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Career Profile

I am an Australian expatriate geologist with more than 30 years' continuous experience in exploration project generation and on-the-ground project management, in Australia, South America and Southeast Asia. Past and present commodity focus includes platinum group metals, gold, base metals, and industrial minerals.

I am a Registered Professional Geoscientist (RPGeo) with the Australian Institute of Geoscientists.

I am a Competent Person for precious and base metals, for deposit types including layered intrusion, porphyry, epithermal, sediment-hosted and volcanic-hosted massive sulfide.

Professional Experience

Savan Resources Sole Co., Ltd – Laos

Principal

March 2017 - present

With closure of exploration at Sepon, my position became redundant. Upon leaving MMG LXML, I immediately commenced establishment of a Lao business entity (achieved April 2017).

Clients & *[roles]* so far include:

- Asian Investment, Development & Construction Sole Co., Ltd (Lao), ***[area selection in three provinces & reporting]***
- Lao PowerPro Manufacturing Sole Co., Ltd (Chinese), ***[ongoing project advice, mapping, core logging - sawing - sampling - pXRF analysis & statutory reporting]***
- Four Stars Granite Mining Co., Ltd (Lao-Australian), ***[mapping & reporting]***
- Hommalar Community Development (Lao), ***[ongoing project advice, data collation & presentation for limestone quarrying & sediment-hosted copper exploration]***
- MDP Trading Export-Import Sole Co., Ltd (Lao-Australian), ***[mapping, project support]***,
- GCI Lao Co., Ltd (Polish), ***[equipment hire]***
- South East Minerals Pty Ltd (Australian), ***[farm-in project field review & reporting]***
- Menang PSI Sdn Bhd (Indonesian), ***[drilling consumables sales]***,
- Europejskie Centrum Inwestycyjne Spółka Akcyjna (Polish), ***[mapping, stream sediment - soil sampling, three areas in two provinces]***
- Lane Xang Minerals Limited (Chinese), ***[project review, advice & presentation]***
- Neyland Lao Mining Co., Ltd. (Russian) ***[project review & advice]***.

Savan Resources' primary business model is that of an international investment agency, to engage with Lao exploration and mining companies to introduce international standards of work to all aspects of mineral exploration and attract external investment. I am also available for short to medium term project generation / review / management contracts in Laos, the Southeast Asian region and internationally.

MMG Limited (Lane Xang Minerals Limited, Sepon Mine [MMG LXML]) –Laos

Manager Exploration

December 2011 – February 2017

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This was a promotion, and an international transfer to leadership of the 70-person gold and copper exploration team in the Sepon Mine concession. Work involved the management of >\$10M annual budgets for 2011-14, >\$5M budgets for 2015-16, and in-country project generation through submittals. Continued exploration success at Sepon saw several copper prospects handed over to Sepon mine operations; following closure of the gold plant in 2014, several gold prospects are yet to be mined, but still constitute significant value to the asset. The final phase of the role was ensuring orderly closure of exploration after more than 25 years of continuous activity.

MMG Limited – Australia (New South Wales & Northern Territory)

Principal Geologist

April 2010 – November 2011

2010 saw a return to full-time employment, to lead MMG's New South Wales and Northern Territory exploration teams. This involved the management of >\$1M annual budgets for 2010-11, supervision of field geoscience teams, exploring for CSA-style copper deposits in a large tenement package in the southern Cobar Basin and involved in project generation for copper throughout the central, western Lachlan Orogen, NSW, and early work on an embryonic sediment-hosted zinc project in the southern McArthur Basin, Northern Territory. Due to the typically small field teams, work included hands-on geological mapping and supervision of drilling programmes. Significant base metal intercepts were made at Sandy Creek and Siegal's Tank prospects, Cobar Basin. The McArthur Basin project is now a large tenement package and a key project in MMG's global portfolio.

Burrell Exploration Services Pty Ltd (New South Wales & Northern Territory)

Director, Contract / Consulting Geologist

December 1998 – March 2010

In 1998, with closure of the Parkes regional office, I took a voluntary redundancy from North, and became a self-employed contract / consulting geologist, providing exploration services to a diverse clientele, exploring primarily in the Lachlan Orogen and later the Arunta Inlier, Northern Territory. Burrell Exploration Services also employed several additional geological, IT and field personnel between 1998 and 2011.

Key services offered were: regional to prospect-scale geological mapping; design, implementation and management of surface geochemical surveys and drilling programmes; interpretation of aeromagnetism / radiometrics / gravity data and integration with mapped geology.

Clientele over more than eleven years included:

- Northparkes Mines (E26 and E48 deposits are still being mined)
- Resolute Limited
- North Limited
- Goldfields Exploration / AurionGold
- MIM
- Golden Cross Resources
- Icon Resources
- Tharwa Sands
- Zinifex
- Calibre Mining
- Waratah Gold
- Silex Exploration
- Goldminco
- Capital Mining
- Rimfire Minerals
- Antofagasta Minerals



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- YTC Resources (now Aurelia Metals, currently mining Hera deposit)
- MMG Limited



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**North Limited (New South Wales)
Senior Geologist
January 1997 - November 1998**

This was a promotion, to leadership of the regional exploration team, including the management of >\$1M budgets 1996-98 and the supervision of up to three geoscientists on various projects throughout the central Lachlan Orogen and southern New England Orogen. I was also required to closely liaise with project generation staff, undertake geological mapping and due to the typically small field teams, supervise specific aircore, percussion and core drilling programmes.

**North Limited (New South Wales & Chile)
Geologist
July 1990 - December 1996**

In 1990, Peko-Wallsend, merged with North Broken Hill to become North Broken Hill Peko (later renamed North Limited). I was offered a full-time position at Parkes. Continuing to work at Lake Cowal, I was responsible for planning and supervision of aircore, percussion and core drilling, compiling drill sections, preparation of data for entry in the in-house database, and geological logging of drill core at the E40, E41, E42, E43 and E46 prospects as part of advanced mesothermal gold exploration and resource drilling programmes.

In 1993 I was seconded to Inversiones North (Chile) Limitada for five weeks to Conchi, northern Chile, to supervise core drilling and log core as part of porphyry copper exploration; my first international experience.

Later, I worked on regional exploration at Batlow, Condobolin, Mineral Hill, Tullamore and Oberon areas, undertaking project generation and tenure evaluation, tenement applications, planning and interpretation of image-processed aeromagnetic and gravity surveys, regional airphoto interpretation and geological mapping, planning and supervision of soil sampling, RAB, aircore, percussion and core drilling programmes.

**Geopeko (New South Wales)
Contract Junior Geologist
November 1989 – June 1990**

Whilst still working for Cyprus, I was referred to, and then accepted a contract based in Parkes, at the local regional office of Geopeko, the exploration arm of Peko-Wallsend Operations Ltd. I then worked on regional geochemical sampling programmes at Euabalong, Young and Michelago areas, involving the day-to-day supervision of soil sampling crews, stream sediment and rock chip sampling and supervision of RAB drilling as part of base metals and epithermal gold exploration programmes. Later, I was sent to assist with resource definition drilling at Lake Cowal, supervising advanced stage percussion drilling at the E42 mesothermal gold prospect (since mined by Barrick, now by Evolution).

**Cyprus Gold Australia Corporation (New South Wales)
Contract Junior Geologist
September to October 1989**

When employment with Lachlan / Platinum Search came to an end due to budgetary constraints, I was offered a contract with Cyprus Gold at Forest Reefs & Junction Reefs areas, where I undertook grid-based hand auger soil sampling as part of a porphyry gold exploration programme. Later, at Copper Hill prospect, Molong, I supervised a percussion drilling programme and logged drill chips as part of advanced porphyry copper-gold exploration.



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Lachlan Resources NL & Platinum Search NL (New South Wales)
Contract Junior Geologist
January to August 1989

After six months, I was promoted to a professional role, continuing to work on Fifield, Nyngan and Bourke areas, interpreting image-processed aeromagnetics, undertaking prospect scale geological mapping, supervising RAB and aircore drilling programmes and logging ultramafic rock types as part of a platinum group metals exploration programme. I also worked at Bumbaldry area, where I assisted stream sediment and rock chip sampling, and helped supervise RAB and percussion drilling as part of epithermal gold exploration at Clay Pit epithermal gold prospect.

Lachlan Resources NL & Platinum Search NL (New South Wales)
Contract Field Assistant
June to December 1988

Before I had finished university study, I had handwritten about 70 letters to exploration and mining companies. A reply to one letter led to contact with Lachlan / Platinum Search. I was offered and gladly accepted a field assistant position at Fifield area, exploring for platinum group metals in layered Alaskan-style intrusions, where I learned the field techniques involved in stream sediment and soil sampling, RAB and aircore drill sampling, basic gridding and surveying, reading of ground magnetics, plotting of magnetic profiles and manual line clearing.



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Publications

- SI55-07 Forbes 1:250 000 Geology map sheet, 2000 (industry contributor 1994/95)
- 8331 Condobolin 1:100 000 Geology map sheet, 2000 (industry contributor 1994/95)

Abstracts & Conferences

- Smith, S., Burrell, P., Lye, A, Jones, P., Kolff van Oosterwijk, L., & Sharry. M., 2002, Blurring the Brown & Green - Near Mine Exploration at Northparkes, Exploration in the Shadow of the Headframe: Getting a New Life on Lease, SMEDG-AIG-ASEG Symposium (co-author);
- Torrey, C., & Burrell, P., 2006, Geology and Mineralization of the Copper Hill Area, Mines & Wines 2006, SMEDG-NSWDPI Symposium (co-author & presenter);
- Coianiz, G., & Burrell, P., 2007, Update on Copper Hill Cu-Au porphyry, Mines & Wines 2007, SMEDG-NSWDPI Symposium (co-author)

Education

1996 Postgraduate Diploma of Science (James Cook University of North Queensland)

1988 Bachelor of Science, Geology (University of Wollongong)

