

Review of operations: mining solutions

AEL is AECI's mining solutions arm and provides fragmentation products and services to customers in the mining, quarrying and construction sectors. In terms of size and technological capability, AEL is a leading player in the global explosives market and comprises 17 businesses, in four main business groups.

The businesses are as follows:

- AEL South Africa Narrow Reef: Gold, Platinum, Customer Operations, Industrial Explosives;
- AEL South Africa Surface and Massive: Coal, Quarry Services, Opencast, Industrial Nitrates;
- AEL Africa: Botswana, Central Africa, East Africa, West Africa, Zimbabwe, Africa Development;
- AEL International: South East Asia, Global Channel, DetNet.

Each business has a specific market focus and delivers consistently high levels of fragmentation solutions from a common business platform comprising Global Business Services, Central Operations, Research and Development, and Financial and Information Services.

Global Business Services concentrates on the service needs of all 17 AEL businesses; Central Operations includes the nitrates and initiating systems complexes at Modderfontein; and Research and Development is tasked with providing ongoing innovation in AEL's three key customer commitments of productivity, safety and security of supply.

AEL's strategy is to:

- grow internationally through partnerships with leading regional players, by building AEL's operations in South East Asia and by growing DetNet's electronic detonator range;
- grow the African business through improved asset productivity and footprint expansion;
- enhance the value of the South African businesses through improved safety, productivity and security of supply to customers; and
- continually improve the business platform's innovation and service levels.

Business environment

The global mining boom drove explosives volumes and shortages internationally, straining operations and dictating cost recoveries in the market. Ammonia shortages and increased input costs resulted in global ammonium nitrate prices reaching unprecedented levels. Inflationary pressures increased as commodity prices, fuel and financing costs escalated. The rand's weakness contributed to local inflation and to raw material price increases in rand terms, but enhanced rand metal prices and foreign earnings.

Power shortages in South Africa and new safety regulations impacted particularly on underground gold and platinum volumes, where advantage could not be gained from high metal prices. Greater infrastructural spend in the road and construction sectors buoyed quarrying activity in all countries where AEL operates.



Financial performance

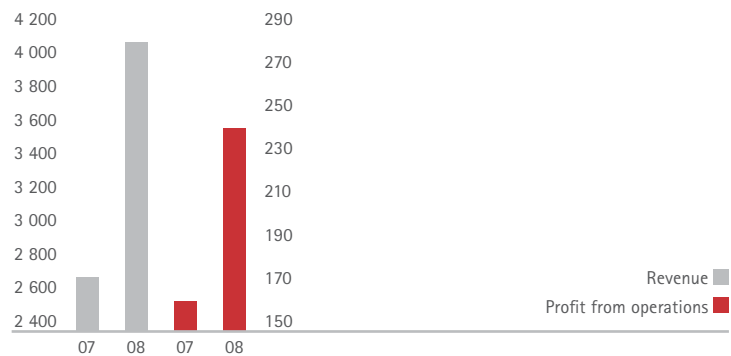
AEL recorded a significant improvement in performance owing to sound growth in its African and South African Surface and Massive businesses. The rand's weakness against major currencies boosted foreign earnings and the International business made significant progress in establishing its Indonesian hub and in securing coal contracts. Capital projects progressed satisfactorily.

Good growth in operating profit did not translate into a significant improvement in trading margin, with high ammonia costs having a diluting effect. Gold and platinum mining in South Africa's narrow reef sectors continued to be constrained by power shortages and safety-related issues with volumes declining again, notwithstanding an improved second half-year.

The DetNet joint venture delivered a strong performance in the year.

Operating profit increased by 52 per cent to R248 million owing to volume growth in specific mining sectors, coupled with the positive effect of a weaker rand on US\$-based earnings. Sales rose 51 per cent on the previous year to R4,1 billion in markets where volumes were slow at first, ammonia input costs soared and the rand had a marked influence.

Sales growth was underpinned by higher mining and quarrying activity in African and South African Surface and Massive operations where volumes in coal, surface platinum, copper and quarrying were pleasing. Performance was tempered by continued volume pressure in the narrow reef sectors where, notwithstanding a stronger finish and market share stability, volumes declined year-on-year.



Financial performance (Rm)

AEL's executive committee

¹ Liesel de Villiers (44)

Liesel is AEL's business director responsible for the Narrow Reef mining sector. She joined the company in 1987 as an engineer-in-training and gained experience in the areas of engineering, information technology, supply chain and strategic planning before joining the marketing function and taking up the position of business director in 2005. Liesel also has a BCom degree in economics.

² Wayne Du Chenne (44)

Wayne is director: business services, tasked with establishing and deploying a world class service portfolio across a range of AEL activities. Wayne joined AEL in 1993 as a technical representative and was appointed an explosives engineer in 1995. He played a key role in developing the value added blasting concept and served as project manager in this area. In 2003, he was appointed managing director: Central Africa, responsible for AEL's businesses in Zambia and the DRC. He took up his current position in 2008. He has completed an MBA degree.

³ Rafael Fernandes (37)

Rafael was appointed AEL's financial controller in 2007 and financial director in 2008. A registered chartered accountant, he joined the company in 1996 as financial manager of a wholly-owned subsidiary. He moved to AEL's head office as finance manager and, thereafter, became business accountant. He left in 2001, returning to AEL two years later and continued to provide financial and management support to sales and marketing business units.

⁴ Cyril Gamede (45)

Cyril joined AEL in 2002 as operations director. He has an MSc (Eng) degree, an MBA and a qualification in labour law. Cyril's background and experience are in engineering, projects, operations and industrial relations. He has also worked in the FMCG and infrastructure industries.

⁵ Piet Halliday (56)

Piet joined the company in 1980 after completing a PhD degree in the synthesis of high energy sensitisers for explosives. As director: research and technology, he has overall responsibility for the technical aspects of AEL's products worldwide.

⁶ Tobie Louw (46)

Managing director and a member of AECI's executive committee. See page 19.



⁷ Stuart Wade (51)

Stuart was appointed AEL's business director: Africa in 2000 and joined the company's executive committee in 2008. He started his career in the mining industry and moved to AEL in 1984. He worked in several senior positions, including managing an independent subsidiary, before taking on his current role. As the executive responsible for the Africa business, Stuart has a portfolio of chairmanships and is tasked with directing further strategic growth initiatives in Africa.

⁸ Colin Wilson (46)

Colin is AEL's business director: Surface and Massive. He joined the company in 1983 as an engineer-in-training and subsequently gained additional experience in explosives manufacture, research, surface and underground mining operations and business management. Colin was appointed to his current position, with responsibility for AEL's South African surface mining business, in 2007.

DetNet

⁹ Gys Landman (47)

He was appointed chief executive officer of DetNet in 2007. His qualifications include a PhD (Eng) and degrees in business management and economics. Prior to joining AEL in 1984, Gys lectured at the University of the Witwatersrand, and had gained extensive experience in production management in the mining industry.



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AEL's operating margins benefited from growth but were adversely affected by the ammonia price, the price of imported ammonium nitrate and growth-related higher fixed costs. At 6 per cent, the margin remained in line with the previous year. The efficiencies gained from the capital programme are expected to contribute to margin improvement going forward.

Manufacturing costs rose ahead of inflation, in line with volumes and the cost of running two manufacturing bases during the shocktube market conversion.

Net capital expenditure totalled R389 million, similar to 2007's level. Average working capital as a ratio of sales increased from 14,5 per cent in 2007 to 16,2 per cent, reflecting higher ammonium nitrate stock levels carried in anticipation of continued healthy sales growth. The increased value of ammonia-related stock also impacted on the working capital ratio.

Review of operations

2008 was both rewarding and challenging. Increased levels of market activity locally and abroad, an active investment portfolio (most notably in shocktube), and the execution of the largest ever explosives market conversion in recent times stretched resources. The impact and management of the highest ammonia price spike in 10 years also required careful consideration.

South Africa

AEL's South African activities delivered mixed results. The Surface and Massive business grew whilst the Narrow Reef business struggled to recover from the declining market and market share losses of 2007.

Surface and Massive

Surface and Massive's good volume growth was evident across all sectors with high demand from coal, quarrying, opencast platinum and diamonds. The supply of ammonium nitrate-related bulk products came under pressure as all sectors experienced volume peaks in the third quarter. Imported ammonium nitrate was needed to meet this demand, despite AEL's own ammonium nitrate complex operating at high efficiencies.

New environmentally-beneficial product innovations were introduced and brought productivity gains for customers, as recycled oils were incorporated into products.

Underground Narrow Reef

AEL's Narrow Reef business essentially stabilised its market share, after the losses of 2007. Total market volumes for narrow reef gold and platinum declined, however, putting increased pressure on the business. Cost containment drives and focused customer service neutralised some of the negative volume effects.

Narrow Reef's project to convert underground customers from capped fuse igniter cord initiating systems to the safer shocktube system is the world's biggest explosives market conversion programme in recent times. Ongoing success in challenging conditions, across a broad spectrum of customers, is proof of AEL's ability to develop and bring new technology advantages to the market and of its skills in effecting the change professionally, in strong partnership with customers.

The Initiating Systems Automated Plant (ISAP) project is AEL's R620 million investment in a modern, high volume, high quality shocktube plant considered to be the "factory of the future".

Early in 2008, new technology and components from ISAP were incorporated into AEL's highest volume narrow reef initiation product, the Reefmaster*. These improvements were introduced as part of the market conversion programme, with pleasing results. It is expected that all capacity for Reefmaster* will be installed in 2009. In 2008, the market conversion programme progressed well and, from September, monthly sales of Reefmaster* have exceeded those of capped fuse.

Africa

As expected, the company's Africa business experienced strong volume growth in the copper and cobalt sectors in Central Africa. East and West African volume growth was driven primarily by increased gold production. Escalation in mining activity in Africa again vindicated AEL's decision to invest in selected, expected growth nodes and to develop a competency to bring world class explosives services to customers in remote locations.

AEL Zambia plc commissioned its new cartridged explosives plant at Mufulira and the Lumwana mine began receiving explosives from its on-site AEL bulk plant. In the Democratic Republic of Congo, AEL's operations are servicing copper and cobalt customers throughout the Katanga Province. Increased demand in Ghana was met with the commissioning of a new bulk plant at Tarkwa, and another plant was shipped to supply a new contract in Egypt.

The Africa business developed new sourcing and logistics channels to ensure security of supply in short markets and to contain escalating logistics costs and complexity. Further footprint expansion is being planned for 2009, with the focus on improved efficiencies in existing African operations.

International

AEL's International activities (outside the African continent) made significant progress in both the South East Asian and Global Channel businesses.

In South East Asia AEL expanded its Indonesian operations and secured new coal contracts, resulting in further investments in on-site bulk plants and mobile manufacturing units. Logistics and product sourcing were developed further to service the region as new contracts are pursued.

AEL's Global Channel business utilises the company's excellent technology and product position in initiating and bulk explosives systems to enter into mutually beneficial channel partnerships with leading regional explosives players internationally. This has led to an increased global focus and organisational restructuring for the effective execution of this strategy. New partnerships were established in 2008 and investments in the new ISAP shocktube plant, the electronic detonator capability in DetNet, and the broader range of explosives technologies are all key enablers of the growth strategy.

Sustaining the trend set in 2007, DetNet delivered significant growth in operating profit, with increased volumes and further improvements made to established and new offerings in its product range.

Further product development in 2008 enhanced the DetNet-based electronics range's position as a world leader. AEL benefited significantly from the marketing of DetNet's products, bringing improved blasting and tunnelling solutions to customers in specific applications throughout Africa. Most noteworthy was the use of electronic detonators in civil works for the Gautrain, Gauteng's rapid rail link that will be operational in 2010.

DetNet's product performance and hi-tech advantages generated additional brand strength for AEL abroad, where the electronics range is offered as part of AEL's full service package.

Sales to third parties in Australia, Europe and South America were sound. In 2009, the focus will remain on sales growth and customer service, product improvements, capacity enhancement and further support of the internationalisation strategy.

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Projects, products and technology

AEL's major capital projects programme made satisfactory progress in 2008 and contributed to the company's strategic growth goals of increased product and service competitiveness, and selective international growth.

Capital expenditure of R40 million was invested in AEL's ammonium nitrate complexes at Modderfontein. The nitrates projects comprised safety-related statutory components and additional environmentally- and efficiency-focused initiatives relating to ammonia recoveries. A project for capacity expansion was progressed and, by year-end, was in the scoping stage.

At the initiating systems complex, there was a further R133 million investment in ISAP, bringing total spend to R408 million of an estimated R620 million. Phase 1 of the project, Bernice, aimed at producing 40 million new-age delay detonators per year. It is complete and is delivering to expectation.

The second phase, Charlize, is aimed at doubling Bernice's capacity and delivering the auto-assembly of Reefmaster* products. Good progress was made, with a number of high speed assembly machines dry commissioned. This phase of the project is slightly behind schedule mainly because certain technology developments took longer than expected. Since the ISAP project includes several such breakthrough developments that will deliver the targeted quality, volume and unit cost edge, longer development periods than originally anticipated are sometimes required. Several new technologies have been patented and will provide AEL with competitive advantages into the future, not only in South African and African markets but also in markets elsewhere being targeted by AEL.

Although the mechanical completion of ISAP is expected in 2010, auto-assembled Reefmaster* products will to be produced on the first assembly lines in the second quarter of 2009. During this same period, the robotic arm assembly cell for surface products will be commissioned on trial units.

Capital invested in remote operations in the South African, African and the International businesses focused on servicing existing and new contracted customers. Investments in Central and West Africa enabled AEL to continue building a leading African mining explosives position, with competitive regional service capabilities where growth potential is greatest. In Indonesia, investments in on-site plant increased as new coal contracts were secured. It is expected that expenditure in this region will continue in coming years, as will investments in international channel partnerships.

Economic empowerment

AECI and a consortium led by the Tiso Group have partnered in AEL since 2004. AEL is level 5 compliant in terms of BEE scoring and is targeting level 4 by enhancing its rating in the preferential procurement and employment equity arenas.

Safety, health and environment

As always, issues relating to safety, health and the environment received attention at all AEL operations and at customer sites.

Additional environmental accreditations were attained across the businesses.

New safety regulations increased pressure on South Africa's underground mining sectors. AEL reviewed how it can best contribute to its customers' efforts in achieving their objectives in this regard.

Outlook

The global economic crisis that followed the global mining boom brought a sudden change to 2008's volume trends. Customers in sectors such as copper, platinum and diamonds responded quickly to both the slowdown in global demand and to the drop in commodity prices. Quarrying volumes also eased while the mining and quarrying sector paused to evaluate expected short- and long-term demand. Gold and coal volume trends were steady.

The duration and extent of the global economic crisis and the commodities slump remain unclear. Overall, a decline is anticipated in explosives volumes, notwithstanding the start-up of some large new African and international contracts.

AEL has responded rapidly at customer sites where operations have been reduced. Nonetheless, the company will continue its growth and investment programmes and will continue to review these regularly. The programmes are concentrated on carefully selected sectors locally and abroad.

Operational efficiency initiatives will be sustained and cash flow should improve in 2009 as the benefits of investments and reductions in ammonium nitrate stock levels are realised.

* Trademark