
Claudio ARANCIBIA

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Claudio Arancibia is a **Senior Project Controls Manager** with extensive experience on Engineering, Procurement and Construction Management (EPCM) also Commissioning phase, Brownfield and Greenfield Projects. Strong knowledge for best practice of Project Controls. Extensive experience managing multi-nationalities Project Controls team. Extensive experience Management multi-projects (LOM Projects)

Mr. Arancibia has held positions were acting Project Director (SNC Lavalin Co. For Anglo American Brazil), also Mr. Arancibia has held positions as Owner representative for Oyu Tolgoi Project (Ivanhoe / Rio Tinto).

Mr. Arancibia have achieved, implemented, maintained and reporting of **Cost Control Systems, Change Management Program, Integrated Project Master Schedule** for EPCM Services, responsible also for **Project Document Control**, responsible also for **Accounting and Invoice processing** (Inc, Tax Review).

Mr. Arancibia has participated for estimate and review for; Project Feasibility Study, project Preliminary Budget, Project Confirming Estimate, Project Definitive estimate. Implemented and review, Organisational Breakdown Structure (OBS), Work Breakdown Structure (WBS), Cost Code Control, Cost type Structure. Responsible implemented and conduct Owner Monthly Project Review, responsible implemented and conduct weekly Project Progress meeting, implemented and consolidate Monthly Project Report... Responsible for Project Cash-flow & Cost-flow. Responsible to implement Project Forecast and Deviation Program. Implemented and maintenance Contingency Management Program, Implemented and management Owner Reserve Program. Implemented Project Risk Management, Implemented Project Earned Value Control.

Implemented, Controlling, Forecast, Deviation, Reporting;

- Project Man-loading (EPCM & Owner)
- Cost Change Management
- Trend Programs & Scope Changes
- Contingency Management
- Owner Reserve Management
- Asset Register
- Progress Report (Budget, Current Budget, Actual, Forecast) for EPCM
- Construction Man-hours Estimate
- Earned Value
- Dashboard Report
- Monthly Project Report
- Project Review (Monthly/Weekly)

- *Quantity Surveying*
- *Risk Management Program*
- *Economic & Financial Evaluation*
- *Construction Contracts, Change Notice and Forecast.*
- *Construction Performance*
- *Project Performance*
- *Document Control*
- *Procurement & Expediting*
- *Engineering Deliverables Control and Performance.*
- *Quantity Surveyor & Take-off*

Project Experience :

- *Mining & Metals Projects*
- *Mining Underground Facilities*
- *Sag Mill Installation*
- *Ball Mill Installation*
- *Flotation Cell Installation*
- *Concentrate Thickeners Installation*
- *Cooper Plants (Oxide & Sulphides)*
- *Flash Furnace Installation*
- *Molybdenum Plants Installation*
- *Oxygen Plants Installation*
- *Sulphuric Acid Plants*
- *Sulphuric Acid Tanks Installation*
- *Ferro Nickel Smelting Plants*
- *Ferro Nickel Furnace Installation*
- *Ferro Nickel Building Infrastructure*
- *Lime Plants Erection*
- *Lime Rotary Furnace Installation*
- *Lime Concrete Storage & Dispatch*
- *Gold Plants (Merrill-Crow Process)*
- *Gold Mill Erection*
- *Gold Thickeners Erection (CS)*
- *Infrastructure Projects*
- *220 KV High Power Lines*
- *220 KV Substation*
- *35 KV Power Lines*
- *35 KV Substation*
- *Unit Substation*
- *Emergency Power Plants*
- *Water Supply, wells & Pumping*
- *Cooper Concentrate Pipelines*
- *HDPE Pipelines*
- *Water Concrete Tanks*
- *Carbon Steel Water Tanks*
- *Tailing Dams Construction*
- *Leach Pads Construction*
- *Architectural Building*
- *Truck Shop Building & Facilities*
- *High way Roads*
- *Rail Lines*
- *Water Dam Construction*
- *Tunnel Improve & Construction*
- *Maritime Port Installation & Facilities*

RELEVANT EDUCATION

- 1991** **BEng, Mechanical Engineering, Antofagasta University, Chile.**
- 2004** Graduate, Project Evaluation Quick MBA, Gerens Institute, Lima Perú.
- 2006** Project Direction, Project Management Institute, Santiago, Chile.
(PMI), registration no. 764678, since 2006.

WORK EXPERIENCE

2013 Freelancer Project Controls Consultant

(Oct-to date) Project Controls Procedures consultant for private companies; Project Controls Procedures Review, Estimating, Budgeting, Forecast, Change Management Program, Quantity Surveying & Material take-off (MTO). Master Schedule, Progress Monitoring, Major Quantity Report, Manager Reports design implement (Dashboard Report) for Mining Projects. Project Controls Procedures review, Implemented, Project Progress Report, Project Cost Control report. Advice for the implementation of the program Project Earned Value.

Oyu Tolgoi LLC (Ivanhoe Mongolia / Rio Tinto) Project Controls Lead –Owner Representative

2012-2013 Phase 2

(Dec-Sep)

Project US\$ 8.6 Billion, CAPEX Investment Project.
Underground Phase, (Total Investment USD 15.4 Billions), located in the Southern Gobi region of Mongolia.
Starting of Beijing Project Home Office to made/organize the basis in the Project, for the new phase estimate cost included 4 major areas of capital costs for the following Phases; Phase 2 Hugo North Expansion capital works consisting in Shaft #3, Shaft #4, Shaft #5, Underground Development, Underground Crushing and Material Handling facilities and associated Surface and Underground Infrastructure facilities. Phase 2 Concentrator Expansion Capital works consisting of the expansion of the concentrator plant to 160,000 tpd through put capacity and associated surface infrastructure. Phase 2 South Gobi Power Plant.
Responsible to produce the Master Schedule Base Line Curves (Engineering, Procurement & Construction)
Responsible to integrate the Master Budget Control Base, also Management Change.



In charge of the Engineering, Procurement and Construction phase control Schedule and Costs.

Implemented management report (Master Schedule Level I and Level II & Cost Report).

Reporting and Control Phase 1.5 final activities on site.
Tracking Budget Shift between Phase 1.5 and Phase 2.

2010-2012 Phase 1

(Oct-Nov) Project Controls Lead –Infrastructure.

Oyu Tolgoi Investment Project US\$ 6.4 Billion, CAPEX investment Project, Phase I, located in the Southern Gobi region of Mongolia. Owner representative for Open Pit and Underground mines, a processing plant and supporting infrastructure to produce copper-gold concentrate. Supporting Infrastructure area will comprise; 220 KV Power Transmission Line from China, 35 KV Power Distribution Line, International Road to China, Raw Water Supply and Services facilities.

Detailed Engineering and Procurement phase develop in China (Beijing) and Ulaanbaatar (Mongolia). Project Controls functions over Fluor EPCM Contracts, for infrastructure areas. Follow-up; Control Budget, Change Management, Estimates, Forecast, Master Schedule (Finish Engineering and Procurement activities).

Owner Integrate Master Schedule responsible for Infrastructure areas, Owner Control Base responsible, reporting, Change management, and trending program. Responsible for Infrastructure Forecast Control. Managing Cost Control in PRISM System.

Review and checking Infrastructure Construction Progress, implemented owner Progress Report for Infrastructure Area.

2010

(July-Sep)

AKER SOLUTIONS CHILE.



Senior Project Controls Manager – ANCASH, Yanacancha, Perú.

Antamina Expansion Project for Minera Antamina S.A., US\$ 1.2 billion initial CAPEX investment. EPCM management portion are US\$ 670 million and Owner portions are US\$ 530 million. The Project Controls Manager functions are to review the Project Master Schedule (Rev. 3). Review the Contracts Construction Schedule Level IV, implemented Tie-ins schedule. Implemented change management program. Project budget control, estimate, forecast, deviation. In addition in charge of account payable activities.

**2010****(Mar-Jun)****SNC-LAVALIN CHILE S.A.****Senior Project Controls Manager –Home Office****El Galeno Bankable Feasibility Study for Lumina Copper SAC.**

US\$ 2.5 billion CAPEX study. Sep-up for Project Control System. Implementation of Project Manual Instruction for the project (PMI), prepare Project Execution Plan for the project (PEP). Follow-up Engineering activities.

Grinding Expansion 170 Kptd, phase I.

EPCM Contract for “Doña Inés de Collahuasi Mining” (CMDIC) US\$ 100 million. Sep-up for Project Control System. Implementation of Project Manual Instruction for the project (PMI), prepare Project Execution Plan for the project (PEP). Follow-up Engineering activities and Procurement phase. Implemented the Master Construction Schedule, Tie-ins schedule.

2007-2010**(Jul-Mar)****SNC-LAVALIN ENGINEERS & CONSTRUCTORS INC.****Senior Project Controls Manager / Acting Project Director.****Barro Alto Project for Anglo American, Belo Horizonte, Minas Gerais, Brazil .**

EPCM Project, US\$ 2.2 billion investment Project. SNC Lavalin-Minerconsult Engineering, Joint Venture.

Implemented the Project Master Schedule, Level I, Level II, Level III. Responsible for the Change Management Program. Preparation of Project Instruction Manual (PIM), preparation of Project Execution Plan (PEP). Responsible for Project Monthly Report (Cost and Scheduling). Prepare the Definitive estimate for Investment Proposal re-evaluation. Implemented the Contingency management. Implementation of Project Risk management program. Responsible for account payable activities, included federal and state taxes calculation and revision. Support to Project Director to achieve the Project objectives, assist to client in Cost and Schedule reporting. Responsible for CAPEX investment review, Contingency and Escalation management. Responsible for Construction contractor progress report, productivity factor reporting. Implemented Project Earned Value Control. Reporting Engineering, Procurement and Construction Progress (Weekly, Bi-weekly and Monthly). Implemented and prepare Monthly Project Review Presentation.

FLUOR CHILE S.A.**Senior Project Controls Manager****2006-2007 Yanacocha Gold Mill Project – Construction Phase for MYSRL - Newmont Co., Cajamarca, Peru.**

US\$ 235 million, EPCM project. Responsible for overall control of project scope, budget, schedule. Assists the Project Director to achieve the project objectives providing planning and scheduling, cost estimating, cost control and accounting services. Responsible for implemented the Project Master Schedule, level I, II and III... Responsible for Project Controls Budget, Project Forecast, Contingency and Escalation management. Responsible for the Project Definitive Estimate revision. Responsible for Internal Project Review, Revenue, Forecast report. EPCM man-loading report.

2005-2006 Yanacocha Gold Mill Project – Basic and Detailed Engineering Phase for MYSRL - Newmont Co., Cajamarca, Peru: US\$ 235 million project. Basic and detailed engineering. Assists the Project Engineering Manager to achieve the project objectives by providing planning and scheduling, cost estimating, cost control and accounting services. Responsible for tracking all capital cost deviations. Progress, master schedule and engineering performance reporting. Responsible for account payable activities. Responsible for internal Project Review. Forecast report. EPCM man-loading report.

2004-2005 Yanacocha Life of Mine (LOM) Projects for MYSRL - Newmont Co., Cajamarca, Peru: Seconded to project owner team for US\$150 million project (yearly). Cost estimate, construction contract control, owner cost estimate and control, appropriation request and monitoring, material and equipment purchase orders control and monitoring. To assist to client on project direction and provide cost and schedule. Responsible for the LOM projects estimation. Responsible for account payable activities.

2003-2004 Lead Cost Engineer

Yanacocha LOM Projects for MYSRL - Newmont Co., Cajamarca, Peru. Seconded to project owner team for US\$137 million project (yearly) Assists the Project Manager (Newmont) to achieve the project objectives by providing planning and scheduling, cost estimating, cost control and accounting services. Cost estimate, Construction contract control, owner cost estimate. Responsible for LOM Projects evaluations in yearly basis. Responsible for LOM Projects estimation. . Responsible for account payable activities.



2001-2003 BSK BECHTEL CHILE & SIGDO KOPPERS J.V

Lead Cost Engineer

Escondida Phase IV Project for BHP Billiton, Antofagasta, Chile.

A Unit Price Construction contract for US\$450 million copper mining project. Budget control and forecasting. Change management control. Change Management Program, Back-charges control and follow-up. Purchase Orders close-out, project close-out. Responsible for project accounting close-out.

1999-2001 BECHTEL Co.

Lead Cost Engineer – Concentrator Area

Antamina Project for Minera Antamina S.A., Yanacancha, Perú.

Self Perform Project. US\$ 2.2 Billion Copper / Molybdenum / Bismuth mining project, including concentrator area and Tailing Dam, Construction contract changes control, construction subcontract change orders review and approval. Project Forecast and trending program implemented. Prepare Definitive Estimate for Concentrator Area. Participate in Construction Progress Meeting, Monthly Project Review Meeting.

1999 BECTHEL Chile, Los Vilos, Chile

Cost Engineer – Concentrator Area

Los Pelambres Project for Lujbic Group, Los Vilos, Chile: US\$900 million copper/molybdenum mining project. Budget control, costs management and estimating, contracts forecasting, responsible for definitive estimate (concentrator Area), Budget cost control. Implemented and management of back charges Program also conduct weekly Back charge meeting. Project Construction progress report. Responsible for Change Management Program for Concentrator area. Responsible for Concentrator Definitive estimate.



FLUOR DANIEL Chile

Project Cost Engineer

1998 Escondida Oxide Plant for BHP Escondida, Antofagasta, Chile.

US\$ 423 million oxide copper mining project. Budget control, costs deviation and estimating, forecasting and back charges follow-up. Direct construction costs estimating and forecasting. Contract construction and Purchase Orders back-charges. Active contribution of Definitive Estimate.

1996-1997 Bajo la Alumbrera Project for Minera Alumbrera Ltd., Catamarca, Argentina.

US\$ 1,2 Billion Cooper/gold Ming Project. Budget control, scope changes, budget shift, forecast changes estimating, estimating, Project change management program implementation. Monthly project cost report sponsor. Active participation in the Definitive Estimate for Filter Plant (Tucuman), Port Area (Rosario), Mine Site (Tucuman). Responsible for the Asset Register. Prepare Final and close-out cost report.

1994-1996 Escondida Phase III Project for BHP Escondida, Antofagasta, Chile.

US\$ 405 million copper expansion project. Budget control, costs deviation and estimating, EPCM services control, purchase orders and construction contracts forecasting. Project change management program implementation, deviation estimating (PCNs). Responsible of project asset register. Participate on Definitive Estimate calculation. Contract Modification review and control.

1993-1994 HEREDIA CHILE, Los Andes, Chile



Project Cost Engineer -Seconded

Unitary Ball Mill Project for Codelco-Chile, Andina, Los Andes, Chile: US\$16 million copper expansion project. Budget control, responsible for Project Change Management costs deviation and estimating, engineering contractors control, purchase orders and construction contracts forecasting. Master schedule for Engineering and Procurement phase.

Responsible for Engineering and Procurement Progress report, Engineering Deliverables Controls.

Responsible to Prepare, Issue, Receive and Evaluate Procurement and Contracts Bid Package. Coordinate the Engineering answers to bidders. Issue the final "Technical-Term-Economical Recommendation".

Responsible charge Purchase Order in the system.

Responsable for factory delivery.



MINMETAL INGENIERIA

MINMETAL INGENIERÍA Y PROYECTOS, Chile

Project Cost Engineer

1992-1993 Casting Plant Expansion for Exxon, Llay-Llay, Chile.

Oxygen Plant, Flash Furnace Installation, Sulfuric Acid Plant, Modification of railway lines, Furnace Building Modification.

Scheduling, material tracking, purchase orders control, field material and requirement expediting and engineering drawing schedule control. Contract and purchase orders budget control, forecasting, commitment and expenditures.

Responsible for contractors billing approval.

Responsible for Warehouse Control and Logistic.

Implemented Contractor Quantity Control (Plan vs. Actual).

Responsible for Project Document Control office.

Responsible for Project IT hardware and Software implementation and improve.

Responsible for Material take-off revision.

1990-1992 Los Bronces Expansion Project

Filter Plant Area for Exxon, Colina, Chile.

Cooper Filter Plant Construction, including Tailing Dam Construction, Fresh Water Supply installation, 220 KV Power Plant Installation, Concrete Water tank, Hyperbaric Filter Installation.

Cost control, Project change management program implementation, engineering and procurement master schedule.

Project change management implementation.

In charge of Project Technical Office, Project Document Control.

Responsible for Construction Contract Administration.

Responsible to review/approval Construction Contractor Invoice.

Responsible to review/approval Contracts change notice.

Project close-out, Cost, Warehouse, Construction Contractor. And accounting final reconciliation.

Responsible to implemented the Project Asset Register and capitalization.

R E G
INGENIEROS

1988-1992 REG INGENIEROS

Project Costs & Scheduler Engineer.

Los Bronces-Dolores and Vizcachas-Colina Tunnels for Exxon, Colina /Santiago, Chile: Cost Engineer at US\$ 400 million expansion project. Master schedule implementation. Project change management program implementation. Project Budget, Current Budget, Expenditures, Forecast, Trending Program reporting. Responsible for Project Monthly Report, weekly progress report. Accounting cost reconciliation.

Project Scheduler and Costs Engineer – Tunnel Area

San Francisco and Los Bronces Tunnel Project for Exxon, Santiago, Chile: Responsible for Project Master Schedule implementation. Project change management program implementation. Project Budget Control, Change Management Program, Current Budget, Expenditures, Forecast reporting.

Project Monthly and Weekly Report. Weekly Progress Report. Construction Contracts man-loading monitoring.

1988

TRANSMETAL LTDA, Antofagasta, II Region, Chile

Mechanical Chief Engineer – Maintenance Workshop

Equipment (trucks) maintenance correction program. Creation of preventive maintenance program, cost analysis, lubricants analysis.

Responsible for workshop activities coordination.

Field Truck driver supervision.

Maintenance Programming and Supervision, in charge for Workshop.

1987

MONTAJES INDUSTRIALES YUNGAY SA, Antofagasta Chile

Project Scheduler and Cost Assistant

Lime Plant Construction Project, Cements Bio-Bio, INACESA area, Antofagasta, Chile. Horizontal Rotary Mill Installation, Lime Storage and Dispatch System.

Implemented Construction Progress Report, Project Report Curves, Construction Performance Reporting, Earned Hours Reporting, and Productivity Report, Man hours Controls (Direct and Indirect).

Construction Cost Control,

Reporting actual Expended. Billing Report , Internal Revenue report.

PROFESSIONAL DEVELOPMENT

- 2010** PRISM Project Management Applications course, ARES Beijing China,
2010 General Induction Safety and Health in Mining, ISEM & Antamina Mining, Lima Peru,
2006 Managing Contractor Safety
2006 Project Direction, Project Management Institute, ,PMI Certification, Chile,
2005 Graduate, Project Evaluation Quick MBA (Q-MBA), Gerens Institute, Lima Perú,
2003 Cost and Schedule using Primavera 3.1, Metacontrol, Santiago, Chile,
2001 Basic Course on Risk Prevention for Mining, Santiago of Chile,
1996 Access Application Development Hernan Hollerith Institute,, Argentina,
1994 Certification, Integrated Project Management, CIDES, Santiago, Chile,
1990 Prevention of Traffic Accidents.
1990 Loss Control Course.
1988 Graduate Programming Course, Santiago of Chile University, Santiago, Chile,
1987 Course, Hydraulic Solid Transportation, Antofagasta University, Chile,
1987 Congress of Mechanical Engineering, Cooper Industries, Antofagasta University, Antofagasta of Chile,
1986 Industrial Hygiene and Safety Seminar, Mejillones II Region Chile,
1981 Seminar Fabrication Process and Machine Tools, Federico Santa Maria University, Valparaíso Chile.

COMPUTER SKILL's

Primavera 3.1 (User Level); Primavera P6 (User Level); **MS Project**; Windows XP, **Windows Professional 2000**; Windows Vista; **Windows 7**; Windows 8; **Windows 8.1**, Windows 10, **MS Office 2003**, MS Office 2007 package; **MS Office 2010 package**; MS Office 2013 package (All version advance user, Excel, Power Point, Word, Outlook); **Visio** (Release 2003,2007,2010,2013), Lotus 5 Package; **DBase V**; **Ellipse**; **SAP**; **PRISM**; **Projects Software**, Software Installation, **Engineering Software**, Procurement Software, **Document Control Software**, Cost Application Software Development in Access (Version : 2003, 2007, 2010, 2013).

PROFESSIONAL SKILL's

Project Management, Mining & Metals, **Gold Plant**, Gold Mine, **Leach Pad**, Ferro Nickel Smelting Plant, **Engineering**, Procurement, **Construction**, Project Estimation, **Cost Control**, Feasibility Studies, **Data Warehousing**, Presentations, **Account Reconciliation**, Key Account Management, **Schedule Progress Control**, Performance Reports, **Graphic Presentations**, Change Management, **Cost Reporting**, Reduced Cost, **Forecasting**, Cash Flow Plan, **Cash Flow Forecasting**, Financial Forecasting, **Trend Forecasting**, Budget Forecasting, **Revenue Forecasting**, Planning Budget & Forecasting, **Incurred Cost Budgeting & Forecasting**, Scheduling, **Master Schedule**, CPM Schedule, **Contingency Management**, Contingency Analysis, **Contingency Planning**, CLAIM's, **Risk Management**, Risk Assessment, **Risk Analysis**, Quantity Survey Manage, **Engineering Construction Quantity Estimation**, Engineering Construction Quantity Reconciliation, **Actual Construction Quantity reconciliation**, Project Earned Value.

PROFESSIONAL ASSOCIATIONS

Project Management Institute (PMI), registration no. 764678, since 2006

LANGUAGES

Spanish, English, Portuguese

INTERNATIONAL EXPERIENCE

Countries worked in Mongolia, China, Brazil, Mexico, Perú, Argentina, and Chile.

REFERENCES's AVAILABLE

Steve Garcia

Project Director & Executive VP
Oyu Tolgoi LLC Project at Ivanhoe / Rio Tinto

Brock Gill

Program Director Commercial
BHP Billiton

Jhon Jones

CEO International Division
Jiangsu Jiangdu Construction Group Co. Ltd.

Maureen Cui

Chief Financial Officer
Jiangsu Jiangdu Construction Group Co. Ltd.

Donald Dhans (976-99011623)

Project Control Manager
Oyu Tolgoi LLC (Invanhoe / Rio Tinto)

Rene Navarro

Project Director at SNC Lavalin Co.
Barro Alto Project