



# **Jamaica Bauxite Institute**



**Annual Report**  
**2012-2013**

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The ochre “J” represents the influence of the iron mineral goethite in Jamaican bauxite. The behaviour of this mineral during Bayer processing is one of our areas of research.

The reddish “B” represents the influence of the iron mineral haematite in our bauxite.

The white “I” represents alumina - the end product in Jamaica.

The silver globe indicates aluminium and our world-wide interest in the product.



## THE ORGANIZATION

AS OF APRIL 1, 2012, THE BOARD COMPRISED:

Mr. Gary Peart (Chairman)  
Mr. Winston Lawson Jnr. (Deputy Chairman)  
Mr. Parris A. Lyew-Ayee, C.D. (Executive Director)  
Mr. Seymour Stewart  
Mr. Hopeton McCatty  
Mr. Donovan Mitchell  
Mr. Gordon Brown  
Dr. Oral Rainford

### PRINCIPAL OFFICERS

Mr. Parris A. Lyew-Ayee, C.D., *Executive Director*  
Mr. Dennis Morrison, *Snr. Director - Special Projects*  
Dr. Phillip Baker, *Director - Economics & Projects*  
Mrs. Dianne Gordon, *Director - Bauxite Lands*  
Mr. Worrell Lyew-You, *Director - Process Monitoring & Services*  
Mr. Wilmon Wallen-Bryan, *Director - Analytical Services*

## ROLE & FUNCTION



The Jamaica Bauxite Institute was established by the Government of Jamaica in 1975 to, *inter alia*:

- (a) monitor and study the aluminium industry and provide technical advice on, and personnel for, the negotiations of various agreements;
- (b) undertake research and development activities on various problems related to the processing of Jamaican bauxite;
- (c) continually assess and ensure rationalization in the use of Jamaica's bauxite reserves and (bauxite) lands; and
- (d) monitor and make recommendations to ensure adequate pollution controls and other environmental programmes in the industry.

In addition, the Jamaica Bauxite Institute has diversified its laboratory to analyze not only bauxite, its products and by-products, but also a range of industrial and agricultural materials.

Further, in pursuance of its objectives of sharpening the knowledge of its staff, the JBI has, since 1980, produced two periodicals, *JBI Journal* and *JBI Quarterly*, and three books by Carlton E. Davis: *Jamaica in the World Aluminium Industry, Volume I, 1938-1973*; *Jamaica in the World Aluminium Industry, Volume II, 1974-1988: Bauxite Levy Negotiations and Jamaica in the World Aluminium Industry, Volume III, The Partnership and Joint Venture Agreements*.

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## MINISTER'S MESSAGE



During the year under review, significant headwinds assailed the global aluminium market of which Jamaica is an important part. These headwinds took the form of excess capacity, sub-par global macroeconomic growth as well as anxieties regarding the timing and extent of monetary policy recalibration by central banks in the developed countries.

In these circumstances, primary aluminium inventories on the London Metal Exchange (LME) ballooned above 5 million tonnes, in their wake depressing prices to worrying levels. As a consequence, global market players with bauxite and alumina operations in Jamaica, notably Alcoa and UC Rusal, have responded by bringing capacity into closer alignment with the prevailing sluggish market conditions. Against this background, we are still working for the resumption

of production at the Alpart and Kirkvine refineries by 2016.

In spite of the foregoing industry challenges, the Government of Jamaica, with support from the Jamaica Bauxite Institute (JBI), has been working diligently to orchestrate a viable energy solution that will materially improve the local industry's international competitiveness. Furthermore, there has been a concerted effort to cultivate new partnerships aimed at creating added value from our bauxite resources and its related red mud tailings.

The broad range of industry revival initiatives currently being pursued serves as a sound basis for this Government's bold vision of a future in which the Jamaican industry, under the JBI's astute stewardship, will rebound to once again become an anchor of development, investment and hope for the country as a whole and the communities affected by bauxite mining and processing in particular.

I wish to express my sincere appreciation to the Chairman, Board of Directors, Management and staff of the JBI for their hard work during the year, and challenge all to aspire to and achieve new goals for the year ahead.

**Philip Paulwell**  
Minister of Science, Technology, Energy and Mining

## CHAIRMAN'S MESSAGE



With the Global Aluminium and Local Bauxite/Alumina Industries still enveloped in a downturn, the JBI has faced many challenges – first and foremost in fulfilling its role as the industry's 'go-to' organization and working to keep the industry on an even keel.

The new Board, just recently installed, was forced to start off at the deep end but with members having the benefit of the long and wide experience of the Institute's management team, it was able to navigate through a somewhat harsh environment and steer the Institute through a difficult year.

That the JBI continues to provide valuable advice to government and services to both government and industry is by no small means attributable to the dedication and experience of its multifaceted staff – many of whom have been at the Institute for well over twenty years. I would therefore like to thank the management team and staff of the Institute for their hard work and support throughout the year.

The most noteworthy event of the past year was the finalization of negotiations with Nippon Light Metal for

the carrying out of research including the construction of US\$3m pilot plant to explore the commercial extraction of rare earth oxides from red mud. The groundbreaking ceremony for the complex was carried out last February.

We have long known of the presence in concentrated form of many valuable substances in Jamaican red mud and are extremely happy that an attempt is being made to advance their exploitation, thus adding another level of value to bauxite production in the Island. This new frontier underscores the importance of Research and Development to the industry and the Institute.

The other important areas of work conducted by the Institute in exploration and reserves allocation, land reclamation and restoration, environmental monitoring, economic analysis and community development in bauxite areas continue unabated.

While the global economy continues to struggle towards a vibrant and sustainable recovery, the world aluminium industry will also face challenges. Energy remains the burning issue and the Achilles' heel of the industry. We in Jamaica therefore have to redouble our efforts to transform the local industry through investment in a more efficient and competitive energy base, ultimately leading to the re-opening of shuttered facilities and additional investment in plant modernization and capacity expansion.

Challenges there are, but, I am confident that the local bauxite/alumina industry and, indeed, the Jamaica Bauxite Institute are up to the task.

Gary Peart  
Chairman



## EXECUTIVE DIRECTOR'S MESSAGE



We have successfully navigated another difficult year for the global aluminium industry and consequently, the local Bauxite/alumina sector by conserving scarce resources and focussing on the main priority areas while we await further advances towards the global economic recovery and the return of more favourable market conditions.

The Institute warmly received a new Board appointed in February 2012 and its Chairman, Gary Peart, CEO of Mayberry Investments Ltd. His strong private sector credentials and experience has been critical in steering the Institute under trying circumstances.

Of course, the success of the JBI largely rests on the effective day-to-day functioning of its specialized staff comprising professional, scientific, technical and managerial personnel as well as the usually unheralded but important support and ancillary staff.

Likewise, I wish to acknowledge the critical support of the wider industry community of government ministries/agencies and other industry stakeholders such as the bauxite/alumina companies and their workforce as well as the communities living adjacent to bauxite-related activities at the mines, plants and ports.

Although 2012 - 2013 was a slow year for the Bauxite Community Development Programme (BCDP) due to lack of funds, the BCDP project team continued its work monitoring and facilitating the implementation of projects that had carried over from Phase V and critically, the team continued to attend the meetings of the 16 Joint Bauxite Councils and to address the issues that required the JBI's attention. Funding for Phase VI of the BCDP was received in the latter part of the year.

Of some note, and a bright spark in an otherwise cloudy atmosphere, is the commencement of negotiations and their successful conclusion with Nippon Light Metal of Japan for the research into and potential exploitation of the island's enormous reserves of red mud residue from alumina refining for the extraction of valuable and scarce rare-earth oxides critical to modern industry and communications.

Globally, the aluminium industry continues to struggle with the problem of oversupply with inventories at historical highs and prices close to or at unsustainable levels. As a result the international companies, including those active in Jamaica, have seen profit levels fall even though demand has remained fairly robust in several important aluminium end-use sectors.

Further afield, the base of the industry – especially in respect of China – was shaken when Indonesia announced that it would cease the export of crude bauxite in 2014 concentrating instead on vertically integrating the industry.



As we move into the new fiscal year, the overall policy framework for the industry is set for implementation with the critical components focused on the following:

- Bauxite Reserves and Land Management,
- Proper and adequate management of the environment
- Restructuring of the Government-owned entities in the sector via divestment or other arrangements;
- The Energy Initiative aimed at restructuring its energy base to replace high-cost crude oil as the primary energy source for the industry; and ultimately,
- Modernization and Expansion of the Sector.

The JBI will continue to work unwaveringly to promote and advance the Jamaican Bauxite/Alumina Sector as, in spite of the current less than favourable global environment, it remains an essential foundation of the national economy whose long-term prospects still remain bright!

  
Parris A. Lyew-Ayee, C.D.



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## INDUSTRY REVIEW

### REVIVING THE BAUXITE AND ALUMINA INDUSTRY

This analysis examines the revival of the Jamaican bauxite and alumina industry by first discussing the global downturn that buffeted it. It identifies some lessons worth learning and presents the revival initiatives already undertaken. It concludes with a set of revival measures currently being considered and singles out the prospect of muted growth in major segments of the global economy as a likely non-trivial risk to the revival process.

### THE DOWNTURN IN THE GLOBAL INDUSTRY

Following from the Global Financial Crisis of 2008 there was an attendant fall in demand for aluminium-based products from major end use customers in the construction, automotive, aerospace and packaging industries. This forced the global bauxite, alumina and aluminium industry to adopt surgical cost reduction measures resulting in the retrenchment of uncompetitive capacity in some regions of the world. In particular, global primary aluminium production fell from 40.1 million metric tonnes in 2008 to 37.7 million metric tonnes in 2009. Of this, roughly 38% (or 0.9 million metric tonnes) originated in the US. A further 15% (or 0.4 million metric tonnes) occurred in Russia and an additional 10% (or 0.3 million metric tonnes) was slashed in Norway. Within this context, global metal grade alumina prices collapsed from a high of US\$435 per tonne in June 2008 to a low of US\$170 per tonne in January 2009. This effectively induced some aluminium smelters to opt to procure their alumina requirement on the spot market at these depressed prices instead of producing it in uncompetitive affiliated refineries. In these circumstances global metal grade alumina production slumped from 79 million metric tonnes in 2008 to 73.8 million metric tonnes in 2009, reflecting a 47% (or 2.4 million metric tonnes) reduction in Latin America and a 34% (or 1.8 million metric tonnes) capacity downsizing in Europe. With the

precipitous decline in alumina prices, some 67% of Jamaican alumina capacity was rendered revenue-negative from around the fourth quarter (Q4) of 2008. This was due largely to their positioning at the higher end of the international cash cost of production curve. As the multinational owners sought to bring global production into closer alignment with the prevailing diminished market demand, some 2.9 million metric tonnes (or roughly 66%) of Jamaican alumina capacity (notably at the Ewarton, Kirkvine and Alpart refineries) was curtailed, with an associated loss of highly skilled and well-paid jobs. Since then, global aluminium production has risen to 47.7 million tonnes in 2012, engendering an increase in global metal grade alumina production to 95 million tonnes. Within this context, the Ewarton refinery has resumed production and is inching towards its rated capacity of roughly 0.65 million metric tonnes per annum amid delicate discussions about capital retooling and a credible energy conversion programme.

### LESSONS WORTH LEARNING

An important lesson worth learning is that episodes of retrenchment (some more protracted than others) are inherent features of the global industry's business cycle. Also, it is to be recognised that being revenue-positive (which is a function of a refinery's positioning on the global industry cash cost of production curve) is a critical determinant of long-term survival. As such, it is absolutely necessary to continuously tweak the industry's business model so as to insulate it from the ravaging effects of these cyclical downturns. More specifically, there is the urgent need to embed disciplined cost structure management and efficient resource utilisation (including the efficiency of labour) into our business processes. It is therefore with this in mind that we now turn to Chart 1 below which is based on data from CRU Analysis. It shows that energy is a significant element of the alumina industry cost

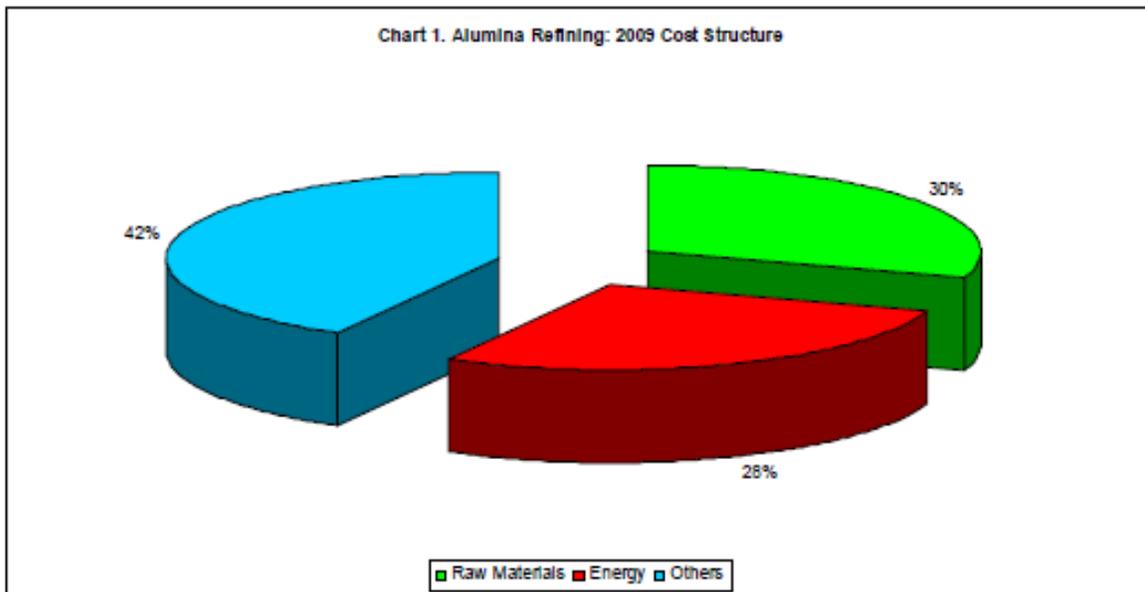


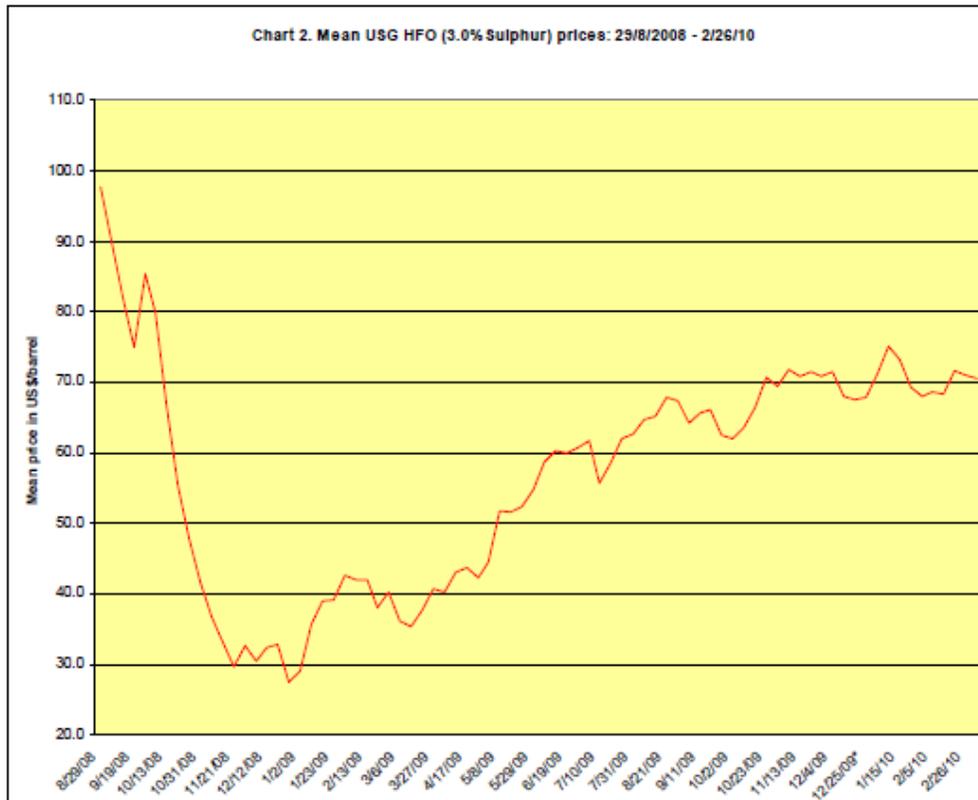
structure, accounting for 28% in 2009. This is further amplified by the fact that, under normal conditions, the Jamaican alumina industry consumes roughly 10 million barrels of oil equivalent (predominantly Heavy Fuel Oil) in a given year. Indeed, Chart 2 illustrates the level of price volatility of Heavy Fuel Oil (HFO) as it flirted with a peak of US\$100 per barrel in August 2008, plummeted to a trough of just under US\$30 in February 2009 before rebounding to about US\$70 in June 2010. Considering that on average the Jamaican industry consumes approximately 2 barrels of HFO in producing a metric tonne of alumina, it means that at prices that prevailed in June 2010 fuel accounted for just about US\$140 of the total cash cost of producing a tonne of alumina. With the alumina spot price in June 2010 being US\$320 per tonne, the cost of raw materials and other inputs would have had to have amounted to less than US\$180 per tonne for the Jamaican operations to have been revenue positive. In June

2010 it was determined by UC Rusal (majority owners of the Windalco operations) that the Ewarton refinery – after factoring in an adjustment to the fiscal regime structure – could become revenue positive in the existing market conditions. Accordingly, the plant was reopened on July 1, 2010. However, the Kirkvine and Alpart refineries have so far not been able to satisfy the revenue positive criterion and as a consequence remain closed.

By way of a postscript, it is necessary to mention that the HFO price has since sprung to US\$103 at the end of 2012, moderated somewhat towards US\$101 in the first Quarter of 2013 and is currently hovering around US\$94. Separately, at the end of May 2013 the alumina price tapered off at the level of US\$322 per tonne.

## REVIVING THE BAUXITE AND ALUMINA INDUSTRY





**REVIVAL INITIATIVES ALREADY UNDERTAKEN**

In the interest of enhancing the local industry's underlying economics, some key revival initiatives have already been undertaken. Essentially, they revolve around reviewing the fiscal regime structure, determining the quantity and quality of available bauxite reserves and diversifying the energy mix to include natural gas and possibly low sulphur coal. In this regard, the Ministry of Science, Technology, Energy and Mining (MSTEM) and the Jamaica Bauxite Institute (JBI) responded to clear evidence of the Ewarton refinery's unfavourable positioning on the global industry cash cost of production curve by adjusting the fiscal regime structure. This was in order to improve the prospect of resuming operations on a sustainable basis. In addition, the JBI is spearheading field exploration drilling and sample gathering and characterization in order to

assess the processability of available bauxite reserves in key mining leases. Also, a concerted effort has been made to engage all the relevant industry stakeholders regarding the capital investment required to retrofit their powerhouses to burn natural gas and possibly low sulphur coal.

**REVIVAL MEASURES BEING CONSIDERED**

Besides the revival initiatives already undertaken, several other measures are receiving urgent consideration. However, owing to the very sensitive nature of ongoing deliberations, it is prudent at this juncture to simply list them. They include:

- Inaugurate the processability testing component of a comprehensive research exercise aimed at cost effectively controlling the levels of goethite and phosphorus found in some of the remaining Jamaican bauxite reserves;



- Enhance the industry's capital intensity by boosting the capital stock at each plant in order to amplify worker productivity and the efficiency of resource utilisation;
- Collaborate with existing local players and prospective investors to plan brownfield expansion and new build capacity around the use of cheaper and more efficient fuels;
- Remove existing barriers to adopting the principles of sequential land use as a necessary safeguard against the sterilization of valuable bauxite reserves;
- Locate, protect and allocate a steady stream of bauxite reserves in economically mineable blocks in order to sustain production at targeted levels over a 30-year time horizon; and
- Explore the prospects of extracting value added products from bauxite tailings stored in mud holding ponds.

### A LIKELY NON-TRIVIAL RISK TO THE REVIVAL PROCESS

In our estimation there is the likelihood of muted growth becoming a feature of major segments of the global economy within the near to medium term. This poses a non-trivial risk to the revival process. Why? Because the global aluminium market as well as the Jamaican bauxite and alumina industry take their cue largely from the state of economic health of the US, the EU27 and Asia. Indeed, data from Eurostat show that Real GDP in the EU27 was -0.3 in 2012 and is poised to deliver a -0.1% outturn in 2013. Against this background, unemployment stood at 11.8% in 2012 and has since risen to 12.1% in 2013 where it is expected to remain for the rest of the calendar year. In contrast, US Real GDP rose to 2.2% in 2012 and is projected to level off at 1.9% in 2013 on the back of productivity gains in the oil and gas sector where cost effective shale gas production has begun to transmit some impetus to industrial activity. However, unemployment clung stubbornly to the level of 7.8% in 2012 but has since fallen to 7.6% at the end of May 2013. Lastly, the US property market continues to improve even though there is still a substantial inventory overhang to be

worked off. Meanwhile, the Japanese economy has shown early signs of renewal, having registered a rate of Real GDP growth of 2% in 2012 and is forecast to accelerate by a further 1.9% in 2013, aided by significant Bank of Japan monetary accommodation and an improvement in export price competitiveness due to a depreciating yen. These incipient benign developments have supported a stabilization of the unemployment rate at approximately 4.3% throughout 2012 and into 2013. Elsewhere in Asia, and especially China, the outlook is for relatively solid growth within the range of 6.5% - 7.5% in 2013, reflecting comparatively more subdued capital investment and property market activity as well as a less accommodative monetary stance on the part of the Chinese Central Bank.

Against this background, the global aluminium market, much like the global economy, must navigate several challenges. These include the slow grind of bringing inventory levels on the London Metal Exchange (LME) down to the 1.3 million metric tonnes recorded in September 2008 from the June 2013 level of roughly 5.2 million metric tonnes, where they have remained for the past two months. The LME 3-month aluminium price, meanwhile, has regained some of the ground lost in 2009 but at the June 2013 level of US\$1,923 per tonne is still below the over US\$3,000 per tonne registered on July 11, 2008.

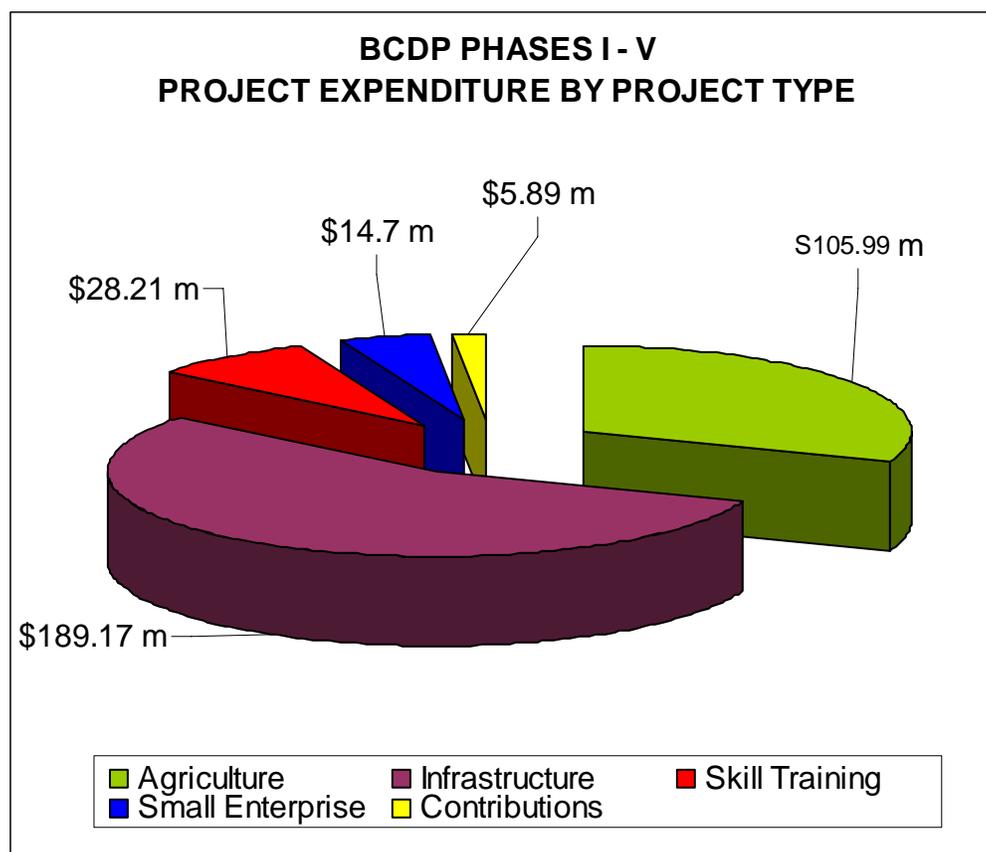
For these reasons and in the absence of any disruption due to acts of God or industrial unrest, the Jamaican bauxite and alumina industry is poised for a steady ramp up of production at the Ewarton plant to the rate of 650,000 tonnes per annum commencing in late 2013. However, the time horizon for a restart of the Alpart refinery could extend into the fourth quarter (Q4) of 2015 as the plant is being positioned within the UCRusal global production system as a feeder into two new Siberian aluminium smelters having a requirement for roughly 2.6 million tonnes of alumina per annum, some of which could be sourced from the Aughinish refinery located in Ireland. In the case of Kirkvine, the timeframe for a sustainable restart appears to be far more uncertain.



## BAUXITE COMMUNITY DEVELOPMENT PROGRAMME ANNUAL REVIEW

The BCDP programme has a primary goal of reinvesting some of the earnings from the bauxite/alumina industry in long-term sustainable projects in communities affected by bauxite mining and alumina operations with the ultimate aim of ensuring that there is "Life after Bauxite".

Since the programme's inception in 1996, it has expended \$343.9 million on the implementation of 220 projects mainly in the areas of agriculture, skills training, the upgrading of schools and community centres and road repairs.



### **BCDP APRIL 2012 - March 2013**

Over the last year (April 2012 to March 2013) the BCDP spent \$6.2 million on projects. Of this total \$1.5 million was spent on infrastructural projects, \$4.65 million was spent on agricultural projects, while \$14,000.00 was spent on skills training. These disbursements were for completion of and support to ongoing projects from Phase V.

Disbursements over the last year for projects in the various categories were as follows:

#### **Agriculture**

The BCDP provided \$0.5 million for completion of the Alpart Orchard Crop Project; and \$4.15 million towards JBI Plant Nursery expenses.

#### **Infrastructure**

The BCDP continued to support the development and maintenance of educational and community facilities and amenities as investments in the future and general well being of persons in bauxite communities with a provision of \$1.5 M to complete

the expansion of the Industrial Technology Department Project at the Winston Jones High School;

#### **Skills Training**

An amount of \$14,000.00 was paid to the Registrar of Cooperatives & Friendly Societies for basic business training, acquisition of the rule book and registration and processing fees for the Windalco/Schwallenburgh Joint Community Council Group.

During the period under review the JBI submitted to the Cabinet a request for the approval of \$330 million for Phase VI of the BCDP for the period 2012-2015. This included a request for the first tranche of \$130.00 million for the Year 2012. Cabinet approval was subsequently received. Parliamentary approval for withdrawal of the first tranche of \$130 million was received in early 2013, thus signaling commencement of year one of Phase VI of the programme.

The last quarter of the review period January-March 2013 was dedicated to the assessment and updating of over 23 projects in preparation for disbursement.



*Expansion of Greenhouse cluster initially established as an incubator project by the BCDP, USAID and Noranda at Burnt Ground, St. Ann.*



*BCDP funded Greenhouse at Plinlimon, Manchester.*



## HIGHLIGHTS OF ACTIVITIES

### BAUXITE LANDS

The Bauxite Lands Division has overall responsibility for ensuring that bauxite lands are prudently managed and protected as part of Jamaica's overall reserves management programme. The Division is also charged with facilitating the optimum utilization of bauxite lands, before, during and after mining, monitoring the use of these lands, ensuring that the legal obligations of the government and the bauxite companies in respect of land agreements are fulfilled and the maintenance of a comprehensive bauxite lands database.

### Processing of Applications for Sub-divisions on Bauxite Lands

The Jamaica Bauxite Institute maintained its efforts to protect bauxite lands from sterilization through its collaboration with NEPA and the Local Planning Authority in the development control process. During the period April 1, 2012 to March 31, 2013, the JBI received and processed 423 applications for sub-division of properties in the bauxite

parishes. These represented a 6 % increase in the number of applications received compared with the same period in 2011 and 2012 when 397 applications were received. Of the 423 applications, received 416 were recommended for approval, six recommended for refusal, while one required field identification (See Table 1).

The majority of applications received were as usual from the parish of Manchester followed by St. Elizabeth and St. Ann. The distribution by parish is shown on the table below.

### The Matter of Outstanding Exchange Titles

The JBI is working closely with the Ministry of Science, Technology, Energy and Mining to expedite the delivery of titles to persons who had entered into exchange agreements with the bauxite companies and to reduce the backlog of titles to be handed over to the vendors of mining lands for their resettlement lots. The period 2012-2013 saw an increase in the number of titles being processed and handed over to vendors by the bauxite companies (see Table 2).

PERIOD	TOTAL APPLICATIONS RECEIVED	TOTAL APPROVED	TOTAL REFUSED
2012-2013	423	416	6
2011-2012	397	387	8
2010-2011	481	466	11



PARISH	MANCHESTER	ST. ELIZABETH	ST. ANN	CLARENDON	TRELAWNY	TOTAL
Received	148	94	92	48	37	423
Approved	145	91	91	48	37	416
Refused	3	2	1	0	0	6

### Bauxite Land Reclamation and the use of Mined Out Lands

The role of the JBI in this regard is to work with the office of the Commissioner of Mines to ensure that land disturbed for bauxite mining is satisfactorily restored and certified, to facilitate the transfer of mined out lands from the bauxite companies to the Government of Jamaica and to encourage the optimal utilization of mined-out bauxite lands. The Institute's main objectives regarding reclamation and use of these lands include:

- Reducing the backlog of un-reclaimed lands
- Effectively increasing the area of mined-out lands under commercial agriculture
- Making more lands accessible to more small farmers
- Making mined-out lands available to meet the high demand for housing and other non-agricultural uses.
- Undertaking research to increase the agricultural productivity of mined-out lands

The JBI continues to work closely with the office of the Commissioner of Mines to ensure that land disturbed for bauxite mining is satisfactorily restored and certified in accordance with the country's Mining Regulations. Since the inception of mining in Jamaica in 1952 and up to December 2012, the bauxite mining companies disturbed a total pit area

of 8,891.16 hectares of land for mining. Over the same period, approximately 6434.70 hectares was certified as satisfactorily restored.

### Technology Transfer - Research and Experimentation on Mined-Out Lands

During 2012-2013, the JBI worked with farmers to assist them in applying the techniques and best practices which have been scientifically proven to produce good yields from the mined out lands. The current technology transfer programme is based on crop research carried out on mined out bauxite lands in previous years and whose principal finding was that under carefully managed conditions the yields of certain crops grown on mined-out lands can exceed the national average.

### JBI Plant Nursery

The JBI Plant Nursery continued to produce seedlings for farmers on bauxite lands, the general public, public entities involved in agricultural projects such as the Ebony Park Heart Academy, as well as private sector companies implementing agricultural projects. Approximately 500,000 seedlings were produced during the 2012-2013 period with Scotch Bonnet Peppers and West Indies Red Peppers accounting for over 75 percent of the output and income from sales.



*SEEDLING PRODUCTION AT THE JBI NURSERY*

### **Cartographic Output, Mapping and GIS**

The Cartographic Unit maintains a lands and reserves data base and is continually engaged in collating, inputting and analyzing bauxite property and reserves data. The Unit carries out land and reserves mapping relying heavily on its repository of digital maps, data tables and images as well as on IKONIS imagery and ARCGIS and CAD software. During the Financial Year 2012-2013, the Unit was largely involved in the conversion of data generated from the first phase of exploration surveys for St. Elizabeth.

### **PROCESS MONITORING & ENVIRONMENT**

With the partial shutdown of the bauxite/alumina industry in 2009, the JBI has been monitoring for special environmental concerns at each location – mainly requirements related to waste management and environmental permits. Operations remain suspended at Kirkvine Works in Manchester and Alpart in St. Elizabeth. The Process Monitoring and Services Divisions were involved in the monitoring of the environment, mothballing of equipment and the maintenance and preservation of the assets.

Over the last year, the usual programme of environmental monitoring continued at Ewarton Works, Jamalco and Noranda Bauxite Limited in Discovery Bay. Apart from refinery operations, this included the bauxite mining and shipping operations. The monitoring programme continued to focus on air quality, water quality and waste management

including red mud and was achieved through site visits, regular environmental reviews, audits and independent sampling. The JBI also continued to participate in monthly community council meetings and prepared environmental reports on the industry for NEPA.

### **Environmental Reviews**

There were scheduled environmental reviews meetings and site audits at all facilities. These served as verification checks to ascertain the level of progress made with regard to the .

Based on the ongoing programme of monitoring and reporting, the general areas of concern for the JBI include:

- dust nuisance complaints from communities near the different facilities
- gas emissions from stacks
- mud disposal and the potential impact of caustic soda losses to the environment
- waste oil management

### **Air Quality and Dust Nuisances**

The bauxite and alumina facilities under normal conditions are generally in compliance with the air quality standards and where there are breaches; the JBI has requested and received action plans. During the year there were no stack emissions from the alumina refineries at which production was suspended as the power plants and calcination equipment were idle. There were however, fugitive emissions from Alpart's and Kirkvine's mud disposal areas. The windblown dust from these sites affected communities and this resulted in complaints from the residents. These areas were identified as more significant environmental concerns when there is no activity and the contingency plans included the installation of sprinklers. Despite the installation of the sprinkler systems, there were emissions from the mud during the dry windy periods. Following meetings with the regulating agencies – NEPA, WRA and JBI, additional sprinklers were installed. Other dust suppression techniques used to minimize emissions at source include ploughing of the mud and the placement of grass on mud surface.



At the operating facilities, dust suppression has been achieved by the wetting of haul-roads in the mining areas and maintenance of dust control equipment at the bauxite drying and alumina plants.

### **Water Quality Impacts and Caustic Soda Losses**

The JBI conducts verification monitoring of water resources as part of its routine monitoring at sample points agreed to by the WRA. In cases of environmental incidents, the monitoring regime would be extended to include checks on other water quality monitoring points.

### **Waste Management**

Waste disposal has remained a significant aspect of the JBI's environmental management and monitoring programmes for the industry because of its potential impact on the environment. The waste includes liquids and solids which can be further classified as hazardous and non-hazardous. The focus is on waste minimization, recycle/reuse, standard procedures, appropriate disposal facilities as well as maximizing the use of the containment area. Examples of the improvements and achievements include combustion of used oil to win the energy values and vertical expansion of mud disposal areas to minimise land requirement. During the year, a permit was sought for the trans-boundary shipment of PCB waste from Jamaica.

### **ANALYTICAL SERVICES DIVISION**

The JBI continues to analyze shipment samples (XRF, bomb-digests) as a statutory requirement. Water samples were also analyzed for quality on for Rio Tinto (Alcan).

### **SPECIAL ACTIVITIES IN THE PERIOD**

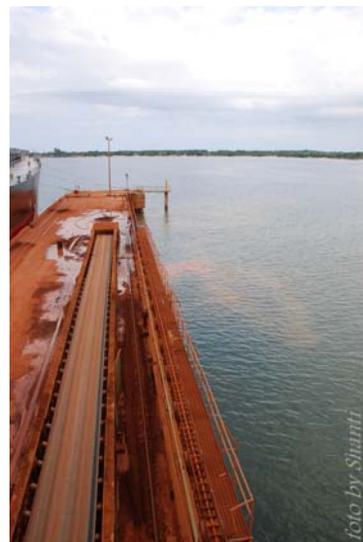
#### ***Regulations Development***

The applications for national air quality licences were processed and licences issued for the bauxite and alumina facilities. The JBI was represented on the NEPA committees processing the applications and

reviewing the water quality standards. There were no new environmental regulations in 2012.

### **Port Audits**

Port audits are undertaken every 3 to 5 years for the industry to update records held on the physical infrastructure of the ports as well as changes in operations. This process was once again initiated in 2012 and should be complete in 2013 for all locations.



*Port Rhodes, Discovery Bay, St. Ann*

### **Closure of Alcan Mud Lakes (excluded assets)**

The environmental permit for aspects of the closure of the Mount Rosser bauxite residue disposal site was received by Rio Tinto Alcan in August 2007. As progress towards restoration of the site is made, regular reviews are conducted and the issues addressed. The treatment plant was commissioned in 2009, and over the last year, there has been consistent discharge of treated water. The restoration of the site will fulfill part of Alcan's outstanding obligation to the Government of Jamaica from their sale to Glencore in 2001.

Work on the closed ponds at Kirkvine is now complete and the process of handover to the state will progress through 2013.



*Mount Rosser Mud Lake*

### **JBI Red Mud Pilot Plant**

Throughout 2012, discussions were undertaken with NEPA through their Development Assistance Centre (DAC) with respect to building a new pilot plant at the JBI for research on red mud for potential extraction of other elements. An environmental permit was sought and specific conditions indicated for the construction and operation of the new facility.

Preparations for the construction and operation of Pilot Plant for the study of the extraction of rare-

earth metals from red-mud took up the major portion of the year.

The JBI in collaboration with Nippon Light Metals Company Limited, a Japanese company broke ground for the construction of the Red Mud Research Pilot Plant on February 4, 2013 at a cost of US\$3.5million. The construction began on March 18, 2013.



*Red Mud Pilot Plant Ground Breaking, February 4, 2013 at the Jamaica Bauxite Institute. From left to right are: Hon. Phillip Paulwell, MP, Minister of Science, Technology, Energy & Mining; The Most Hon. Portia Simpson Miller, ON, MP, Prime Minister; His Excellency, Yasuo Takase, Ambassador of Japan to Jamaica; Mr. Parris Lyew-Ayee, CD, Executive Director, Jamaica Bauxite Institute and Mr. Mitsuru Ishihara, Director & Senior Executive Officer, Nippon Light Metals Co. Ltd.*



## MANAGEMENT REPORT

### ORGANIZATIONAL CHANGES

There were no significant organizational changes during the period.

### COMPENSATION PACKAGE OF SENIOR EXECUTIVES FOR FINANCIAL YEAR ENDED MARCH 31, 2013

POSITION	BASIC SALARY	FULLY MAINT. M/V	UPKEEP ALLOW.	OTHER EMOLUMENTS	TOTAL
EXEC. DIR	\$5,480,202.32	Yes	\$0.00	\$12,936.00	\$5,493,138.32
SNR. DIR S. P.	\$4,553,459.93	No	\$514,500.00	\$962,178.87	\$6,030,138.80
DIR. E & P	\$3,489,429.08	No	\$208,380.00	\$2,122,364.60	\$5,820,173.68
DIR. A. S.	\$3,489,429.08	No	\$514,500.00	\$2,010,301.21	\$6,014,230.29
DIR. P. M. S.	\$3,458,539.20	No	\$514,500.00	\$12,936.00	\$3,985,975.20
DIR. B/LANDS	\$3,526,051.08	No	\$514,500.00	\$12,936.00	\$4,053,487.08

### Notes

- (i) All persons except the Directors of Analytical Services and Econ. & Projects are part of a contributory pension scheme. Employer's contribution is made at the rate of 10.10%.
- (ii) The Directors of Econ. & Projects and Analytical Services received a gratuity of 25% of annual basic on the successful completion of their contracts.
- (iii) All persons benefited from a Health Insurance Scheme.
- (iv) All persons benefited from a lunch subsidy of \$700.00 per week.



## DIRECTORS' COMPENSATION

Position of Director	Fees (\$)	Motor Vehicle Upkeep/ Travelling or Value of Assignment of Motor Vehicle (\$)	Honoraria (\$)	All Other Compensation including Non- Cash Benefits as applicable (\$)	Total (\$)
CHAIRMAN	44,000.00	-	-	-	44,000.00
DEPUTY CHAIRMAN	116,501.00	-	-	-	116,501.00
DIRECTOR	36,000.00	-	-	-	36,000.00
DIRECTOR	46,500.00	58,750.00	-	-	105,250.00
DIRECTOR	36,500.00	54,950.00	-	-	91,450.00
DIRECTOR	26,000.00	60,760.00	-	-	86,760.00
DIRECTOR	10,000.00	-	-	-	10,000.00
SECRETARY	73,364.70	-	-	-	73,364.70
DIRECTOR	6,500.00	-	-	-	6,500.00

**Notes:**

Where a non-cash benefit is received (e.g. government housing), the value of that benefit shall be quantified and stated in the appropriate column above.



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# FINANCIAL STATEMENTS



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## ***Independent Auditors' Report***

To the Members of  
Jamaica Bauxite Institute Limited

### **Report on the Financial Statements**

We have audited the accompanying financial statements of Jamaica Bauxite Institute Limited, set out on pages 1 to 28, which comprise the statement of financial position as at 31 March 2013 and the statements of comprehensive income, changes in equity and cash flows for the year then ended, and a summary of significant accounting policies and other explanatory information.

### **Management's Responsibility for the Financial Statements**

Management is responsible for the preparation of financial statements that give a true and fair view in accordance with International Financial Reporting Standards and with the requirements of the Jamaican Companies Act, and for such internal control as management determines is necessary to enable the preparation of financial statements that are free from material misstatement, whether due to fraud or error.

### **Auditor's Responsibility**

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with International Standards on Auditing. Those standards require that we comply with ethical requirements and plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation of financial statements that give a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

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*PricewaterhouseCoopers, Scotiabank Centre, Duke Street, Box 372, Kingston, Jamaica*  
*T: (876) 922 6230, F: (876) 922 7581, [www.pwc.com/jm](http://www.pwc.com/jm)*



**Members of Jamaica Bauxite Institute Limited**  
**Independent Auditor's Report**  
**Page 2**

***Opinion***

In our opinion, the financial statements give a true and fair view of the financial position of Jamaica Bauxite Institute Limited as at 31 March 2013, and of its financial performance and cash flows for the year then ended in accordance with International Financial Reporting Standards and the requirements of the Jamaican Companies Act.

**Report on Other Legal and Regulatory Requirements**

As required by the Jamaican Companies Act, we have obtained all the information and explanations which, to the best of our knowledge and belief, were necessary for the purposes of our audit.

In our opinion, proper accounting records have been kept, so far as appears from our examination of those records, and the accompanying financial statements are in agreement therewith and give the information required by the Jamaican Companies Act, in the manner so required.

*PricewaterhouseCoopers*

Chartered Accountants  
17 September 2013  
Kingston, Jamaica

# Jamaica Bauxite Institute Limited

## Statement of Comprehensive Income

Year ended 31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

	Note	2013 \$'000	2012 \$'000
<b>Revenue</b>	5	166,114	161,921
Finance income		4,127	3,122
Other income	6	2,016	2,209
		<u>172,257</u>	<u>167,252</u>
Administrative expenses	7	(168,450)	(163,838)
<b>Surplus for the year before tax</b>		3,807	3,414
Taxation	9	6,143	(2,836)
<b>Surplus</b>		<u>9,950</u>	<u>578</u>
<b>Other comprehensive income</b>			
Net actuarial (loss)/gain on retirement benefit asset		(6,157)	12,807
Net actuarial gain on retirement benefit obligation		1,265	4,984
Net change in unrecognised asset		8,323	(7,398)
Total other comprehensive income		<u>3,431</u>	<u>10,393</u>
<b>Total comprehensive income for the year</b>		<u><u>13,381</u></u>	<u><u>10,971</u></u>

# Jamaica Bauxite Institute Limited

## Statement of Financial Position

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

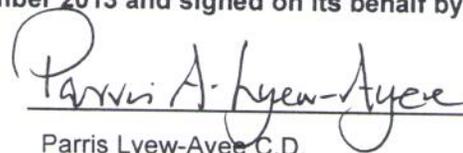
	Note	2013 \$'000	2012 \$'000
<b>Assets</b>			
<b>Non-current assets</b>			
Property, plant and equipment	10	34,221	8,821
Retirement benefit asset	11	66,262	67,034
Long term receivables	12	-	95
Deferred tax asset		2,889	-
		<u>103,372</u>	<u>75,950</u>
<b>Current Assets</b>			
Trade and other receivables	13	7,633	9,860
Current portion of long-term receivables		265	77
Taxation recoverable		7,808	6,814
Cash and cash equivalents	14	184,615	82,362
		<u>200,321</u>	<u>99,113</u>
<b>Total assets</b>		<u>303,693</u>	<u>175,063</u>
<b>Equity</b>			
Share capital	15	-	-
Actuarial reserve		(21,255)	(24,686)
Accumulated surplus		121,669	111,719
<b>Total equity</b>		<u>100,414</u>	<u>87,033</u>
<b>Liabilities</b>			
<b>Non-current liability</b>			
Retirement benefit obligation	11	45,141	41,874
Deferred tax liability	19	-	2,110
Project funds	16	5,246	5,246
		<u>50,387</u>	<u>49,230</u>
<b>Current Liabilities</b>			
Bank overdraft	14	3,009	5,606
Trade and other payables	17	146,161	29,472
Income tax payable		3,722	3,722
		<u>152,892</u>	<u>38,800</u>
Total liabilities		<u>203,279</u>	<u>88,030</u>
<b>Total equity and liabilities</b>		<u>303,693</u>	<u>175,063</u>

Approved for issue by the Board of Directors on 16 September 2013 and signed on its behalf by:



Winston Lawson

Director



Parris Lyew-Ayee C.D.

Director

# Jamaica Bauxite Institute Limited

## Statement of Changes in Equity

Year ended 31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

	Share Capital	Actuarial Reserve	Capital Reserve	Revaluation Reserve	Capital Grant	Accumulated Surplus	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
<b>Balance at 1 April 2011</b>	-	(35,079)	8,217	9,098	7,857	85,969	76,062
Total comprehensive income	-	10,393	-	-	-	578	10,971
Transfer to accumulated surplus	-	-	(8,217)	(9,098)	(7,857)	25,172	-
<b>Balance at 31 March 2012</b>	-	(24,686)	-	-	-	111,719	87,033
Total comprehensive income	-	3,431	-	-	-	9,950	13,381
<b>Balance at 31 March 2013</b>	-	(21,253)	-	-	-	121,669	100,414

# Jamaica Bauxite Institute Limited

## Statement of Cash Flows

Year ended 31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

	Note	2013 \$'000	2012 \$'000
<b>Cash Flows from Operating Activities</b>			
Surplus for the year		9,950	578
Adjusted for:			
Change in retirement benefit asset/obligation		8,614	5,908
Depreciation	10	5,217	3,228
Interest income		(4,127)	(3,122)
Exchange gain		(2)	(478)
Taxation	9	(6,143)	2,836
		<u>13,509</u>	<u>8,950</u>
Trade and other receivables		2,227	(5,204)
Trade and other payables		<u>116,689</u>	<u>(38,417)</u>
<b>Cash provided by/(used in) operations</b>		<u>132,425</u>	<u>(34,671)</u>
Income taxes paid		<u>(994)</u>	<u>(5,251)</u>
Net cash provided by/(used in) operating activities		<u>131,431</u>	<u>(39,922)</u>
<b>Cash flows from investing activities:</b>			
Purchase of property, plant and equipment	10	(30,617)	(3,643)
Long term receivables		(93)	109
Interest received		<u>4,127</u>	<u>3,122</u>
Net cash used in investing activities		<u>(26,583)</u>	<u>(412)</u>
Increase/(decrease) in cash and cash equivalents		104,848	(40,334)
Effect of exchange rate changes on cash and cash equivalents		2	478
Cash and cash equivalents at beginning of year		<u>76,756</u>	<u>116,612</u>
<b>Cash and Cash Equivalents at End of The Year</b>	14	<u>181,606</u>	<u>76,756</u>

# Jamaica Bauxite Institute Limited

## Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

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### 1. Identification and Principal Activities

Jamaica Bauxite Institute Limited (JBI) is a limited liability Company and was incorporated on October 1975 under the Laws of Jamaica.

The company is domiciled in Jamaica, with registered office and principal place of business located at Hope Gardens, Kingston 6, Jamaica, West Indies.

The Company's main activities are to advise the Government of Jamaica on matters pertaining to the Bauxite/Alumina Industry, local and international, and to undertake research and disseminate information related to the industry.

Up to and including the financial year 1980, the Company's main income was derived from the Jamaica National Investment Company Limited, later known as the National Investment Bank of Jamaica Limited (NIBJ) for services rendered. From 1981 up to the financial year ended 31 March 1988, the Company received payments from the Capital Development Fund through the National Investment Bank of Jamaica Limited for providing services, in addition to earnings from public and private entities.

From 1989 up to the financial year ended 31 March 1993, the Company received funds for services rendered from the Ministry responsible for mining and continued to earn funds from other entities.

For the financial years 1994 - 2006 the Company received payments for providing services from the Capital Development Fund through NIBJ. During the current financial year JBI was funded mainly by support from the Capital Development Fund, in addition to earnings from public and private entities.

### 2. Significant Accounting Policies

The principal accounting policies applied in the preparation of these financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

#### (a) Basis of preparation

These financial statements have been prepared in accordance with International Financial Reporting Standards (IFRS), and have been prepared under the historical cost convention.

The preparation of financial statements in conformity with IFRS requires the use of certain critical accounting estimates. It also requires management to exercise its judgement in the process of applying the Company's accounting policies. Although these estimates are based on management's best knowledge of current events and action, actual results could differ from those estimates. The areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements, are disclosed in Note 4.

# Jamaica Bauxite Institute Limited

Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

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## 2. Significant Accounting Policies (Continued)

### (a) Basis of preparation (continued)

#### ***Standards, interpretations and amendments to published standards effective in the current year***

Certain new interpretations and amendments to existing standards have been published that became effective during the current financial year. The Company has assessed the relevance of all such new standards, interpretations and amendments and has determined that none are relevant to the operations.

#### ***Standards, interpretations and amendments to published standards that are not yet effective***

At the date of authorisation of these financial statements, certain new standards, interpretations and amendments to existing standards have been issued which are mandatory for the Company's accounting periods beginning on or after 1 April 2012 or later periods, but were not effective at the year end date, and which the Company has not early adopted. The Company has assessed the relevance of all such new standards, interpretations and amendments, has determined that the following may be immediately relevant to its operations, and has concluded as follows:

**IFRS 9, 'Financial instruments'** (effective for annual periods beginning on or after 1 January 2015). The standard introduces new requirements for the classification, measurement and recognition of financial assets and financial liabilities, in order to ensure that relevant and useful information is presented to users of financial statements. It replaces the multiple classification and measurement models in IAS 39 with a single model that has only two classification categories: amortised cost and fair value. The determination of classification will be made at initial recognition, and depends on the entity's business model for managing its financial instruments and the contractual cash flow characteristics of the instrument. Management is assessing the timing of its adoption by the Company, and the potential impact of adoption.

**Amendments to IAS 1, 'Presentation of financial statements'** (effective for annual periods beginning on or after 1 July 2012). The amendment requires entities to separate items presented in Other Comprehensive Income (OCI) into two groups, based on whether or not they may be recycled to profit or loss in the future. Items that will not be recycled such as revaluation gains on property, plant and equipment will be presented separately from items that may be recycled in the future, such as deferred gains and losses on cash flow hedges. Entities that choose to present OCI items before tax will be required to show the amount of tax related to the two groups separately. The Company will adopt the amendments from 1 April 2013. The adoption of this amendment is not expected to have a significant impact on the Company's financial statements.

**IAS 19 (Revised 2011) 'Employee benefits'** (effective for annual periods beginning on or after 1 January 2013). The amendment makes significant changes to the recognition and measurement of defined benefit pension expense and termination benefits, and to the disclosures for all employee benefits. Management is currently assessing the impact of these changes on the Company's financial statements.

**IAS 32 (Amendment) - Financial instruments: Presentation** (effective for annual periods beginning on or after 1 January 2014). This amendment updates the application guidance in IAS 32, 'Financial instruments: Presentation', to clarify some of the requirements for offsetting financial assets and financial liabilities on the statement of financial position. The Company will apply the amendment from 1 January 2013 but it is not expected to have a significant impact on the financial statements.

# Jamaica Bauxite Institute Limited

## Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

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### 2. Significant Accounting Policies (Continued)

#### (b) Foreign currency translation

##### *Functional and presentation currency*

Items included in the financial statements are measured using the currency of the primary economic environment in which the entity operates (the functional currency). The financial statements are presented in Jamaican dollars, which is the functional and presentation currency.

##### *Transactions and balances*

Foreign currency transactions are accounted for at the exchange rates prevailing at the dates of the transactions. At year end, monetary assets and liabilities denominated in foreign currency are translated using the closing exchange rate. Exchange differences arising from the settlement of transactions at rates different from those at the dates of the transactions and unrealised foreign exchange differences on unsettled foreign currency monetary assets and liabilities are recognised in the statement of comprehensive income.

#### (c) Revenue recognition

Revenue comprises consultancy and research fees earned from projects. Revenue is recognised when consideration is received or receivable for the services in the ordinary course of the Company's activities.

Interest income is recorded on the accrual basis. Where collection of interest income is considered doubtful, interest income is thereafter recognised based on the rate of interest that is used to discount the future cash flows for the purpose of measuring the recoverable amount.

Gains and losses arising from trading in foreign currencies are recognised when realised and are shown net in the statement of comprehensive income.

#### (d) Income taxes

Taxation expense in the statement of comprehensive income comprises current and deferred tax charges.

Current tax charges are based on taxable surplus for the year, which differ from the surplus before tax reported because it excludes items that are taxable or deductible in other years, and items that are never taxable or deductible. The Company's liability for current tax is calculated at tax rates that have been enacted at the year end date.

Deferred tax is the tax expected to be paid or recovered on differences between the carrying amounts of assets and liabilities and the corresponding tax bases. Deferred income tax is provided in full, using the liability method, on temporary differences arising between the tax bases of assets and liabilities and their carrying amounts in the financial statements. Currently enacted tax rates are used in the determination of deferred income tax.

Deferred tax assets are recognised to the extent that it is probable that future taxable surplus will be available against which the temporary differences can be utilised.

Deferred tax is charged or credited in the statement of comprehensive income, except where it relates to items charged or credited to equity, in which case, deferred tax is also dealt with in the accumulated fund.

# Jamaica Bauxite Institute Limited

Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

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## 2. Significant Accounting Policies (Continued)

### (e) Property, plant and equipment

Property, plant and equipment are recorded at historical cost less accumulated depreciation. Depreciation is calculated on the straight line basis at such rates as will write off the carrying value of the assets over the period of their expected useful lives, which are as follows:

Freehold buildings	40 years
Research library stock and furniture, fixtures, equipment and fence improvement	5 – 10 years
Motor vehicles	5 years

Gains and losses on disposal of property, plant and equipment are determined by reference to their carrying amount and are taken into account in determining operating results.

Repairs and maintenance expenditure is charged to the statement of comprehensive income during the financial period in which it is incurred. The cost of major renovations is included in the carrying amount of the asset when it is probable that future economic benefits in excess of the originally assessed standard of performance of the existing asset will flow to the Company. Major renovations are depreciated over the remaining useful life of the related asset.

### (f) Impairment of non-current assets

Property, plant and equipment and other non-current assets are reviewed for impairment losses whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the carrying amount of the asset exceeds its recoverable amount, which is the greater of the asset's net selling price and the value in use. For the purpose of assessing impairment, assets are grouped at the lowest level for which there are separately identifiable cash flows.

# Jamaica Bauxite Institute Limited

Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

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## 2. Significant Accounting Policies (Continued)

### (g) Financial instruments

A financial instrument is any contract that gives rise to both a financial asset in one entity and a financial liability or equity in another entity.

The Company classifies financial assets as loans and receivables. Management determines the classification of its financial instruments at initial recognition and re-evaluates this designation at every reporting date.

Loans and receivables are non-derivative financial assets with fixed or determinable payments that are not quoted in an active market, other than those that the Company:

- (i) intends to sell immediately or in the short term, which are classified as held for trading, and those that the Company upon initial recognition designates as at fair value through profit or loss;
- (ii) upon initial recognition, designates as available-for-sale; or
- (iii) may not recover substantially other than because of credit deterioration.

Loans and receivables are initially recognised at fair value - which is the cash consideration to originate or purchase the loan including any transaction costs - and measured subsequently at amortised cost using the effective interest rate method.

At the date of the statement of financial position, the following was classified as loans and receivables: long term receivables, trade and other receivables and cash and cash equivalent.

### *Financial liabilities*

The Company's financial liabilities are initially measured at fair value, and are subsequently measured at amortised cost using the effective interest method. At the date of the statement of financial position, the following items were classified as financial liabilities: bank overdraft, trade and other payables and project funds.

### (h) Trade receivables

Trade receivables are carried at original invoice amount less provision made for impairment of these receivables. A provision for impairment of these receivables is established when there is objective evidence that the Company will not be able to collect all amounts due according to the original terms of receivables. The amount of the provision is the difference between the carrying amount and the recoverable amount, being the present value of expected cash flows, discounted at the market rate of interest for similar borrowers.

### (i) Cash and cash equivalents

Cash and cash equivalents includes cash in hand, deposits held at call with banks, other short-term highly liquid investments with original maturities of three months or less, net of bank overdrafts.

### (j) Project funds

Project funds are classified as financial liabilities at amortised cost. These are initially recognised at the proceeds received (which represents fair value) and subsequently stated at amortised cost.

### (k) Payables

Payables are stated at cost.

# Jamaica Bauxite Institute Limited

## Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

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### 2. Significant Accounting Policies (Continued)

#### (l) Share capital

Shares are classified as equity when there is no obligation to transfer cash or other assets. Incremental costs directly attributable to the issue of equity instruments are shown in equity as a deduction from proceeds, net of tax.

#### (m) Employee benefits

##### (i) Pension obligations

The Company participates in a multiemployer defined benefit pension plan which is open to all permanent employees and administered by Sagicor Life Jamaica Limited. The plan is generally determined by periodic actuarial calculations.

A defined benefit plan is a pension plan that is not a defined contribution plan. Typically, defined benefit plans define an amount of pension benefit that an employee will receive on retirement, usually dependent on one or more factors such as age, years of service and compensation

The asset or liability recognised in the statement of financial position in respect of defined benefit pension plans is the difference between the present value of the defined benefit obligation at the reporting date and the fair value of plan assets, together with adjustments for unrecognised actuarial gains or losses and past service costs. The defined benefit obligation is calculated annually by independent actuaries using the projected unit credit method. The present value of the defined benefit obligation is determined by discounting the estimated future cash outflows using interest rates of high-quality Government of Jamaica bonds that are denominated in the currency in which the benefits will be paid and that have terms to maturity approximating to the terms of the related pension liability.

Actuarial gains and losses arising from experience adjustments and changes in actuarial assumptions and amendments to the pension plan are charged or credited to other comprehensive income over the employees' expected average remaining working lives.

##### (ii) Termination obligations

Termination benefits are payable when employment is terminated by the company before the normal retirement date, or whenever an employee accepts voluntary redundancy in exchange for these benefits. The company recognises termination benefits when it is demonstrably committed to either: terminating the employment of current employees according to a detailed formal plan without possibility of withdrawal; or providing termination benefits as a result of an offer made to encourage voluntary redundancy. Benefits falling due more than 12 months after the reporting date are discounted to present value.

##### (iii) Other retirement benefit obligations

The company also provides medical benefits to qualifying employees upon retirement. The entitlement to these benefits is usually conditional on the employee remaining in service up to retirement age and the completion of a minimum service period. The expected costs of these benefits are accrued over the period of employment using the same accounting methodology as used for defined benefit pension plans. These obligations are valued annually by independent qualified actuaries.

# Jamaica Bauxite Institute Limited

Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

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## 3. Financial Risk Management

The Company's activities expose it to a variety of financial risks: credit risk, liquidity risk and market risk (including currency risk, fair value interest rate risk and cash flow interest rate risk). The Company's overall risk management programme focuses on the unpredictability of financial markets and seeks to minimise potential adverse effects on the Company's financial performance.

The Company's risk management policies are designed to identify and analyse these risks, to set appropriate risk limits and controls, and to monitor the risks and adherence to limits by means of reliable and up-to-date information systems. The Company regularly reviews its risk management policies and systems to reflect changes in markets, products and emerging best practice.

The Board of Directors is ultimately responsible for the establishment and oversight of the Company's risk management framework. The directors provide guidelines for overall risk management, as well as policies covering specific areas, such as foreign exchange risk, interest rate risk, credit risk, and investment of excess liquidity.

### (a) Credit risk

The Company takes on exposure to credit risk, which is the risk that its customers, clients or counterparties will cause a financial loss to the Company by failing to discharge their contractual obligations. Credit risk is an important risk for the Company's business; management therefore carefully manages its exposure to credit risk. Credit exposures arise principally from receivables from customers and investment activities. The Company structures the levels of credit risk it undertakes by placing limits on the amount of risk accepted in relation to a single counterparty or groups of related counterparties.

#### ***Credit review process***

Management performs ongoing analyses of the ability of customers and other counterparties to meet payment obligations.

### (i) Short term investments

The Company limits its exposure to credit risk by investing mainly in liquid securities, with counterparties that have high credit quality and Government of Jamaica securities. Accordingly, management does not expect any counterparty to fail to meet its obligations.

# Jamaica Bauxite Institute Limited

Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

## 3. Financial Risk Management (Continued)

### (a) Credit risk (continued)

#### (ii) Trade and other receivables

The Company's exposure to credit risk is influenced mainly by the individual characteristics of each customer. Customers that fail to meet the Company's benchmark creditworthiness may transact with the Company on a cash or prepayment basis.

Customer credit risk is monitored according to their credit characteristics such as whether it is an individual or Company, industry, and previous financial difficulties. Trade and other receivables relate mainly to institutional customers.

The Company establishes an allowance where appropriate, for impairment that represents its estimate of incurred losses in respect of trade and other receivables on an individual basis.

#### (iii) Cash and bank

Cash and bank transactions are limited to high credit quality financial institutions.

### Maximum exposure to credit risk

The Company's maximum exposure to credit risk equals the carrying value for the items on the statement of financial position that are subject to credit risk.

### *Aging analysis of trade receivables that are past due but not impaired*

Trade receivables that are less than three months past due are not considered impaired. As of 31 March 2013, trade receivables of \$405,000 (2012 – \$1,928,000) were past due but not impaired. These relate to a number of independent customers for whom there is no recent history of default. The ageing analysis of these trade receivables was as follows:

	2013 \$'000	2012 \$'000
More than 3 months but not more than 6 months	405	1,928

### *Aging analysis of trade receivables that are past due and impaired*

As of 31 March 2013, trade receivables of \$38,000 (2012 - \$83,000) were impaired. The amount of the provision was \$38,000 (2012 - \$83,000). The individually impaired receivables mainly relate to institutions who are in difficult economic situations.

	2013 \$'000	2012 \$'000
More than 1 year	38	83

# Jamaica Bauxite Institute Limited

Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

## 3. Financial Risk Management (Continued)

### (a) Credit risk (continued)

#### *Movement analysis of the provision for impairment of trade receivables*

	2013	2012
	\$'000	\$'000
Balance at beginning of year	83	213
Provision for impairment	38	83
Written off during the year	(83)	(213)
Balance at end of year	<u>38</u>	<u>83</u>

The creation and release of provision for impaired receivables have been included in other operating expenses in the statement of comprehensive income. Amounts charged to the provision account are generally written off when there is no expectation of recovering additional cash.

There are no financial assets other than those listed above that were individually impaired.

### (b) Liquidity risk

Liquidity risk is the risk that the Company is unable to meet its payment obligations associated with its financial liabilities when they fall due. Prudent liquidity risk management implies maintaining sufficient cash and short term investments, the availability of funding through an adequate amount of committed credit facilities and the ability to close out market positions.

#### **Liquidity risk management process**

The Company's liquidity management process as carried out by the Company and monitored by the accounting department, this includes:

- (i) Monitoring future cash flows and liquidity. This incorporates an assessment of expected cash flows and the relevant obligations.
- (ii) Maintaining a portfolio of highly marketable and diverse assets that can easily be liquidated as protection against any unforeseen interruption to cash flow;
- (iii) Optimising cash returns on investment;
- (iv) Managing the concentration and profile of liabilities.

The maturities of assets and liabilities and the ability to replace, at an acceptable cost, interest-bearing liabilities as they mature, are important factors in assessing the liquidity of the Company and its exposure to changes in interest rates and exchange rates.

# Jamaica Bauxite Institute Limited

## Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

### 3. Financial Risk Management (Continued)

#### (b) Liquidity risk (continued)

##### Financial liabilities cash flows

The table below summarises the maturity profile of the Company's financial liabilities at 31 March based on contractual undiscounted payments.

	Within 1 Month \$'000	1 to 3 Months \$'000	3 to 12 Months \$'000	1 to 2 Years \$'000	2 to 5 Years \$'000	Total \$'000
<b>As at 31 March 2013</b>						
Project funds	5,246	-	-	-	-	5,246
Trade and other payables	6,919	32,360	40,127	66,756	-	146,162
<b>Total financial liabilities (contractual maturity dates)</b>	<b>12,165</b>	<b>32,360</b>	<b>40,127</b>	<b>66,756</b>	<b>-</b>	<b>151,408</b>
<b>As at 31 March 2012:</b>						
Project funds	5,246	-	-	-	-	5,246
Trade and other payables	24,814	-	-	-	4,658	29,472
<b>Total financial liabilities (contractual maturity dates)</b>	<b>30,060</b>	<b>-</b>	<b>-</b>	<b>-</b>	<b>4,658</b>	<b>34,718</b>

Assets available to meet the liabilities include trade and other receivables, cash and bank and short term investments.

As explained in Note 14, the bank overdraft represented unrepresented cheques and would not result in an obligation, accordingly it has been excluded from the table above.

#### (c) Market risk

The Company takes on exposure to market risks, which is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. Market risks mainly arise from changes in foreign currency exchange rates and interest rates. Market risk exposures are measured using sensitivity analysis. There has been no change to the Company's exposure to market risks or the manner in which it manages and measures the risk.

##### (i) Currency risk

Currency risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in foreign exchange rates.

# Jamaica Bauxite Institute Limited

Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

## 3. Financial Risk Management (Continued)

### (c) Market risk (continued)

#### (i) Currency risk (continued)

The Company is exposed to foreign exchange risk with respect to the US dollar. Foreign exchange risk arises from short term investments and cash balances. There was no effect on reserves.

The Company manages this risk by holding foreign currency balances in a currency that is relatively strong compared to the Jamaican dollar.

The statement of financial position at 31 March 2013 includes foreign assets of approximately US\$13,000 (2012 – US\$307,000). This is comprised as follows:

	2013 US\$'000	2012 US\$'000
Cash	13	16
Short term investments	-	291
	13	307

#### **Foreign currency sensitivity**

The following table indicates the currency to which the Company had significant exposure on its monetary assets and liabilities and its forecast cash flows. The change in currency rate below represents management's assessment of the possible change in foreign exchange rates. The sensitivity analysis represents outstanding foreign currency denominated monetary items and adjusts their translation at the year end for a 1% revaluation and 10% devaluation in foreign currency rates. There is no impact on other comprehensive income.

Currency:	% Change in Currency Rate 2013	Effect on Profit before tax 2013 \$'000	% Change in Currency Rate 2012	Effect on Profit before tax 2012 \$'000
USD – Revaluation	1	(13)	1	(267)
USD – Devaluation	-10	127	1	267

# Jamaica Bauxite Institute Limited

Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

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## 3. Financial Risk Management (Continued)

### (c) Market risk (continued)

#### (ii) *Interest rate risk*

Interest rate risk is the risk that the value or future cash flows of a financial instrument will fluctuate because of changes in market interest rates. Floating rate instruments expose the Company to cash flow interest rate risk, whereas fixed interest rate instruments expose the Company to fair value interest rate risk.

The Company invests excess cash in short term investments and maintains interest-earning bank accounts with licensed financial institutions. Short term investments are invested for periods less than three months at fixed interest rates and are not affected by fluctuations in market interest rates up to the date of maturity.

#### *Interest rate sensitivity*

There is no effect on the Company's statement of comprehensive income as the Company does not have any floating rate non-trading financial assets and financial liabilities. Interest rate on long-term receivables are fixed for the life of the loans.

### (d) Capital management

The Company's capital management objectives are to ensure the Company's ability to continue as a going concern and to sustain development of the business. The Company's Board of Directors review the financial position of the Company at regular meetings.

The Company is not subject to any external imposed capital requirements.

## 4. Critical Accounting Judgements and Key Sources of Estimation Uncertainty

Judgements and estimates are continually evaluated and are based on historical experience and other factors, including expectations of future events that are believed to be reasonable under the circumstances.

### (a) Critical judgements in applying the Company's accounting policies

In the process of applying the Company's accounting policies, management has made no significant judgements on the amounts recognised in the financial statements.

### (b) Key sources of estimation uncertainty

In the process of applying the Company's accounting policies, management has made no significant estimates regarding the amounts recognised in the financial statements.

# Jamaica Bauxite Institute Limited

## Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

### 5. Revenue

	<b>2013</b>	<b>2012</b>
	<b>\$'000</b>	<b>\$'000</b>
Government grant – Capital development Fund	154,000	152,000
Consultancy and research fees – Government bodies	715	1,584
Other	11,399	8,337
	<u>166,114</u>	<u>161,921</u>

### 6. Other Income

	<b>2013</b>	<b>2012</b>
	<b>\$'000</b>	<b>\$'000</b>
Gain/(loss) on foreign exchange	881	(586)
Management fees	835	2,067
Rent	300	300
Other	-	428
	<u>2,016</u>	<u>2,209</u>

### 7. Expenses by Nature

Total administrative and other operating expenses:

	<b>2013</b>	<b>2012</b>
	<b>\$'000</b>	<b>\$'000</b>
Auditors' remuneration	1,000	577
Bad debt	-	83
Depreciation	5,219	3,228
Insurance	1,144	1,024
Legal and professional fees	578	513
Other expenses	10,652	7,476
Project expenses	190	1,758
Repairs and maintenance	4,830	10,742
Staff costs (Note 8)	136,349	130,803
Utilities	8,488	7,634
	<u>168,450</u>	<u>163,838</u>

# Jamaica Bauxite Institute Limited

## Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

### 8. Staff Costs

	<b>2013</b>	<b>2012</b>
	<b>\$'000</b>	<b>\$'000</b>
Salaries, wages and related expenses	97,753	96,530
Payroll taxes – employer's portion	6,624	6,287
Pension (Note 11)	10,492	7,315
Health insurance and other benefits (Note 11)	5,871	6,523
Travelling and subsistence	7,619	6,907
Staff training	42	95
Other	7,948	7,146
	<u>136,349</u>	<u>130,803</u>

### 9. Income Tax

Income tax based on surplus for the year, adjusted for tax purposes and computed at the tax rate of 25% (2012 – 33 1/3%) comprise:

	<b>2013</b>	<b>2012</b>
	<b>\$'000</b>	<b>\$'000</b>
Current tax	-	3,722
Deferred tax (Note 19)	(6,143)	(886)
Total	<u>(6,143)</u>	<u>2,836</u>

Reconciliation of theoretical tax charge to effective tax charge.

	<b>2013</b>	<b>2012</b>
	<b>\$'000</b>	<b>\$'000</b>
Surplus for the year	<u>3,807</u>	<u>3,414</u>
Tax calculated at a rate of 25% (2012 – 33 1/3%)	952	1,138
Adjusted for the effects of :		
Effect of change in tax rate from 33 1/3% to 25%	528	-
Expenses not deducted for tax purposes	35	1,672
Income not subject to tax	(7,654)	-
Net effect of other charges and allowances	(4)	26
	<u>(6,143)</u>	<u>2,836</u>

# Jamaica Bauxite Institute Limited

Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

## 10. Property, Plant and Equipment

	Buildings \$'000	Laboratory, Surveying and Drawing Equipment \$'000	Furniture, Fixtures and Office Equipment \$'000	Motor Vehicles \$'000	Computers \$'000	Total \$'000
At Cost -						
At 1 April 2011	1,140	13,359	4,960	9,358	4,809	33,626
Additions	16	388	3,179	60	-	3,643
31 March 2012	1,156	13,747	8,139	9,418	4,809	37,269
Addition	-	27,786	817	-	2,014	30,617
Transfers	-	65	(3,022)	2,734	388	165
At 31 March 2013	1,156	41,598	5,934	12,152	7,211	68,051
Depreciation -						
At 1 April 2011	323	11,165	3,172	6,821	3,739	25,220
Charge for the year	28	1,445	1,591	135	29	3,228
At 31 March 2012	351	12,610	4,763	6,956	3,768	28,448
Charge for the year	29	2,593	362	1,687	546	5,217
Transfers	-	(84)	(1,500)	1,270	479	165
At March 31, 2013	380	15,119	3,625	9,913	4,793	33,830
Net Book Value -						
31 March 2012	805	1,137	3,376	2,462	1,041	8,821
31 March 2013	776	26,479	2,309	2,239	2,418	34,221

# Jamaica Bauxite Institute Limited

## Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

### 11. Retirement Benefits Pension Scheme

The Company participates in a multiemployer defined benefit pension plan which is open to all permanent employees and administered by Sagicor Life Jamaica Limited.

	2013 \$'000	2012 \$'000
Assets/(liabilities) recognised in the statement of financial position –		
Retirement Benefit Asset - Pension plan	66,262	67,034
Retirement Benefit Obligation - Medical benefits	(45,141)	(41,874)
Amounts recognised in the profit or loss in the statement of comprehensive income		
Retirement Benefit Asset - Pension plan (Note 8)	10,492	7,315
Retirement Benefit Obligation - Medical benefits (Note 8)	5,871	6,523

#### *Pension plan benefits*

The plan is funded by employees' contributions at 5% of salary with the option to contribute an additional 5% and employer contribution as recommended by independent actuaries. Pension at normal retirement age is based on 2% of final 3 year average salary per year of pensionable service, plus any declared bonus pensions.

The defined benefit asset recognised in the statement of financial position was determined as follows:

	2013 \$'000	2012 \$'000
Fair value of plan assets	380,609	367,081
Present value of funded obligations	(314,347)	(288,950)
	66,262	78,131
Unrecognised assets	-	(11,097)
	66,262	67,034

# Jamaica Bauxite Institute Limited

Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

## 11. Retirement benefits (Continued)

### *Pension plan benefits (continued)*

The movement in the fair value of plan assets during the year was as follows:

	<b>2013</b> <b>\$'000</b>	<b>2012</b> <b>\$'000</b>
At beginning of year	367,081	334,779
Expected return on plan assets	23,436	27,437
Actuarial (loss)/gain on plan assets	(14,408)	711
Employer's contributions	6,831	7,100
Member's contributions	4,294	4,447
Benefits paid	(12,281)	(22,483)
Value of annuities purchased	5,656	15,090
At end of year	<u>380,609</u>	<u>367,081</u>

The movement in the present value of the defined benefit obligation during the year was as follows:

	<b>2013</b> <b>\$'000</b>	<b>2012</b> <b>\$'000</b>
At beginning of year	288,950	275,643
Current service cost	8,214	8,909
Interest cost	25,714	25,843
Member's contributions	4,294	4,447
Actuarial gains on obligations	(6,200)	(18,499)
Benefits paid	(12,281)	(22,483)
Value of annuities purchased	5,656	15,090
At end of year	<u>314,347</u>	<u>288,950</u>

The amounts recognised in the profit or loss in the statement of comprehensive income are as follows:

	<b>2013</b> <b>\$'000</b>	<b>2012</b> <b>\$'000</b>
Current service cost	8,214	8,909
Interest cost	25,714	25,843
Expected return on plan assets	(23,436)	(27,437)
Total included in staff costs (Note 8)	<u>10,492</u>	<u>7,315</u>

The charge of \$10,492,000 (2012 - \$7,315,000) was included in administrative expense in the profit or loss in the statement of comprehensive income.

# Jamaica Bauxite Institute Limited

Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

## 11. Retirement Benefits (Continued)

### *Pension plan benefits (continued)*

The actual gain on plan assets was \$13,957, 000 (2012 – \$33,061,000).

Expected contributions to the plan for the year ended 31 March 2014 amount to \$11,738,000.

The distribution of plan assets was as follows:

	<b>2013</b>	<b>2012</b>
	%	%
Quoted equities	28.0	32.0
Mortgage and real estate	16.0	14.0
Fixed income	27.0	30.0
Other	29.0	24.0
	<u>100.0</u>	<u>100.0</u>

The expected return on plan assets was determined by considering the expected returns available on the assets underlying the current investment policy. Expected yields on fixed interest investments are based on gross redemption yields as at the reporting date. Expected returns on equity and property investments reflect long-term real rates of return experienced in the respective markets.

The four-year trend for the surplus/(deficit) in the plan, as well as actuarial (gains)/losses is as follows:

	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
	<b>\$'000</b>	<b>\$'000</b>	<b>\$'000</b>	<b>\$'000</b>
Present value of obligation	314,347	288,950	275,643	245,742
Fair value of plan assets	<u>(380,609)</u>	<u>(367,081)</u>	<u>(334,779)</u>	<u>(290,016)</u>
	<u>(66,292)</u>	<u>(78,131)</u>	<u>(59,136)</u>	<u>(44,274)</u>
Experience adjustments -				
Defined benefit obligation	(13,493)	(12,470)	(1,970)	32,743
Fair value of plan assets	<u>14,408</u>	<u>(711)</u>	<u>(12,469)</u>	<u>(24,025)</u>

# Jamaica Bauxite Institute Limited

Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

## 11. Retirement Benefits (Continued)

### *Pension plan benefits (continued)*

#### *Medical benefits*

In addition to pension benefits, the company offers retirees medical benefits. Funds are not built up to cover the obligations under the medical benefit plan. The method of accounting and frequency of valuations are similar to those used for the pension plan. The liability recognised in the statement of financial position was determined as follows:

	<b>2013</b>	<b>2012</b>
	<b>\$'000</b>	<b>\$'000</b>
Present value of unfunded obligations	45,141	41,874
Unrecognised actuarial losses	-	-
	<u>45,141</u>	<u>41,874</u>

The movement in the present value of the defined benefit obligation during the year was as follows:

	<b>2013</b>	<b>2012</b>
	<b>\$'000</b>	<b>\$'000</b>
At beginning of year	41,874	43,657
Current service cost	1,728	1,982
Interest cost	4,143	4,541
Actuarial gains on obligations	(1,686)	(7,476)
Benefits paid	(918)	(830)
At end of year	<u>45,141</u>	<u>41,874</u>

For the medical scheme, a 1% increase/(decrease) in the assumed medical cost trend rate would result in an increase/(decrease) in the aggregate current service cost and interest cost of \$2,170,000/(\$1,390,000) and \$4,913,000/(\$3,526,000), and an increase/(decrease) in the defined benefit obligation of \$8,464,000/(\$6,763,000).

# Jamaica Bauxite Institute Limited

Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

## 11. Retirement Benefits (Continued)

### *Medical benefits (continued)*

The amounts recognised in the profit or loss in the statement of comprehensive income are as follows:

	<b>2013</b>	<b>2012</b>
	<b>\$'000</b>	<b>\$'000</b>
Current service cost	1,728	1,982
Interest cost	4,143	4,541
Total included in staff costs (Note 8)	<u>5,871</u>	<u>6,523</u>

The total charge of \$5,871,000 (2012 – \$6,523,000) was included in expenses in the profit or loss in the statement of comprehensive income.

	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>
	<b>\$'000</b>	<b>\$'000</b>	<b>\$'000</b>	<b>\$'000</b>
Present value of obligation	45,141	41,874	43,657	37,519
Experience adjustments	(5,253)	267	674	(757)

### *Principal actuarial assumptions used in valuing retirement benefits*

The principal actuarial assumptions used in valuing retirement benefits were as follows:

	<b>2013</b>	<b>2012</b>
Discount rate	10.0%	10.0%
Long term rate of inflation	5.5%	5.0%
Expected return on plan assets	9.0%	6.0%
Future salary increases	5.5%	5.0%
Future pension increases	3.0%	3.0%
Administrative fees	1.0%	1.0%
Investment fees (of pay)	1.0%	1.0%
Minimum funding rate	<u>0.25%</u>	<u>0.25%</u>

The average expected remaining service life of the employees is 21 and 14 years for males and females respectively (2012 - 21 and 14 years for males and females).

# Jamaica Bauxite Institute Limited

## Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

### 12. Long Term Receivables

	2013	2012
	\$'000	\$'000
Staff loans	-	172
Less: Current portion	-	(77)
	<u>-</u>	<u>95</u>

Staff loans represented amounts advanced for the purchase of motor vehicles and houses. Interest rates on loans ranged between six percent (6%) and ten percent (10%) per annum. Loans were repayable over one (1) to five (5) years and were secured by guarantee. Repayments made by staff were credited to a saving account to form the basis for future loans.

### 13. Trade and other Receivable

	2013	2012
	\$'000	\$'000
Trade	1,914	4,839
Less: provision for doubtful debts	(38)	(83)
	<u>1,876</u>	<u>4,756</u>
Project funds	265	76
Prepayment	2,425	2,863
Other	3,067	2,165
	<u>7,633</u>	<u>9,860</u>

All amounts are short-term and the carrying value is considered a reasonable approximation of fair value.

### 14. Cash and Cash Equivalents

	2013	2012
	\$'000	\$'000
Bank accounts	3,376	4,826
Short term investments	181,239	77,536
	<u>184,615</u>	<u>82,362</u>
Bank overdraft	(3,009)	(5,606)
	<u>181,606</u>	<u>76,756</u>

Cash is comprised mainly of amounts held in a current account which attracts interest rates of 0.35% to 2.40% (2012 – 0.25% to 2.40%) per annum.

The average effective rate on short term deposits was 5.0% (2012 – 5.50%) per annum and these deposits have an average maturity of 30 days (2012 – 32 days). Included in short-term deposits is an amount of \$104,682,000 (2011 - \$4,658,000) which represents funds held on behalf of the Bauxite Community Redevelopment (BCR) Project Fund.

# Jamaica Bauxite Institute Limited

## Notes to the Financial Statements

31 March 2013

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### 14. Cash and Cash Equivalents (Continued)

The bank overdraft represented unpresented cheques which were outstanding at the end of the financial year. The Company does not utilise overdraft facilities and as such overdraft in the current year did not attract interest.

### 15. Share Capital

	2013	2012
	\$'000	\$'000
Authorised, issued and fully paid		
200 ordinary shares	-	-

The issued shares have no nominal or par value.

### 16. Project Funds

This represents amounts held for Alpart modernisation, North Coast and May Projects.

### 17. Trade and Other Payables

	2013	2012
	\$'000	\$'000
Trade	1,532	1,597
Accruals	17,476	22,242
Bauxite Community Redevelopment Project Fund	121,723	4,658
Other	5,431	975
	<u>146,162</u>	<u>29,472</u>

### 18. Related Party Transactions

(a) Transactions with related parties -

	2013	2012
	\$	\$
Directors' emoluments		
Fees	569,826	142,290
Remuneration	6,179,147	6,187,216

(b) Key management compensation

	2013	2012
	\$'000	\$'000
Short-term employee benefit -		
Management remuneration	29,078	23,583
Other	2,312	2,072
	<u>31,390</u>	<u>25,655</u>
Pension	1,704	1,663
	<u>33,094</u>	<u>27,318</u>

# Jamaica Bauxite Institute Limited

## Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

### 19. Deferred Income Taxes

Deferred income taxes are calculated in full on all temporary differences under the liability method using an effective tax rate of 25% (2012 - 33 1/3%).

The movement on the deferred tax account is as follows:

	<b>2013</b>	<b>2012</b>
	<b>\$'000</b>	<b>\$'000</b>
(Liability)/asset at beginning of year	(2,110)	2,200
Credited to income statement (Note 9)	6,143	886
Other comprehensive income	(1,144)	(5,196)
Asset/(liability) at end of year	<u>2,889</u>	<u>(2,110)</u>

During the 2012/13 budget presentation, the Government of Jamaica announced a reduction in the corporate income tax rate for unregulated entities, from 33 1/3% to 25%, effective 1 January 2013. The change in the tax rate was signed into law on 28 December 2012 and as such has been applied in determining the amounts for deferred taxation in these financial statements.

	<b>2013</b>	<b>2012</b>
	<b>\$'000</b>	<b>\$'000</b>
Deferred income tax assets:		
Property, plant and equipment	2,243	2,522
Accrued gratuity	2,889	3,983
Tax losses	3,261	-
	<u>8,393</u>	<u>6,505</u>
Deferred income tax liability		
Unrealised foreign exchange gain	174	195
Interest receivable	49	33
Retirement benefits	5,281	8,387
	<u>5,504</u>	<u>8,615</u>
Net deferred tax asset/(liability)	<u>2,889</u>	<u>(2,110)</u>
Deferred tax assets to be recovered after more than one year	2,243	2,522
Deferred tax liabilities to be settled after more than one year	<u>5,281</u>	<u>8,387</u>

# Jamaica Bauxite Institute Limited

Notes to the Financial Statements

31 March 2013

(expressed in Jamaican dollars unless otherwise indicated)

## 19. Deferred Income Taxes (Continued)

Deferred income tax credited to the profit or loss in the statement of comprehensive income is as follows:

	2012	2011
	\$'000	\$'000
Deferred income tax assets:		
Property, plant and equipment	279	(1,886)
Accrued gratuity	1,094	(61)
Unused tax losses	(3,261)	3,426
Retirement benefit obligation	2,251	(1,898)
	<u>363</u>	<u>(419)</u>
Deferred income tax liabilities:		
Unrealised foreign exchange gain	(21)	(429)
Interest receivable	16	33
Retirement benefit asset	(6,501)	(71)
	<u>(6,506)</u>	<u>(467)</u>
Net deferred tax credited to the profit or loss in the statement of comprehensive income	<u>(6,143)</u>	<u>(886)</u>

Deferred income tax charged/(credited) to other comprehensive income is as follows:

	2013	2012
	\$'000	\$'000
Actuarial (loss)/gain on retirement benefit asset	(2,052)	6,403
Actuarial gain on retirement benefit obligation	422	2,492
Change in unrecognised asset	2,774	(3,699)
Net deferred tax charged to other comprehensive income	<u>1,144</u>	<u>5,196</u>