get all the cameras in there to get a scene in one take. The actors appreciated it as well, even though they weren't used to working that way.

"As you know, while shooting over-the-shoulders with multiple cameras, eyelines aren't quite as close as they might be if you were using a single camera, and that's something I thought about in prep. But I decided that if we did it consistently and used a slightly wider angle, the audience would never expect anything different; uniformity would allow them to settle in. The actors would often be performing literally nose to nose, so I'd have to ask, 'Is there any chance you can play that a little farther apart?' Their instinct is to get right in there for the drama, so there would sometimes be a bit of a battle, but we'd work through it. As shooting progressed, they became

used to seeing A camera in front of them and being told that B camera was a little black hole in the wall, C camera would track out from behind a wall in the middle of the scene, D was behind a curtain and E was in the roof."

Each of Seale's Panavision units - Gold IIs, a Millennium, and assorted PanArris used in HydroFlex soft splashbags and hard underwater housings - was always fitted with a zoom and mounted on sliding plates, dollies or cranes, allowing the respective operators to "follow the action or track out of trouble if they were picking up another unit correcting a dicey over-the-shoulder, all within the shot and under their control. This reminded me of a phrase Larry Kasdan coined while we were shooting Dreamcatcher [AC April '03]. In describing the coverage he wanted, he said, 'The cameras are there by invitation, not by design.' That's the feel I wanted on Poseidon as well, so I hammered my operators with that. I told them, 'You haven't seen the walk-through; you haven't seen the rehearsal; you don't know what's going to happen. Now shoot, and be nervous about it!' We wanted that with every take. I wanted the cameras to be nervous; I wanted them to track the action and seek out shots as opposed to designing them."

However, Seale knew this approach was not appropriate for the entire picture, and he chose to introduce it only after the world within the ship is literally turned upside-down. "The coverage and camera is much more traditional before that," he says. "We wanted to establish a feeling of calm and control that would accentuate the change that happens in the second act of the picture, which we go even further with in the third act, to the point where I was calling out to the operators on the radio, 'Handheld, handheld, handheld!' They may have been on tripods and sliders, but I wanted that 'handheld' energy. I also wanted them to zoom in or out depending on how the action played. A zoom can be hidden so easily within a little panning movement. I'd tell them, 'Even if you didn't need to zoom, pan anyway, because you don't know what's going to happen!'"

After seeing this footage cut together, Seale was pleased with the visual energy this approach brought to the film. "Of course, the A camera was always the safest shot, generally the 'wide' shot, so it's often the first used, maybe just two or three seconds in a scene, but the rest works beautifully. The A camera is the fallback."

Seale's team of operators - Dan Gold, Greg Smith, Maurice McGuire and several day players - achieved the look he was after, and he also credits 1st ACs Brad Peterman, Mike Endler and lay Peterman with ensuring the roving lenses stayed in focus. "We were just flying, and when you're driving across a room into a close-up at 270mm on an actor who has no marks - for much of the film, our sets are underwater, with bodies and junk floating around - you need to have a reliable hand pulling focus. And they performed brilliantly. They should win technical Academy Awards, those boys."

Asked what kind of chance he gave his 1st ACs by building up a solid base stop, Seale chuckles slightly and replies, "Almost none." Shooting in Super 35mm on Kodak Vision2 500T 5218, the cinematographer tried to establish at least a T2.8, but not much more. "Anamorphic would have been much too slow - a T4.5 was not going to happen. I also had to have zooms. I didn't use any primes - even the Steadicam had the little lightweight zoom - so Super 35 was the way to go. I've only used high-speed negative for the past 18 years, and 5218 handles everything you throw at it. Night, days, interiors, no problem. A lot of the Poseidon's third act is in fact lit by flashlights the actors carry, so the fast stop was a necessity."

Seale regularly employed wider lenses in the early part of the film to show off the fine production design by William Sandell and establish the setting, but he also stuck to his general practice of using long lenses for close-ups. "Especially in the beginning of the picture, as we're surrounded by the warmth of this luxurious ship, I wanted the people to be as attractive as possible. I was willing to sacrifice the set a bit in the close-ups to accentuate the faces - a mother, her son and our younger hero; our older hero and his daughter. We were careful to set up the ship because it is, after all, a major character, and the geography of the locations was very important to Wolfgang. But there is really very little dialogue in the picture, so we wanted to get right in and establish those relationships when we could."

The picture's feeling of claustrophobia gradually increases after the tidal wave hits, a mood driven home by Seale's use of increasingly longer lenses. "We could have simply moved in closer with wider lenses, but I preferred the longer-lens look. Also, this was necessitated by the multiple cameras' need to keep each other out of shots - in the DI, it was fun looking for and finding all the cameras, lenses or crew in shot that the CGI boys missed! Even in a sequence much later in the film, as our heroes are moving through an air-conditioning ventilation system, I wanted to keep that long-lens feel. So we constructed the vents, which measured 23-by-23 inches, with flyaway sides to give us plenty of space to angle in. That also helped the actors, who might have otherwise felt claustrophobic crawling through them. We also used a snorkel lens when we wanted to keep things closed in; we just cut a small hole in the vent wall and poked it through." Much of the lighting for this scene was done by the actors, who wielded powerful flashlights. "The galvanized-metal walls bounced the light around nicely, but we'd also occasionally sneak in a supplemental flashlight or two here and there," says Seale. "I think Josh Lucas should get a lighting credit. He was very good at getting his flashlight right where I needed it!"

While high-pressure air blasters built onto the splashbags generally kept water off his lenses, Seale was not so concerned about this issue on Poseidon because the "documentary style we were going for wasn't at odds with a bit of rubbish on the front, a few drops of water. I think it looks great."

The production occupied five stages on the Warner Bros, lot, with some additional shooting done at the Staples Center sports arena in downtown Los Angeles. "Because we had to have the same sets built both upright and upside-down - including a five-story foyer and a huge ballroom - we were quite crammed, so we built the upright nightclub at Staples Center," explains Seale. "One big problem with our schedule was that there just wasn't enough studio space reserved for us, so the production juggled sets as best we could. The water we'd be running in each set was always a primary concern: Was it stagnant? Was it rising? Would the set need to be flooded? There were not only a lot of structural concerns because of the weight issues, but also concerns about the lighting, of course, because a set that started out dry might later be flooded, and we had to be prepared for that. As soon as a set was up, my gaffer, Bob Krattinger, and I would determine what we should do, and then the rigging gaffer, D.J. Lootens, and his boys would move in."

"I'd not worked with Bob Krattinger before, and I was lucky to have him," adds Seale. "He was very good with big sets and big problems, as was Mike Anderson, our key grip. There was never a problem or schedule change those boys couldn't handle. Much of the credit for Poseidon finishing on time and under budget goes to them and their crews. "

As an example of such dilemmas, Seale points to a set depicting the upside-down ship's main foyer, a five-story-tall structure built "over the 20-foot-deep water tank on Stage 16. This also included a bluescreen on the bottom of the set, which would allow the digital extension of another couple floors and then a skylight at the bottom. Now, our heroes have to cross this chasm to escape flames and explosions behind them. Suddenly, a giant refrigerator unit crashes through a floor above them and falls into this chasm, smashing through the skylight at the bottom, which allows the water to rush in and fill up the huge foyer."

The problem was that the 20' of real set that would be submerged by the rising water - in shot - had to be lit with waterproof fixtures. However, most waterproof fixtures cannot be run dry, as the sealed units will immediately overheat. Working with underwater chief lighting technician Cory Geryak, Krattinger decided to house the 50 underwater units needed for the set in sections of large-gauge PVC tubing, each of which would be filled with water and then capped with a transparent lid, creating a self-contained aquatic environment for each lamp. "We tested it and it worked great," says Seale. "The PVC containers simply looked like standard light housings. It was a fantastic idea; the only problem was that the water inside literally started boiling if the lamps were left to run for more than about 15 minutes! So our dimmer-board operator, Scott Barnes, programmed the lamps to switch off as soon as Wolfgang called 'Cut.' That allowed the water to cool between takes. It was an ingenious plan. Now, I have to say that we never ended up using the system exactly as such, which was a disappointment; shooting and schedule changes meant the water would be CGI. But we were prepared for it, and that's half the battle. If Wolfgang had needed it, we were ready."

The cinematographer notes that the foyer set was also a challenge for key grip Anderson, because "four floors of set were going to have action, so there was a considerable amount of rigging and camera platforms that had to be built, as well as cranes to be brought in on each floor. Mike and his crew devised a chain-block system from the ceiling that allowed us to move a crane from one level to the next in just 20 minutes." Anderson generally had the run of every set's "ceiling" area, Seale adds. "There were no lights up there because after the ship has capsized, all our lighting came up from the floor."

This lighting approach was inspired not only by logic, but also by the Oscar-nominated cinematography of Harold Stine, ASC on The Poseidon Adventure (AC Sept 72). "We studied that film during prep, and it's with the greatest respect that I say it taught us we had to be absolutely religious about lighting from underneath after the ship turned," says Seale. "In every shot or scene where they cheated the light in the original film - coming in from the side or a little higher to get better modeling or separation - it's noticeable. It has a 'studio' look Wolfgang noted right away that if the lighting didn't come from below, the illusion would be ruined, and I agreed. Wolfgang said, 'I want every frame to help establish that the ship is upside-down.' So we did it. The lighting had to be from the floor, but I didn't want that kind of Hammer Films horror-movie uplighting, with all the problems on the faces."

With the ship's overhead lighting motivating Seale's uplighting, he relied primarily on a mixture of Kino Flo and HydroFlex fluorescent units, as well as "all manner of little fixtures hidden behind assorted junk floating in the water. There was one scene where we had lighting higher than the actors' eyeline, set in the upside-down ballroom. The shots were so wide that the only practical lighting we could get in there were the two huge chandeliers jutting up from what was now the floor. They were about 10 feet high and 8 feet in diameter. To supplement that, we used a couple

of 20Ks way up high, just skimming in. We choked them right down so they just added a bit of horizontal illumination to the actors, but the chandeliers were tall enough to justify the light. It still looked a bit 'upright' to me, so we went back to lighting from the bottom in the next scene to firmly re-establish our look.

"I have to say that our uplighting and the very nature of the setting made it much easier to light for our multiple cameras," he continues. "We could drop in a source wherever we wanted to and have things coming in from angles that just wouldn't make logical sense in any other film. It was so much fun."

The digital intermediate (DI) for Poseidon, which Seale supervised over the course of three weeks at Warner's Motion Picture Imaging (MPI), was the cinematographer's first taste of the relatively new 4K DI process. "I really felt we needed that jump [from 2K to 4K] to make a DI work, especially considering that the film is to be released in Imax and 35mm simultaneously," says Seale. "I just never felt 2K was enough. 4K is film-quality resolution."

Seale recognizes the inherent "creative-control" dilemmas sparked by the burgeoning technology, and his experience at MPI made him rethink his approach to a craft he has practiced for more than 30 years. "If you're doing a DI, you can suddenly have a lot of people in the room during the timing, and they all can have their say, whereas in the past it was sometimes just you and the director. In photochemical timing, you basically just have control over the frame as a whole, but with the DI, you suddenly have hundreds of options in every part of the frame. There is much more to discuss, and there is the question of who will make those decisions."

Fortunately, Petersen and Seale enjoy the kind of creative control many filmmakers only dream about. "Wolfgang has made the studios a lot of successful movies that have earned their professional respect," says the cinematographer. "So control was not an issue on this picture."

Much of the color-timing aspect of the DI included "gradually cooling down the lighting as the picture progresses" explains Seale. "Our heroes are making their way through the very bowels of the ship as the water rises higher and higher, and their hopes of escape diminish as they press on. To accentuate that feeling of coldness, I gradually removed any warmth in the light - it ebbs away. By the time we get to the engine rooms and such, these long corridors that run right down the guts of the ship, the lighting becomes downright ugly; we just have greenish-blue fluorescent tubes in the floor, some white-light flashlights, some fires, and not much else. The water is literally chasing the characters, blowing out the last bits of lighting. It's a battle, and in Wolfgangs words, 'The ship is dying. Its heart is stopping.' The picture becomes almost monochromatic at that point, a look that continues after they escape the ship and find themselves on the surface of the water on a moonlit night, right up until the last shots of the film, when the rescuers arrive just before dawn. That range of color perfectly fits the drama. That's the emotional course we planned from the beginning, and we're lucky to have the DI to help us make that gradual transition, because if we'd tried to achieve all of that in camera with lighting, we'd still be shooting!"

The DI process on Poseidon "impressed upon me what I don't have to do on set," he adds. "Having a DI is no excuse to be lazy - you can't improve a poorly shot film - but you can now concentrate your time on the most important aspects of the image instead of wasting 20 to 60 minutes of set time cutting the light in a certain place while the entire cast and crew is waiting. If given the chance, we can use the DI to make production that much more efficient."

TECHNICAL SPECS

Super 35mm 2.35:1

Panaflex Gold II, Millennium, PanArri

Primo lenses

Kodak Vision2 500T 5218

Digital Intermediate

Printed on Kodak Vision 2383