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THE 'LINGAN' COAL SEAMS

In view of the much development going on at New Waterford, the following report of Prof. V. Hind to parties who held areas in the Lingan district may prove interesting. The report was made forty five years ago. Brown gives the thickness of the several seams in the district as forty feet while Prof. Hind places the thickness at 45 or 46 feet. There is evidently a big mistake in the given thickness of the McGillvray seam. When Hind was reading the figures off to his sec'y he said "McGillvray four, to five." The four being pronounced rather thickly the scribe took the height to be fourty-five (45). After reading this explanation the minds of certain perplexed Waterfordians will be relieved. A look at the table of contents bears out this explanation, as the Carr a 4 ft. seam is given the same quantity as the McGillvray.

These areas lie wholly within the limits of the productive Carboniferous Basin, which occupies a portion of the north-eastern extremity of the Island of Cape Breton, and is known as the Sydney Coal Field of North America.

The southern boundary of the areas is formed by the coast line of the entrance to the Harbor of Sydney, for a distance of two and a half miles; then they extend northerly under the sea.

The rocks, with their associated beds of coal, form a shallow subordinate trough at the edge of a basin extending in a north-easterly direction of unknown extent. The whole of the rim of this basin on the Coast of Cape Breton appears to be broken by gentle folds in the strata into a number of minor troughs, so as to resemble a roughly corrugated edge, the folds or wrinkles of which represent the different subordinate coal basins of the northern part of Cape Breton.

The centre of the trough in which your mining areas lie may be supposed to be two and a half miles due north of the Ross Vein, where it appears on the coast. With this point approximately representing the deepest portion of the trough, the nothern side will be found to have much less elevation than the southern boundary, in consequence of the anticlinal fold which separates it from the next succeeding trough or corrugation in the rim of the basin, being low in comparison with that on the south side. The effect of this difference will be to cause the measures to lie much flatter and at much greater depth on the northern than on the southern side. The interests involved are of no present importance, but it appears ts have an important bearing on the question whether it would eventually be possible with known appliances to work seams of coal at the depth they probably assume within two and a half miles to three miles of the coast. Any speculations on this question are, however, wholly unnecessary, for within one mile of the coast, and within the limits of the area in question there are 150,000,000 tons of coal, fully one half of which is available.

The attitude of the rocks on the whole southern bouudaryof the area shows no disturbance, and a gentle, uniform, but very slight variation of dip. There does no appear to be any reason for apprehension with regard to the existence of faults or fractures, no evidence being visible on the south coast, although there are slight and probably wholly unimp ortat disturbances apparent on the north-westerly coast of the harbor.

The dip of the rocks is nigh 40 to 41 degrees, but it diminishes rapidly and at a depth of 200 feet on the slope at the Ross Seam it lessened from 43 to 38 degrees. The dip of the Fraser Seam is about 28 degrees, showing a slight undulation between it and the Ross Seam

The following represents the number of seams which have been discovered on these areas and the thickness of each seam, also the quantity of the coal as far as ascertained.

NAME.	THICKNESS.	REMARKS.
1. Carr Seam.	4 feet.	Good Coal.
2. Paint "	7 "	Do. do.
3. Crandall Seam.	5 "	Excellent Coal—Steel Welding Coal.
4. Lyle "	3 "	
5. Ross "	7 "	Excellent coal—a small seam overlies it two chains north.
6. Willie Fraser Seam.	3 "	Do.
7. No 3 Seam.	5 "	Indifferent, very ferrugin's.
8. Hugh McGillvray.	45 "	" requires prospecting.
9. 2 Foot Seam.		Good.
10. 6 Inch "		
11. Fraser "	7 feet.	Good.

Table showing the quantity of Coal in each seam in on square mile.

NAME.	TONS.
1. Carr.....	3,982,620
2. Paint.....	6,969,600
3. Crandall.	4,978,285
4. Lyle.....	3,200,000
5. Ross	6,969,600
6. Willie Fraser....	3,200,000
7. No. 3	4,978,285
8. H. McGillvray..	3,982,620
9.	.....
10.	.....
11. Fraser.....	6,969,600.....
Total.....	45.230.610 tons in

one square mile, or upwards of 135 million tons on the three square miles owned at present by the company.

The questions relating to the character and thickness of the roof between each seam or any