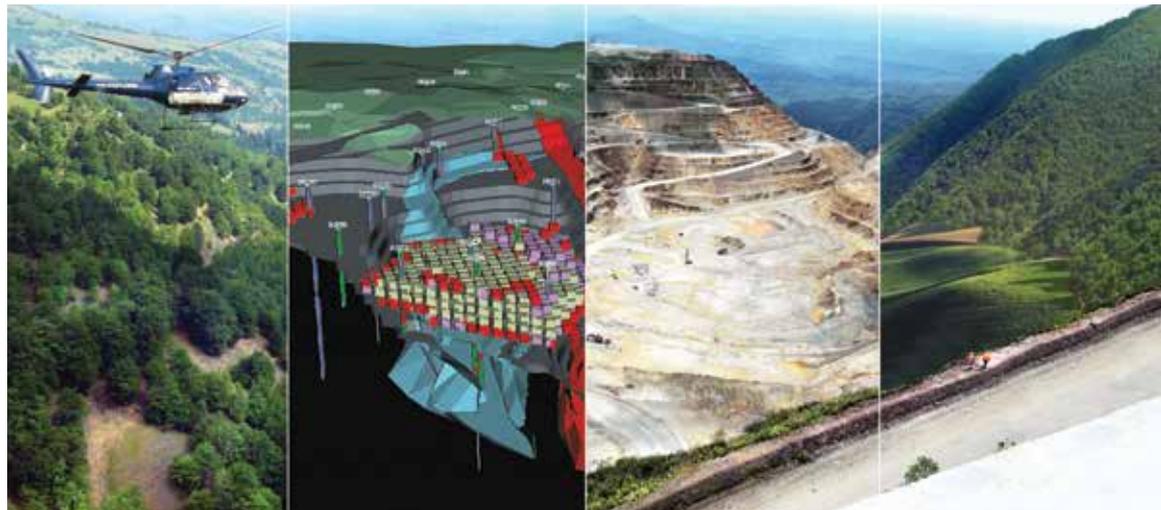


overview of services

the global experience you need to develop
the resources of a competitive world



 **srk** consulting



at your service

With more than 1400 consulting engineers and scientists, in over 45 offices on 6 continents we bring a truly global perspective to your unique requirements. Projects large or small, in the tropics or permafrost; we've given our clients innovative, practical, cost effective solutions for over 40 years.



One stop consultancy

SRK provides a truly comprehensive range of consulting services to resource industries.

We can assist mining companies from grass roots exploration through to mine closure. Our clients range from local retailers to the world's largest industrial players.

We value our independence, and we work harder than you might think to keep it. Clients come to us when they want real answers, not a prefab formula.

Who's on the team?

SRK's reputation springs from the talents of our people. We provide an environment that recruits and nurtures world class talents in a unique global consultancy.

Our team's expertise prompted one client: "We are amazed at the breadth of skills and quality of people you have".

Our staff publish technical papers regularly and many are recognised international experts.

We've got our feet on the ground

Our approach is straightforward. The best people, combined with the innovative application of leading edge ideas and technology.

That's why the international banking and investment community regards our studies as the best available. That's why one of our clients remarked "We are somewhat disappointed to see SRK's name on a feasibility study – it means we can't use SRK as the bank's independent engineer to do the due diligence".

Why do you choose us?

We recommended a 4° increase in the slopes of a Botswana diamond mine, where each degree represented potential savings of \$12 million in stripping costs.

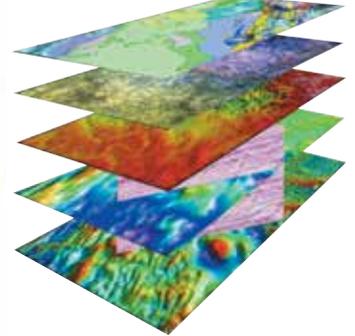
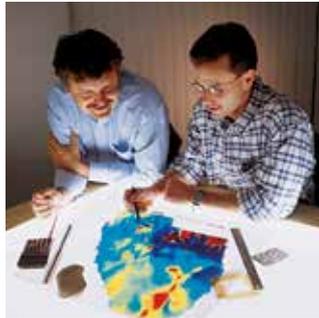
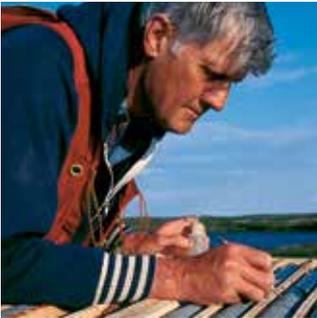
Our geological consulting work in a Papua New Guinea mine has added 500,000 ounces of gold to the reserves.

Using fertiliser and bacterial action we have cleaned up a site contaminated with 8,000 litres of diesel oil.

We look beyond the obvious. You invite us to the table because we do.

exploration

You explore to create wealth. You need the most effective methods to find the best opportunities and make choices. With state-of-the-art targeting tools, we can minimise your risks, cut your costs and reduce your time frames. Our independent assessments and advice provide the basis for your choices.



World Class Experts

Our expertise across a wide spectrum of geological disciplines ensures that maximum value is obtained from your data to define your exploration targets.

Our staff includes world recognised experts in structural geology, seismic interpretation, alteration geochemistry, and design and management of exploration projects.

Our targeting concepts are applied throughout the petroleum and minerals industries in exploring for precious metals, base metals, diamonds, petroleum, gas, coal and industrial minerals.

Interpretation and Integration

Our experts integrate complex data sets to generate and refine targets, define controls on ore bodies, and delineate prospective structures and sequences.

We are recognised as world leaders in interpreting integrated data sets for target generation, including aeromagnetic, radio-metric, gravity, landsat and seismic data.

We effectively map open pits and underground mines to improve grade control, ore reserve modelling, mine plans and near mine drill targeting.

Independent Assessment and Resource Estimation

From the world's major mining houses to junior resource companies, our clients turn to us for reviews, audits and independent assessment of their projects.

Resource estimations using the most appropriate methods based on rigorous data analysis and sound geological assessment of ore systems provide clients with a clear understanding of reliability and risk at all stages of reserve development projects.

Our independent reports and due diligence programs carry the weight of our global reputation in the stock markets and banks of the world.

Products and Training

Our R&D team has developed a range of high quality digital exploration GIS products that include country studies, and world comparative studies of geological terranes for generative work.

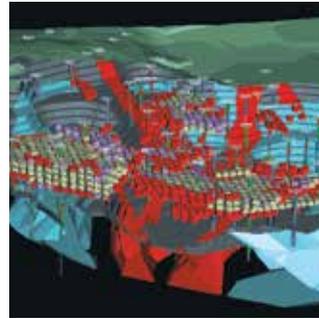
We offer practical courses and workshops for geologists in mineral exploration, resource estimation and mining.

You select the modules most appropriate for your staff, your geological environment and your exploration objectives, with examples chosen for practical field study on your property.



mining

Profitable mining demands an independent, experienced, long term perspective that gives you real answers. How much do you have? Have you got a mine? Is it feasible? What's the optimal design? SRK's experienced personnel and practical technology give you options and solutions.



All types of mining, every continent

Our experience with all types of mining projects on every continent includes surface and underground mines; geology and resource estimation; slope stability and strata control; rock engineering; heap leach processes; tailings disposal; acid rock drainage; waste engineering; and environmental monitoring and management.

Our extensive experience from mine planning through to mine decommissioning ensures innovative, cost effective and environmentally acceptable solutions from prefeasibility to site rehabilitation.

One stop consultancy

If you're planning a new mine or a new investment, now you have the opportunity to employ a team of specialists from a single company for fully integrated feasibility studies, due diligence assessments, economic evaluations, detailed mine design, pit optimisation, production scheduling and mine planning.

We combine engineering expertise with environmental considerations to design, manage and close heap leach, tailings and other mine waste facilities.

What does your operation need?

Existing operations benefit from our audits and engineering services. We'll help you optimise head grades and increase tonnage, analyse and reduce risk, improve safety and manpower requirements.

Our advice to the deep underground gold mines of South Africa differs from our advice to a Vancouver junior exploring in South America. We tailor solutions to your country and environment with the right team for your needs.

Independent, qualified perspective

Mining is a risky business with the potential of very significant rewards. Everyone is finding mineralisation but very few show a return. How do you manage that risk?

You need an independent, qualified, long term perspective that gives you real answers. We identify the issues and opportunities, and give you flexible solutions.

Our comprehensive reports help your board of directors and technical staff make informed business decisions.



environment

Proactive environmental planning saves money. What are the issues and regulations? How do you minimise your liabilities? SRK's professional staff have the specific experience you need to satisfy the regulations and apply cost effective, technically sound solutions to your environmental challenges.



We get you where you want to go

Our knowledge of the regulations, field experience, proven technical expertise and a history of success ensures your project proceeds as smoothly as possible.

SRK's environmental professionals provide site assessment, impact analysis, compliance audits, permitting, public involvement and community planning and facilitation, detailed site investigation, soil and ground water remediation, air quality services, waste characterisation and disposal, risk management, emergency response, and site closure and rehabilitation.

Get it right – up front

The key element of any successful project is identifying the issues up front. Will you recognise a fatal flaw when you see it?

SRK's practical experience with some of the world's largest heap leach, waste and tailings disposal facilities, helps you identify the critical issues in design and management so facilities can ultimately be safely and properly closed.

Our foresight at the outset of a project means you can avoid costly remediation down the road.

What's the problem?

There are many ways to look at your particular situation.

Each affected party will see a project differently. How do you involve each group and balance their input to ensure a project's success?

Where do you transport material for disposal – or do you? On-site treatment is often a fraction of the cost. Perhaps you need careful monitoring rather than aggressive treatment.

You benefit from our insight with problems large and small, and our experience with solutions everywhere in the world.

We all benefit from the solution

We pride ourselves on solutions that sustain commercial interests *and* a healthy environment.

We work with mines looking for economical, effective compliance; with small businesses and industrial giants that all need to solve a legacy of problems; with financial institutions that need to assess and manage risk; and with environmental protection agencies looking for assurances and solutions.

SRK teams include world recognised experts and specialists with experience in practical, cost effective applications.



water

Scarce, plentiful, wasted, coveted – water is fast becoming the world’s most precious commodity. Too much in the wrong place at the wrong time and this valuable resource becomes an unwanted hazard. We’ve helped clients manage water in all its forms everywhere in the world.



Water, water everywhere

Water moves continuously through the environment. Seldom is it the right quantity or quality to suit our ever increasing needs.

You can take advantage of an integrated water management system designed to cut your costs, using SRK’s combined surface and ground water resource evaluation expertise to assess and supply your needs.

Not a drop to drink

At a mine in Chile’s Atacama Desert we have cut water consumption by 42% with improved tailing pool designs and reclamation processes.

Ground water contaminated by industrial developments and waste disposal is being treated right now with facilities engineered by SRK.

Rivers polluted by acid mine drainage from abandoned operations have been restored to healthy condition with inexpensive passive treatment systems.

Foresight saves time, effort and money

SRK’s comprehensive approach to planning water projects lets us anticipate potential problems.

By considering water issues during exploration drilling, a large amount of essentially free hydrogeological test data can be obtained.

Filling abandoned large quarries with excess winter river flow is an effective closure method and supplements downstream users and local towns during dry summer months.

Commitment to this valuable resource

SRK’s water professionals can assist with mine and industrial water management, water supply and water quality and national and local management strategies.

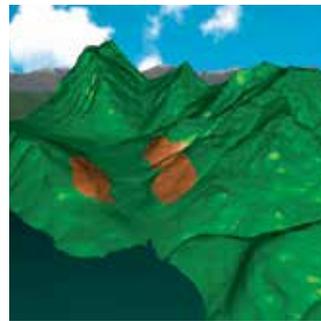
If you’re concerned about the impact of your project on the water environment SRK can provide a world class team and the approach to solving your problem from scoping studies to feasibility, design, commissioning and monitoring.





civil geotech

Stability. Solid foundations. Whether it's a multi-storey building, a mine development, a road cutting or a tunnel, you don't need to risk costly surprises from unforeseen settlement, instability or seismic hazards. Our geotech professionals give you the right foundation for a profitable project.



Latitude and flexibility

Providing you with a clear, comprehensive set of foundation design options and their time-related risks is a cornerstone of our engineering services. You can compare these alternatives and make an informed decision on the best one for your needs and risk profile. Our experience helps you minimise risk and keep projects on track and within budget.

As you move through the earth, SRK can support your buildings, your roads, your rivers and canals, the bridges over them and the tunnels under them.

Solid solutions for unstable sites

One of the surest ways to exceed a construction budget is to underestimate the costs of excavation and shoring. We provide reliable estimates for the temporary support of excavations on confined sites.

If your project site is on soft compressible soil or landfill we can provide options for ground improvement and foundation support that include conventional piles, wick drains, stone columns, preloading and weight compensated foundations that use lightweight cellular concrete.

Sedimentation and erosion control

Whether you're involved with residential construction or resource extraction we can deal with accelerated erosion from construction ground disturbance and/or waste disposal.

For complex situations we use computer models to forecast erodibility and sedimentation. Solutions have included settling ponds, diversion systems, barriers, oil/water separators and extending landfill and tailings waste designs.

Practical advice for tunnel construction

For tunnel investigations, we combine our geotechnical experience and structural geology skills with our knowledge of conventional and mechanised construction to assess design parameters. We use numerical and empirical techniques of analysis to produce designs and to evaluate construction alternatives.

We have assisted clients in sourcing construction bids, overseeing construction and updating designs according to the evolving geotechnical understanding. On the Santiago subway construction project, our alternative design facilitated savings of 30% in cost and 35% in construction time.

Country website addresses

Africa: <http://www.srk.co.za/>
Argentina: <http://www.latam.srk.com/>
Australia: <http://www.asia-pacific.srk.com>
Brazil: <http://www.latam.srk.com/>
Chile: <http://www.latam.srk.com/>
China: <http://www.asia-pacific.srk.com>
Hong Kong: <http://www.asia-pacific.srk.com>
India: <http://www.asia-pacific.srk.com>
Kazakhstan: <http://www.srk.kz>
North America: <http://na.srk.com/>
Peru: <http://www.latam.srk.com/>
Russia: <http://www.srk.ru.com/>
Sweden/Finland: <http://www.srknordic.com/>
Turkey: <http://www.srkturkiye.com/>
United Kingdom: <http://www.srk.co.uk/>
(UK) Exploration Services: <http://www.srkexploration.com/>



close at hand

■ SRK project countries
○ SRK offices

Who in the world do we work for?

Our clients are as widespread as our projects are varied.

This abridged list indicates where we've been working with clients, including mining companies, government departments, regulatory authorities, local governments, property developers, water authorities, power utilities, contractors and consulting engineers.

Where in the world do we work?

- | | | |
|-------------|--------------------------|------------------------------------|
| Afghanistan | Bolivia | Costa Rica |
| Alaska | Bosnia | Cuba |
| Albania | Botswana | Cyprus |
| Algeria | Brazil | Czech Republic |
| Andorra | Brunei | Democratic Republic of Congo (DRC) |
| Angola | Bulgaria | Denmark |
| Antarctica | Burkina Faso | Dominican Republic |
| Argentina | Burundi | Ecuador |
| Armenia | Cambodia | Egypt |
| Australia | Cameroon | El Salvador |
| Austria | Canada | Eritrea |
| Azerbaijan | Central African Republic | Estonia |
| Bahrain | Chad | Ethiopia |
| Bangladesh | Chile | Fiji |
| Belarus | China | Finland |
| Belgium | Columbia | France |
| Bhutan | | |



- | | | | | | |
|---------------|-------------|---------------|-------------------|-------------------|--------------------------|
| Gabon | Indonesia | Madagascar | Nigeria | Serbia | Turkey |
| Gambia | Iran | Malaysia | Norway | Sierra Leone | Uganda |
| Georgia | Ireland | Malawi | Oman | Singapore | Ukraine |
| Germany | Israel | Mali | Pakistan | Slovakia | United Kingdom |
| Ghana | Italy | Mauritania | Panama | Solomon Islands | Uruguay |
| Greenland | Ivory Coast | Mexico | Papua New Guinea | South Africa | United States of America |
| Greece | Jamaica | Mongolia | Paraguay | Spain | Uzbekistan |
| Grenada | Jordan | Morocco | Peru | Sudan | Vanuatu |
| Guatemala | Kazakhstan | Mozambique | Philippines | Suriname | Venezuela |
| Guinea | Kenya | Myanmar | Poland | Swaziland | Vietnam |
| Guinea-Bissau | Korea | Namibia | Portugal | Sweden | Yemen |
| Guyana | Kyrgyzstan | Nepal | Republic of Congo | Switzerland | Yugoslavia |
| Herzegovina | Laos | Netherlands | Romania | Tajikistan | Zambia |
| Honduras | Lesotho | New Caledonia | Russia | Tanzania | Zimbabwe |
| Hungary | Liberia | New Zealand | Rwanda | Thailand | |
| Iceland | Libya | Nicaragua | Saudi Arabia | Trinidad y Tobago | |
| India | Macedonia | Niger | Senegal | Tunisia | |



For more information on our services and for a complete directory of our offices, visit our website:

 **srk**.com

© SRK Consulting 2016