

The South Australian Mining Association: An Early Australian Cost-book Company

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When I assumed the position at the Mines I was under twenty-four years of age. Within a year I had control of 1,100 or 1,200 men and officers. I had no other mining establishment from which to copy. The organisation of that vast establishment was almost entirely my own, and of course I look back with great pride on it.

‘Presentation by Burra Residents’, Address by Sir Henry Ayers, G.C.M.G., *South Australian Register*, 27 September 1896.

Although an extremely able servant of the South Australian Mining Association (SAMA), the above quotation shows that the 52 years that had elapsed since his appointment as Secretary had played tricks upon Ayers’ memory. Not only had he exaggerated the growth of the Association’s Burra Burra Mine during its first year of activity but he had also exaggerated his own part in the formulation of policy and organisation. In effect, Ayers and his brother officers merely embellished the edges of a form of organisation that would have been as recognisable to the captains and miners at Burra Burra as any mining organisation in their native Cornwall. Even the basic financial and legal framework was unoriginal being a direct transplant from England of the cost-book principle which had been moulded over three centuries or more into a code of custom and practice recognised under the Stannary Law.¹

It is this aspect of organisation that will be examined in this paper. Not only is the SAMA experience of interest because of the historical antecedents associated with metalliferous mining practice but pertinent also in that SAMA is the first company to be *identified* as functioning under cost-book organisation in Australia. It thus predates the heralded gold companies that adopted the system in Victoria from the 1850s,² which are seen as setting the pattern for the No-liability Mining Companies familiar today. As very little has been written on the subject in Australia, the author’s first task has been to identify the salient characteristics of cost-book practice.

The Cost-book system

By the nineteenth century the cost-book system had become so complex that only a few lawyers fully understood its intricacies, it being claimed in the pages of *The Mining Journal* in 1847, that this had arisen due to frequent legal interpretation and innovation.³ Not only was there uncertainty among the lay public as to liability responsibilities of Mine Adventurers who provided the capital⁴ but also as to the validity of Stannary Law in areas outside of Cornwall and Devon.⁵ So diverse was opinion that in the early 1850s *The Mining Journal* took the unusual step of offering a prize for the most competent essay on the subject so as to clarify the issue - an incentive that resulted in publication of an eight-page supplement authored by Thomas Tapping.⁶

Yet, paradoxically, the system was viewed by the mining fraternity as eminently simple both in terms of application and company formation. In the latter respect it involved minimal cost and trouble, unlike Joint-Stock formation, available from 1844, which 'is through the innumerable, yet ineffectual statutory precautions to prevent fraud, admitted to be the most monstrous and costly constitution by which partnerships can be constituted and governed'.⁷ Such attitudes were still prevalent after the coming of Limited Liability in 1855 under the 18 and 19 VIC. Cap 133, when it was argued that smaller ventures were better served by the time-honoured cost-book principle rather than by the 'cumbrous machinery of the Joint-Stock Acts'.⁸

Described as 'a compromise between limited liability companies and ordinary partnerships',⁹ the establishment of a cost-book company was eminently simple, for company formation required only that shareholders enter their names and shareholdings in a 'cost-book' in which would also be inscribed the rules and by-laws as determined by the Adventurers. Not until 1869 were cost-book companies required to register or even publish the fact of their formation or contents of responsibilities.¹⁰

While the flexibility of 'rule-making' which catered for all whims and circumstances was seen as a boon to shareholders, it also added to legal confusion, for even 'recognised' rules were the source of contention, having been codified and developed over time, often on the basis of unwritten custom and convention, thus leading to difficulties regarding legal interpretation.¹¹ Such diversity of rules and opinion resulted in the 'system' being referred to from the mid-nineteenth century as the cost-book 'Principle'.¹² To define this principle it is appropriate to examine some of the

major components and to compare some aspects with Joint-Stock, and Common Law Partnership organisations.

Function and constraints

Control of a venture was usually placed in the hands of a Purser, though in large concerns the direction of officers was often placed in the hands of a Committee of Management that appointed a subordinate official as Secretary.¹³ However, such officers were constrained in their powers in order to protect the body of shareholders. Their powers were ascribed and constrained by the limitations of the rules and bye laws set out in the cost-book and were further constrained by limits over their powers to determine long term contracts or purchases outside day-to-day requirements unless briefed to do so by a General Meeting of shareholders. Herein lay both strength and weakness, for while it curbed reckless speculation and thus protected the shareholder, it tended to dampen long-term development plans in favour of more certain short-term goals. This problem was exacerbated by the desire to distribute profits at the expense of long-term capitalisation, which saw the next period commence with no reserves.¹⁴ The subsequent need to pay everyday costs out of current receipts, or to await a call on subscriptions, could also cause interruption to the work pattern and induce prompt sales so as to meet current running costs. This practice tended to encourage ‘picking-the-eyes’ out of the mine, prevented accumulation of ore stocks and could prove disadvantageous in terms of playing the market.¹⁵ Additionally, in times of adversity, shareholders were liable to bail out of the venture either by selling their interests or by closing down the mine – risk aversion and not perseverance was a common feature of mining under the cost-book system.

Meetings were usually scheduled bi-monthly, so as to ensure tight control by the body of shareholders,¹⁶ for as Thomas Tapping so pithily commented, ‘short accounts make long friends’.¹⁷ At shareholders meetings the cost-book would be presented so as to detail all receipts and expenditures. Decisions would be taken to determine calls, or in the case of losses, to abandon activities and to sell assets, settle liabilities, divide any surplus and wind-up the Company - a procedure accomplished with minimum of fuss at the Stannary Court should a majority of shareholders (usually representing three-fourths of shares) care to do so.¹⁸

The cost-book system although it exposed all members to unlimited liability, differed from other trading ventures or partnership in that no shareholder could pledge the credit of another shareholder.¹⁹ Unless stipulated by the General Meeting, or if liabilities arose due to the actions of the Purser or Management Committee which lay outside the everyday needs of the Association, or as specified in the by-laws, the shareholder was deemed protected.²⁰ Indeed, the weight of opinion was that technically cost-book companies should not borrow. Expenditure should be conducted in cash rather than credit.²¹ Should a loss be made, it needed authority of the shareholders to continue activity through a call on shares. This further protected the shareholder but could lead to the closing down of a concern at a time when a little perseverance might have brought positive results. Furthermore, unlike limited liability or partnership shareholders, cost-book shareholders could relinquish their interest in a company and not be liable for future calls. Capital could also be increased at any special general meeting, and shareholders could be proceeded against for non-payment of same, whereas under the common law partnership, there was a set amount of capital.²² As stated by Burt, the law 'enabled partners in mining ventures to enjoy privileges of continuity of operations, transferability of shares, and limitation of liability much beyond the members of ordinary commercial or trading partnerships'.²³

One distinct advantage of the cost-book was the freedom enjoyed by the shareholder to transfer shares. This could be done without consent of co-partners, and the transfer could be achieved at no cost²⁴ by merely informing the Association, usually in writing, that a transfer had taken place. Shares could also be forfeited following the honouring of current liabilities and calls, and forfeiters were allowed to claim their proportion of mine assets in relation to shareholding²⁵ as represented by dividends, plant and machinery, ores and metals, at the time of relinquishment.²⁶ Such privileges were not allowed under Common-law partnerships where shares were purely a personal association between the original partners, and where transfers were arranged only by common consent.²⁷

Shared with the Joint-Stock Company was corporate identity granted to cost-book companies under Stannary Law, allowing the company to sue and be sued in its own name, a vital legal condition in the nineteenth century when cost-book companies tended to increase in size and activity.

The cost-book Adventurer was therefore well protected under Stannary Law: there was adequate machinery of control; a favourable position under the law but a tendency for such organisations to be restrictive in terms of long-term growth and development. They were also quite obviously set up to cater for a relatively small group of Adventurers with limited capital or, with limited desire to commit themselves heavily. They had also developed under a peculiar system - the Stannary Law - peculiar that is to Cornwall, Devon (and possibly to other parts of England and Wales).²⁸ The question that arises is, how did such a system work abroad? An examination of SAMA's South Australian experience attempts to put the cost-book system under examination in an 'alien' environment, examining in the process some of the problems and the Association's attempts to rectify them.

The South Australian Mining Association

With John Bentham Neales in the Chair the South Australian Mining Association was floated on 5th April 1845. Neales, a nephew of British political economist Jeremy Bentham, and himself a popular and charismatic figure, had past experience in Cornish mining, and throughout his life in South Australia espoused the virtues of the cost-book principle.²⁹ With such a keen advocate in the Chair it is not surprising to find that the Association's prospectus³⁰ was virtually a facsimile of similar documents found in any area under the Stannary Law.

Stressed was the need to cater for small investors who in combination would be able to successfully compete for mineral lands.³¹ Shareholders would be protected and there should be 'No liability or responsibility whatever upon the holders of Scrip, and no calls of any sort are ever to be made upon them beyond the amount of £5'. To emphasise this point it was further decreed that a special agreement would be executed 'wherein it shall be specified that the Directors only are to be held liable as the contracting parties' (a decree which was amended in the Articles of Association, Clause 122, to read 'Directors & Officers to be indemnified and saved harmless out of the fund ...' unless by their own neglect or default).³² Full reports were to be made to shareholders every month. Initial capital of £5,000 was to be raised, with liberty to increase to £20,000. On each scrip issued a deposit of £1 was to be paid within two weeks of the announcement, with the balance to be paid by 10th May 1845. The projection proved too optimistic. The book remained open until July when revealed that

359 scrips had been paid up, giving a total of £1,795, with an additional £126 remaining in the kitty for forfeited issues.³³ The gloom of those forfeiters in future years can well be imagined for SAMA was soon to own what was recognised in the 1850s as the most fabulous copper mine in the world.

In August 1845 excitement in Adelaide was rife as reports of two magnificent copper ore deposits were reported to the North of Adelaide. The ensuing tussle for ownership between two major competing groups, the necessity to purchase 20,000 acres of land under the 1842 Waste Lands Act, and the decision to allow the two groups to raise £10,000 each and to then draw straws for the two claims, is mentioned in virtually every general history of South Australia.³⁴ What is little known, however, is that SAMA was not a serious contestant having no chance of raising the necessary £10,000. It became involved when the thirteen members of one contesting party, the 'Mining Association for the Northern Monster Lode' who were desperate to acquire the purchase price but also working capital, agreed to combine with SAMA.³⁵ The members of the 'Monster Lode' combine received the lion's share of the deal. Of the £12,320 in subscribed capital £10,105 (2,021 shares) was provided by them, and £2,215 by SAMA subscribers.³⁶ While there is no documented explanation as to why they combined, this had no doubt been affected by the fact that some of the 'Monster Lode' members were also SAMA scrip holders. In addition, the 'Monster Lode' group had been hastily organised to exploit the opportunity, while SAMA had a well-established and registered organization. In the final tally there were over 60 scrip holders, ranging from John Benjamin Graham with 415, to miner James Cobbledick who held just one.³⁷

After paying for the land, working capital available amounted to only £2,320, hardly an adequate sum when considered that the mine lay 100 miles from Adelaide and was set in territory deplete of any infrastructure and inhabited only by a few local Aborigines and shepherds. With the previously mentioned decision never to make calls and a restriction on borrowing except as collateral or lien on ores raised, SAMA's officers were called upon to exercise miracles of financial juggling in the early years of activity. However, due to the problems of regular mass meetings of shareholders, it was soon realised that the chosen method of conducting business was not entirely satisfactory.

Argument over petty detail, uninformed debate over technical and financial matters that threatened rational decision making, leaking of information which promised

to jeopardise the Association's security,³⁸ and the likelihood of factions developing, which could have proved destructive to corporate interest, were sufficient to persuade the shareholders to amend monthly meetings to 'half-yearly' and to vest activity in the hands of a small group of responsible Directors. The term 'Director', however, belies the true power of the Board, for in theory they were constrained by the cost-book principle over planning procedure and in expenditure decisions. In practice, and to all intents and purposes real power soon fell into a few hands.

Contrary to the bye laws and to all cost-book practice a motion to allow selection to the Board to those holding 20 shares and above was approved by a show of hands in April 1846.³⁹ This was nullified when J.B. Graham quite legitimately demanded the matter be determined on a one-share to one-vote basis.⁴⁰ Graham's 415 votes contributed to the success of an amended motion that restricted applicants to those who held 40 shares and above. However, with dissipation of shares by 1847, only 17 members were eligible though not all these found it convenient to stand. This caused membership qualification to be reduced to 20 shares and in 1850 this was further reduced to 11. This, claimed Secretary Ayers was a matter of necessity, for 'the shareholders resident here holding twenty shares and upwards were getting few and now we are able to choose from a larger number'.⁴¹ The dissipation of some holdings and the departure of large shareholders abroad were factors that worried J.B. Graham who was himself domiciled in London in 1848. In April 1847 there had been 62 shareholders, a number which had almost trebled by 1854⁴² - a situation no doubt encouraged by the dramatic increase in share values which reached £220 on one occasion in 1848.⁴³ But Graham's concern as to the necessity for large shareholders to be represented for the good of the Association was groundless: first, there were always one or two substantial holders on the Board; second, a list of those on the Board between 1845-77 looks like a Who's Who of successful South Australian politicians and businessmen; and third, there was a great deal of continuity among Board members.⁴⁴ In 1874, for example, two of the 1849 Board, G.S. Kingston and J. Beck were still members even though in the intervening period membership had been reduced from nine to five.⁴⁵ Cohesiveness was a mark of the Board - I. Johnson, referred to by Ayers as a 'cross brute'⁴⁶ was defeated in 1849 when he stood for election.⁴⁷ As Ayers remarked, 'of course we could not have him'. Instead they elected M. Fetherstonhaugh, 'A Gentleman very highly connected at home, and a friend of F.H. Dutton's he has not

long been a shareholder - has 22 shares – is a very intelligent young Gentleman and one with whom we shall work well together'.⁴⁸

The Directors were in a strong position to keep out such unwelcome candidates as Johnson, or to elect those of whom they approved. Not only did they have influence, but their voting power was reinforced through capture of votes of absentee colonists or foreign shareholders who were empowered to place power-of-attorney with a representative within the colony. In this respect, Secretary Ayers was in a particularly strong position and was not averse to touting for proxies,⁴⁹ all which added to his pervasive influence over Company matters. Never a large shareholder,⁵⁰ Ayers at a Special Meeting called in 1846, controlled 776 out of a total of 1,569 shares represented. This power bloc, and the fact that many shareholders and attorneys did not bother to vote enabled the Directors to consolidate and perpetuate their position on the Board. Moreover, the verdict must be that over time this power was wielded sensibly so that they retained the confidence and respect of the large body of shareholders in whose interest they served.⁵¹ The claim, however, that the cost-book system was controlled directly by the shareholders was proved in one sense, in SAMA's case, to be a myth,⁵² but in another, through the power-of-attorney, it rang true.

While dividends continued to pour in, apathy (or confidence!) was usually the response of shareholders. At a half-yearly meeting in 1858 for example, Graham, while paying a visit to South Australia was surprised to note that only six shareholders were in attendance.⁵³ But despite the wealth of the mine, the mettle of SAMA's Board was sometimes tested under conditions of adversity. Difficulties arose in relation to supply of capital goods; in labour and transport supply; in finance and marketing. There were periods of stress such as the Gold Rush years from 1851 to 1853. Dealings with foreign factors and smelting companies also created problems. Most were overcome through competent management and direction.⁵⁴ Many of the problems faced can be associated with SAMA's cost-book regulations.

The first major problem facing the Board was associated with the limited capital of £2,320 in hand to commence production. This sum was soon whittled away as the scale of works at the Burra Burra mines increased rapidly. Within three months of commencement on 29th September 1845, strategies had to be adopted to pay for cartage and wages - indeed the dilemma at one stage was whether to lay off miners or to discontinue cartage of ores. The choice was averted by obtaining loans from

shareholders (not calls) - thus the loan of £150 from C.F. Beck repaid later with 9s 10d interest, and the £300 with £1.6.3 interest from C.S. Penny, among others.⁵⁵ Such loans were legitimately covered by collateral of the ores raised. Another strategy emerged four months later in May 1846, when the Directors gave notice '... to the men at the next letting that they will only receive a modest subsist and that the balance of their wages will not be paid until the season enables the Association to get the ore away'.⁵⁶ While these examples expose one of the weaknesses of the cost-book in the inability of a company to seek uncovered loans, it does reveal a more positive side. The incidents occurred in the very early days of the venture when over-confidence because of early mineral indications could have led to over-speculation. The petering-out of rich ore deposits was a very real possibility, as illustrated by the case of the nearby 'Princess Royal Mine' (the other deposit discovered at the time of the Burra Burra find) where the rich deposits proved only surface-deep and the mine was soon abandoned, without paying a dividend.⁵⁷

The uncertainty as to liability of shareholders as expounded by the mining press, compounded by the suspicion of bankers regarding mining, proved an early stumbling block to borrowing on collateral from this source. Indeed it was well over two years, when returns began to flow into Adelaide from overseas, that the Directors could relax in terms of their financial position. Accommodation for SAMA's business was refused by the Bank of South Australia (the Bank elected to conduct SAMA's business in the Prospectus of June 1845) and overtures had to be made to the Bank of Australasia. Accommodation by the latter was granted but this was arranged locally, much to the chagrin of the Bank's London Directors who appeared to have had much more faith in colonial wool than copper.⁵⁸

In the first instance, advances were received on ores shipped, followed after negotiation by advances on ores stores at Port Adelaide. Only in 1847 was a lien extended to ores raised 'to Grass' at the Mine. This latter accommodation proved a Godsend, for road and sea transport were mainly seasonal activities confined to the summer months from October to April, and denial of the lien would have adversely affected development at the mine during the winter time. Not only would this have proved ill for SAMA, but from mid 1847 for the health of the whole South Australian economy and to the fortunes of the Bank of Australasia itself. Through the issue of Promissory notes on behalf of SAMA (clause 119 of the Articles of Association allowed

this practice on collateral being available) the Bank accommodated SAMA's thirst for funds between July 1846 and August 1847 - a period sufficient for the practice to be noted by the Bank's London Directors and for word to get back to the Adelaide branch to stop the practice.⁵⁹ Fortunately, funds began to return from overseas at this stage, and with the proven wealth of the Burra Mines the Bank became more accommodating.

Although the flow of returns from mid 1847 placed SAMA in a healthy position, the practice of paying out dividends whenever possible caused periodic problems, even in the heydays of financial good fortune. Between 1847 and 1868, a total of £776,160 was paid out on the initial capital of £12,320, that is, a total return of 6,300 percent or 300 percent per annum. But even so, strategies were often sought to help overcome liquidity problems.

Dividends were utilised as one source, for under clause 113 of the regulations, unclaimed dividends were placed in a special fund, the interest accruing to the Association, and when the need arose the Directors were not averse to use the deposits 'for the General purpose of the Company'.⁶⁰ Seeing this as a useful source of funds, shareholders were encouraged to leave their dividends in credit and from the payment of the seventh dividend of 200 percent paid on 1st September 1849, it was practice to allow interest at a rate of eight percent per annum to any shareholder informing the Secretary that the Association could utilise the money and keep it on deposit for at least one month.⁶¹ However, money in hand appears to have been more attractive to shareholders, for records show that £4,145 was the most ever deposited,⁶² and normally the sum remained below £500.

A loan scheme was also adopted in times of contingency. This allowed money at one day recall to be paid into the Association. SAMA also had the right to return such money at similar notice. The first motion passed to this effect by the Board asked for sums 'not less than £500 nor in the aggregate more than £10,000; to be held at interest at 6% per annum'.⁶³ In this instance the Secretary received from 'Wm. Saunders £2000, I & T Waterhouse £1000 and S. Penny £2000'. In 1851 limits were set at £200 to £20,000.⁶⁴ When S. Stocks junior's deposit of £340 was not collected at request of SAMA, it remained gathering interest for SAMA but only dust for the depositor. Such deposits helped bridge the gap held at any one time between credits and liabilities at the Bank of Australasia.⁶⁵ As the Bank paid only a proportion of the full expected value of produce before marketing, then such adverse balances did not contravene the 'no-credit'

basis of transacting Company business. With regard to the debt to shareholders, their position was also covered, for they enjoyed a claim over the assets of the organisation. Such strategies allowed SAMA to overcome periodic problems without contravening its cost-book regulations.

Regulations were also drawn up to allow the existence of a financial reserve - the absence of which has been one of the most criticised areas of cost-book activity. This was catered for under clause 114 of the Articles of Association, though at 'no-time' was this to exceed £10,000. The extent of activity had obviously not been anticipated, a matter that worried Secretary Ayers who stated in 1850 that he would 'urge the Directors to lay aside a goodly sum ... and guard against a rainy day'.⁶⁶ During 1853, the Articles were amended and such a 'goodly sum' was set aside. While under normal circumstances funds were sufficient to allow plough-back of profits and payment of handsome dividends, with reduced activity during the Victorian Gold Rush the mine had been allowed to flood to the 20-fathom level so as to save on costs. With resumption of activity around the corner and with the need to 'fork' the mine, carry out repairs and to expand activity, it was decided that:

an account be opened ... to be called 'Stock Account' and that be carried ... from 'Profit and Loss' Accounts for the purpose of representing the value of the Company's landed property, buildings, machinery, plant, stores, office furniture and the funds necessary for carrying on the operation of the Company in order that the balance remaining at all times represent the amount applicable for division among the Shareholders.⁶⁷

In 1859, the Stock Account rose to a peak of £147,840.⁶⁸ Whether the account was always put to its original purpose is debatable. In 1867, for example when facing a loss over the year's trading of £15,068.0.11, the Directors transferred £24,640 from Stock Account in order to cancel out the debit, and entered it into the credit of Profit and Loss.⁶⁹ While this allowed the Balance Sheet to show a profit, which no doubt helped boost share prices, it occurred at a time when it was obvious that effort to increase capitalisation at the mine was required. However, it is difficult to ascertain if SAMA was under-capitalised. The level of capitalisation in a mine is notoriously difficult to assess at the best of times. For example, how to divorce exploration work from exploitation work is often difficult to resolve.⁷⁰ The investment in machinery and plant was not impressive especially as depreciation was not utilised in yearly valuations.

When, in 1869 a re-assessment was made, it was calculated that £42,285 was held in Land and Buildings, £18,146 in fixed machinery and pitwork and £10,320 in timber, tools, horses and stores.⁷¹ The amount of machinery is perhaps surprisingly small after 24 years of activity. A breakdown for the first 21 years showed total expenditure on machinery as £26,988 - or 1.36 percent of the total expenditure of £1,982,005.⁷² However, is this evidence of under-capitalisation? In a Mine where deposits were so concentrated and where ores were extremely rich, averaging 23-24 percent over the first 21 years, it is doubtful, considering the technology of the day, whether any additional innovations or capital deepening or widening could have made exploitation more efficient than made possible by the 'human capital' under the activities of the Cornish 'Cousin Jacks'. Another problem lies in the costing of plant, machinery and buildings, much of which was erected at cost by SAMA's own workmen. All that can be said is that when the works were restructured in 1870 to Open-Cast mining, capitalisation was conducted with vigour - railways and railway inclines were laid down, winding engines and trucks purchased, and a new treatment plant erected - though again the total value of plant and labour in a two year period still only amounted to under £15,000,⁷³ or little more than the original capital holding of £12,320. Whatever the verdict, SAMA cannot be accused of blindly following cost- book precedent by failing to allow for contingency or development funds, though the shareholders were often tempted to reduce the reserve in order to boost dividends. As an illustration, in December 1861, it was deemed that £12,320 could be shifted from Stock Account with safety, in order to pay out the fourth 100 percent dividend of the year! In its decision to build up a reserve fund, SAMA appears to have been well ahead of cost book companies in Cornwall, for according to Burt and Kudo, it was only in the last quarter of the 19th century that the Stannary courts permitted many companies to establish a similar practice.⁷⁴

The latter years of activity utilising open-cast methods saw removal of thousands of tons of overburden but revealed only a few pillars and small deposits of ore - little of value was exposed. A report by Captain Hancock of Wallaroo in 1877 suggested that at least four years preparatory work at the deeper levels and an outlay of £60,000 was required just to prove the worth of the mine.⁷⁵ With a drop in copper price in 1877 and with gloomy prospects for recovery, the Directors determined to cease activity on 29th September of that year. Thus, exactly 32 years after commencement, the mine was abandoned. Even had they wished to pursue the matter, the no-liability

cost-book form of association which forbade unsecured debt would have thwarted their plans,⁷⁶ and at that stage even adoption of limited liability would probably have not impressed a public, which despite the mine's glorious past, would have realised that it was of too great a vintage to prove a solid investment.

To the contentious issue of whether the cost-book principle had any legal standing outside the Stannary Law, SAMA's shareholders in at least one area had few illusions, for provision was made under Clause 123 of the Articles of Association to seek recognition as a corporate identity. With the extent of activity, the only surprise is that they left the matter until the end of 1851 (though as this was the year of Colonial self-government herein may lie the cause) when a Private Act was passed in the South Australian Parliament for 'facilitating and simplifying proceedings by and against a certain Joint-Stock Company called the "South Australian Mining Association" so "that the said Company should be able to sue by and be liable to be sued in the name of a Public Officer of the said Company in place and stead of the whole"'.⁷⁷ The designation as a Joint-Stock Company did not preclude SAMA from the cost-book principle - as Thomas Tapping explained, the usage of the term 'Joint Stock' or 'Scrip Companies' was often used when referring to mines under the cost-book system.⁷⁸

The necessity to sue (a rare event as recorded in SAMA's records) arose in 1856 with the 'McDonald affair'. In an unusual gesture of generosity the Directors agreed to utilise Shareholder's money' to reward James McDonald with six months salary for his faithful services as Cashier over the previous eight years, upon his forced retirement due to ill-health.⁷⁹ However, the approval was quickly reversed⁸⁰ when the astonished Secretary and Directors discovered through their auditors that McDonald by 'extensive system of forgeries had defrauded the Company of the sum of £1550.16.6'.⁸¹ On checking it was discovered that drafts totalling £1,600.16.4 had been double-entered in the books to the debit of the company.⁸² Gearing-up for a law suit the Directors on advice of their solicitor were sobered by the difficulties of prosecuting a 'certified lunatic'. The end to the rather sad story was that McDonald's wife discovered and returned the bulk of drafts that her husband had secreted, along with £110.18.2 in cash.⁸³

Resulting from the fraud there was a general tightening of controls. All cheques and bills of exchange were to be counter-signed by the Secretary or the Assistant

Secretary; all officers and clerks were requested to sign fidelity bonds amounting to two years' salary and a deputation of Directors plus the Secretary proceeded to the mine to 'minutely' examine the books and stores and to introduce new procedures.⁸⁴ This visit was in addition to their regular monthly visit to the mine - a practice which was a feature of all cost-book ventures where the desire to keep down expense and keep the shareholder 'harmless' was the guiding principle.⁸⁵

Conclusion

As the Burra Burra proved such a fabulously wealthy mine the question of whether the cost-book system served SAMA adequately is academic - whatever system had been adopted, the dividend payments would have been prodigious. What is revealed is the constraining hand on expenditure associated with the bye laws, which in all probability allowed for lower costs that added to the total profitability of the Mine. Such restraint is definitely obvious in one area not touched upon in this paper - that of provision of welfare and facilities for the company's employees and dependants. Their neglect and the tight-fisted approach by SAMA was legendary,⁸⁶ the rationale presented being that the directors were forced above all other considerations to look after the interests of shareholders - an argument more usually associated with cost-book borrowing than with principles of 'giving', but nevertheless reflecting the careful approach adopted by the Association in terms of its care over finance and need of the directors to strictly abide by the terms of the bye laws.

While a less prosperous or difficult mine might possibly have faced problems in a situation where unsecured loans were unavailable, the need for caution among most concerns was necessary in an era when at formation companies tended to have only small access to capital. The benefits of access to capital were certainly recognised in the various Australian Colonies from the mid-1850s and well into the 20th Century, for most adopted no-liability systems based on cost-book organisation.⁸⁷ Among additional benefits was that the system tended to protect the shareholder from the entanglement of penal liabilities in case of liquidation.⁸⁸ This was of vital account in an industry renowned for its uncertainties, and less generous regulations would probably have been to the detriment of mining company formation. This form of organisation was also eminently suited to an industry seen as a 'wasting' business, for control over liabilities

and ease of the inevitable winding-up⁸⁹ was a matter to be considered when compared with the permanency and growth prospects of other forms of enterprise.

In an industry such as tin or copper mining tied to a resource facing diminishing returns, caution rather than over-zealous capitalisation is not an unhealthy practice - if not taken to an extreme. Such caution, common to cost-book principles was certainly a hallmark of SAMA's regime, though not to the extent that it adversely affected development. More work is required to see how other, perhaps less prosperous Australian mines coped with the situation once they had passed the early stages of development.

As the SAMA experience illustrates, one of the advantages of the system lay in its flexibility. Within bounds, not only were the rules and regulations set by the shareholders, but such rules could be altered to cater for changing circumstances and goals. Thus SAMA was able to see the folly of monthly meetings of shareholders and alter these to the bi-annual affairs. In this instance, because the Association marketed abroad and as it took appreciable time to realise returns, this proved the most practicable mode of conducting business, for it proved impossible to settle the Book even at the end of a six-month period. This necessitated that the accounts be carried over to the following period (or even two periods) before an accurate reckoning could be rendered. While perhaps such a situation was really outside the usual 'safety' bounds required to safeguard against over-extended liability, the careful scrutiny and market assessment by directors who were themselves cautioned due to their personal liability for neglect, tended to create a compensating safeguard.

As previously noted, one of the main alleged problems faced by cost-book companies was the danger of funds being withdrawn by shareholders at times of crisis or when capital development was necessary. Perhaps the wealth of the Burra and the expectation of continuing dividends put the Association in a different mould than the majority of smaller and less successful ventures.

One of the major benefits of cost-book, it was argued, was the ability of the shareholder to recognise and thus contain the extent of liability, and also the ability to drop an interest when danger bells began to sound. No such bells rang for SAMA. No call was ever made on the shareholders. Theirs was a fruitful relationship with the cost-book system and any snags were hidden or quickly covered by the torrent of dividends

that flowed bountifully from the Burra Burra Mines. The final experience did not even necessitate winding-up. Unlike most mining concerns, the peculiar nature of its foundation saw the Association take freehold title over the mine and vicinity as well as over other properties it purchased over time. When the mine finally closed in 1877, equipment was sold, but housing and land continued to be rented and the odd dividend paid until SAMA finally sold out its interests in 1916.

Other companies adopting the cost-book principle might not have been so successful. Unfortunately, no records appear to have survived of other South Australian Mines that adopted the principle. As little or no comment appears in published works in relation to the basis of South Australian mining company organisation, such companies would be difficult to even identify. The only evidence that they did exist is a brief comment in the South Australian Parliament in 1862 that several mines under the cost-book system were working in the colony.⁹⁰ Even by the 1860s, however, there was no special provision for such companies in South Australia, it being claimed that if people wished to organise under the cost-book then they were entitled to do so without any special laws being necessary.⁹¹ This is supported by Godden & Robertson's statements in 1902, that in South Australia 'there is no separate Mining Company legislation, but the No Liability System is provided for in, or by amendment to, the Ordinary Companies Act'.⁹² In a colony which saw Australia's first mining rush, and which spawned in the Burra Burra and the Moonta/Wallaroo, Australia's two richest copper mines of the 19th century, it is surprising that so little attention was paid by the South Australian government to company structure - an opinion shared by J.B. Neales whose attempts to champion the introduction of specific cost-book legislation in the South Australian Parliament of 1862 fell on deaf ears.⁹³

When company organisation outside of the Cornish Stannaries has been addressed, too often the assumption has been that companies were either based on Common-law partnerships or were formed under Joint-Stock organisation. This assumption has arisen, it is suggested, because outside of Britain, cost-book companies rarely utilised the term 'cost-book' in their titles. Yet, on examination, from South Africa to the United States or wherever non-ferrous mining occurred, the basic Cornish method of company organisation was quite commonly adopted. One of the reasons for failing to recognise this has been the belief by many historians that the cost-book system could only survive where Stannary law was in force. The point made in this

paper, as recognised by Thomas Tapping, is that the system could exist outside the Stannary because of its flexibility. Recognition of this fact would go a long way to help historians explain puzzling policy decisions by many mine owners in the 19th century.

Endnotes

¹ For a comprehensive account of development of the Cost-book Principle under Stannary Law, see Robert R Pennington, *Stannary Law. A History of the Mining Law of Cornwall and Devon*, Newton Abbot, 1973. Pennington, p. 9, states that Stannary Law origins may possibly pre-date the Anglo-Saxon conquest of Cornwall in the 10th Century. See also, G.R. Lewis, *The Stannaries. A Study of the Medieval Tin Miners of Cornwall and Devon*, 1908, reprinted Truro, 1965.; Richard D. Morris, 'The origins of the no-liability mining company and its accounting regulations', in T.E. Cooke and C.W. Nobes (eds), *The development of accounting in an international context. A Festrict in honour of R.H. Parker*, Routledge, London, New York, 1997, pp. 90-121. I wish to thank an anonymous referee for directing me to two other informative sources: Thomas Bartlett, *A Treatise on British Mining; with a digest of the Cost Book System, Stannarie and general Mining Laws*, London, 1850; R. H. Williams, 'Cornish Mining and the Cost Book Principle', *The Accountant*, March 28, 1891, pp. 246-251.

² Danvers Godden and William N. Robertson, *Australian Mining Company Accounts*, London, 1902, p. 10, claim the cost-book system was first adopted in Victoria; note also Roger Burt and Norikazu Kudo, 'The Adaptability of the Cost Book system', *Business History*, vol. 25:1, 1983, p. 10, who also imply that in Australia the cost-book was peculiar only to gold mining. For comment on early Victorian companies organized under the cost-book system see, Ralph W. Birrell, *Staking a Claim: Gold and the Development of Victorian Mining Law*, Melbourne UP, Carlton South, 1998, pp. 36, 67.

³ *Mining Journal*, 11 December 1847, p. 586, colm. a. See also Burt & Kudo, 'Adaptability', p. 31; and J.R. Leifchild, *Cornwall Its Mines and Miners*, London, 1857, p. 242.

⁴ Burt & Kudo, 'Adaptability', p. 131.

⁵ See *Ibid.*, pp. 32-33; *Mining Journal Supplement*, 17 December 1853, p. 801, colms. b & c.

⁶ *Ibid.*

⁷ *Ibid.*, p. 807, colm. b. See also Leifchild, *Cornwall Its Mines*, pp. 243-4.

⁸ Thomas Tapping, *The Principles of the Cost-Book System Practically Considered; Embracing Suggestions for the Formation of a Cost-Book Mining Company*, 1867, p. 12; A.R. Hall, *The Stock Exchange of Melbourne and the Victorian Economy 1852-1900*, ANU, Canberra, 1968, pp. 76-8, outlines some of the problems and abuses of the limited liability system.

⁹ Morris, 'origins of the no-liability mining company', p.92.

¹⁰ Pennington, *Stannary Law*, p. 156.

¹¹ Burt & Kudo, 'Adaptability', p. 131.

¹² The terms System and Principle will be used interchangeably in this paper.

¹³ Pennington, *Stannary Law*, p.158.

¹⁴ Gillian Burke and Peter Richardson, 'The Decline and Fall of the Cost Book System in the Cornish Tin Mining Industry, 1859-1914', *Business History*, vol. 23: 1, 1983, p. 4; R. Burt, *John Taylor Mining Entrepreneur and Engineer 1779-1863*, Buxton, 1977, p. 53.

¹⁵ John Rowe, *Cornwall in the Age of the Industrial Revolution*, Liverpool, 1953, p.22; Burt, *John Taylor*, p. 53.

¹⁶ *Mining Journal*, 12 September 1846, p. 1386, colms. a & b; Burt & Kudo, *Adaptability*, p. 36.

¹⁷ *Mining Journal Supplement*, 17 December 1853, p. 804, colm. b.

¹⁸ *Ibid.*, colm. c, states that notice was also required to be placed in the *London Gazette*.

¹⁹ *Mining Journal*, 13 October 1849, p. 487; Pennington, *Stannary Law*, p. 150.

²⁰ For the precedent, see case of the liability of the Purser of the Wheal Providence Mine in the following editions of the *Mining Journal*, 7 November 1846, p. 470, colm. b; 13 October 1849, p. 487, colm. b; *Mining Journal Supplement*, 17 December 1853, p. 807, colm. b. For further evidence re limitations of powers of the Purser, see Pennington, *Stannary Law*, pp. 159-65.

²¹ Roger Burt (ed.), *Cornish Mining - Essays on the Organisation of Cornish Mines and the Cornish Mining Economy*, Newton Abbot, 1969, p. 195; *Mining Journal Supplement*, 17 December 1853, p. 801, colm. b.

²² Morris, 'origins of the no-liability mining company', p. 94; *Mining Journal Supplement*, 17 September 1853, p. 807, colm. b; Lawrence R. Dicksee, *Auditing. A Practical Manual for Auditors*, London, 1892, reprint. Arno Press, N.Y., 1976, p. 68; Bartlett, *A Treatise on British Mining*, p. 31; Williams, 'Cornish Mining', pp. 249-50.

²³ Burt, Roger, *The British lead mining industry*, Dyllansow Truran, Redruth, 1984, p. 72.

²⁴ Pennington, *Stannary Law*, pp. 191-2, states that from 1860 there was normally a charge of six-pence per share, compared with one-half percent on the price paid per share in Joint Stock Companies from 1850, a premium which had doubled by 1910.

²⁵ Burt, *Cornish Mining - Essays*, p. 95, f. 42 (i); Pennington, *Stannary Law*, p. 185; Williams, 'Cornish Mining', p. 248.

²⁶ *Mining Journal*, 12 September 1846, p. 386, colms. a & b; Pennington, *Stannary Law*, pp. 185-6 states that a two year payment period was allowed. Note that forfeiters were entitled to any profit from resale or auction of the surrendered shares.

²⁷ Basically, when a shareholder relinquished shares in a cost-book company, that Company was not dissolved but was continued by the other participants. In a Partnership, however, the other partners needed to form a new partnership if the intention was to continue in partnership together.

²⁸ The legality of the cost book companies outside the Stannaries was never clear in England and as far as can be determined, the South Australian authorities appeared to be ambivalent as to any problems that could have been raised in the absence of Stannary jurisdiction. According to Burt, *British lead industry*, p. 79, in Britain, outside the Stannaries, cost book companies were 'simply given exemption from such legislation as the 1844 *Registration Act* and left to develop complex and varying arrangements which depended on enforcement on the ordinary law of partnership. It was not until the *Joint Stock Act* of 1856 that cost book companies existing outside the jurisdiction of the stannaries were abolished [and thereafter] ... were treated at law as ordinary partnerships.' Presumably this was also the situation in South Australia.

²⁹ *South Australian Parliamentary Debates* [hereafter *SAPD*], 6 June 1862, pp. 221-2; 6 August 1862, pp. 612-19; 'Minutes of Evidence on Working of Mineral Laws', *South Australian Parliamentary Papers* [hereafter *SAPP*], no. 51, 1862, pp. 60-61.

³⁰ See SAMA, *Minutes of Meetings of Shareholders*, BRG [Business Record Group] 22, 959, 5 April 1845, pp. 5-7, State Library of South Australia [hereafter *SLSA*]. See comment in *The South Australian Register*, 16 April 1845.

³¹ Pennington, *Stannary Law*, p. 155, points out that the issue of a Prospectus to invite public subscription was not an unusual practice in cost-book ventures.

³² SAMA, *Deed of Settlement*, 21 April 1847, BRG 22, 1250, *SLSA*.

³³ 16 July 1845, BRG 22, 959, *SLSA*.

³⁴ See for example, Douglas Pike, *Paradise of Dissent: South Australia 1829-1857*, London, 1957; J.J. Pascoe, *History of Adelaide and Vicinity*, Adelaide, 1901; Geoffrey Blainey, *The Rush that Never Ended. A History of Australian Mining*, 1963. From January 1843 until March 1846, legislation under the Wastelands Act of 1842 decreed that any person could have purchase at private contract of lots of 20,000 acres or more at £1 per acre. Additionally, from the foundation of South Australia in 1836 until March 1846 it was gazetted that 'nothing above or below the surface will be reserved to the Crown'. SAMA was thus fortunate in avoiding the royalties charged on some later mining producers (though following protest, royalties were removed in 1849). See Arthur C. Veatch, 'Mining Laws of Australia and New Zealand', United States Geological Survey, *Bulletin 505*, Washington, 1911, pp. 54-55, 62.

³⁵ SAMA, *Minutes of Directors Meetings*, 18 August 1845; SAMA, *Miscellaneous Papers*, 19 August 1845, BRG 80, 26, *SLSA*.

³⁶ 9 August 1845, 18 August 1845, 23 August 1845, BRG 957, *SLSA*; 19 August, 23 August 1845, BRG 80, 26, *SLSA*.

³⁷ 21 April 1847, BRG 22, 1250, *SLSA*.

³⁸ For account of one such breach of security see, 18 October 1848, Diary of Mr. Adams, *J.B. Graham Papers*, Private record Group, [hereafter *PRG*] 100, *SLSA*.

³⁹ This had been agreed to earlier, see 16 August 1845, BRG 22, 959, *SLSA*.

⁴⁰ Bartlett, *A Treatise on British Mining*, p. 28. Under SAMAs Articles of Association, clause 29, 21 April 1847, BRG 22, 1250, *SLSA*, the voting system was modified: 3-5 shares 1 vote; 6-10 shares 2 votes ascending 1 vote for each 5 extra shares up to a total of 10 votes for 46-50 shares; 51-60 shares 11 votes, and 1 extra vote for each additional 10 shares up to 99-100 when 15 votes were allowed; above that number 1 extra vote for every additional 25 shares was determined. The shareholders meeting on 19 May 1847, (Minutes of Directors Meetings, BRG 22, 957, *SLSA*), extended future voting rights to 1 vote for

holders of one or two shares - but this was only to be allowed to those in the category who had attended that specific meeting.

⁴¹ H. Ayers to J.B. Graham, 22 April 1850, no. 20, PRG 100, SLSA.

⁴² SAMA, *Directors Out-letter Books*, 21 February 1854, no. 1879, BRG 22, 960, SLSA, lists 164 shareholders in total. Nineteen domiciled in England; seven in Guernsey; 13 in Van Diemen's Land; three in New South Wales; four in Western Australia; one in India; one in Ireland; one unknown. Of the 108 remaining in Adelaide, 23 had given Power-of-Attorney.

⁴³ Ten were sold in August 1848 for £270 on 12-month bills.

⁴⁴ Birrell, *Staking a Claim*, p. 37, points out that the 'Haines' Act that controlled cost-book mining companies was not a success in Victoria because of the inability to ensure the required regular meetings of shareholders or a committee of shareholders.

⁴⁵ 19 April 1850, no. 1073, and – April 1874, BRG 22, 960, SLSA.

⁴⁶ H. Ayers to J.B. Graham, 12 March 1849, no. 8, PRG 100, SLSA.

⁴⁷ *Ibid.*, 24 April 1849, no. 11.

⁴⁸ *Ibid.*

⁴⁹ H. Ayers to Francis Jeune, Esq., D.C.L., Master of Pembroke College, Oxford, no. 2210, 17 March 1856, BRG 22, 960, SLSA.

⁵⁰ Ayers never held more than 28 shares in his own right, yet his 'large shareholdings' is referred to in all the published literature dealing with his activities with SAMA. He is also referred to as the 'Managing Director' of the Association. For the latest such reference see, 'Henry Ayers', in Wilfrid Prest (ed.), *The Wakefield Companion to South Australian History*, Wakefield Press, Kent Town, SA, 2001, p. 61.

⁵¹ That this could have been otherwise is evident in Burt, *British lead industry*, p.80, where pointed out that fraudulent practices associated with the interests of 'in adventurers' was quite common, especially when it came to securing contracts for supply of materials, which would be sold to the company at inflated prices. Evidence from SAMA shows that the tendering process ensured keen competition for supplies.

⁵² Similar statements are made re Cornish mines and absentee shareholders in Burt & Kudo, 'Adaptability', p. 36; and Burke & Richardson, 'Decline and Fall', p. 195. Burt, *British lead industry*, p.75, notes that in larger copper mines in England, a similar situation arose when 'managerial functions were usurped by a "managerial committee" of the largest local shareholders – or "in adventurers" '.

⁵³ Diary of J.B. Graham, 21 April 1858, PRG 100, SLSA.

⁵⁴ For overseas marketing strategy see, Mel Davies, 'Copper and Credit: Commission Agents and the South Australian Mining Association 1845-77', *Australian Economic History Review*, 23:1, 1983, pp. 58-77.

⁵⁵ 6 January 1846, BRG 22, 957, SLSA.

⁵⁶ 26 May 1856, BRG 22, 957, SLSA.

⁵⁷ See Pike, *Paradise of Dissent*, p.332. Note that the 'Princess Royal' was organized under a small partnership that consisted of a small group of large landowners.

⁵⁸ For account of strategies adopted towards Bankers see, Davies, 'Copper & Credit'.

⁵⁹ See 4 July 1846, BRG 22, 957; No. 220, 23 September 1846, No. 360, 17 August 1847, BRG 22, 960, SLSA.

⁶⁰ 7 August 1851, BRG 22, 957, SLSA.

⁶¹ *Ibid.*, 18 August 1848.

⁶² *Ibid.*, 15 May 1855

⁶³ *Ibid.*, 14 June 1850.

⁶⁴ *Ibid.*, 18 August 1851.

⁶⁵ See *ibid.*, 19 January 1858.

⁶⁶ No. 21, H. Ayers to J.B. Graham, PRG 100, SLSA.

⁶⁷ 29 September 1853, BRG 22, 957, SLSA.

⁶⁸ Balance Sheet 31 March 1859 to 31 March 1860, BRG 22, 25, SLSA.

⁶⁹ Balance Sheets 31 March 1859 to 31 March 1860, p.196, and 29 September 1866 to 30 March 1867, SLSA.

⁷⁰ Note the comments on this point in Burke & Richardson, 'Decline and Fall', p. 196.

⁷¹ For a detailed list see SAMA, *Superintendent's Letter Books*, No. 1289, 5 October 1866, BRG 22, 966, SLSA.

⁷² See 'The Burra Burra Mines', *The South Australian Advertiser*, 22 May 1867.

⁷³ Accounts 31 March 1869 to 31 March 1871, BRG 22, 959, SLSA.

⁷⁴ Burt and Kudo, 'Adaptability', p. 34.

⁷⁵ 13 November 1877, p. 478, BRG 22, 959, SLSA.

⁷⁶ See similar comment in written transcript, no author, 'Historical and Descriptive Account of the Burra Burra Mine 1845-1881', London, 1881, p. 4, A856, SLSA. The writer wrongly refers to SAMA as a limited liability company.

⁷⁷ Act no. 10, Assented 17 December 1851.

⁷⁸ *Mining Journal Supplement*, 17 December 1853, p. 801, colm. a.

⁷⁹ 22 April 1856, 13 May 1856, BRG 22, 957, SLSA; No. 2258, 16 May 1856, BRG 22, 960, SLSA.

⁸⁰ 3 June 1856, BRG 22, 957, SLSA.

⁸¹ *Ibid.*, 30 May 1856..

⁸² *Ibid.*, 5 August 1856.

⁸³ *Ibid.*

⁸⁴ *Ibid.*, 3 June 1856.

⁸⁵ See Thomas Tapping, *The Principles*, p. 10.

⁸⁶ For brief comment see Mel Davies, 'Cornish miners and class relations in early colonial South Australia: The Burra Burra strikes of 1848-49', *Australian Historical Studies*, no. 105, October 1995, pp. 568-95.

⁸⁷ For comment on the desirability of the introduction of no-liability legislation which was seen as encouraging mining investment in a situation of limited capital, see Michael Drew, 'Queensland Mining Statutes 1859-1930', K.H. Kennedy (ed.), *Readings in North Queensland Mining History*, vol. II, James Cook University, Townsville, 1982, esp. pp. 148, 151. Details of mining company organisation in Victoria are outlined in Hall, *The Stock Exchange*, pp. 15-18, 75-77. Hall states that under the Mining Companies Law Amendment Bill of 1871, the forfeiture of shares for non-payment of calls which had previously been written into memoranda of association (as per cost-book practice), became a recognised legality. The legislation which brought in no-liability, served the Victorian mining industry for almost a century. For an authoritative discussion on the development of no-liability companies in Australia see, Morris, 'origins of the no-liability mining company', pp. 90-121.

⁸⁸ Danvers & Robertson, *Australian Mining Company Accounts*, p. 3.

⁸⁹ *Ibid.*, pp. 66-69.

⁹⁰ *SAPD*, 6 June 1862, p. 221.

⁹¹ *Ibid.*, p. 617. Note, the Joint Stock Act of 1844, the 7 & 8 Vic., c. 110, was passed a year before the opening of the Burra Burra Mine. Clause 63 exempted 'working of Mines, Minerals, and Quarries ... on the Principle called the Cost Book Principle' from its jurisdiction.

⁹² Danvers & Robertson, *Australian Mining Company Accounts*, p. ix.

⁹³ 'Minutes of Evidence on Working of Mineral Leases', items 1058-1080, *SAPP*, No. 51, 1862; *SAPD*, 6 June 1862, pp. 221-2; and 6 August 1862, pp. 614-19. The lack of recognition is in contrast to the Victorian situation where such recognition was first made under the 'Haines' Act of 1853. See, Birrell, *Staking a Claim*, p. 36.