EARLY COAL MINING IN NOVA SCOTIA*

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OAL-MINING in Nova Scotia could not properly be called an industry, certainly not one of any importance, prior to the 19th century. It is interesting to know that the French discovered coal in Cape Breton and probably in the Peninsula in the 17th century; that fishermen and traders from New England took on small cargoes at Louisburg or helped themselves at convenient out-croppings along the coast of Cape Breton and the Peninsula in the first half of the 18th century; that after the French were finally defeated in the Seven Years War, Brigadier-General Howe and other high ranking British officers asked for large grants in Cape Breton in order to mine coal; that, despite the refusal of the imperial government to grant land or lease mines in the Island from 1763 to 1784, certain merchants of Halifax with the unwarranted authority of the provincial governor opened a mine at Spanish River (Sydney) for one year in that period; that a few provincial officials and influencial individuals during the American Revolution occasionally were given permission to dig or have dug a limited amount of coal in Cape Breton for their own use; that the only other miners within the law in those years were soldiers or persons who were licenced to keep His Majesty's garrisons supplied with fuel (when there was a surplus, which was not uncommon at the King's fuel yard in Halifax before the Revolution, it was sold to civilians); that, regardless of the prohibition, smugglers carried on their small-scale operations, needing no more than crow bars and shovels and assured of a market in New England and sometimes at Halifax. All this has interest. yet it is relatively unimportant in the development of coalmining which was not an industry in any real sense until sometime after 1784 and was not established as one of the foundations of the Nova Scotian economy until the 1840's. It is with coalmining in the intervening period, say the first forty years or so of the 19th century, that this paper is concerned.1

In contrast with the open-handed manner in which the forests of Nova Scotia were disposed of among settlers and speculators was the tight-fisted grip that the Crown kept on minerals. When the Privy Council decided in 1784 that land

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might be granted in Cape Breton, they made it clear that "all coals, and also all mines of gold, silver, and lead" were to be specified as the property of His Majesty. Reservations of minerals in grants of land on the Peninsula before 1808 changed from time to time. Gold, silver, precious stones and lapis lazuli were reserved in some of the grants in 1749-52 and in all the grants from 1752 to 1782. Lapis lazuli and precious stones were omitted after 1782 and replaced by lead, copper and coal. Then in 1808 a blanket reservation was made of "all Coals, and also Gold, Silver and other Mines and Minerals". This was in all grants from that time on, and after Cape Breton was re-annexed in 1820 applied to the Island as well as the Peninsula.

Coal-mining had been carried on in Cape Breton either by the Crown or by individual lessees ever since 1784 when the Island became a separate colony and the local government, in need of revenue, received imperial sanction to make use of the coal. The first lieutenant-governor, J. F. W. Desbarres, who happened to be an experienced surveyor, wisely began operations in the "Six Feet" or "Sydney main coal"; but the selling price at the mine of eleven shillings and sixpence per ton (2,240 lbs.) precluded any substantial profit. His successor, Colonel Macormick, who thought the mines were in a "neglected state", decided to lease them, beginning in 1788, to one Thomas Moxley who was willing to sell at the same price. When Moxley died in 1791, Messrs. Tremain and Stout obtained a lease for seven years and, making no change in the price, increased their sales from a little over 2,000 tons in 1792 to almost 9,000 tons in 1799.

Although by later standards these amounts were trifling, the Cape Breton government was becoming aware of the potential resource it had in coal. The Council, in an address late in 1799, assured the King that his coal mines in the Island were "objects of the Highest importance; being of Greater extent and more commodiously situated for shiping, than perhaps any in Europe, or America; and are capable of furnishing any quantity of Coals for exportation". But for the next two decades and more, nearly all the coal exported from Cape Breton continued to go to Halifax and Newfoundland where it was used mostly for His Majesty's forces.

The mover of the address was the Hon. William Campbell, Attorney-General, who evidently fancied himself as a mining expert for in 1800 he took over the mines on behalf of the government and two years later secured a seven years' lease for him-

self. Although Campbell lowered the price per ton to ten shillings and three pence in 1802, production and sales fell off during his management, and he gave up his lease in 1804. The Council then appointed John C. Ritchie, who was superintendent of the shipping of coal as their agent. In the next three and a half years, Ritchie, according to his own statement, sunk "three Pits from Nineteen to Twenty-One fathoms deep and Two of five fathoms deep", driving "the water Level nearly half a Mile", and from these five pits raised and shipped 22,500 chaldrons which, he presumed, had "never been equalled in the same Space of time, and with the same number of workmen". Unfortunately, his books, when investigated, did not account for large quantities of bread, fish, molasses, pork and rice, the staples with which he fed the men. So in 1807 Mr. Campbell was appointed agent and superintendent of shipping. But when informed of this change, the colonial secretary, Lord Castlereagh, decided that Mr. Ritchie had not been given an opportunity to state his case fully. This was accordingly arranged with the result that Ritchie was re-instated. In the meantime, Campbell had left the colony.

After all this trial and error the profits were still so meagre that the government was ready to discontinue its operation of the mines. A net surplus of only ten pence per ton was realized for the period from June, 1808 to September, 1810. One obvious reason for this poor showing was that the business was too small-annual sales had only once so far exceeded 10,000 tons—to bear the comparatively large salaries of the mining officials, five of whom received £510 or 13% of the gross sales in 1810. On looking around for lessees, the Council found that it was no longer easy to interest private enterprise. With the intention of taking a twenty-one years' lease, Messrs. Jonathan and John Tremaine of Halifax made a tentative arrangement in 1811, but finding operations more expensive than anticipated, they withdrew the following year. A tender made by Richard Swallow and sent from Halifax late in 1812 was welcomed, but the negotiation was not completed. Council, which now employed John C. Leaver, Jr., as their agent, had to carry on until 1813 when John C. Ritchie, the former agent, and Timothy Leaver signed a seven years' lease agreeing to pay a royalty of three shillings and eight pence per ton. Thenceforward the mines of Cape Breton were leased and the government contented itself with the royalties.

The operations of the various lessees were only slightly more productive and in some cases may have yielded even less profit. Ritchie and Leaver sold on an average over 9,000 tons annually, but within five years they were forced to transfer their interest to their assignees, G. W. Brown and J. Leaver. Although the latter gentlemen sold even less coal, they managed to hold on until the lease expired in 1820. Owing to the uncertainty caused by the imminent re-annexation of the Island to the Peninsula, the Council at Sydney offered and G. W. Brown accepted a one year lease at a reduced royalty. Coal was now selling at the mine for thirteen shillings and two pence per ton. the price set in 1812 when war with the United States added to the rising cost of provisions. There had been no reduction in price after the war; but the five years' lease offered by the government of Nova Scotia in 1822 stipulated that there was to be no increase, although the royalty was raised to four shillings and threepence. This lease was taken by two more hopefuls, T. S. and W. R. Brown, who did no better than their predecessors. They were succeeded on January 1, 1827, by the General Mining Association.

To understand the entry of the General Mining Association, an English concern that was capitalized at £400,000, it is necessary to see what had been happening on the Peninsula. The coal mines there had been officially under lock and key until 1816 when London, in response to a growing demand, finally gave the word for the opening. The long delay had not been without cause, as will be shown, but no one in office in 1816 seemed to know what it was. The authorities at Halifax indeed had for some time been taking it upon themselves to make minor

exceptions.

The first coal discovered on the Peninsula appears to have been in Cumberland County. In 1715 Governor Caulfield, writing from Annapolis Royal, referred to the "Very good coal mines" at Chignecto and said they had "formerly" been used by "this garrison" by which he may have meant the French. Five years later, in 1720, Governor Phillips reported that New Englanders were working a coal mine "at the head of the bay without even the good manners to ask the King's leave". When soldiers were quartered at Fort Cumberland, they opened a mine at Joggins and took "a considerable quantity". The evidence is indefinite but this was probably before or during the American Revolution. Coal was not found in Pictou until

some time after the Revolution, although once they were aware of their underground wealth, the Scots were quick to seize upon it, and coal-mining became an important industry in Pictou long before it became so in Cumberland.

It is questionable as to who may be credited with the discovery of coal in Pictou. The historian of that county. Dr. Patterson, does not commit himself but hints that it might have been William Fraser, the surveyor, or Dr. James McGregor or William McKay. John McKay, son of William, said many years later that his father had been requested by Lieutenant-Governor Wentworth "as early as 1790" to explore "the Eastern Section of the Province in search of minerals" and that he had come upon coal in Pictou and had been given a mining licence. This leaves the time doubtful because Wentworth, although in the province in 1790, did not become lieutenant-governor until two years later; but such a slip is "a clean chip in porridge" and does not prejudice the rest of the statement. Its truth is borne out by a petition of Alexander Fraser, dated at East River, Pictou, January 16, 1793, which begins with a reference to his Excellency's intentions of opening "a Mine of Coals upon your Petioner's Lott". Having heard that coal was first found in Pictou a year before the election when Dr. McGregor "entertained the candidates and some strangers at dinner, and made for them a fire of coal", Dr. Patterson places the date as 1798. But there were two elections in that decade, the famous one in 1799 and an earlier one in 1793. So in all likelihood the discovery was made in 1792. When further searches uncovered coal in other places in the district of Pictou, the owners of the land who wished to make some use of this mineral apparently had no difficulty in obtaining licences from Lieutenant-Governor Wentworth.

Without any instructions from London, Wentworth had an indenture drawn up in 1802 giving William Forsyth, Lawrence Hartshorne and William Smith, all of Halifax, the right to dig for coal in "mountains or in wild desert and uncultivated Lands Grounds and places" for a period of twenty-one years. This agreement was subject only to royal approval which, however, was not forthcoming. But the colonial secretary was sufficiently interested to ask for particulars about any coal found on the Peninsula—particulars which Wentworth gave with a will, naming the East and West Rivers in Pictou, Pomquet in what is now Antigonish County, Joggins in Cumberland and London-

derry in Colchester. He had tried unsuccessfully, he wrote, to induce some one on the Fundy side of the province to supply fuel for King's College and he had also failed to have coal shipped from Pictou to Halifax, although he had made an offer to the Pictonians for 100 tons in 1801.

Later lieutenant-governors followed Wentworth's example in overlooking the fact that the King evidently had other purposes in mind for the minerals of the Peninsula. Sir George Prevost empowered John McKay, who had already had a licence from Wentworth to work the mine on his father's land, to sell coal "wherever he might find a market". At least that is what McKay said himself and he further told how Sir John Sherbrooke "ordered" him to ship to Halifax during an acute shortage of fuel in the last year of the War of 1812. To meet this demand, McKay sent twelve cargoes of coal which he declared later had been dug under difficulties, the "water being pumped out by hand".

War-time profits and the assurance from Sherbrooke that his licence would be continued led McKay to a program of expansion during which he "commenced with fresh vigor to drain off the water from the Pits . . . made roads and bridges -bought waggons for the carriage of coal-built lighters-and erected buildings necessary for his purposes at an immense expense—as the hiring and supply of workmen and every thing requisite for the conducting of large mining operations was at this time at an exorbitant rate." All of which he soon had reason to regret for in the hard times after the peace he went bankrupt and his creditors threw him in jail where he was held for upward of twelve months while his wife and children experienced "the greatest distress". Such was the common effect of the debtor's law. McKay eventually received £300 Halifax currency-a paltry sum in his opinion—in compensation for his effort and expenditure.

Meanwhile the increasing difficulty of procuring wood in Halifax and the rising price of the so-called Spanish River coal which reached unheard-of heights in Halifax during the War of 1812 were creating an ever stronger demand in the capital that the coal mines of the Peninsula be properly opened and leased to the highest bidders. The Halifax Committee of Trade complained early in 1811 that vessels going to Cape Breton were often "disappointed in procuring Coal, the demand being greater than the Supply". Owing to "the delay and frequent losses of

freight", the price to the consumer in Halifax had gone up from thirty-four shillings and sixpence a chaldron in 1798 to forty-five shillings and eightpence in 1810. Under the conditions brought about by the conflict with the United States, the price soared as high as one hundred and twenty shillings a chaldron. Coal sold at that rate in the capital in the winter of 1815, when the legislature made an almost pathetic appeal for "the privilege of opening the Coal Mines in the Province, and supplying themselves with a material of the first importance to their comfort". This petition was successful, although the decision of His Majesty's government "to permit the opening of the Coal Mines" was not made until the summer of 1816. Then another two and a half years passed while the local government made arrangements for long-term leases.

Back-yard operations were now forbidden as leases were obtainable from the government for the working of any coal mine in the Peninsula not excluding those already opened by the landowner. When Alexander McKay of New Glasgow asked in 1817 for the right to the coal he had discovered on his lot. Lieutenant-Governor Dalhousie wrote on the petition: "All coal being King's Property must now be leased". For the owners of land on which mines were or might be opened, legislation was passed in 1818 to provide for the payment of damages and rent. But men who had coal on their own land, particularly those who had been accustomed to digging it, were inclined to disregard the new regulations. Settlers in the vicinity of what became Springhill are said to have been using coal there in the 1820's and sending occasional loads to Amherst. In the District of Pictou, Alexander Fraser, Colin McKay, William McKay and James McGriror along with "others" were accused in 1822 of "raising Coals on their own lands and other lands . . . for their own use and in many instances sparing them to their Neighbours." Some of these transgressors held "licences granted by His Excellency Sir John Wentworth".

Smugglers also were now subject to greater vigilance. The government superintendent of the mines in Cape Breton, Thomas Crawley, was forever reporting on their activities and explaining their latest ruse. In 1820 he named eleven smugglers of Mainadieu and Sydney who with others carried off, by his estimate, at least 1,000 chaldrons that year. Those who were "not sufficiently venturesome to offer their coals for sale without permit or clearance" obtained "the latter at Sydney for about half

a cargo of coal and the rest of fish to be taken on board at Louisbourg or Mainadieu". But instead of calling for the fish, they completed "their cargoes of coal at Cow Bay or some other convenient place on the Coast" where it was to be had for the digging. This additional lot usually went to private dealers in Halifax, and the rest was sold at the King's fuel yard. When regulations at Halifax were tightened, there were always the out-Turning to the source of this illicit trade, Crawley suggested in 1823 that a few soldiers be stationed at Dead Man's Cove on the south side of Lingan Bay, a favourite place for loading; but his idea, although approved by the lieutenantgovernor, does not appear to have been adopted. The government was not prepared to take all the measures necessary for complete suppression. After the General Mining Association came into possession of the mines, the official conscience was probably eased by the thought that such an organization could look after its own protection. The consequence was, of course, that smuggling continued.

The process of leasing the mines on the Peninsula was completed in 1819. Two temporary leases to mine at Pictou had been issued in 1817, one to John McKay which within the year had to be taken over by his creditors, Hartshorne, Boggs and Co. of Halifax, and the other to Adam Carr, an English miner who had worked in Cape Breton and with Mr. McKay. Hartshorne, Boggs and Co. tried for a long-term lease but lost out to the merchant prince of Pictou, Edward Mortimer, who in 1818 secured twenty-one years' leases to mines on both sides of the East River and so became the only lessee in the District of Pictou. A similar lease was granted in 1819 to Samuel McCully who was interested in the coal at Joggins.⁸

McCully's attempt at mining in Cumberland was short-lived. He gave up his lease in 1821, after shipping some 550 chaldrons mostly to St. John, New Brunswick, which was a poor market because of the large quantities of English coal brought there as ballast by the timber ships. A load that he sent to Windsor and another to Cornwallis in 1819 were both returned. These and other disappointments convinced McCully that it was "most prudent to quit the concern & Surrender the Lease".

Mortimer died in 1819, but his lease was transferred to his partners, George Smith of Pictou and William Liddell of Glasgow, Scotland, who gave sub-leases to Adam Carr. The east side of East River, where Carr had worked with a temporary

licence in 1817, yielded inferior coal and had been abandoned in Mortimer's time, although the lessees were still liable to the government for the rent. So operations after 1819 were all on the west side, the former domain of John McKay, who got out of prison in time to place obstructions in the pits and otherwise delay his successors during their first months of occupation. Adam Carr was to play the same role himself in 1827 when the General Mining Association appeared on the scene. Smith and Liddell, angry as they may have been, realized that they could not compete with the Association and declared themselves ready to relinquish their lease and sell their equipment; but Carr, whose sub-lease ran to 1829, conducted what he called "six months hard warfare" in 1827 before giving up.

As the General Mining Association had a title to all the mines in the Peninsula except those already leased, and as they had made a temporary arrangement which soon became permanent to work the mines of Cape Breton, their purchases in Pictou, which included the lot of Dr. McGregor and probably those of other "landed proprietors", gave them a clear field, or, as their enemies put it, a monopoly of the minerals of the province.

This unforeseen development was the belated result of a literal exercise of the royal prerogative. George the Third had intended in 1788 to grant the mines of Nova Scotia, which was then only the Peninsula, to his favourite son, the Duke of York. But for one reason or another the necessary documents had not been completed. The Duke, never one to be concerned over money until hard pressed by creditors, had not troubled about it, although in 1791 Governor Parr of Nova Scotia issued a notice that His Royal Highness had authorized John Tuck "to explore the Situation extent & value of the Silver Mines" in the province.9 The war with France, however, seems to have submerged such mundane matters in the royal mind. Not until the long conflict was over and Parliament and even moneylenders were looking askance at his extravagances did the Duke remember and have his agent apply for the grant. But the papers by that time had been mislaid, the King was no longer able to recall the past, and all the officials of 1788 appeared to be dead or gone. The new officers of state declared that they knew nothing about it.10 Obviously they thought the Duke was dreaming; otherwise they would scarcely have dared to authorize the rental of the mines, as they did, in 1816. Yet as late as 1812. Lieutenant-Governor Sherbrooke, when writing to Robert Peel.

had said that he understood the mines had been granted exclusively to the Duke.¹¹ This knowledge or hearsay had evidently deterred former administrations from leasing any mines in the Peninsula. But no one in power after the war put any stock in the royal claim. Great was the consternation therefore when the unfinished grant was found in the Patent Office in 1825.¹⁰

The discovery was a god-send to the Duke. Since the death of George the Third in 1820, he had been faced with poverty. His income was still considerable, although he was now without the £10,000 a year he had received for looking after his father: but, as one of his biographers explains,12 "the whole of it was absorbed in the interest on his debts, and the sources of credit were long ago dried up". Of course, as the same writer aptly says, princes can be "penniless without feeling the pinch of poverty". One of the stories of the time related how at a dinner the Duke proposed the health of Mr. Coutts as "my banker for upwards of thirty years", at which Mr. Coutts was heard to whisper. "It is your Royal Highness who has done me the honour to keep my money for thirty years". He was very partial to jewels on himself and others. When he saw his brother, George the Fourth, dressed for the coronation in 1821, he admired the profusion of jewellery (which was not all real) and exclaimed: "By God! I'll have everything the same at mine". The extent of his jewellery bills is probably not a matter of record; but as soon as he received the mines of Nova Scotia, he arranged to have them sub-let to the London jewellers, Rundell, Bridge and Rundell.

Squaring a jewellery account, as we are told he did, with the sub-lease of the mines of a colony was not done every day even in the British capital. Rundell, Bridge and Rundell, however, were probably ready to accept anything from their royal patron, and this looked profitable. Only a short while before they had formed the General South American Mining Association to work certain mines in Brazil and now they readily prepared to operate in Nova Scotia where they expected to find rich deposits of copper.13 Accordingly they sent out a Cornish mining engineer who, after spending the summer of 1825 in the province, reported a scarcity of copper and an abundance of coal. So they turned their attention to coal, and, in return for the right to the Duke's mines in "the Province of Nova Scotia" for a period of sixty years, agreed to pay the government of Nova Scotia the rent specified in the grant to His Royal Highness and to give him or his assignees one-fourth

of the net gains and an additional one-twelfth of any excess over £30,000 a year. Further, they bound themselves to forfeit £20,000 if they did not begin to mine within two years of September 12, 1826, the date of their sub-lease. Thus the Duke paid a bill and had the expectation of some provision in his

old age, but in less than six months he was dead.

New arrangements had to be made not because of York's demise but on account of the claim of Rundell, Bridge and Rundell to the mines of Cape Breton. Their Company, which not until 1829 had the name of the General Mining Association. had succeeded the Browns at Sydney at the end of 1826 on the assumption that the Duke had been granted all the other mines in the Island. His Majesty's law officers, however, in view of the fact that Cape Breton in 1788 had been separate from Nova Scotia, came to the conclusion that "the Province of Nova Scotia", even although written in 1826, meant the Peninsula because the document was designed to give effect to George the Third's intention.14 The Association thereupon asked for a lease, effective from January 1, 1828, covering the entire province. Their request was granted, but the Halifax authorities being less satisfied than those in London, 15 the financial settlement was left open to change.

A supposedly final arrangement was made when the colonial secretary, Sir George Murray, wrote to Nova Scotia in November, 1829, to say that His Majesty would agree to a rent of £3.333/6/8 Halifax currency annually and a royalty of two shillings currency for every chaldron above 20,000 chaldrons sold in a year. The measurement of the chaldrons led to another dispute. Although Sir George had not mentioned either "Newcastle" or "Winchester", it was taken for granted at Halifax that he meant the latter which was in general use in both England and Nova Scotia. But when production exceeded 20,000 chaldrons Winchester measure in 1831 and royalties were claimed, the Association pointed out that they had specified Newcastle measure which was double that of Winchester, so royalties were not due until they exceeded 40,000 chaldrons Winchester. It was useless to plead misunderstanding of the written word. The Colonial Office had been asleep. As the government in Nova Scotia had been counting on revenue that was not now forthcoming, London requested the Association in 1833 to advance £1,000 Halifax currency annually for three years. As the financial statements do not indicate any such payment.

the Association presumably does not accede to the request. In any event, two years later production was up to 36,838 chaldrons Newcastle or 73,672 Winchester.

The advantageous terms under which the Association operated may be judged from the following figures. In the eight years preceding 1828, the various lessees raised 71,159 chaldrons Winchester and paid in rent and royalties £23,343 Halifax currency. In the eleven year period, 1828-1838, the Association raised 460,000 chaldrons Winchester and paid in rent and royalties less than £43,000 Halifax currency. The Association had outdone the Duke in dealing with the Crown.

The favours and privileges gained by the Association in London were not unnaturally a guarantee in Nova Scotia of unpopularity. Their monopoly was generally resented in the province, especially perhaps in influential and wealthy circles, for local capitalists would have been their chief competitors in a free field. The Cunards in 1826 had been ready to rent the coal mines of Cape Breton on terms that would have yielded the government far more revenue than was ever received from the General Mining Association. One of the shrewd moves of the Association was the appointment of Samuel Cunard as their local business agent.

Applications to work newly discovered mines were always in order, for the Crown had reserved the right to lease any mine that the Association, after due notice, refused or neglected to work; but applicants were always turned down. The Earl of Stirling likewise got nowhere with his claim in 1831 that all the mines in Nova Scotia belonged to him by virtue of his descent from Sir William Alexander.¹⁷ The Association, although confining their attention almost entirely to certain deposits of coal, managed to sit tight on all the potential wealth underground. When the Reform Assembly in 1837 approached the Throne for a redress of grievances, they did not forget the mining monopoly.

Those who attacked the Association generally ignored the benefits conferred on the province by the extensive investment of English funds and the introduction of skilled labour and modern machines. The Cunards had spoken of large sums and railways and steamships, yet it was at least questionable whether they could have equalled the accomplishments of the Association which in little over a decade could point to several railways, two steamships, an iron foundry, shafts going down

in some places nearly 500 feet, steam engines doing the work of 459 horses in 1838, and in the same year at Bridgeport, Pictou and Sydney (earlier in the thirties they had also operated at Little Bras d'Or) 287 horses and about 1,500 employees including highly paid colliers—an establishment which by the end of 1840

had cost nearly £360,000.

Contrary to the popular supposition that the Association was reaping large profits, there were in these years no dividends. In December, 1842, Samuel Cunard stated that "no interest or return" had "yet been paid". While partly, it seems, the the result of extravagance and inefficiency, this was largely owing to heavy capital expenditures that were made in the first fifteen years in the expectation of an almost unlimited demand in the United States. That was the market in these years for nearly all the coal mined in Pictou and beginning in 1830 for about half the output in Cape Breton.

Unfortunately the bright prospect of sales in the Republic faded away in the forties. The first dark clouds had come even earlier, between 1828 and 1835, when Parliament reduced and then removed the duty of 11 shillings per ton on coal exported from the British Isles. But the threat of English coal was not to be compared with the challenge of American anthracite which, with the building of canals and railways in the United States, had by 1840 fallen sharply in price and climbed high in production and popularity. Any lingering hopes of the Association disappeared after the Americans increased their tariff on foreign coal in 1842. Up to that time, shipments from Nova Scotia had been on the increase; but from then on they were more or less on the decline, and it was necessary to depend more and more on the market in British North America.

The operations in the mines and the conditions under which the miners worked and lived are topics in themselves which cannot be thoroughly examined in this limited space; but a few observations by contemporaries may well be given here for the interesting glimpse they afford of the mines and the men. The Sydney mines as they were before the advent of the General Mining Association were thus described by Richard Brown, engineer of the Association, who saw them first in 1826:

The Sydney main seam was first opened in 1785 by driving an adit from the shore near the old wharf. This adit, as it proceeded along the strike of the seam, drained all the coal lying between high-water level and the outcrop—a belt about one mile in length, with an average width of 200 yards. As the workings

advanced from the shore in a westerly direction, new shafts were sunk at intervals of about 200 yards, so that the length of haulage from the faces of the bords to the bottom of the shaft never exceeded that distance. The bords, or rooms, were intended to be six yards wide, separated by pillars of four yards, driven parallel with the adit or level; but this parallelism was rarely maintained, and it was not unusual to find the bords seven or eight yards, and the pillars only two or three yards, wide. As a natural consequence, the pillars, being too weak to bear the weight of the superincumbent strata, were crushed in and entirely lost . . . The coal was worked by "holing" across the bord in the middle, "sheering" the sides, and breaking it down by wedging. As no separation of large and small was made, the same price being paid for the whole, the colliers had no interest in making as much large coal as possible, so that before it left the face of the bord the proportion of large coal obtained did not amount to twothirds of the whole. The coal was hauled in "two-bushel" tubs, upon small iron-shod sledges, over a road-way formed of round poles two to three inches in diameter, laid transversely, close together, by strong, active young men, who were paid at a certain price per tub. Upon reaching the bottom of the shaft three of the tubs were emptied into a large tub which was raised to the surface, a height of about ninety feet, by a double-horse gin. At the top of the shaft the large tub was emptied into a shoot or hopper, from which the coal was discharged into carts containing twelve bushels. If a vessel happened to be loading at the time, the carts were driven over a rough, shaky road, formed of round poles three or four inches in diameter, laid close together—the "Corduroy Road" of the colonies—to the wharf, where their contents were discharged into the vessel. When no vessel was loading, and also in winter, when navigation was closed, the coals were deposited in a large heap near the wharf, over which the carts were dragged. As sometimes 3,000 to 4,000 tons were accumulated in one heap ready for shipment, it may easily be conceived that, after undergoing so many removals, with a final crushing by the horses and carts, the coal was reduced almost wholly to slack before it reached the vessel.

Most of the miners before 1827 were unskilled, and they all worked and lived under conditions that were unjust and uncomfortable. Those at Sydney when Brown arrived were "mostly young Irishmen who had been employed in the Newfoundland fisheries". After making a little money at the mines, some got land in Cape Breton, and others went to the United States. Few remained as miners for reasons which Brown makes abundantly clear:

All the workmen of the establishment, consisting of overmen, mechanics, colliers, haulers, and labourers, in addition to their wages, whether by day or by contract, were allowed rations of

beef, pork, bread, and molasses, which was given out weekly. If a man was absent from his work, of course he had to pay for his rations; but whether a man worked faithfully or not, he received the same allowances, thus placing the industrious and skilful men on the same level as the idle and ignorant. The working time, both in the pit and on the surface, extended from 5 A.M. to 7 P.M., with an allowance of one hour for breakfast at 9 A.M., and the same for dinner at 1 P.M. All hands being summoned to breakfast by the ringing of the bell, abandoned their work and rushed to the store, whence each, having swallowed a glass of raw rum, went to his breakfast. The same process was repeated with regard to dinner, and again at 7 P.M., when the day's work was done. Some of the men were engaged for four, others for twelve months, commencing on January 1. were only two pay-days in the year-one for the four-months' men, on May 1, the other for the twelve-months' men, on December 31. As the men, in the meantime, were not furnished with any accounts of their wages or purchases at the store, they generally found, at the final settlement, that, after paying for clothing, stores, rum, &c., they had very small balances to receive. We need not wonder that, under this system, the lessees, as has often been asserted, made more profit by the sale of their stores than of their coal.

All the men, except the two overmen and four mechanics. lived in two barracks or cook-rooms (as they were called), where they took their meals and slept in the same apartments. Their sleeping berths were ranged along the sides of the two rooms in tiers, one above another, as in a ship. It may easily be imagined what sort of a place the cook-room was, where forty men ate, slept, and washed-when they did wash, which was only once a week-in a single apartment. In winter, it is true, they had abundant means of making it warm enough, which is about all that can be said in its favour; in summer it became so very lively that most of the men preferred sleeping during the fine weather under the spruce trees in the vicinity. It could hardly be expected that either harmony or good order prevailed in two rooms occupied by eighty or ninety men under such conditions, where all were upon equal terms and free from restraint. Brawling and fighting seemed to be the order, or rather the disorder, of the day, from Monday until Saturday, Sundy being truly a day of rest, which, strange to say, was devoutly observed. The writer, who had the misfortune to occupy a house for more than twelve months about 100 yards from the cook-rooms, can testify that he rarely enjoyed an undisturbed night's rest during the whole of that period.

Under the management of the General Mining Association, the miners fared comparatively well. Many of them after 1827 were skilled men brought out from the old country, and they were apparently able to take advantage of this fact. The Commissioner sent by the Provincial government in 1842 to investigate the Albion mines which the Association operated in Pictou County, reported that there were 91 "dwelling houses", about 18 by 30 feet, all "well finished", 21 "smaller and inferior houses", and 110 "old log houses" the greater number of which were "quite habitable", which altogether provided "more than a house for each man". He went on to say that so far as he could learn

the colliers are considered as tradesmen and as such paid high wages. They fix their prices and will not consent to admit any other persons into the works. Two-thirds of their work can be done by common labourers and yet they insist upon doing the whole themselves at wages of from eight to twelve shillings per day besides privileges in rent and fuel to the value of twelve or fifteen pounds annually. In the same pits labourers perform services equally severe for three shillings per day; but these men are not allowed to touch the work of the miners. Sometimes the miners take an apprentice who by the payment of a fee obtains the standing of a miner, but the employer cannot send a single man among them.

The Albion mines greatly impressed Joseph Howe when he was shown around in 1829. He devoted an entire chapter of his *Eastern Rambles* to their description. At that time there were fifty men and seven horses kept constantly employed in the pits and eighty men and fourteen horses on the surface. Down in the pit, Howe found the men "variously employed":

some are digging away with their pick axes into the coal measures, or boring holes for blasting; while others are loading the sleds, or driving the horses back and forwards from the place of excavation to the bottom of the shaft . . . [where the coal was sent up to the surface by the agency of steam . . . A large pump, which is sunk in one of the shafts, and worked by the Steam Engine, draws up a great quantity of water, which it deposits in a hogshead bored with holes-from thence it again descends into the pit, carrying with it a large quantity of air, by which the boards are ventilated, and all dangerous vapours carried off. As the coal is dug out, the roof of the pit is supported by logs, which are stood on end, and wedged with plank . . . large bodies of coal are left at certain distances for a similar purpose, and thus there is but little risk of any danger from the falling in of the ceiling. But, Heaven preserve us, what was that? Are we blown into a thousand atoms? Are we suffocated by sulpher and fire damp? . . . Nothing of the kind, my gentle traveller, it is only a blast, which you might have seen two stout fellows preparing and which has upturned as much coal as would serve to keep an old maid warm and comfortable, during the approaching winter.

Such assurances notwithstanding, accidents and fires were all too frequent.

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