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SECTIONS

of the

SYDNEY COAL FIELDS

CAPE BRETON, NOVA SCOTIA

by

Joseph G. S. Hudson

G.P.

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SECTIONS OF THE SYDNEY COAL FIELDS.

Joseph G. S. Hudson.

The Maritime Provinces of Canada, owing to their geological position on the Atlantic seaboard, were the first in Canada to have their mineral resources explored. Among these resources coal is one which stands pre-eminent, and Nova Scotia has for over 200 years had an enviable reputation as a producer of bituminous coal.

The first printed notice of the existence of coal in these areas appeared in 1672, when Nicholas Denys published in Paris, "La Description Geographique et Historique des Costes de l'Amerique Septentrionale." Eighteen years before, in 1654, Denys had obtained from Louis XIV, a concession granting the right to explore and work mines of gold and other minerals; for this privilege he agreed to pay the King a royalty of one-tenth. In 1677, M. Duchesneau, the Intendant of New France, issued a proclamation, exacting a royalty of 20 sous per ton, from all persons taking coal from Cape Breton. In 1711, Admiral Walker—who commanded an expedition to reduce Quebec—mentions in his journal, that he procured a supply of coal from the cliffs, with no other appliances than crowbars.

The initial attempt at systematic mining was made in 1720, when it was found necessary to procure a supply of fuel for the men who came from France to lay the foundations of the fortress of Louisburg. The pit openings then made, can be seen even at the present day, at Port Morien, Table head, and other places. During the next 100 years, very little work was done, the coal mined being used almost exclusively by the garrison at Halifax. In 1820, however, when Cape Breton island became part of the Province of Nova Scotia, a considerable tonnage of coal was being mined. In 1827 all the mines were transferred to the company known as the General Mining Association by the London firm of goldsmiths (Rundle, Bridge, and Rundle) who had secured the mines and minerals concession for the entire island Province of Cape Breton, from the Duke of York. The new owners immediately organized, opened out, and systematically operated, mines in Cape Breton, Pictou,

and Cumberland, counties. A formidable agitation had been started in the Province for some years previous to 1858, claiming that the monopoly of the coal lands by the General Mining Association was seriously retarding the legitimate expansion of the coal trade; this agitation eventually resulted in the whole subject being referred to the Privy Council of Great Britain for equitable adjustment. In 1858, the Mining Association surrendered its claims to the Provincial Government of Nova Scotia. The Government, in return, agreed to abolish the fixed rental of £3,000 per annum, together with the royalty on slack coal; to reduce the royalty on all screened coal up to 250,000 tons, to 4·80 pence per ton; and to reduce the royalty on all coal sold over 250,000 tons to 3·20 pence per ton. To the Association, however, was reserved the exclusive right to 20 square miles in Cape Breton, and to 4 square miles each in Pictou, Joggins, and Springhill counties respectively. Under this new regime, mining developed to such magnitude that, in 1865, the Provincial Government appointed an Inspector of Mines (John Rutherford, M.E.)—the first on this continent.

In 1854, the Government of the United States removed the duty on coal. This "open door" policy greatly increased the trade with the New England States; in 1866, the exportation of coal thereto amounted to 404,252 tons. In 1867, however, (year of Confederation) the United States once again discriminated against Canadian coal, imposing a duty of \$1.25 per ton. This duty was maintained at this rate until 1872, when it was reduced to 75 cents per ton; at which figure it remained until 1894. During this latter period, the exports fluctuated from 228,132 tons, to 13,883 tons. During the period 1894-97, the tariff was reduced to 40 cents, but in 1897 it was advanced to 67 cents, at which figure it still remains. Notwithstanding the tariff barriers, the exportation of Nova Scotia bituminous coal to the New England States continued to increase, and in 1903 the shipments reached a maximum of 968,832 tons. There has been a gradual decrease since that date, and in 1912 the shipments were 412,531 tons. The total production has, however, increased enormously; in 1912 it was 6,802,997 tons (of 2,240 pounds). Of this production 5,197,601 tons are to be credited to the coal fields of Cape Breton.

This marked increase in the production is due in part to the increased market offered by St. Lawrence ports. In 1877 a select committee of the Dominion Parliament, appointed to

inquire into the condition of the coal trade, recommended the imposition of a duty on United States coals; this duty has had the desired effect of opening up the markets of the St. Lawrence to the Nova Scotia coal trade, and in 1912 the St. Lawrence market alone purchased 2,159,005 tons, most of which came from Cape Breton.

On February 1, 1903, the Dominion Coal Company was organized with a capital of \$18,000,000 by a special Act of the Legislature of Nova Scotia. This corporation amalgamated the principal interests in the coal areas on the south side of Sydney harbour, Cape Breton. These included the Caledonia, International, Gardiner, Old Bridgeport, Glace Bay, Reserve, Gowrie, Victoria, and Ontario mines, also the Sword areas, in all comprising 70 square miles; the areas controlled have now been extended to 142 square miles. With the advent of this great industrial organization, a new era in Nova Scotia coal mining began; new mine workings, railway extensions, new shipping and discharging facilities were developed, old coal markets were expanded, and new ones opened out, so that the whole coal trade was revolutionized. In the first year of its operations (1893) the coal mined was 834,019 tons; in 1912, the production amounted to 4,332,320 tons; or an increase of nearly 520 per cent in 20 years.

In 1900, the Nova Scotia Steel and Coal Company acquired all the mining rights still held by the General Mining Association. In addition to operating the existing collieries, they have opened out new mines, erected iron and steel works, and built a modern coke oven plant, all in close proximity to the working collieries. Their Princess Pit—now known as Sydney No. 1—was, in 1873, the first submarine mine in North America, the coal being won from workings under the sea. The shafts are of unique construction, consisting of metal cribbing or tubbing. The total length of metal tubbing is 842'-9", weighing some 776 tons. Here, also, was erected the first Guibal ventilating fan in Cape Breton.

The most important of the Cape Breton coal fields is that known as the Sydney field. It is an extraordinarily rich tract of coal bearing rocks, having an area of approximately 250 square miles. It extends along the northern coast of Cape Breton island for a distance of about 35 miles. Geologically the coal bearing strata are bounded by the outcrops of the Millstone Grit, as seen at Mira bay, and they terminate at

Cape Dauphin, where the intrusive syenites of the Ste. Anne hills form the northern boundary of the Great Bras d'Or lakes. The Sydney field is divided into four main basins, as follows:—

(1). **COW BAY or MORIEN BASIN**, defined on the east by the Millstone Grit and on the west by an anticlinal fault that dips seaward at Cape Percy.

(2). **GLACE BAY BASIN**, bounded by the Cape Percy anticline on the east, and by the Bridgeport anticline on the west.

(3). **LINGAN-BARASOIS—VICTORIA BASIN**. This basin has not so well defined boundaries as the two preceding basins but it extends from the Bridgeport anticline, passing the eminence known as David head, to a submerged fault which exists midway in Spanish bay and Sydney harbour.

(4). **SYDNEY MINES or BRAS D'OR BASIN**. This basin extends from the submerged fault in Spanish bay to the western termination of the coal measures at Cape Dauphin.

Mr. Richard Brown, the well known author of "The Carboniferous System of Cape Breton" states that the thickness of the productive measures of the Sydney field will not exceed 6000 feet. This measurement is taken from Burnt head in the Glace Bay basin, where the highest known bed occurs, down to the Millstone Grit. It is possible that the extended deep workings at this point may, in the future, accurately determine their actual thickness.

The following sections were prepared to illustrate the thickness of the productive coal seams and coal measures in the different basins of the Sydney field.

A number of tables giving analyses of coals from the different mines are also appended. These tables are taken from the Report on An Investigation of the Coals of Canada with reference to their economic qualities, published by the Mines Branch of the Department of Mines.

COAL SEAMS AND STRATA IN THE SYDNEY COAL FIELD, CAPE BRETON

COW BAY OR PORT MORIEN DISTRICT SOUTH SIDE

Names of Coal Seams	Thickness.		Vertical Section	Thickness of Strata		Depth from Surface	
	Feet	ins.		Feet	ins.	Feet	ins.
Block House seam	9	2					
Strata seam D	1	0		235	8	294	10
Strata seam E	2	6		107	0	402	10
Strata McAulay seam	4	11		160	7	565	11
Strata Spencer seam Southhead	3	9		187	9	758	7
Strata Long Beach seam	3	1		330	11	1093	3

TABLE I.
SUMMARY RECORD OF ANALYSES OF COALS

SYDNEY COAL FIELD, CAPE BRETON COUNTY, N.S.

1. Source of coal—mine and seam.....%	North Atlantic Collieries, Gowrie Seam, Port Morien	Dominion Coal Co., Glace Bay, Phalen Seam, Dominion No. 1.					Dominion Coal Co., Glace Bay, Phalen Seam, Dominion No. 5, or Reserve Colliery.		
	Regular sample over $\frac{3}{4}$ " screen and picking belt	Regular sample over 1" screen and picking belt	Mine moisture sample	Boiler trial sample	Rescreened for producer trial	Fresh sample for coking tests	Regular sample over $1\frac{1}{2}$ " screen and picking belt	Mine moisture sample	Fresh sample for coking tests
2. Description of sample.....	50	38	138	338	738	2038	35 SP	135 SP	2035 SP
3. Sample number.....									
Moisture in coal									
4. Total moisture.....%	2.8		3.5	2.8	2.2	1.8		3.4	1.9
5. Moisture left after air drying.....%			2.1					1.9	
Proximate analysis of dry coal									
6. Fixed carbon (FC), by difference.....%	53.0	59.8			60.2	60.4	59.5		58.2
7. Volatile matter (VM).....%	34.7	34.3			33.2	34.8	35.0		35.2
8. Ash.....%	12.3	5.9	7.7	4.1	6.6	4.8	5.5	6.1	6.6
Ultimate analysis of dry coal									
9. Carbon (C).....%	70.5	78.6				80.2	78.6		78.3
10. Hydrogen (H).....%	4.8	5.1				5.3	5.3		4.7
11. Sulphur.....%	6.4	1.9				1.5	1.8		2.3
12. Nitrogen.....%	1.0	1.5				1.4	1.4		1.3
13. Oxygen, by difference.....%	5.0	7.0				6.8	7.4		6.8
Calorific value of dry coal									
14. —by determination.....calories	7010	7780					7800		
15. — " ".....B.T.U.	12620	14010					14040		
16. — " " calculated to ash free coal.....calories	7990	8270					8250		
17. —by calculation from ultimate analysis.....calories	7290	7850				8030	7920		7690
18. Ratio FC/VM.....	1.53	1.74			1.81	1.73	1.70		1.65
19. Ratio C/H.....	14.7	15.4				15.1	14.8		16.6

*These samples were slack coal furnished by Mr. Preston.

TABLE II.
SUMMARY RECORD OF ANALYSES OF COALS

SYDNEY COAL FIELD, CAPE BRETON COUNTY, N.S.

1. Source of coal-mine and seam.....	Dominion Coal Co., Glace Bay, Hub Seam, Dominion No. 7.							Dominion Coal Co., Glace Bay, Harbour Seam, Dominion No. 9.				
	Regular sample over 2½" screen and picking belt	Mine moisture sample	Boiler trial sample	Rescreened for producer trial	Washed coal	Boiler trial sample of washed coal	Fresh sample for coking tests	Regular sample over 2½" screen and picking belt	Mine moisture sample	Boiler trial sample	Rescreened for producer trial	Fresh sample for coking test
2. Description of sample.....												
3. Sample number.....	36	136	336	736	236	536	2036	35	135	335	735	2035
4. Moisture in coal												
4. Total moisture.....%		3.5	2.7	2.4		4.5	3.4		2.4	1.8	1.4	2.1
5. Moisture left after air drying.....%		2.6							1.6			
6. Proximate analysis of dry coal												
6. Fixed carbon (FC), by difference.....%	57.6			59.1	59.1		58.3	55.5			53.3	54.9
7. Volatile matter (VM).....%	36.5			35.8	38.2		37.2	38.6			35.6	38.2
8. Ash.....%	5.9	5.2	8.9	5.1	2.7	2.5	4.5	5.9	5.0	4.2	11.1	6.9
9. Ultimate analysis of dry coal												
9. Carbon (C).....%	76.7				80.0		78.2	77.0				76.0
10. Hydrogen (H).....%	5.0				5.2		5.2	5.2				5.2
11. Sulphur.....%	2.4				2.0		3.0	3.7				3.8
12. Nitrogen.....%	1.6				1.7		1.5	1.5				1.4
13. Oxygen, by difference.....%	8.4				8.4		7.6	6.7				6.7
14. Calorific value of dry coal												
14. —by determination.....calories	7700				7950			7780				
15. —" ".....B.T.U.	13860				14310			14000				
16. —" " calculated to ash free coal...calories	8180				8170			8270				
17. —by calculation from ultimate analysis.....calories	7600				7920		7840	7830				7740
18. Ratio FC/VM.....	1.58			1.65	1.55		1.57	1.44			1.50	1.44
19. Ratio C/H.....	15.3				15.4		15.0	14.8				14.6

*These samples were slack coal furnished by Mr. Preston.

TABLE III.
SUMMARY RECORD OF ANALYSES OF COALS

SYDNEY COAL FIELD, CAPE BRETON COUNTY, N.S.

1. Source of coal—mine and seam.....	Dominion Coal Co., Glace Bay, Emery Seam, Dominion No. 10 Colliery.							Dominion Coal Co., Glace Bay, Lingan Seam, Dominion No. 12 Colliery.		
	Regular sample run of mine over picking belt	Mine moisture sample	Boiler trial sample	Screened for producer trial	Washed coal	Boiler trial sample of washed coal	Fresh sample for coking tests	Regular sample run of mine coal	Mine moisture sample	Fresh sample for coking tests
2. Description of sample.....										
3. Sample number.....	37	137	337	737	237	537	2037	39	139	2039
4. Moisture in coal										
Total moisture.....%		4.0	2.8	2.1		4.5	4.1		4.9	4.3
5. Moisture left after air drying.....%		2.0							3.6	
6. Proximate analysis of dry coal										
Fixed carbon (FC), by difference.....%	53.8			53.9	57.3		58.5	57.9		58.8
7. Volatile matter (VM).....%	35.1			34.8	36.9		35.5	37.3		37.1
8. Ash.....%	11.1	8.1	10.1	11.3	5.8	5.7	6.0	4.8	6.4	4.1
9. Ultimate analysis of dry coal										
Carbon (C).....%	73.3				78.5		79.3	77.6		80.4
10. Hydrogen (H).....%	4.9				5.2		5.2	5.2		5.5
11. Sulphur.....%	2.5				2.1		1.7	1.8		1.6
12. Nitrogen.....%	1.2				1.3		1.2	1.6		1.6
13. Oxygen, by difference.....%	7.0				7.1		6.6	9.0		6.8
14. Calorific value of dry coal										
—by determination.....calories	7290				7710			7660		
15. —" " B.T.U.	13120				13880			13790		
16. —" " calculated to ash free coal.....calories	8200				8190			8050		
17. —" calculation from ultimate analysis.....calories	7360				7880		7960	7720		8130
18. Ratio FC/VM.....	1.53			1.55	1.55		1.64	1.55		1.58
19. Ratio C/H.....	14.9				15.1		15.2	14.9		14.6

*These samples were slack coal furnished by Mr. Preston.

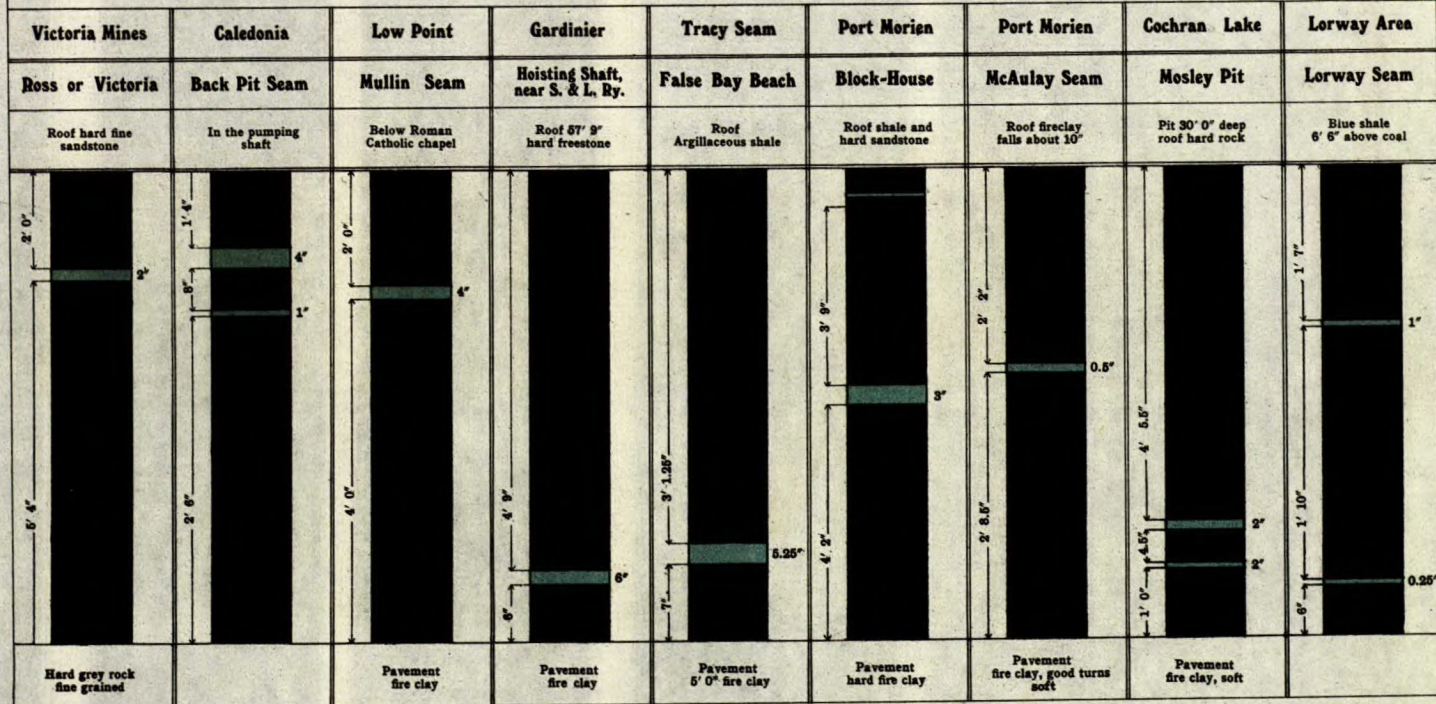
TABLE IV.
SUMMARY RECORD OF ANALYSES OF COALS

SYDNEY COAL FIELD, CAPE BRETON COUNTY, N.S.

1. Source of coal—mine and seam.....	Nova Scotia Steel & Coal Co., Sydney Mines, No. 1 Colliery.						Nova Scotia Steel & Coal Co., Sydney Mines, No. 3 Colliery.				
	Regular sample over $\frac{1}{8}$ " screen and picking belt	Mine moisture sample	Boiler trial sample	Washed coal	Boiler trial sample of washed coal	Fresh sample for coking tests	Regular sample over $\frac{1}{8}$ " screen and picking belt	Mine moisture sample	Boiler trial sample	Rescreened for producer trial	Fresh sample for coking test
2. Description of sample.....											
3. Sample number.....	13	113	313	213	513	2013*	12	112	312	712	2012*
4. Moisture in coal											
4. Total moisture.....%		3.5	2.3		3.3	1.6		5.4	4.2	3.6	3.5
5. Moisture left after air drying.....%		2.7						4.0			
6. Proximate analysis of dry coal											
6. Fixed carbon (FC), by difference.....%	55.4			56.3		52.6	54.3			55.3	48.4
7. Volatile matter (VM).....%	37.4			40.2		36.0	39.0			36.6	34.8
8. Ash.....%	7.2		5.7	3.5	3.8	11.4	6.7		5.3	8.1	16.8
9. Ultimate analysis of dry coal											
9. Carbon (C).....%	75.4			79.3		72.6	74.9				67.4
10. Hydrogen (H).....%	5.1			5.4		5.1	5.1				4.7
11. Sulphur.....%	2.9			1.9		2.2	2.5				3.5
12. Nitrogen.....%	1.3			0.9		1.4	1.4				1.3
13. Oxygen, by difference.....%	8.1			9.0		7.3	9.4				6.3
14. Calorific value of dry coal											
14. —by determination.....calories	7650			8050			7600				
15. —" ".....B.T.U.	13770			14490			13680				
16. —" " calculated to ash free coal.....calories	8250			8340			8150				
17. —" calculation from ultimate analysis.....calories	7570			7930		7370	7450				6870
18. Ratio FC/VM.....	1.48			1.40		1.46	1.39			1.51	1.39
19. Ratio C/H.....	14.8			14.7		14.3	14.7				14.3

*These samples were slack coal furnished by Mr. Preston.

GENERAL SECTIONS IN THE SYDNEY COAL FIELD, CAPE BRETON



J. G. S. HUDSON

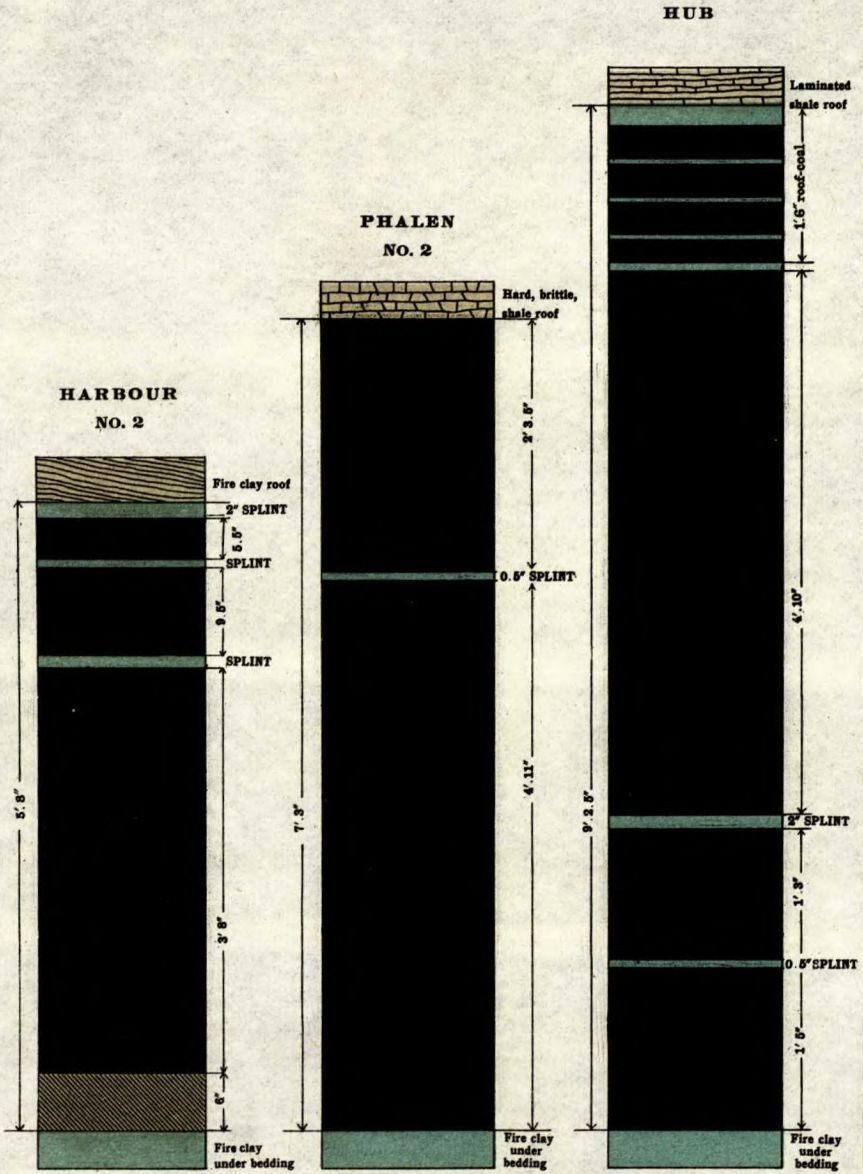
COAL SEAMS AND STRATA IN THE SYDNEY COAL FIELD, CAPE BRETON

GLACE BAY DISTRICT

EAST SIDE

Names of Coal Seams	Thickness		Vertical Section	Thickness of Strata		Depth from Surface	
	Feet	ins.		Feet	ins.	Feet	ins.
Hub seam	9	10					
Strata Harbour seam	5	3		366	3	376	1
Strata Boutilier seam	2	0		299	3	680	7
Strata Back-pit seam	4	9		74	2	756	9
Strata Phelan seam	8	3		112	9	874	3
Strata Ross or Emery seam	5	6		188	3	1070	9
Strata Lorway seam	4	0		307	7	1383	10

SECTIONS OF HARBOUR, PHALEN AND HUB SEAMS



GENERAL SECTIONS IN THE SYDNEY COAL FIELD, CAPE BRETON

Lingan Area	Lingan Area	Lingan Area	Lingan Area	Lingan Area	Low Point Side	Low Point Side	Low Point Side	Low Point Side
Upper Carr Seam	Barachois	David Head	Northern Head	Lingan Main	Paint Seam	Grandell Seam	Hugh McGillivray	Victoria or Ross Seam
Roof sandstone, fine grained with conglomerate 4' 0"	Red and green marl	Slope 17 chains. Roof argillaceous shale	Calcareo-bituminous shale	Strata including coarse conglomerate 75' 11"	Roof arenaceous shale 8' 0", argillaceous shale 7' 0"	Roof argillaceous shale 7' 3"	Roof blue argillaceous shale; erect Calamites 7' 6"	Roof hard rock argillaceous shale next coal
Pavement underlay stigmaria	Pavement underlay 5' 10"	Pavement underlay 4' 0"	Pavement underlay argillaceous	Pavement underlay 4' 0"	Pavement underlay 5' 0"	Pavement underlay 3' 6"	Pavement underlay 5' 0"	Pavement hard grey arenaceous rock

COAL SEAMS AND STRATA IN THE SYDNEY COAL FIELD, CAPE BRETON

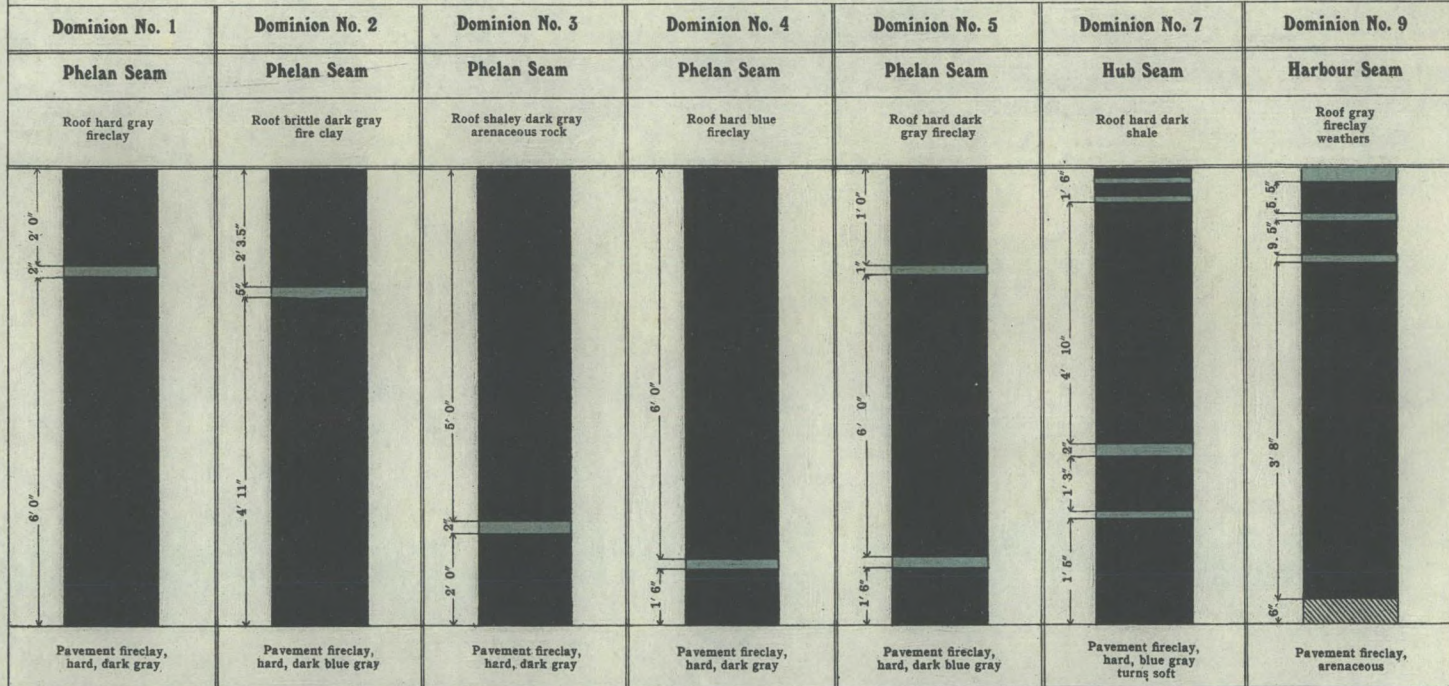
GLACE BAY DISTRICT BRIDGEPORT SIDE

Names of Coal Seams	Thickness		Vertical Section	Thickness of Strata		Depth from Surface	
	Feet	ins.		Feet	ins.	Feet	ins.
Hub seam	9	5					
Strata Harbour seam	6	1		344	4	353	9
Strata Boutillier seam	4	0		238	7	598	5
Strata Back-pit seam	4	0		92	1	694	6
Strata Phelan seam	8	7		83	3	781	9
Strata Emery seam	1 4	8 to 8		108	1	898	5
Strata Gardinier seam	5	9		279	2	1179	3

COAL SEAMS AND STRATA IN THE SYDNEY COAL FIELD, CAPE BRETON LINGAN DISTRICT LINGAN SIDE

Names of Coal Seams	Thickness		Vertical Section	Thickness of Strata		Depth from Surface	
	Feet	ins.		Feet	ins.	Feet	ins.
Seam A	3	0					
Strata Carr seams	6	5		306	2	309	2
Strata				190	1	505	8
Barachois seam	12	1					
Strata				379	3	897	0
David Head seam	8	0					
Strata Seam D	3	0		235	0	1140	0
Strata Northern Head seam	4	0		78	1	1221	1
Strata				75	11	1301	0
Lingan main seam	8	0					
Strata				95	3	1404	3
Strata Seam G	2	6					
Strata Seam H	1	0		340	5	1747	2

GENERAL SECTIONS IN THE SYDNEY COAL FIELD, CAPE BRETON



**COAL SEAMS AND STRATA IN THE SYDNEY
COAL FIELD, CAPE BRETON
LINGAN DISTRICT SYDNEY HARBOUR**

Names of Coal Seams	Thickness		Vertical Section	Thickness of Strata		Depth from Surface	
	Feet	ins.		Feet	ins.	Feet	ins.
Paint seams	13	4					
Strata Crandall seam	7	11		176	3	189	7
Strata Victoria or Ross seam	6	7		320	3	517	9
Strata Willie Fraser seam	3	6		308	8	833	0
Strata Number Three seam	4	0		83	11	920	5
Strata Hugh McGillivray seam	6	3		116	4	1040	9
Strata Dan McGillivray seam	2	2		126	6	1173	6
Strata Seam H		10		362	9	1538	5

SECTIONS OF COAL SEAMS AT LINGAN AND BARACHOIS


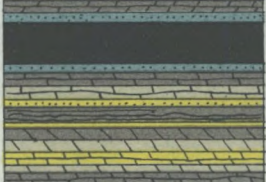


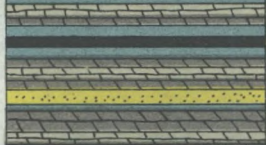



NOTE.—On the Northern Side of the Lingan slopes, stone divides the coal and comes in 2 to 3 feet thick.

Lingan Main	David Head	David Head	David Head	Victoria or Ross	Victoria or Ross	Barachois Seam	Lingan Main
Laffin Pit, near the Head	Gracie Pit	Gracie Pit	Section in Gracie Pit on headway between shafts	Curren slopes 12° dip N 20 E strike N 80 E	Pit on McNeil road 18 feet deep, dip 13°	Section on Ling farm near Curren farm	Lynks slopes, rear Curren farm
Roof soft shale dip 10° pit 23' 0" deep	Roof 1' 0" gray coal, pit 31' 0" deep	Roof 16' 5" to 18" dip. 2' 0" coal left up	Roof coal left up 1' 10"	Roof coal 1' 1" soil and shale	Roof soft grey till, wet	Roof mixed shale and some sandstone	Roof good, some coal left up, well timbered
Pavement soft fireclay	Pavement soft fireclay	Pavement soft fireclay	Pavement soft fireclay	Pavement soft fireclay	Pavement soft fireclay	Pavement hard gray fireclay	Pavement soft seggar, dip 14°

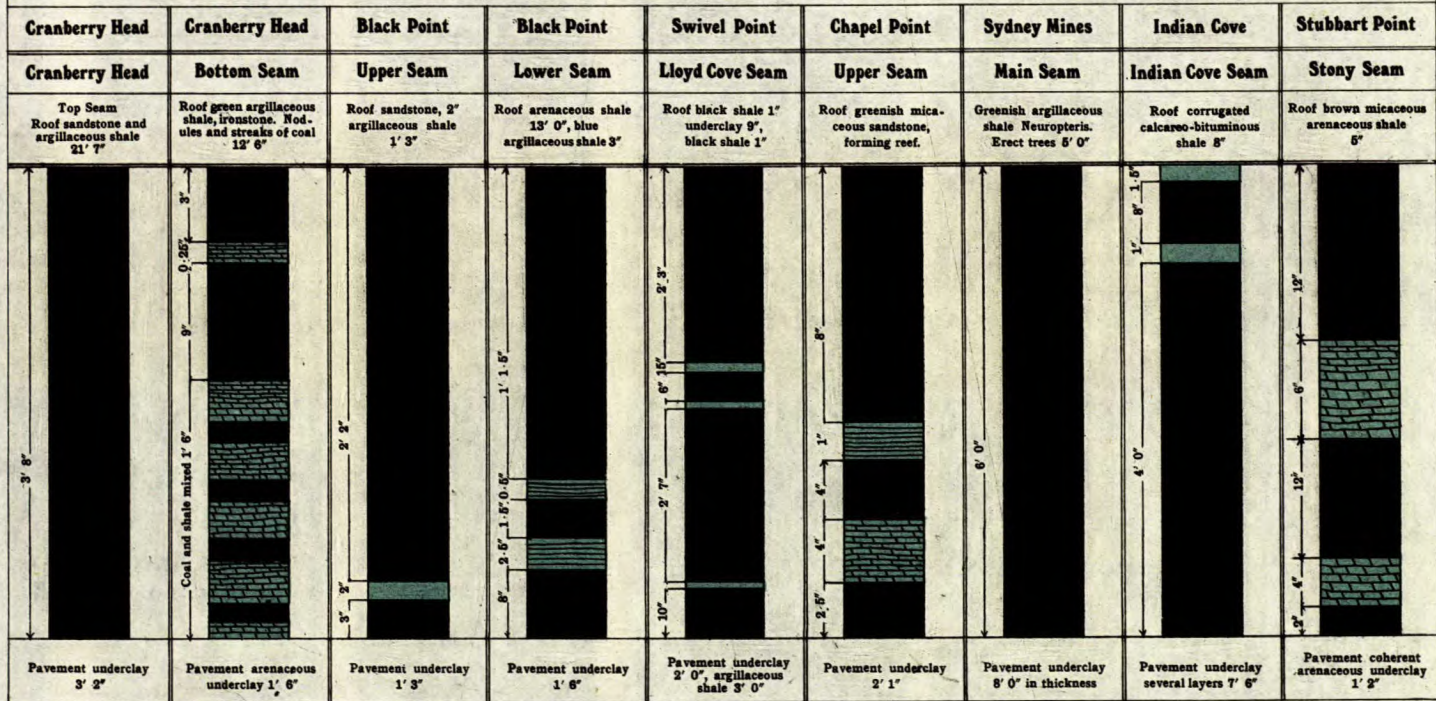
**COAL SEAMS AND STRATA IN THE SYDNEY
COAL FIELD, CAPE BRETON**

SYDNEY MINES

SYDNEY HARBOUR

Names of Coal Seams	Thickness		Vertical Section	Thickness of Strata		Depth from Surface	
	Feet	ins.		Feet	ins.	Feet	ins.
Cranberry Head seam	3	8					
Strata Lloyd Cove seam	6	4		281	4	285	0
Strata Chapel Point seam	3	9		269	1	560	5
Strata Sydney Main seam	6	0		322	9	886	11
Strata Willie Fraser seam	1	4		315	10	1208	9
Strata Indian Cove seam	4	8		117	0	1327	1
Strata Seam F	1	7		87	0	1418	9
Strata Stony seam	3	0		123	9	1544	1

GENERAL SECTIONS OF COAL SEAMS IN THE SYDNEY COAL FIELD, CAPE BRETON, CRANBERRY HEAD TO STUBBART POINT



J. G. S. HUDSON

COAL SEAMS AND STRATA IN THE SYDNEY COAL FIELD, CAPE BRETON

SYDNEY MINES

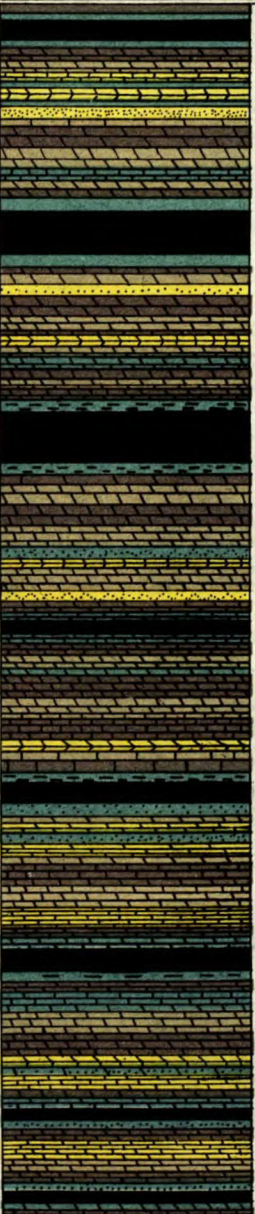
LITTLE BRAS D'OR

Names of Coal Seams	Thickness		Vertical Section	Thickness of Strata		Depth from Surface	
	Feet	ins.		Feet	ins.	Feet	ins.
Lloyd Cove Seam	8	1					
Strata Seam B	4	2		231	7	239	8
Strata Sydney main seam	3	0		380	7	624	5
Strata Byrant seam	2	0		205	0	832	5
Strata Edwards seam	5	5		78	0	912	5
Strata (approx.) Seam F	2	9		100	0	1017	10
Strata Collins seam	5	0		100	0	1120	7

**COAL SEAMS AND STRATA IN THE SYDNEY
COAL FIELD, CAPE BRETON**

BOULARDERIE

WEST SIDE

Names of Coal Seams	Thickness		Vertical Section	Thickness of Strata		Depth from Surface	
	Feet	ins.		Feet	ins.	Feet	ins.
Point Aconi seam	3	2					
Strata				242	0	245	2
Bonar seam	6	10					
Strata				218	9	470	9
Stubbart seam	7	6					
Strata Seam C	2	9		413	3	891	6
Strata Millpond seam	3	11		219	4	1113	7
Strata Blackrock seam	3	0		176	5	1293	11
Strata Seam F	0	8		125	8	1422	7
Strata Seam G	0	11	43	9	1467	7	

**COAL SEAMS AND STRATA IN THE SYDNEY
COAL FIELD, CAPE BRETON
CAPE DAUPHIN MIDDLE DISTRICT**

Names of Coal Seams	Thickness		Vertical Section	Thickness of Strata		Depth from Surface	
	Feet	ins.		Feet	ins.	Feet	ins.
Seam D	1	8					
Strata Four-foot seam	4	0		237	0	238	8
Strata Seam F				53	3	295	11
Strata Six-foot seam	6	0		54	0	351	8

A T L A N T I C O C E A N

