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TABLE OF CONTENTS REFEREED

	Pages
LLOYD CARPENTER <i>'Specimens liberally studded with gold': The mining history of a remote Otago valley</i>	1 - 23
ERIK EKLUND <i>Company and Labour loyalties in a central Queensland gold mining town, 1882 to 1992</i>	24 - 42
JIM ENEVER <i>A difficult challenge: Processing complex ore at Bethanga</i>	43 - 60
DAVID LEE <i>The Establishment of Iron Ore Giants: Hamersley iron and the Mount Newman Company, 1961--1969</i>	61 - 77
JASON SHUTE <i>When is a Store not a Store? When it's a Smelting House</i>	78 - 97

UNREFEREED

CLIVE BEAUCHAMP <i>Disaster at the ('Welsh Mine') Stanford Merthyr Colliery, Kurri Kurri, New South Wales, 1905</i>	98 - 109
BRIAN HILL <i>Gold Streaming: The application of Volumetric Production Payments in financing gold mine development in Australia</i>	110 - 120
KEITH PRESTON <i>Hydraulic Sluicing on the Gladstone Tinfield: Tasmania</i>	121 - 140

BOOK REVIEWS

Peter Bell , <i>Alas It Seems Cruel: The Mount Mulligan Coal Mine Disaster of 1921</i> Reviewer: Alan Murray	141 - 142
Ben Curtis , <i>The South Wales miners: 1964–1985</i> Reviewer: Alan Murray	143 - 143
Kett H. Kennedy, with Lyn Robinson and Maria Caeser , <i>From Spruikers Corner: Electoral Politics on the Northern Goldfields</i> , Reviewer: Ruth Kerr, University of Queensland	144 - 147
Robert P. Wolensky and William A. Hastie Sr , <i>Anthracite Labor Wars: Tenancy and organised crime in the Northern Coalfield of Northeastern Pennsylvania 1897-1959</i> . Reviewer: Alan Murray	148 - 149

BOOK NOTES

Barry Sykes , <i>Lines Mines People and Places: settlement of South Gippsland – Korumburra, Jumbunna, Outtrim</i> . Commentator: Ruth Kerr, University of Queensland	150 - 151
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AUTHOR DETAILS AND ABSTRACTS OF ARTICLES

CLIVE BEAUCHAMP: *Disaster at the ("Welsh Mine") Stanford Merthyr Colliery, Kurri Kurri, New South Wales, 1905*

Dr Clive Beauchamp is Adjunct Associate Professor at Charles Sturt University, Bathurst and holds degrees from the University of London and a PhD (UNSW). He has taught at tertiary institutions in Australia, UK and the USA. Since 1990 he has published a number of articles on Australian Mining History. Currently his research focuses on the migration of Welsh coal miners to the Northern coalfield of NSW (1840-1930).

In October 1905, a fire and explosion at the Stanford-Merthyr colliery resulted in six fatalities and nine others suffered serious injuries. The disaster had some significant and unusual features. It occurred when no one was underground; those killed were all mining officials and five out of the six deceased were Welsh migrants. Also there were allegations of arson. The paper traces briefly the history of the mine; the rescue attempts; the sealing of the mine and its re-opening. There is special focus on the proceedings of the Coroner's inquest including its findings and recommendations. The disaster's impact is also considered.

LLOYD CARPENTER, <lloyd.carpenter@pg.canterbury.ac.nz> *'Specimens liberally studded with gold': The Mining history of a remote Otago valley*

Lloyd Carpenter is of Ngati Toarangatira, English, Cornish and Highland Scottish descent. He worked in sales, the insurance industry, taught high school Economics and Mathematics, was a Salvation Army officer and recently completed his doctoral thesis in English at the University of Canterbury: 'Rich in Myth, Gold and Narrative: the Central Otago Gold Rush 1862-2012'. He works as a tutor in English, History and Civil Engineering at the University of Canterbury.

Abandoned shafts, moonscapes of sluice workings and mullock piles beside old mines are typical elements in landscapes shaped by a gold rush. In Otago the prevalence of these landscapes means that for many areas, economic histories detailing gold yields, mining enterprises and the miners that worked them are lost or ignored as typical visual markers of an interesting heritage.

Taking Otago's Rise and Shine Valley as an exemplar landscape, I detail nine decades of its mining history and explain its remaining archaeology. This reveals layers of the industrial and mining past that is not apparent to the casual observer.

ERIK EKLUND: <erik.eklund@monash.edu> *Company and Labour loyalties in a central Queensland gold mining town, 1882 to 1992*

Erik Eklund is Professor of History at Monash University's Gippsland campus. He has published numerous works on Australian regional history with a particular focus on mining and industrial towns. His latest book was published by UNSW Press in 2012, entitled *Mining Towns: making a living, making a life*.

This article examines how a labour interest grew and prospered at Mount Morgan in the face of strong control from the local mining company and its senior staff. One might expect to see a local miners' union at the centre of this story, but instead a town-based political organisation carried the flag for Labor during this early period. Away from the scrutiny and control of the company, working class representatives and their local middle class supporters were able to build a collective identity that eventually led to success in municipal and Queensland parliamentary elections.

JIM ENEVER: <jmenever@satlink.com.au> *A difficult challenge: Processing complex ore at Bethanga*

Jim Enever is a retired mining engineer. Educated in mining at Melbourne University, Jim went on to have a working career in mining research with CSIRO. After retirement, He returned to study to complete qualifications in archaeology and history. Jim is the author of several papers on some lesser-known aspects of Victorian mining history.

Bethanga, located in the upper Murray Valley of Victoria, started life in the 1870s as a gold field, later turning to copper mining, and then reverting to become primarily a gold producer in the 1890s. In the early days gold was relatively simply recovered from the oxidised gossan material, but the complex copper/arsenic sulphide primary ore occurring at depth proved a tougher nut to crack. A range of evolving processing techniques were tried, initially to produce copper, with gold as a bye product, and later to principally focus on gold production with copper as the bye product. From the late 1870s to the mid 1890s, a series of trials were initiated involving most, if not all, of the major processing techniques emerging at the time. Direct smelting to produce copper matte, followed by refining to recover the gold content of the matte, was persisted with for 10 years. Various methods primarily for gold recovery were experimented with, including amalgamation, leaching, cyaniding and chlorination. Eventually, a viable method for essentially complete recovery of the gold content of the ore, with copper as a valuable by product, was arrived at with a modified version of Munktell's vat chlorination process. From the mid 1890s to around 1915, Bethanga was a viable, if sporadic, gold producer, with intermittent attempts at copper production. Interest in the Bethanga ore bodies continues to this day.

BRIAN R. HILL: <brhill@senet.com.au> *Gold Streaming: The application of Volumetric Production Payments in financing gold mine development in Australia*

Forty years ago Brian Hill arranged the financing of the development of Marvel Loch gold mine in the Yilgarn Goldfield of Western Australia, and this mine has gone on to produce some 2.4 million ounces of gold. His mining history research interests include capitalism in mining, and 19th century British investment in overseas mining. New Zealand gold mining history research is another retirement hobby.

Gold streaming is a new mechanism in financing gold mine development in Australia. It involves a financier – a gold streaming company – providing mine development finance in exchange for receiving volumetric production payments in the form of having the right to acquire a certain percentage of the gold produced over the life of the mine at a predetermined price per ounce. Streaming agreements allow the mining company to capitalise on proven reserves before the operation becomes productive. The underwriting financier or streaming company enjoys any resource upside while avoiding the downside risk associated with mine operation. The difficulties encountered in obtaining traditional finance for gold mine development in Australia have encouraged the adoption of such an exotic mechanism as gold streaming as a finance model.

DAVID LEE, <david.lee@dfat.gov.au> *The Establishment of Iron Ore Giants: Hamersley Iron and the Mount Newman Company, 1961–69*

David Lee is Director of the Historical Publications and Information Section, Department of Foreign Affairs and Trade, and an Adjunct Professor in History, Deakin University.

The paper examines how companies were established after 1960 to mine the two largest iron ore deposits which had been discovered in the Pilbara region of Western Australia: those in the Hamersley and Ophthalmia Ranges in the 1950s and 1960s. Both deposits were discovered by independent prospectors who were only able to interest

overseas mining companies in deposits that lay hundreds of kilometres from the coast. The successful establishment of iron ore companies was facilitated by their access to US capital loaned on the basis of long-term contracts negotiated with the Japanese. Yet Australian management by Conzinc Riotinto of Australia in the case of Hamersley Iron, and the Colonial Sugar Refining Company (and later the Broken Hill Proprietary Company) in the case of the Mount Newman Company, was an essential part of the development of both companies into giants of the Australian iron ore industry by 1969.

KEITH PRESTON: *Hydraulic sluicing on the Gladstone Tinfield, Tasmania: water supply - an uphill battle*

Keith Preston is a retired engineering geologist and geotechnical engineer who continues to research aspects of the Tasmanian mining industry, particularly the widespread application of water power for mineral processing.

Tin mining by hydraulic sluicing proceeded for a century on the Gladstone tinfield following the initial discovery of economic deposits in 1874. As tin deposits were elevated above the reach of gravitational supply schemes using water races cut from the Ringarooma River, pumped water supply schemes were implemented. A number of steam powered plants were tried and found to be unviable, the installation of an ingenious water powered plant proving to be the only means of supplying elevated leases on the Empress Hills prior to 1890. State Government intervention re-vitalised mining activity when the Mount Cameron Water Race was purchased and then extended to supply the eastern and northern sections of the field from 1890, and leases on the western bank of the Ringarooma River from 1923. The long-awaited supply of HEC power in 1952 prolonged mining into the early 1980s, thereby stimulating the local economy.

JASON SHUTE: *When is a store not a store? When it's a smelting house.*

Jason Shute, the biographer of Henry Ayers and of LMS Hargrave, is an Adjunct Lecturer in the Archaeology Department of Flinders University, following a career as a classical musician. A participant in the Leverhulme Trust-funded 'Copperopolis' (Swansea 'moment') project based at the University of South Wales, he contributed to the recent BBC Wales television documentary *Wales in Australia*, focusing on the Welsh smeltermen's experiences at Burra.

This is the first in-depth discussion of the fate of the South Australian Mining Association's 'lost' early smelting house at Burra. Drawing together pictorial, documentary and on-site evidence, it is argued that Australia's first copper smelting house building is extant, in the form of the Burra mine's storehouse.