

The making of *Just Pilbara Trains*

The story behind the film - By Greg Travers

Background

The events leading up to the release of the Train Pictures video and DVD production *Just Pilbara Trains* makes for a rail story with a difference. The DVD version was one of the first of its type to deal with an Australian railway topic. Interest in *Just Pilbara Trains* was generated for several reasons: it was heavily advertised prior to release; the topic is one that intrigues many, because it is Australian, yet the railways themselves are so far away from the big cities that many find them difficult to access. Scenically, the Chichester and Hamersley Ranges offer some of the most beautiful country through which railways travel in Australia and finally the Pilbara railways are regularly heralded as among the most efficient in the world. (For example, the world's longest train with eight GE AC6000CW locomotives and 682 ore cars operated over 275 kilometres in the Newman to Port Hedland section on 21 June 2001. The train length was 7.353 kilometres).

Planning

While planning a holiday in the Kakadu National Park, a plan was formulated to expand the trip with our families to the Kimberley and Broome. It wasn't long before we reasoned that with the Pilbara only 600 kilometres further south than Broome, a rail aspect of the trip should be negotiated. It was agreed that Peter and I would depart two weeks in advance of our families, and then meet them in Broome for the journey to Kakadu and Darwin via the Bungle Bungles. Peter began doing some research into what we could expect and in particular Bob Grant in Adelaide gave much useful advice. Bob has travelled to the area many times, providing notes and guidance to prepare us well in advance. A local railfan, Richard 'Toad' Montgomery had also briefed us before our journey and upon arrival gave us an introductory tour of Port Hedland and environs. Since many areas where the trains run in the Pilbara have restricted access, advance contact had been made with the managements at BHP Iron Ore, Robe River and Hamersley Iron for permission to enter some of these areas. We are indebted to railway management and staff of these companies.

On a trip such as this you need to carry everything that you will need and then extra. We planned in the most intricate way, as we were limited in what luggage we could take on the plane, yet we had to have enough gear to be able to camp out in the open. There would be one big trip to the supermarket before we headed into the bush. If we forgot to buy something then there was no corner shop. The shopping list was compiled months in advance, checked and rechecked. There were many calls to the vehicle hire company, who supplied a few extras for camping. We booked a Toyota Landcruiser because of the

rough conditions expected. A four-wheel drive vehicle was a must, with two spare tyres and two fuel tanks. Enough film had to be carried and video batteries had to be fully charged to allow for two to three days of filming. We consumed a large amount of water during the trip and certainly enjoyed all the other supermarket goodies and our carefully selected tinned meals we had packed! We had heard of people using both spare tyres due to torn tyre walls. In our experience it was dust reacting with split wheel rims and inner tubes that caused flat tyres. After the two tanks of diesel fuel had been exhausted, it was necessary to return to civilisation for a refill or two, and it was a long drive back! The Chichester Ranges are some 200 kilometres south of Port Hedland, on gravel roads all the way.

Even in September, the weather was hot, sometimes sweltering. The days were also long and the distances great. The country looks easy enough in the photos. But once there you find that it is rough and aptly described as unforgiving. This is particularly so in the areas where Robe and Hamersley trains operate, south of Dampier. What appear to be fluffy grass tussocks are in fact the plant kingdom's version of porcupines, the tips of which break off and remain embedded in one's skin at a touch. This can be dangerous, when combined with weathered loose rocks underfoot. A well-stocked first aid kit and knowledge on how to use it is recommended.



In this dramatic view, Hamersley Iron CM44-9CW locomotives 7076/7083 drag a loaded iron ore train through the Hamersley Ranges between Galah and Gull on Tuesday 18 September 2001. Greg Travers

The Trip

After our 600-kilometre drive from Broome to Port Hedland, we awoke the next morning to find high overcast cloud. We were told that people living here for 25 years had not seen cloud at this time of year. This is just what we wanted to hear! We visited 'Toad' Montgomery and did the city sights tour of Port Hedland after a welcoming cold ale. The next day dawned fine, sunny but extremely windy. The wind was keeping the high cloud away, but was extreme to the point of affecting the sound recording during filming. The next day we awoke to our first flat tyre but the wind was not as strong as the previous day. Some excellent footage was taken on this day. But the following day dawned to no wind. Stepping outside, we saw that the cloud had returned. Alongside these inauspicious omens, there was more to come. This day was September 11, 2001 and events taking place in the United States polarised people's attention around roadhouse television sets. A visit to the weather bureau the next day saw a prediction of an end to the cloud. Footage of the maintenance facilities around Port Hedland was taken that day. As a plane came into land at the nearby airport I pointed out to Peter that it might be the last Ansett plane we would see in the skies. The company collapsed that night. With some cloud about we



AC6000CW unit 6075 leads a General Electric 'Dash-8' cousin 5650 (while hidden mid-train are the Dash-8 pairing of 5642/5652) on a 220-wagon Up Iron Ore working down the Chichester Ranges through Hesta on the BHP Iron Ore system on Friday 21 September 2001. Greg Travers

departed south for the 240-kilometre drive to Dampier.

On the way to Dampier under sunny skies, we diverted to the Robe facilities at Cape Lambert, near Wickham. The ALCo M636 on yard shunting duties was a welcome surprise. That afternoon we visited the office of Hamersley Iron at Dampier to arrange our road permit. An indemnity was signed after viewing a safety induction video. The first 100 kilometres of the railway gravel road provides public access to the Chichester – Millstream National Park, as well as several mine sites. The weather gradually improved as the days went on, but some mornings at the end of this dry season were remarkably foggy for such an arid landscape. My fixation with weather conditions during this story is to illustrate the difficulty in the making of a DVD such as *Just Pilbara Trains*, which is almost totally filmed in full sunshine. While I carried out some filming under cloudy conditions, most of these scenes were not included. Of course, it is my preference to film in sunny conditions, but I think the quality of the production justifies my decision. On most nights at this stage we stayed in Karratha, venturing out each day to a point where the Robe line crossed over the Hamersley line, so that we could photograph easily on each. We camped out near Emu siding on one night near the billabong at Western Creek. A million stars could be seen, even appearing under the zero – lux conditions on the digital video. The occasional train headlight did indeed turn night into day!

The return journey from Karratha to Port Hedland occurred partly after sunset. We had heard warnings about driving after dark and soon found out why. Roads at night are the domain of kangaroos and beef cattle, which suddenly appear at right angles out of the adjacent bush, without warning. Our road speed was down to 40-km/h on the final leg into Port Hedland. We hit one 'roo at low speed then an oncoming truck caused Peter to dip his headlights to low beam. Almost immediately the head of a cow, standing almost on the centreline of the road, flashed past. We were sure it was smiling as it flashed past only centimetres from the window. We arrived at the hotel in Port Hedland and headed for dinner. We had visited the quiet solitude of the dining room during the previous week, and looked forward to a beer after the harrowing drive. We opened the door to the sight of scantily clad women and a lively audience – it was the girly show from Perth – in town for one night only! Two final days were spent on the BHP Iron Ore trains, again on the busiest line south toward Newman and also on the former Goldsworthy line.

The locomotives and rolling stock in use in the Pilbara are generally standardised. So apart from weather constraints, another challenge was to obtain variety in the scenes filmed. BHP operate General Electric Dash 8 and AC6000CW locomotives, Robe also had Dash 8s

and a couple of ALCos in service, while Hamersley was operating GE Dash 9 locomotives only. We were lucky enough to film ballast trains, and trains conveying fuel deliveries in addition to typical ore trains. While BHP usually operated two locomotives at the front and two assisting in the middle of the train, Robe operated double headers and quad lash ups. Hamersley operated two locomotives at the head of each iron ore train we saw in operation. Luck was with us on the BHP system, obtaining some unusual locomotive combinations and one six locomotive train comprising 330 ore cars (pairs of locos being evenly placed between each lot of 110 cars).

The Chichester Ranges, through which these railways operate, have been described as one continuous photo location. The background views were awe inspiring at times. Several spectacular bridges span various watercourses, mostly dry, except for the wet season.

Back Home

But that is only half of the story. Soon after my return, a conversation began with Chris Harding and Ross Verdich at the ARHSnsw Bookshop, which somehow got around to the fact that I had just returned from the Pilbara. Ross asked if I could put together a short film for presentation at an AHRSnsw member's meeting. There was no reason not to agree. So now I had four hours of film to somehow compress into a programme that would interest the majority of the audience. Most of the scenes with wind noise or without the sun shining could be eliminated immediately. After that with the limited types of locomotives in use, varying the types of scenes would be the first objective. A second would be to show locomotives hard at work. A mix of day to day working was included for the record. It all compressed down to 44 minutes after days of editing. When presenting the entertainment at ARHS meetings it seems that the protocol is to meet the General Manager, Ross Verdich at the Kirribilli Club for a meal before the performance. Several other friends and acquaintances were there and I had recruited Peter Attenborough and John Ward as my support in case anyone asked any questions I couldn't answer!

An Idea is Born

Nobody left during the performance and nobody spoke, except for the occasional question. These were my two measures of acceptance by the audience. I was pleased to see the film on the large screen at the premises of Engineers Australia where the meeting was held. I had a request soon after to screen the film at the Wollongong meeting

of the Rail Transport Museum. Meanwhile, Ross Verdich had suggested that this was a saleable product. I had produced *Diesels in South Australia* in the year 2000, but initially hesitated at the thought of another production. During my next visit to the ARHSnsw bookshop, Ross handed me a business card and suggested that I speak to Benjamin Page at Train Pictures. I asked Ross to screen some of their productions on the shop monitor and that afternoon was on the phone for 45 minutes to Benjamin.

Now for a production to be successful, the film is only half of the story. A script is required. Peter and I had produced a detailed article for the April 2002 issue of *Motive Power* magazine. The script could be based on facts lifted from this article and our notes. However, I have an aversion to narration being dubbed over the top of the noise made by hard working locomotives. The challenge was to give enough information (as 99 per cent of audiences have not been to the Pilbara) while preserving that four-stroke beat! Benjamin provided much valuable technical advice along the way. Sometimes subtitles were used, or visual information was included such as film of the public display boards at Port Hedland. This minimised discussion on the video. Fitting the words chosen into the sometimes-limited time available was quite a time-consuming challenge. A DVD (Digital Versatile Disc) version had always been planned and the Train Pictures guys sought to provide as many added extras as possible. Although rail DVDs had begun arriving from the USA distributors en masse this would be one of the first Australian rail DVDs released. So the objective was to encourage as many enthusiasts to buy the DVD (and for some probably a DVD player as well!) Retailers had dropped the price of DVD players to as low as \$150, whereas they were \$500 or so only two years earlier.

So it was decided that the DVD could have two sound tracks, one with narration and one without. Hidden web links, a screen map, a slide show, a promo for other products; specification presentation of all the locomotives and ten minutes extra footage were eventually provided. But wait, there's more... there was room for a third sound track. This was not what I needed to hear, as now I had to pen yet another script. A quick call to the *Motive Power* editor and I had permission to lift great slabs out of the article which Peter and I had written earlier. The VHS with its single

sound track is a poor relation to the DVD. Picture clarity is vastly improved, as there is little or no quality loss from the master tape on DVDs, which use digital technology. A professional was engaged to give the narration.

The video was released in February 2003. Advertisements in several magazines had preceded the release. There were immediate encouraging sales of the VHS, but even more encouraging were on-line advance orders placed with Train Pictures for an equal number of DVDs. At the same time the guys at the ARHSnsw bookshop were complaining that they had no Australian DVDs to sell but were being inundated with requests for same, as the shelves were stocked only with DVDs from the UK and USA.

Australian DVDs

In fact Train Pictures had produced Australia's first rail DVD, *The Mary Valley Heritage Railway* late in 2002. The second DVD to arrive was Andrew McBain's title *Desert Storm*, featuring classic quad GM class two-stroke diesels on a return trip to the Leigh Creek coal mine, against the backdrop of the Flinders Range. *Just Pilbara Trains* was the third Australian DVD as far as I am aware, released in April 2003. Since then, the floodgates appear to have opened, with May seeing the release of *Diesel Diary - Volume 12* by Bevan Wall in DVD format only, and the release of a swag of other DVDs, either new productions or new to DVD re-issues by a number of producers, including Series 567 and Train Hobby.

The *Just Pilbara Trains* production has been well received and I have been encouraged to look at other productions in the future. There are a number of Australian producers of rail videos and now DVDs. Many people have quizzed me on various aspects of this story, to the point where the *Railway Digest* editor did the same! This has been a behind the scenes look at how just one Australian video/DVD came about. I'm sure that moviemakers like George Bambery (*Short South Sojourn; Moving Mountains*); Tony Astle (*Railview No. 1 - Railview No. 12*); Bevan Wall (*Diesels Under the Wires; 38s over the Mountains; Diesel Diary Nos 1 - 12* and *Steam Stories Nos. 1 - 6*) or John Stone (*The Hills are Alive*) would also have a story or two to tell.

Greg Travers is the Director, Producer, Cameraman and Scriptwriter of Just Pilbara Trains. He lives in Sydney, New South Wales.

On the Robe River system a quadruple combination of CM40-8M locomotives (namely 9414/9415/9418/9417) is seen on an Up loaded iron ore train bound for Cape Lambert at Siding Two on Wednesday 19 September 2001. **Greg Travers**



From raw material to finished product - By Benjamin Page

As I write this I think back to my initial conversations with Greg Travers about the possibility of releasing his footage as a Train Pictures' title. We spent many hours on the telephone discussing how he and I each viewed such a release, the form a DVD version might take, and the type of promotional campaign required for launching what was going to be a new standard in Australian rail DVD production.

First I would like to share some details about my role at Train Pictures as Director – Production & Project Development. As indicated by the number of *Just Pilbara Trains* videos and DVDs sold, many *Railway Digest* readers now know Train Pictures as a producer of railfan titles featuring trains from across Australia and even a few from our friends across the Tasman in New Zealand. Everyone at Train Pictures strives to create bigger and better titles with each new release and it's my job to see this happens. In my position I oversee all titles



This view shows the Sony Video Tape Recorder (VTR) unit at Train Pictures. The raw footage is uploaded onto this Digital Beta SX machine at the start of the long process to turn the images into a professionally finished product. Train Pictures



This is the heart of the Sony Digital Edit Suite that enables the transfer of the video images from tape to digital format with nil-loss of definition or quality. The use of purpose built equipment gives better results in the finished product. Train Pictures

produced by Train Pictures, and the development of projects with independent production partners such as Greg.

In this article I will take you through the technical process Train Pictures progressed through to release the footage and film work of Greg's as a DVD. A title that I am not only personally extremely proud of, but a release that has also set a new benchmark for Australian railfan DVDs.

Our story begins with Greg supplying his footage to Train Pictures on the Digital Video (DV) tape format. DV is a digital format primarily designed for consumer use, although it is fast becoming a professional format due to its high quality and low cost. At Train Pictures we use the digital broadcast formats of Sony DVCAM and Beta SX for the production of our original titles and as such the first step in our production process was to transfer Greg's footage from DV to Beta SX. As the footage was transferred a time code was added to enable each section of the footage to be identified and tracked easily. A copy of the footage with time code was then dubbed down to VHS and sent to Greg for the formulation of an Edit Decision List (EDL). An EDL is a list of all clips from the raw footage to be included in the main feature program for release. Once Greg determined a final EDL, based on the time code information overlaid onto the footage, it was sent back to Train Pictures where editing could begin.

Once we had Greg's final EDL the footage was loaded from the Beta SX tape onto a Sony digital edit suite. The edit suite is basically a powerful PC incorporating a Beta SX tape machine. This provides for direct digital transfer of vision and audio between the tapes and hard drives resulting in zero loss of quality. Such a system also affords significant video bandwidth and minimal video compression, both of which maintain or even improve the video and audio quality. The system is also free from the common PC problems of freezing and crashing as its sole purpose is to edit video and nothing else. Another big plus of the Sony edit suites is their ability to keep footage filmed at a broadcast standard at this standard. This is very important at Train Pictures, as we require the masters of our original productions to be broadcast ready following completion. While much of the equipment used throughout our production process would be beyond the reach of most consumers (as it is all broadcast and professional equipment), it ensures the production (be it in VHS, DVD or VCD format) purchased from Train Pictures is the best it could possibly be. I have lost count of how many debates I have had with marketing people on the topic of quality vs. quick release.

I digress, back to the real story, once the footage has been loaded onto the edit suite from the Beta SX cassette, based on the EDL, the various clips are arranged appropriately and onscreen text and graphics are added. At this point the preliminary edit without voice over was again dubbed down to VHS and sent to Greg who had to write two voiceover scripts for the feature. The first script was to be the audio track for the VHS edition and the main audio track for the DVD, and focused primarily on the technical aspects of the trains. The second script had greater breadth and depth focusing on the surroundings and other interesting details in addition to the technical details. The final DVD also includes a third audio track option of no voice over at all, just pure train sounds to satisfy the railfan viewer.

Once Greg finalised the voice over scripts and forwarded them to Train Pictures, our audio technician recorded them in a sound studio with our 'voice over guy' (as he is known at Train Pictures). If you own a few titles from Train Pictures you will be familiar with our 'voice over guy', as he has spoken on all original productions and many joint production projects to date. Once the voice-overs are recorded it is back to the edit suite to transfer the appropriate audio clip over the appropriate video segment. Special attention is always paid to the audio placement to ensure dialogue does not obscure the audio from the trains. Throughout this process of script development and recording, the 'slicks' or inserts for the VHS and DVD cases were designed and printed. The slicks are designed using software such as Adobe Photoshop, through a multi-layering process.

At this point the master feature is complete and is ready for dubbing onto VHS. Production of the DVD still has a few steps to go, and this is why VHS versions are released prior to their DVD cousins. While the *Just Pilbara Trains* VHS was being duplicated our production department was busy developing the DVD. Menus, title graphics, and special features all had to be developed. Once these were finalised a DVD sequence was prepared. The sequence list is a numbered list in



Fortunately for us, this still photograph has captured a little bit of the video camera filming the scene as 6077/5665 (with mid-train units 5641/6073) head through kilometre post 200 at Redmont with another loaded iron ore train and the Chichester Ranges in the background on Tuesday 11 September 2001. Greg Travers

disc-geographical order specifically stating the flow of the DVD during playback.

Once complete the files and sequence list, along with the digital vision, audio master and any special features or extra content were sent to Cutting Edge Interactive (a division of Cutting Edge Post) for the encoding and authoring of a DVD master. Cutting Edge Post is one of Australia's leading post-production houses and utilises the most advanced digital encoding and authoring equipment available for DVD production. The Cutting Edge Interactive team used the DVD sequence list as a map to encode the DVD to Train Pictures' requirements. All content is assembled including still images and the video footage off the digital Beta SX master. Once assembled the content is processed through a Minerva hardware encoder into the MPEG2 format for DVD. The MPEG2 compression format used by DVDs and digital television enables large amounts of data to be compressed into very small files for storage or transmission. While all DVDs have had their content encoded into MPEG2 *Just Pilbara Trains* is the only locally Australian produced rail DVD we are aware of to have been encoded using the Minerva hardware technique and not through software.

As I said earlier Train Pictures tries to make each release bigger and better than the last and as our first DVD was software encoded, Our second just had to top that and be hardware encoded. Software encoding involves the DVD's content being encoded through software on a PC with preset algorithms determining how the data is compressed. Hardware encoding involves the content being processed by a standalone piece of computer driven hardware with the ability to treat each pixel individually when encoding and compressing the data. The result, in addition to a much higher production cost, is a much tighter image when viewing the DVD. The image pixels are integrated to a much greater degree, moving images flow across the TV screen free from artifacts (image defects such as blocks or distorted pixels). Hardware encoding provides compressed images that appear far more film like in appearance compared to images compressed using software encoding.

While the vision information was encoded into the MPEG2 format all audio was encoded into the Dolby Digital format. Dolby Digital is one of the most popular digital audio formats in use today. It is used in cinemas, for digital television and on more DVDs than any other audio format. Train Pictures selects Dolby Digital over other formats for audio encoding, as it is the only audio format all DVD players produced worldwide are universally required to playback.

Following encoding Cutting Edge Interactive authored a master disc from which duplicates can be made. From the master DVD a glass master was produced. This is a replica of the master DVD only in glass form. From the glass master duplicates were pressed. Through the glass master aluminum sheets are pressed and then covered with thin sheets of plastic to form a pressed DVD. Some other rail DVDs available (including Train Pictures first DVD), are the DVD-R format, and are 'burnt' through a laser etching the information into the surface of the disc. Pressed DVDs have high playback compatibility in DVD players from around the world. Train Pictures expected sales from many international markets and for this reason we opted for a pressed DVD release over a DVD-R release for *Just Pilbara Trains*.

The pressed *Just Pilbara Trains* DVD is classified as a DVD5. That means it is a single sided, single layered disc. Pressed DVDs can be double sided and dual layered depending on the amount of information the disc needs to store. The majority of pressed DVDs available are either DVD5 or DVD9 (single sided, dual layered). DVD9's pause slightly during the feature as the laser jumps from the first layer to the second.

Production of the glass master and duplication of the discs was performed offshore in Taiwan as it has some of the most advanced equipment for this work. Discs from Taiwan have a level of quality and reliability above those produced in many other nations. At the same time the DVDs are pressed their labels are screen printed in full colour directly onto the disc. Once this process is complete the discs are shipped back to Train Pictures for distribution.

Well, that brings us to the end of the production process of the *Just Pilbara Trains* DVD. At this point the DVD was distributed to stores for sale or shipped directly to railfans across Australia and around the world from the Train Pictures distribution center in Brisbane.

I hope you have found this article interesting; I always love talking tech to railfans so if you have any questions or comments about any Train Pictures' titles please email me, I would love to hear from you. I want to thank all of the railfans that have purchased *Just Pilbara Trains*, it was a big leap for Train Pictures and I appreciate the support you have all shown. Personally I also wish to thank all of the retailers and rail societies who have taken Train Pictures on board and carried our titles to the railfans. Happy rail fanning!

Benjamin Page is Director – Production & Project Development at Train Pictures and lives in Queensland.