

CURRICULUM VITAE



Rick Piovesan

BScEng (Civil), GDE, CPEng, MIEAust

GEOTECHNICAL ENGINEER

Perth, Western Australia

Education	BScEng Civil, University of the Witwatersrand, South Africa, 1990 Graduate Diploma in Engineering, University of the Witwatersrand, South Africa, 1992
Professional Registration	CPEng 3046020 (Australia) NPER: 3046020 (Australia)
Professional Membership	Engineers Australia – Member Australian Geomechanics Society (Past WA Committee Member)
Languages	English, Italian, Afrikaans



1. SUMMARY

Rick Piovesan is a consulting geotechnical engineer with 27 years' experience. His expertise lies in geotechnical investigation and reporting for slopes and deep excavations, large mining and civil infrastructure projects, wind-turbines, harbours, low-rise and high-rise buildings and land development.

He is also experienced in earth dams, retaining wall design, ground improvement, geotechnical modelling (including finite element modelling), pile design, foundation analysis, earthworks materials sourcing and evaluation, pavement assessments, field testing and construction issues.

He is based in Perth, Western Australia (WA) and has worked throughout WA as well as several countries in southern Africa. He has also carried out geotechnical investigations in Georgia and Mongolia.

2. EMPLOYMENT HISTORY

2.1. GALT GEOTECHNICS PTY LTD (PERTH): 2009-PRESENT

DIRECTOR / GEOTECHNICAL ENGINEER

Rick is a part owner and director of this specialist geotechnical consulting firm.

Rick's work includes:

- ✦ Preparation and submission of Proposals and Tenders.

- ✈ Site Investigations and Reporting.
- ✈ Computer Analysis (slope stability, finite element analysis, settlement analysis, pile design etc).
- ✈ Project Management.
- ✈ Office Management.
- ✈ Client Development.
- ✈ Staff Training.

Rick worked with Chevron on the massive Wheatstone LNG project near Onslow, Western Australia. Rick was on Chevron's geotechnical team, supervising the onshore and nearshore Phase 3 geotechnical investigation. Geotechnical issues on this project include:

- ✈ Soft soils.
- ✈ Piling (onshore and nearshore).
- ✈ Large, highly settlement sensitive structures.
- ✈ Dredging.
- ✈ Earthworks and pavements.
- ✈ Port facilities, etc.

2.2. *GOLDER ASSOCIATES PTY LTD (PERTH): 2005-2009*

SENIOR GEOTECHNICAL ENGINEER

Senior Geotechnical Engineer in this firm of consulting Geotechnical, Environmental, Mining and Tailings Engineers. The projects included a mix of large mining infrastructure projects and smaller site investigations. The work done included:

- ✈ Preparation and submission of Proposals and Tenders.
- ✈ Site Investigations and Reporting: start-to-finish execution of investigations, including specification of site investigations, appointment and supervision of subcontractors (drilling, earthworks, CPT, geophysics, surveying, etc), development of project specific QA/QC and health and safety (HSE) management plans, site supervision of site investigations, field testing (point load testing, hand penetrometer, hand shear vane, dynamic cone / Perth sand penetrometer), soil and rock logging, sampling, specification of laboratory testing, analysis and report writing and subsequent client liaison.

- ✦ Computer Analysis: use of a number of computer packages on large projects, including finite element modelling using PLAXIS 2D, development of spreadsheets for specialist tasks and for automation of routine tasks.
- ✦ Project Management: Management of engineering projects from proposal stage, arranging and appointing subcontractors, overseeing and/or undertaking site supervision, supervising field engineers, processing incoming data, writing reports and making recommendations to clients, client liaison, invoicing and undertaking follow-up work.
- ✦ Major Projects: involved as a team member and project manager of several major mine infrastructure projects in the Pilbara and primarily responsible for geotechnical analysis and reporting on the project.

2.3. JONES & WAGENER PTY LTD (SOUTH AFRICA) 1995-2005

ASSOCIATE / SENIOR GEOTECHNICAL ENGINEER

Senior Geotechnical Engineer and Associate (2000-2005) in a multi-disciplinary engineering consultancy in Johannesburg, South Africa. He worked in the geotechnical section and was responsible for geotechnical investigations for small and large mining infrastructure and industrial developments throughout South Africa and southern Africa (Zambia Mozambique, Namibia, Botswana, Swaziland and Malawi).

The work included

- ✦ Preparation and submission of Proposals and Tenders.
- ✦ Site Investigations and Reporting: start-to-finish execution of investigations, including specification of site investigations, appointment and supervision of subcontractors, development of health and safety (HSE) management plans, site supervision of site investigations, field testing, soil and rock logging, sampling, specification of laboratory testing, analysis and report writing and client liaison.
- ✦ Karst risk assessments: investigation of small and large dolomite sinkholes throughout the Witwatersrand area. This included geophysical surveys (micro-gravity), supplemented by drilling. Risk assessments were also carried out for large infrastructure projects and residential developments.
- ✦ Computer Analysis: use of a number of computer packages on large projects, including finite element modelling using PLAXIS 2D, development of spreadsheets for specialist tasks and for automation of routine tasks.
- ✦ Project Management: Management of engineering projects from proposal stage, arranging and appointing subcontractors, overseeing and/or undertaking site supervision, supervising field engineers, processing incoming data, writing reports and making recommendations to clients, client liaison, invoicing and undertaking follow-up work.

- ✦ Major Projects: involved as a team member and project manager of several major mine infrastructure projects and large industrial developments and primarily responsible for geotechnical analysis and reporting on the project.

2.4. KNIGHT HALL HENDRY (SOUTH AFRICA) 1991-1995

GRADUATE GEOTECHNICAL ENGINEER

Graduate Geotechnical Engineer in a small geotechnical consultancy based in Johannesburg, South Africa. He was a team member and later Team Leader on the following types of projects:

- ✦ Karst risk assessments for residential developments.
- ✦ Forensic investigations for insurance claims.
- ✦ Foundation investigations for bridges, dams, tanks, roads, house, etc.
- ✦ Investigation of slope failure on a major freeway followed by the design and supervision of remediation works.

3. MAJOR PROJECTS

3.1. OIL & GAS

CHEVRON - WHEATSTONE LNG PROJECT

Member of the Chevron Geotechnical Team supervising the Phase 3 detailed geotechnical investigation of the Wheatstone Downstream Project. Geotechnical issues include:

- ✦ Soft soils (including Acid Sulfate Soils).
- ✦ Piling (onshore and nearshore).
- ✦ Large, highly settlement sensitive structures.
- ✦ Dredging.
- ✦ Earthworks and pavements.
- ✦ Materials.
- ✦ Port facilities, etc.

3.2. PILING

Involvement in numerous piling projects involving different piling techniques:

- ✦ Investigation and geotechnical pile design for numerous multi-storey developments throughout the Perth metropolitan area.
- ✦ Construction support during piling of the Wheatstone LNG plant. Driven steel piles through soft tidal mud flats.
- ✦ Design and construction support for the Elleker Bridge, WA. Driven steel sections through deep alluvial deposits.
- ✦ Investigation and geotechnical pile design for the Robe River Bridge, Pilbara. Deep alluvial deposits comprising fine grained soils, sand and gravel and boulder beds. Tubex piling technique used.
- ✦ Geotechnical investigation and pile design for large storage silos in soft ground conditions, Middelburg, South Africa. Driven precast piles through soft residual clays and boulders.
- ✦ Geotechnical support during piling works, Indian Ocean Fertilizers, South Africa. Driven steel piles through deep soft marine deposits.
- ✦ Geotechnical investigation and pile design for several major rail bridges for collieries in the Witbank and Middelburg Coalfields, South Africa. Bored and driven tube, cast *in situ* piles.
- ✦ Johannesburg Stock Exchange Annex – construction of bored contiguous piles through old landfill for a multi-level basement excavation.

3.3. MINING

BHP BILLITON RGP6 SITE – NEWMAN, WESTERN AUSTRALIA

Project Director for the geotechnical investigation for a major new iron ore hub and associated facilities (crushers, ROM pads, rail, conveyors, stockpiles, train load-out, accommodation village, etc). The work included:

- ✦ Slope stability assessments for rock cuttings and excavations.
- ✦ Foundation investigations for major structures, including dynamically loaded foundations.
- ✦ Earthworks materials sourcing and assessment.
- ✦ Hydrogeological studies.
- ✦ Karst risk assessment.

- ✦ Road and rail centreline evaluations.

BHP BILLITON RGP4 SITE – NEWMAN, WESTERN AUSTRALIA

Project Manager and Lead Geotechnical Engineer for the geotechnical investigation for a major new iron ore hub and associated facilities (crushers, ROM pads, rail, conveyors, stockpiles, train load-out, accommodation village, etc). The work included:

- ✦ Foundation investigations for major structures, including dynamically loaded foundations.
- ✦ Earthworks materials sourcing and assessment.
- ✦ Assessment of 20 m deep car dumper excavation
- ✦ Road and rail centreline evaluations.
- ✦ Construction support.

OYU TOLGOI MINE - MONGOLIA

Geotechnical Engineer for assessment, design and supervision of the 25 m deep pre-sink excavation and headgear foundation.

SINO IRON PROJECT - WESTERN AUSTRALIA

Project Manager and Lead Geotechnical Engineer for numerous geotechnical investigations for a major new haematite mine in the Pilbara (mine access roads, harbour, power station, crushers, ROM pads, rail, conveyors, stockpiles, train load-out, accommodation village, etc). The project included:

- ✦ Foundation investigations for major structures, including dynamically loaded foundations.
- ✦ Earthworks materials sourcing and assessment.
- ✦ Road centreline evaluations and pavement design.
- ✦ Harbour works, including off-shore piling.
- ✦ Construction support, including geotechnical supervision of the construction of the 20 m high in-pit crusher pockets (reinforced earth construction).

HELENA MINE - STEELPOORT, MPUMALANGA, SOUTH AFRICA

Project Manager and Lead Geotechnical Engineer for the chrome milling plant at Helena Mine. The plant site was located on a recently placed rock waste dump which was up to 20 m deep in places. The work included:

- ✦ detailed geotechnical investigation.
- ✦ design and management of the dynamic compaction of the dump.
- ✦ design of the access roads around the dump.

DER BROCHEN MINE - STEELPOORT, MPUMALANGA, SOUTH AFRICA

Project Manager and Lead Geotechnical Engineer for the Feasibility Study for the proposed Der Brochen Platinum Mine, at the time, this was to be the largest platinum mine in the world. The work included:

- ✦ Investigation and preliminary design of 5 portals for the main adits.
- ✦ Investigation of the plant site.
- ✦ Investigation of three potential tailing storage facilities (approx. 200 ha each).
- ✦ Sourcing of suitable borrow materials for earthworks.

3.4. LAND DEVELOPMENT

RESIDENTIAL AND COMMERCIAL SUBDIVISIONS - WESTERN AUSTRALIA

Project Manager and Lead Geotechnical Engineer on numerous large (50-100 ha) residential and commercial sub-divisions in Perth, Albany, Margaret River, Geraldton and the Pilbara. Work included site classification, ground improvement, anchor design, earthwork verification, Acid Sulfate Soils (ASS) assessments and remediation of soft soils and uncontrolled fill.

3.5. INDUSTRIAL

KWINANA GAS POWER STATION – KWINANA, WESTERN AUSTRALIA

Manager and Geotechnical Engineer for a geotechnical investigation for the Kwinana Gas Power Station, WA. This included assessment of small strain shear moduli for the analysis and design of dynamically loaded foundations.

PG GLASS – SPRINGS, SOUTH AFRICA

Project Manager and Lead Geotechnical Engineer for the new float glass line at PG Glass. The work included:

- ✦ Detailed geotechnical investigation involving the drilling of rotary core boreholes.
- ✦ Assessment of the ground water table.
- ✦ Assessment of karst risk and potential heave.

- Preliminary pile design for tender purposes.
- Evaluation of the piling tenders.
- Site supervision during piling.

SCAW METALS – WADEVILLE, SOUTH AFRICA

Project Manager and Lead Geotechnical Engineer for several large upgrade projects within the Scaw Metals Steel Factory.

SALDANHA STEEL PROJECT – SOUTH AFRICA

Site Geotechnical Engineer on a detailed geotechnical investigation for the new steel plant.

3.6. KARST RISK ASSESSMENT

DOLOMITES – SOUTH AFRICA

Lead Geotechnical Engineer responsible for the assessment and design of rehabilitation of numerous small to large-sized dolomite related sinkholes throughout the residential and mining areas around Johannesburg.

4. REFEREES

Name	Company	Telephone	Email
Andrew Cray	Golder Associates	9213 7600	acray@golder.com.au
Dr Doug Stewart	Golder Associates	9213 7600	dstewart@golder.com.au

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