

VICTOR DUQUE SILVA

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PROFESSIONAL PROFILE

Civil-Geotechnical engineer with expertise in project management with over 25 years of experience in the Engineering and construction sector. Skills proven in the design, conceptualization, planning, implementation and quality control of civil structures, earthworks. Solid knowledges in developing and monitoring project scopes, budgets, and schedules under local and international standards. Bilingual (Spanish – English).

PROFESSIONAL EXPERIENCE

1. INDEPENDENT CONSULTANT

2015-Present

Independent geotechnical consultant in areas related with geotechnical design of different structures and projects. I have been working developing technical documents for foundation analysis, slope stability analysis, soil and rock mechanics, seepage analysis, retaining walls, deformations and others. Experience working in dam design and rehabilitation projects, quality control and quality assurance of geotechnical construction projects, and developing dam safety programs (Dam Safety and Monitoring Plans, Emergency Action Plans, Failure Modes Analyses. I also have been working developing geotechnical field investigation programs and laboratory tests programs for regular and complex projects. Part of my services are focused in Project Management helping clients in the development and monitoring of project scopes, schedules and budgets.

2. MECO Construction, Panamá City,

2017-2018

Construction company with presence in Central and South America and the Caribbean. Specialized in the construction of earthworks for several infrastructure projects, as motorways and highways, residential, industrial and commercial developments, marine infrastructure, hydroelectric projects and airports.

PSA Panamá International Terminal Rodman Port. EXPANSION PHASE 2 Container Yard, Panama. The project began in May 2015. This expansion consists of the installation of 800 linear meters of dock, two docking structures for mega ships and the expansion of its container yard to 2 million TEU capacity. Additionally, PSA Panama installed eight new port cranes and 12 RMG cranes (mounted on rails), for a total investment of more than \$ 400 million dollars.

Responsible for the quality control and quality assurance of earth movement works (excavations and fills). Responsible for the aspects related with civil construction of the RMG beams, RTG, bases Container, rail crane and metal mechanical components, electrical installation, structural frames and associated utilities. Responsible of laboratory tests to control soil and concrete materials. Responsible for the verification of the quality materials used during the project. Query management and technical proposals.

Reports: 6 engineers, 2 draftsmen and administrative staff.

3. MWH Global now STANTEC

2015-2016

Engineering company based in USA and presence in 35 countries. Company recognized for the development of large infrastructure projects around the world, in particular related with water supply infrastructure, dams and hydropower.

Project: Expansion Project of the Panama Canal "Panama Canal -third Set of Locks Project".

Construction of a third set of locks, and the expansion of the InterOceanic Highway in both the Pacific and Atlantic coast, which increased the flow of traffic and better accommodate Post-Panamax vessels. The project was carried out with an investment amount of USD 3,200 million and a runtime of 7 years.

Responsibilities:

- Quality control in the repair of concrete slabs Locks Project.
- Processing and analysis of geological conditions of the rock mass
- Permeability tests and pressure conditions and infiltration structure and foundation concrete slab.
- Plan development curtains and polyurethane grout injections and planning for the implementation of the slabs, coordinating its execution at time.
- Identification of the actual risk potential water pressure foundation slabs of the Panama Canal locks as opposed to the design and permissible indicators, enabling timely redesign of the sub-allowable pressure slabs.

4. Consortium FCC-ICA-MECO, Panama City, Panama

2014 - 2015

Group consisting of 3 major companies, ICA of Mexican origin with presence in the United States, Central and South America, MECO, with a presence in Central and South America and the Caribbean, both specialized in earthworks for infrastructure on Roadways and highways, industrial infrastructure and commercial, marine, hydroelectric projects and airports. FCC of Spanish origin with full presence in Europe and expanded to countries in the Americas, with extensive experience in large projects always towards environmental care.

Project: Expansion Project of the Panama Canal "Pacific Access Channel"

Excavation and extending channel areas and construction of the dam 1E 2Km characterized by embankment dam Clay, filters and castled protection. The volume of earthworks was 5,300,000 cubic meters and with a total investment of USD 3.6 million.

Responsibilities:

- Monitoring and control in accordance with the technical specifications and drawings execution of the works.
- Coordination with the owner and technical support.
- Identification of deficiencies and not conformities formulating corrective actions.
- Embankments test to optimize thicknesses pass and parameterize the fill materials.
- Optimization of field supervision processes by automating and digitizing drawings, reports, images, technical specifications and reports.

5. MWH Global now STANTEC, Panama City, Panama

2011 - 2014

Engineering company based in USA and presence in 35 countries. Company recognized for the development of large infrastructure projects around the world, related with water supply infrastructure, dams and hydropower.

Project: Expansion Project of the Panama Canal "Panama Canal -third Set of Locks Project".

Construction of a third set of locks, and the expansion of the Interoceanic Highway in both the Pacific and Atlantic coast, which increased the flow of traffic and better accommodate Post-Panamax vessels. The project was carried out with an investment amount of USD 3,200 million and a runtime of 7 years

Responsibilities:

- Development of geological survey of soil and rock slope stability and control and monitoring of field trials (boring, test pits)
- Review and evaluation of results under the implementation of grouting curtains below foundation.
- Supervision and quality control of foundations, embankments dams.
- Review of technical specifications, working procedures, responses to requests for design change, modification field on foundation, slopes, embankments.
- Weekly preparation of the corresponding technical reports.
- Identification of deficiencies and non-conformities, formulating corrective actions.
- Evaluation and study of the stability of slopes and walls excavation of foundations and trenches of the locks and storage tubs, over a period of 8 months through the formulation and issuance of approx. 400 designs instructions.
- Evaluation and re-dimensioning of filter materials in the 3 dams channeling of the project, with the unification single filter which allowed an optimization of runtime and machinery to be used without diminishing the functional purpose of stabilization and drainage.
- Resizing widths foundation of the dams, 3 km in length to avoid contact with an existing channel flooded area, reducing deadlines and machinery costs.

6. CVG EDELCA now CORPOELEC, Caracas, Venezuela

1996 - 2011

Corpoelec is one of the biggest companies of Venezuelan, responsible for the hydropower sector in the Guayana region since it produced about 75% of the electricity consumed in the country.

Corpoelec currently operate 3 Hydroelectric projects which are Simón Bolívar (Guri) with an installed capacity of 10,000 megawatts, Hydroelectric Antonio José de Sucre (Macagua) with an installed capacity of 3,140 megawatts and Hydroelectric Francisco de Miranda (Caruachi) with an installed capacity of 2,280 megawatts. Manuel Piar Hydroelectric (Tocoma) with an installed capacity of 2,160 megawatts actually under construction. Also, is responsible of the network of transmission lines that across the Country reaching a length of 5,700 Km.

Projects Information:

- Macagua Hydroelectric Project (Earth-Rock fill Embankment & RFC Dams- Vol. 2MM m3)
- Caruachi Hydroelectric Project (Earth-Rock fill Embankment Dam- Vol. 8MM m3)
- Tocoma Hydroelectric Project (Earth-Rock fill Embankment Dam- Vol. 8MM m3)
- Guri Hydroelectric Project (Earth-Rock fill Embankment Dam- Vol. 15MM m3)

Head Geotechnical Department & Project Coordinator**2008 - 2011**

- Responsible of the department in carrying out the updating and revision of the designs of geotechnical character of the dams, foundations, cofferdams, system and implementation of the Injections, geological evaluation of the slopes of the Tocoma Project (more than 8 million m³ soils and rocks of earth movement)
- Develop terms of reference for the system of tendering the construction project of the 2nd hydroelectric development of the western region of Venezuela, with earthworks of 5.4 million m³ and a storage capacity of 1185 million m³, with a power of 480 MW and investment amount of USD 1 billion.
- Drafting of stabilization 10 batters to the main arterial road Caracas-La Guaira between the capital and main seaport, which involved the movement of 30,000 m³ of land, in a span of 6 months.
- Preparation of the project report in its study phase for the construction of the compensator reservoir hydroelectric project La Vueltona located in the western region, which generates 720 MW and maintains a storage capacity of 5,600 million m³ of water.
- Coordinator of the geotechnical area in the draft formal inspection of the Central Hydroelectric of Macagua in Guayana City, with a generating capacity of 2,160 MW, through design review, recalculation of the stabilities of the slopes, control network water flow, following the standards of US Bureau of Reclamation and the Polytechnic University of Valencia in Spain.
- Coordination and review of the Guri Hydroelectric Project in Guayana City, Venezuela, with a capacity of 10,000 MW. Assessment of compliance with technical standards and operating calculations following the standards of US Bureau of Reclamation and the Polytechnic University of Valencia in Spain.

Project / Construction engineer & Contract Manager**1996 - 2008**

- Preparation of the redesign of the materials used in the cofferdam on the right dam of Tocoma hydroelectric according to the reduced volume of material according to the study of bathymetric survey.
- Study of stability of excavation slopes and fillings of the Dam
- Study and revision of the materials of filters of the body of the earth dam
- Performing Design Field instructions.
- Coordinator of Left Dam soil and rock (8 million m³) Hydropower Project Caruachi, Guayana, Venezuela. Technical supervisor of construction progress, costs and quality assurance of the works.
- Supervision works Foundation, rock grouting, embankment test for clay and filters.
- Investigation and studies for quarries and borrows for rocks material and clay and sand materials
- Installation of instruments of monitoring for leakage, piezometers, relief wells
- Supervision of the excavation and fillings and placement of ballast material for the railway line due to the deviation because of the reservoir formed by the Caruachi dam.
- Supervision of clay materials, rocks and filters and construction of the dams downstream of the dams of the Macagua Project.
- Resolving problems and aspects of design and implementation in the field
- Supervision and monitoring of quality control of materials and their execution in the field.
- Supervision of the works excavations, fillings, asphalt pavements of Highway Sucre Figarella that connect the urban city with Project.

EDUCATION**MsCE Geotechnical Engineering**, Central University of Venezuela, Caracas, Venezuela**Project Management Master**, Andrés Bello Catholic University, Caracas, Venezuela**Civil engineer**, Central University of Venezuela, Caracas, Venezuela**SKILLS****Autocad Drawings****Software Geostudio, Slide, Rockscience for Slopes stabilities****Software Gin for Geological exploration****Microsoft Office****Microsoft Project**