

# Risk and Valor



Barry Ackroyd, BSC uses Super 16mm and handheld cameras to lend intensity to *The Hurt Locker*, which follows a U.S. Army bomb squad at work in Iraq.

by Patricia Thomson

Veterans frequently describe combat as the most vivid, fully lived experience of their lives. Some get hooked on it. As former *New York Times* war correspondent Chris Hedges writes in his book *War Is a Force That Gives Us Meaning*, “The rush of battle is often a potent and lethal addiction, for war is a drug.” Those are the opening lines of *The Hurt Locker*, a drama about U.S. Army specialists who dismantle improvised explosive devices in Iraq. Directed by Kathryn Bigelow, the film follows members of the Bravo Company in 2004, an early and particularly bloody stage of the war. Often called in to defuse IEDs 10 or 20 times a day, soldiers in

the Explosive Ordnance Disposal squads endure lives of unrelenting intensity.

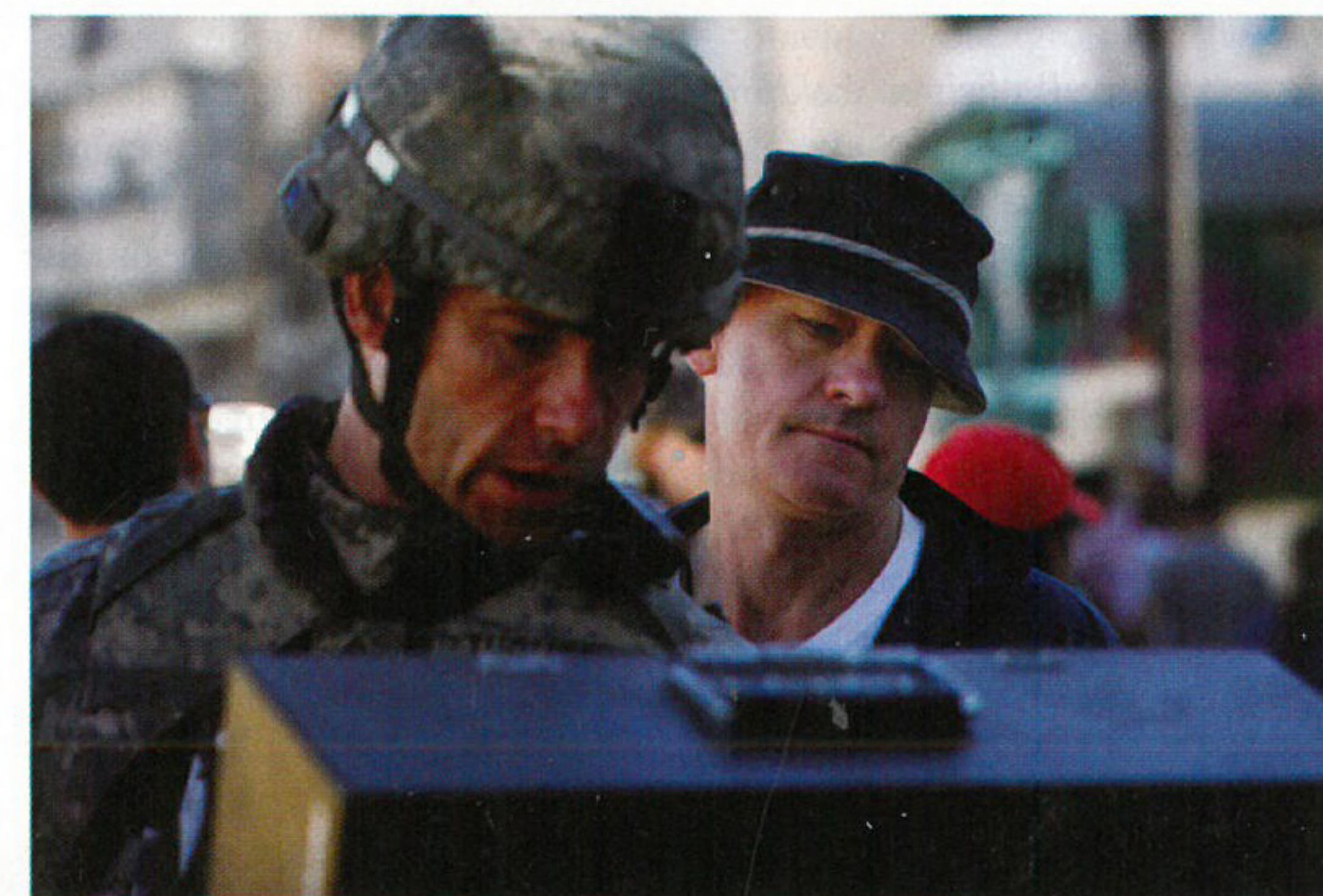
*The Hurt Locker* focuses on three characters: newly arrived Staff Sgt. William James (Jeremy Renner), whose impressive record of disarming 873 bombs is offset by a reckless bravado; Sgt. J.T. Sanborn (Anthony Mackie), a seasoned soldier who worked in Army Intelligence for seven years; and Spc. Owen Eldridge (Brian Geraghty), who is looking for a role model. The film moves through seven missions that are interspersed with moments of downtime back on the base. Visually, it combines the jagged edges of war reportage with inti-

mate close-ups of the soldiers engaged in life-and-death assignments. In addition, long-lens surveillance and riflescope images create the sense of watching and being watched in a hostile land.

*The Hurt Locker* is based on the accounts of embedded freelance journalist Mark Boal, who also wrote the screenplay. Bigelow says she “wanted ... you to feel like you’re the fourth man in the Humvee — you’re right there. But we also wanted to keep it different from a documentary, moving past that into something that was raw, immediate and visceral.” To achieve those sensations, she turned to Barry Ackroyd, BSC, Ken Loach’s longtime cinematographer. Bigelow was particularly impressed with Ackroyd’s work on Paul Greengrass’ *United 93* (AC June ’06) and Loach’s *The Wind That Shakes the Barley* (AC April ’07). “In *The Wind That Shakes the Barley*, Barry’s attention to character and story is as important as the look,” says Bigelow. “If I had to describe him simply, I’d say he’s a true poet.”

For his part, Ackroyd considered *The Hurt Locker* a good fit. “My work has always got a political theme to it,” he notes. “I’ve worked with Ken Loach for 20 years, and there’s a reason why: our ideas coincide. All the good stories seem to revolve around political themes.”

Although *The Hurt Locker* was independently produced on a fairly low budget, Bigelow wanted multiple cameras for multiple perspectives. “That’s how we experience reality, by looking at the microcosm and the macrocosm simultaneously,” she explains. “The eye sees differently than the lens, but with multiple focal lengths and a muscular editorial style, the lens can give you that microcosm/macrocosm perspective, and that contributes to the feeling of total immersion.” Ackroyd recommended shooting on Super 16mm. He recalls, “I said, ‘Let’s



Opposite: Sgt. Thompson (Guy Pearce) tries to outrun the blast of an IED in the opening sequence of *The Hurt Locker*. This page, top: With Spc. Eldridge (Brian Geraghty) looking over his shoulder, Thompson guides a robot toward the device in an attempt to determine what it is. Middle: Barry Ackroyd, BSC checks Pearce’s view. Bottom: After the robot breaks down, Thompson dons a protective suit to investigate further.

Photos by Jonathan Olley. Frame grabs and photos courtesy of Summit Entertainment.



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**Above:** After disarming one IED, Staff Sgt. James (Jeremy Renner) uncovers a network of secondary bombs. **Below:** Sgt. Sanborn (Anthony Mackie) helps James out of the protective suit.

make it physical. I figured the cameras would be handheld 90 percent of the time, and they were.

"Kathryn wanted an accentuated version of what I do normally," continues the cinematographer. "At times, we had up to four cameras running on a single scene, and everyone was instructed to get more coverage and as much information as possible about the characters. I think the film is full of energy because of that. We were trying to

convey the kind of paranoia that goes on in those circumstances."

This approach is evident in the very first scene, shot on the streets of Amman, Jordan. The opening image is a low-quality video of a war-torn street, tracking just inches above the ground. Next, a telephoto shot from a rooftop reveals that the video camera is attached to a small robot rolling toward a pile of rubble where an IED has been spotted. Tight, hand-

held close-ups follow, showing members of an EOD squad headed by Sgt. Matt Thompson (Guy Pearce), who is studying a monitor from behind a Humvee and remotely guiding the robot. Snap zooms zero in on faces and procedures; telephoto shots show locals watching from the rooftops; and another shot through a riflescope watches them back. When the robot malfunctions, Thompson dons a Kevlar protective suit and walks down to manually defuse the IED. Tensions mount when Sanborn spots an Iraqi using a cell phone, and the bomb detonates before Thompson, encumbered by his 80-pound suit, can reach safety.

To cover this 10-minute sequence, the filmmakers used one high-speed Phantom HD camera and four Aaton XTR-Pros. "The Aaton is the camera I used during my documentary years," says Ackroyd, who spent 10 years shooting for the BBC and other documentary outlets before transitioning to feature films. "It's the basic tool of documentary-makers of the pre-video era, and I thought it was a good choice for this film. It feels very

comfortable and is very ergonomic." For running shots and tighter quarters, like inside the Humvee, Aaton's A-Minima came into play. "You can poke it around a bit, the same way people use [Sony] PD150s; it's got that kind of attitude."

Though Bigelow storyboarded the film, the four Aaton operators worked like documentary shooters covering a war. The sets were big, usually more than 300 meters long. In the opening sequence, the video images were captured by the Army's robotic device. Two XTR-Pros were stationed behind the Humvee to pick out dialogue and reveal characters. (In this sequence and others, special reveals were given to well-known actors playing cameo roles, such as Pearce and Ralph Fiennes.)

Canon 8-64mm and 11-165mm zoom lenses were employed throughout the shoot. "It's a good, huge range," says Ackroyd. "We'd have three to four cameras, and we'd tell one of the guys to try to find a rooftop. There are lots of lovely 45-degree angles down. Using an 11-165mm zoom, you could pick off a head-and-shoulders shot of someone across the street, or have a wide-angle shot. We used a lot of zooms within the shot to give it that little edge."

IED explosions were created by special-effects supervisor Robert Stutsman and his team. No digital effects were used to create or enhance any explosions because Bigelow was aiming for total accuracy. "Those fake gas fireballs have a lot of visual impact but are inaccurate, especially given the type of ordnance soldiers are dealing with in Iraq," she says. "The effect we were after was predominantly a very dense, black, thick, almost completely opaque explosion filled with lots of particulate matter and shrapnel."

The blast in the opening scene was captured at high speed with a Phantom HD, which was obtained in Beirut, Lebanon. Ackroyd notes



**Left:** James examines the detonator he ferreted out while defusing a car bomb at the United Nations building in Baghdad. **Below:** James and Sanborn search an abandoned building where suspicious activity has been detected.

he is normally reluctant to use slow-motion for such scenes. "On a lot of films I've shot, we'd refuse to shoot high-speed or use multiple cameras on something like an explosion or a crash because that's showing too much knowledge," he explains. But in this case, "we shot high-speed to get the sense of flying dirt. When an explosion that big goes off, the whole earth moves.

"The great thing about that [Phantom] camera is that it's really quite simple to use, provided you have enough daylight," he continues. "And you can play back and see your results straight away, which is really helpful." He determined that shooting between 500-1,000 fps would facilitate the appropriate amount of screen time and optimal

resolution in the HD image.

As he has on all his features, Ackroyd manned the A camera throughout the shoot. "It's my documentary background," he says. "When you're feeling in tune with something, you can follow a whole scene or conversation — even one in another language — and know how to make that coverage tell the story. You can use one camera and one sound recorder and get cut-aways and reaction shots, all in real time. I think that's the greatest kind of training you can have."

The other camera operators on the picture were Scott McDonald, a Canadian who had worked with Ackroyd on *Battle in Seattle* (2007); Duraid Munajim, who was hired for second unit but





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**Right:** While working out in the desert, James' unit finds itself pinned down by an Iraqi sniper. Sanborn lines up his shot with James' assistance.  
**Below:** Director Kathryn Bigelow talks over a setup with Ackroyd.



wound up operating for the main unit; and Neils Johansen, a Danish operator brought in for second unit. (Dory Aoun operated the Phantom HD.) Many other crew members were Jordanian, Moroccan or Palestinian. "I said to Kathryn right at the beginning, 'No matter where we go, we can't just take over the place and treat it like it's just a back-drop,'" recalls Ackroyd. "We very consciously tried to bring on as many people from the region as we could in all departments." Because

Jordan has a limited production infrastructure, Bigelow created a training program. "I modeled it after the Directors Guild program, like an internship," she says. "There were trainees in the camera department, in the art department, in props and makeup — you name it."

Bigelow chose to shoot the Iraq scenes in Jordan because it has a sizable population of Iraqi refugees. "There are two million of them in Amman alone, and some of them are actors from Baghdad," says the

director. "All of the extras and bit players were real Iraqis. That was really important to me. If we'd shot in Morocco, our extras would have been North African, and to an Arab eye, that's probably the equivalent of me trying to look like a Native American." Reinforcing her decision to shoot in Jordan were the country's architectural similarities to Iraq, which it borders, as well as the availability of U.S. military gear. "One company there is already providing military machinery for war films, so we could get Humvees and the type of military hardware we needed to make this film look right," says Bigelow. "We could even use some of the bases, which I think were built by America as a training school for Iraqi police."

Shooting in Jordan in mid-summer, the filmmakers had to contend with average temperatures of 110°F. Though he was twice felled by heat exhaustion, Ackroyd saw a big benefit to the location: full sun was guaranteed every day of the shoot. He took advantage, using sunlight to illuminate certain interiors, such as a large, seemingly abandoned building that the EOD squad searches. "When we first saw that building, it

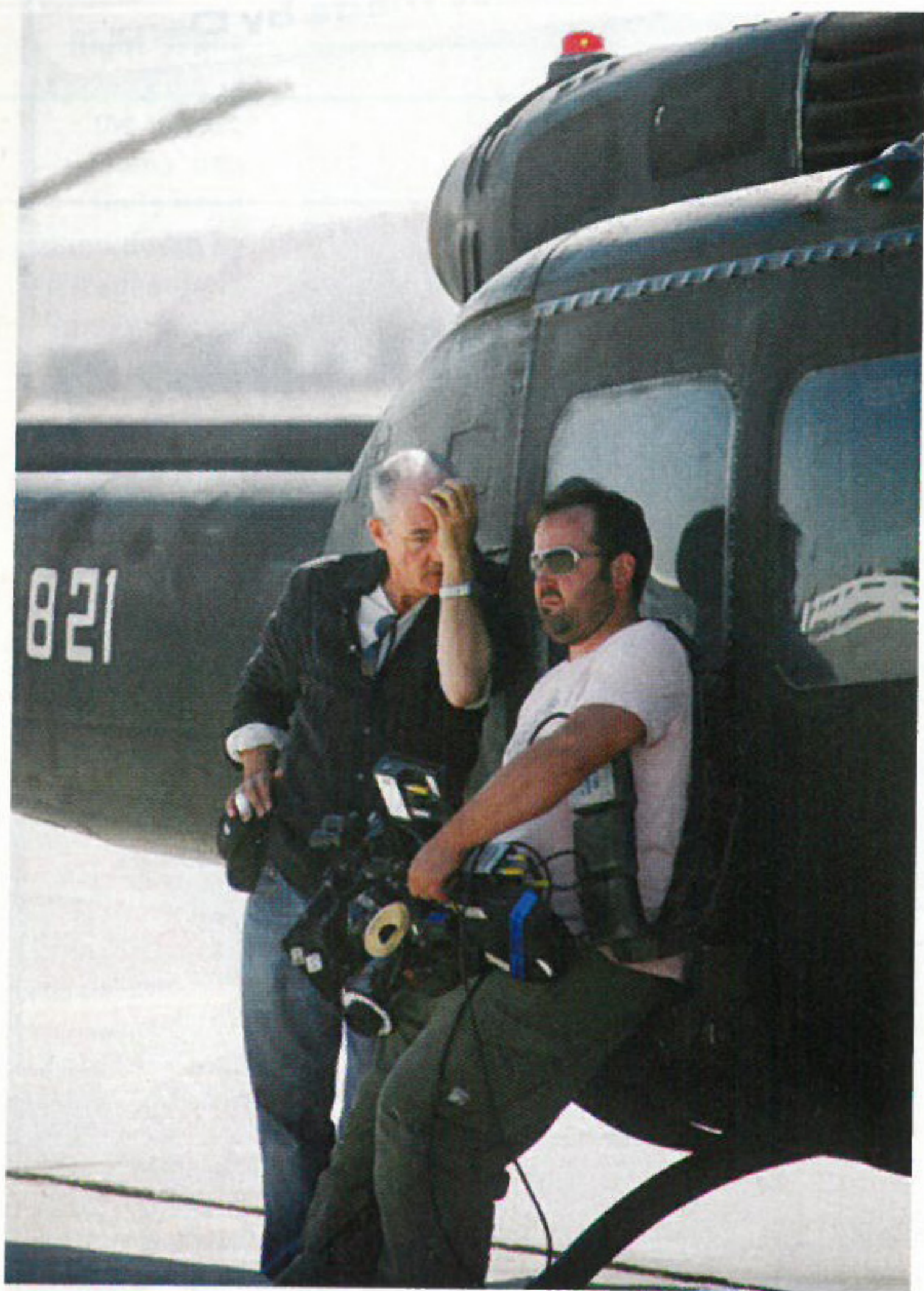


had these wonderful shafts of light inside," he recalls. "We could have brought a lot of big lights in to reproduce that look for different times of day, but I decided to do something else." Shooting in late afternoon, when the sun was on the far side of the building, Ackroyd rounded up several grips to handle 4'x4' mirrors that would bounce sunlight through the empty windows into the interior. "There was a little embankment and a fence outside, so we could strap everything off to the fence and make the mirrors rigid. The sun was guaranteed, and there's no movie light that gives you the intensity of sunlight. We managed to keep that with a little bit of luck, good planning, and trust. So instead of using electricity, we just used the sun." The enduring sunlight also gave the filmmakers enough time to stage the scene the way they wanted. "We wanted those to be long, continuous takes that told lots of stories — every step could be a trip wire, every corner could be a booby-trap or ambush," says Ackroyd. "I think that comes across."

Throughout the film, Ackroyd employed a small, portable lighting fixture he devised, a "Tubo." Starting with a 2' or 4' section of black drainage pipe, he cuts away a section, paints the interior white, and then installs a few small clips to hold a battery-operated Kino Flo in place. He tops it off with diffusion. "It's just a very simple way of getting more control of the light," he says. He originally devised the Tubo for the 360-degree or 180-degree lighting situations he often encounters on Loach's films. "You can put them through batteries and dimmers to warm them up a bit; then, you can roll them underneath the bed, stand them behind a table or affix them anywhere. They're useful things. The casing protects the bulb and also controls where that light goes. And you can always give it a little 10-degree twist to make it less bright. It



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Ackroyd and 1st AC Oliver Driscoll find a rare bit of shade on location in Jordan.

tends to be my secret weapon to get the small stuff in a scene.”

Tubos were among the fixtures used in a long night sequence that required a combination of sources. In the scene, the EOD squad is called in to investigate a deadly explosion in the Green Zone moments after it has occurred. The men arrive to find a huge crater surrounded by fires, mounds of rubble and survivors wailing over the dead. “Nights were tricky because we were trying to portray cities that were blacked out either because of curfew or because they’d lost power,” notes Ackroyd. “But we did have this great special effect, the fire, that we kept burning throughout the night. We just filled in and built around that.” Ackroyd’s 4’ Tubos and flame bars backlit and silhouetted the soldiers and special-effects fires, while military-grade flashlights carried by some soldiers provided additional sources.

Ackroyd wanted to add one more element: flares. “They light up a whole war zone so the soldiers can

see where they’re going,” he notes. “Those things are being fired off around Baghdad all the time, and we thought we could use that kind of light to give the scene an ethereal glow.” When military flares proved impossible to get, the production obtained some signal flares — not an exact match. To better emulate the roving, overhead light he had in mind, Ackroyd and his gaffer, Matt Moffatt, devised a low-cost solution, filming the signal flares only for effect. “I’m almost embarrassed to tell you,” Ackroyd says with a laugh, “but we got some silver shiny board, like a 4-by-4, and put it on the end of a long pole or lighting stand, then pointed a powerful Xenon [flashlight] up into the shiny board. It was just enough to create that very soft glow. What’s more, we could fade that light in and out just by waving the board over our heads, and move it around like it was a floating light up in the sky that drifted away into darkness. Sometimes you just improvise things!”

When James decides the bomb could have been detonated by someone just outside the Green Zone, he takes his men to hunt for suspects, and they switch off their flashlights as they leave the bomb site. “When soldiers go into battle, they switch off their flashlights,” notes Ackroyd. Instead of using any of the standard tricks for suggesting total darkness, the filmmakers allow the image to go completely black for several beats. “Black is something that gets out of your control, really,” says Ackroyd, who notes that a key component of his night strategy was shooting on Fuji Eterna 500T 8673. “When I push Eterna 500 to its limits — i.e., at night, when you cannot or do not want to bring in too much light — the image will go somewhere that’s a little bit crazy, and that’s sometimes what we wanted on this film. If you feel you’re in control of the situation, you might lose the sense of danger you’re trying to

establish. I’ve been using Fuji for 10 years now, and I feel I can mess around with it.”

Once they leave the site of the bomb blast, the soldiers search for suspects by scouring some urban alleyways. (This sequence was shot in a Palestinian refugee camp in Amman.) “In that location, we could use some justified light and play people against silhouettes,” says Ackroyd. They pre-rigged one alleyway, but at the last minute, Bigelow decided to have the soldiers split up and go down three separate alleys, and she wanted to film them simultaneously. Ackroyd determined he would need 360-degree lighting in the added locations, and his crew rummaged through the lighting truck and came back with a mixed bag of units. “They have very wacky lightbulbs there, really high-intensity bulbs,” he notes. “There’s sodium, mercury and all kinds of other things. The color temperature could be 6000°K with extra green in it! But that’s life, so we used those things. Of course, we also used some Kino Flos and standard fluorescent tubes. Though we had done tests on all the available lights, quality control was completely out of the window! We just knew that if we mixed it all together, we’d have a sense of reality, and that’s what we wanted.” ■

## TECHNICAL SPECS

**Super 16mm and High-Definition Video**

**Super 16mm:  
Aaton XTR-Prod, A-Minima**

**HD:  
Phantom HD**

**Canon lenses**

**Fuji Eterna  
250D 8663, 500T 8673**

**Digital Intermediate**

**Printed on Kodak Vision 2383**