

AUSTRALIAN GEOLOGICAL SURVEY ORGANISATION

AGSO RECORD 2000/05

**Facsimile copy of the Aerial Geological
and Geophysical Survey of Northern
Australia (AGGSNA) Reports (1 to 26,
28, 46, 48, 51 to 59) for Western
Australia (Pilbara Goldfield).**

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Background

The economy of the Pilbara region of Western Australia is almost entirely mineral resource based, largely from vast deposits of late Archaean to Palaeoproterozoic aged iron ore. The early Archaean rocks of the the North Pilbara hold potential for significant discoveries of new mineral deposits. Discovery of new resources requires a basic understanding of the geology of the region. Since the mid 1960s, the Pilbara Craton has become a major contributor to the Australian economy due to the exploitation of vast iron ore deposits of middle Archaean and Palaeoproterozoic age. With the more recent development of the Northwest Shelf gas project, the Pilbara region is about to become one of Australia's main growth regions.

Palaeo- to Meso-Archaean rocks of the north Pilbara greenstone-granite terrane produced the first economically viable ores in the Pilbara region. Copper and gold have been produced from mining centres such as Whim Creek and Marble Bar since the late 19th century. Historically, the North Pilbara has been one of the most significant copper producers in Western Australia. During the 20th century, Meso-Archaean rocks have also produced significant quantities of tin, tungsten, beryllium, tantalum, antimony, lead, silver and iron. The potential for production of zinc, nickel, chromium and platinum group elements has also been recognised. However, to date, no world class base or precious metal deposits have been discovered, although the potential exists for such deposits. In recognition of this potential, the North Pilbara craton is at present the subject of exploration activity by mining companies, particularly for gold and base metals, and, to a lesser extent, for chromium and platinum group elements.

Rationale

The North Pilbara NGMA (National Geological Mapping Accord) project, a joint Australian Geological Survey Organisation (AGSO) and Western Australia Geological Survey (GSWA) initiative, will provide second generation mapping at 1:100000 scale as well as advanced geological data that are useful for exploration, such as: (1) regional airborne magnetic and gamma-ray spectrometric data, (2) remotely sensed multispectral images, (3) structural data, and (4) compilation of the geological characteristics of mineral deposits. The data will also incorporate isotopic age data, mineral deposit descriptions, and geochemical data for igneous rocks that will be used to generate metallogenic and tectonic syntheses, and to develop empirical models of exploration for the North Pilbara. These programmes are intended to enhance exploration activity in the North Pilbara, and, thereby, increase the probability of significant mineral discoveries.

As part of the North Pilbara project synthesis, the Aerial Geological and Geophysical Survey of Northern Australia (AGGSNA) Reports (1 to 26, 28, 46, 48, 51 to 59) for the Pilbara Goldfield of Western Australia have been recompiled (scanned). The AGGSNA was a Commonwealth initiative that documented the mineral deposits of the Pilbara region between 1935 and 1939. The reports were scanned and optical character recognition technology used to capture the words and numbers as rtf files. The reports contain descriptions of the geology, history and production, the economic geology, and in some cases, the water supply. The numerous maps (plates) have also been scanned and the colour plates saved as Joint Photographic Expert Group (jpeg) files, and the line diagrams saved as binary Tagged Image File Format (tiff) files using 'group4' compression.

The AGGSNA reports are valuable documents that are fragile and relatively rare. As part of the regional synthesis aspect of the project, it was decided that they should be captured and re-released by the Commonwealth as an AGSO Record. The maps contain the geology

outlines of the vein and lode systems (many now removed due to extraction), drill and sample assay results, mining methods, mine plans and sections, and areas of alluvial workings.

The reports are listed below in report numerical order and are hot linked to the digital text files. The plates (maps) are relatively large files that can be accessed by suitable image manipulation packages. Each report has its own map directory (e.g., Report01) and the contents (plates) listed in each (e.g., r01plate01_sheet01). Reports 58 and 59 were never officially published, the scan was made off pre-publication proofs (there were no plates with these two reports).

This recompilation of the AGGSNA reports will be of value to mineral explorer's and prospectors working in the Pilbara, both from a current exploration and an historical perspective. This CD release will also make this rare material more widely accessible.

List of Reports

Finucane, K. J., 1935, McPhee's Patch area, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 1.](#)

Finucane, K. J., 1936, The North Pole mining centre, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 2.](#)

Finucane, K. J., 1936, Lalla Rookh mining centre, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 3.](#)

Finucane, K. J., 1935, The Nullagine conglomerates, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 4.](#)

Finucane, K. J., 1936, The Nullagine River concessions, No. 695H, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West [Australia Rept. No. 5.](#)

Finucane, K. J., 1936, Talga Talga, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 6.](#)

Finucane, K. J., 1936, The Blue Spec gold-antimony quartz veins, Middle Creek-Nullagine district, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 7.](#)

Finucane, K. J., 1936, Marble Bar mining centre, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 8.](#)

Finucane, K. J., 1936, Bamboo Creek mining centre, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 9.](#)

Finucane, K. J., 1937, Halley's Comet Centre, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 10.](#)

Finucane, K. J., 1937, Lalla Rookh gold mine, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 11.](#)

- Finucane, K. J., 1937, Station Peak mining centre, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 12.](#)
- Finucane, K. J., 1938, The Just-in-time conglomerates, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 13.](#)
- Finucane, K. J., 1938, The North Shaw mining centre, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 14.](#)
- Finucane, K. J., 1938, McLeod's Find, Dalton mining centre, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 15.](#)
- Finucane, K. J., 1938, The Tambourah and Western Shaw mining centres, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 16.](#)
- Finucane, K. J., 1939, The Sharks Well mining centre, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 17.](#)
- Finucane, K. J., and Sullivan, C. J., 1939, The Twenty Ounce mining centre, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 18.](#)
- Finucane, K. J., 1939, Mining centres east of Nullagine, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 19.](#)
- Jones, F.H., 1938, The Warrawoona area, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 20.](#)
- Finucane, K. J., 1939, The Salgash-Apex area, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 21.](#)
- Finucane, K. J., 1939, The Boodalyerrie mining centre, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 22.](#)
- Finucane, K. J., 1939, The Yandicoogina mining centre, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 23.](#)
- Finucane, K. J., 1938, The Braeside lead field, Pilbara District: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 24.](#)
- Finucane, K. J., 1938, Recent gold discoveries near Wyman's Well, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 25.](#)
- Jones, F.H., 1938, The country between Sharks and North Shaw, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 26.](#)
- Finucane, K. J., 1938, Halley's Comet and adjacent mines, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 28.](#)
- Finucane, K. J., and Telford, R. J., 1939, The tantalite deposits of the Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 46.](#)

- Finucane, K. J., and Telford, R. J., 1939, The antimony deposits of the Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 47.](#)
- Telford, R. J., 1939, The Mallina and Peawah Mining Centres, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 48.](#)
- Finucane, K. J., Jones, F. H., and Telford, R. J., 1939, The Weerianna, Nicol Bay and Glenroebourne mining centres, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 51.](#)
- Sullivan, C.J., 1939, The Hong Kong, Pilbara and Egina Mining Centres, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 52.](#)
- Telford, R. J., 1939, The Toweranna Mining Centre, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 53.](#)
- Finucane, K. J., Sullivan, C. J., and Telford, R. J., 1939, The chrysotile deposits of the Pilbara and Ashburton Goldfields: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 54.](#)
- Finucane, K. J., and Sullivan C. J., 1939, The Whim Well and Mons Cupri copper mines, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 55.](#)
- Finucane, K. J., and Telford R. J., 1939, The Ellarine Hills and Andover Iron Deposits, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 56.](#)
- Sullivan, C.J., 1939, The Moolyella and Cooglegong tin-fields, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 57.](#)
- Jones, F. H., 1939, Prospecting of the Coongan–Bamboo Creek Area, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 58.](#)
- Sullivan, C. J., 1939. The Lalla Rookh-North Shaw area, Pilbara Goldfield: Aerial Geol. Geophys. Survey Northern Australia, West. [Australia Rept. No. 59.](#)