Southern West Virginia Community and Technical College gains significant cost savings through smarter training

Perth, Australia February 8, 2007
For Immediate Release

THE Director of a new US mining training academy seeking to help rebuild the operator skills base in one of America's most important coal producing regions says simulator training technology is the key to establishing higher educational and safety standards in the industry.

Carl Baisden, West Virginia Community and Technical Collegey

Carl Baisden, who has headed the Academy for Mine Training and Energy Technology (AMTET) at the Southern West Virginia Community and Technical College since September 2006, says the academy is working with the West Virginia Coal Association to address severe looming shortages in the availability of skilled equipment operators in the Appalachian coal fields. The AMTET program is also aimed at establishing and reinforcing higher safety standards in the industry.

Baisden says an industry study which predicted high attrition of the predominantly mature-age workforce in the Appalachian coal fields over the next decade also concluded there was a lack of new skilled miners emerging to replace them.

"The West Virginia Coal Association championed this (training academy) project and obtained a federal grant for improved training and potentially new programs to enhance safety," Baisden says.

"As a result of the numerous mine disasters over the last year, the urgency for increased skilled and better trained miners has increased and the issue has come to the forefront in both the public and industry's eyes.

"The local industry suffered a downturn earlier this decade and we basically had a generation of young people come up and leave this area. They went and did other tech jobs, manufacturing jobs and so forth, and that left a huge gap. We are very thin on mid-level managers and the attrition rate of the older guys is going to be very high over the next few years.

"Of course, production is now also expanding. There is an urgent need to train up new people, but there is also a need to ingrain better safety habits and standards. There is an opportunity to do that through this program.

"Due to advances in mining equipment technology and mining methods, we have determined that the new standard for educational training will be based highly upon simulator technology. The technology is proven in the military and aviation sectors."

Baisden says an Immersive Technologies Advanced Equipment training simulators have been used to train more than 40 students since late September 2006. “We plan to put 20 students per month through each of three custom formatted programs,” he says.

The Australian-developed AE Simulator technology is the most advanced in the world, according to Baisden, while the supplier’s “depth in engineering computer controlled simulators brings a technical training package to the end user that gives that user the ability to troubleshoot and repair systems and faults, which maintains the simulator at a higher level of availability for utilisation”.

“Immersive right now is at the top of the game in terms of advanced graphics and exact engineered controls of the equipment. It’s about as realistic as it gets,” Baisden says.

AMTET’s three simulator-based training programs are designed to:

- Train inexperienced operators to safely operate multi-million-dollar mining machines.
- Cross-train experienced miners to improve equipment efficiencies.
- Train new and mid-level managers to improve knowledge of safe operational conditions, to minimise equipment maintenance and increase production.

Baisden says there is already strong recognition and acceptance of the benefits of simulator training among mine owners.

“We know for instance we have reduced brake usage from our students who have taken a simulator class understanding more about the functions of braking, retarders, and using the haul truck in a better way,” he says.

“We also know that we have reduced fuel usage by 5-7% at sites through students understanding better the relationship between haul truck engine torque and load, and keeping RPMs at the appropriate level.

“The bottom line for the coal companies is that if they can improve these types of numbers – 4% on brakes, 5-7% on fuel and another 3-4% on a more efficient operator capable of quicker cycle times – the overall impact is very significant. That’s just on the production side.

“On the safety side, a student can be immersed in multiple conditions and real world scenarios with the highest level of safety obtained through a controlled environment. We can replicate several types of fires, which you can’t afford to do with a real piece of equipment, and put them through conditions such slick surfaces, very dusty surfaces, low visibility.

“Most of the time training takes place in the daytime, when you have certain types of staff on site, but as soon as we get students to where they are fairly comfortable in the equipment, what happens? They usually go to work on the night shift in the dark.

“The simulator enhances our focus time with the student. The more seat time the student has the better they will be. And the more opportunity they have to experience different scenarios – loading under different conditions with a variety of equipment, for example – the better prepared they are when it comes to jumping on the learning curve at an actual operation.

“We are getting them to focus on the big picture; we don’t just want tunnel-vision operators now. We want them to understand why everything connects to make the operation profitable and safe.”

About Immersive Technologies
Established in 1993, Immersive Technologies is the leading global provider of operator training simulators to the mining and earthmoving industries.

With more than 100 AE simulators utilising 300 Conversion Kit™ modules deployed in 18 countries around the world, the company's simulators are integral to the operations of many world-leading mining companies who use the technology to improve operational safety and efficiency while driving down maintenance costs.

Immersive Technologies' exclusive alliances with five leading Original Equipment Manufacturers (OEMs) ensures its extensive range of Advanced Equipment Simulators achieve a superior level of realism and accuracy through the use of exclusively licensed proprietary data and machine technical information from the OEM.

The company's expanding customer support base includes offices in Australia, the USA and South Africa.