



PATHFINDER EXPLORATION PTY LTD

(INCORPORATED IN WA)

CONSULTING GEOLOGISTS & GEOCHEMISTS
MINERAGRAPHIC-PETROGRAPHIC SERVICES

11 Dennison Drive

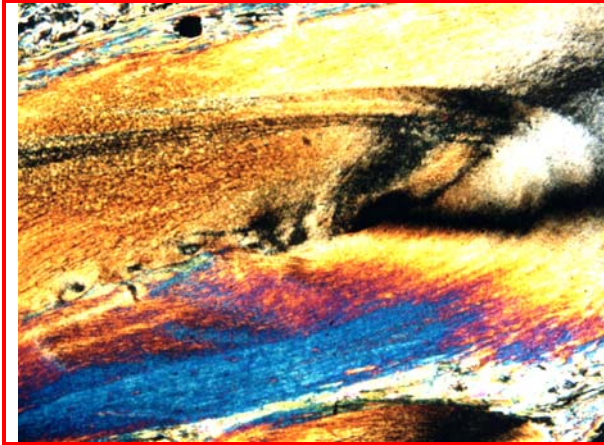
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PETROGRAPHIC, MINERAGRAPHIC & SEM SERVICES

Price List Current 1st August 2009

ROCK PREPARATION (A\$)

Thin Section/Polished Section.....	\$40
Polished Thin Section	\$50
Unconsolidated thin section	\$60
Unconsolidated Polished Thin Section.....	\$70

DESCRIPTIONS

TABULATED PETROGRAPHIC OR MINERAGRAPHIC DESCRIPTION (A\$) :-

includes all the salient petrographic details including minerals present, textures, alteration and classification – particularly useful for large petrographic suites –

Thin Section.....	\$90
Polished Thin Section.....	\$100

BRIEF PETROGRAPHIC OR MINERAGRAPHIC DESCRIPTION (half page)(A\$) :-

includes a brief overview of the section, identifying important textures and alteration assemblages as well as providing a classification of the rock.

Ideal for RAB/RC programmes where lithologies and alteration assemblages

need to be defined – Thin Section.....	\$120
Polished Thin Section.....	\$135

STANDARD PETROGRAPHIC DESCRIPTION (full page) (A\$):-

includes rock classification and estimated of mineral percentages, textures, discussion of metamorphism and/or alteration and comments on the petrogenesis –

\$140

STANDARD MINERAGRAPHIC DESCRIPTION (full page)(A\$) :-

includes identification and estimated percentages of opaque minerals as well as textures and comments on paragenesis -

\$140

Double polished section description (useful for boxwork identifications in gossans)

\$150

COMBINED MINERAGRAPHIC/PETROGRAPHIC DESCRIPTION (full page)(A\$) :-

using polished and thin sections or polished/thin sections.....

\$155

Large polished/thin section or double polished thin section description.....

\$180

DISCUSSION OR COMMENTS ON PETROGRAPHIC SUITE (A\$ per hour) ... \$150

<i>XRD, SEM, MICROPROBE SERVICES & PIMA ANALYSES (A\$ per hour).....</i>	\$295
<i>NITON XRF ANALYSES (A\$ per sample).....</i>	\$15
<i>DIGITAL PHOTOMICROGRAPHS (A\$ per plate).....</i>	\$40
<i>AUSTRALIAN CUSTOMS/LAB STERILISATION CHARGES (A\$ per batch).....</i>	\$250

BACKGROUND AND SPECIALITIES

Petrographic and mineragraphic descriptions are based on 30 years' of hands-on exploration and research experience in the mining industry. Emphasis is placed on identifying lithologies in the weathering profile, particularly the Western Australian lateritic regolith, using relic minerals and preserved textures.

An extensive thin section reference library has been accumulated for the lithostratigraphic settings of a broad spectrum of mineralisation styles throughout Australia and Oceania, as well as world class base and precious metal deposits in the US, Canada, Africa, South America and the UK.

Particular areas of interest include:

- Identification of hydrothermal, metamorphic and metasomatic alteration assemblages associated with epigenetic gold deposits.
- Identification of low temperature alteration assemblages associated with epithermal gold deposits.
- Petrology and mineragraphy of polymetallic volcanogenic (VMS) ***polymetallic deposits*** and host volcanic/volcaniclastic rocks including identification of subtle alteration assemblages.
- Petrology and mineragraphy of layered mafic/ultramafic intrusive rocks and associated PGE and/or chromite mineralisation.
- Petrology and mineragraphy of komatiite-hosted and gabbroid-hosted ***Ni/(Cu) mineralisation***.
- High grade metamorphic assemblages with particular reference to ***gold and base metal deposits*** in Archaean and Lower Proterozoic terranes.
- Identification of the various hydrothermal alteration, greisen and skarn assemblages associated with felsic intrusive and plutonic rocks and attendant ***Sn, W and Au mineralisation***
- Identification and classification of boxwork textures in ***gossans***.

PETROCHEMISTRY

Whole rock, immobile trace element (i.e. Ti, Y, Nb, Zr, Cr and REE) petrochemical analyses of weathered and unweathered rocks can be reported and interpreted. Electron microprobe of polished/thin sections and SEM identification of opaque minerals can be facilitated to complement petrographic studies. XRD services are available particularly for the identification of alteration assemblages.

FIELD STUDIES

Systematic field studies may help to elucidate difficult rock assemblages or reveal subtle alteration trends. This may involve detailed geological mapping or core/RC logging (or relogging). This service is available at normal contract rates.

INSTRUMENTATION

- Olympus BHT-BH2 & BHSM-BH2 Binocular Microscopes capable of transmitted (petrographic) or incident light (mineragraphic) examination. Objectives include 5X, 10X, 20X, 50X and 100X.
- Digital photomicrographic and point counting capabilities.
- Access to EDS and WDS microanalysis facilities on the Scanning Electron Microscope (SEM) and Electron Microprobe at the University of Western Australia.
- Niton XL3T Portable XRF.
- PIMA infrared mineral analyser for hydrothermal alteration assemblages.