

# the bulletin

Mining & Construction Global Edition • VOLUME 1 • 2023



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**Cover**  
Bernegger sees the benefit of B60Es in large Austria quarry.

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# Don't be left in the dust



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**2023** is drawing to a close, as is my time with Bell Equipment, and I find myself reflecting on the incredible journey we've undertaken together over the past 16 years. It has been an honour and a privilege to serve as CEO for the last five years, and I am filled with gratitude for the trust and support you, our customers, have shown throughout my tenure.

As I prepare to pass the baton to a new leader, I can't help but feel a sense of nostalgia and a touch of sadness. Leaving a company and a community I have been a part of for so long is never easy. However, I do so with the utmost confidence in the future of Bell Equipment.

Our organisation stands on a solid foundation, and I am proud to say that we are in great shape. The strategies we have embarked upon to explore new global products, expand into new markets, and drive various new business units and initiatives forward have set us on an exciting path. This positive momentum will undoubtedly continue into the future.

I want to express my sincere thanks for your partnership, loyalty, and unwavering support over the years. It's your trust and collaboration that have fuelled our success, and I have every belief that the same will hold true in the years to come.

As I bid farewell to my role as CEO, I look forward to watching Bell Equipment reach new heights, achieve greater milestones, and continue to serve you with excellence. Our dedicated team remains committed to your success, and I have no doubt that the best is yet to come.

Thank you, once again, for being an integral part of the Bell Equipment family. It has been an incredible journey, and I am excited to witness the remarkable future that lies ahead.

Yours sincerely

Leon Goosen  
Group Chief Executive Officer

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# Europe's largest fleet of Bell Water Tankers



Leading UK plant hirer, P Flannery Plant Hire (Oval) Ltd, known throughout the industry as Flannery, has grown from a single-machine business in 1972 to a five thousand-machine enterprise in 2022. Operating from a head office in Wembley, the company now services clients from nine depots across the UK with over one thousand six hundred and eighty operators working with key national building and infrastructure clients nationwide.

Over the last 50 years Flannery has partnered with world-leading machinery manufacturers to ensure it maintains the most modern and sophisticated fleet of machines and this includes Bell Equipment with over 50 Bell Articulated Dump Trucks (ADTs) in their portfolio. Models include 20t, 30t, and 45t trucks that have proved to be very popular with hirers thanks to their combination of productivity, fuel efficiency, and reliability.

Recently the company invested in Bell Water Tankers to work on multiple groundworks projects nationwide. A delivery of five new Bell B30E Water Tankers brings the number to 10, which makes it the largest fleet in Europe to date.

The new units were delivered to the HS2 construction site in Lichfield to help manage excess water

and keep the site operational throughout winter. They join an existing Bell Water Tanker which has been on site since the start of the works.

According to Liam Hill, Senior Plant Co-ordinator for Flannery, the 27 000-litre Bell Tankers perform a range of vital functions and the ability to help remove excess water has been critical in keeping the site open during poor weather conditions.

This includes redistributing water from a series of purpose-built water lagoons and creating recyclable limestone haul roads. In summer

the bowsers will switch to dust suppression duties and this versatility ensures year-round utilisation.

“Our fleet of Bell Articulated Dump Trucks are in great demand, and they simply never let us down. We were confident the Water Tankers would prove to be equally productive and so far, they have, particularly on sites such as Lichfield where the ground conditions can be challenging.

They are currently working seven days a week without any issues





**Liam Hill, Senior Plant Co-ordinator.**

at all, and without them, we would struggle to keep the project on track."

Each tanker is fitted with a powerful water pump on the rear

which runs off a hydraulic motor coupled through keyed shafts and direct gear couplers. The pumps operate at a flow rate of 1 800 L/min and a pressure head of 50 m/5 bar enabling the machines to self-fill in just 20 minutes.

A low-level water sensor automatically cuts off the pump when the level is low to prevent the pump from running dry whilst a high-level sensor cuts off the pump once the chassis-mounted tank is full. This fail-safe mechanism is designed for long pump life and performance.



# Bell celebrates two decades of excellence at German factory



*In June 2023, Bell Equipment was joined by government and business representatives and employees from Bell Germany to celebrate the twentieth anniversary of its German factory in Eisenach-Kindel.*

"We followed a vision," said Bell CEO, Leon Goosen, paying tribute to the achievements of his predecessor and current Bell Group Chairman, Gary Bell, as the driving force behind the successful establishment of Bell's first production facility outside South Africa. "We needed to get closer to our customers," he explained, pointing out that today 75% of the world's production of ADTs goes to Northern Hemisphere markets.

The assembly plant, which opened in November 2003 after only five months of construction, marked the beginning of a long-term strategy that has transformed the company from a specialised niche supplier to a globally oriented construction machinery manufacturer.

The event provided an ideal opportunity to recognise long-serving employees and present Bell Chairman, Gary Bell, with an

award acknowledging his more than 50 years of service to the Group.

In addition to the great commitment of the company's own employees, Leon expressly praised the good co-operation with the regional and municipal officials as well as the state economic development agency LEG, which have all supported the company in its goals over the past years.



**Today, the Bell ADT factory in Eisenach-Kindel offers a total of 18 000m<sup>2</sup> of production and assembly space.**





Appreciation from the district and municipality (from left): Bell Group Chairman, Gary Bell and Group CEO, Leon Goosen, with District Administrator, Reinhard Krebs, and 1st Alderman Hörselberg-Hainich, Michael Thomas.

Bell CEO, Leon Goosen, welcomed around 60 guests at the official ceremony.



Bell Equipment has been manufacturing the bodies of its vehicles on site since 2019.



Numerous employees were honoured for their 20 years of membership in the company as part of the anniversary celebrations and Bell Group Chairman was presented with a commemorative plaque for more than 50 years of service.

# Dzombo Plant Hire sees huge benefit in its B30Es with coal bins



*Load and haul in a mining material handling application involves so much more than simply loading a haulage vehicle with the commodity at hand. There must be proper planning, daily adjustments to environmental conditions and above all, the correct tools for the job.*



This is according to Wynand Botha who heads up the Dzombo Group of Companies in Limpopo's Lephalale where Dzombo Plant Hire has made its mark as a contract mining and material handling company. Dzombo was the name of one of the legendary magnificent seven big elephants that ruled South Africa's Kruger National Park for many years. The name comes from the Xitsonga word for a stream that is slow to move but impresses on arrival.

"Since starting our company in 2005, we first concentrated on doing developments in the domestic housing and commercial retail markets and believed in

doing the levelling of building sites, preparation of platforms for construction, installation of water and power services and the construction of roads, ourselves," Wynand says. "To do this we needed a fleet of yellow machines, and we have over the past 17 years steadily grown our own fleet to now number some 150 pieces of equipment."

According to Wynand, their acquisition of yellow machines was always for their own use and, at the right time, the creation of a plant hire division named Dzombo Plant Hire was a natural outflow of their ownership of a variety of earthmoving equipment that

*"Proof of excellence in a machine is found in good production coupled with economical fuel consumption which in turn needs to be backed up by good parts availability and service and here Bell Equipment ticks all the boxes," Wynand adds.*

could be put to wider and profitable use.

"If you look hard enough, you'll find plenty of opportunities for work as we did when an opportunity to do material handling on one of the



**Bell Sales Representative, Jan Barnard, (left) with Wynand Botha in front of a mural depicting the elephant Dzombo.**

major coal mines in our area came across our path and we created a mining division," Wynand continues. "We had been using a fleet of 16 Articulated Dump Trucks (ADTs) fitted with standard bins to haul coal slimes for reprocessing when in 2021, Gerald Lottering, Bell Equipment's Branch Manager in Rustenburg, first approached us with the concept of a Bell B30E ADT that was fitted with a coal bin, which would carry far more volume due to the low specific gravity of the coal products."

Bell Equipment duly provided Dzombo Plant Hire with a demonstration Bell B30E ADT fitted with a coal bin to test its performance and fuel consumption under actual working conditions. Wynand says when testing the Bell B30E, the results of its performance and especially its frugal fuel consumption were so positive while carrying a larger load that he had no hesitation in ordering two Bell B30E ADTs fitted with coal bins. The new Bell B30E ADTs were delivered in July and August 2022.

"When working in challenging environmental conditions such as heat, dust and wind, we pay a lot of attention to controlling those factors that we're able to such as

reducing dust blowing into our machines and having our haulage vehicles pull away on a downhill rather than uphill, if possible," Wynand explains. "Our two new Bell B30E ADTs with the coal bins have been managed in the same way and have really exceeded our production expectations while using remarkably less fuel over the 6km haul route."

"We've been impressed with Bell Equipment's design of its coal bin which, with the use of a tailgate, gives us six to seven more cubic metres of a heaped load than ADTs with standard bins," he says. "And even working with those larger loads in wet underfoot conditions, a fuel burn of around 22 to 24 litres an hour does not exceed our fuel cap."

Wynand adds that with Bell Equipment's design engineers distributing equal torque across the Bell B30E ADT's three axles, thus creating equal torque bias, tyre life is extended as there is less scuffing of the centre axle's tyres.

"What we especially enjoy about the design and build of the Bell B30E ADTs is that it's a simple design and everything is made of steel, which means that should you want to replace something

beyond the ADT's warranty period, you can simply fabricate such a section to be slotted in," he says. "Having invested in many pieces of earthmoving equipment, our aim is to get the maximum life out of such a machine, and this can only be done when there is diligent maintenance backed by parts availability from the original supplier, which in the case of Bell Equipment has been solid.

"Proof of excellence in a machine is found in good production coupled with economical fuel consumption which in turn needs to be backed up by good parts availability and service and here Bell Equipment ticks all the boxes," Wynand adds. "We're especially keen to learn what other new products Bell Equipment plans to bring to the market and we appreciate the company's Sales Representative, Jan Barnard, calling on us regularly."

The Dzombo Group employs its own team of mechanics which has become familiar and confident with rebuilding machines where necessary, so further extending machine life and productivity.



**Wynand Botha with his beagle aptly called Bell. Bell follows Wynand everywhere.**

# RJV adds four Bell Water Tankers to its growing fleet



*From humble beginnings dating back to 1955 RJ Vincent & Co (RJV), a privately owned family company, initially provided bulldozing services in country areas of Western Australia. RJV has since evolved to become one of the most respected and leading civil engineering and mining services contractors in Western Australia with a proud record for 'doing things right'. Employing over 160 staff, RJV is an employer of choice that puts the safety and well-being of its employees at the forefront of business importance.*



**The E-series range of Bell ADTs is packed with class-leading features that deliver production-boosting payloads.**

RJV has enjoyed continuous growth over the past 65 years due to its 'can do' attitude and corporate belief that quality and safety should never be compromised. As a company that is strongly committed to innovation, quality assurance, and customer satisfaction, RJV has partnered with Hitachi

Construction Machinery (Australia) Pty Ltd (HCA), as a likeminded supplier of earthmoving machinery, to assist with their civil, mining, and marine infrastructure operations across Western Australia. As the exclusive distributor of Hitachi and Bell equipment in Australia, HCA prides

itself on achieving a reputation for exceptional customer satisfaction and machine reliability.

The current range of RJV's fleet of machinery consists of 83 machines purchased from HCA over the years. The company also received a recognition award from HCA in



## *The purchase decision of these tankers is to further prove and expand RJV's tanker fleet in Western Australia's growing and highly competitive market.*

April 2011 for purchasing the 100th Bell B50D Articulated Dump Truck (ADT) sold in Australia. In August 2020 RJV celebrated its 65th anniversary and in commemoration the company purchased six Bell B45E ADTs with special decals honouring this great milestone.

The E-series range of Bell ADTs is packed with class-leading features that deliver production-boosting payloads, lower daily operating costs, superior ride quality for the toughest of conditions, and uncompromising safety standards. It's a class leader in productivity, which has impressed the RJV team as the fleet of Bell trucks is working double shifts proving the reliability of the equipment.

The mining industry in Western Australia is a very important factor attributing to RJV's growth. RJV Mining Services is one of three business divisions of RJV that is entirely dedicated to the mining sector. RJV Mining Services has built a track record with companies offering a comprehensive range of engineering, civil construction, and

open-pit contract mining services to the resource sector. Mining projects over the years include Roy Hill; Package 3 Landslide Bew, Siberia Open Pit Mining, and West Angelas Power Station Bew. Pleased with HCA's extensive range of performance-driven machinery along with the professionalism of HCA Major Accounts Manager, Steve Gunn, and Perth's sales team, the RJV team placed an order for an additional 11 pieces of equipment. Included in this transaction were four Bell Water Tankers (two B2304Es and two 2806Es).

A new product in the Australian market, Bell-designed and manufactured Water Tankers are fully integrated into the machine's safety features, ensuring maximum performance, control, and uncompromised reliability.

Being 4x4 makes the water tankers a perfect combination for Western Australia's sand and the harshest mining environment. The two Bell B2304E Water Tankers purchased by RJV were delivered in January 2022 while the two 2806E 16 000 L Water Tankers were delivered in

March and April 2022. The purchase decision of these tankers is to further prove and expand their tanker fleet in Western Australia's growing and highly competitive market.

The Australian market for water tankers is growing and their demand on mining and construction sites is rising due to their versatile nature making the tankers suitable for numerous applications including mining and construction sites, dust and dirt suppression/control, roadworks, and vegetation care, rural and farming applications.

The relationship between RJV and HCA has continued to grow and strengthen over the years as both organisations are technologically driven with a fundamental emphasis on the safety of their employees and customers. HCA's after-sales support is at arm's reach with five centralised HCA branches across Western Australia and a 24/7 customer support centre. There is no doubt RJV and HCA make an unbeatable match.

*Article and photography credit:  
Hitachi Construction Machinery  
(Australia) Pty Ltd (HCA).*



# Bernegger sees the benefit of B60Es in large Austrian quarry



*For more than 40 years, limestone has been extracted at Bernegger's Schützenstein quarry near Spital am Pyhrn in Austria up to heights of almost one thousand metres. Together with the sales and application experts from Kiesel Austria, the company optimised its year-round conveyor chain by using two mining excavators in combination with two Bell B60E 4x4 Articulated Dump Trucks (ADTs).*

The Schützenstein quarry was opened in 1979 and is part of the family-run Bernegger Group, which today employs around 1 000 people. The extraction of mineral raw materials and concrete production remains a core business of the company that is headquartered in Mölln and is also involved in the construction and environmental technology sectors at 20 locations through subsidiaries and affiliates.

A good 500 000 tonnes of limestone are quarried per year in Spital am Pyhrn and processed into high-quality aggregates, road and civil engineering materials, hydraulic engineering blocks, and lime fertiliser in the plant that was renovated in 2011. A large portion of this does not remain in the region but is transported by block trains to various Bernegger intermediate storage facilities. The materials also reach Bernegger construction projects or customer construction sites throughout the country directly and in an environmentally-friendly manner via a self-developed container exchange system.

## Challenging quarrying

The Schützenstein quarry is barely 750 metres away from the plant with its high-silo storage, railway loading, ready-mixed concrete plant, and recycling plant. The quarry's primary crusher site with its 10 000-tonne roofed rock storage facility is connected to the lower-lying plant via a conveyor belt that crosses a federal road. On a mining area of almost 20 hectares there are currently 13 mining levels, the highest at 984 metres, almost

200 metres above the primary crusher. Mining is done by blasting, with wall heights of 15 metres and berm widths of around nine metres.

The loading and transport of the raw material in sizes up to 1 000mm is correspondingly demanding. Individual distances of up to 2 000 metres, the narrowest bends, and gradients of up to 18% characterise the routes for the transport equipment, whose operation is made even more difficult in wet weather or early winter conditions. The use of classic 4x2 rigid trucks is too unsafe here and, until the end of 2021, four articulated 6x6 40-ton trucks supplied the primary crusher, with a total transport capacity of

around 2 000 tonnes per shift with travel times of up to 30 minutes.

## Solutions sought

For the upcoming renewal of the Schützenstein conveyor chain, the Bernegger managers also sought talks with the customer advisors of Kiesel Austria and the extraction specialists within the Kiesel organisation in autumn 2021. Based on the application profiles of loading equipment and transport vehicles, the experts drew up precise needs analyses. From the very beginning, the focus was on optimisation potentials, such as higher utilisation, lower personnel expenses, and greater economic efficiency. After a thorough evaluation of the results and alternative offers, Spital am



**Satisfied at the on-site meeting (from left): Deputy Bernegger Plant Manager, Patrik Stangl, Kiesel Austria's Area Sales Manager, Mario Popatnik, Kiesel Large-scale Machine Expert, Walter Michels, and Kiesel Austria's Application Consultant, Markus Stäblein.**



*The bin, specially designed for hard stone use, offers a considerable volume even with large boulders.*

Pyhrn finally decided in favour of Kiesel's Hitachi and Bell system solution.

Two Hitachi Excavators were delivered in May 2021 and September 2022 respectively to replace the existing 70- and 50-ton excavators and at the beginning of 2022, two Bell B60E 4x4s replaced the original four 40-ton trucks that were in operation.

In Spital am Pyhrn, as in numerous European and Austrian operations, it was not only the large of 55-ton payload capacity of the 35m<sup>3</sup> body that tipped the scales. Once again, the articulated two-axle ADT with all-wheel drive impressed above all with its driving characteristics, which are specially tailored to exposed hard stone quarries: safe 4x4 traction on gradients, large safety reserves thanks to a sensitively dosed

retarder, adjustable speed limiters and high comfort owing to active suspensions and large spring travel on the front and rear axles.

And the two B60Es meet all expectations in terms of economy. With documented shift performances of 2 000 tonnes, two drivers now reliably achieve the daily target. After 13 months of operation, the average consumption was just under 20 litres per hour, which represents a significant cost saving compared to the former 6x6 fleet. It also makes a noticeable contribution to the reduction of the CO<sub>2</sub> balance that is being intensively pursued within the Bernegger Group.

In addition, Spital am Pyhrn expects lower tyre costs compared to the three-axle articulated trucks, which also

require more effort for road maintenance, especially in narrow hairpin bends.

#### **Good prospects**

In addition to the economic efficiency, the Bernegger managers also appreciate the versatility of the manoeuvrable sixty-ton trucks – for example, for reloading in the interim storage area, handling large boulders or in overburden and backfilling. The demands on the transport chain in Schützenstein are not diminishing as the planned extension of the mining area by eight to 10 hectares will add another 250 metres in height. With the excavation height then reaching around 1 200 metres, the demand for powerful all-season vehicles will certainly be even higher.

*Article and photos reproduced courtesy of Kiesel Austria.*

# KJ Services invests in Bell ADTs for limestone quarry



*For over 50 years, KJ Services has been working in the mining, quarrying, and construction sectors offering operated plant, machine hire, maintenance, transportation, and parts sales.*

Based in the Rhymney Valley, Gwent the company works for some of the biggest names in quarrying, including Hanson, and in recent years has added crushing and screening into its portfolio. Using the best and most advanced machinery on the market, the company prides itself on its fleet of over 100 machines which are offered on short and long-term hire contracts.

One of the company's contracts to extract and process limestone is at the Tytherington Quarry in Gloucestershire. When it was time to renew its fleet of articulated dump trucks (ADTs) in 2022, Bell Equipment was offered the opportunity to introduce its range of ADTs for the first time. After a comprehensive evaluation and demonstration, KJ Services bought four B45Es complete with maintenance contracts and Fleetm@tic® telematics. Three units were put to work at Tytherington, whilst one of the machines was delivered to the Machen Quarry in the Rhymney Valley, where KJ Services has another limestone quarry contract.

Impressed by the all-round productivity, safety features, and fuel economy, a further four units were ordered for delivery in 2023. The first of these has now joined its counterpart at the Machen Quarry hauling limestone and aggregates from the rock face to the stockpile area, where the majority of products are loaded onto rail wagons.

Jack Stephens, the Operations Manager at KJ Services, was formerly a fitter and keeps his hand in by operating plant and equipment. He knows a great piece of plant when he sees one and is delighted with the addition



of Bell ADTs to the fleet. He says: "The four machines in the initial order of Bell Dumpers have been in operation for 12 months now and they have all performed brilliantly. I cannot fault them. We have had no service issues and not a single breakdown. Although we have our own fitters, we took full service and maintenance contracts with Bell Equipment to ensure they are kept in tip-top shape. We have a four-year/8 000-hour warranty which offers us peace of mind and the Bell Service team really does provide exceptional service."

A service engineer from KJ Services attended a Bell service course to ensure the proper completion of all daily checks and another engineer is scheduled to attend the next course.

The machine operators, who have previously driven other ADT brands, have adapted to the control layout with no issues and report that the machines are very

comfortable to drive, have great visibility, and are generally very happy.

"It's important that our drivers like the machines as they are in them all day and have noticed improved fuel economy. The client pays for the fuel, we deliver this benefit back to them," adds Jack.

The 45-ton payload has proved to be ideal for the application; a fact supported by data from the advanced telematics system, Fleetm@tic®. In fact, once KJ Services realised the extent of the analytics available from Fleetm@tic® all the ADTs were upgraded to the premium version, which produces reports on materials moved at the end of every day. The material type, which is pre-programmed into the controls, is simply selected by the machine driver and automatically recorded. This was previously recorded manually on a tick sheet in the cab. This level of information





enables accurate billing and enables reliable stockpile survey reporting for the client.

Another feature that has been worth its weight in gold is the inclinometer, which is fitted as standard on Bell ADTs. This helps to reduce the risk of unsafe tipping, which has happened in the past,

and Jack is now demanding the same level of safety from all machinery suppliers. He said: "Fleetm@tic® is by far the best telematics system we have used. From the inclinometer to the statistical analysis of production and analysis of fuel consumption, it has really helped us understand and improve our efficiency. All our

safety and service alerts are updated in real-time, which helps us with planning, and we are now actively working with other suppliers to provide similar solutions."

Three more machines are now due for delivery to the Machen Quarry and KJ Services is already planning its future machinery requirements.

# Bell Care Packages keep AMC's B40E fleet in top condition



*A positive experience with a smaller branch of a well-known original earthmoving and haulage equipment supplier convinced a leading contractor in crushing and screening to buy many more of that brand's larger Articulated Dump Trucks (ADTs).*

African Mining & Crushing (AMC) was founded in 2009 by Warwick and Matthew Hughes and is headquartered in Bloemfontein, South Africa. "Our core business is drilling and blasting, crushing and screening, and loading and hauling of run-of-mine (ROM) material and aggregates," says Chrisjan Roodt, AMC's Procurement Manager. "We also design, manufacture and install infrastructure on mines and quarries."

"The bulk of the minerals we process are iron ore, manganese, coal, gold and kimberlite on the ROM side while on aggregates, we have experience with road and concrete stone, ballast and Rip-Rap."

"A while ago, we bought two older Bell B20D ADTs that we wanted to

use as vehicles for training purposes in our quarry near Bloemfontein as we put a premium on the proper training of our drivers and machine operators," Chrisjan continues.

"The ADTs had done between 14 000 to 15 000 hours each and we set about rebuilding them in our own workshops as we were confident that they'd still be delivering productive hours even as training vehicles, in years to come."

Chrisjan goes on to explain that they were pleasantly surprised by the service that they received from Bell Equipment's Bloemfontein branch. Even for these older model ADTs, replacement parts were readily available and were far more reasonably priced than what they had expected to pay for

original OEM parts.

"We have been involved in a crushing, screening, and materials handling role on a major opencast manganese mine in the Northern Cape for some years now. In 2022 we received more contract work from the mine to assist with overburden removal on a cut-back project which would expand their mining pit and another contract where we would remove topsoil to enlarge an existing waste dump," Chrisjan adds. "For these purposes, we realised immediately that we'd need more new haulage vehicles and approached, amongst other sales representatives, Wikus Kleynhans of Bell Equipment, for a quotation on six new Bell B40E ADTs."

"We've long considered Bell ADTs to be the market-leading ADT in





**AMC Operations Director, Zane Murray with AMC Procurement Manager, Chrisjan Roodt, and AMC Maintenance Manager, Piet Bester.**

Africa having been designed and built locally and with the correct number of Bell B40E ADTs available and a B-BBEE\* score that favoured us and us supporting local content, we placed an order for six B40E ADTs and took delivery in July 2022."

Following soon on these contracts was more work and AMC again turned to Bell Equipment for four more new Bell B40E ADTs which were delivered in December 2022.

On the site clearing topsoil for the expansion of the waste dump, the Bell ADTs are loaded using a 100-ton excavator and haul topsoil to a topsoil dump over some 2km in one direction, for 24 hours a day. At the crushing plant, other Bell B40E ADTs in the fleet haul crushed manganese, with specific gravities (SG) of between 1,8 and 2,2 due to varying loose bulk densities, over shorter distances to export stockpiles from where the manganese is fed into a rail loadout facility.

The new Bell B40E ADTs have been returning average fuel consumption of 14,2 litres an hour and this pleases their owners and clients alike. "We must commend the high levels of service we receive from Bernard Niemand and his team at Bell Equipment in Kuruman,"

Chrisjan says. "Their response times are great and attention to detail, especially on software updates, has been exceptional and we get the feeling that we're really being taken care of."

"We're acutely aware that underfoot conditions play a big part in both fuel consumption and tyre life and for this reason and as far as we're able to, we grade some of the haul roads that we mostly use. We also know that with Bell Equipment's even distribution of torque across all three axles of a Bell ADT tyre life is improved."

AMC's 10 new Bell B40E ADTs have all been bought with Bell Care Packages to 10 000 hours during which time Bell mechanics will do all servicing, preventative maintenance, and repair. Chrisjan notes that calculated in the long run over 10 000 hours, the cost of servicing each machine on this basis is very reasonable with the added guarantee of having mechanics from the supplier doing properly supervised work and using original replacement parts and service kits.

While AMC does not have a fixed policy on machine replacement, Chrisjan mentions that the current fleet of Bell B40E ADTs will almost

be a test case for the company: "We run some of our other equipment to 20 000 hours and plan to do that with the Bell B40E ADTs as well, a target we're confident of reaching given the solid design and build of the Bell B40E ADTs and especially with the level of extended care we're receiving under the Care Package.

"We'd like to standardise on one make of ADT and we're willing to walk the long road with a supplier such as Bell Equipment and its sales representative, a process which we believe will be good for both parties and especially for us in terms of the service we receive and buying replacement parts and service kits, which by the way we consider Bell Equipment to price very reasonably."



# 'Go anywhere, do anything' with Bell Equipment's Tracked Carrier



*Geared for the short haul and to provide access to difficult-to-reach remote areas, Bell Equipment introduced its TC7A and TC11A Tracked Carriers to the South African market at NAMPO 2023 in May, and the group's Australian dealer, Hitachi Construction Machinery Australia, has taken the units to customers down under.*

Bell Tracked Carriers leverage the company's experience as a global articulated dump truck specialist, especially with its B20E Low Ground Pressure truck. The units, fitted with premium components and Bell Equipment's proprietary Fleetm@tic® software, are powered by a 6,7 litre Cummins engine with Rexroth hydraulics, have a standard ROPS and FOPS certified cab, and the option of a dump bed or flatbed.

Bell Equipment Product Manager, Jeremiah Mokhomo, explains: "What sets the Bell Tracked Carriers apart is our unique six-roller system with compound walking beams that provide equal weight distribution when traversing obstacles. The result is a much smoother ride compared to the tracked machines that are currently available on the international market."

In keeping with the company's philosophy of 'strong reliable machines', Bell Tracked Carriers are made from thicker gauge steel, have rubbers in the bogie pivots for reduced greasing requirements and improved wear, and a ground-level service hatch and removable panels for ease of maintenance. Jeremiah adds: "Our design engineers listened to the market and designed accordingly, thinking of everything including cab accessibility and operator comfort."

He continues: "One of the reasons we first designed the Tracked Carrier was for pipeline projects in the USA where sites are in remote areas that are difficult to access. In the initial stage of a project, Bell



**The versatile Bell Tracked Carrier can be used to carry attachments such as hydroseeders.**

Tracked Carriers are the only machines that can access these areas and minimise environmental damage. With a flatbed configuration, they also are an ideal solution for delivering wooden mats to remote areas so that other machines can gain access or to carry attachments like personnel carriers and welding machines."

Markets for the Bell Tracked Carrier have since expanded with the machine's launch in Western Europe in 2022, and interest has been shown from Australia and South Africa. This has brought the versatility of the Tracked Carrier to the fore as new applications are discovered. The Tracked Carrier has been used successfully in the electrical utility and power

transmission industry where specialised attachments such as aerial platforms and auger drills have been fitted to the chassis to provide the perfect tool to maintain power lines in difficult terrain.

Tracked Carriers are a versatile addition to any general construction fleet as they can perform clean-up and earthmoving tasks, especially at the start of a project before infrastructure has been established and site conditions are usually adverse or after excessive rainfall.

They are likewise useful for residential and commercial developments such as apartment blocks and golf courses due to their ability to access challenging

sites, especially where the ground profile is undulated and covered by vegetation. "Ground conditions are often extremely soft once land clearing is done, and this is where the Bell Tracked Carrier comes into its own, particularly when there is rainfall," adds Jeremiah.

Due to their tight turning circle and ability to make progress in wet, muddy conditions, Tracked Carriers are well suited to dam wall construction. Furthermore, with multiple combinations available, the Bell Tracked Carrier can be tailored to meet most needs for tough municipal jobs and military installations.

"Landfill and ash pond management are other possible applications. With their low ground pressure, Tracked Carriers reduce the overall stress on landfill and ash pond infrastructure like plastic liners.

They also excel at landfill sites when the ground is too steep or too muddy for rubber-tyred vehicles, and ash ponds where the slurry material creates unfavourable underfoot conditions for other vehicles. In addition, opportunities exist for attachments such as hydroseeders."

Tracked Carriers offer exceptional versatility in sand mining applications, where they enable ongoing production during excessive rainfall and when high water tables minimise drainage and can also be used for tailing pond management when required or carrying attachments like personnel carriers and drills, etc.

"They are also usually the only option for wetlands and flood control work due to the extremely low ground pressure they exert. In the case of wetlands, which are environmentally sensitive, this helps



**Bell Equipment Product  
Manager, Jeremiah Mkhomo**

to minimise the disruption underfoot. The uses of the Tracked Carrier are many and varied and we look forward to gauging the reaction and interest from our South African and Australian markets," says Jeremiah.



# Adoption stage for autonomous Bell ADTs



Four years after commencing extensive testing, global articulated dump truck (ADT) specialist, Bell Equipment, reports that autonomous technology is now at the adoption stage with several customers around the world set to introduce autonomous Bell ADTs on their worksites early in 2024.

"We're extremely excited to have reached the adoption stage," says Bell Equipment Product Manager, Brad Castle. "Right now we are working closely with one of our European customers. They are a leading mobile plant supplier and earthmoving contractor that has a large existing fleet of Bell ADTs and is looking to install an autonomous system onto an ADT for a quarry application as part of a continuous drive to improve safety.

"At the same time, we have a mining customer in Australia who will be introducing five autonomous Bell ADTs. Both these customers have chosen xtonomy as their preferred guidance system."

Brad explains: "Providing autonomous-ready machines will be a part of our core business in the future, but in terms of sensing and guidance systems we decided that it makes more sense to partner with market leaders and innovators, as we do with drivetrain, hydraulics, and electronics technologies in our trucks. Bell currently has two approved service providers, xtonomy based in Europe and Pronto AI in the United States, both of which can work with Bell customers from anywhere in the world."

Xtonomy has had B30Es operating autonomously in the Alps since 2020. Pronto has established two test sites in the US, one at a Texas sand mine and another in Reno, Nevada, where three autonomously operated Bell B45Es and a Bell B50E are working in a quarry. In addition, a demo site was established in South America earlier this year and a second site will follow in 2024. "As part of our



**Bell Equipment's autonomous technology is now at the adoption stage with customers in the United Kingdom, South America, and Australia set to introduce autonomous Bell ADTs on their worksites.** (Photo courtesy of xtonomy/voestalpine)



**Bell currently has two approved service providers, xtonomy based in Europe and Pronto AI in the United States, both of which can work with Bell customers from anywhere in the world.** (Photo courtesy of Pronto AI)

strategy to enable interoperability between our ADTs and various control systems, so that customers have a choice of third-party suppliers, we have recently engaged with a third supplier," he

adds. The xtonomy and Pronto AI systems, although both autonomous, offer different benefits depending on a customer's needs. "Xtonomy has vast experience in the

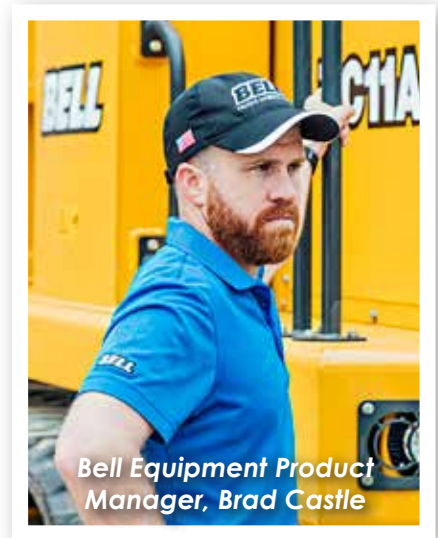
autonomous field with years of stable testing. It offers a complex radar-based system, which is less affected by inclement weather, but requires higher upfront costs and relies on the loading tool operator to manage the operation," says Brad.

However, the continuous site and object mapping, with minimal manual interaction, makes the system well-suited to multiple load and dump sites. In addition, the advanced in-cab display and supervision screens are easily integrated with other equipment on-site to provide a fully autonomous offering.

"Pronto AI, on the other hand, offers quick deployment with a much simpler, integrated system

that has subscription-based pricing with minimal upfront costs," says Brad. "Theirs is a camera system and the non-dynamic site and object detection require manual interactions. However, it is controlled by a user-friendly mobile app and routes can be changed easily by manually driving them. It is also possible to run this system over a private LTE network."

Concludes Brad: "The beauty of both systems is the flexibility they offer our customers. Bell provides a standard cab with no extra hardware taking up space to create an environment where manual, remote, or autonomous operation is interchangeable. This means that once an ADT has finished a contract on an autonomous site, the sensory and



control system can easily be removed and the truck either fitted with a new system for another site or be used in a manual operation."



# Zambia's Grizzly Mining achieves economy of scale with Bell B50Es



*The existence of emerald deposits in Zambia dates to the 1920s but it was only in the 1970s and 1980s, once prospecting and mining techniques had developed, that mining started taking place. Today the country is the world's second-largest producer of emeralds, a gemstone more than twenty times rarer than diamonds, and mining efficiently is just as important as it was when emerald mining first started.*

Located 48km southwest of Kitwe in the Lufwanyama Emerald Restricted Area is Grizzly Mining Limited, one of Zambia's leading emerald producers, founded in 1997 by the company's Chairman, Mr Abdoulaye Ndiaye. With humble beginnings as a small-scale artisanal mine, Grizzly Mining has grown into a large-scale fully mechanised mine involved in the large-scale mining, processing, grading, marketing, and supply of 'Grade A' emeralds.

The company is ramping up its production and has invested in 20 Bell B50E Articulated Dump Trucks (ADTs) to reduce mining costs by optimising economies of scale. "We are currently mining nine million tonnes of waste per year with plans to scale up to 15 million tonnes at the beginning of 2024 once the full fleet of B50E ADTs has arrived," says Grizzly Mining's Mine Manager, Langson Mukuma.

Maintaining the highest standards in the production and supply of its gems has been critical to the success of Grizzly Mining. The company's long relationship with Bell Equipment dates to when the mine was commissioned and has played a valuable role in achieving production targets ever since. At that time, four Bell B25Cs were used to haul the massive amounts of overburden that it takes to get to the emerald crystals, which are carefully removed by hand.

After about 16 000 hours of service, two of these machines were traded in on larger Bell B30Ds



before adding three Bell B35Ds, which were loaded by a fleet of Bell Excavators.

Today the Bell ADT fleet numbers 26, which includes three B35Ds, eight B40Ds purchased in 2017, five B40Es bought in 2018, and 10 new B50Es. According to Langson, Grizzly Mining has remained loyal to the Bell brand due to the unmatched reliability of its Bell D-series ADTs. The B35Ds and B40Ds have reached around 33 000 hours of production and are still going strong.

The first tranche of 10 B50Es was delivered in June 2022 and the oldest units have already clocked over 6 500 hours, which is hardly surprising when one considers that Grizzly Mining's operation runs 24 hours, seven days a week.

A further seven trucks were delivered in September and October 2023, and the remainder

into 2024. The fleet works three eight-hour shifts per day with the average haul cycle taking 24 minutes. Describing the underfoot conditions of the haul route, Langson says: "The ramps are only muddy in a few areas during the rainy season and gradients are very gentle averaging 11% with the steepest being 15% in a few sections. This makes the Bell ADTs well suited to our operation, especially when manoeuvring in tight spaces and in the rainy season when 6x6 is required."

The B50Es come standard with Bell Fleetm@tic<sup>®</sup> during the warranty period and Grizzly Mining can access basic productivity information such as the number of hours operated, tons per hour, and fuel consumption. So far, they have been impressed with the productivity of their B50Es. "They are very productive, mainly due to their larger size compared to the 40-tonners," says Langson. "The



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*According to Langson, Grizzly Mining has been impressed by the “ergonomics, high productivity, excellent fuel consumption, and powerful engine” of the B50Es, which are providing “decent mechanical availability of 87%”*

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B50Es each work an average of 560 hours per month, moving 800 tonnes per eight-hour shift and consuming an average of 31 litres per hour.” By comparison, the B40Ds return average fuel figures of 23,1 litres per hour, and 24,35 litres per hour for the B40Es.

According to Langson, Grizzly Mining has been impressed by the “ergonomics, high productivity, excellent fuel consumption, and powerful engine” of the B50Es, which are providing “decent mechanical availability of 87%”.

Grizzly Mining has also ordered four Kobelco SK850LC-8 Excavators to expand its loading tool fleet, the first of which was commissioned in early August 2023.

Chosen as an ideal to match the B50Es, Grizzly Mining has excavators from a few other OEMs in its fleet and thought it would be prudent to try Kobelco Excavators to compare their performance in both soft and hard rock.

Appreciating that ‘strong reliable machines’ need ‘strong reliable

support’, Grizzly Mining’s older machines are all serviced by their qualified in-house technicians, and the new Kobelco Excavators and B50Es will be serviced by Bell Zambia during the warranty period.

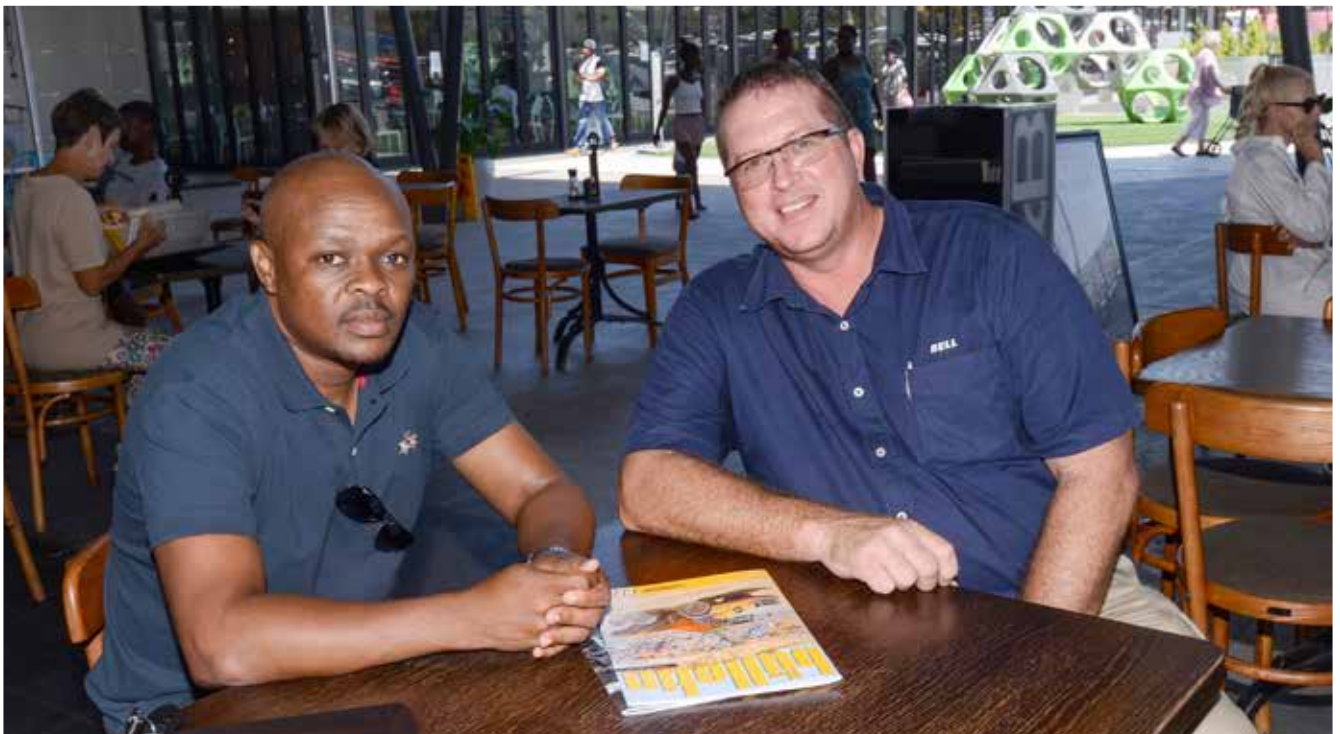
“The support we receive from Bell Zambia is very good,” says Langson. “Their technical team responds on time and, while there is still room for improvement, availability of parts is reasonable.”



# Mabona Civils enters into contract mining with two Bell B40Es



*When Andile Mbele was a young graduate working his way up through the ranks in a small municipality in the northern part of the Eastern Cape Province, he always thought that there had to be a more efficient way of delivering infrastructure projects to ease the lives of people living in rugged conditions in that province.*



**Owner of Mabona Civils & Plant, Andile Mbele, with Bell Equipment Sales Representative, Anthony Enslin.**

Andile and his single parent mother had early on realised the value of tertiary education and his double degrees in Quantity Surveying and Construction Management are proof of this. "During my studies I gained valuable work experience with Group 5 Housing and Projects, building low-cost housing and after 12 months I resigned, went back to school and later became a Project Manager in the Umzumvubu Local Municipality in Mount Ayliff, which is the area where I was born and grew up," Andile says. "When another more challenging opportunity opened up in the nearby Ntabankulu Local Municipality, I jumped at the

chance to learn even more about infrastructure development as I thought I could make a difference to people's lives."

Andile's dedication brought rewards as he got to gain more valuable experience working in community-based public works programmes and overseeing infrastructure projects funded by the Municipal Infrastructure Grant (MIG) scheme to help municipalities develop their infrastructure. "It was when I was involved in training SMMEs to develop local contractors in building trades and civil works that I had the inkling that should I be able to obtain a 4CE grading, I

could become a contractor as well. I thought starting a plant hire company would be a challenging but manageable business plan, except I didn't have money and certainly no plant to hire out," Andile says with a self-effacing grin.

But help was at hand and Andile's older brother, who is a doctor, assisted him financially and with a mutual friend signing surety, this enabled them to scrape together the money to buy a rebuilt grader.

"This happened in 2009 and my company Mabona Civils & Plant Hire came into being," he says. "I'm proud to say that 14 years

down the line, we're still using that grader."

The grader alone was not enough as Andile realised that to successfully tender on roads contracts, he'd also need a roller and a water truck, as those three machines form the backbone of any roads project. Andile subsequently attended an auction in Johannesburg where he met people who promised that on payment of a large deposit, which was in fact his entire savings, they would build him a new water truck in no time.

"I duly paid my money and these guys kept sending me pictures of water trucks to supposedly show the progress on my truck, but all I had in the end was the pictures as these unscrupulous people took my money and ran. An expensive but unforgettable lesson to learn."

Fast forward to 2012 and by now Andile and his company, Mabona Civils & Plant Hire, had grown beyond merely doing plant hire and had successfully tendered on several infrastructure projects. "I had, through hard work and saving more, built up the funds to buy both a roller and a water truck and completed an R8 million roads project in Umzimkulu along with other smaller projects in water reticulation, drilling boreholes, and doing bulk water line projects," he says. "I was also able to buy an excavator with funds from a house

I had sold, and successfully completing these projects lead my company to being upgraded to 6CE status, which meant we could tender on even larger projects."

Andile soon discovered that on many of the projects he had landed, he was the site manager, the HR manager, a driver, the supervisor and had to fulfill many other roles that did not necessarily stimulate him. A chance meeting with the mutual friend who years before had signed surety for his grader, led to them discussing contract mining in the Mpumalanga coalfields where the friend had become a successful contract miner.

"This was a completely new challenge to me and it really got me thinking that I could do plant hire in coal mining, running big trucks," he says. "I had made many new connections through networking and road running, a sport I love, and soon found two rebuilt Bell B40D Articulated Dump Trucks (ADTs) with relatively low hours that I bought for a contract on a coal mine where they actually wanted five such trucks."

Not wanting to put all his eggs into the proverbial single basket, Andile started looking around for other coal mining contracts. He found one on a large mine near Belfast, Mpumalanga, but here the demand was for new ADTs that would guarantee production.

"I once again researched the broader ADT market and again came back to Bell Equipment. The company struck me for notably designing and building an ADT fit for the South African mining environment and that in my book had to count for something," Andile says with a smile. "I obtained my own financing and ordered two new Bell B40E ADTs in November 2022 and they were delivered to our site near Belfast in February 2023."

His two new Bell B40E ADTs have slotted into a fleet of similar haulage vehicles, at times hauling overburden to a dump some 1,5km from the mining area and coal 2km to the run-of-mine tip.

The two new Bell B40E ADTs have been bought with extended warranties of 10 000 hours on their wet drivetrains along with a care package, which translates into Bell Equipment mechanics handling all servicing, maintenance, and repair during that time.

"Looking ahead, I believe this will be the core of my business plan in the future," Andile says. "The confidence that a proven model like the Bell B40E ADT provides, along with legendary technical backup from Bell Equipment, will surely prove successful with sustained uptime and positive production figures."



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