

# Modeling the Sunrise Gold Deposit

Drawing on its expertise in structural geology, alteration systems and ore mineralogy, SRK Consulting developed a geological model for the Sunrise gold deposit, Western Australia, to aid mine exploration and constrain future resource models.

The Sunrise deposit, operated by Placer (Granny Smith) Pty. Ltd., is located in the

Laverton belt of the Archean Yilgarn Block. Sunrise, and the neighbouring Cleo deposit (owned by Acacia Resources) have combined reserves of approximately 4-

million oz of gold, making it one of the most significant gold discoveries in the Yilgarn Block in the last 5 years.

SRK's know-how was harnessed to develop a geological development model that could be applied to exploration within the pit to increase reserves.

The project team, assembled by SRK's Perth office, included Executive Director Dr Peter Williams, Dr James Lally, Dr Lindsay Ferguson and senior associate Dr Cam McCuaig.

Pit mapping and examination of drill core led to the construction of a series of geological cross-sections, which were digitized and developed into a 3D geological model using Vulcan software.

Grade distribution, from blasthole and resource drilling sampling, was used to



James Lally and Cam McCuaig

*The Sunrise deposit is one of the most significant recent discoveries in Australia's Yilgarn Block.*

determine the controls on gold deposition in the deposit, and define the direction of fluid flow during mineralisation.

Rock samples were taken in the pit and from drill-core for geochemical analysis and thin section preparation, to determine fluid conditions and timing of mineralisation relative to the structural history.

"Results from the project significantly increased our understanding of the

Sunrise deposit," says Malcolm Titley, Senior Mine Geologist, Placer (Granny Smith). "The work was carried out in a cost-effective and professional manner, with a high degree of technical ability and constant interaction with staff on site."

"We are continuing to use SRK Consulting for both geological and engineering input at Sunrise and other projects elsewhere in the region."

---

## Vanuatu Mineral Potential

---

A country-study by SRK Consulting on behalf of the Vanuatu government has resulted in the introduction of several mining and exploration companies to this relatively unexplored area of the south-west Pacific, potentially expanding State coffers and stimulating warmly-welcomed development.



David Adams

Vanuatu is part of an active island arc system located at the margin of the Australian (west of the New Hebrides Trench) and Pacific tectonic plates. The 18 month study, officially known as the Vanuatu Mineral Exploration Initiative (VMEI), was commissioned to determine prospectivity and identify and rank exploration targets.

Focusing on the western-most early Tertiary arc, which forms the present islands of Santo and Malekula, the SRK project team produced a comprehensive report, new 1:100 000 geological map sheets and a comprehensive database of historic exploration geochemical data.

SRK's Dr Peter Williams comments: "The new sheets were derived from existing maps, combined with geological traverses by SRK personnel and interpretations of government-owned aeromagnetic data."

Colleague David Adams elaborates: "Key objectives were to determine the style and setting of known mineralisation, and identify the timing and controls of mineralisation. Interpretative maps were produced outlining potential areas of new mineralisation, including those beneath thin cover. Both porphyry style and epithermal targets were generated.

"As a result of the program, a number of companies are presently drilling target areas identified within the VMEI."

---

## Discovery Focus

---

Our industry is all about making crucial decisions. All of them carry risk, and all of them have a requirement for reliable information. All aspects of the mineral industry are therefore dependent on reliable geologic information.

Geology, however, has tended to take a low profile in the decisions involved in major developments and even exploration investments. Geologic information traditionally tends to be 'soft' and inferential, with a tendency to intricate explanations for how ores formed rather than where they are and what are their properties.

All of that has changed. Through access to the new tools of the information age, the practice of geology has been rapidly revolutionized. It is now possible to accurately map in remote terrain even when there is deep weathering or young cover as in Africa and Australia, to target new exploration opportunities

Detailed data on rock properties can also now be accurately reviewed in 3D computer-based formats to better predict rock failure or plan new stopes. More importantly, decision support tools linking to other critical data are now readily available.



Dick Henley

SRK has pioneered much of this revolution. It has an enviable track

record of discovery, enhancing mine performance and reserves, and some of the largest independent due-diligence activities of recent times. SRK's geologic expertise centres on a network of internationally recognized principals and established professionals, with global experience and know-how.

The coming-of-age of geology, like all revolutions, is based on sound fundamentals such as identifying rocks and minerals, tracking their inter-relationships and defining their properties.

The articles that follow show how this revolution is impacting on the mining industry. But the benefits of new-generation geology don't end there: they extend into a wide variety of realms such as petroleum exploration, environmental management and geologic hazards assessment, to name a few. SRK, is actively involved in all of these fields, pushing the envelope of geology further and further for the benefit of our clients.

---

## Global Archean Project

---

SRK Consulting, in conjunction with MIM Exploration, Placer Dome and a number of corporate sponsors, has developed a consistent database of the major Late Archean terranes of the world to enable companies to rapidly delineate gold, base metal and diamond targets using new exploration concepts.

SRK's Dr. Renate Sliwa explains: "The database includes many structural and geological interpretation maps, digital databases and reports. Also included are comprehensive mineral deposit information, regolith maps, geochronological charts and time-space diagrams."

The Late Archean was chosen as it hosts some 40% of all gold production worldwide. The research team included a number of SRK consultants from Australia and North America, experts on various mineralisation styles and geological terranes.



Renate Sliwa



**SRK  
assists  
management  
turnaround**

## **Production Rises at Lac des Iles – World’s Largest Open Pit PGE Deposit**



**SRK’s input assisted Lac des Iles to end a 4 year operating loss and surpass rated capacity**



**Mike Michaud**

**A**t the request of the incoming management team, SRK Consulting created an enhanced geological framework for the unique Lac des Iles Platinum Group Element (PGE) Mine in north-western Ontario, Canada, providing the urgently-needed foundation for optimising other aspects and transforming the heretofore loss-making operation into a profitable one.

Lac des Iles is the world’s largest open-pit producer of PGEs, with a mill-rated capacity of some 3,000 tons of ore per day. However the operation, owned by North American Palladiums Ltd. (NAP), a public company headquartered in Thunder Bay, Canada, has experienced

production problems since coming on-stream in 1993. As a result, design-rated capacity was not reached until late 1997.

During this time the mine was operating at a financial loss. In January 1998, a new management team was installed.

SRK, by virtue of its vast experience of open-pit environments, was contracted by NAP to review the geological model, update existing geological resources and mining reserves, and modify grade-control procedures.

SRK personnel assumed the duties and responsibilities of mine geologist and chief mine engineer for a minimum three-month period.

SRK’s Mike Michaud reports: “As a result of our input – notably the improved geological framework – PGE production soared by over 50% compared to 1997. Accordingly, NAP for the first time was able to report an operating profit during the third quarter of 1998.

“In addition, an exploration programme is underway at the mine site as well as the surrounding area to locate additional resources.”

---

## Prestigious Fellowship For Mike Etheridge

---



*Mike Etheridge*

**D**r Mike Etheridge, Chairman of SRK Consulting (Australasia) and world-renowned structural geological consultant, was recently confirmed as a Fellow of the prestigious Australian Academy of Technological Sciences & Engineering (AATSE).

This honor has been bestowed on a select few eminent individuals including Arvi Parbo (Chairman of Western Mining) and Tim Besley (Chairman of the Commonwealth Bank), the current president of the Society.

Mike is recognised world-wide for his expertise in structural controls on gold and base metal deposits. He has considerable experience, spanning 25 years, in settings ranging from Archaean greenstone belts, through richly mineralised Proterozoic basins and metamorphic complexes, to a wide range of Phanerozoic environments.

A key interest of Mike's is risk assessment in prospectivity analysis. He recently undertook, with other senior SRK staff, reviews of the processes and systems and management of exploration for major mining companies.

---

## Modeling High Grade Shears

---



*Auriferous shear zone at the Clone project*

**S**howing its mettle in developing state-of-the-art 3D geological models SRK Consulting completed a project for a Canadian exploration company Teuton Resources to assist further exploration and drill-hole targeting at the Clone Project in northern British Columbia.

Located on a nunatak in the Cambrian ice field, the Clone mineralisation was discovered in 1994 by Teuton after it was exposed by the receding ice.

The deposit yielded very high-grade surface trench samples, with spectacular assay results of multi-ounce-per-ton gold values across several meters true width being attained from channel-sampling. Subsequent diamond drilling also yielded high grade intersections but results were difficult to predict.

Teuton, encouraged by these positive indicators, commissioned SRK to map

the Clone geology and develop a geologic framework of the mineralization.

SRK's Ross Sherlock remarks: "We spent two weeks on-site mapping the project and a further two weeks interpreting the drill sections using geology from surface mapping and core-logging, and extending this to the subsurface. We incorporated this information into a GEMCOM database."

"The purpose of this was to produce a 3D model of the shear zone and distribution of grade in the shear. This model will be used in a soon-to-be-completed resource model for the project. It will also be used to effectively target exploration drilling."

"Only a sound understanding of geology can boost confidence in resource estimates and lower the risk in future exploration programs."



---

## Greenfields Exploration in Zambia

---

**SRK** Consulting, through a team led by Directors Peter Williams and Mike Etheridge, has been working with Equinox Resources and Zamanglo Ltd. in developing exploration models and new target zones in large areas of the Zambian Copperbelt and other parts of Zambia.

The project was initiated as a joint-venture between Equinox Resources and Anglo American Corporation (through Zamanglo) in 1996. Initial work by Equinox involved collection of large amounts of aeromagnetic data that had to be integrated with geological maps and geological data from mineral deposits in the area.



*Peter Williams*

Aeromagnetic and geological data were integrated with radiometric data, Landsat TM data and, in some places, SPOT data, enabling a well-constrained geological interpretation.

Interpretations provided a new picture of the structural and basin evolution of Zambia, and new insights into the mineral potential of the region. With geologists from Equinox Resources, a detailed study of the structural geology of the deposits was related to structures mapped from the aeromagnetic interpretation.

This approach allowed the development of controlled cross-sections and a genuine 3D picture of the geological framework.

**The team's interpretation has proved a powerful exploration tool**

SRK's Peter Williams comments: "In areas like Zambia, where there has been little modern exploration or geological mapping, Equinox and Zamanglo gained experience in compiling regional geological maps and a clear exploration focus by having access to a team of people with specialist skills."

Craig Williams, Managing Director of Equinox Resources says: "Integration of detailed magnetic interpretation by SRK and the field program of the Equinox-Anglo team in Zambia has proved a powerful exploration tool, resulting in delineation of numerous targets for Copperbelt and iron-oxide Cu-Au style mineralisation".

---

## Attracting Explorers to Botswana

---

**SRK** Consulting's unique skills in interpreting airborne geophysical data have led to a new series of mineral prospecting maps for the Kalahari Desert around the Okavango Delta.

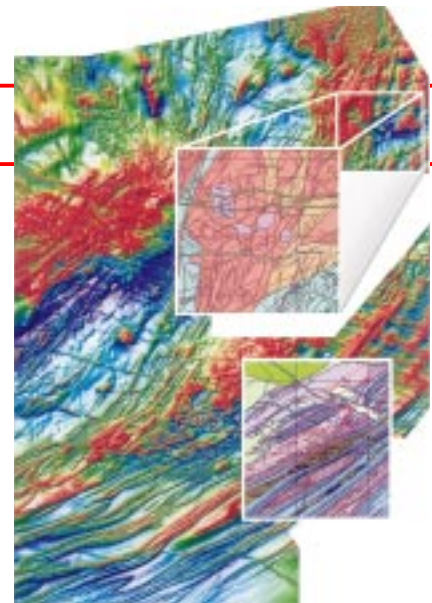
The maps, commissioned by the Botswana Government and European Union, identify the geological structure, key areas of mineral exploration potential and groundwater potential.

"Given the low outcrop density and scant previous exploration, the maps will help attract gold, diamond and base metal

explorers to the region," says Dr. Lynn Pryer, a structural geologist and remote sensing specialist with SRK Consulting.

SRK's approach is one of careful analysis of aeromagnetic data and rigorous integration with field data, and is based on experience in Precambrian terrains worldwide.

The map products focus on the key decisions that explorers must make in selecting the best ground and planning the exploration.



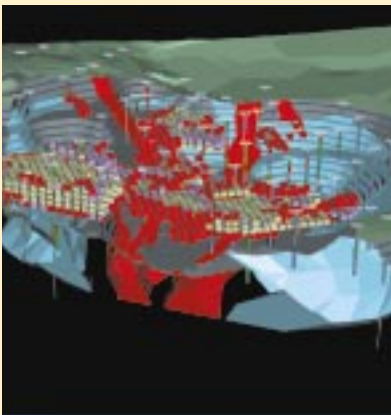
**Western Ngamiland high resolution aeromagnetic data with two examples of the interpretation.**

## Welcome Andrew Vigar

Seasoned Australian resource geologist Andrew Vigar has joined SRK Consulting, bringing some 20 years' experience with some of the major mining and exploration companies to SRK's Resource Geology unit.

Andrew is Chairman of the Queensland Australian branch of the AUS IMM, and on the steering committee for that organisation's "Towards 2000" programme which aims to develop best practice for ore reserve estimation.

With his vast experience – previous employers include Utah Development, Emperor Gold Mines (Fiji), Western Mining, Pancontinental, Norseman Gold Mines, Comalco Minerals and CRA (now Rio Tinto) – Andrew will make a valuable contribution to the team.



At present Andrew is involved with audits, reviews and due diligence examinations for SRK clients. He also adds considerable skills to SRK's 3D computer modeling capabilities.

## New Approaches To Exploration Targeting

With the downturn in mineral exploration, SRK Consulting is playing a key role in helping companies to prioritise funds into areas with the greatest chance of success.

SRK has developed teams of multi-disciplined specialist geologists who approach the delineation of ore controls by using an assessment of evidence of ore processes, rather than descriptions of model features.

"Assessment of geological controls on ore deposits is critical in targeting an economic intersection," say SRK geologist Dr. Nicola Netherway. "Understanding the process and timing of ore deposition is critical in evaluating the importance of various controls in the ore forming process."

Nicola cites the Frieda River project in Papua New Guinea as a case in point. Drill core re-logging and detailed structural mapping enabled her and fellow-geologist Dr. Stephen Windle to identify a strong structural control on high-grade mineralisation in what previously had been modelled as a large low-grade deposit.



Nicola Netherway

"The updated geological/structural model not only provides new drill targets but gives a more accurate representation of deposit geometry for ore reserve calculations," the geologist says.

SRK Consulting has also pioneered a new approach to targeting by bringing expertise from SRK's Petroleum

Department into the minerals industry.

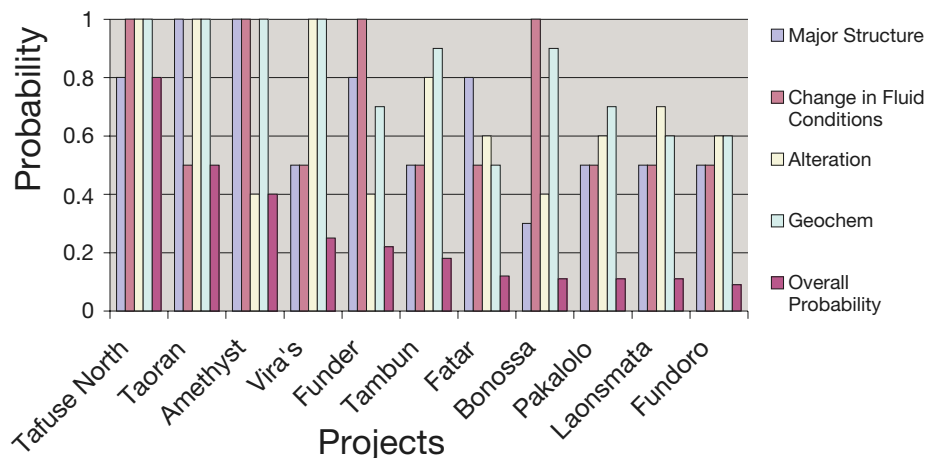
Working with petroleum geologists Karen Romine and Tom Loutit, Nicola has assessed the base metal and gold potential in Proterozoic and Palaeozoic sedimentary basins within Australia.

"By integrating seismic interpretations and sequence stratigraphy, with interpretation of geological, Landsat, aeromagnetic and

gravity data, we produced a 3-D prediction of the nature and distribution of key ore-forming structures," Nicola reports.

"Targets can be ranked on the basis of probabilistic Bayesian methods, enabling companies to better compare the risk on investment for each proposed target across a portfolio of prospects."

### Ranked Exploration Targets



---

## Long Term Partnership with Kalgold

---



*The Goldridge open pit gold mine in South Africa.*

**W**ide-ranging expert advice from feasibility to JSE-listing provided by SRK Consulting to Kalahari Goldridge Mining Company (KalGold) Limited in 1996 fostered a strong, mutually advantageous business partnership that flourishes today.

KalGold operates the Goldridge open-pit gold mine in North West Province, South Africa, that country's most productive open-pit gold mine with some 250 kg of gold per month produced from a low-grade banded-iron-formation hosted orebody.

SRK, retained as technical advisor for the listing, tapped the extensive experience of its Co-Founder, Dr. Oskar Steffen, to review the complex array of mine-planning and strategic issues.

The initial resource and reserve estimates reported for the listing document were audited by Prof. Danie Krige, one of the founders of modern geostatistics.

Dr. Mike Harley, who was responsible for developing the resource model says:

"We're delighted to report that initial resource estimates correlate well with reality. Building on this success, SRK continues to provide KalGold with a variety of geological and geostatistical services on demand."

For example, KalGold regularly employs SRK to update the resource statements for orebodies within the mining lease boundary. These estimates are endorsed by SRK for use in shareholder information documents and annual reports.

Construction of the geological model and estimation of the resource model access both production blasthole and exploration drilling information. These data-sources are used contemporaneously to produce a conventional block-model for long and short-term production planning and pit optimization.

SRK has also provided a variety of innovative services to KalGold to assist with aspects of strategic planning and operation.

---

## The Key To High Grade Ore Shoots

---

**S**ound structural mapping can quickly and efficiently produce an understanding of ore distribution and formation, critical to profitable mine planning and orebody development.

That's the view of Dr. Cam McCuaig, Senior Associate of SRK Consulting, who recently led a project commissioned by Resolute Limited to investigate the controls on ore shoots in the Poseidon South underground mine at Higginsville, Western Australia.

Ore at Higginsville is distinguished by shear-zone-hosted quartz veins. While the quartz veins and shear zones are quite continuous along strike, ore-grade mineralisation is not. The patchy but very high grade gold was proving difficult to correlate from level to level within the mine.

SRK, in conjunction with Resolute's Senior Geologist, Jon Standing, undertook a brief program of mapping the underground mine workings. This study quickly identified that the ore had formed in a compressional setting and that orebodies at dilational sites on the shear/vein systems were horizontal.

The sub-horizontal nature of the oreshoots explained the difficulty in correlating grade from level to level. A host-rock control on ore that locally produced steeper ore shoots was also established.

Jon comments: "We were impressed by the high quality and professional level of SRK's geological input. The structural model presented for Poseidon South mineralisation added significantly to our understanding of the geometry of the ore shoots and was instrumental in extending the life of the operation."



## Aeromagnetic Interpretation Specialist



Peter Williams

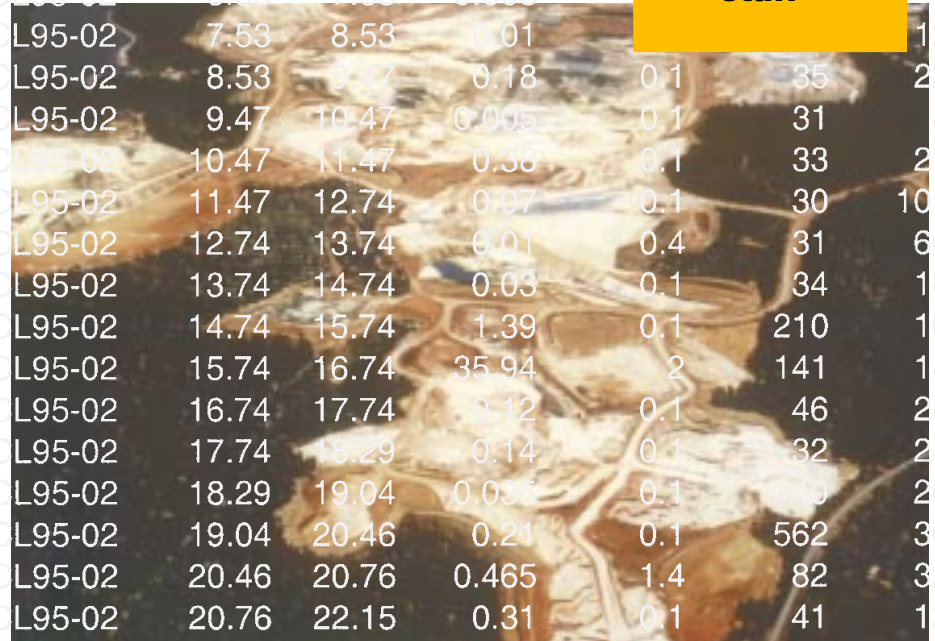
**D**r Peter Williams, Technical Director, SRK Consulting, is one of the world's leading specialists in aeromagnetic interpretation.

A partner in Etheridge Henley Williams until it amalgamated with SRK, Peter is at the forefront of structural geology – in particular, the application of integrated remote sensing interpretation to prospectivity assessments and target generation.

With over 20 years' world-wide experience, he is a sought-after consultant to the world's mining houses and governments. In addition, he is a seasoned and eloquent educator: his workshops on aeromagnetic interpretation and related topics invariably are over-subscribed.

## A Boost For Boddington

**"...continual interaction with our geological staff"**



**A multi-disciplinary research effort identified the processes that generate mineralisation**

**SRK** Consulting has been augmenting Boddington Gold Mine's geological understanding of the Boddington gold-copper-molybdenum deposit in Australia since 1993.

In conjunction with BGM Geologist Merryn Behn, SRK's Dr. Cam McCuaig has spearheaded a multi-disciplinary research effort to identify the processes that generated mineralisation at Boddington. A key aim is to translate these processes into improved exploration models for further Au-Cu-Mo resources.

Aspects of assay data, whole-rock geochemistry, geochronology, petrography, alteration theory, geophysics and empirical field observations are being integrated into a geological synthesis of the BGM mineralising system.

David Burton, BGM's Geological Superintendent, notes: "SRK has provided us with professional, high-quality technical advice over the years.

"Essential elements of our geological model for mineralisation and exploration strategies stem directly from their input to, and continual interaction with, our geological staff.

"Furthermore, SRK has a wealth of technical expertise from numerous fields of geoscience that is accessible to us. This comprehensive service is provided to us on a flexible basis as we require it, and at a fraction of the cost of hiring specialist expertise as permanent staff."



---

## Structural Controls at Porgera

---

**G**eological staff from SRK Consulting have been involved with one of the most prestigious projects in Papua New Guinea: the Porgera Gold Deposit.

This is an intrusive-related, high-grade, vein and fault-hosted deposit located in the (central) highlands.

Drawing on its global expertise, SRK assisted in determining the structural controls on mineralisation, mapping and targeting during regional exploration and training of geological staff at the mine.

A project to determine the mineralisation-controls was done during a study by SRK Consultant Dr. Stuart Munroe.

“The controls were ascertained by collecting new data from available exposures and logging of selected drill holes,” Stuart reports.

“Gold mineralisation is spatially associated with oxidized, hydrous intrusions. Two stages of mineralisation are recognised, which have distinct mineral assemblages and structural association.

“Models determined from this work were then used during regional mapping to determine the most likely sites for further mineralisation.

“A key advantage of this approach is the ability to prioritise exploration targets according to the geological criteria required to form mineralisation.”

Mine geologists were brought up to speed in interpreting the results, enabling them to combine geological criteria *and* geochemistry to better delineate ore blocks during mining.

**“The models developed were used to target further mineralisation”**



*The Porgera Deposit, located in the PNG Highlands*

## A New Asset for Zimbabwe

**SRK** Consulting's Zimbabwe practice received a boost in 1998 with the appointment of respected mine-geology specialist, Dr. Tony Martin, as Principal Scientist.

Tony specialises in all geological aspects of the mining industry, with



**Tony Martin**

particular emphasis on ore reserves. His long experience – his career started in 1971 in the Geological Survey Department of the then Rhodesia Government – encompasses

mine geology and exploration, feasibility studies, grade control, mine planning and rock support.

He joined SRK from Union Carbide Zimbabwe/Zimasco, where he was Consulting Geologist responsible for all aspects of the group's gold and base metal exploration (on and off-mine) and resource and reserve generation and maintenance.

Previously Tony was Exploration Manager for Chase Minerals, whom he joined after a stint with Cluff Mineral Exploration as Senior Exploration Geologist.

Author of many publications on Archean geology, Tony is a terrific asset to SRK's burgeoning Zimbabwe operation.

## New Insights at Gold Ridge

**A** detailed field study by SRK Consulting at Gold Ridge Mine in the Solomon Islands, followed by a regional remote sensing investigation, produced fresh insights into the controls on mineralisation at the mine and generated a new regional exploration model.

SRK's involvement with the mine began in 1996, when Dr. Dick Henley and Dr. Mike Etheridge, partners in Etheridge Henley Williams (EHW), visited the site for the then operator, Saracen Minerals, and identified the tectonic setting of the epithermal gold mineralisation as a pull-apart basin.

Subsequently, in 1998 (EHW and SRK having joined forces), we were invited by current owner Ross Mining

to complete detailed field mapping and regional remote sensing studies.

SRK's Dr. Steve Windle, manager of the latest project says: "Field mapping identified two styles of mineralisation: high-grade vein-hosted, with a strong structural control; and lower-grade disseminated, with a structural and sedimentological control."

"On a regional scale, structures that were critical to the formation of the Gold Ridge deposit were highlighted. Detailed aeromagnetic interpretation improved our understanding of the geological and structural history of the area, leading to the definition of new targets as well as a conceptual framework for continued regional exploration."



**Steve Windle**



**Detailed field mapping lead to definition of new targets at Gold Ridge**



**Courses designed to fit your unique requirements**

## High Praise For Customised Training



*Mike Etheridge ( 2nd left ) with clients in Africa*

**SRK's** practical training courses in applied structural geology and mapping have earned high praise from our minerals industry clients around the world.

"I recommend this course to all explorationists. (It) is able to translate the concepts and practice of structural geology into plain language, as well as develop a sense of confidence in the participants." Greg Hall, Manager, Acquisitions and Generative, Placer Dome.

Dr Mike Etheridge, Technical Director of SRK Consulting in Australia, has developed the courses in collaboration with several key clients over the past five years. Courses have been given in Canada, Ghana, South Africa, Indonesia, Papua New Guinea, Philippines, and throughout Australia.

Unlike conventional educational courses, which are often tailored to suit the expertise and interests of the course provider, SRK Consulting designs its programmes to meet its clients' training and career development requirements. The courses are generally provided at the client's site, with the field component set up to address site-specific issues.

"Courses are modular, so you select modules most suitable for your current needs," Mike explains. "We provide courses of your choice, at a time and place selected by you, the client. We design the practical field study components on your rocks."

A typical course day begins with a practical introduction to key concepts during a morning session of lectures and exercises. These concepts are then

reinforced and extended with small-group sessions of field or mine mapping, or core logging.

Aspects currently covered include: structural mapping techniques, targeting in fault/shear zones, analysis of structures in drill core, relating local to regional structural settings, and aeromagnetic image interpretation for targeting ore deposits, to name a few.

A recent development has been to integrate the mapping course with the design of site-specific mine mapping protocols, and ongoing advice on implementation of improved grade control and resource estimation practices. We have recently implemented this integrated training and pit mapping service at the Kalgoorlie Superpit and Sunrise Dam mines in Western Australia.

*Mike Etheridge*

# Exploration Management In Indonesia

For approximately two years, SRK Consulting staff acted as project managers for Aberfoyle Resources' Nusa Tenggara (NT) project in Indonesia, providing Aberfoyle a rapid start for its exploration programs.

The NT project-area covered an extensive tract of remote land in the Sunda-Banda island arc, from the island of Sumbawa in the west to the far-flung island of Alor to the east.

Phillip Uttley and Roland Bartsch, two of SRK's foremost explorationists with experience in these tropical, geologically,



**Roland Bartsch**

culturally, and logistically challenging areas, were contracted in management roles to help plan the programs.

Commenting on SRK's approach, Phillip Uttley remarks "The project was designed to bring targets in the most promising and accessible areas to the west on Sumbawa to maturity while reconnaissance and follow-up continued eastward".

Specialist skills in geology, geochemistry and geophysics were required from time to time, and SRK was again able to bring



**Bartsch leads field crew**

in the right staff for each job for short periods.

"A single benefit for Aberfoyle was continuity over the life of the project. As candidates for staff positions were selected, a hand-over period with the managing SRK consultant ensured a smooth succession".

"This way we not only solved a short-term management problem for Aberfoyle, but also effectively transferred the latest intellectual knowledge in delineating targets to the client's staff."



**For more information, contact us at: [www.srk.com](http://www.srk.com)**

Australia	Tel: (+61)	(7) 3832-9999	Fax: (+61)	(7) 3832-9330
Canada	Tel: (+1)	(604) 681-4196	Fax: (+1)	(604) 687-5532
Africa	Tel: (+27)	(11) 441-1111	Fax: (+27)	(11) 880-8086
South America	Tel: (+56)	(2) 269-0353	Fax: (+56)	(2) 269-0322
United Kingdom	Tel: (+44)	(29) 2023-5566	Fax: (+44)	(29) 2034-0524
USA	Tel: (+1)	(303) 985-1333	Fax: (+1)	(303) 985-9947