corporate profile
an overview of who we are
Our mission
- We provide expert advice and solutions in natural resources

Our vision
SRK aims to be recognised as:
- Experts in the selected fields of natural resources in which we choose to practice
- Technologically advanced, while practical and business oriented
- A partner of choice for our clients by:
  - Adding value to their projects
  - Being worthy of their confidence by remaining accountable for our actions
  - Delivering services based on real needs

Our philosophy
- Clients: We believe that in order to succeed we must contribute to the success of our clients
- Staff: Our performance and abilities are only as good as the staff we are able to attract, develop and retain
- Technology: A cornerstone of our philosophy is to develop and embrace new technologies and methodologies to the advantage of our clients and our business
- Cooperation: We encourage cooperation and communication between our international offices, and work with international partners to the best advantage of clients
- Growth: It is our view that growth of our business must be in response to the requirements of clients

Our objectives

People goals
- Maintaining broadly-based employee ownership
- Providing an environment for a satisfying and challenging career
- Providing an umbrella for ambitious staff members to grow their client base and their reputations in directions of their own choosing
- Maintaining an environment which is conducive to innovative thinking and solutions
- Recognising and rewarding excellence and achievement
- Fostering a unified corporate culture

Financial goals
- Providing a superior investment for employee shareholders
Our last Corporate Report was produced in 2005, shortly after our 30th anniversary celebrations. The intervening period has seen a significant increase in the demand for metals and bulk commodities in particular, which was dramatically interrupted by the Global Financial Crisis. While mining generally recovered very quickly, many industries are still facing challenges, and much uncertainty remains. It has been a period quite different from any other we have experienced in recent times.

Despite the general uncertainty, however, we have continued to undertake our project work, and to grow in staff numbers and to progress our various strategic initiatives. As a result, I am sure we are now in a much better position to provide our services within the regions in which they are required.

Since our last report, we have started new SRK practices in India, Russia, Indonesia, Sweden, Democratic Republic of Congo, Mongolia, Kazakhstan, Mexico and Ghana, and merged with VS Consultores in Buenos Aires to form an SRK Practice in Argentina. At the same time we have extended the reach of our existing Practices by opening additional offices in Saskatoon and Sudbury in Canada; Melbourne in Australia; Kimberley in South Africa; Anchorage in Alaska; Nanchang in China; and Mendoza in Argentina. In addition to all of this, we are actively evaluating initiatives in Peru.

Since 2005, our staff numbers have in fact doubled to just over 1,000. This growth has forced us to work hard to knit the global entity of the SRK Group as closely as possible, and we have encouraged a lot more interaction among the practices in the form of technical workshops, secondments and transfers. This has, I am sure, both improved the quality of work we undertake and our ability to serve clients in so many parts of the world.

We have increased our links with universities and colleges in many countries, which has enabled us to maintain our research efforts and remain in contact with, and help encourage, new people joining the industry. Recruiting good people remains a key focus and we continue, in particular, to look for entrepreneurial individuals to run their practices within the SRK Group and to share in the ownership and direction of the organization. We have significantly increased our emphasis on responsible Health and Safety practices, have adopted a Sustainability Policy across the Group, and have steadily implemented a more structured approach to quality management.

Even as I report these highlights of the SRK Group’s activities, I am mindful that none of the developments in SRK, recent or past, would have been possible without the commitment of our staff and the patronage and encouragement of our clients. While mining generally recovered very quickly, many industries are still facing challenges, and much uncertainty remains. On behalf of my colleagues around the SRK world, I express our profound gratitude for the role you continue to play in our development.

From the Chairman

Mike Armitage, Chairman
June 2011
Formed in 1974, SRK now employs more than 1000 staff in over 40 offices on 6 continents.

The SRK Group’s independence is ensured by the fact that it is strictly a consultancy organisation, with ownership by staff. It does not hold equity in any project, nor do our consultants serve as directors on listed companies. This permits our consultants to provide clients with conflict-free advice and objective support on crucial issues.

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
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<tbody>
<tr>
<td>1974</td>
<td>Oskar Steffen, Andy Robertson and Hendrik Kirsten establish SRK in Johannesburg, South Africa, offering services in soil and rock mechanics and tailings disposal.</td>
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<tr>
<td>1977</td>
<td>SRK introduces services in mine planning. Services extended into environmental engineering arena.</td>
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<tr>
<td>1979</td>
<td>Services in hydrology and hydraulics offered for the first time. Staff complement reaches 100.</td>
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<tr>
<td>1981</td>
<td>Zimbabwe practice established in Harare. GEMCOM South Africa formed.</td>
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<tr>
<td>1983</td>
<td>Staff complement reaches 200.</td>
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<td>1985</td>
<td>Gemcom Services Inc. formed in Vancouver. Water quality services introduced.</td>
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<td>1988</td>
<td>SRK South Africa merges with Binnie &amp; Partners (SA), extending the firm’s skills in water and effluent technology, structural engineering, and hydraulics. UK practice established in Cardiff. Robinson Dames and Moore purchased and renamed SRK-Robinson Inc., operating in Burnaby, Canada. GIS/DIP services introduced.</td>
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<tr>
<td>1993</td>
<td>Port Elizabeth and Pietermaritzburg offices open in South Africa.</td>
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<tr>
<td>1994</td>
<td>Chilean and Australian practices established in Santiago and Perth respectively. International holding company, SRK Consulting Limited, formed in UK.</td>
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SRK Consulting employs leading specialists in the fields in which we offer services. Our seamless integration of services and global base enables us to provide comprehensive services in technical advice, feasibility studies, due diligence and confidential internal reviews.

Among SRK’s clients are many of the world’s mining companies, exploration companies, financial institutions, construction companies and government bodies.
Sustainability policy

SRK recognises the importance of economic and social development, and we contribute to its realisation in many ways. In this context we have a responsibility to encourage and support development that can be sustained environmentally, socially and economically for the lasting benefit of those involved. We do this through:

- Our own management and operational practices
- Our natural resources and wider consulting services
- Our relationships with clients and other stakeholders

Our consulting practices are central to the realisation of this policy and they will elaborate and implement it in a manner appropriate to their contexts and focus.
Health and safety policy

We place the highest importance on safety and are committed to ensuring that all work by our staff is carried out in a safe manner.

We make this policy meaningful by:

- Requiring our consulting practices to develop and implement health and safety management programs
- At a minimum, ensuring that our work is carried out in accordance with applicable government and client standards
- Providing appropriate levels of safety training and certification for our staff
- Monitoring health and safety performance across the SRK organisation

Quality policy

We are committed to continually improving our professional consulting services to meet and exceed the needs of our clients.

We make this policy meaningful by:

- Hiring or subcontracting people with a demonstrated high skill level in areas of expertise that match the services provided for clients
- Providing a learning environment where the growth and development of employees is actively encouraged and supported
- Advancing our global capabilities by sharing our experiences, knowledge and resources among and between consulting practices and offices
- Enhancing our global business systems to meet international standards
- Measuring our progress against meaningful targets
SRK Consulting (Global) Limited is the overarching company of the SRK Group. SRK Global, through its Practice Leaders, Board of Directors, Executive Committee and Officers:

- Sets Group direction
- Evaluates options for development of the international consulting practices
- Funds the establishment of new consulting practices
- Promotes cooperation on technical matters among consulting practices
- Produces and reviews Group policies, procedures and standards
- Manages and coordinates Group policies
- Develops and maintains corporate identity and produces marketing materials

Ownership

SRK Global is owned exclusively by employees of SRK Group Companies. SRK employees are offered shareholding at the regional and global levels after being with the Group for a defined minimum period. Maximum shareholding levels are set for each staff category – this is to ensure that Group ownership is broadly based and not dominated by a small number of individuals.

SRK Global maintains a minimum shareholding of 30% in SRK Consulting Practices (CPs). The balance of the shares in CPs is held by regional SRK employees.
Governance and management

Our corporate governance model aims to take account of the unique nature of SRK Consulting—a partnership approach within a corporate vehicle. The functions and roles of our various groupings and designations are outlined below:

**Practice leaders group**

The SRK Global Practice Leaders Group comprises the Practice Leaders from all Consulting Practices. Practice Leaders are generally senior consultants who have earned recognition as “consultants in their own right”, who generate a significant amount of business and have demonstrated a long-term commitment to SRK. Appointment as a Practice Leader requires an invitation from the current regional Practice Leaders and a commitment to achieve defined shareholding levels within a given time. The Practice Leaders assume the major leadership roles in the Consulting Practice.

The SRK Global Practice Leaders Group:
- Develops guidelines, policies and procedures
- Reviews the strategic direction of the organisation and formulates the strategic plan
- Develops and maintains the SRK culture
- Coordinates technology and knowledge transfer through information sharing and internal workshops
- Sets group standards for quality, health, safety and sustainability

Representatives of the SRK Global Practice Leaders Group generally meet every two years.

**Board of directors**

Directors are elected for a one-year term. Consecutive terms are permissible so that the entire Board will not change in any given year.

The SRK Global Board (2010/11) is made up as follows:
- Two USA directors
- Two Australian directors
- Two Canadian directors
- Four South African directors
- One Chilean director
- Two UK directors

Directors for 2010/11 are: Mike Armitage, Andy Barrett, Jean-Francois Couture, Sjoerd Duim, Tim Hart, Iestyn Humphreys, Peter Labrum, Brian Middleton, Alejandro Palma, Jeffrey Parsley, Neal Rigby, Paul Schmidt, Kurt Uderstadt

The Board appoints officers as follows:
- The Group Chairman who manages the Board
- The Group CEO who ensures the effectiveness of the SRK Group and CPs
- The Group CFO who is responsible for financial planning and controls for the Group and company

The Board meets annually. The main duties of the Board are:
- Monitoring the performance of CPs
- Monitoring implementation of the strategic plan
- Ensuring that policies are implemented
- Providing support to CPs where challenges arise

Other Board functions include approving the annual company budget and strategic plan; new group policies and procedures; the annual report; the licencing of new CPs; acquisitions and mergers, and the financial statements.

The Board delegates routine activities to the Executive Committee (ExCo) — comprised of the Group CEO and CFO, and the Managing Directors/Presidents of the CPs. The main ExCo functions are:
- Facilitating interaction of the CPs
- Identifying inter-company conflicts and devising appropriate actions/policies/procedures to resolve these
- Ensuring implementation of Group policies/procedures
Consulting practices
Market sectors and clients

We focus on civil and geotechnical engineering for the mining and construction industries, with emphasis on tunneling, soil-structure interaction, rock mechanics, earthquake engineering, and water and tailings dams.

Major services

Our Buenos Aires services include geological/geotechnical modelling; geotechnical engineering for open pit and underground mining; tailings facilities; design of tunnels and underground space; groundwater studies including: water supply, dewatering and depressurization; seismic hazard and earthquake engineering; computational geomechanics and structural engineering.

We recently opened an office in Mendoza, close to the major operating mines in Argentina. In its initial stage, the Mendoza office will focus on resource evaluation, mine planning, and environmental engineering services.

New strategies

We are poised to grow with the Argentinian Mining Industry. At present, we are focusing on exploration geology and tailings.

Example projects

Buenos Aires Metro

Since 1998, our professionals have been involved in basic and construction engineering for the extension of the Buenos Aires Metro System. Projects include geotechnical and structural design, numerical modelling and final construction engineering for 8km of tunnels, several underground and cut-and-cover metro stations and complementary facilities. Additional services include site supervision, design review and general consulting services for underground space engineering. Our clients are the contractors of the projects and the Metro Authority.

Los Caracoles dam

Our professionals have been involved in geotechnical consulting services for the Los Caracoles Hydropower Dam, located in San Juan, Argentina, from 2006 to 2008. Los Caracoles is a CFRD (Concrete Faced Rockfill Dam), 136m high, located in a geologic region of high seismicity. The project included seismic stability analyses and reinforcement design for a very large rock slope located immediately above the spillway’s inlet and construction engineering for twin spillway tunnels with a cross section of 120 square meters.

Pirquitas mine

Pirquitas is a gold/zinc mine located in Jujuy, Argentina. Our professionals assisted the EPCM contractor Techint by performing a general peer review of the basic engineering for the process plant, waste dump and tailings facilities. They also specified the grading, compaction and foundation systems for the main process plant; participated in the design of the diversion dams; and performed the final design of the geomembrane-lined tailings dam, including the detailed documentation for construction.
Market sectors and clients

We focus on projects in the mining sector for major, mid-tier and junior mining companies, financial institutions and engineering companies.

Major services

Our services include:

Exploration: geophysics, structural and resource geology, valuations.
Mining: underground, open pit, and corporate services.
Environment: environmental and social services.
Water: surface water, groundwater, water quality.
Geotechnics: surface geotechnics, underground rock mechanics.
Waste: tailings and mine waste engineering.

Example projects

3D exploration targeting

SRK was employed by Focus Minerals Ltd to generate near-mine exploration targets for their gold deposits in Western Australia. This involved the compilation of a large amount of historic and recent geological and geophysical data in a 3D environment. The 3D model was used to investigate structural features that could host extensions of gold mineralisation near existing deposits. The client’s initial drill testing of SRK targets resulted in significant gold intersections at depth.

Subsea investigation

Over a six-year period, SRK provided an independent technical review of Seafloor Massive Sulphide projects in Papua New Guinea and Tonga for Nautilus Minerals, including observations and review of ship-based mapping, sampling and drilling. Nautilus is the first company to explore commercially for this newly-recognised deposit type. SRK also completed the offshore production system definition and cost study for the project, which summarised five years of geological, exploration and engineering studies.

Tailings expansion

SRK was commissioned by Focus Minerals to undertake an evaluation of its current operations, and design an extension in support of mining expansion. SRK developed operating strategies to maximise the remaining life of the Tailings Storage Facility, manage the various deposition scenarios, facilitate the decanting process and lay the groundwork for the proposed facility expansion. SRK undertook the detailed geotechnical and geochemistry evaluation and the detailed design of the expansion.
New strategies

We will continue strengthening our services in geology, mining, water, environment, waste and geotechnics to the mining industry. We will identify areas where we can best focus our service offerings to grow both organically and geographically. We have been at the forefront of technological advances in such areas as 3D modelling, and will continue these thrusts.

With the capability to provide exploration services to the energy (petroleum, oil and gas) industry world-wide, and, using new technologies, we can build on past relationships, particularly in the Middle East. We will expand our niche services outside of the mining industry and focus on similar and compatible resource industries: specifically, waste, chemical and water.

We will concentrate on strengthening our ties with SRK Group companies in China, India and Indonesia and, with their assistance, actively pursue expansion into the Australasian and southeast Asian countries.

We aim to maintain our standards and ISO 9001 quality accreditation. We are currently upgrading our Occupational Health and Safety practices in line with the Group focus, and will seek accreditation in this area.

Example projects

Weld Range

Over the past three years, SRK has worked on the Weld Range iron ore project in the Murchison region of Western Australia. SRK has provided integrated technical and management solutions, with expertise in project management, mine planning, resources, geotechnical engineering, hydrogeology and geochemistry. The client, Sinosteel Midwest Corporation, which continues to develop the Weld Range project, plans to produce 15 million tonnes a year of a direct shipping ore product.

SRK has delivered field and office based programs, resulting in standalone technical reports, which have been key technical documents for both the prefeasibility and bankable feasibility studies. Additionally, SRK assisted the client in authoring the overarching bankable feasibility study summary document that presented all the project studies in one report. SRK continues to work with the client in the value improvement and risk mitigation phases of the project.

Ok Tedi

SRK has worked on the Ok Tedi copper-gold mine in Papua New Guinea since 2006, completing studies in hydrogeology, structural geology, geotechnics and mining engineering. In the conceptual and feasibility phases, SRK developed specialised numerical models to assess the stability of the underground operations interacting with the open pit. Key insights from this modelling helped refocus the project at various phases, selecting optimal mining methods to ensure mine stability.
Due diligence services
We have participated in several due diligence studies, at the level of fatal flaw and bankable opportunities, to clients seeking certification of reserves and resources for Brazilian deposits of iron ore, gold and copper, among others. Within this kind of service, many projects consist of advising companies and investors by evaluating and negotiating mineral assets.

Bahia Mineração
Bahia Mineração (BAMIN) is developing the Project Pedra de Ferro in Bahia state; it is designed to produce iron ore concentrates for export. Currently, this project is at the feasibility stage. Together with our UK office, SRK has been supporting BAMIN in developing this project since completing the initial scoping study.

Beadell Resources
The Tucano gold project located in the State of Amapá, Brazil, is owned by Beadell Resources Limited, whose head office is in Perth, Australia. The area covers approximately 2,500 km² of contiguous exploration licenses and a mining concession. SRK is undertaking a definitive feasibility study to recover gold from sulphide ore. Being in the Amazon region, state of the art environmental measures are being carefully developed as well.
SRK Consulting (Canada) Inc.

Established in 1978

5 offices & 123 staff in: Saskatoon, Sudbury, Toronto, Vancouver, Yellowknife

Shareholding: 64 CA & 52 US Employees own 70% of SRK (NA), SRK Global 30%

Practice Leaders:

Dr Wayne Barnett, Andrew Barrett, Glen Cole, Dr. Jean-Francois Couture, Stephen Day, Gordon Doerksen, Peter Healey, Daryl Hockley, Jarek Jakubec, Mark Liskowich, Bruce Murphy, Ken Reipas, Dr Maritz Rykaart, Darrell Sandison, Cam Scott, James Siddorn

Market sectors and clients

We focus mainly on projects in the mining sector. Clients include major, mid-tier and junior mining companies, public sector organisations, financial institutions and engineering companies.

Major services

Geological interpretations (structural; geophysical); resources and reserves; independent reporting; engineering studies (scoping, prefeasibility, feasibility); geotechnical studies (rock mechanics, soil mechanics); permitting, environmental geochemistry (acid rock drainage, metal leaching, water chemistry predictions); mine waste engineering (tailings, heap leach, waste piles); mine water management; mine closure studies; due diligence studies (banking, M&A, liability assessments).

New strategies

We continue the development of our offices in Sudbury and Yellowknife. We continue to look for experienced staff in all our business units to meet project demands in this booming resources market.

Example projects

Xstrata

We were commissioned by the integration planning team of Xstrata plc to provide technical guidance for evaluating Falconbridge’s exploration assets. SRK’s assignment was to complete a desktop review, providing an independent assessment of their realizable value, as well as commenting on the capabilities of the exploration team. Within six weeks, a team of 14 SRK geologists reviewed over 60 active exploration projects in 14 countries, assessed their merit, and provided a “fair market value” opinion.

Hope Bay

SRK has been working on the Hope Bay Gold Project since 2002 from preliminary assessment to final regulatory approval. Located south of Roberts Bay, on the Arctic coastline, the high grade gold deposits will be developed through a series of underground and open pit mines with the ore processed on site into gold bars. SRK completed hydrogeological and geotechnical assessments for the mines, and designs for most of the supporting surface infrastructure currently under construction. SRK has an ongoing role in developing environmental management plans for current facilities and activities.

Sabodala gold project

We were contacted in 2006 by the Oromin Joint Venture Group to conduct a preliminary project review on the Sabodala gold project, located in eastern Senegal. In 2008, SRK was asked to undertake a preliminary feasibility study (PFS) and baseline environmental monitoring on the project. The PFS report was finalised in 2009, after which SRK conducted a feasibility study and environmental and social impact assessment, released in 2010.
Market sectors and clients

We focus on projects in the mining sector, with major, mid-tier and junior companies, in addition to tunneling and special foundations projects for companies in the civil sector.

Major services

Site investigations, geological/geotechnical modelling and 3D visualisation, structural and economic geology, resource estimation, due diligence audits, geotechnical engineering for open pit and underground mine design, waste dumps, tailings facilities, and tunnel design. Mining engineering including feasibility studies, mine design, infrastructure and operations planning. Groundwater studies including water supply, mine dewatering and pit slope depressurisation, field investigations, computer modelling, and surface water management. EIA studies including management of permitting applications and mine closure planning.

New strategies

We will be focusing on the development of mining engineering services as well as geochemistry related to mine closure and geotechnical underground design.

Example projects

Anglo American

SRK’s technical site supervision of the South Tunnel at Los Bronces Mine, involved the control of operational, geological and topographically advanced aspects of design, from concept to detailed engineering, for a tunnel boring machine (TBM) for an 8km x 4.5m tunnel. The first stage of the work included excavation with traditional drilling and blasting methods of the surface portal and the TBM chamber. Second stage (excavation with TBM) is still ongoing.

Minera Esperanza

SRK’s scoping engineering for a thickened tailings deposit included site selection, analysis of capacity and stability of the deposit. At the feasibility stage, SRK produced the design of the TTD facility, including drawings and quantities for capital and operational costs. The project advanced to detailed engineering where SRK completed the design of a deposit that could be expanded to 750M tons. The contract included construction drawings of the pre-commissioning works of the tailings deposit for a capacity of 500M tons.

Mineral Tayahua, Mexico

A scoping study to select the mining method and underground operation design for a skarn-type deposit at Minera Tayahua (MT), covered mining, geology, resource estimation, and a geotechnical model, addressing environmental issues and hydrogeology. The report recommended a high productivity and extraction rate and an outline of actions required to commercially exploit this geological resource. The business potential was also identified. MT can now make decisions on a strong technical basis.
SRK Consulting (China) Ltd.  

**Market sectors and clients**

We focus mainly on projects in the mining sector. Our clients include large and medium sized mining companies and investment companies, both at home and abroad.

**Major services**

We provide due diligence for auditing, mergers, acquisitions and listings, QA/QC management of exploration programs, resources and reserves estimation, engineering studies (scoping, prefeasibility and feasibility), geotechnical investigation and numerical modelling.

**New strategies**

We aim to develop services in mine design and feasibility study areas and enhance our coal capability to accommodate the increased market demand. We will continue to support the development of the Ulaanbaatar office.

**Example projects**

**Kulihuoshatu**

SRK prepared an independent technical report as well as a valuation report on the Kulihuoshatu coking coal project located near Wuhai City, in the Inner Mongolia Autonomous Region of China. SRK reviewed the resource, reserves, operating open pits and design of the underground mine, together with the design of the processing plant and coking plant. The review was used to support an acquisition and transaction that took place on the Stock Exchange of Hong Kong Limited; the results were successful.

**Xinjiang Xinxin**

SRK prepared an independent technical report for the mining operations and development projects of Xinjiang Xinxin Mining Co Ltd, located in the Xinjiang Uyghur Autonomous Region, to accompany the listing documents for an initial public offering on the Stock Exchange of Hong Kong Limited. The report was designed to provide potential investors with an independent view of the company’s mining assets. Xinjiang Xinxin Mining was successfully listed on the Hong Kong Stock Exchange in October 2007.

**Taliabu**

SRK has been managing a QA/QC drilling program since October 2008 on the Taliabu Iron Exploration Project, located in Maluku Utara Province, Indonesia. The scope of services includes an exploration property review; drill-hole layout design; supervision of daily drilling; provision of technical assistance with drilling; core logging and sample preparation for assay; analysis of assay results; daily, weekly and monthly reporting, and providing quality control to ensure that drilling is done in accordance with international standards.
Market sectors and clients

Our range of services focuses on the Global mineral exploration industry and, as such, remains flexible in order to cater to minor, mid-tier and major mining and exploration companies, private investors and financial institutions.

Major services

Our exploration consultancy services cover the design, management, staffing and reporting of mineral exploration programs; their results range from grassroots to feasibility studies. Additional services include geophysical interpretation, structural geology, licence acquisitions, target generation, technical reports for stock exchange listings and mineral exploration project auditing and valuation.

New strategies

We aim to continue to develop teams of geologists, geophysicists and consultants specialising in the fields of mineral exploration and target generation that are respected and internationally mobile. We recently opened an office in Moscow to better serve our CIS clients and continue to increase our geophysical capabilities.

Example projects

**Skaergaard**

For the last four years, we have been assisting Platina Resources with their exploration and resource development at the world famous Skaergaard PGM/Au project in East Greenland. In the summer of 2009, we mobilised teams for a 6-week, helicopter-supported reconnaissance exploration of the area surrounding the Kangerlussuaq fjord. As a result, we identified a number of new layered intrusions and Au/PGM targets for further followup.

**Kokoya**

We oversaw the acquisition and interpretation of airborne magnetic and radiometric data over three licences held by AmLib in Liberia. In areas of dense jungle and challenging terrain, the data revealed major, previously unrecognised mineralisation, and controlling structures that could not have been identified through conventional mapping. These data are now being used to target exploration around known mineral resources and to locate new mineral occurrences.

**Gran Colombia**

Tapestry Resources, a Toronto-listed exploration company, approached SRK to review a series of Au licences and historical mines in the Antioquia region of Colombia and to assist with their acquisition and subsequent NI 43-101 documentation. Following the mobilisation of field teams, this project involved compiling data and technical reports under the management of a Competent Person. It stretched across 18 licences totalling 6,000 hectares and the development of extensive surface and underground exploration programs.
Narayanposhi iron ore
Aryan commissioned SRK to assist its Brownfield Exploration Program for the Narayanposhi Iron Ore project and to produce an Independent Technical Report, including a Resource Statement in accordance with the JORC Code. First, SRK provided field support during exploration to ensure that international best practices were followed. Then, SRK interpreted the data and estimated the Mineral Resource using geostatistical block modelling, classified the resource following the JORC Code and assessed additional exploration potential.

Deccan Gold Mines
Deccan Gold Mines Limited commissioned SRK to prepare an initial mineral resource estimate for the Ganajur Main gold deposit located in southern India. Our team of consultants from Kolkata and Toronto offices prepared the mineral resource estimate following JORC standards. As the first resource evaluation for the Ganajur Main gold deposit, the model assessed the gold mineralisation delineated by drilling and channelling and provided an independent assessment to justify additional exploration and development work.

Coal India Limited (CIL)
SRK conducted an audit of CIL’s resource and reserve and re-classifying according to Australian JORC code. To dilute its shareholding in CIL, the Government of India proposed to disinvest and appointed SRK to undertake an independent assessment, including an audit of resources and reserves of all 471 operations and submit a JORC statement; prepare an Independent Technical Report for an IPO prospectus for investors inside and outside India, and compare JORC reporting standards with all other similar standards.
Due diligence
We have carried out a number of confidential due diligence studies throughout Indonesia, and in particular in Kalimantan, for the purposes of obtaining finance through independent purchasers, banks and stock exchanges. The scope of services typically covers all aspects of the Resource and Reserve, including mine economics. Our experience and extensive databases have given us a strong reputation in Due Diligence, and have also facilitated client corporate decisions.

PT. Ithaca Resources
PT. Agrabudi Jasa Bersama (AJB), a subsidiary of PT. Ithaca Resources, have done a drilling program for its coal concession in Meulaboh, Aceh Province Indonesia. Ithaca has engaged SRK to prepare JORC Resource and Reserve Statements, and our involvement incorporates detailed geotechnical and hydrogeological studies. SRK's role at this remote greenfield site has included providing support to AJB for contractor management and QA/QC data acquisition.

Gold exploration
SRK provided gold mine exploration management and resources and reserve report preparation for PT. Binadaya Lahan Pertiwi, the owner of the gold mine concession located in the North Sulawesi area. The scope of services included drilling plan supervision, QA/QC, geological modelling, and resources and reserve report preparation. The report was prepared to meet the requirements of the Hong Kong Stock Exchange.
Udokan copper

Udokan is one of the largest undeveloped copper deposits in the world. SRK has been commissioned to provide advice on how to optimise the project, to develop a data collection program that enables the completion of a joint Russian and International feasibility study, and to develop an environmental and social impact assessment that complies with Russian and international requirements.

Iron ore benchmarking

SRK was commissioned to benchmark a major Russian iron ore company’s open pit and underground mines against international practices and to identify opportunities to increase capacity while minimising capital investment. SRK worked closely with the client’s own performance evaluation team to ensure that the conclusions were effective.

Konder platinum

We assisted the client with developing an equipment procurement strategy. This involved working with the client’s team to determine the condition of the existing fleet, developing a life of mine plan and helping to structure a tender document for local dealers to bid on. The result was the selection of a unified equipment fleet and improved dealer support.
Risk aware!

Risk = (event) x Consequences. Mining enterprises demand understanding of geology, hydrogeology and engineering, while uncertainty and variable properties within a rock mass provide the challenge. The minerals industry has established codes for data adequacy to define geological confidence. It’s an engineer’s task to produce a mine design that is functional and economic at an acceptable risk. Risk valuation in geotechnics must be upgraded to meet more rigorous engineering standards.

Eskom’s Nuclear-1 project

In late 2006 SRK began assisting the South African power utility, Eskom, with its nuclear sites program, by developing a business plan and reviewing their quality manual. A detailed site investigation followed of three sites selected for South Africa’s next generation of nuclear reactors. Technical specifications for site safety reports were developed for submission to the regulator. All work was carried out in accordance with stringent quality and safety standards.

Lesotho study tour

SRK facilitated a study tour to the Lesotho Highlands Water Project, under the auspices of the Eastern Nile Technical Regional Office (ENTRO), for 17 parliamentarians from Egypt, Ethiopia and Sudan. The tour was designed to build international cooperation concerning the management of transboundary water resources, and to share lessons from the Eastern Nile and the Lesotho Highlands initiatives. The Trans Caledon Tunnel Authority, the Lesotho Highlands Water Commission and the Lesotho Highlands Development Authority interacted with the group.
A new tailings disposal facility was planned for this open cast platinum mine, situated in the Northern Province, but social issues prevented access to the site. In order to allow the commissioning of the new concentrator to proceed, one tailings dam had to be buttressed with waste rock to temporarily accommodate the additional tonnage. The usual 300t dump trucks could not be used. Instead, the waste rock containment walls were designed to allow for smaller fleet size, maneuverability and the simple but effective “stockpile-to-wall” construction method. The waste rock size was limited, and a smaller fleet used to transport it from the stockpile. The smaller fleet placed approximately 375,000m³ in 4 to 5 months. The monthly operational cost of the tailings dam was reduced by nearly 50%. Later, the dam infrastructure was converted back to the conventional spigot method of deposition.

Discovery Metals Limited commissioned SRK to compile the Environmental Impact Assessment for their Boseto Copper Project in Botswana. The project was undertaken under the terms of the Botswana Environmental legislation. Specialist studies were done internally by SRK or by local subconsultants. Groundwater was a particularly sensitive aspect of this project and SRK assessed it in detail from the point of view of water availability and potential impacts.
Garpenberg

Boliden's Garpenberg mine lies in the Bergslagen district in central Sweden. Boliden commissioned SRK to undertake a technical audit of an internally managed feasibility study, addressing an expansion of the mine, as a basis for financing and to support a board decision. Boliden subsequently committed to invest US$600m in the Garpenberg mine expansion, supporting an increase in annual ore production from 1.4 million tonnes to 2.5 million tonnes.

Photo: Boliden AB

Kaunisvaara

The Kaunisvaara iron ore project, owned by Northland Resources AB, is located in northern Sweden. Northland commissioned SRK to provide technical input to several aspects of the Kaunisvaara feasibility study and, in addition, to prepare an independent NI 43-101 report based on this study. Northland secured financing for the project, and construction of a 5Mtpa open pit operation at the initial capital cost of US$694m has recently commenced.

Photo: Northland Resources AB, Photographer: Ulrica Holm

Rönnbäcken

Rönnbäcken is a high-tonnage nickel sulphide deposit, located in the Caledonies of central Sweden and wholly owned by Nickel Mountain AB. SRK previously carried out an update of the mineral resource estimate, which significantly improved the classification of the resources and afforded the client substantial time and cost savings on budgeted infill drilling programs. SRK is preparing a preliminary economic assessment, in accordance with NI 43-101 on behalf of Nickel Mountain, to support the planned listing of the Company on the TSX.

Photo: Nickel Mountain AB, Photographer: Daniel Photos

Market sectors and clients

Our focus is on providing value adding services to the Nordic mining industry. Our clients include major, mid-tier and junior mining and exploration companies as well as lenders and government institutions.

Major services

Engineering studies such as scoping, prefeasibility and feasibility studies, as well as due diligence reviews and technical audits.

New strategies

As a new company, our focus is on building a profile in the Nordic region. As an integral part of that profile, we are promoting our extensive mining experience to the Nordic mining industry through the broader SRK Group.

Example projects
Çukuralan gold mine, located in western Turkey, is being developed by Koza Gold Corporation. The project consists of a combination of surface and underground mines and aims to extract gold and truck-transport the run-of-mine to the nearby Ovacık gold mine, where it would be subjected to cyanide tank leaching. Our geoenvironmental team is conducting the mine dewatering design and Environmental Impact Assessment studies.

Özkoyuncu Madencilik A.Ş. has been developing the Karacat iron deposit in south central Turkey and SRK was retained to carry out the mine design and LoM scheduling and reporting of ore reserves in a pre-feasibility of the project’s expansion. The work included geological and block modelling, geotechnical studies, and mine planning.

We are conducting an investigation program in the Arzular geothermal prospect in western Turkey. Several structural measurements were taken in order to understand the gross architecture of the system. Clay mineral distribution was studied on Aster images to locate hydrothermal alteration zones. Potential hydrostratigraphical units were studied as part of an initial site hydrogeological survey. A comprehensive geophysical survey program was designed to locate thermal gradient holes.
The Grib diamond project is a large diamondiferous kimberlite located in northern Russia, some 100km from Arkhangelsk. It is wholly owned by OAO Arkhangelskoye Geologodobychnoye Predpriyatiye (AGD), a subsidiary of LUKOIL, one of the world’s leading vertically integrated oil & gas companies. SRK managed the exploration program, and is preparing a mineral resource and ore reserve statement in accordance with the JORC Code, a multi-disciplinary feasibility study to bankable standards and an Environmental and Social Impact Assessment (ESIA). These technical documents parallel and draw upon local regulatory documents authored by Russian design institutes, including the TEO Proyekt (feasibility study), OVOS (feasibility study) and the GKZ reserve statements. In partnering with AGD and the design institutes, SRK’s combined local and international experience ensures efficient compliance with international reporting and project finance requirements.

The Zanaga iron ore project, located approximately 300km from Pointe Noire in the Lékoumou district of Republic of Congo, is currently owned by MPD Congo SA, a subsidiary of Jumelles Limited. This West African iron ore project is the subject of an extensive exploration program, Environmental and Social Impact Assessment and multi-disciplinary prefeasibility study managed by SRK. The current mandate follows on from the scoping study completed by SRK.
in 2009, which predates Xstrata Plc’s project development agreement with Jumelles and Xstrata’s initial equity investment of US$50m. To specifically address the challenging concentrate transportation aspects, SRK is partnering with MPD and Xstrata to establish an internationally experienced infrastructure team able to assess the various railway/pipeline and port terminal options.

**Reko Diq**

Reko Diq, a copper-gold porphyry deposit on the Tethyan belt in the province of Balochistan of south west Pakistan, is one of the most significant mineral discoveries in the last two decades, ranking alongside Escondida in Chile and Sarcheshmeh in Iran. Owned (75%) by Canada’s Barrick Gold and Chile’s Antofagasta Minerals, the US$3.2bn project is targeting an annual average production of 420 million pounds of copper and 256,000 ounces of gold. SRK has managed the Environmental and Social Impact Assessment for the project, which comprises an open-pit mine, concentrator, pipeline and marine terminal, to comply with Pakistan requirements, IFC performance standards, World Bank Guidelines and owners’ corporate standards. The global team, which includes SRK colleagues from the United Kingdom, North America, Australasia and Turkey, in-country specialists and the owners’ engineers, successfully integrated environmental and social issues into the current project design.
Molycorp rare earth

The Mountain Pass Mine in California produced rare earth oxides from an open pit for nearly 50 years, until 2001. After Molycorp, the operator, re-formed as an independent company in 2008, they retained SRK to prepare the reserve statement for re-opening the mine. Working with consultants, SRK produced an engineering study, then reviewed and validated historical operations data. Molycorp successfully executed its Initial Public Offering on the New York Stock Exchange in 2010.

Hycroft revival

After lying dormant for 10 years, Hycroft, Allied Nevada Gold’s flagship property, was reactivated to establish cash flow to fund exploration and development, both onsite and for their other holdings. SRK performed an initial resource estimate, secured permits and completed engineering designs for expanded heap leaching. With SRK’s continuing support in permitting and exploration, the mine is currently producing gold and silver, the resource value has more than tripled, and the company’s market capitalisation has quadrupled.

Springer tungsten mine

Golden Predator Mines engaged SRK to assist them with engineering updates and re-permitting the Springer tungsten mine, which had closed in the 1970s. Later, SRK was asked to design and secure permits for a stand-alone, “modular” gold mill, a tailings disposal facility near the mine, and for an exploration decline nearby to access high-grade feed for the new mill. SRK prepared the decline plan and is helping to facilitate the project’s environmental assessment.
SRK operates in Angola under a joint venture company established there a few years ago. The JV has undergone a number of changes and now trades as Angola Resources Consultants Ltda (ARC) with SRK (ZA), N’Zogy Yetu and a local partner as shareholders. Project activity is dominated by the oil and gas environmental market but is also fast gathering momentum in land contamination/remediation geotechnical engineering and waste management fields. Primary clients are Angola Environmental Services Ltda, Cabinda Gulf Oil Company (CABGOC) and Sonangol, and a number of others in the oil and gas sector.

Contact Bruce Engelsman: bengelsman@srk.co.za

SRK has opened an office in Lubumbashi in the Democratic Republic of Congo (DRC), with Susa Maleba as the country manager. A graduate of the University of Lubumbashi, Susa previously worked for Gecamines in the DRC and for consulting firms in South Africa. He is an expert in production scheduling and modelling using Mine2-4D and has a deep knowledge of local conditions and languages. The new office aims to transfer skills from SRK staff in other offices to the DRC nationals to complete local projects expeditiously. Development of local skills is part of SRK’s commitment to sustainable development in the country. The initial work focuses on environmental and social sustainability, hydrogeology and hydrology, and geotechnical engineering. The dewatering of mining operations in Katanga Province of the DRC is very critical to their success. The SRK group also offers services in exploration, resource and reserve estimation, reserve and resource audits, and due diligence studies.

Contact Susa Maleba: smaleba@srk.co.za

Following continued demand for services in West Africa, the SRK Group recently established a consulting practice in Accra, with John Kwofie as country manager. He is a geotechnical/geological engineer with over 23 years’ experience in the Ghanaian and international mining and metals sector. As the practice develops, SRK Ghana will be directly supported by our established consulting practices in South Africa and Europe, focusing specifically on recruitment, skills transfer and training, resourcing new opportunities and furthering our relationship with existing clients (AngloGold Ashanti, Gold Fields Ghana and Golden Star Resources).

Contact John Kwofie: jkwofie@srk.co.za

As part of SRK’s broader CIS and Central Asia initiatives, SRK Kazakhstan was registered in the United Kingdom, with a branch office established in Almaty. This strategy seeks to consolidate our extensive experience in the mining and metals sector of Kazakhstan, combining the completion of feasibility studies with various due diligence projects for private and publicly listed exploration and operating companies and financial institutions. Current mandates include annual ore reserve audits for the multinational, vertically-integrated group ENRC, and partnering with local engineering design institutes to align TEOs (feasibility studies), OVOS (ESIA environmental studies) and state-approved reserve reporting codes (CRIRSCO template) with their respective global counterparts. The Kazakhstan office opened in 2010, with full-time staff and administrative support supplemented by specific specialists from SRK (UK), SRK (RU), and SRK (ES).

Contact Tony Thornton: tthornton@srk.kz

Other Offices and Initiatives
SRK Mexico commenced operations in early 2011 with an office in Zacatecas City, Zacatecas. Located approximately 350 miles northwest of Mexico City, Zacatecas hosts a significant number of active precious metal mines and mining companies. The Mexican mining industry consists of a wide variety of operators, from 50 ton-per-day underground silver mines to 100,000 ton-per-day gold mines. Similarly, ownership varies from privately held Mexican companies to publicly traded mid to major mining companies. Increasing numbers of Mexican-owned and foreign-owned mining companies operating there have come to expect that consultants have native Spanish language skills and that an increasing portion of project workloads are sourced within Mexico. Our first priority is providing geology and mining engineering services for existing and proposed operations. We plan to expand our SRK Mexico staff over time to address other mining-related technical disciplines. Current demand for SRK services in Mexico exceeds our capacity; therefore, we anticipate significant collaboration with our NA practices as well as other global SRK offices.

Contact Luis Arroyo: larroyo@srk.com

SRK has worked in Mongolia periodically over the past few decades. Our involvement has increased since 2006, including several QA/QC exploration management projects and due diligence reviews for project acquisition, mergers and listings on the Stock Exchange of Hong Kong Limited. SRK Hong Kong registered an office in Ulaanbaatar to facilitate interaction with local clients, to provide logistical support for SRK projects and to arrange translation of project information from Mongolian/Russian to English. We look forward to learning more about the opportunities and business culture in Mongolia over the coming years.

Contact Erdene-Otgon Dalai: edalai@srk.cn

SRK is looking forward to assisting in the resurrection of the Zimbabwean mining sector through the participation of our professional staff in high-quality technical studies. In accordance with that objective, Arimon Ngilazi, a Zimbabwean National with degrees in geology and business administration, a post-graduate diploma in mining geostatistics and 18 years of experience in mineral exploration, resource evaluation and production, has been appointed manager of our Harare-based office. Under his leadership, SRK is working on platinum projects on the Great Dyke and exploring opportunities in gold, copper and chrome.

Contact Arimon Ngilazi: anglazi@srk.co.zw
Brochures and SRK news

Further information on SRK that may be of interest is available through the following publications. To download PDFs of the mining services, corporate profile, overview of services and SRK news, or to read online: www.srk.com/English/News_&_Media/

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A brief overview of our services

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