

Paul Stuart Burrell, RPGeo, Mineral Explorationist

Thongwin House, Sanamxay Village, Kaison Phomvihane District, Savannakhet Province, Laos

+856 (0) 20 2221 3453

+856 (0) 20 9139 6786

banxethamouak@hotmail.com

Career Profile

I am an Australian expatriate geologist with more than 32 years' continuous experience in mineral exploration project generation and management, in Australia, Southeast Asia and South America. My range of 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 in deposit types including porphyry/epithermal and sediment-hosted.

Professional Experience

Fortress Far East LLC – Russian Far East Contract Geologist June – October 2019

I worked a summer contract at Shelekhovo prospect, Khabarovsk Region, supervising a 3000m trenching programme that included hyperspectral sample analysis with ASD TerraSpec.

Annamite Resources Holdings Pte Ltd – Laos Chief Geologist March 2019 - present

I became a founding investor in a new junior exploration company for Laos and the region. I was also appointed Chief Geologist (part-time).

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 (Laos), **[Au, area selection in three provinces & reporting]**
- Lao PowerPro Manufacturing Sole Co., Ltd (China-Laos), **[base metals, ongoing project advice, mapping, core logging - sawing - sampling - pXRF analysis & statutory reporting]**
- Four Stars Granite Mining Co., Ltd (Laos-Australia), **[decorative stone, mapping & reporting, small drill rig lease to purchase]**
- Hommalar Community Development (Laos), **[limestone, Cu-Ag, ongoing project advice, data collation & presentation for limestone quarrying & sediment-hosted copper exploration]**
- MDP Trading Export-Import Sole Co., Ltd (Laos-Australia), **[Au, mapping, project support]**,
- GCI Lao Co., Ltd (Poland), **[equipment hire]**
- South East Minerals Pty Ltd (Australia), **[Au-Mo-Ag, farm-in project field review & reporting]**
- Menang PSI Sdn Bhd (Indonesia), **[drilling consumables supply, equipment hire]**,
- Europejskie Centrum Inwestycyjne Spółka Akcyjna (Poland), **[Au, mapping, stream sediment - soil sampling, three areas in two provinces]**

- Chifeng Jilong Lane Xang Minerals Limited (China), [**Cu-Au, project review, advice & presentation**]
- Resource 500 (UK), [**Fe-Ti-V, project review, advice & desktop support**]
- SustainRisk (France), [**Au, Cu, desktop support**]
- Annamite Resources (Singapore), [**Au, Ag, base metals, project management**]

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 term project generation / review / management contracts in Laos, the Southeast Asian region and internationally.

**MMG Limited (Lane Xang Minerals Limited, Sepon Mine) –Laos
Manager Exploration
December 2011 – February 2017**

This was a promotion, and an international transfer to leadership of the 70-person gold and copper exploration team in the Sepon Mineral District. 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.

Additional skill development: line management, life of asset studies, preparing for mine closure

**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 became 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 aeromagnetics / radiometrics / gravity data and integration with mapped geology.

Clientele over more than eleven years included:

- Northparkes Mines (**E22, E26N, E27, E31, E37, E48 deposits** & district [E26N and E48 deposits are still being mined]) (*Macquarie Arc*)
- Resolute Limited (*Macquarie Arc*)
- North Limited (*Macquarie Arc*)
- Goldfields Exploration / AurionGold (*Macquarie Arc*)
- MIM (*Macquarie Arc*)
- Golden Cross Resources **Adelong deposit** (*Lachlan Orogen*), **Copper Hill prospect** (*Macquarie Arc*)

- Icon Resources **Tara Sn prospect** (*Cobar Basin*)
- Tharwa Sands (*crushed granite*)
- Zinifex **Siegal's Tank prospect** (*Cobar Basin*)
- Calibre Mining (*Macquarie Arc*)
- Waratah Gold (*Macquarie Arc*)
- Silex Exploration (**Oonagalabie prospect**) (*Arunta Inlier*)
- Goldminco (*Macquarie Arc*)
- Capital Mining (*Macquarie Arc*)
- Rimfire Minerals (*Macquarie Arc*)
- Antofagasta Minerals (*Macquarie Arc*)
- YTC Resources (now Aurelia Metals, currently mining **Hera deposit**) (*Cobar Basin*)
- MMG Limited (*Cobar Basin*)

Ongoing skill development: *geographic information systems (GIS), supporting data for mineral resource calculation*

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.

Ongoing skill development: *geographic information systems (GIS)*

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; **El Abra Cu deposit** is nearby (now mined by Freeport-McMoran / Codelco).

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.

Additional skill development: *geographic information systems (GIS), geotechnical logging of drill core*

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, tin and epithermal gold exploration programmes in the Wagga-Omeo region. Later, I was sent to assist with resource definition drilling at Lake Cowal,

supervising advanced stage percussion drilling at the **E42 Au deposit** (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 (including **Glendale Au deposit**, later mined), where I undertook grid-based hand auger soil sampling as part of a porphyry gold exploration programme. Later, at **Copper Hill Cu-Au prospect**, I supervised a percussion drilling programme and logged drill chips as part of advanced porphyry copper-gold exploration.

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 (**Doradilla Sn deposit** is nearby) 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 (**Broula King Au deposit**, later mined by Resource Base Limited), 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 Au 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 (**Gilgai, Collerina, Hylea, Kars & Derriwong Hill PGM prospects**), 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.

Publications

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

