

THE SHALE-MINING TRADE LINLITHGOWSHIRE AND MID-LOTHIAN

Throughout the whole history of our manufacturing industry it would be exceedingly difficult, if not quite impossible, to find record of a branch of trade that has opened with such brilliant prospects, when once established, and suffered such a complete collapse as the manufacture of mineral oil. Both in its origin and its development it may be said to be peculiarly a Scottish manufacture, although latterly it has been exclusively so. Practically created and developed in all its magnitude within the short period of twenty years, it has a history that is quite unique, as it soon drew to its aid a capital of probably not less than one and a half million pounds sterling, together with all the resources and refinements of chemical and mechanical science. The first phase of its history terminated with the expiry of Mr Young's patent rights in the year 1864; but since then more fortunes have been lost than have been gained in it, the desire to "strike ile" having taken possession of a large number of our countrymen who had observed with amazement that the New Industry had proved to be a sort of mine of almost untold wealth to the proprietors of the original patent. However, as indicated above, a collapse was in store for this new scientific industry. It had been rapid in its growth, and it was destined to be rapid in its fall, which, let us hope, will not be permanent. It was no sooner well established itself than it stimulated into active existence a closely-allied but still more gigantic industry, the great Petroleum trade of the United States of America and Canada.

Our purpose, on the present occasion, is not to descant upon either the native or the American industry, but rather to place before our readers a few facts of interest which we have collected regarding the present state of the mining branch of the Scotch oil trade, so far as concerns the principal seat of its activity – namely, that portion of the counties of Linlithgow and Midlothian which embraces Bathgate, Uphall, West Calder, and Mid-Calder, and which may collectively be spoken of as the "Scotch Petrolia."

The production of mineral oil in this country involves conditions which are totally dissimilar to those which prevail in the United States and Canada. *There* it seems to be almost quite sufficient that the earth's crust should simply be tickled or punctured in order that the oleaginous liquid may flow forth in abundance; with us, on the contrary, it is necessary that we should dig into the bowels of the earth, and bring forth the crude and most unattractive mineral substance known as oil-shale, and then, by most refined scientific means and processes, extract the useful material from it. In short, we must resort to the use of retorts, condensers, artificial heat, &c., for the production of our oily distillates; whereas the American petroleum, which is practically the same substance as our shale oil, has been distilled in Nature's great laboratory by the internal heat of the earth, and condensed in the cool strata forming its outer crust. For the production of every thirty gallons of crude mineral oil in Scotland it is necessary that, on the average, at least one ton of shale be excavated and brought to the surface of the earth. Now, as shale-mining has naturally participated in the good fortune with which coal-mining has been attended during the last two years or so, the raw material forming the source of the oil has of necessity been a very costly commodity – so costly, indeed, as to render it very difficult for those capitalists who had embarked their means in the mineral oil manufacture to make ends meet, or, at all events, to obtain a fair return upon the capital invested. In fact, the cost of mining alone has latterly been, as a general rule, not less than 4s 9d per ton of shale, without any regard for the mineral lordship, cost and tear and wear of plant and machinery, cost of timber and other materials, the labour of oncost men, cost of management, &c.; and it is certainly very difficult to see how the making of mineral oil could possibly be an "ile striking" business under such circumstances.

Accordingly, some radical change in the mode of working, or some kind of reform or retrenchment, became absolutely necessary. The West Calder Oil Company were the first "to take the bull by the horns." Having a stock of about 11,000 or 12,000 tons of shale in hands, or as much as would keep their retorts going for a period of four months, on the reduced scale of working that has prevailed of late, they resolved on shutting down their shale pits until the rate of wages should be brought more into conformity with the price of the oil as finished and ready for market. The ordinary "darg" was 1 ½ tons, and the length of the day's work, "from bank to bank," was eight hours; but, owing to special cases of difficulty, allowances, &c., or doing more than the recognised "darg," the West Calder Oil Company's miners, we are informed, were making, in a number of instances, from 10s to 15s per day – the working week being five days. Even assuming that the majority were making 10s, rather than 15s, per day, it is easy to see that, with the low ebb to which the price of oil had reached, the "lion's share of the spoil" would be going into the miners' pockets, and not into those of the capitalists. While the price of finished oil has fallen from 1s 6d or 1s 8d to 1s, or

even 11d, per gallon, the wages for shale-mining have been about doubled; engine-keepers' wages have advanced from about 3s 8d per day to about 5s 8d; the wages of oncost pitmen and others have advanced to 7s 6d or 8s per day, as against 5s or thereby; and the cost of timber and certain other materials has practically doubled. With these facts all staring them in the face, the Company recently proceeded to the very ulterior measure of shutting down their shale pits, and thus they were compelled to turn about 250 workmen adrift. A large proportion of them directed their steps to the colliery districts of Lanarkshire and other places in search of work, but they found that the downward tendency in the price of coal, and the slackening demand for that commodity, were making it difficult to secure work at the high rate of wages that had been prevailing in the coal-mining trade. Very shortly many of them returned to the scene of their labours and offered their services at somewhat lower wages than they had formerly been receiving. But we have not yet learned that the Company have acceded to the men's terms. Indeed, we believe it has been resolved not to reopen the shale pits until those services can be obtained on much more favourable terms. It must not be supposed the West Calder Oil Company's works are at a complete standstill. Their coal pit is at work, and a large proportion of the retorts are in operation, together with the stills and most of the plant and machinery embraced in the refinery.

Young's Paraffin Light and Mineral Oil Company have also been compelled to take action. They were paying their retort men, both at the Bathgate and Addiewell works, 2s per week higher than were being paid throughout the adjoining oil districts – a condition of things that was rectified several weeks ago, and the attempt to avert the reduction by means of a strike proved to be quite unavailing. They have also increased the rents of their houses, whether occupied by their own employes or by other persons; and eventually they have come to the wages of the shale-miners, a reduction of 6d per day having been quietly effected towards the end of the past year. Such a reduction seems to have been less required among the Addiewell shale-miners than at the West Calder Company's shale pits if, as we have been assured was the case, they were only in rare instances making 10s per day. No strike took place, nor was there any need to resort to a lock-out, although either measure might have been borne by the Company with comparative composure for some weeks – their stock of shale being between 40,000 and 50,000 tons, or a supply sufficient to last for about four months, with all the retorts (nearly 700) at work, due allowance being made for a certain percentage constantly under repair. The Company in question is the only one, we believe, whose works are all going at full strength.

A somewhat similar course of procedure has been forced upon the Uphall Mineral Oil Company. At Boghall they have two pits with both shale and coal workings in each of them; they have likewise one shale pit and one shale "mine" at Uphall. The foregoing have all been shut down within the last two or three weeks, and the men thrown idle; and at Hopetoun, where the Company have one shale pit, the men have been on strike for a fortnight because they would not submit to a proposed reduction of 1s per day on the rate of wages. In some instances the Uphall men were earning up to 12s per day; latterly their wages were about 9s per day, and the proposed reduction at Hopetoun would have brought them down to 8s. The price for getting shale at the different works has been varying from 3s to 3s 4d per ton at Hopetoun, to 5s 10d and even as high as 6s 10d, per ton at Boghall. The retorts are all standing at Uphall and Boghall, and only those at Hopetoun are in operation. There are in all about 680 retorts, and there is a stock of shale in hands amounting to 8,000 or 10,000 tons, or three months' supply for the Hopetoun works alone. From 250 to 300 of the Uphall Company's men are either locked out or on strike. Possibly, when the holidaying is thoroughly concluded, the strike hands may turn in at the Company's terms.

The Oakbank Oil Company, whose works are situated at Mid-Calder, are carrying on their manufacturing operations. They have no stock of shale, nor are they mining any, as they can purchase it on more favourable terms than they can work it themselves. Their consumption is about 160 tons per day. The experience of this Company is, that during the last two years the cost of producing the requisite mineral has advanced 50 per cent., while the cost of manufacturing the oil has been increased fully 25 per cent.

And here it may be worth while to give in a tabular form the rates of wages paid to the different classes of workmen whose services are in great request about a large mineral oil works where refining operations are carried on with any degree of completeness. It may be premised that the length of the week for skilled workmen is not more than 54 hours, or an average of 9 hours per day:-

Masons.....	4s	10d	to	6s	per day
Bricklayers.....	4s	10d	to	6s	"
Boilermakers.....	4s	8d	to	5s	"
Engine-fitters, &c...	4s	8d	to	5s	"

Coopers.....	4s	9d				“
Blacksmiths.....	4s	4d	to	4s	8d	“
Joiners.....	4s	2d	to	4s	8d	“
Retort-men.....	3s	8d	to	4s		“
Still-men.....	3s	4d	to	4s		“
Labourers.....	3s		to	3s	8d	“