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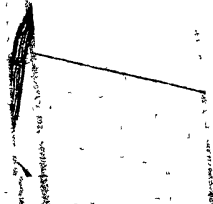
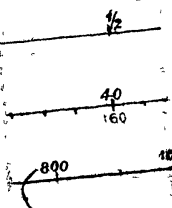


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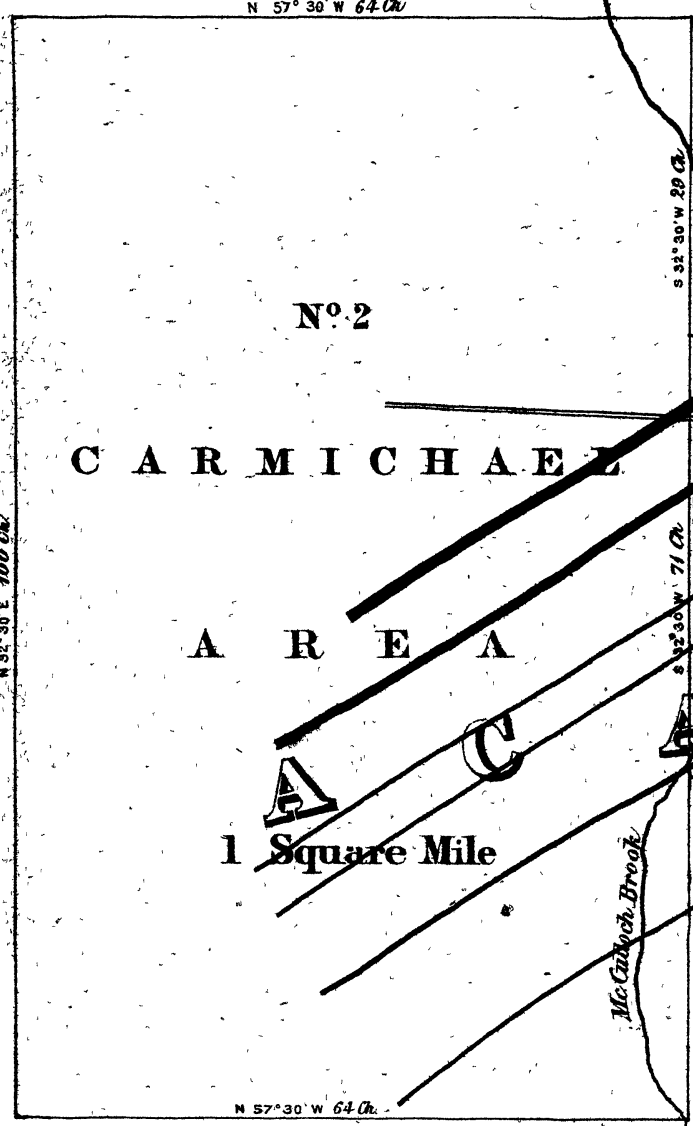
DAI

UNTY,

SCALE



LANDS OF THE GENERAL MINING ASSOCIATION - LONDON



C A R M I C H A E L

A R E A

F R A S E R A R E A

1 Square Mile

A L L

C O

M P

Crop of "Main Coal"

Crop of "Deep Coal"

Crop of "Third Coal"

Crop of "Purvis Coal"

Crop of "McGregor Coal" No 1

Crop of "Oil Coal"

Collieries

Collieries

Church

Mount
Randell

Bore Hole

Fleming Shaft

Adit

Coal Pit

Rich Oil Coal
Adit

Purvis Adit

Adit

McCulloch Brook

Bear Brook

McClellans Brook

Link Branch

Big Branch

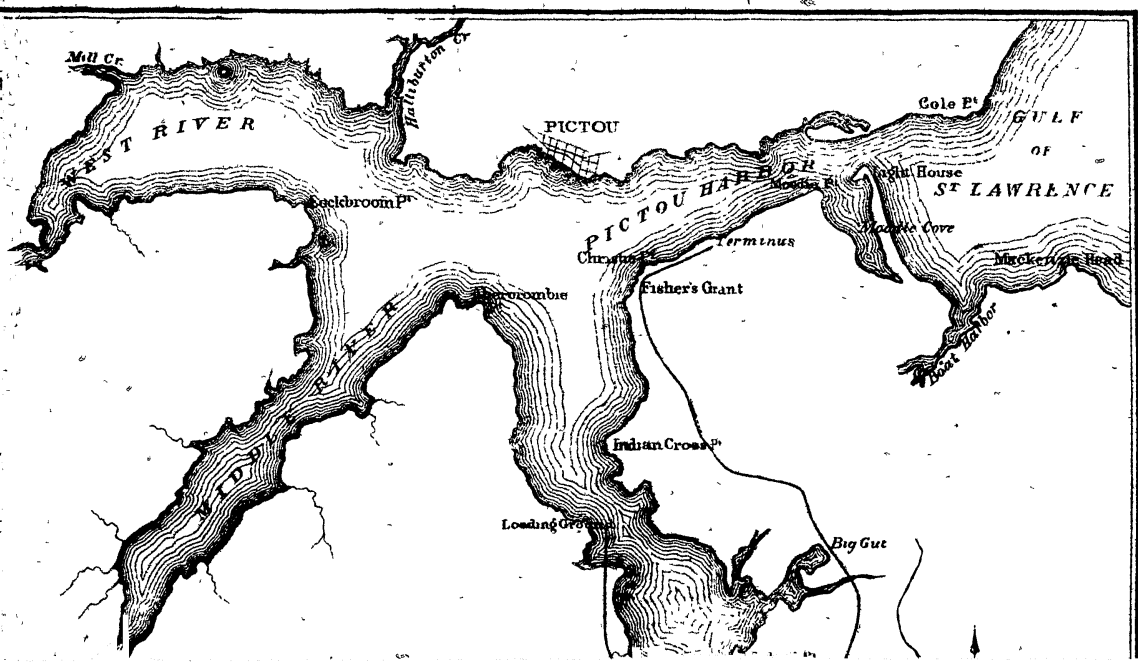
General dip of Coal measures
18° to 20°

No 3

5 Square Miles

RAIL ROAD
(NOVA SCOTIA)

N 32° 30' E
S 32° 30' W 180 Ch.
S 32° 30' W 197 Ch.

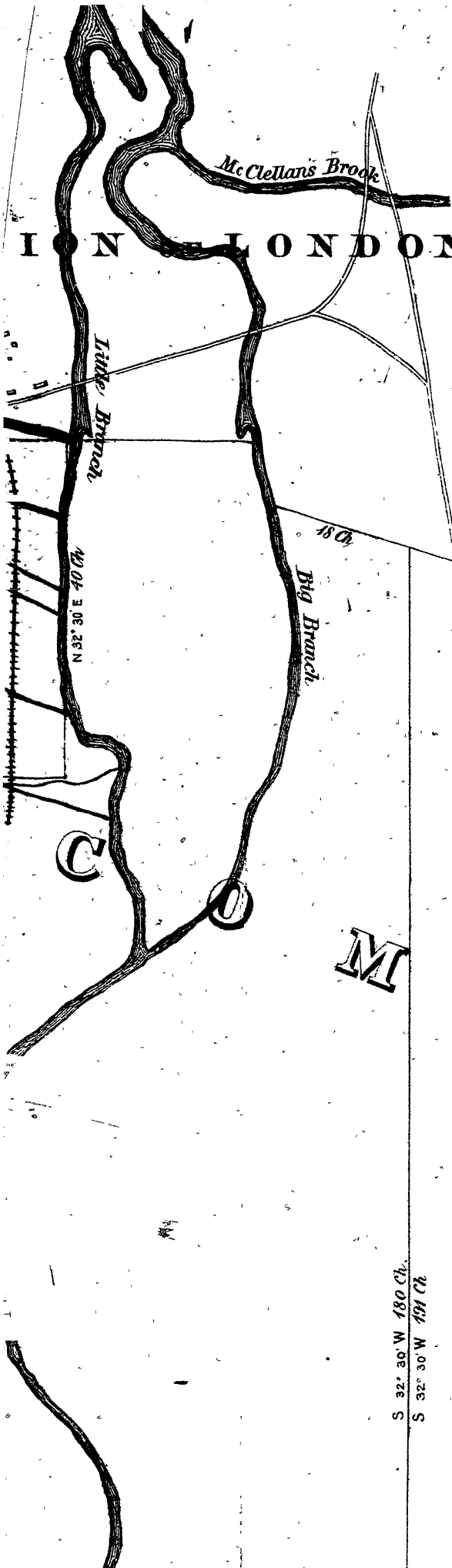
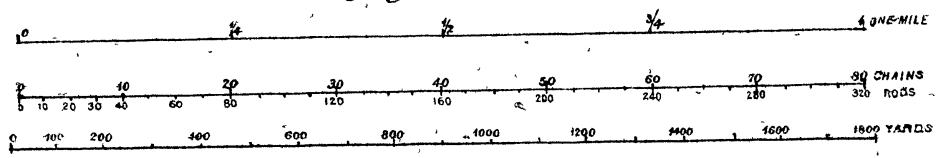


I O N L O N D O N

Map of the Lands OF THE **ACADIA COAL COMPANY**

PICTOU COUNTY, NOVA SCOTIA.

SCALE.

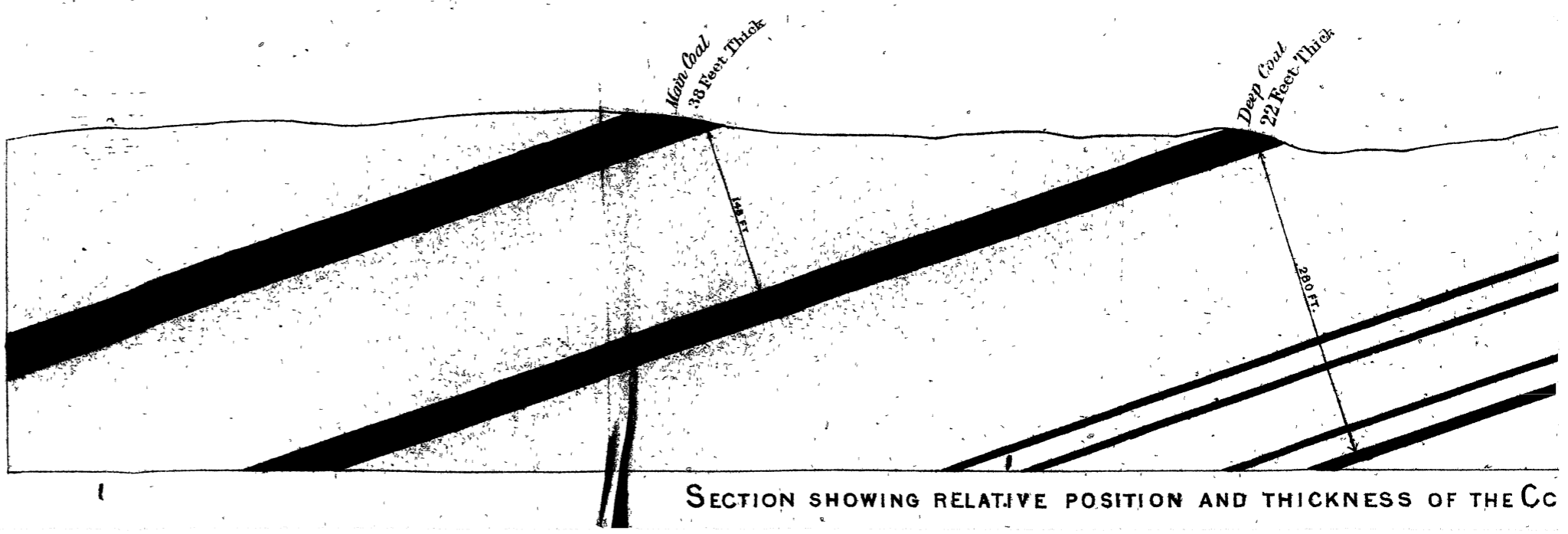
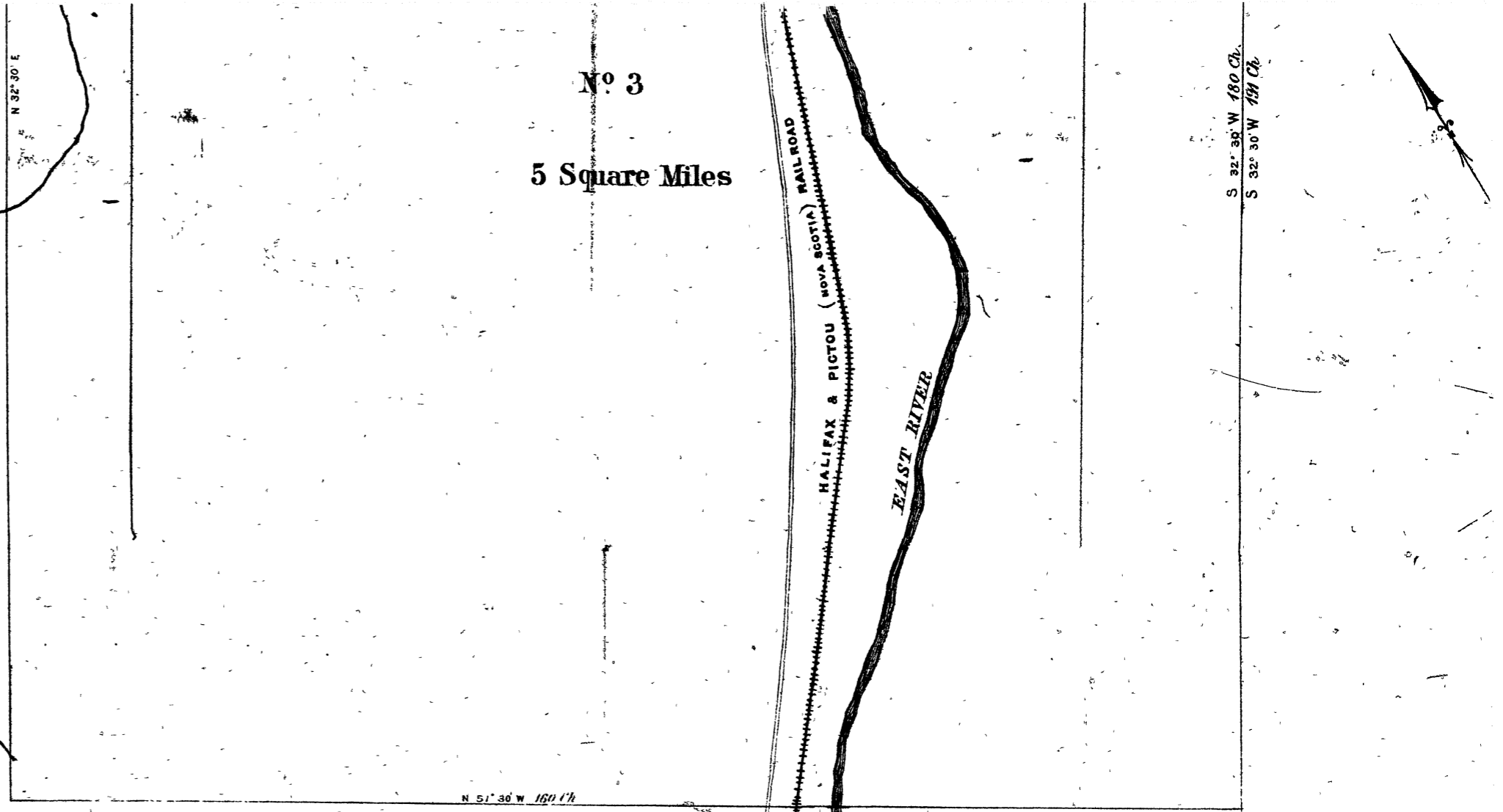
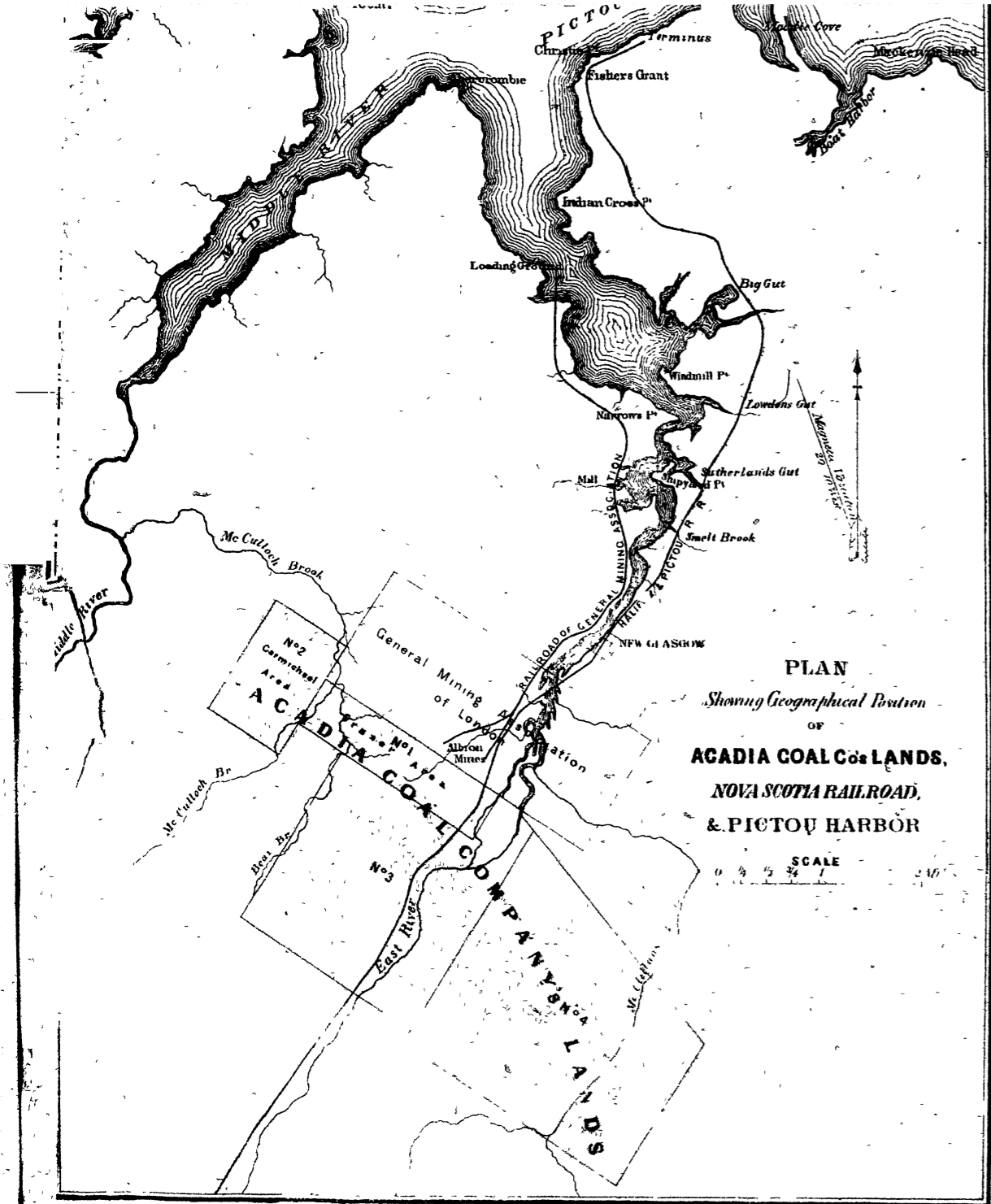


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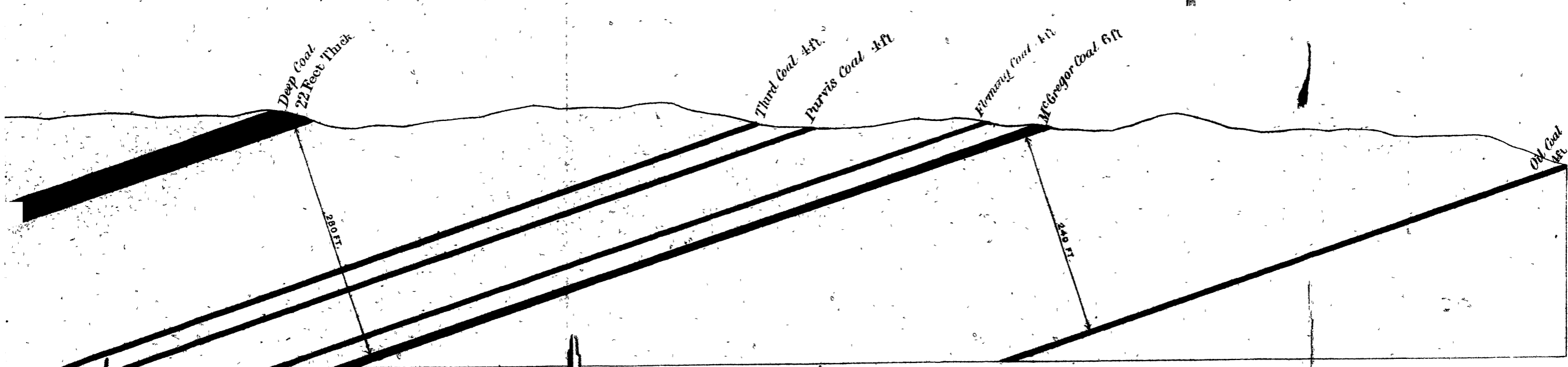
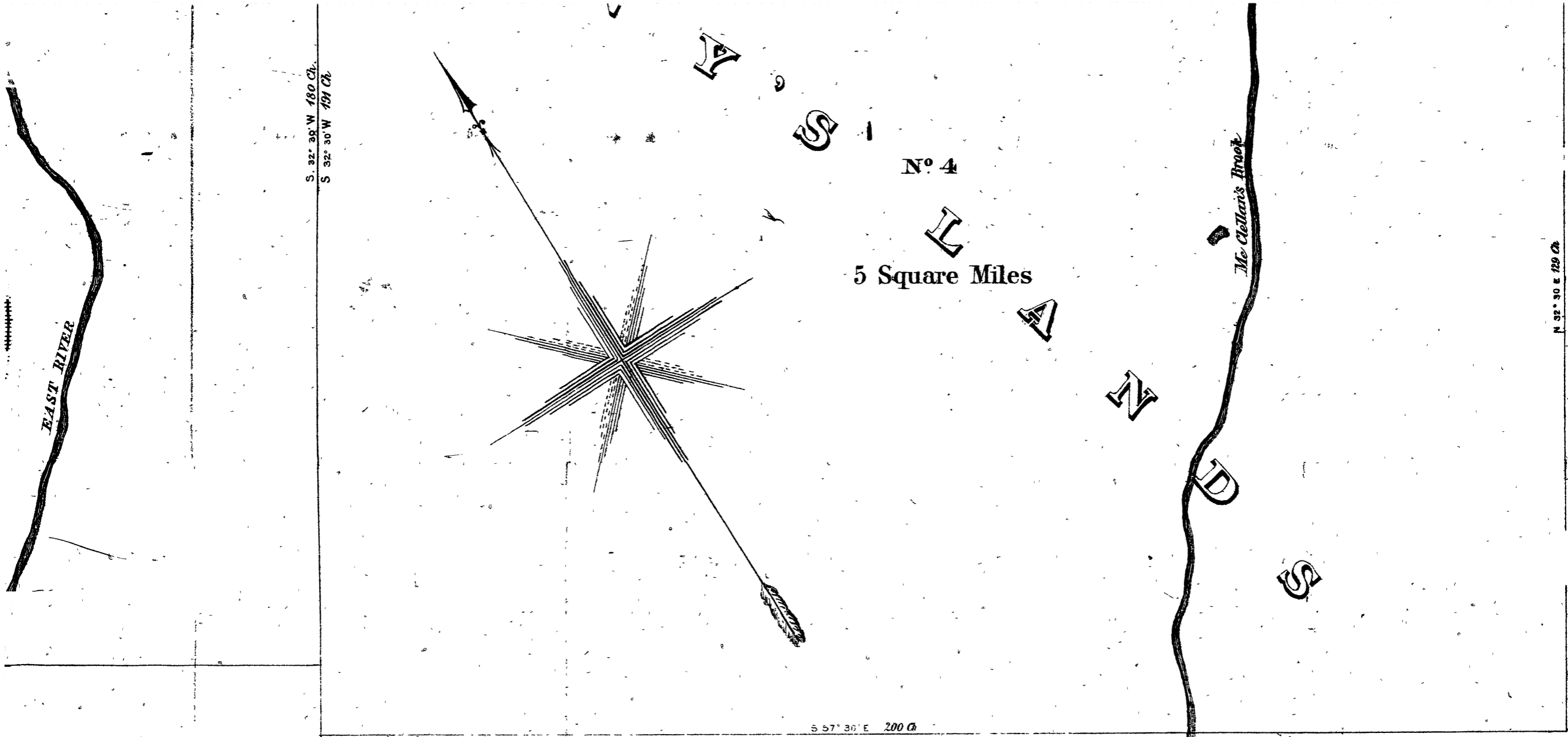
5 Square Miles

McClellan's Brook

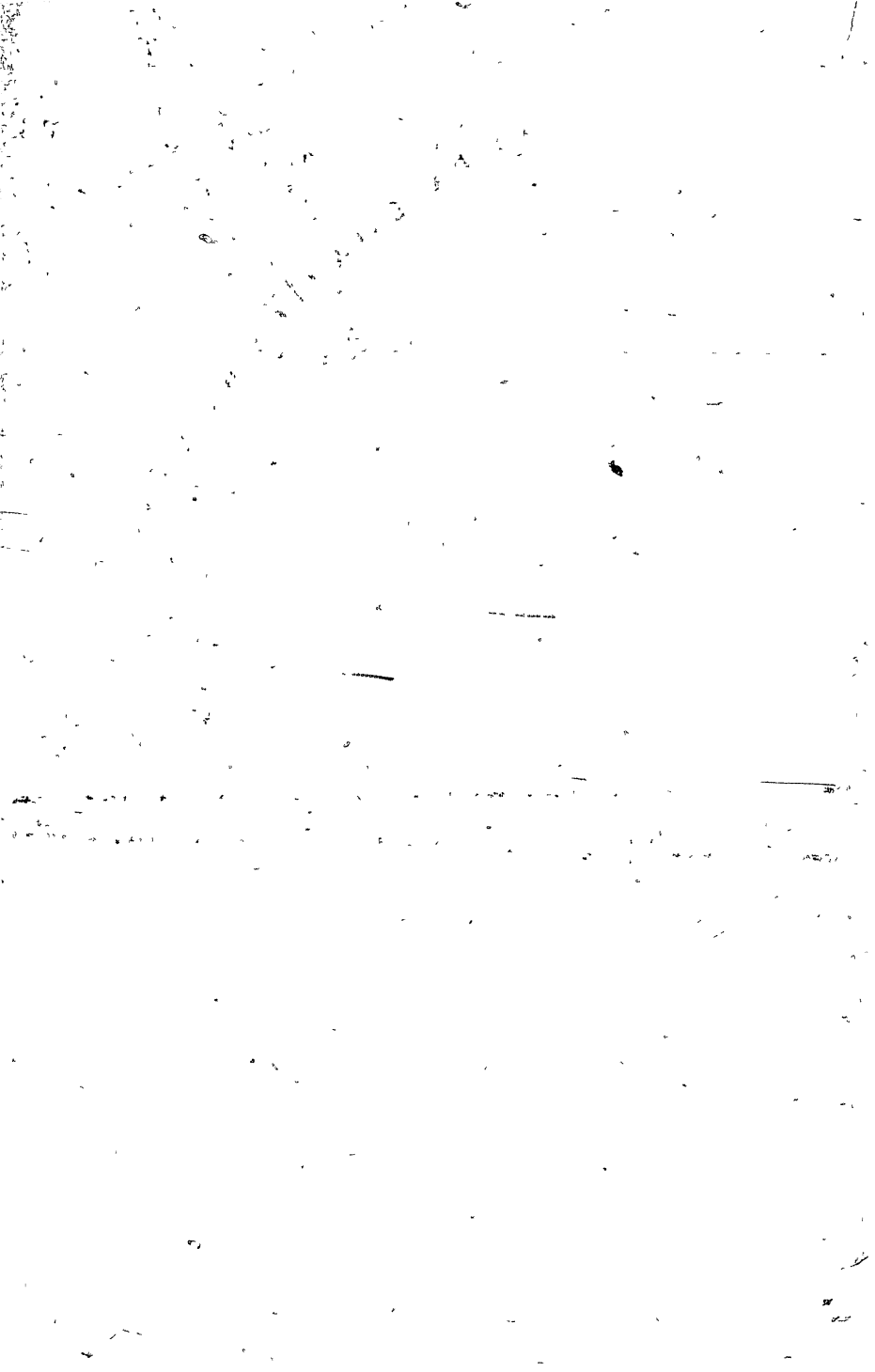
E 180 Ch.



SECTION SHOWING RELATIVE POSITION AND THICKNESS OF THE COALS



ING RELATIVE POSITION AND THICKNESS OF THE COAL SEAMS IN THE LANDS OF THE ACADIA COAL CO.



REPORT

ON

THE PROPERTY

OF

THE ACADIA COAL COMPANY,

NOVA SCOTIA.

For private circulation only among the Proprietors.

New York:

BOWNE & CO STATIONERS AND PRINTERS, 149 BROADWAY.

1865.



145 BROADWAY, NEW YORK, }
 1st February, 1865. }

TO THE PROPRIETORS OF THE ACADIA COAL PROPERTY: . . .

Gentlemen—

THE Trustees, to whom the management of the Acadia Coal property in Nova Scotia was confided, until suitable arrangements could be made for its future development, would respectfully report their action—as well as the proceedings had at two meetings of the parties interested, held in this city.

The clear and able reports of Messrs. Thomas Petherick, Mining Engineer, and Jesse Hoyt, General Agent, will enable you to form a correct judgment as to the value of our coal lands, and the means required to give practical development to them.

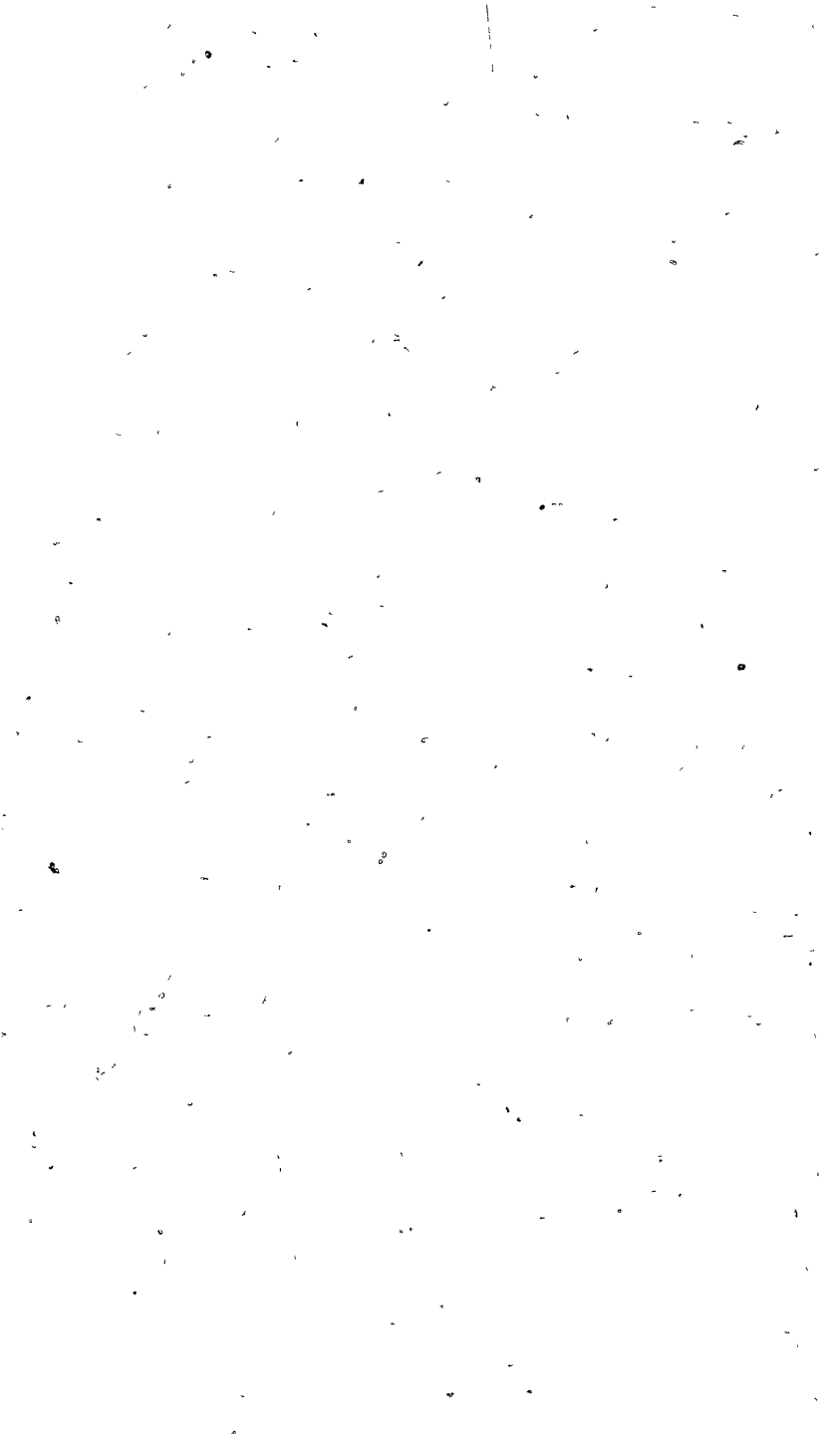
It has been decided to apply at the opening of the Nova Scotia Legislature on the 9th inst., for a charter, with a capital of \$1,000,000, under the title of “the Acadia Coal Company.” This charter has already been drawn up by distinguished Counsel; and we do not apprehend any difficulty in securing its passage. 7

You will find embodied in Mr. Hoyt’s letter a statement of what is now being done at the mines.

The Nova Scotia government having located their railroad immediately through our lands, we are thus saved an outlay of at least \$300,000 *in gold*, which otherwise we should have been obliged to expend to secure transportation to the shipping harbor.

We are well satisfied that the manufacture of oil—from one of our coal veins—can be profitably carried on; but it has been decided to form a separate company for this branch of business—inviting all the parties in interest to join in it, and keeping “the Acadia Coal Company,” strictly to the business of mining the coal for sale.

EDWARDS S. SANFORD, }
CYRUS W. FIELD, } *Trustees.*



REPORT
ON THE PROPERTIES OF
THE ACADIA COAL COMPANY,
NOVA SCOTIA

THESE properties are situated about two miles southwesterly of the town of New Glasgow, on the East River, in Pictou County, and about eight miles southerly from the seaport of Pictou. They comprise four areas: two of them the Fraser and Carmichael tracts, each containing one square mile, purchased by the Company, and a right of mining search over ten square miles acquired directly from the Government.

The carboniferous formation on which these properties are situated, extends from its southern limit northerly to, and under the tide beyond, Pictou; easterly some miles, and a much greater distance to the westward; but excepting the important and very profitable mining operations in the adjoining property of the General Mining Association of London, the "Albion Mines," and some limited openings in the Company's, and other lands in the immediate neighborhood, I do not find that any suitable efficient means have yet been taken to prove what other valuable coal veins it contains.

In the adjoining "Albion Mines" the mining opera-

tions have hitherto been confined to two coal seams—the “Main Coal,” and the “Deep Coal;” but besides these unusually large, “powerful” veins, (which run through the Carmichael tract of the Acadia Co.,) other valuable coal veins are known to run a great length through the Company’s four properties—the “Third Coal,” the “Purvis Coal,” the “McGregor Coal” and the “Oil Coal;” but from the information I have obtained, I consider it highly probable that other valuable veins underlie, and perhaps intervene between, them. *My impression in this respect is very strong*, and the inducements to the adoption of proper efficient means to prove this important question appear to me to be obvious.

The close proximity of the Company’s properties to the Albion Mines Collieries, and their great success, rendered me very desirous to make myself acquainted, by personal examination, with the coal formation developed by those extensive works, for which every desired facility was afforded me by the Superintendent, Col. Scott, and his son, Mr. George Scott.

I found the Albion Mines “Main Coal” opened by the “Dalhousie pit,” which reached it at the depth of forty-five fathoms, to be a very large and important vein; important, not only on account of its great thickness, but in regard to its great regularity, and the evenness and strength of its roof; *which important circumstances are characteristic of all the veins which I have examined, both in the Albion mines and in those of this Company.* The thickness of the “Main Coal” was stated by Mr. Poole, the former Superintendent, to be upwards of forty

feet, deducting from which the aggregate thickness of five small bands of other material, about two feet, leaves that of the coal thirty-eight feet; but as the measurement was vertical, instead of being at right angles with the dip of the vein (about 20°), the true geological thickness of the coal may be taken to be about thirty-six feet. The next deeper vein worked in the "Albion Mines," the "Deep Coal," deducting for similar bands, was found by the same gentleman to be about twenty-two feet thickness of coal. My observations at different points on those two great veins, induced me to believe that those statements were substantially correct,—the joint thickness of those two veins being about fifty-eight feet.

It is very important to observe that the whole geological formation in which the "Albion Mines" and the Acadia Coal Company's properties are situated, is remarkable for the unusually *great regularity* of its stratification; exempt, in a remarkable degree, from the disturbance and consequent deterioration and loss of coal, and liability to serious and indefinite expense, which under less favorable geological circumstances, often render coal mining a source of uncertainty and embarrassment.

In the Company's ground no attempt has yet been made to mine the "Main Coal;" but it has been proved at the point "A" in the Mining Association's property, (see accompanying map), to be a very large vein, at the distance of only one hundred and sixty yards from the Company's line. The length which it will occupy in their (the Company's) property,

cannot in consequence of its strike being somewhat uncertain, be stated with accuracy; but from the course of this vein and also of the "Deep Coal," it will probably be nearly sixteen hundred yards in the Carmichael or western portion of the Company's ground, and a vastly greater length in their recently acquired mining areas, in their eastern ground, beyond the line of the General Mining Association. The—"McGregor" vein, and other lower veins in the series, will occupy a much greater length still, as will be seen by the map herewith.

The "Deep Coal" has been opened at the point "B," or at least an upper bench of it, at the McKenzie pit, sunk about forty two feet. at which depth I found the vein to be over seven and a half feet thick; below which, it was observed to me, there is another "bench" of a considerable further thickness of coal; but it was not accessible for my examination, and I can therefore state nothing specific on the subject. In the recent opening at this pit, I examined a drift of about sixty yards length, in which I found the vein to be very regular, with an excellent sound roof. This coal is of very good quality and free from sulphur—like all the other coal hitherto proved on the Company's property. Properly opened, this coal can be cheaply worked, and with *unusually small waste*. There is a great country demand for this coal, but it has been worked at a great disadvantage on a small scale, by hands unaccustomed to mining. Properly opened, with suitable machinery for pumping the water (which is in trifling quantity) and hoisting the coal, which have been done by

very unsuitable horse power, a large production can be cheaply effected from this pit, when a railroad is extended to it.

The "McGregor Coal" has been opened at the point "C" by an "Adit" or horizontal drift, which has been extended on the vein over four hundred yards in excellent coal, which is being mined upon a small scale for country use, and for carting over wretched roads to the East Pictou river, below New Glasgow, for shipment.

The quantity thus produced is of course limited, but even under those great disadvantages it leaves a *large profit, the superior quality of the coal commanding a high price.* This vein appears to increase in size, in extending under the rising ground, and I found it at the extremity of the drift to be fully six feet thick, of fine quality, very regular, and with an excellent roof. At about 136 yards northerly from the mouth of the drift, a shaft, called the "Fleming Shaft" was sunk some time since to the depth of 164 feet. Being full of water I could not examine it, but the vein in the bottom of it is stated to be considerably thicker than that described above in the drift, separated, it is said, by seven feet of slate from a vein of four feet of good coal. Not having seen such associated veins on the property, I merely give the statement as I received it. This "Fleming Shaft" is of a fair size for deeper operation, 14 feet length by 6 feet width, calculated for a considerable extent of business. The Government railroad from Truro to Pictou harbor, touching at a point about half a mile easterly from this shaft, from whence the shipping of the coal will be far more convenient and

less expensive, renders it desirable to sink a slope (or diagonal shaft) on the vein near such point, by the railroad. instead of at present using that shaft which will however, at no distant day, be of service for ventilation and perhaps otherwise.

What has been called the "Third Coal" was opened at "C," to a small extent. It is stated to be a *large vein*, (its precise thickness I could not learn,) a four feet bench of which, stated to be very good coal, was mined for country use. The same vein was opened, some years ago, to the depth (diagonally) on the slopes of forty yards, the coal from which is stated to have been of very good quality. At the horizontal distance, southerly of say 300 yards from the "McGregor Coal," and deeper in the series, are openings at what is termed the "Oil Coal." or "Stellar Coal," (so called from the brilliant corruscations which it throws off, like stars, when ignited.) from one of which openings, I am informed, nearly three thousand tons of coal was sold for the manufacture of Kerosene Oil. I examined it, in a recent opening, where I found it to be 16 inches thick, overlaid by 13 inches of bituminous coal, and underlaid by 19 inches of "batt," or bituminous shale, the whole thickness being four feet. The bench of oil coal is stated to contain from 80 gallons of oil per ton, up to a much larger yield. I have reason to believe that if the distillation of the oil from this coal, and probably also from the bituminous shale, were to be carried on in the immediate vicinity where the necessary fuel would be cheap, it would be a *very profitable manufacture*. I am not, however, sufficiently acquaint-

ed with the operation, to enable me to offer an opinion on the precise results to be expected from it; but the statements which have been made to me, by the best informed parties, of undoubted reliability and experience in the business, and *who have operated on this particular coal*, have fully satisfied me of the great value of this portion of the Company's property. It has been stated to me, that there is another vein of Oil Coal of the same peculiar and valuable quality, but much thicker, on the property, running through the whole extent of it. I suggest that means be resorted to speedily, to prove this important point.

The "Purvis Coal" remains to be noticed. It was worked at the point "A," several years since, for country use. It appears that the good coal of this vein is of about four feet thickness, and of a very superior quality. I am not able to give very particular description of it, but I may observe that it could be conveniently worked in connection with the "Third Coal."

Obviously a point of prominent importance in regard to the value of coal properties, is the cost of transportation of the coal to market. In this respect the Company's lands are very favorably situated. The Government of Nova Scotia have already in operation a railway from Halifax harbor, on the Atlantic, (one of the best in the world, and, unlike some other northern harbors, never frozen up) to Truro, about sixty-five miles, and have under contract, and the work commenced, the remaining portion, extending about forty miles to Pictou harbor, on the Gulf of St. Lawrence; the whole to be completed and in operation by the 1st July, 1866; *passing through the prop-*

erties of the Acadia Company, the value of which, it can scarcely be necessary to add, will be vastly increased by it, affording an easy and short access to an excellent shipping place in deep water in Pictou harbor, and (when that and most other northern harbors are frozen up,) giving the Company shipping facilities for their coal to the superior harbor of Halifax, with far less length of transit than that from the anthracite coal region in Pennsylvania to tidewater. The Government are disposed to hasten the completion of the road from the Acadia Collieries to Pictou harbor, so as to be prepared for the shipment of coal there at the opening of navigation in 1866.

There are two blocks of miners' houses, of two dwellings each, on the ground, a house for the foreman, carpenter's and smith's shops; and arrangements are being made for the erection of several blocks of suitable miners' houses.

As soon in the approaching season as circumstances will permit, shallow openings should be made to develop the size and other circumstances of the "Main Coal," and the "Deep Coal," (the thickness of the latter is believed to be only partly ascertained at the McKenzie pit, in the Company's property,) and to prove what other veins may exist in the great extent of unproved ground in it, within the carboniferous formation.

It is not practicable in the present state of their development to form more than an approximate estimate of the probable aggregate quantity of coal, in the known veins in the Fraser and Carmichael tracts,

which tracts comprise, together, two square miles. I have, however, come to the conclusion, after careful and repeated consideration, that after allowing for the loss of coal to be left for pillars and by waste, and, exclusive of the "Oil Coals," the probable aggregate quantity may be reasonably assumed to be not less than *thirty-six millions of tons from these two tracts alone*, which would be equal to the production of *about a thousand tons per day for a hundred and twenty years*.

Of the probable quantity of that very valuable mineral—the "Oil Coal",—my opinion is yet scarcely formed; it being stated upon what I consider good authority, that there are two veins of that coal; the one which has been opened and partially worked being by far the smaller of the two, the size of the larger, however, not being stated. I consider that this smaller *proved vein* will yield nett, in the two square miles above mentioned, *over fifteen hundred thousand tons*. Its importance, however, cannot be estimated by its quantity without reference to its *superior quality*. If the contemplated manufacture of it on the ground be established, it would yield a profit many times larger than any that can be obtained from the mining of coal of the ordinary description. It is important to remark, that this proved "Oil Coal" vein rests immediately on a bed, of considerably greater than its own thickness, of "batt"—a highly bituminous shale, which it is considered can be also used in the oil manufacture with great advantage.

It should be observed that my estimates of quantities of coal here given are confined to the *specific*

area of only two square miles, without reference to the other far larger grants made to the Company, principally on the left bank of the East Pictou River, CONTAINING FOR VERY GREAT LENGTH ALL THE COAL VEINS WHICH I HAVE DESCRIBED, AND PROBABLY OTHER VALUABLE ONES.

I consider that the first step in establishing regular effective operations on the Company's property, should be the speedy sinking of a slope on the McGregor vein, from the surface to a depth suitable for making a large shipment from it on the opening of the Pictou Railroad, and for a business of not less than 120,000 tons of coal a year. The high character of the McGregor Coal, already established by the sale of it from the limited operations of the "Fleming colliery," will no doubt insure a ready and increasing demand for it. Ample evidence of its superiority for steam cooking and gas purposes, has followed the use of it. The slope should be commenced in the coming spring, and suitable machinery for pumping the water and hoisting the coal be placed on it during the summer.

I recommend, as being appropriate for the purpose, the placing of the following machinery at the proposed slope: A steam pumping engine, 18 inches diameter cylinder, 8 feet stroke, (to make a 6 feet stroke in the shaft,) the pumps (plunger or forcing pumps) to be 8 to 9 inches diameter, and the water pipes (to provide for an increase of water) to be 10 inches diameter. A steam engine of the same dimensions and length of stroke, (which will avoid the necessity of gear work), with drums, flat wire

rope, &c. Three boilers of 50 feet length and 3 feet diameter, to supply steam to both the engines. The underground equipment I propose to be equal at the outset to the pumping and hoisting from the depth of not less than 240 yards;—the power of these, with additional boilers, being estimated to be equal to the pumping and hoisting from the slope depth of 600 yards. The great length which the McGregor Vein occupies in the Fraser and Carmichael tracts alone (over 5,000 yards,) will render it necessary after some time; (in order to avail, even to a moderate extent, of its great capacity of production, and to meet the active demand which may be relied on for this coal;) to have an additional slope or slopes; but the pumping for such additional operations may still be done in the first slope.

To carry out these suggestions will be required:

Two steam engines, one for pumping, the other for hoisting, with the boilers for their joint supply of steam, as before described.

Pump-work, pipes, rods, &c., complete.

Winding apparatus, wire rope, &c., complete.

Coal cars for underground hauling, on the slope, and on the bank.

Railroads in the gangways, on the slope and on the bank.

Sinking slope.

Driving gangways, airways, &c.

Houses for overman and miners boarding house, carpenters' and smiths' shops, magazine, store-house, office, &c.

Tools—smiths', carpenters' and miners'.

wages and sundries ;	
at a cost in all of	\$115,800
Add for contingencies, 10 per cent.	11,580
	<hr/>
United States currency	\$127,380

This estimate is founded upon what the same work would cost in the Coal Mining Districts of Pennsylvania, at the present time. I could not, with my present means of information, undertake to state what the same work will cost in Nova Scotia; but an approximate conclusion can be arrived at on that point by those who are informed of the state of the currency, and the relative value of labor and materials in both countries.

At the rates paid in Nova Scotia for mining labor and materials, and the shipping prices at Pictou, I consider that the McGregor Coal, under the arrangements I have proposed, without reference to the preference in point of price which it will probably command in the market, will be worked at a profit of a dollar to a dollar and ten cents per ton Nova Scotia currency, *i. e.* in gold, after paying the usual rate of ten cents per ton royalty to the Government.

I recommend \$6,000 to \$7,000 being applied this summer to exploration on the veins not yet sufficiently developed in the Fraser and Carmichael areas, and in the new-acquired tracts, of far greater extent, yet unexplored.

In conclusion, I may observe that the very favorable opinion I entertain of the great importance and value of the Company's property, is founded upon careful examination, during three different visits

which I made to it in the months of September, November and December last.

Respectfully submitted,

THO. PETHERICK,
Mining Engineer.

January, 1865.

EPITOME

OF THE FOREGOING REPORT.

QUANTITY OF COAL LANDS.

No. 1. Fraser area, acquired by purchase,	1	square mile
No. 2. Carmichael " " " "	1	" "
No. 3. Unexplored " " from Government,	5	" "
No. 4. " " " " " "	5	" "
Total,	12	" "

DISTANCE FROM NAVIGATION.

From New Glasgow, on East River,	2 miles.
" Pictou Harbor, " Gulf of St. Lawrence,	8 "
" Halifax " " Atlantic Ocean,	97 "

NUMBER OF COAL SEAMS AND THEIR THICKNESS.

No. 1. " Main Coal,"	36	feet	}
No. 2. " Deep Coal,"	22	"	
No. 3. " Third Coal,"	4	"	
No. 4. " Purvis Coal,"	4	"	
No. 5. Vein in Fleming Shaft, said to be 4 feet thick . .			
No. 6. " McGregor Coal,"	6	"	
Total thickness,	72	"	Bituminous Coal

The above figures represent the actual thickness of good coal, exclusive of the bands of interstratified iron stone, &c.

No. 7 " Oil Coal." Bituminous Coal,	16	inches.	
Oil Coal, (Stellar)	13	"	
Bituminous Shale,	19	"	
No. 8. " Oil Coal No. 2," Not yet examined.	—		4 feet

QUANTITY OF COAL.

- | | | |
|-------------------------|--|------------------------------------|
| No. 1. Fraser area, | } Estimated after deducting 25 per cent. for pillars, waste, &c. | } 36,000,000 tons bituminous Coal. |
| No. 2. Carmichael " | | |
| No. 3. Unexplored area, | } Not yet examined, and therefore not estimated. | |
| No. 4. " " " | | |

RECOMMENDED EXPENDITURE.

Sinking slope, driving gangways,	} \$127,000 U. S. Currency.
railways on bank, on slope and	
in gangways, engines pumps	
and other machinery Building	
houses, shops, magazine, store,	
office, &c... ..	
Tools, labor, &c , &c , including 10	}
per cent. for contingencies.....	

After this expenditure in equipping and putting in operation one slope, the

PRODUCTION

Is estimated at 120,000 tons per annum, which,	} \$120,000 in gold,
at \$1.00 per ton, would give a nett profit	
per annum, of.....	

The above figures represent the cost, production and profit of only one opening on the Company's grounds, which are sufficiently extensive to admit of many more such collieries.

RECOMMENDED EXPLORATIONS.

Required to explore and thoroughly test	} \$7,000 U. S. Currency.
coal seams in unproved ground,.....	

ASTOR HOUSE,

NEW YORK, 31st Jan., 1865.

To the Trustees of the Acadia Coal Property :

GENTLEMEN :

I have the honor to state, for your information, in reference to your lands in Pictou County, Nova Scotia, that the work of mining coal for the local consumption of the country, as commenced by James D. B. Fraser, Esq., the former proprietor of the "Fraser Mine" is continued by the employment of twenty men and two horses in the "adit," or horizontal level, referred to in Mr. Petherick's Report. The present yield from this "adit," is about 400 tons per month, all of which will be absorbed by local consumption. It is proposed to increase the working staff to thirty men and boys, and three horses, and to work night and day, by which means the production of the mine will be increased to 1,200 tons per month.

In addition to the miners' dwellings on the Company's ground referred to in Mr Petherick's report, there is on hand a considerable quantity of mining appurtenances, and arrangements have been made for the immediate erection of six new blocks of houses, and for the purchase of additional tools and material.

One of the best mining machinists in America has been employed to prepare designs and working drawings of the engines, pumps, and other machinery required to equip one colliery, in order to work on a large scale the McGregor vein.

It is suggested that, as the Company's property occupies a very extended area, other collieries be located and rented or leased to private individuals who may become willing to work them, by paying a royalty per ton on all the coals raised, as is now done in the mining districts of Pennsylvania and elsewhere.

I beg to state also, that I have made diligent inquiries from persons who are best informed on such subjects, on all matters connected with the manufacture of Kerosene Oil, and I have had

several interviews with a gentleman of high standing, and of the greatest experience in that business, by whom I am kindly furnished with the following particulars :

The "Stellar Oil Coal" has been tested in the Kerosene Oil Works at Portland and other places, and found to make the *very best of oil*.

The value of the coal at the colliery, in Pictou County, may be given as follows :

Coal producing	100	Crude Oil per ton,	\$10.00	per ton, in gold.		
"	"	90	"	"	"	"
"	"	80	"	"	"	"
"	"	70	"	"	"	"
"	"	60	"	"	"	"
"	"	50	"	"	"	"
"	"	40	"	"	"	"
"	"	30	"	"	"	"

An establishment for the manufacture of refined oil to the extent of 400,000 gallons per annum, and such other products as paraffine, from the "Stellar Coal," could be erected and put in operation at the Acadia Colliery for \$80,000 in gold. Computing the yield of the "Stellar Coal" at 50 gallons only to the ton, at \$5 per ton, the "Bituminous Coal" for fuel, at \$1.60 per ton, (which would give a handsome return on the mining,) refined oil could be manufactured at a cost of 25 to 30 cents per gallon. As such oil commands at the present time from 50 cents to 55 cents per gallon in the British Provinces, and as the European markets could also be made available, it will readily be perceived that such an establishment cannot fail to be exceedingly remunerative, independent of the great profit to accrue from mining the "bituminous coal," as estimated by Mr. Petherick.

The expense of works and machinery capable of extracting the 8,000 tons of the "Stellar Coal," (which, computing 50 gallons per ton, would be required to manufacture 400,000 gallons of oil per annum,) is estimated at \$28,000 in U. S. Currency; and the expense and mining labor thereafter would not exceed \$2,50 per ton, which would leave a profit of \$2,50 per ton in gold. If the coal is sufficiently rich to produce more than 50 gallons per ton, then the profit of both mining and refining will be increased in the same ratio.

Appended to this letter will be found some extracts from the records of the Industrial Exhibition in London, in 1862, furnishing valuable information as to the quality of the coal in the "McGregor" and "Oil Coal" veins on the Company's property.

I have the honor to be,

Your most ob't servant,

JESSE HOYT,

General Agent.

EXTRACTS FROM THE RECORDS OF THE INDUSTRIAL EXHIBITION OF LONDON, REFERRED TO IN MR. HOYT'S LETTER.

NOVA SCOTIA.

Underlying the Albion Mines "Deep Seam," at a depth of 280 feet, and having the same dip of 18°, is a bituminous coal seam of 8 feet thick, which the Fraser Mine Company are working near the "crop," by means of a level. No. 1 Sample is 2 feet thick. sp. gr., 1.334; volatile matter, 22.50; carbon, 65.70; ash grey, 11.80; total, 100. Then 4 inches of poor coal are rejected. No 2 sample is 3 feet 6 inches thick, making a total seam of 5 feet 6 inches marketable coal. Sp. Gr., 1.301; volatile matter, 23.30; carbon, 70.00; ash grey, 6.70; total, 100. It is proved to be a superior steam coal by steamers running between Pictou, Charlottetown and Shediac, and it gives a good illuminating gas.

(Signed,)

HENRY POOLE,

Mining Engineer.

HALIFAX, 21st January, 1862.

Below the Fraser Mine, bituminous coal, at a depth of 240 feet, a seam of oil coal—No. 3 sample—has been worked, called the "Stellar Coal," from the free way in which it throws off its sparks. It varies in thickness from 4 to 20 inches. Sp. Gr. 1.152.

The following analysis has been made by Prof. How, of Windsor College, Nova Scotia: moisture, 0.23; volatile matter, 66.33; carbon, 25.23; ash, 8.21; total, 100. Ultimate analysis yielded: carbon, 80.96; hydrogen, 10.15

(Signed,)

HENRY POOLE,

Mining Engineer.

HALIFAX, 21st *January*, 1862.

RECAPITULATION.

Estimated expenditure required to open McGregor seam, as by Mr. Petherick's report, \$127,380 U. S. currency, say	\$64,000 in Gold.
Estimated expenditure required to open Oil Coal seam, as by Mr. Hoyt's letter, \$28,000 U. S. Currency, say	14,000 " "
Estimated expenditure required to establish Oil Manufactory, as by Mr. Hoyt's letter,	80,000 " "
Total Expenditure	\$158,000 " "

Estimated nett income, per annum, after the above expenditure :

From bituminous coal, 120,000 tons at \$1.00 per ton,	\$120,000 in Gold.
From Oil Coal 8,000 tons at \$2,50 per ton,	20,000 " "
From manufacture of Oil 400,000 gallons per annum at 20 cents per gallon	80,000 " "
Profit	\$220,000 " "



The following is the result of the Analysis of this Coal as made by DR. JOHN TORREY, in the Laboratory of the Manhattan Gas-Light Company:

COKING COAL OF THE ACADIA COAL COMPANY,

FROM CYRUS W. FIELD, NOVA SCOTIA.

One ton—2 240 pounds—yielded 9,500 feet of 13.03 candle gas and 42 bushels coke, weighing 1,640 pounds.

The coke is good It contains rather much ash, and makes some clinker ; but it burns very well, keeping up a good, strong fire

The coal seems to deserve a trial on a larger scale, as it is very readily carbonized, yielding a good volume of gas and coke.

ANALYSIS OF THE COAL.

Volatile matter.	32.0
Fixed carbon	59.3
Ash	8.7
	<hr/>
	100.0

Manhattan Gas Works, Feb. 9, 1865.

OIL OBTAINED FROM THE OIL COAL.

PORTLAND, Feb. 13, 1865.

CYRUS W. FIELD, ESQ

Dear Sir—I have got through with the Fraser Coal. In making the crude oil, it yields—after taking out the water, which is about 12 per cent.—50 gallons to the ton, of good crude oil; that, I think, will finish more than 40 gallons of refined product to the ton—at least 38 gallons.

To work this coal in the retorts that we work, would be an expensive way; if you would be willing to spend from 6 to 800 dollars to put one of Atwood's pipes to work it, and then send here about 16 tons of each kind of coal you have there, we could decide intelligently upon the best way of working all the coal you have into refined oil.

Yours truly,

F. MACDONALD.