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**UPDATE ON THE ARGYLE INTERNATIONAL AIRPORT PROJECT**  
**AS AT 31<sup>ST</sup> DECEMBER 2009**

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This report gives an update on the progress of work on the Argyle International Airport project as at 31<sup>st</sup> December 2009. The project is managed by a wholly owned government company, the International Airport Development Company Limited (IADC), incorporated in 2004 under the Companies Act of 1994.

### **TECHNICAL WORKS**

#### *Progress of earthworks*

On August 13<sup>th</sup> 2008, earthworks began on the Airport project. Initially, the ***Chatoyer-Che Contingent*** (the name given to the workforce in the field doing the technical works) concentrated on clearing and grubbing the area, demolishing the vacant structures on the site, and removing the top soil. Over time, the ***Contingent*** progressed beyond these initial activities. Now, the three main activities of the earthworks are excavation, transportation and creation of embankments. In the first half of 2010, a culvert would also be built in the first kilometre of the runway to convey water under the runway.

Over the 16 months of earthworks (i.e. 13<sup>th</sup> August 2008 to 15<sup>th</sup> December 2009), the ***Contingent*** completed **29.14** percent of the total amount of earthworks to be done on the project

#### *Equipment*

To keep the project on schedule for completion by March 2012, IADC had to enlarge its fleet of equipment. During the year, IADC purchased, from its own resources, **25** pieces of heavy equipment to enhance its capacity for more work. The equipment purchased in 2009 were:

- 17 Articulated Trucks (4 from Kelectric & 13 from L. Jackson)
- 2 Motor Scrapers
- 2 Bulldozers (1 - D8 & 1 - D9)
- 1 Caterpillar 345 Excavator
- 1 Caterpillar 330 Excavator, with Hydraulic Hammer
- 1 Wagon Drill
- 1 Kobelco Crane

Within the first quarter of 2010, IADC intends to purchase another 11 pieces of heavy equipment to bolster its fleet from the 2<sup>nd</sup> quarter of 2010 onwards.

All of this is in addition to the **37** pieces of heavy earth moving equipment and a variety of spares—costing US\$10 million or EC\$27 million—made available to the project by the government of the Bolivarian Republic of Venezuela and **3** compactors purchased partly with the EC\$502,625 grant made to government, by the Government of Austria. Hence, at the close of work on 15<sup>th</sup> December, there were **63 pieces** of heavy equipment employed on site.

#### *Workshop and fuel station*

To reduce equipment downtime, a workshop was constructed on site to carry out repairs. A fuel station was also erected on site to eliminate long frequent trips into Kingstown, and to have a guaranteed supply of fuel on site. These two facilities will also be needed by the new airport, during its operational phase.

#### *Excavation and blasting*

It is estimated that 870,000 m<sup>3</sup> of the rocks to be excavated are hard and necessitate the use of explosives. Controlled blasting of this hard rock, in an area known as Fort Hill, at the Southern end of the runway, commenced on May 5th, 2009. An area at Johnson Hill has similar hard rock that requires blasting that would be done in 2010.

Blasting has been done weekly on Tuesdays, Wednesdays and Thursdays and will likely continue up to the end of June 2010. Since blasting started, about 41 percent of the hard rock material was fractured and excavated.

Before the blasting operations began, property condition surveys were carried out on all properties within a 400 metre radius of the blast site. Measures are also in place on the days when blasting takes place to inform residents of the activity and to evacuate those who are in proximity to the blasting site and need such assistance.

#### *Quality control of work*

A range of quality control tests are carried out daily by technicians at the Soil Laboratory established at Argyle and donated by the Bolivarian Republic of Venezuela. For example, from commencement of the work, to date, a total of 2,592 compaction tests have been carried out, equivalent to one test for every 120-150 m<sup>3</sup> of embankment compacted to maximum density. By comparison, the United States' Federal Aviation Administration (FAA) established a standard of one test for every 300m<sup>3</sup> of soil compacted. We have therefore adopted and implemented more strident standards than those internationally accepted.

#### *Wind studies*

The all important wind studies are continuing. So far, wind data have been collected and analysed for just over 3½ years, from 3 wind stations installed within the airport zone. These stations are located at the Northern and Southern ends of the runway, and close to the IADC's Offices, near the midpoint of the runway. IADC's associated meteorologists at the E.T. Joshua Airport and in Venezuela continue to receive and analyse these data.

According to the International Civil Aviation Organization (ICAO) Standards, the main runway of an airport must be positioned in such a way to guarantee at least 95 % of aircraft operations, without cross-winds exceeding:

*10 knots for runways that are less than 1,200 metres,*

*13 knots for runways between 1,500 – 1,200 metres,*

*20 knots for runways that are 1,500 metres or more,*

The runway at Argyle is 2,743 metres long and therefore falls within the last category of the ICAO's regulations.

The ICAO also requires that wind studies be carried out for at least 5 years. IADC began collecting wind data from March 2006. Since then, wind data has been collected up to the present. The results from the analysis of the data for 3½ years show that the predominant winds at Argyle are from the East-North-East and the East, with an average intensity that does not exceed 15 knots. This wind speed and direction represent an even smaller cross wind component that favours the take-off and landing operations of aircraft, given the 02/20 orientation of the Argyle airport runway.

In summary, therefore, the analysis of the data over 3½ years suggests that there is **no significant** crosswind component to necessitate the construction of a crosswind runway. However, as required by the ICAO, the wind studies at Argyle will be carried out for at least 5 years, and will therefore continue for the duration of the construction phase of the airport. Indeed, by March 2012, the proposed date for completion of the airport project, we would have collected 6 years of data. If, at any stage, the results of our wind studies suggest the need for a "cross-wind" runway for the smallest planes that are affected by high wind gusts, one will have to be designed and built in accordance with the earlier policy decision and in consideration of the safety of small aircraft that will be operating at the Argyle airport.

#### *Sea defences and identification of fuel tank location*

The design work for the sea defences were commissioned and completed during the year. A five member team of Cuban designers, surveyors and an environmental specialist visited the State from June to August 2009 to perform oceanographic studies at the North-eastern end of runway (020). Bathymetric surveys were carried out up to approximately 1km from the coast. These studies were done to inform the designs for the sea defences in that area of the coast as well as to suggest possible locations for the docking of a fuel tanker to supply the fuel farm that would be constructed for the operational phase of the airport.

#### *In-house design team*

An in-house team will be created to assist with the designs of new projects such as the designs for the fuel farm, concrete pavement for runway, river canal, navigational aids and lighting systems, and other projects that arise as a consequence of modifications to previous designs. This team will also comment on designs provided to IADC's hired consultants.

#### *New and improved access roads*

Work on the new 3-kilometre Argyle bypass road and bridge was completed to allow the road to be opened during the last quarter of the year. This means that the IADC can proceed with work on the 2<sup>nd</sup> kilometre of the runway, which at some stage would mean that sections of the old Argyle road would become permanently inaccessible to vehicular traffic.

The IADC has also done some improvement work on the Stubbs-Rawacou-Argyle road. Work on this road will continue during the first quarter of the year 2010, with a view to completing the entire road by the third quarter of the year. This road, which traverses the Southern end of the runway and terminates in Argyle near to the area known as Corner Rock

will provide enhanced access to persons living on the Eastern side of the airport, and to persons visiting the recreational pond at Rawacou. The road will be a dual carriage way.

#### *Airport Master Plan*

The government secured the assistance of Professor Federico Dovali of the Airport and Auxiliary Services (ASA) of Mexico to assist the IADC with the preparation of an Airport Master Plan. ASA is a government owned company that designs, builds and operates about 20 airports in Mexico. The support from ASA is part of the assistance promised by the government of Mexico to the government of St. Vincent and the Grenadines on the Argyle airport project.

Work on the Airport Master Plan began in June 2008 and was completed in December 2009. The Plan was handed over to IADC in December 2009. This Master Plan will guide the development of the Argyle International Airport over the next 30 years and beyond, in a way that meets the demands for growth in local industries, protection of the environment and demands for aviation services. The airport must also grow in a way that is consistent with broader national development plans.

As work progressed on the long-term oriented Master Plan, IADC seized the opportunity to modify the plan with which it had been working to incorporate some of the ideas contained in the Master Plan. One of the ideas taken from the Master Plan was to increase the area for the Terminal Building and Other Landside Facilities, to allow for a more spacious layout of these facilities to accommodate their growth in a more structured and cost-effective way over time.

The adoption of the Airport Master Plan will also mean that, at some stage, government would have to buy additional lands, to cater for the long term development of the airport. Clearly, from a national point of view, the decision to buy lands around the airport is a good decision for future growth and development, for at least two reasons. First, government can buy lands around the airport at a much cheaper price now than it would be able to do in the future. Secondly, if the government buys land around the airport today, it would be much better able to control the kind of developments that take place outside the airport fence.

Perhaps the clearest example of our failure to do proper long term planning of our airport infrastructure is the experience at E. T. Joshua Airport, where virtually no land was set aside for a cost-effective expansion of the facilities at E. T. Joshua.

The Airport Master Plan calls for the first stage construction of the facilities listed below:

#### *Runway*

- Length – 2743 metres (9,000 feet)
- Width – 45 metres (148 feet)
- Max longitudinal slope 1.25%
- Landing distance available – 2,623 metres
- Take off distance available – 2,743 metres

### *Aprons*

Three distinct interconnecting apron areas will be provided and are categorised as Commercial, General Aviation, and Cargo aprons.

**Commercial Apron:** This apron will serve international passengers, with one position for aircraft such as B 747-400 and B767-200, one position for small to medium aircraft such as B737-800, and six positions for DHC-8 or similar aircraft. The apron is 300m x130m. However, in the Airport Master Plan, space to the North of the apron has been earmarked for its future expansion.

**General Aviation Apron:** This is located south of the commercial apron, with dimension 290m x180m. Space has been earmarked for expansion westwards. In the first phase of construction, the general aviation apron will park a mixed fleet, such as executive jets (Global express, Challenger), DHC-6 twin otters and islanders. The general aviation apron will be flanked on the North by four (4) hangers, one of which is earmarked for a Fixed-Base Operation (FBO).

**Cargo Apron:** These facilities, located immediately South of the General aviation facilities, will allow for simultaneous parking of 2 aircraft of the size of the B727 jets.

### *Land Use Plan around the Airport*

As we worked on the Airport Master Plan, we have been working also on a Land Use Plan for the airport zone. IADC has assembled a team comprising in-house staff, and representatives from various government departments and civic organisations to discuss the issue of the proper zoning and use of the lands around the Argyle airport. Work on this plan will continue into 2010, with this diverse team of people, drawing on their own skills and experience, as well as from studies of land use planning at regional and international airports.

## **TERMINAL BUILDING AND OTHER LANDSIDE FACILITIES**

During the year, IADC finalised its design objectives for the Terminal Building and Other Landside Facilities and awarded the contract for the design and supervision to a Taiwanese firm, CECI Engineering Consultants Inc. (CECI). This contract is valued at US\$3,913,038 million.

The Design Objectives require the CECI to design functional, efficient, environmentally sustainable, safe and cost effective passenger and cargo terminal buildings and other facilities to provide a distinct “front-door” experience to all visitors to the Argyle airport and provide a pleasant environment for all other persons using the facilities.

In reflecting these broad objectives into the design, the Consultants were also asked to recognise and incorporate into their designs the fact that St. Vincent and the Grenadines is a nation state, that it is located in the Caribbean Sea with plenty of sunshine and beautiful beaches, and that its tourism sector is its emerging engine of growth.

In November 2009, the floor plans and several different preliminary design elevations, all of which attempt to capture the design objectives were submitted to the IADC for its consideration and approval. Since then, IADC has provided comments on these preliminary designs to allow the Consultants to proceed to the detailed design stage of their work.

Based on the planned programme of activities, the detailed designs that are being done now are expected to be completed by March 2010, in readiness for submission to firms that are to be pre-qualified for bidding for the contract for construction services. It is expected that the contract for the construction of the facilities would be awarded in time to allow construction work on the facilities to begin by 1<sup>st</sup> July 2010.

One may recall that the government of Taiwan pledged an amount of US\$30 million (EC\$81.5 million) for the design and construction of the terminal building and other landside facilities for the Argyle International Airport. On 7th January 2008, IADC drew down US\$2.5 million (EC\$6.7 million) of this sum, leaving US\$27.5 million available for the design and construction. Hence, CECI was asked to restrict the facilities to this budget.

## **COMPENSATION AND RELOCATION OF HOMEOWNERS**

### *Compensation to homeowners*

IADC has now paid out EC\$48.8 million to 120 of the now 134 affected built property (home) owners. The other 12 properties that have to be bought are estimated in value at EC\$7.8 million. This means that the estimated total cost of built properties is EC\$ 56.6 million. During the year, 3 properties, located close to the area of operations and were as a result severely affected by noise and blasting, were purchased. This takes the total number of affected built properties from 131 to 134.

### *Compensation to vacant land owners*

Vacant land owners are also being paid for lands acquired for the airport. In all, there are 370 affected vacant land parcels of various sizes, estimated at EC\$56.3 million. Owners of 259 of these land parcels have already submitted to the IADC deeds evidencing ownership of these lands. To date, IADC has paid out EC\$12.6 million to owners of 89 of these land parcels. This process of compensating land owners, which is being done in collaboration with the Offices of the Chief Surveyor and the Attorney General, will continue into 2010.

### *Relocation of homeowners*

Most of the homeowners who were paid have rebuilt their homes elsewhere or are in the process of relocating from the site. Many of them are now resettled at one or another of the IADC's subdivisions at Harmony Hall, Diamond, or Carapan. All of the infrastructure works at these sites have been done by the IADC, and in the case of Carapan, IADC is in the process of improving the access road to that site. A rubble stone wall was also constructed at a section of the Harmony Hall road that was destroyed during a landslide. All of these sites will be handed over to the Ministry of Works in 2010.

Although these site developments are only tangential to the IADC's core mandate of building an airport, the care taken in ensuring the proper relocation of the affected Mt. Pleasant/Argyle property owners is only one indication of IADC's gratitude for the co-operation it has received from these affected homeowners.

## **ENVIRONMENTAL MONITORING AND PROTECTION**

As part of the process of implementing the proposals contained in the Kocks Consult environmental study of the airport project, IADC assigned an in-house Environmental Auditor to lead a team of professionals drawn from other government agencies and civic society organisations, to put together and implement an Environmental Monitoring Plan. The role of this Environmental Monitoring Team is to ensure (1) that adequate measures are put in place and (2) that the engineering work plans are designed and executed in a manner to mitigate adverse consequences to the environment, from the construction of the international airport.

During the year, the Environmental monitoring team has been involved in various initiatives, in relation to protection of the environment. Many of these initiatives have been in collaboration with the Cuban Ministry of Science, Technology and Environment (CITMA) which, on the request of our government, agreed to be part of the environmental monitoring team and to assist in conducting additional studies.

### *Hydro-geological Studies*

During the period January 20<sup>th</sup> to February 3<sup>rd</sup>, a two member team from CITMA conducted some geology and hydrology studies in the areas of Yambou, Rawacou, and Peruvian Vale. These studies were done to provide additional information to the project and to propose solutions to some outstanding issues. These studies identified some areas for further investigations, which will be undertaken in 2010.

### *Bird Studies*

IADC was also assisted by a three member team of Cuban ornithologists who conducted two sets of bird studies during the year. These studies focused on the reproductive stage and migratory patterns of aquatic and terrestrial bird species in and around the Argyle Airport. The first study was conducted January to early March 2009, and the second, May to July 2009. As part of these studies, an inventory was taken of the bird species in 13 locations inside and outside of the airport zone. In taking this inventory, visits were made to several locations around the airport, including Brighton Beach, Rawacou, the Diamond Landfill, Milligan Cay, Bequia, Battowia, Western Balliceaux, and other cays located near Bequia.

The studies offer useful insights into the potential impact of birds on the airport and aircraft and vice versa. At the end of the final study that is slated for October 2010, a monitoring team will be assembled with a plan for continuous monitoring of birds during airport operation.

*Preserving our national heritage*

IADC and the National Trust continue to collaborate on the implementation of a Cultural Heritage Plan proposed by the National Trust and funded by the IADC, to the tune of EC\$460,000. This Cultural Heritage Action Plan covers work on:

- (a) *retrieval and documentation of archaeological artefacts discovered during earthworks at Argyle,*
- (b) *preservation of the derelict sugar mills at Escape and Argyle Gardens,*
- (c) *preparation of a book to document the cultural heritage of Argyle, and*
- (d) *relocation of the affected petroglyphs at Yambou.*

*Archaeological Intervention*

As part of the Cultural Plan, a team of Canadian archaeologists, led by Joe Moravetz, did extensive excavations in March-April 2009 in an area within the airport zone, in proximity to P'Tani Resort at Escape. Their excavations uncovered major historical artefacts, including a lot of pottery and other artefacts, several post holes, and 22 skeletons, all believed dating back 2000 years and which provide *prima facie* evidence that civilisation existed here more than 2000 years ago.

Although the findings are still to be dated, the lead archaeologist Joe Moravetz noted that the style of some of the pottery discovered is indicative of the saladoid, a pottery style associated with the Arawaks who first came to St Vincent, while the other pottery ~~are~~ is reflective of the Suazey, produced by the Caribs some 1500 years ago.

If the styles and ages of the artefacts are confirmed by tests that are now being done by the archaeologists, this kind of evidence can alter significantly the pre-Columbian history of St Vincent and the Grenadines. These artefacts, which are now in the possession of the National Trust, will no doubt also add to our Museum, to help preserve our history for posterity.

In June 2009, another team of archaeologists led by Dr. Arie Boomert of Leiden University in Holland, conducted reconnaissance surveys in an area just North of the Yambou River. This team feels that this site is rich in Cayo complex, which forms the least well-known, but most intriguing ceramic assemblage known from the Lesser Antilles. During their preliminary excavations, they uncovered a variety of pottery that they believe to belong to the past inhabitants of that area. More extensive excavations in this area are planned for 2010.

All of this work is spearheaded by the SVG National Trust and supported by the IADC. Apart from helping us understand much better our history and the history of the peoples of the Lesser Antilles, these excavations will also help promote St. Vincent and the Grenadines as a rich cultural centre, and certainly make our islands more attractive to visitors.

### *Preservation of sugar mills and petroglyphs*

IADC has agreed to purchase 2.3 acres of land at Argyle in an area near the new Argyle Bridge where the relics of an old sugar mill were recently discovered. This land, that will be bought by the IADC and passed to the SVG National Trust, will be converted into a recreational park, to be known as the “Escape Heritage Park”. This park will have as part of its attraction, a restored functioning sugar mill, made up partly from ruins found in Escape, as well as the affected petroglyphs that are to be relocated from the Yambou site. Again, this park will be attractive to both locals and visitors alike.

### *Roman Catholic Church, Cemetery and Shrine*

IADC continues to work with the Roman Catholic Community on the relocation of the RC Church and Shrine to a 4 acre plot of land at Spring. The infrastructure works at this site were completed, and paid for by IADC, at a cost of EC\$528,212.39. The Roman Catholic Community has decided to use direct labour to construct its new Church, with the IADC providing technical services and assistance with transportation of Rabacca Material.

In September 2009, IADC, the Ministry of Health, and Everready Funeral Home combined to relocate the bodies interred at the Roman Catholic cemetery at Argyle to the new cemetery at Spring/Peruvian Vale. The work was done with the full knowledge of the Next-of-Kin and in a most professional and sensitive manner. The Roman Catholic Community plans to convert the cemetery into a memorial garden.

## **EMPLOYMENT AND TRAINING**

The IADC has so far created direct employment for 158 persons: 108 Vincentians and 50 Cubans. Of the 108 Vincentian workers, 55 are operators, drivers and mechanics of the **Chatoyer-Che Contingent**, 33 are Office Staff and 20 are domestic workers. The other 50 employees are Cuban engineers, technicians and operators, and 1 doctor.

In 2009 alone, IADC employed seventy-four (74) new persons, of whom sixty-five (65) are Vincentians: 36 hired as operators, drivers, mechanics or assistants in the **Contingent**, and 29 as office and domestic staff. The other 9 employees are Cuban operators and engineers.

In 2010, IADC will increase its direct workforce by at least 65 persons, 54 of whom will be Vincentians. Of these, 42 will be employed on constructing the culvert in the first kilometre of the runway, 11 will be drivers and operators of the new equipment to be bought, and 1 will be an electrical engineer, as part of the design team. The other 11 employees will be Cubans who will make up the in-house design team and hired on short term contracts.

This is in addition to those persons who will be hired by the selected contractor to construct the terminal buildings and other landside facilities, which should begin by mid 2010.

Over the life of the airport project, IADC will provide ample opportunities for young Vincentian project workers to be trained and to improve their work ethic as they work alongside more experienced Cuban and Taiwanese professionals. In addition, IADC will

continue the process of identifying and training a cadre of professionals in the areas of airport operations and management, in readiness for the operational phase of the airport in 2012.

*Marketing of the new airport*

Late in the year, we began the process of marketing, or perhaps more accurately, building awareness of the new airport. As part of this objective, we attended two travel related conferences: (a) the **World Travel Market** (WTM) held in London, November 8<sup>th</sup> – 12<sup>th</sup>, and (b) **Network Latin America** held in St Maarten 6<sup>th</sup> to 8<sup>th</sup> December, 2009. At these two conferences, representatives from the IADC, Ministry of Tourism and Harlequin—at WTM—met and held potentially route building discussions with representatives from Virgin Atlantic, British Airways and Monarch Airlines at the WTM, and with US Airways, Delta, Jet Blue and GOL, at the Network Latin America conference.

To be successful in attracting airlines to St. Vincent in 2012, this marketing effort must be intensified in 2010. This will involve at least, (a) development of a marketing plan for promoting St. Vincent and the Grenadines and the new airport. This marketing should be done in a coordinated way by IADC, Tourism Authority, Invest SVG and other interested large hotels. As part of this drive, careful research must be done to target properly those airlines from the USA, Canada, United Kingdom, Caribbean, and Latin America that can be convinced of a business case for adding St Vincent, as a new destination, to their routes.

The marketing and promotion effort should be bolstered in 2010 with the adoption of a new logo, and the promotion—by way of sale—of IADC’s branded souvenirs.



Rudy Matthias  
Chairman/CEO

January 5<sup>th</sup> 2010.