

DEPARTMENT OF TRADE AND COMMERCE
DOMINION BUREAU OF STATISTICS
MINING, METALLURGICAL AND CHEMICAL BRANCH
OTTAWA - CANADA

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IRON OXIDES (OCHRE) - 1938.

Production (Producers' Sales) in Canada of iron oxides and ochres, crude and refined during 1938 totalled 5,821 short tons valued at \$71,769 compared with 6,197 short tons worth \$83,640 in 1937. Of the 1938 output 5,387 short tons valued at \$67,209 came from properties in the Province of Quebec and the balance of 434 tons at \$4,560 represented crude material shipped from deposits located in British Columbia.

For many years there has been an annual production in the Province of Quebec of iron oxide from deposits situated between Champlain and Three Rivers; in 1938 shipments were made in Quebec from properties operated at Pointe du Lac, St. Maurice county, Red Mill and St. Adelphe, in Champlain county, also from Alnaville in the Lake St. John district and from Lacoste, Marchand township, Labelle county.

The Bureau of Mines, Ottawa, reports that the present producing localities have met the requirements of the domestic pigment trade for cheaper grades for many years past. Other prospective deposits could, if necessary be drawn upon in Quebec and Ontario; deposits of ochre also occur in Nova Scotia, Manitoba, Saskatchewan, Alberta and British Columbia.

The larger part of the tonnage recorded as annual production of iron oxides in Canada represents crude material for use in the purification of heating and illuminating gas, whereas the calcined or higher grades, are produced for use in the manufacture of paints and pigments.

Imports into Canada of ochres, ochrey earths, siennas and umbers during 1938 totalled 2,333,112 pounds valued at \$37,631 of which 1,583,753 pounds valued at \$23,836 came from the United States; 340,369 pounds at \$4,119 from France; 287,948 pounds at \$6,584 from the United Kingdom, and 70,843 pounds worth \$1,794 from Italy. Canadian exports of mineral pigments, iron oxides, ochres, etc., in 1938 totalled 3,370,300 pounds valued at \$104,814, of which 1,567,100 pounds at \$34,694 went to the United States and 800,100 pounds at \$28,725 to the United Kingdom.

In 1938, there were six Canadian firms reporting commercial mine shipments of iron oxides, five in Quebec and one in British Columbia; capital employed by the industry totalled \$200,057; \$31,557 were distributed as salaries and wages to 37 employees and the cost of fuel, purchased electricity, and process supplies consumed amounted to \$8,124.

Table 1 - PRINCIPAL STATISTICS OF THE NATURAL IRON OXIDES INDUSTRY IN CANADA, 1936, 1937 and 1938.

	1936	1937	1938
Number of firms	6(a)	6(b)	6(c)
Capital employed	\$ 167,499	213,248	200,057
Number of employees - On salaries	3	6	5(d)
On wages	36	44	32
Total	39	50	37
Salaries and wages - Salaries	\$ 3,792	8,770	7,900
Wages	\$ 26,489	26,598	23,657
Total	\$ 30,281	35,368	31,557
Selling value of products (gross)	\$ 69,630	83,640	71,769
Cost of fuel and purchased electricity ...	\$ 10,909	13,368	7,931
Cost of process supplies	\$ 510	510	193
Selling value of products (net)	\$ 58,211	69,762	63,645

(a) Four (4) producing. (b) Five (5) producing. (c) Five (5) producing in Quebec and one (1) in British Columbia. (d) One (1) female.

Table 2 - WAGE-EARNERS EMPLOYED, BY MONTHS, 1936, 1937 and 1938.

Months	Number			Months	Number		
	1936	1937	1938		1936	1937	1938
			Mine Mill				Mine Mill
January ...	26	22	.. 21	July	51	63	30 17
February ..	25	22	18 20	August	60	61	28 18
March	25	36	18 5	September ..	49	45	22 17
April	24	32	13 5	October	44	46	14 20
May	29	57	13 17	November ...	34	45	5 18
June	38	64	27 16	December ...	26	40	.. ..

Table 3 - WAGE-EARNERS WORKING THE NUMBER OF HOURS SPECIFIED DURING ONE WEEK IN MONTH OF NORMAL EMPLOYMENT, 1938.

Number of Hours worked	Number of Employees	Number of Hours worked	Number of Employees
30 hours or less .....	..	49 - 54 hours .....	..
31 - 47 hours .....	..	55 hours	10
48 hours	21	56 - 64 hours	23
Grand total number of employees in week specified			54
Total wages paid in week specified			\$ 343

Table 4 - TOTAL FUEL AND ELECTRICITY USED, 1937 and 1938.

Kind	Unit of Measure	1937		1938	
		Quantity	Value	Quantity	Value
			\$		\$
Bituminous coal	short ton	...	...	33	239
Anthracite coal	short ton	41	480	18	279
Gasoline	Imp. gal.	1,080	246	862	210
Kerosene	Imp. gal.	40	8	66	13
Wood	cords	3,032	10,010	1,397	4,540
Electricity purchased	K. W. H.	140,000	2,624	140,000	2,650
TOTAL COST .....	\$	...	13,368	...	7,931

Table 5 - PRODUCTION IN CANADA, IMPORTS AND EXPORTS OF IRON OXIDES, 1937 and 1938.

	1937		1938	
	Quantity	Value	Quantity	Value
	Tons	\$	Tons	\$
PRODUCTION (SALES) (x)				
Quebec	5,617	77,640	5,387	67,209
British Columbia	580	6,000	474	4,560
TOTAL	6,197	83,640	5,821	71,769
IMPORTS				
Ochres, ochrey earths, siennas and umbers	1,623	56,084	1,166(+)	37,631
Oxides, fireproofs, rough stuff, fillers and colours, dry, n.o.p....	4,042	844,149	3,038	718,329
EXPORTS				
Mineral pigments, iron oxides, ochres, etc.	1,755	105,240	1,685	104,814

(x) Includes both crude and refined. (+) 792 tons from United States.

Production of iron oxides in Canada during the first six months of 1939 totalled 1,560 short tons valued at \$33,285 compared with 1,350 short tons worth \$27,105 in the corresponding period of 1938.

Table 6 - PRODUCTION OF IRON OXIDES IN CANADA FOR YEAR SPECIFIED.

Year	Quantity		Year	Quantity	
	Short tons	\$		Short tons	\$
1886	350	2,350	1926	6,626	101,843
1913	5,987 (a)	41,774	1927	6,125	103,536
1914	5,890 (a)	51,725	1928	5,414	111,198
1915	6,248 (a)	48,353	1929	6,518	115,932
1916	8,811 (a)	58,711	1930	6,596	83,873
1917	9,409 (a)	87,605	1931	5,520	49,205
1918	17,317 (a)	112,440	1932	5,240	46,161
1919	11,862 (a)	113,427	1933	4,357	53,450
1920	19,128	157,909	1934	4,959	66,166
1921	9,048	93,610	1935	5,516	77,075
1922	7,285	110,608	1936	5,854	69,630
1923	10,424	129,636	1937	6,197	83,640
1924	7,266	91,160	1938	5,821	71,769
1925	7,118	91,913			

The production of iron oxides in Canada since the first recording of statistics in 1886 to the end of 1938 totalled 281,370 short tons valued at \$2,779,546.

(a) Production entirely from the Province of Quebec; there was a small production, included in the totals for 1917, 1919 and 1920 of zinc oxide for use as a pigment, the production being obtained at the oxide plant of the Canadian Zinc Products Company Limited, at Notre-Dame-des-Anges, Quebec.

Table 7 - CANADIAN IMPORTS AND EXPORTS OF OCHREY EARTHS AND OXIDES, 1913 - 1919.

Year	Imports				Exports (+)	
	Ochres, ochrey earths and raw siennas		Oxides (a)			
	Tons	\$	Tons	\$	Tons	\$
1913	1,663	43,119	4,387	240,435	1,956	18,931
1914	1,533	33,197	4,023	244,867	1,777	22,311
1915	1,240	23,763	2,452	260,986	1,196	17,263
1916	2,082	51,771	2,917	357,487	1,696	25,312
1917	1,956	59,364	2,538	357,638	1,451	30,052
1918	1,560	66,011	2,460	409,841	769	18,377
1919	1,297	65,744	3,378	518,780	767	25,229

(a) Includes dry fillers, fireproofs, umbers and burnt siennas n.e.s.

(+) Mineral pigments, iron oxides etc.

Table 8 - CONSUMPTION OF IRON OXIDES IN SPECIFIED CANADIAN INDUSTRIES, 1932 - 1938.

Years	Coke and Gas		Paints, pigments and varnishes		Paints, pigments and varnishes	
	Quantity	Value	Quantity	Value	Quantity	Value
	Tons (a)	\$	Tons (b)	\$	Tons (c)	\$
1932 ...	3,736	35,284	701	52,323	512	48,047
1933 ...	2,734	29,076	504	43,826	491	43,671
1934 ...	3,757	47,010	580	53,539	544	53,236
1935 ...	3,701	46,204	990	77,758	564	56,219
1936 ...	(d)	41,291	733	67,850	634	65,819
1937 ...	(d)	40,414	890	81,709	566	49,082
1938 ...	(d)	41,013	(e)	(e)	(e)	(e)

(a) Oxide and purifying materials. (b) Iron oxide pigments (c) Ochres, siennas and umbers. (d) Data not available. (e) Not yet complete.

NOTE: A classification of iron oxide colours is contained in the Bureau of Statistics annual Mineral Production report for 1936.

PRICES - Canadian - September, 1939. (x)

Iron Oxides - Red	2 cents to 7 cents per pound.
Yellow	5 cents to 7 cents per pound.
Brown	5 cents to 8 cents per pound.
Black	5 cents to 7½ cents per pound.
Ochres	2 cents to 4 cents per pound.
Siennas	5 cents to 7½ cents per pound.
Umbers	4¼ cents to 5 cents per pound.

(x) Canadian Chemistry and Metallurgy, Toronto.

PRICES - United States - October, 1939.

Iron Oxide per pound: standard (No. 1 quality) Spanish red, 3 to 4 cents nominal; domestic earth 2½ to 3 cents.
 Ochre per ton, f.o.b. Georgia mines; \$19 in sacks; \$22.50 in barrels. Buff clay, 98 per cent through 325 mesh, \$19. F.O.B. Virginia, dark yellow, 300 mesh, 60 per cent ferric oxide, in jute bags, \$19.50. (+)

(+) Engineering and Mining Journal - Metal and Mineral Markets - New York.

LIST OF FIRMS IN THE CANADIAN IRON OXIDES MINING INDUSTRY, 1938.

<u>Name of Firm</u>	<u>Head Office Address</u>	<u>Location of Plant</u>
<u>QUEBEC</u>		
Argall, Thos. H. (a)	639 St. Angel St., Three Rivers	Pointe du Lac
Girardin, Chas. D. (a)	Yamachiche	Almaville
Iron Oxide Products Co. Ltd. (a)	680 Sherbrooke St. W., Montreal	Lacoste
Sherwin-Williams Co. of Canada Ltd. (b)	2875 Centre St., Montreal	Red Mill
Vennes, Wm. (a)	Grand'Mère	St-Adelphe
<u>BRITISH COLUMBIA</u>		
Davidson, J. G. (a)	3498 Marine Drive, Vancouver	Rainbow Lodge
McDonald, R. W. (a) (x)	128 Grizzly St., Banff, Alta.	Windermere Dist.

(x) Active, but no production.

(a) Shipped crude material.

(b) Shipped crude and refined (calcined).

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