



A. Hoyes in dugout

# IN THE TRENCHES

BY ROBERT C. MORTON

*Beneath Hill 60* is the true story about Oliver Woodward, an Australian miner, who volunteered for the Australian Army Mining Battalion during World War I. The job of the Battalion was to burrow under enemy lines in an attempt to break the stalemate across France and Belgium on the Western Front.

The miners were not trained as normal infantry, only getting 2 weeks basic instruction. They were not expected to fight with the rest of the soldiers above ground; instead they had to monitor and protect the mines under No Mans Land.

Woodward and his men were entrusted with the main mine under Hill 60, one of 21 mines laid under the Messines Ridge encircling the town of Ypres in Belgium. Their mission was to keep the mines clear, safe and dry, and repel German infiltration until they were detonated. Whilst stationed at Hill 60, Woodward designed an ingenious plan to avoid tunnel flooding, by using pumps to expel the water to the surface, freeing up valuable manpower.

After the war, Woodward returned to Australia, where he married his love interest, Marjorie, having 3 children, before his death in 1966.

The story was forgotten until 15 years ago, when executive producer Ross Thomas found the diaries detailing Woodward's experiences of the war in a Queensland dumpster. Thomas commissioned a script by writer David Roach, which led to the collaboration between Producer Bill Leimbach, Director Jeremy Sims and Cinematographer Toby Oliver ACS, in creating a stunning portrayal of a forgotten underground war.

In pre-production, the book *Beneath Flanders Fields: The Tunnellers' War* was a leading source of reference, detailing

tunnel diagrams, photos, diary entries and letters. The book was distributed to all heads of departments to familiarise them with the working conditions of the men and the look of the tunnel.

At this point, Oliver began collecting his own visual references for the film. The look of the film was adapted from the styles inherent in the expressionist artists between 1900-1930. Citing Otto Dix and Vincent Van Gogh as key references, Oliver created separate mood boards for the key sequences within the film to present them to and discuss them with Sims.

Production Designer Clayton Jauncey worked with the ideas from Oliver's references and his own extensive period research, focusing on the authenticity of the dressing, using texture from sand bags, wet dripping tunnel walls, earth, uniforms and equipment. All these elements added to the visceral experience of the film in creating a frightening and disorientating space.

The majority of the film was storyboarded between Sims and the storyboard artist, Peter Sheehan and refined over a 2 month period with Oliver. Some of the scenes were shot exactly as boarded, but at other times they came up with more appropriate coverage on the day due to actor blocking. A lot of the coverage in the tunnels was determined by the physical limits: where the camera could be placed, where the actors could move, how much one could contort; the shape of the environment dictated the shot.

Initially the producers favoured the RED camera format due to its cost effectiveness and image quality. However, early in prep Oliver did some small tests with the RED and candlelight. As a result, he confirmed his fears that the RED may not be best suited for the conditions they were to be shooting in,

specifically warmer colour temperatures and very low light levels.

At this point Oliver took the initiative and presented to the producers a format comparison between the RED, Sony F35 and 35mm film. Key elements that Oliver explored were candlelight exposure on faces, robustness of the format appropriate to the shooting conditions and cost from shoot through to post. RED proved to be the cheapest by far with film somewhat more expensive than shooting F35.

Oliver advocated changing formats and shooting on film, and after many discussions and feedback from post houses overwhelmingly in favour of film, the producers made the switch. Even though the decision had some serious budget implications, it turned out to be the correct choice for this movie. An historical story set in the war era, the organic nature of film was the right choice on a subconscious level.

Further stock tests were completed with Kodak and Fuji, eventually deciding on Kodak Vision 3 500T 5219 for the bulk of the movie. To get enough exposure from the candlelight within the tunnel and dugout scenes, the film was force processed at the lab to 1000 ASA. Night exteriors were rated at 500 ASA with day exteriors rated at 400 ASA. The Queensland elements were shot on 200T 5217 rated at 100 ASA.

Oliver notes, "The amazing thing Kodak has done with 5219 is you can force it a stop and the grain is minimal. It is visible in some midtones, but the blacks remain super clean. Any shot that ended up being a little noisy, the blacks were clamped down in the grade to remove it. You have a true 1000 ASA stock that is very comparable to the best digital camera formats in terms of sensitivity. The contrast doesn't change when force processing and the highlight latitude is unbelievable."

The main exterior filming location near Townsville intended to depict the Western Front consisted of a cow paddock a

couple of hectares in area with rows of tall gumtrees along three sides. The trenches were constructed across an area of around 150m long x 120m deep. This included two parallel lines of Allied trenches joined by a sap (trenches perpendicular to the front), adjoined by a 100m long area for 'No Man's Land', and then a slight rise which acted as a pseudo Hill 60, occupied by the German infantry.

The Art Department had an elaborate sprinkler system that would pump water from a nearby dam over the entire shooting area, something that was important for the look of the film in recreating the Western Front's darker soil. This was done regularly as the Townsville heat would evaporate the water relatively quickly.

There was a dugout (underground room where the men lived and slept in when off duty) set dug into the earth on location that allowed for shots from inside the dugout to the exterior trenches in one move. This meant dealing with the Townsville sun beating onto a piece of black plastic above the interior dugout, and this combined with multiple burning candles effectively turned the set into a 45 degree oven. With up to 18 cast and crew squeezed inside, people were sweating like pigs for the 3 days worth of shooting.

There was a rule of thumb in the tunnels, that the lens could never exist outside the tunnel walls and look in. There were pull away walls in the studio location, but the choice to never take the lens outside gave the impression of being closer to the action and not breaking the 4th wall. As a result, you get a feeling of being trapped in the tunnels with the characters.

The conditions were dirty and muddy for days on end, putting extra pressure on the camera crews who were exemplary in keeping the cameras clean, often spending additional time after wrap or the next morning, cleaning the cameras for the shooting day ahead.

The shoot utilised two cameras for many of the exterior action scenes; Andre Deubel, A camera Focus stepped up to B

#### TECHNICAL SPECS:

Arricam LT 3 Perf

Cooke S4i

Angenius 25-250 HR

Kodak 500T 5219 and  
200T 5279

2K Digital Intermediate



Toby Oliver ACS

## IN THE TRENCHES

camera operator with Luke Nixon stepped in as A Focus during that time.

While the Queensland flashback scenes were more classic, being shot from tripod, crane or dolly, the war at the Western Front was covered virtually entirely handheld to give a sense of anxious unpredictability to the shots, and allow a faster mode of shooting especially in some of the more awkward situations. This choice of shooting required a lightweight/small camera that was suitable for sound, particularly when actors were 6" away from camera, whispering in a tunnel that echoes. The Arricam LT as supplied by Panavision fitted the bill nicely, combined with Cooke S4i lenses mostly used wide open at T2.

There were a couple of scratches on the film, something which seemed unavoidable in those sorts of working conditions. A few of scratches were on print takes and needed to be painted out by the VFX department.

Jamie Crooks, the 1st AD was the go-to guy you wouldn't want to be without! Crooks pulled everything together on time with limited resources. Oliver worked closely with Crooks, always thinking ahead of the day's schedule, preparing the unit for a particular move and getting a new setup ready whilst finishing off the current one. The shoot was shot over 40 days with no additional days required outside the schedule.

To differentiate between the earlier Armentières trenches

and Hill 60 in the film, the Art Department would redress the trenches, moving bridges and other elements around the location to give the shots a different look..

One of the major challenges of the film was the football scene, shot outdoors during daylight hours. Off to one side was a huge line of gumtrees, which needed to be avoided at all costs. Enormous amounts of smoke were added to hide the gumtrees. Wide shots were accomplished from high vantage points as to avoid framing the treeline, with other shots composed looking up at cast members from low angles. There were a couple of shots in the film that required VFX smoke elements to remove the remaining gumtrees that snuck in on the day.

Townsville is a very sunny and friendly location. To mimic the look of the Western Front, it needed to be turned into an often misty, dark and cold environment. Whilst filming the exterior war elements for *Beneath Hill 60*, Oliver worked closely with the SFX team (headed by brother Dan Oliver). This included the placement of explosions, smoke, rain and flare lighting elements within the frame.

During a sequence in the film that involves soldiers going over the bags to demolish the German-held 'Red' house, every now and again flares soar into the sky and light up the landscape.

SFX had real boat emergency flares (which do not shoot up in the air due to legal reasons); instead, they were attached to

**BENEATH HILL 60**  
Colour, light and tone reference.  
The Western Front - Day  
Prepared by Toby Oliver DOP



a 5m long stick that SFX would de-elevate during the shot to mimic the German parachute flares.

For the wider shots, Gaffer Miles Jones built a lighting flare rig that consisted of four Blondie bulbs on a dimmer with burnt orange gel that matched the rich colour of the SFX flares. This was positioned off a boom arm that could be raised and lowered on cables during a shot.

The first part of the film takes place in the tunnels in Armentières, France with some of the scenes lit with just a few candles, and sometimes only one candle (as in the first scene of the film). Double wick candles were utilised to create about ½ stop of very welcome additional light compared with regular candles.

Most of the supplemental lighting in the tunnels were just standard household bulbs half wrapped in blackwrap and dubbed 'snowcones' by the Electrix team; 60w, 100w and 150w bulbs were dimmed down to around 50% with some additional dedos and the occasional redhead through some gridcloth. At times SFX gas rig candles were used, adjusting the luminosity to the amount of oxygen within the particular environment. The subtleties of the deliberate colour temperature variations in the tunnels enhanced the depth within the frame.

Throughout the day exteriors, Jones would juggle multiple boom arms with 20x20 sailcloths, lined up along the trenches to create shade during the rain sequences.

For the exterior night sequences, testing was done to find a gel pack that would emulate a natural moonlight. Tungsten lighting with 'steel green' gel (referred to as a 'Steel Gray' on set) was decided upon. This gave a slightly greenish silvery moonlight feel, with the green tint reduced in the DI to create a neutral moonlight feel.

Jones constructed a moonbox for the boomlift, consisting of a 12x12 box with ¼ grid diffusion all around it. There were 30 1K parcans inside, with 2x 5kw on top. In the occasional wider shot, all lights were at full blast, but when closer to the action the parcans would be turned off systematically to reduce the overall light levels.

A Dinette on another boom lift was often used for backgrounds and rim lights, placed in the deep background of the shot. Blondies and 5ks were used through diffusion frames closer to the foreground action with soft silver reflectors used for fill in close-ups, adding to the silvery moonlight feel.

To enhance the shape of the landscape, smoke was frequently used to create depth in the shot, often backlighting ridges, craters and crosses. The SFX team used long runs of tubing surrounding the location, just out of shot. These would distribute smoke across the scene and could be controlled if the wind suddenly shifted direction.

Stylistically Sims doesn't like to use gratuitous camera movement that distracts from the scene and draws attention



Camera crew in tunnel



Gaffer Miles Jones with sails



The tunnel sets



to the camera, preferring static handheld or only slight movements where the attention is more focused on the actors.

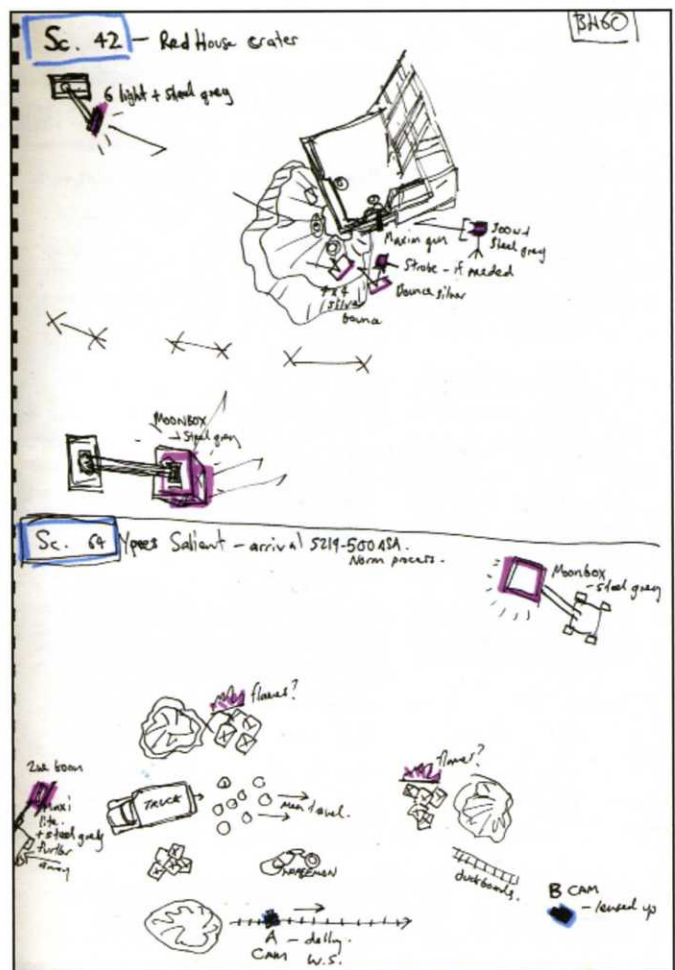
Moving the camera by hand in the tunnels was relatively difficult as it was not possible to stand up straight. When the camera did move, Grip Ben Hyde used a very simple dolly consisting of steel pipes laid in the middle of the tunnel with a skateboard dolly. This allowed the actors to move up and down between the pipes without impeding their movement.

Intricate choreography was required to allow camera and actors to move around the tunnels successfully; sometimes Oliver would contort and squash up against the wall whilst the actors moved past often with backpacks, guns and other bulky attire.

In Townsville, there was an excellent editing and rushes screening room setup by Cutting Edge. To maintain a consistent look throughout the rushes Oliver would send a few on-set stills graded in Photoshop down to Sydney after each day's shoot as a reference for colourist Adrian Hauser. The 'best-light' graded rushes would come back up to Townsville within a couple of days and were screened on a Barco Digital projector played off XDCAM HD.

Oliver exclaims, "Having Adrian on the other end of the phone, working on the material 24/7 and knowing that he is going to be the final colourist at the end of the film was a real plus. Having one person there from start to finish is the ideal way I would like to do it in the future. Getting the look of the

Frank Tiffin (Harrison Gilbertson)



Mud maps

rushes right is really important for the cinematographer, as the look you set in the rushes is often the look the director falls in love with after working with it in editorial."

Shooting 3 perf allowed for a 25% cost savings in the film stock with a 2.40 ground glass marked up for widescreen framing. This allowed for minor re-framing for the theatrical release and provided a 16x9 frame for television and DVD. The important thing in getting a good 16x9 version is maintaining some flexibility in post, allowing you to keep all the key elements and characters in the frame without overly compromising the intent of the original composition.

Cutting Edge VFX Supervisor Ron Roberts and his team completed all the VFX on the film including the sequence where Hill 60 is blown up. Additional VFX shots included muzzle fire, weather, atmosphere, matte paintings and explosion enhancements.

Oliver spent 2 weeks in the Digital Intermediate with Hauser, initially applying a quick overall look to the film based on the rushes, before coming back and finessing at length. Oliver notes, "This was important to create consistency between scenes at different points in the film, rather than going back and forth fixing things in an adhoc fashion; giving a blanket look, then going back a second and third time to refine the look provided the most efficient way of grading."

There has been reluctance over the past 5-10 years by people to see Australian films, with the percentage of Australian films

at the box office being relatively small. Hopefully films with a good audience appeal like *Beneath Hill 60* can help reverse this trend.

There are not many Australian war films, and they are very important to our identity as a nation. Going off to other countries to fight other people's wars, as ill-fated as it may have been, should be remembered. *Beneath Hill 60* is a part of remembering that history.



*The Sneddens*