

DOMINION
IRON AND
STEEL
COMPANY

SYDNEY,
NOVA SCOTIA

ROBERT R. BROWN

by Robert T. Brown

DOMINION IRON & STEEL COMPANY - Marble Mountain Limestone quarry
West Bay of Great Bras d'Or.

- 1902 - Quarry opened at Marble Mountain to supply crushed limestone required for fluxes in the steel mill at Sydney.
- 1918 - Operation discontinued.

The stone was lowered from the quarry, which was 300 feet above the level of the lake, to a crusher, by means of a double shaft system by which the descending loaded car was made to hoist the empty one. From the crusher to the storage bin and from the bin to the loading pier, the stone was carried by conveyor belts.

In addition, there was a standard-gauge tramway which ran from the wharf and climbed the side of the mountain by several switchbacks to the top of the hill, and then back into the quarry.

Motive Power: The line was worked by 0-4-OT engines sent over from the mill at Sydney when needed. Although listed in the DISCO roster, they cannot be individually identified.

DOMINION IRON & STEEL COMPANY - Sydney, NS Industrial shunting
in yard of the steel mill.

No.	Type	Cylinders	Dri.	Weight	Year	Builder	Disposition
101	0-4-OT	12x16"	34"	48,000#	1910	Porter	sc.
102	"	"	"	"	"	"	sc.
103	"	"	"	"	"	"	sc.
104	"	"	"	"	"	"	sc.
106	"	"	"	"	1912	Montreal #49496	sc.

WABASH IRON & STEEL CO. (cont'd)

114	0-4-OT	17x24"	42"	48000	1900	Fittsburgh	Ac.1942		
115	0-6-0	"	49"	104000	1924	Davenport	Ac.1930		Sold
116	"	"	"	"	1904	"	"		"
117	"	19x26	50"	130000	"	Montreal	#29874 Ex S&L#11		sc'37
118	"	"	"	126000	"	"	29875 "	12	sc'37
119	"	"	"	"	1907	"	42749 "	13	sc'38
120	"	"	"	"	1909	"	45886 "	14	sc'39
121	"	"	"	120000	1918	Baldwin			sc.
122	"	"	"	104000	1899	"			sc'10
122	"	"	"	112000	1910	Baldwin			sc.
123	"	18x24"	50"	104000	1899	Fittsburgh	#1981		sc.
124	"	"	"	"	"	"			sc.
125	"	"	"	"	"	"			sc.
126	"	19x24"	50"	"	1898	Schenectady			sc.
127	"	"	"	"	1900	"			sc.
128	"	"	"	"	"	"			sc.
129	"	"	"	"	"	"			sc.
130	"	18x24"	52"	"	1902	Kingston	#557 Ex S&L#30 Re#140		
131	"	"	"	"	"	"	558 "	31	141
131	"	"	"	108000	1919	Montreal	#60567		sc.
132	"	"	"	"	1906	"	40866		sc.
133	"	"	"	102000	1893				sc.
134	"	19x24	50"	110000	1902	Schenectady			Sold
135	0-4-0	16x24"	51"	104000	1900	Rhode Island	#3201		sc'28
136	"	"	"	"	"	"	3202		"
Nos.135 and 136 were tender engines bought from the International Power Company.									
140	0-6-0	18x24"	52"	104000	1902	Kingston	#557 Ex.#130		£
141	"	"	"	"	"	"	558 "	131	sc.
Nos.150 to 157 were narrow gauge (3'0")									
150	0-4-OT	"	"	74000	1912	Porter			sc'15
151	"	"	"	"	"	"			sc.
151	"	14x22"	40"	"	1942	Montreal	#69741		
152	"	"	"	"	1939	"	69240		
153	"	"	"	"	1902	Porter			sc'36
153	"	14x22"	40"	"	1937	Montreal	#68802		
154	"	"	"	"	"	Dickson			sc'19
154	"	14x18"	36"	"	1919	Porter			sc.
155	2-6-0	12x16"	37"	"	1890	Kingston	#394 '93 ex G&C		sc'28
155	0-4-OT	14x18"	36"	74000	1928	Porter			sc.
156	"	14x22"	40"	80000	1935	Montreal	#68702		sc.
157	"	12x16"	35"	40000	1912	Schenectady			sc'43
200	0-6-0	21x26"	50"	162000	1914	Schenectady	Ac.'41		£
201	"	"	"	148000	1924	Baldwin	"		£
202	"	"	"	158000	"	Richmond	Ac.'42		£
							Ex New Haven #214		£
203	"	"	"	154000	1929	Alco	Ac.'44		£

£- Indicates in service in 1955.

Incredible as it may seem in a coal mining region, this company is replacing its steam locomotives with diesels !

-RRB

GLACE BAY MINING CO. Table Head to Glace Bay - 1½ mile.

- 1858 - Hub area leased to E.P. Archbold of Sydney, associated with Messrs. Hubbard, Howe, Converse and Emery of Boston.
- 1861 - Standard gauge railway line built from the Hub Mine at Table Head near Glace Bay to an artificial harbour at the mouth of Renwick Brook
- 1863 - Little Glace Bay Colliery opened near the Hub Mine to work the Harbour Seam.
- 1865 - The Boston partners withdrew to form the Caledonia Mining Co.
- 1877 - The Hub Mine closed.
- 1894 - March 1st, The Glace Bay Mining Company bought by the Dominion Coal Company and part of the Glace Bay Railway became part of the main line of the Sydney & Louisbourg Railway. The branch down to the harbour was abandoned soon after.

Motive Power

- ? O-4-OT 10x18" 43" 1863 Neilson
Possibly builder's date should be 1866
Retired in 1889 and scrapped in 1894.
- E.P. ARCHBOLD O-6-OT 10x16" 36" 1889 Baldwin #9271
In 1894 it became S&L No.7 and in 1901 renumbered No.2

GOWRIE COAL MINING COMPANY Gowrie Mine to Cow Bay 1½ mile.

- 1864 - Gowrie Mine opened by driving a level from the beach through the old French workings of 1724-58. Later, numerous shafts were sunk, each one being further from the shore than the one before it. A short cable-operated tramway was built to the wharf at Cow Bay.
- 1877 - The Balmoral shaft sunk about one mile from the shore and the railway extended to it. A locomotive bought to work level.
- 1894 - March 1st, The Gowrie Coal Mining Co. bought by Dominion Coal Company. The mine was closed soon after and the railway abandoned.

Motive Power

- LASSIE O'GOWRIE No.1 4-4-OT 10x16" 42" 1872 Hunslet #95
Was to have been No.7 of the Prince Edward Island Ry. but was refused by that road. Bought by Gowrie Coal Mining Co. in 1877. Scrapped in 1894.
- BLOWERS P. ARCHIBALD No.2 4-4-OT 10x16" 42" 1879 Hunslet #228
Ordered through J.R. Banks and originally bore the name FORMOSA. Scrapped in 1894.

(to be continued)

THE DOMINION COAL COMPANY, LIMITED

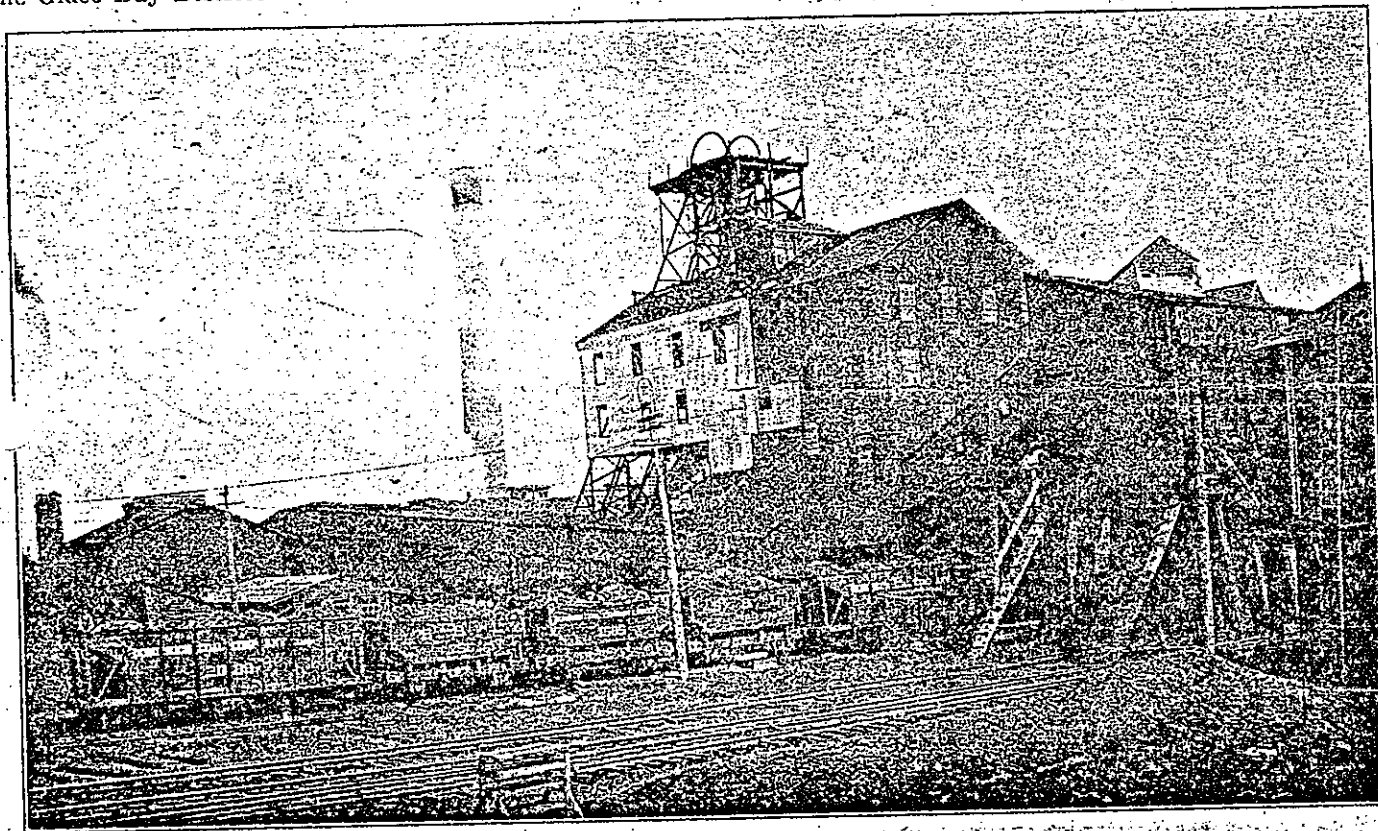
The Dominion Coal Company is the largest single operator in Canada, producing in 1913 thirty-eight per cent. of the entire coal output of the Dominion, and seventy per cent. of the coal output of Nova Scotia. The company in 1913 produced 4,739,149 tons of coal.

The amalgamated collieries taken over by the Dominion Coal Company at its incorporation in 1893 numbered eight, namely, four mines on the Phalen Seam, one on the Lorway Seam, and one on the Emery Seam, all these being in the Glace Bay Basin. In the Waterford District there was the Victoria Mine, on the Victoria Seam, and in the Morien District there was one colliery on the Blockhouse Seam. A policy of concentration was decided upon, and all the collieries except those in the Glace Bay District were closed down.

Lingan Seam, Nos. 15 and 16, were added in the Waterford District. In 1912, No. 21 Colliery was opened to a producing stage in the Morien District, and No. 22 Colliery in the same district was completed in 1913. In 1913 the Emery Seam was entered at a point closely adjoining No. 3 Colliery, the new mine being known as No. 11. The Old Victoria Mine, in the Waterford District, which was closed down in 1897, was pumped out during 1913, and became once more a producer in the early part of 1914.

At the beginning of 1914, therefore, the company had in operation 20 collieries.

During the summer of 1914 the company expects to obtain daily outputs from the collieries aggregating 22,000 tons.



No. 1 Colliery (Dominion), Phalen Seam. Shows the Pressed Steel Hopper Cars used on the Railway.

In 1899 the company was operating four mines only, namely No. 1 (Dominion), No. 4 (Caledonia), and No. 5 (Reserve), all on the Phalen Seam, and No. 8 (International) on the Harbor Seam. In 1900 a new opening was made on the Phalen Seam, known as No. 3 Colliery, to which was allotted a territory lying between the workings of No. 4 and No. 5 Collieries. In 1901 were added Nos. 2 and 9 Collieries, operating the Phalen and Harbor Seams. The old Hub Colliery (No. 7) was re-opened in 1903, and in 1905 No. 6 Colliery was opened on the Phalen Seam, and No. 10 Colliery was commenced on the Emery Seam at Reserve Mines.

The practically virgin coalfield of the Lingan-Victoria areas—now known as the Waterford District—was opened up in 1907, Nos. 12 and 14 Mines, on the Victoria Seam, becoming producers in 1908 and 1909 respectively. In 1911 the collieries of the Cumberland Coal & Railway Company were acquired by the Dominion

The coal areas of the company in Cape Breton Island compose the most valuable and desirable portion of the Sydney Coalfield, and it may be safely stated that, with the exception of the areas of the Nova Scotia Steel & Coal Company, there is but a negligible extent of the Sydney coalfield that is not under lease to the Dominion Coal Company.

The Sydney Coalfield, because of the purity, accessibility and quantity of its coal seams, and its proximity to good harbors, holds a first place in Canadian coalfields. The main basin has a superficial area of from 200 to 250 square miles on land. The extent of the submarine area cannot be more than conjectured, but the geological indications are that the land area, extending for 32 miles from the crop of the Millstone Grit at Mira Bay to the pre-Carboniferous range of hills which have their seaward termination in Cape Dauphin, is the "segment only of an immense basin extending towards the coast of Newfoundland."

The ammonia condensed from the gas as gas liquor, contains 50 per cent of the total ammonia and after running in to the hot drain tank with the tar, is pumped into a settling tank where the liquor settles on the top of the tar and liquor and tar are then run off into separate storage tanks. The tar thus obtained contains 2 per cent moisture.

The gas liquor is fed into a 6' 0" ammonia still having free and fixed stills on separate foundations, the line necessary to decompose the ammonia salts is introduced into the bottom section of the free still, and steam for the operation is furnished by the exhaust steam from the engines at 15 pounds pressure. The flow of liquor is measured by means of a Venturi meter, 3,000 gallons per hour has been successfully treated with a loss of .015 grams per litre of ammonia in the waste liquor.

The gas liquor contains 8.2 grams per litre of total ammonia of which 75 per cent is in the fixed state.

The ammonia vapour generated is led through a covered pipe which is connected to the main gas line between reheater and saturator.

The top temperature of the still is kept constant at 99° except for 1 hour at the end of each shift when it is raised to 103°C, and at the same time the acid content of the saturator is increased. This prevents the cracker pipe and saturator becoming salted up and blocking the passage of the gas.

After leaving the saturator the gas passes through

an acid separator where the traces of acid mother liquor carried by the gas are deposited, and thence to the final cooler. The cooler consists of a steel tower 60' 0" high and 12' 0" in diameter containing sets of wooden grids. The gas in its upward passage meets a descending spray of water, the cooling being accompanied by a partial deposition of naphthalene. The temperature of the gas is here reduced from 60°C to approximately 20°C, the latter temperature depending on the temperature of the cooling water, but no difficulty has been experienced in cooling the gas, if necessary, to within three degrees of the temperature of the water as shown at the inlet to the cooler.

After being cooled the gas passes through two towers of similar design to the final cooler, but 100' 0" high and 15' 0" in diameter. Here it is washed with a high boiling point petroleum oil which absorbs the Benzol vapours from the gas, 95 per cent of the total Benzol being absorbed with suitable conditions of gas and oil temperatures and oil flow.

The debenzolized gas is then passed to a holder of 40,000 cu. ft. capacity. From the holder it is delivered to the fuel mains at the batteries and the surplus gas is measured by an indicating and recording it is sent under pressure to the steel plant. The surplus gas is measured by an indicating and recording Venturi meter. Should it be necessary, at any time, to cut off the supply of surplus gas at the steel plant, the holder, when full, automatically opens a valve to

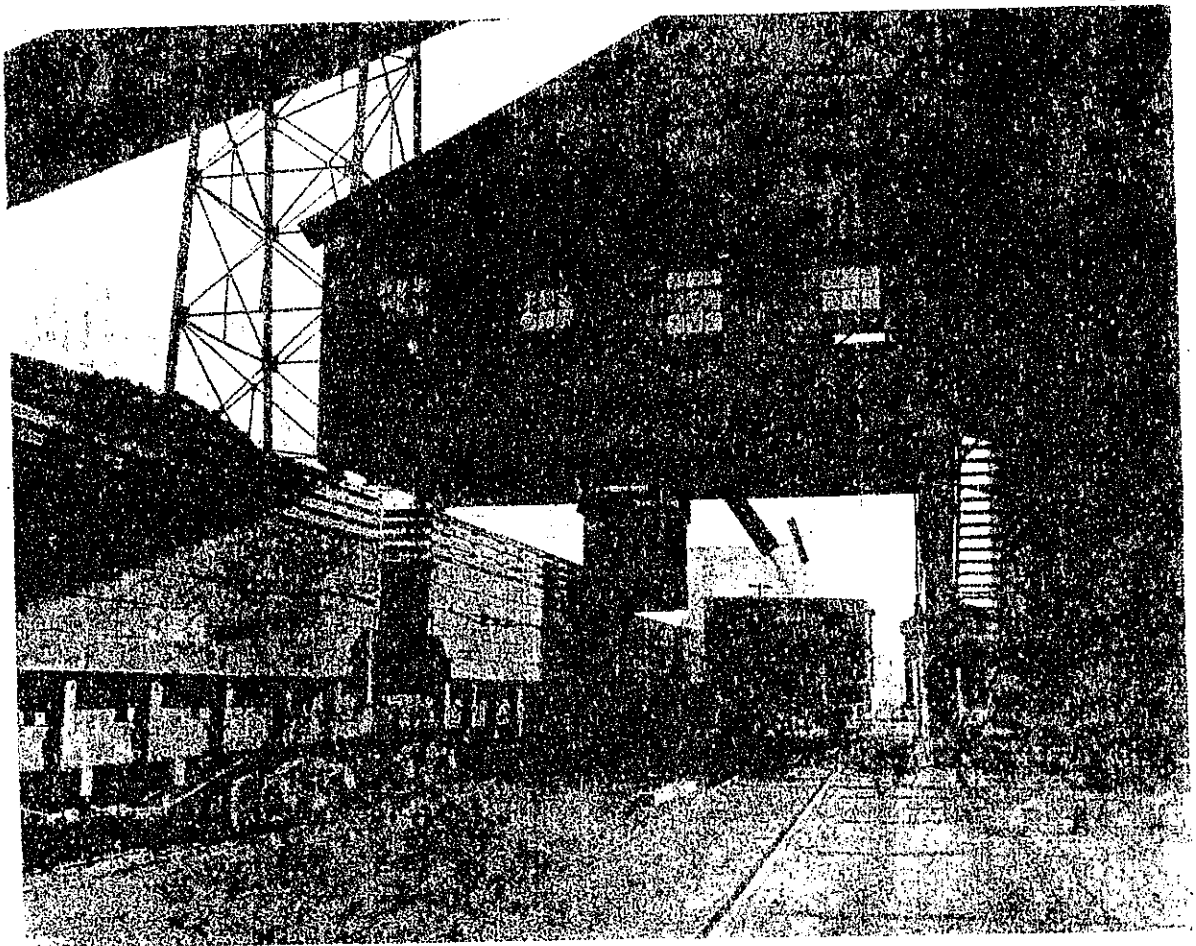


Fig. 5 - Loading Coke and Bricks Simultaneously.

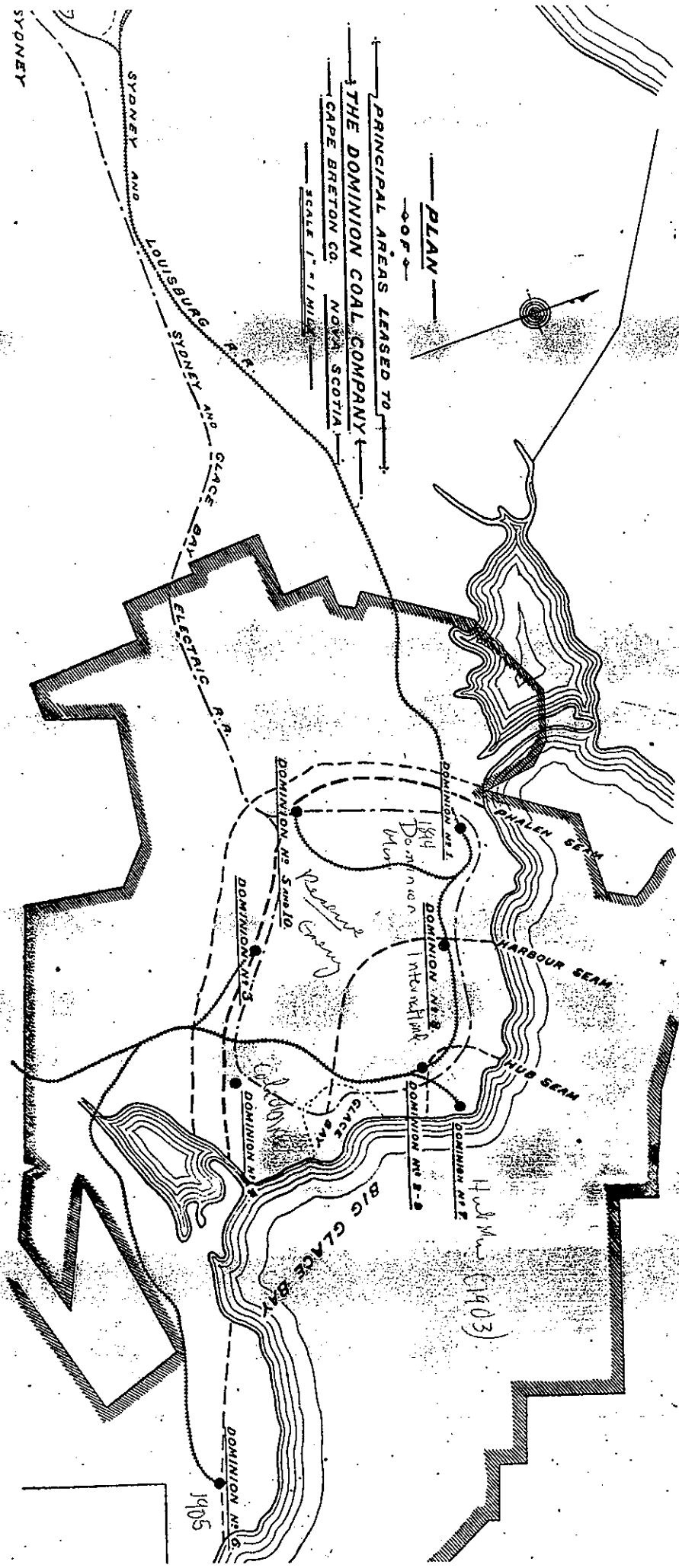


Fig. 9