

Directors' review of operations – SamQuarz



SamQuarz, which began production in 1955, is an opencast silica operation, situated 10 kilometres east of Delmas in Mpumalanga Province. It is the largest producer and supplier of silica to the glass and metallurgical industries in South Africa.

Operational and Financial review

The performance of SamQuarz was consistently good for the year ended 30 June 2009, despite a 3.92% reduction in the ROM tonnes produced. Tonnes sold increased by 5.09% and revenue by 16.36%.

During the period under review the world suffered a dramatic economic slowdown which had a significant effect on the mining and metals industries. SamQuarz is a key supplier of silica to the local ferro-metal industries which drastically reduced production during the period. Tonnage shortfalls in this market were to some extent made up by growth in the local construction industry during the first six months of the financial year. However, this momentum tailed off towards the end of the financial year with the construction sector becoming extremely competitive. Demand remained steady from the glass manufacturers.

SamQuarz concentrated on cost management and a comprehensive maintenance programme to ensure operational efficiency. Recoveries in sand products for the manufacture of glass improved as a result of tighter operational control throughout the plant.

SamQuarz – Key performance indicators

		FY09	FY08
Sales revenue	Rm	180.80	153.03
Production (ROM)	Mt	1.33	1.39
Sales	Mt	1.51	1.44
Profit before tax	Rm	47.7	46.7
Net profit after tax	Rm	34.7	33.1

Capital expenditure

Capital expenditure (capex) for the year amounted to R16.33 million, and was focused on increasing production capacity both in the open pit and the plant to ensure that customers' demands could be met. The breakdown of expenditure is as follows:

- 33.4% on mine development, mainly the opening up of the pit to improve access to the orebody;
- 12.9% on the replacement of moveable components of the primary crusher; and
- 10.2% on the replacement of one of the screens.

The balance was spent on generators and refurbishment of sand plant stockpile drainage systems.

The installation of an emergency generator was completed during the six months to 31 December 2008.

Capex of R22 million is scheduled for the 2010 financial year. This will be spent mainly on mine development, plant/equipment and the installation of an 11-kilovolt (kV) Power Factor correction system. The balance will be used for various replacement and maintenance requirements.

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Exploration programme

SamQuarz concluded an extensive exploration drilling programme in October 2008.

The programme culminated in the production of a SAMREC-compliant Reserve and Resource Statement that confirmed proven and probable reserves of 60.64 million tonnes of quartzite, an increase of 33% from 45.75 million tonnes, and 11.48 million tonnes of chert, a rise of 88% from 6.11 million tonnes, resulting in a life of mine in excess of 40 years. (See pages 37 and 38 of this report for further details.)

In order to mine the available reserves effectively, a comprehensive mine schedule has been developed as part of the mine's five-year plan and will be updated on an ongoing basis.

During the mine scheduling phase concerns were raised regarding the slope design used for the pit. Geotechnical data used for this design is currently under review to take into account newly exposed features present in the north pit as well as results obtained from the exploration drilling programme concluded.

Review of Products and Markets

Products

SamQuarz mines silica and chert breccias from the Delmas silica deposit. The silica (quartzite) is monomineralic and is both remarkably uniform and of high purity, greater than 98% silicon dioxide (SiO₂). It is an extremely hard, white to very pale grey, glassy rock composed of discrete grains cemented by silica. The main impurity is alumina (1% or

less). After metallurgical treatment the silica is suitable for the manufacture of flat and container glass. It may also be used in place of chert by the ferro-metals industry.

The chert is a hard, dark to light grey breccia composed entirely of angular chert fragments cemented by silica to form a massive chert rock. Overall, the silica content averages above 97%, with about 1.5% iron oxide (Fe₂O₃). The chert is suitable for use as a flux in the ferro-metals industry, and is also used as an aggregate in the construction and road-building industries.

The mineral deposit is mined and processed by SamQuarz to produce the following products:

- glass grade silica;
- metallurgical grade silica;
- metallurgical grade chert; and
- silica sand.

The glass grade silica is of unrivalled quality in South Africa, making SamQuarz the sole supplier to the country's main manufacturer of plate and clear glass. The chert is used as metallurgical process feed and aggregate because the aluminium content prevents it from being used for glass production.

Markets

The South African silica market comprises two key market segments, namely the glass and metallurgical sectors. Total annual consumption has been maintained at approximately 2.7 million tonnes.

SamQuarz is the largest producer of silica products in South Africa, meeting approximately 35% of the country's total annual consumption.

Product	Grade	Use/Application
Silica rock	-80mm +40mm -80mm +25mm -40mm +20mm -30mm +10mm	Metallurgical flux or silicon carrier
Silica chips	-20mm +6mm -10mm +3mm -3mm +1mm	Metallurgical flux or silicon carrier
Chert rock	-90mm +40mm -90mm +25mm -40mm +20mm	Metallurgical flux
Chert	-20mm	Building and construction
Silica sand	D30, D33, D36 D31	Foundry, refractory and other industrial applications Dry sand for fine milling
	D03 (flint sand) D13 (float glass sand) D23 (amber sand) D21, D30	These sands are used for the manufacture of flat glass, container glass and clear glass products Sand for bunkers and sandpits

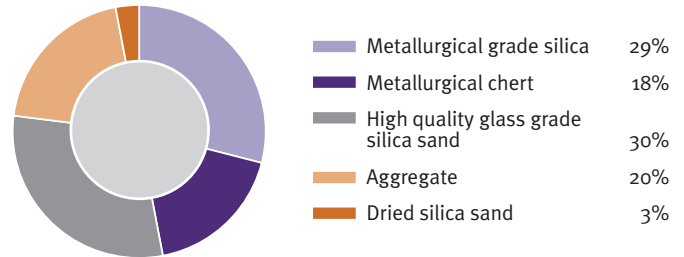
The company continues to rely on the local market and, in particular, a small number of key customers who accounted for close to 80% of the total tonnes sold during the year to June 2009. These customers include major companies in the glass and metallurgical industries. Approximately 47% of production, comprising metallurgical grade silica (29%) and metallurgical chert (18%) is supplied to the metallurgical sector.

Although the metallurgical process industries were affected by the economic slowdown and increased electricity tariffs during the year, they remained the primary consumer for SamQuarz's products.

There was a slight drop in demand from the glass industry during the past year. Glass sand sales constituted 30% of total sales compared with 38% achieved in 2008. Maintenance projects carried out by major customers together with the economic climate are the main reasons for the decrease.

Companies in the Gauteng and Mpumalanga provinces account for approximately 60% of the total silica consumption in South Africa and SamQuarz is ideally located to take advantage of these markets.

SamQuarz products



Health, Safety and Environment

During the past year, SamQuarz focused on reviewing its safety management system and mandatory codes of practice in order to continue to provide a safe and healthy working environment for all its employees.

SamQuarz was awarded the prestigious NOSA five-star rating after achieving 92.28% (2008: 82.99%) for its stringent health and safety



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programmes. The NOSA Five Star System Standard is implemented by thousands of organisations across the world, providing them with a rock-solid framework for managing occupational health and safety. Its grading audit focuses on the status of safety, health, environmental and quality (SHEQ) programmes and the company's disabling incident frequency rate (DIFR). NOSA's star ratings are based on established industry criteria.

The mine is working towards converting from the CMB150N system to the CMB253 NOSA system over the next two to three years. The proposed rating system will include environmental matters.

There were no fatalities in 2009 (2008: no fatalities). Whereas in 2008 the mine recorded a LTIFR of 0.00 per 200,000 hours worked, the LTIFR for 2009 was 0.25 as a result of one lost-time injury.

Employees continued to benefit from the training shift which forms part of the shift cycle. During these training sessions, employees undergo formal, safety-related training as well as operations-specific training.

The generation of alpha quartz dust continues to be major health risk at the mine as this dust can cause occupational lung diseases such as silicosis and occupational tuberculosis (TB). Another health risk is noise-induced hearing loss (NIHL) which can develop when employees are consistently exposed to high levels of noise (above 85 decibels).

SamQuarz has controls in place to reduce dust and dust emission surveys are conducted to monitor and mitigate this risk. The health of employees and contractors is closely monitored with monthly personal

dosimetry for exposure to silica dust being conducted. During 2009, there were no cases of TB, silicosis or NIHL reported. The services of a new occupational hygienist were sourced to refine procedures for measurements and verification as well as to establish the protocols to be followed when levels exceed threshold limits. In addition, a Baseline Occupational Health Risk Assessment was conducted at the mine.

SamQuarz conducts regular audits during the year to ensure compliance with the requirements of the mine's EMP and those of the DMR and the DWEA. The mine is currently reviewing and updating its approved EMP to ensure compliance with the requirements of the DMR. Documentation to facilitate the application for a water permit was completed during the year.

SamQuarz applied for the renewal of its railway siding permit from the Railway Safety Regulator during the period under review. The permit was issued and is valid until March 2012.

Employment

SamQuarz employed a total of 150 people on a full-time basis and an additional 111 contractors during the financial year ending June 2009. The mine continues to be committed to the training and development of its employees through programmes that aim to improve literacy levels and skills levels and is implementing career development plans in key disciplines.

Regular meetings are held with the National Union of Mineworkers (NUM) which represents 71% of the workforce. In terms of the three-year wage agreement concluded with NUM in April 2008, wages increased by 11.8% for the period from 1 March 2009 to 28 February 2010 (and will increase by the average CPIX for 2009 plus 1% or a minimum of 8% from 1 March 2010).

Mining right conversion approved

The mining right conversion for SamQuarz was approved and came into effect in April 2009. This right is valid for 30 years (the maximum number of years allowed under the Mineral and Petroleum Resources Development Act of 2002).

Outlook

It is anticipated that with economic conditions improving in the second half of 2009, demand from the glass manufacturing industry will be stable during the 2010 financial year.

Demand from the metallurgical sector is expected to improve over the next six months as the ferrochrome and ferromanganese smelters increase production to normal levels and the country moves out of the winter electricity tariff period.

Although there is still demand for material for construction purposes, this market has become extremely competitive. SamQuarz will continue to evaluate other opportunities as and when they arise.

