



**Elmer Cholán Moro**

**CQA Resident Engineer / Project Manager**

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## **Education**

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Universidad Nacional de Cajamarca, Perú

Atlantic International University, School of Sciences and Engineering, Civil Engineering

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## **Resumen de Experiencia**

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Mr. Cholán is a project professional with 22 years of experience in various mining and energy projects. He has been directly responsible for EPC, EPCM, and turnkey contracts overseeing engineering, Quality Control (QC) and Quality Assurance (QA), construction, safety, and environmental programs.

His Construction Quality Assurance (CQA) experience includes earthwork supervision, soil, concrete, and geosynthetic material for mining operation facilities including leach pads, large event ponds, retention dams, sedimentation ponds, waste dumps, tailings dams, roads, power plants, and conventional and reinforced concrete dams. Additionally, he has worked on and supervised the construction of tunnels, assembly of plants, assembly and installation of steel and HDPE pipelines, project control, logistics, and contracts, among other areas. He is always focused on continuous improvement, following the SGI and the PMI guidelines, as well as the ISO (9001 / 14001) and the OHSAS 18001 standards.

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## **Project Experience**

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### **MINERA PLATA REAL, LOS GATOS PROJECT | CHIHUAHUA, MÉXICO**

Resident Engineer responsible for CQA of a tailings dam, monitoring ponds, final access ways and crest channels, among other quality management activities. In charge of engineering revisions, CQC and CQA Manuals, quality management, procedures, construction scheduling, revision of execution contractor manuals, costs, budgets, management audits, and MQA revision of permanent materials. (Tierra Group, 2018)

### **MINERA APOENA | MATO GROSSO, BRAZIL**

Resident Engineer responsible for the construction oversight of a tailings dam and crest channels. (Tierra Group, 2017)

### **FEKOLA MINE, B2GOLD | MALI - AFRICA**

Senior Civil Supervisor responsible for construction oversight of a tailings dam, mine waste dumps, crest channels, large event ponds, primary and secondary plants, and access ways for haul truck traffic. (Tierra Group, 2016)

### **SOCIEDAD MINERA CORONA S.A. | LIMA, PERÚ**

CQA Resident Engineer responsible for the construction of the Stage 4 Yauricocha Tailings Dam. (Tierra Group, 2015)

### **HYDROELECTRIC POWER PLANT - CERRO DEL ÁGUILA S.A. | HUANCAVELICA, PERÚ**

Construction Manager for Cerro del Águila hydroelectric power plant. (Cerro del Águila S.A.– Kallpa S.A. - IC Power, 2013 to 2015)

### **HYDROELECTRIC POWER PLANT - CERRO DEL ÁGUILA S.A. | HUANCAVELICA, PERÚ**

Senior Civil Supervisor responsible for the construction of Cerro del Águila hydroelectric power plant. (Cerro del Águila S.A.– Kallpa S.A. - IC Power, 2012)

### **LA LIBERTAD MINE, DESMINIC – B2GOLD | NICARAGUA**

As Resident Engineer, conducted QA tasks for the construction of Orosi Project Phase 3 Tailings Dam expansion. (Gramsa, 2010)

**CONGA PROJECT, MINERA YANACOCHA | CAJAMARCA, PERÚ**

Superintendent (in charge of the quality and execution program) for the construction of Alto Jadibamba, Chirimayo, and Chailhuagon. Conducted supervision, CQA, and project control activities. Performed multiple tasks including earthworks; backfill, geotextile and underdrain control; geosynthetic liner placement (1-mm, 1.5-mm, and 2-mm-thick, one-sided and double-sided textured LLDPE and HDPE geomembrane); bituminous geomembrane installation; top soil dumps' construction; and PAG (potentially acid generating) and sediment management, in addition to the use of BMP and PMO controls. (Conga Earthworks Team CET - Fluor, 2011 to 2012)

**4B PAD PROJECT, MINERA CERRO VERDE S.A. | AREQUIPA, PERÚ**

As Senior CQA Engineer, oversaw the construction of 4B Pad, temporary and permanent access ways, waste dumps, and performed the assessment of pits.

Conducted supervision, CQA, and project control activities. Performed multiple tasks including earthworks; backfill, geotextile and underdrain control; geosynthetic liner placement (1.5-mm-thick LLDPE and HDPE geomembrane), and installation of solution collection systems and over liner material (HDPE solid and ADS perforated pipes). (Gramsa, 2011)

**SAN BARTOLOMÉ PROJECT, MINERA MANQUIRI S.A. | POTOSÍ, BOLIVIA**

Construction and CQA Resident Engineer for Phase 2 Tailings Dam Expansion. Supervised CQA and project control activities. Work included earthworks; backfill, geotextile and underdrain control; placement of geosynthetic liner (1.5-mm-thick LLDPE geomembrane), and installation of solution collection systems and over-liner material. (Gramsa, 2010)

**CERRO CORONA PROJECT, MINERA GOLDFIELDS LA CIMA | CAJAMARCA, PERÚ**

CQC and CQA Senior Supervisor for Las Gordas, Las Flacas, and Las Águilas Tailings Dams. (MWH, 2007 to 2010)

**LA VIRGEN PROJECT, COMPAÑÍA MINERA SAN SIMÓN, LA LIBERTAD | PERÚ**

CQA Supervisor for Leach Pad Phases 1, 2, 3, and 4, large event pond, north Suro Waste Dump, Suro River diversion channel, and dynamic pads. Project work included supervision of earthworks and approval of foundations, underdrains, backfills, over liners, HDPE pipe thermo fusion, and geosynthetic materials like geomembrane, GCL, and geotextile. (Vector, 2003 to 2004)

**EL GALENO PROJECT, NORH PACIFIC | CAJAMARCA, PERÚ**

Supervisor of hydraulic works for Río Grande monitoring. (Vector, 2006)

**CHAPI PROJECT, MINERA PAMPA DE COBRE S.A. | MOQUEGUA, PERÚ**

CQA Supervisor responsible for construction oversight of a leach pad, and sulfide and oxide ponds. (Vector, 2007)

**QUICAY PROJECT, CHANCADORA CENTAURO | PASCO, PERÚ**

CQA Supervisor for the execution of Phase 3A Pad and mine waste dump. (DESMINIC, 2006)

**MINERA CERRO VERDE | AREQUIPA, PERÚ**

CQC Supervisor for the construction of sulfide primary plant and tailings dam. (Vector, 2005)

**ALTO CHICAMA PROJECT, LAGUNAS NORTE, BARRICK | PERÚ**

QC Supervisor for the construction of Leach Pad Phase 0. (Vector, 2005)

**MINA HUARON | PASCO, PERÚ**

CQA Supervisor for the construction of a tailings dam. (Vector, 2006)

**MINERA YANACOCHA | CAJAMARCA, PERÚ**

QC Supervisor and laboratory technician for Carachugo Leach Pad Stages 3, 4, 5, 6, 7, 7A, 8, and 9, and north waste dump.

Supervisor and laboratory technician for the construction of La Quinua Project Stage I, including leach pad, small event pond, process plant, and temporary and permanent access ways, Grifo La Quinua (fuel tap).

Supervisor and laboratory technician for the expansion of Yanacocha 3, 4, and 4A leach pads, and north waste dump.

Supervisor for environmental works in Carachugo, Maqui Maqui, San José Sur and La Quinoa. (Fluor 1995 to 1997); (H&J, 1998); (Knight Piésold, 1998 to 2001); (Thiess, 2002 to 2003)

**ANTAMINA MINE | ANCASH, PERÚ**

QC Supervisor for the construction of temporary and permanent access ways and dynamic crushers. (Knight Piésold, 2000)

**ROSAURA PROJECT | LIMA, PERÚ**

Supervisor of geotechnical studies for the construction of tailings dams. (Vector, 2004)

**CAJAMARQUILLA REFINERY | LIMA, PERÚ**

Supervisor of geotechnical pre-feasibility studies for tailings dam and pond. (Klohn-Crippen Berger, 2007)

**MINERA EL BROCAL, SOCIEDAD MINERA EL BROCAL, CERRO DE PASCO | PERÚ**

Geotechnical Supervisor for the future Condorcayan Mine waste dump. (DESMINIC, 2006)

**EL MOCHITO MINE | HONDURAS**

CQA Supervisor for La Soledad and Pozo Azul Dams. (Gramsa, 2008)

**SAN ANDRÉS MINE | HONDURAS**

CQA Supervisor for primary crusher plant. (Gramsa, 2008)

**EL LIMÓN MINE | NICARAGUA**

CQA Supervisor for the construction of a retention dam. (Gramsa, 2011)

**PETAQUILLA GOLD PROJECT | PANAMÁ**

CQA Supervisor for emergency dam. (Gramsa, 2008)

**LA COLORADA PROJECT | MÉXICO**

Tailings Dam CQA Supervision. (Vector, 2004)

**MINERA ESCONDIDA, D-54 PROJECT | CHILE**

Leach Pad QC Supervisor. (Vector, 2006)

**VELADERO PROJECT | ARGENTINA**

Leach Pad QC Supervisor. (Vector, 2007)

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## Employment History

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<b>CURRENT EMPLOYER</b>	<b>TIERRA GROUP INTERNATIONAL, LTD.</b>
<b>POSITION</b>	Senior Civil Engineer / CQA Resident Engineer / Project Manager
<b>YEARS</b>	2015 to Present
<b>EMPLOYER</b>	<b>CERRO DEL ÁGUILA S.A.</b>
<b>POSITION</b>	Construction Manager
<b>YEARS</b>	2012 to 2015
<b>EMPLOYER</b>	<b>GRAMSA S.A.C.</b>
<b>POSITION</b>	Senior Civil Supervisor / CQA Resident Engineer
<b>YEARS</b>	2012
<b>EMPLOYER</b>	<b>CONGA EARTHWORKS TEAM (CET)</b>
<b>POSITION</b>	Construction and CQA Superintendent
<b>YEARS</b>	2011 to 2012

<b>EMPLOYER</b>	<b>GRAMSA S.A.C.</b>
<b>POSITION</b>	Civil Supervisor / Resident Engineer
<b>YEARS</b>	2008, 2010 to 2011
<b>EMPLOYER</b>	<b>MONTGOMERY WATSON HAZAR</b>
<b>POSITION</b>	Construction and CQA Senior Supervisor
<b>YEARS</b>	2007 to 2010
<b>EMPLOYER</b>	<b>KLOHN-CRIPPEN BERGER S.A.</b>
<b>POSITION</b>	Senior Geotechnical Supervisor
<b>YEARS</b>	2007
<b>EMPLOYER</b>	<b>VECTOR PERÚ S.A.C.</b>
<b>POSITION</b>	CQA and CQC Supervisor
<b>YEARS</b>	2003 to 2007
<b>EMPLOYER</b>	<b>THIESS PERÚ S.A.</b>
<b>POSITION</b>	Laboratory Manager / QC Manager
<b>YEARS</b>	2002 to 2003
<b>EMPLOYER</b>	<b>KNIGHT PIÉSOLD S.A.</b>
<b>POSITION</b>	Construction and CQA Supervisor
<b>YEARS</b>	1998 to 2001
<b>EMPLOYER</b>	<b>H &amp; J SERVICIOS GENERALES S.A.</b>
<b>POSITION</b>	Engineering Assistant
<b>YEARS</b>	1997 to 1998
<b>EMPLOYER</b>	<b>FLUOR DANIEL SUCURSAL DEL PERÚ</b>
<b>POSITION</b>	Engineering and Field Assistant
<b>YEARS</b>	1995 to 1997

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## Language Proficiency

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Spanish:	Native language
English:	Writing: intermediate level; speaking: basic level
French:	Basic level