

# GM 01203

A STUDY OF NORANDA MINES LIMITED

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Énergie et Ressources  
naturelles

Québec 

A Study of

Ministère des Mines

# NORANDA MINES LIMITED

*Rouyer Tuzi*

*1 mai 1951*

*2*

QUEBEC DEPARTMENT OF MINES

MAY 21 1951

MINERAL DEPOSITS BRANCH

No. GM-1203

**JOHN M. EASSON & CO.**

*Members the Toronto Stock Exchange*

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## FOREWORD

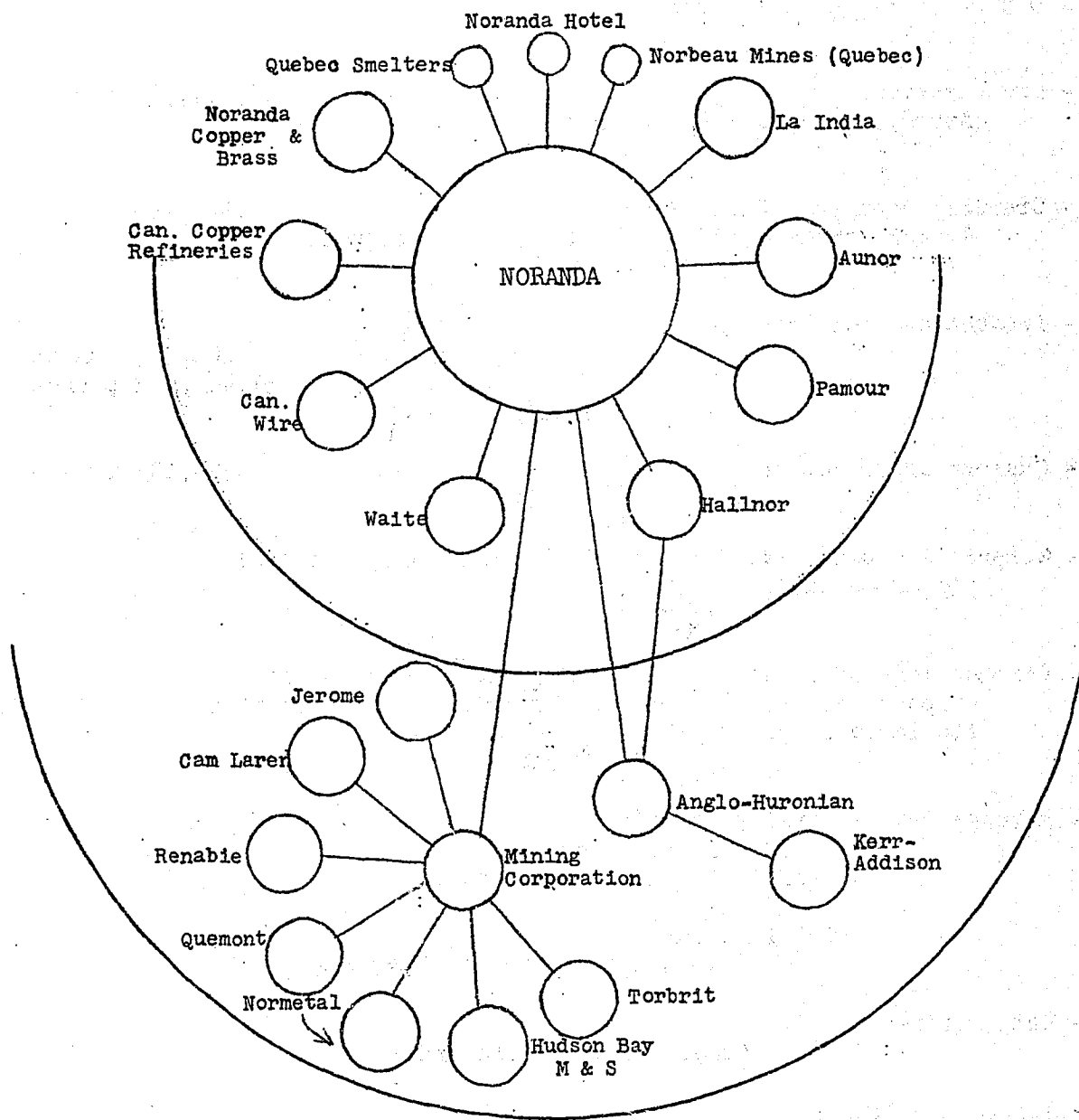
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In the pages which follow we give the history of Noranda; its present position; the indications for the future and the apparent outlook for its shares.

The facts are given as briefly and concisely as is consistent with presenting an adequate picture, but owing to the ramifications of Noranda's operations this study entails a considerable amount of reading.

Consequently we have divided our survey into two parts. The first gives what we consider to be the salient features; the second part supplements the first, with a good deal of factual information and statistics for those, who after reading the first section, desire to form their own views regarding the company's future prospects.

John M. Easson & Co.



The above chart does not show the following subsidiary companies, as showing them diagrammatically would over-emphasize their importance - Anglo Porcupine Mines Limited, Noranda Exploration Limited, Norancon Exploration Limited, Norancon Exploration (Que.) Limited. The latter holds a Concession License in Ungava. Other companies in which varying interests are held but which are not sufficiently important to include in the graph are - Adelmont Gold, Amalgamated Larder, Cariboo Gold, Chibougamau Claims, Highland Bell, Midcamp, New Rouyn Merger, Norbec Copper, Quebec Gold and Raindor Gold.

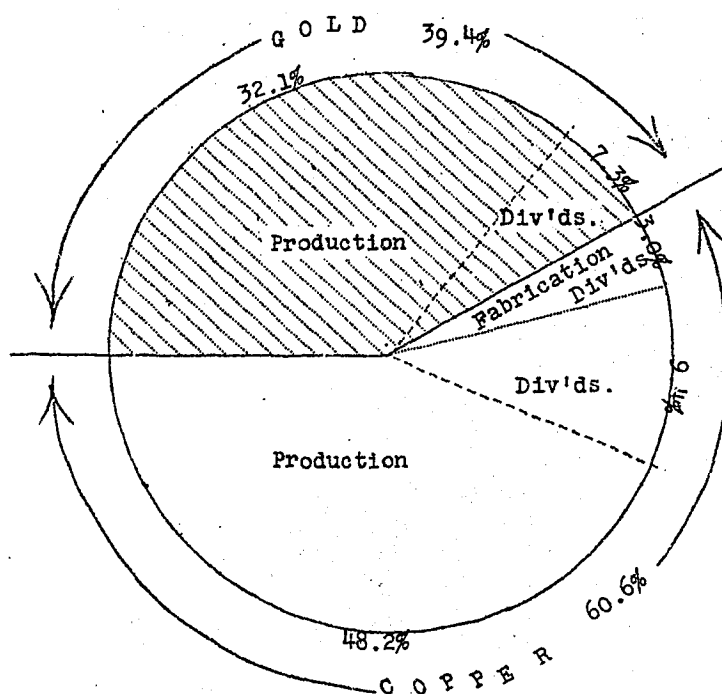
## 1950 HIGHLIGHTS

- Ore Reserves: 20,917,900 tons  
Average grade 0.174 ounces gold and 1.82% copper.  
(pages 4, 5 and 22)
- Ore Shipments from Horne Mine: 1,349,369 tons  
Average grade 0.159 oz. gold and 2.09% copper.  
(pages 4 and 23)
- Production from Horne Mine:  
Gold 202,543 ounces  
Copper 51,462,222 pounds  
(pages 4 and 23)
- Customs Ore Treated: 529,103 tons  
(pages 5 and 23)
- Noranda's Subsidiary, Canadian Copper Refiners, produced  
51% of Canada's refined copper.  
(pages 6 and 26)
- Announcement of plans for (1) commercial production of  
sulphur and iron sinter; (2) bringing into production  
its large copper deposits in Gaspé  
(pages 5, 24 and 25)
- Revenue from - Metal production: \$19,009,696  
- Dividends and interest: 4,670,384  
- Profit on sale of securities: 721,810  
Total Revenue \$24,401,890  
(pages 3, 6, 8, 9, 10, 11, 18, 32 and 33)
- Net Profits: \$11,774,556  
(pages 8, 9, 11, 12, 18 and 33)
- Earned per Share: \$5.26  
(pages 8 and 33)
- Dividends Paid: \$8,959,088, or \$4.00 a share  
(pages 12 and 33)
- Price Range of Shares 1950-1951: High 85½ - Low 63  
(pages 13, 14 and 34)

A detailed index will be found on page 17.

NORANDA MINES LIMITED

Estimated Sources of \$23,680,080 Revenue in 1950 \*



\* - Not including \$721,810 profit on sale of securities

COMMENT

Noranda's ownership of the Horne Mine -- Canada's second largest copper producer and third largest producer of gold; its interests in 10 companies which are leaders in the production of gold and copper, and an important factor in zinc production in Canada; its 3 companies engaged in refining or fabricating copper; its interests in other potential producing mines and in exploration companies, means that Noranda offers a very comprehensive cross-section of Canada's base and precious metals industries.

The indications of an ultimate upward revaluation in the official price of gold; the near and long term outlook for base metals; the company's plans for substantially increasing its copper output; the near commencement of commercial production of sulphur and iron from its extensive pyrite deposits, makes Noranda worthy of careful study by individuals and corporations seeking a long term investment of inherent value.

in valuing the reported ore reserves of that day, the much lower price of copper at that time (8.76¢ New York - see page 34) results in a value of \$332 million, or about the same as today's dollar value.

At the 1950 rate of production, current ore reserves would be sufficient for 15-16 years' operations, but in the years since 1944, 2 tons of ore have been developed for every three mined. A continuation of this basis would give the Horne a total future life of 45-50 years. The foregoing is a mathematical calculation only but it does indicate a fairly extended existence for the Horne Mine.

In speaking of reserves so far reference has been made only to the copper and gold. In No. 5 zone of the Horne Mine there is more than 100,000,000 tons of ore which contains 50% pyrite. Commercial production of sulphur and iron sinter will be commenced shortly.

In the Gaspé Peninsula, Noranda through a practically wholly owned subsidiary, Gaspé Copper, has a copper property on which diamond drilling over a period of years has shown there is 57 million tons of copper ranging in grade from slightly under 1% to 2%, but mostly just over 1%. Plans now underway indicate this property will be brought into operation on the basis of 5,000 tons a day. This will give it a life of over 30 years on currently proved reserves. Drilling continues and further increases in the size of the ore bodies are a distinct possibility. The size and nature of this project will entail a good deal of investigation, and planning, and it will probably be 4 years before production actually starts. It seems reasonable to assume that in future years production from this property will be a fairly effective offset to the decline which will ultimately take place in the output of the Horne.

The tonnage of material smelted by Noranda for other companies has risen from negligible figures in the early 1930s' to the 1950 level of 529,103 tons. Much of the marked increase of the past two years has been accounted for by ore handled for East Sullivan and Quemont.

The rated capacity of Noranda's smelter is 3,000 tons a day. In 1950 the smelter treated a total of 1,243,700 tons (made up of 714,597 tons of the company's own production and 529,103 tons from outside companies). This was at an average daily rate of some 3,400 tons and leads to the view that no great increase in materials accepted for treatment from outside companies can be expected in the future.

No figures are made public regarding the profit made on its customer's business, but taking all things into consideration, there is no doubt that it is profitable and it is possible that profits from it run in the neighborhood of \$3.00 a ton.

### Metal Processing Subsidiaries

Through the operations of Canadian Copper Refiners, Noranda Copper and Brass, the Canada Wire and Cable, the company handles all phases of copper production from crude ore to the finished product.

In 1950 Canadian Copper Refiners' production of refined copper amounted to 123,200 tons, or 51% of the 240,143 tons total for Canada. No figures on production are available on Noranda Copper and Brass, or on Canada Wire and Cable, except it has been stated that the latter company is the largest producer in Canada of copper wire and cable.

### Investments

(Including direct share holdings in subsidiary and other producing mines, holding companies and Canada Wire and Cable).

Based on indicated share holdings at the end of the year, and the recent market values of only those shares on which there is a regular quoted market, Noranda's investments have a value of some \$72 million, or the equivalent of about \$32.00 a share on the company's own stock. 1950 income from these investments approximated \$4.1 million, equal to \$1.85 per share of Noranda.

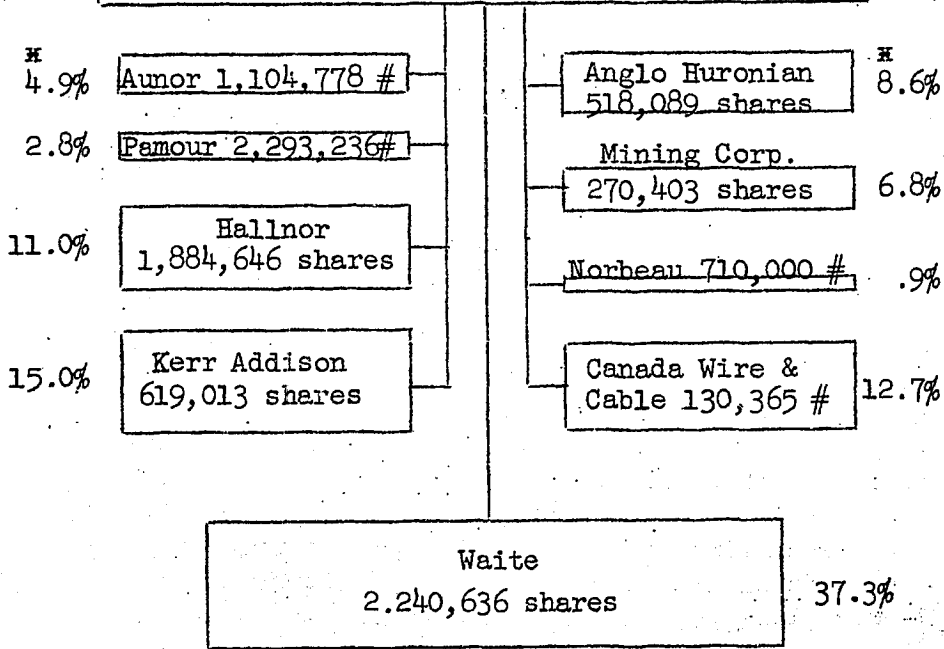
### Growth of Company and Earnings

In the past 23 years the book value of the total assets of the company has risen from \$14.3 million to \$71.2 million, an increase of about 400%. During the same period, total revenue has grown from \$6.2 million to the 1950 figure of \$23.7 million (exclusive of \$721,810 profit on the sale of securities last year), or almost 300%, while net profits have jumped from \$1.4 million to \$11.7 million (including the \$721,810 profit on the sale of securities), or more than 700%.

These figures take in the first years of operations and may give an exaggerated view of the current rate of growth. If last year is compared with 1940 it is seen that during that time the following increases were recorded: total assets 46%, total income 16.8%, net profit 16.6%.



Recent Market Value of Principal  
Marketable Shares Held by  
  
N O R A N D A  
\$ 7 2 , 0 0 0 , 0 0 0



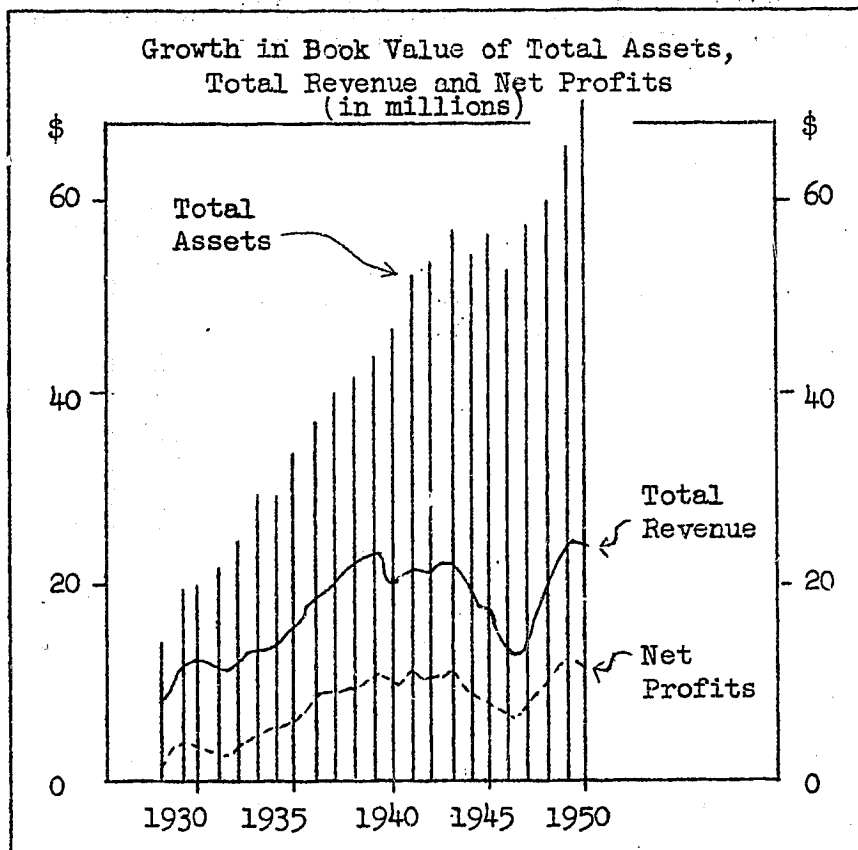
⌘ - Percentage of total market value. # - Shares

From the commencement of operations until 1939 there was a strong growth trend in net profits that carried them to \$11.1 million. During the earlier years of the second world war (1940 - 1943) they remained in the neighborhood of the 1939 level but following this showed a decline until 1946, by which time they had dropped to \$6.3 million. This figure and the \$6.7 million of 1947 were largely the result of a prolonged strike which extended from November 22, 1946 to February 28, 1947. By 1948 net profits had largely recovered and in 1949 they reached an all-time high of \$12.7 million.

Though revenue from metals produced in 1950, at \$19.0 million, was little changed from the previous year, an increase of about \$1 million in operating costs and a decline of a little more than \$1 million in dividends received from Waite Amulet, as well as a decline of \$280,000 in dividends from La India, resulted in net profits of \$11.7 million, down \$1 million from 1949, even though in 1950 \$721,810 profit realized on the sale of securities was included in revenue. The present indications are that dividends from Waite Amulet paid to Noranda in 1951, will exceed slightly those of 1950, while it is anticipated there will be increases in the dividends of other investments which Noranda holds.

The current price of copper is some 3¢ a pound higher than last year's average price and should lead to revenue from metals produced in the current year being increased by possibly \$1.5 million, though rising costs of operations and anticipated raising of corporation taxes will considerably reduce the amount of the increase carried through to net profits. Nevertheless it should still offset a considerable portion of the non-recurring item of \$721,810 profit from the sale of securities included in the 1950 statement. Earnings in the first quarter of 1951 were \$1.19 per share after Dominion taxes at the new rate.

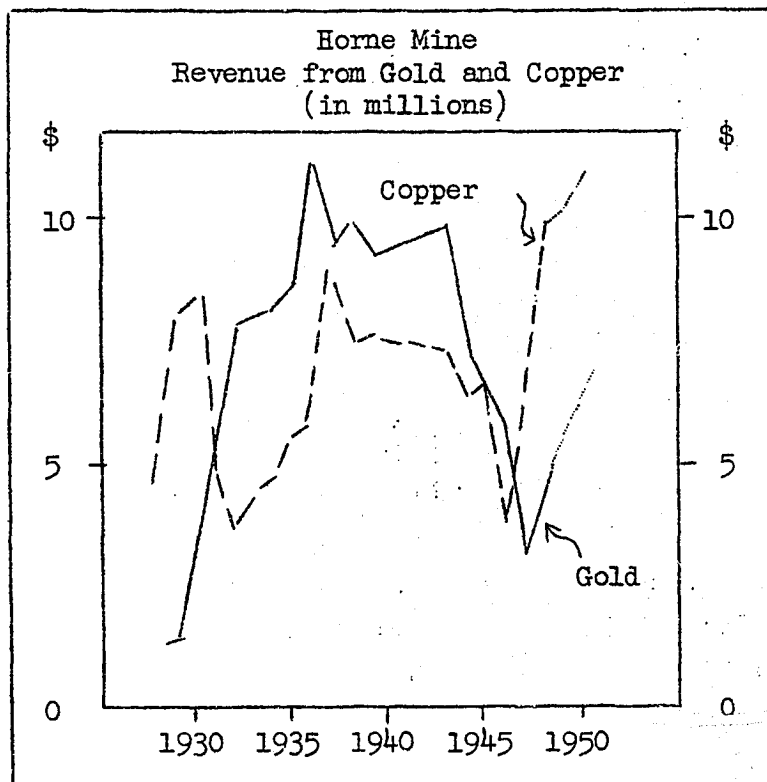
Summing up the foregoing, it appears likely that, if there are no particular changes in the prices of copper and gold in the interval, 1951 net profits may be slightly under the \$5.26 a share earned last year.



Higher operating costs have reduced the percentage the company now earns on its assets and the much higher taxes of today are made apparent by the relative smallness of the increase in net profits.

In view of the current high price for copper, which seems likely to be sustained for sometime, and the possibility of an upward revision in the official price of gold, an estimate of the distribution of

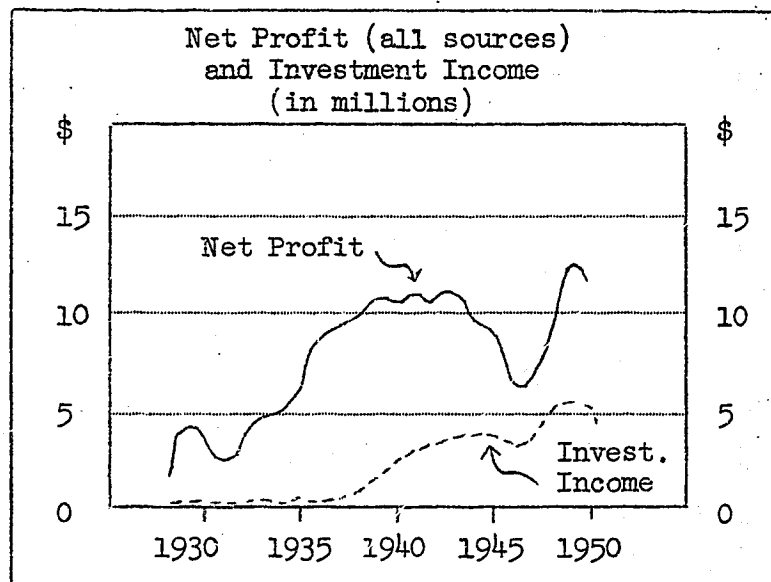
revenue from the copper and gold produced by the Horne Mine is given below. (1928 to 1948 is based on a graph appearing in the company's annual report for 1948. The dotted lines for 1949 and 1950 represent our estimate of the probable revenue from each metal.)



The growing importance of income from investments is illustrated in the table on the next page. Reference to page 3 of this study shows that some \$1.50 is derived from companies in the copper industry for each \$1.00 derived from those in the gold industry.

The outlook for base metal companies, whose shares are held, points to increased dividend income from them. No great increase from the gold division is to be expected unless the official price of gold

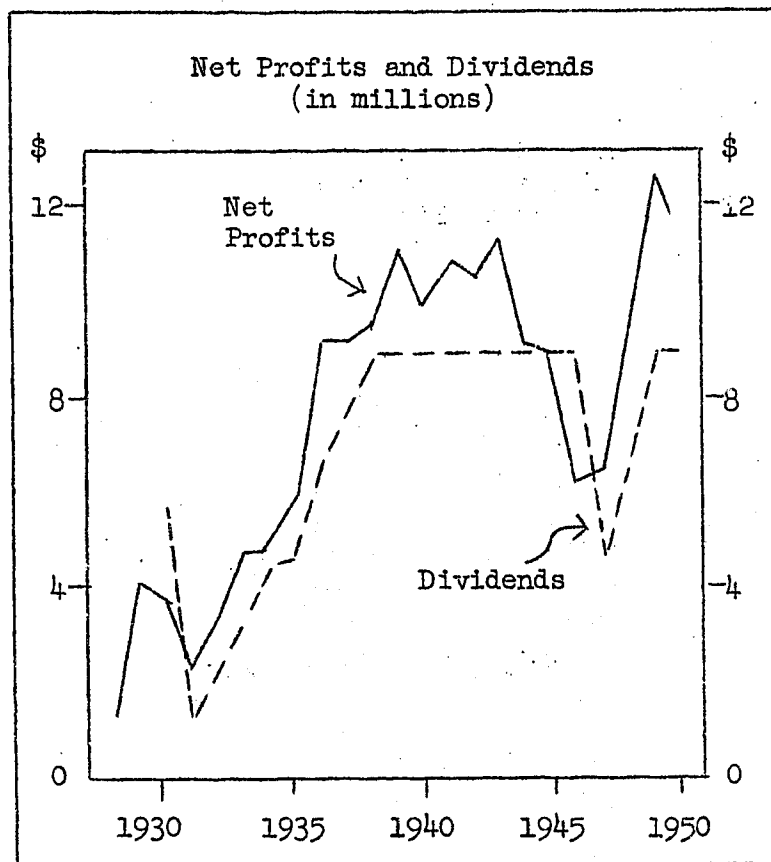
is raised. The likelihood of this appears to be increasing and its occurrence would, of course, have a marked effect on the company's investment income, due to the extensive holdings of gold shares (see pages 26 to 31). Noranda would also benefit further because gold production from its own Horne Mine is in the neighborhood of 200,000 oz. a year.



#### Operating Expenses

Since 1943, operating expenses have risen more than 60%; namely from \$5,188,007 to \$8,307,894. This increase is all the more noteworthy because in this time the tonnage of ore hoisted from the Horne Mine has declined by 25%, though ore handled on a customs basis has increased about 22%. In each of the past two years the rise in operating costs has approximated \$1.0 million, but where tonnage hoisted rose some 30% between 1948 and 1949 there was only a 7% rise in the past year. On the other hand, the tonnage of material smelted for other companies increased from 327,049 tons in 1948, and 454,929 tons in 1949, to 529,103 tons last year. (see page 23).

## Dividends

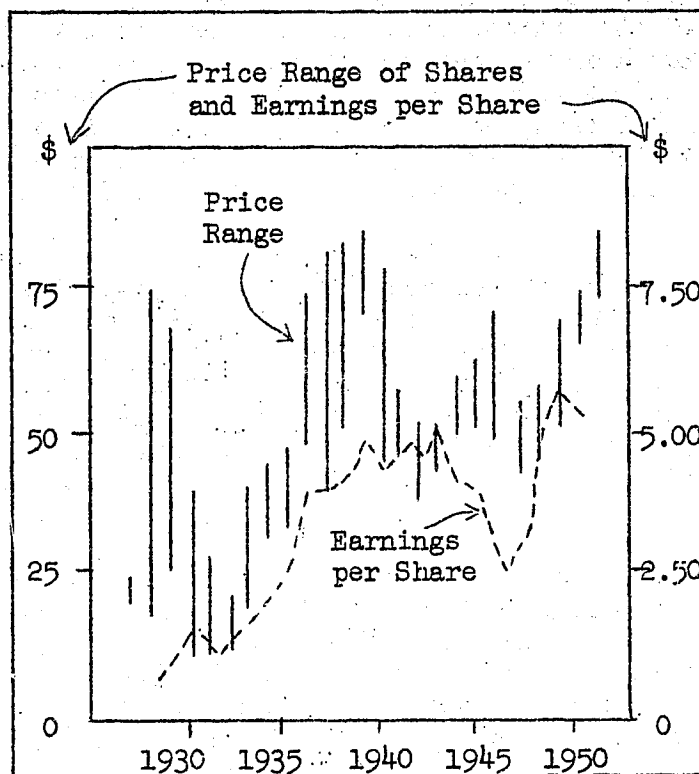


The initial payment was made in January 1930, 25 months after production commenced at the Horne Mine. Dividends have been paid in each year since then.

Up to the end of 1950, net profits have totalled \$179.5 million and \$146.2 million, or about 81%, has been distributed to shareholders. In 1949, 70% of available profits were paid out and in 1950, 76%. The only other time the percentage of profits paid to shareholders has been as low as in the past four years was in the depression years of 1931-

1933, and in 1936. In view of the large expenditures of cash (\$13,000,000) on acquiring the substantial interests now held in Anglo-Huronian and Mining Corporation, as well as the large scale expansion program which lies ahead, it seems unlikely that an increase from the current \$1.00 a quarter can be expected in the near future.

Price Range of Shares



Noranda Stock at its high price in each year since 1930 has, on the average, sold at about 17 times that year's earnings per share. At its low point it has averaged in the neighborhood of  $10\frac{1}{2}$  times.

Figures for 1928 and 1929 have been omitted in calculating these averages because the company had just commenced operations and the en-

thusiasm attendant upon this, superimposed upon the very high level of general stock market prices in that period led to Noranda selling, in 1928, at 100 times that year's earnings, as it anticipated higher profits in the future.

Exclusive of these two years, the highest ratio of price to earnings at which the stock has sold was 28 times in 1931. In 1946 it again approached this level, selling at 25.9 times the earnings of that year. In both these years earnings dropped sharply and it is probable that the price of the shares, which led to these high price-earnings ratios, was recorded in the early months of the years before it was realized that earnings were declining. The lowest ratios of price to earnings was in 1930 when the shares sold at 12, while earnings for the year were \$1.72. This was a 7.1 to 1 ratio. In 1942 and 1943 this was approached, but not equalled, with ratios of 7.5 to 1 and 7.7 to 1, respectively.

Currently, Noranda shares are selling about  $14\frac{1}{2}$  times 1950 earnings, or somewhat below their average high of the past, but they are on a higher relationship of price to earnings than the shares of our "straight" base metal companies. This no doubt is in part due to the considerable expansion of its output that will take place upon completion of present plans for the production of sulphur and iron, and from the proposed development of the very large tonnage of low grade copper ore in Gaspe.

An additional factor is the outlook for an eventual upward revaluation of gold. For every dollar the price of gold may be raised, the increase in the value of the Horne Mine's gold production should raise earnings per share by 8¢ to 10¢, before taxes. Dividends from Noranda's large holdings in other gold mines also would contribute to higher earnings - possibly at a rate of 4¢ to 5¢ a share for each dollar advance in gold. Therefore, should revaluation take place, and the official price be raised to the levels which have been mentioned as reasonable, the effect upon the company's profits would be very marked.

The shares of most established gold producers are currently selling at a high relation of price to earnings, in apparent anticipation of a higher price for gold. Considered as a "gold" Noranda's present price-earnings ratio is relatively modest.



### Summary

In considering the outlook for Noranda there are three points of major importance.

- (1) The existing demand for copper at a high price level points to most satisfactory operations from this division of the company's activities during 1951 and 1952. Over the longer term the indications are that increasing demand, especially in Europe where it has been substantially below that of even the 1920s', will fully offset the considerable amount of new production now in prospect. At the same time the degree of inflation we already are experiencing, added to that which will be induced by necessary defense expenditures, may even lead to a still higher price level.
- (2) The apparently sound basis for the growing opinion that the present official price of gold at \$35 (U.S.) an ounce is untenable, as evidenced by the continued loss of gold from the United States Federal Reserve during the past 18 months. Any increase in the official price would be beneficial to Noranda.
- (3) The planned expansion of the company's own copper production, through placing its Gaspé property in operation, and the possibilities of large scale sulphur output from its extensive pyrite deposits.

These factors, coupled with the assured existence of gold and copper production from the Horne Mine over an extended period of years and the company's existing widespread interests in the copper and gold industries, lead to the view that a prolonged period of profitable growth lies ahead of Noranda.

### Outlook for Shares

In our opinion, due to the company's record of sound and aggressive management, the present program of expansion, the apparent period of growth ahead of the company and the prospects for both the copper and gold industries, the shares of Noranda offer an excellent medium for those investors desiring a long term investment with good growth possibilities.

John M. Easson & Co.

May 1, 1951

SECTION II

A Summary of Facts Regarding

N O R A N D A

I N D E X

Affiliated Companies	28,29,30,31	Kerr-Addison	7,28,29,32
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- Tonnage milled	23		
- Tonnage smelted	23		
Investment - Holdings	6,7,32		
- Income	10,11,32,33		
Joliet-Quebec Lease	24		

C A P I T A L I Z A T I O N  
December 31, 1950

Common stock, no par value

Outstanding - 2,239,772 shares

CONDENSED BALANCE SHEET  
December 31 (in thousands of dollars)

Assets			
	<u>1950</u>	<u>1940</u>	<u>1930</u>
Current	\$20,835	\$18,507	\$ 6,134
Fixed, Exclusive Min Claims ##	19,866	14,988	9,514
Invest. in Subsid. Companies	13,752	7,319	)
Invest. in affil. & other Co's	12,677	4,966	2,779)
Miscellaneous	4,148	2,723	1,412
Total Assets	<u>71,278</u>	<u>48,503</u>	<u>19,839</u>
Liabilities			
	<u>1950</u>	<u>1940</u>	<u>1930</u>
Current	\$ 7,667	\$ 4,576	\$ 887
Invest. & Cont. Reserves *	21,477	14,543	3,687
Capital Stock	11,303	11,303	11,303
Earned Surplus	30,831	18,080	3,962
Total Liabilities	<u>71,278</u>	<u>48,503</u>	<u>19,839</u>

CONDENSED PROFIT AND LOSS  
December 31 (in thousands of dollars)

	<u>1950</u>	<u>1940</u>	<u>1930</u>
Metal Recoveries	\$19,009	\$20,264 @	\$11,967
Less Operating Expenses	9,147	6,611	6,284
Net Earnings	9,862	13,652	5,201
Less Depreciation	532	549	1,350
Outside Explor. w/o	149	-	460
Taxes	2,799	3,007	481
Net Profit from operations	6,383	@	3,391
Add other Income	** 4,670	aa	451
Total Net Income	** 11,774	10,094	3,842

@ - includes other income. aa - other income included in metal recoveries. \*\* - 721,810 profit on sale of securities not included in "other income" but included in "total net income". ## - before depreciation. \* - including depreciation.

## BOARD OF DIRECTORS

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### Outlook for Copper

In the years between 1928 and 1950 world production of crude copper increased from 1,880,000 tons to 2,287,000 tons, a gain of 21%. In this period U.S. consumption rose from 736,000 tons to 1,394,307 tons in 1948 and 1,053,225 tons in 1949. By 1950 it had increased to 1,440,895 tons and in the last two months of the year was running at an annual rate of 1,465,000 tons, under the impetus of the tense international situation which exists. This pronounced rise, which raised per capita consumption in the U.S. from 12.3 lbs. at the end of the 1920's to 19.0 lbs. a year in 1948 was the result of the great expansion which took place during this period in the power, telephone, electric appliance and automobile industries. The further increase which occurred in the final months of 1950, and carried per capita consumption to an annual basis of 19.5 lbs., was induced by a rush of buying on the part of both private consumers and of industry to fill not only current but future needs, in anticipation of the inevitable shortages once government defense programs became fully operative. Any prolonged period of strictly civilian consumption at levels approximating the past few months, seems most improbable.

Although the United States is the largest mine producer of copper in the world, its rising use of the metal has necessitated the yearly importation of very substantial amounts in each of the past few years. These imports reached a volume of 606,034 tons in 1950, of which Canada supplied 80,877 tons, or more than 30% of our output for that year.

In the past 20 years, consumption by the balance of the world, Canada excluded, has declined and is now about 200,000 tons a year under the rate of the 1920's. This has been due, in a large part, to the second world war and the financial difficulties in Europe both preceding and following it. At such time as Europe recovers financially, this indicates there will be large backlogs of deferred demand to be filled, and after that a sustained demand at least equal to the 1928 rate.

This, coupled with a "normal" demand from the U.S., would make it appear that there is little danger of world productive capacity,

including those increases which are currently planned, exceeding average consumption requirements.

### The Outlook for Gold

The era of managed currencies, which commenced in the early 1930s' with the abandonment of the gold standard, has not been successful and it is believed by many financial authorities that a return to it, and the free convertibility of currencies into gold, is desirable.

Since the abandonment of the gold standard nearly twenty years ago, the inflationary effects of the second world war, with its large increases in government debts and the money supply, and the attendant 75%, or greater, rise in the general price level, has raised the question whether present world monetary gold supplies are sufficient to form an adequate base. If this is so, and as there is no way of materially increasing the physical volume of gold in the world, the only alternative appears to be placing a higher valuation on the existing supply.

The gold producing countries of the world also believe that gold should be revalued upward in keeping with the higher general price level that now prevails. At the current official price of \$35 an ounce, many of the world's gold producing mines cannot operate profitably and in consequence during the past 10 years, the world's annual gold output (exclusive of Russia) has declined from 36,600,000 ounces to 24,500,000 ounces.

An estimated 85% of this reduced output in 1950 was used for industrial purposes or, through the free gold markets, found its way into the hands of hoarders, thus leaving very little to add to the reserves of governments or central banks. United Kingdom authorities have pointed out that the amount of gold flowing into free markets is likely to increase still further in view of the higher price that can be obtained that way than from government sources. They point out the structure of official gold prices (\$35 an ounce U.S.) is coming to appear more and more artificial and that the International Monetary Fund may be forced to withdraw from an increasingly untenable position.

Of more direct, and probably of more immediate urgency, is the continuing loss of gold by the United States Federal Reserve. Withdrawals have taken place in all but one month since September 1949. Since the Korean War the rate of withdrawal has accelerated greatly and has reduced holdings of the Federal Reserve to under \$22 billion, down \$2.6 billion from their level in September 1949. Though current gold reserves are stated officially to be far more than the United States needs for the backing of its monetary system, the psychological affect of this continuing loss is undesirable, especially at the present time

of strain in international affairs when the maintenance of an economically strong U.S. is of major importance.

If withdrawals of gold keep up for any further extended period they might well lead to the estimated \$6 to \$8 billion of foreign credits held in U.S. currency, or its equivalent, being converted into gold, which would be a matter of serious embarrassment. It has become increasingly apparent in recent months that an ultimate upward revaluation will take place in the price of gold, and the possibility of this occurring in the relatively near term future should not be lightly dismissed.

#### The Horne Mine:

Location, etc: Main properties cover about 1,580 acres in Rouyn Township, northwestern Quebec and are known as the Horne Mine and Chadbourne property.

Development: 6 shafts have been sunk, Nos. 1 & 2 not now in use. No. 3, (2 compartment) to 2,754 ft., No. 4 (4 compartment) to 3,094 ft., No. 5 (5 compartment) to 4,094 ft. and No. 6 (3 compartment) internal shaft extends from 2,975 to 6,021 ft.

Equipment: Concentrator and smelter. Each has a capacity of about 3,000 tons a day. A 30-ton pilot plant installed in 1947 for treatment of iron pyrites. (see under New Developments, page 24).

#### Ore Reserves

Most important of the 10 or more orebodies found to date are the "H" and Lower "H". The "H" developed in 1928 is some 700 feet long on the 725 and 975 foot levels, varying in width from 40 to 400 feet. Below this it contracts to much smaller dimensions but widens out again and on the 2,500 foot level has a length of 600 feet and a maximum width of 500 feet.

The Lower "H", developed in 1931, is a large massive sulphide ore body, extending from the 1,600 to 2,975 foot levels. On the 2,725 foot level the total mineable area is about 700 feet long and 200 feet wide.

Below the Lower "H" is the large mineralized zone, which contains over 100,000,000 tons of ore of which 50% is pyrite.

ORE RESERVES

	Tons	Gold Oz. per Ton	Copper Percent	Average Gold & Copper Content	
				Gold oz. per ton	Copper Percent
1930	3,433,000	0.146	7.20%	0.163	4.05%
	4,448,000	0.170	1.83%		
	294,000	0.277	.80%		
	<u>8,175,000</u>				
1935	7,333,000	0.174	7.54%	0.180	2.51%
	20,457,000	0.190	.99%		
	3,239,000	0.137	.73%		
	<u>31,029,000</u>				
1939*	6,948,000	0.153	6.96%	0.174	2.32%
	18,886,000	0.190	.81%		
	3,679,000	0.136	1.31%		
	<u>29,513,000</u>				
1945	5,127,000	0.148	7.08%	0.181	2.20%
	15,228,000	0.197	0.68%		
	853,000	0.107	.10%		
	<u>21,208,000</u>				
1948	4,528,000	0.161	7.16%	0.183	2.15%
	14,000,000	0.195	.67%		
	957,000	0.121	.09%		
	<u>19,485,000</u>				
1949	4,290,000	0.161	7.13%	0.176	1.85%
	13,217,000	0.196	.66%		
	957,900	0.121	.09%		
	1,550,000	0.126	- Chadbourne		
	320,000	0.228	- #5 zone (1)		
	1,500,000	0.120	.70% #5 zone (2)		
	<u>21,834,900</u>				
1950	4,031,000	0.157	7.05%	0.174	1.82%
	12,559,000	0.195	.68%		
	957,900	0.121	.09%		
	1,550,000	0.126	- Chadbourne		
	320,000	0.228	- #5 zone (1)		
	1,500,000	0.120	.70% #5 zone (2)		
	<u>20,917,900</u>				

In addition to the foregoing there are over 100,000,000 tons of ore containing 50% pyrite.

\* - Figures for 1940 not available.



Summary of Operations

<u>Year</u>	<u>Tons of Ore Hoisted from Horne Mine</u>	<u>Tons of Ore Milled</u>	<u>Tons of Horne Material Smelted</u>	<u>Tons of Material Smelted for Other Companies</u>
1928	265,970	4,468	266,095	5,831
1930	849,303	191,856	713,143	20,930
1935	1,906,661	1,048,806	1,069,912	6,320
1940	1,970,957	1,118,338	1,040,584	322,100
1945	1,330,534	858,523	626,571	296,520
1948	977,403	603,516	509,401	327,049
1949	1,257,202	794,152	601,851	454,929
1950	1,349,369	769,756	714,597	529,103
Total Since 1927	32,438,408	17,234,561	18,490,731	4,717,134

PRODUCTION

<u>Year</u>	<u>Horne Mine</u>		<u>Other Sources</u>		<u>Totals</u>	
	<u>Copper Lbs.</u>	<u>Gold Oz.</u>	<u>Copper Lbs.</u>	<u>Gold Oz.</u>	<u>Copper Lbs.</u>	<u>Gold Oz.</u>
			(in thousands)			
1928	32,113	52	952	-	33,065	52
1930	69,244	116	6,265	1	75,509	117
1935	74,106	259	372	6	74,478	265
1940	76,720	251	57,134	39	133,854	290
1945	53,565	174	48,758	52	102,323	226
1948	43,731	142	54,025	44	97,756	186
1949	51,896	185	85,107	96	137,003	281
1950	51,462	202	93,911	176	145,373	378
Total Since 1927	1,373,290	4,979	771,906	814	2,145,196	5,793

The greatest tonnage hoisted from the Horne in a year was 2,024,468 tons in 1937. Maximum production of gold from the Horne Mine was 340,664 ounces in 1936 and the highest copper output was 82,626,816 lbs. in 1939.

### Other Properties

In 1949 a 25 year lease was taken on 25 acres of the Joliet-Quebec property, adjacent to the Horne. The lease is to a depth of 1,200 feet. In 1950 a 50 year lease was obtained on 50 acres from the MacDonald Mine. The area leased contains a large tonnage of 78% pyrite and 3% zinc.

### New Developments

Gaspe Copper: The situation regarding this property was outlined on page 5. During the past year 10,000,000 tons were added to reserves, bringing the total to 57,000,000 tons. Some 37,000,000 tons in Copper Mountain and in the upper zones of Needle Mountain, averages somewhat less than 1% copper. The lower Needle Mountain zone, however, contains 20,000,000 tons averaging 2%. The nature of the ore body and the size of the operation which is planned are expected to result in low operating costs.

Pyrite Deposit (Horne Mine): Development of more than 100 million tons of ore running 50% pyrite, led to the construction of a pilot mill (30 tons) in 1947. After 4 years trial it is now planned to erect an initial plant, at a cost of \$4,000,000 for the commercial production of sulphur and sinter iron. Its location has not been announced but it is stated the plant will treat 300 tons of pyrite a day and is scheduled to produce 50 tons of sulphur. Some 50 tons will be elemental sulphur; 100 tons sulphuric acid. In addition there will also be about 100 tons of iron sinter daily.

The demand for elemental sulphur has exceeded supply in recent years and currently the shortage is severe. In the past, Canada has been dependent on imports from the United States and in 1950 these amounted to 390,000 tons. This makes it seem likely that Noranda's initial plant will be followed by others, especially in view of the large volume of pyrite available in the Horne Mine and the leased section of the MacDonald mine.

A Summary of Noranda's Expanding Interests

- 1923 -- The Horne property acquired.
- 1927 -- Production at the Horne Mine commenced in December. Control of one of the present Waite Amulet properties acquired.
- 1929 -- Canadian Copper Refiners formed.
- 1930 -- Large interest acquired in Canada Wire and Cable.
- 1935 -- Substantial interest taken in Pamour. Also in Norbeau Mines.
- 1936 -- Majority interest taken in Hallnor.
- 1937 -- Acquired a 63.7% interest in Compania Minera La India.
- 1938 -- Formed Noranda Exploration.
- 1939 -- Obtained control of Aunor Gold.
- 1940 -- La India incorporated a subsidiary (Empresa Minera de Nicaragua)
- 1947 -- Noranda Copper and Brass formed.
- 1948 -- Substantial interests bought in Anglo Huronian and Mining Corporation.
- 1951 -- Construction of a plant to produce sulphur and iron expected to start shortly. Decision taken to develop its large copper deposits in Gaspé.

### Principal Operating Subsidiaries

Aunor Gold Mines: Producing gold mine. 2,000,000 shares outstanding. Noranda holds 1,104,778 shares, or 55.2%. Ore reserves have shown increasing tendency and at end of 1950 amounted to 714,000 tons, averaging \$12.67 to the ton. Rated mill capacity 450 tons a day. Last year production averaged 485 tons daily for a total of 177,371 tons with a recovery of \$14.01 a ton. Bullion receipts totalled \$2,485,760 (approximately 65,400 ounces). Earnings per share 34.1¢ compared with 31.3¢ in 1949. Dividend rate 24¢ a year. No particular change anticipated in grade or output. Outlook for shares: Reasonably good. \*

Price range of shares 1950-1951: High \$3.80, low \$2.75, recent price \$3.20, equal to  $9\frac{1}{4}$  times earnings. Yield 7.5%.

Canada Wire and Cable: Copper fabricators, 210,000 shares of Class B Stock will be outstanding when remaining 11,326 Class A shares are converted (conversion basis 1 Class A for 2 Class B). Noranda holds 130,365 Class B, or 62%. Canada Wire produces all types of copper wire and cable. Earnings per share Class B, \$10.06, compared with \$7.82. Dividend rate raised to \$3.00 a year with payment of quarterly dividend of 75¢ in September, 1950. Further increase seems probable. High level of profits likely to be maintained. Outlook for shares: Promising.

Price range of shares 1950-1951: High 76, low  $30\frac{1}{4}$ , recent price 70, equal to 7 times earnings. Yield 4.3%.

Canadian Copper Refiners: Copper refiners. 20,000 shares outstanding. Noranda Mines Limited holds 18,455 shares, or 92.275%. Refined copper production totalled 123,200 tons in 1950, or 51% of total Canadian production of 240,143 tons of refined copper. No statement made public. Shares not listed. Prospects for company: Good.

Compania Minera La India: Gold producing property. 10,000 shares outstanding. Noranda holds 6,375 shares, or 63.75%. Company operates in Nicaragua, as does its subsidiary Empresa Minera de Nicaragua (95% controlled by La India). No information available about size or grade of ore reserves. Net profit for 1950 was \$95,743, compared with \$388,170 in 1949. Average price received for gold in 1950 was \$38.66 (U.S.), while in previous year it averaged \$44.80 (U.S.). This, and serious flood in October, which disrupted operations for a month, contributed to reduced profits. Paid \$120,000 (U.S.) in dividends in 1950 compared with \$400,000 (U.S.) for 1949. Shares not listed. Prospects for company: Good. \*

Hallnor Mines: Producing Gold Mine. 2,000,000 shares outstanding. Noranda holds 1,884,646, or 94.2%. Ore reserves have shown some increase and grade has been well maintained. At end of 1950 reserves totalled 537,366 tons averaging \$11.20. Rated mill capacity 400 tons a day. Last year production averaged 361 tons daily for a total of 131,760 tons with a recovery of \$14.17 a ton. Bullion receipts amounted to \$1,867,063 (approximately 49,200 ounces). Earnings per share 36¢ compared with 33¢ in 1949. Dividend rate indicated as 28¢ a year, small extra dividend payment possible. No particular change anticipated in grade or output. Outlook for shares: Fair. \*

Price range of shares 1950-1951: High \$4.75, low \$3.25, recent price \$4.20, equal to  $11\frac{1}{2}$  times earnings. Yield 6.6%.

Noranda Copper and Brass: Copper fabricators. Capitalization not made public. Noranda holds approximately a 60% interest with Bridgeport Brass Co., of Bridgeport, Conn. holding remaining interest. Formed in 1947, the company produces a complete line of brass mill products. The shares are not listed. Prospects for company: Good.

Pamour Porcupine: Producing gold mine. 5,000,000 shares outstanding. Noranda holds 2,293,236 shares, or 45.8%. Ore reserves have shown a slight tendency to increase and grade has been fairly well maintained. At end of 1950 reserves totalled 1,434,149 tons averaging \$3.74. Rated mill capacity 1,600 tons a day. Last year production averaged 1,658 tons daily for a total of 605,081 tons with a recovery of \$3.66 a ton. Bullion receipts amounted to \$2,216,588 (approximately 58,300 ounces). Earnings per share were 5.8¢ compared with 9.7¢ in 1949. The drop was largely due to increase in costs of deep development work. Dividend 4¢ (indicated). Some improvement in grade possible but expenditures on 4 year program of company will tend to keep down reported earnings. Outlook for shares: Not particularly favorable. \*

Price range of shares 1950-1951: High \$1.58, low  $77\frac{1}{2}$ ¢, recent price 88¢, equal to 15 times earnings. Yield 4.5%.

Waite Amulet: Producing copper-zinc mine. 3,300,000 shares outstanding. Noranda holds 2,240,636 shares, or 67.9%. Ore reserves have been low for several years and a number of times have appeared to be nearing exhaustion. Recent discovery of further ore - the East Waite orebody, also below the lower A on the Amulet - will again extend the life of the property. The new orebodies are estimated to contain 900,000 tons, averaging 4.0% copper and 3.0% zinc. Their finding raised ore reserves to 1,888,186 tons compared with 1,150,184 tons at the end of 1949. Mill capacity 1,800 tons a day. Last year daily production averaged 1,165 tons (1,240 tons in 1949). Output of copper 25,871,158 lbs.,

Subsidiaries cont. (Waite Amulet)

down from 33,498,231 lbs. in 1949. Zinc production at 45,376,879 lbs. was up from 41,642,364 lbs. in the previous year. Earnings per share \$1.02 compared with \$1.56. Possibility of increase in copper output, coupled with 2¢ to 3¢ higher prices now prevailing for copper and zinc than the 1950 average, should benefit 1951 earnings somewhat. Outlook for shares: Fair.

Price range of shares 1950-1951: High \$14.00, low \$7.85, recent price \$12.00, equal to about 11-3/4 times earnings. Yield, on basis of present quarterly dividend of 25¢ (\$1.00 a year), 8.3%.

Principal Affiliated Companies:

Anglo Huronian: A holding company. 1,500,000 shares outstanding. Noranda holds directly 518,089 shares of Anglo Huronian, or 34.5% and Hallnor, in which Noranda holds a 94.2% interest, holds 155,000 shares or 10.3% of Anglo Huronian. Noranda's portion of this is 146,000 shares (155,000 x 94.2). Combined, therefore, Noranda holds directly and indirectly, as its portion, a total of some 664,089 shares of Anglo Huronian, or about a 44.2% interest.

Anglo Huronian's principal interests are 1,159,500 shares (est.) or 24.5% of Kerr Addison. Therefore Noranda's direct and indirect holdings in Anglo Huronian make its portion of Kerr Addison 512,500 shares (est.), or 10.8%.

Earnings per share of Anglo Huronian in 1950 (year ends July 31) 35¢ compared with 27¢ in preceding fiscal year. Dividend 50¢ indicated. Outlook for shares: Fair.

Price range of shares 1950-1951: High 13 $\frac{1}{4}$ , low 9 $\frac{1}{2}$ , recent price 12, equal to 34 times earnings. Yield 4.16%.

Kerr Addison: Canada's largest producing gold mine. 4,730,000 shares outstanding. A tentative estimate of Noranda's direct holdings, and its proportion through the holdings of its subsidiary and affiliates, places its interest in Kerr Addison at 1,232,413 shares.

Owned directly	619,013 shs.
Owned through Anglo Huronian's and Hallnor's holdings of Anglo Huronian	512,500 shs.
Owned through direct holdings of Hallnor, etc.	72,000 shs.
Owned through Mining Corp's. direct holdings	28,900 shs.
	<u>1,232,413</u>

This is 26% of Kerr Addison's outstanding shares. (Total holdings of Kerr Addison by Noranda, its subsidiaries and affiliates, apparently approximates 44.5%).

Affiliates cont. (Kerr Addison)

Ore reserves of Kerr Addison have been well maintained and so has grade of ore. At end of year (1950) reserves totalled 14,436,398 tons, averaging \$7.83 a ton. # Kerr Addison is a young mine and a great deal more ore will be developed in the years ahead. Rated mill capacity 4,000 tons daily. Last year production averaged 4,337 tons a day for a total of 1,582,974 tons with a recovery of \$7.71 a ton. Bullion receipts amounted to \$12,211,153 (approximately 321,300 ounces). Earnings per share \$1.00 compared with 83¢ in 1949. Dividend rate 20¢ a quarter, or 80¢ a year. Slight increase in grade of ore possible but no particular increase in tonnage likely. Outlook for shares: Fair\*

# - Taking gold at \$35.00.

Price range of shares 1950-1951. High 20-3/8, low 13-7/8, recent price 17-1/2, equal to 18 times earnings. Yield 4.4%.

Mining Corporation: A holding company. 2,134,807 shares outstanding. Noranda owns directly 270,403 shares and through its 67.9% share interest in Waite Amulet, that portion of the latter's 410,400 share holding in Mining Corporation. All told therefore, Noranda has directly or indirectly, as its portion, 549,064 shares, or 25.7% of Mining Corporation.

Mining Corporation's principal holdings are -

1,800,665 shares, or 47.9% of Normetal	
of which Noranda's share is	462,770 shs.
1,096,728 shares, or 52.2% of Quemont	
of which Noranda's share is	281,860 shs.
1,874,200 shares, or 62.5% of Torbrit	
of which Noranda's share is	481,670 shs.
112,500 shares, or 2.3% of Kerr-Addison	
of which Noranda's share is	28,910 shs.

Mining Corporation's earnings per share in 1950 were 63.9¢ compared with 44.4¢ in 1949. Dividends totalled 45¢ in 1950 (15¢ June; 30¢ December). Commencement of dividend on Quemont could make a substantial difference in Mining Corporation's earnings. Such payments are a possibility in 1951. Outlook for shares: Fair. This is based on prospects for substantially higher dividend income within a reasonable time.

Price range of shares 1950-1951: High 20, low 10, recent price 18 1/4, equal to 28 1/2 times earnings. Yield, on assumption of 60¢ annual dividend rate, 3.3%.

Normetal: Producing copper-zinc mine, 3,757,012 shares outstanding. 1,800,665 shares owned by Mining Corporation so that Noranda's 25.7% interest in the latter company entitles it to approximately 462,700 shares, or the equivalent of a 11.2% interest in Normetal.

Affiliates cont. (Normetal)

Ore reserves and grade of ore at Normetal increased during year but are small for a base metal operation. At end of 1950 reserves totalled 1,573,100 tons averaging over \$43 a ton at current metal prices. This is before dilution. Not included in reported reserves are 438,600 tons of ore averaging 11% zinc, or approximately \$39.50 a ton. Rated mill capacity about 900 tons a day. Last year production averaged 995 tons daily for a total of 363,297 tons compared with 292,235 tons in 1949. Recovery per ton amounted to \$34.50. Metal recoveries had a total value of \$12,535,701 (15,706,299 lbs. copper; 48,054,818 lbs. zinc.) 1950 earnings per share of 81¢ compared with 36¢ in previous year. Earnings in final quarter in 1950 at a yearly rate of 90.8¢. Regular dividend 10¢ a quarter. An extra of 15¢ paid in December 1950 and a further extra of 10¢ paid in February. Total disbursements in 1951 likely to substantially exceed the 55¢ of 1950. No particular increase in grade or tonnage is indicated but current prices for copper and zinc 2¢ to 3¢ above last year's average and should benefit earnings accordingly. Outlook for shares: Uncertain due to small ore reserves.

Price range of shares 1950-1951: High \$6.00, low \$2.46, recent price \$5.40, equal to about  $6\frac{1}{2}$  times earnings. Yield, on basis of 55¢ dividend, 10.2%.

Quemont: Producing gold-copper-zinc mine. 2,102,168 shares outstanding. 1,096,728 shares owned by Mining Corporation so that Noranda's 25.7% interest in the latter company entitles it to 231,860 shares, or the equivalent of a 13.3% interest in Quemont.

Quemont's ore reserves amount to 9,402,000 tons, averaging \$24.20 a ton.\* These are sufficient for some 12 years operations and are somewhat smaller than the average among established base metals. However, indications are that development work will lead to a substantial increase. Rated mill capacity 2,000 tons a day. Last year production averaged 2,081 tons daily for a total of 759,663 tons with a value of \$17.61 a ton. Metal shipments amounted to \$13,378,942 from 109,274 ounces of gold, 23,267,020 lbs. copper and 18,420,946 lbs. zinc. Earnings per share \$2.15, after allowance of approximately 67¢ a share for depreciation and deferred development. With bank loans reduced to \$1,600,000 at the year end, initiation of dividends in current year seems probable. No particular increase in grade or tonnage seems in prospect for 1951, though higher prices for copper and zinc than last year's average prices, should benefit profits. Outlook for shares: Favorable.

Price range of shares 1950-1951: High  $29\frac{1}{2}$ , low 17, recent price 25, equal to about  $11\frac{1}{2}$  times earnings.

\* At current metal prices.



Affiliates cont.

Torbrit: Producing silver-lead mine. 3,000,000 shares outstanding. Mining Corporation holds 1,874,200 shares so that Noranda's 25.7 interest in the latter company is the equivalent of 481,670 shares, or equal to a 16% interest in Torbrit.

Ore reserves of Torbrit have shown moderate increase in size and grade. At the end of 1950 reserves totalled 660,932 tons averaging \$18.60 a ton of silver. Lead is of relatively minor importance. Reserves are not large but the reported figures seldom are in the case of a silver property. Rated mill capacity 300 tons a day. Last year production averaged 357 tons daily for a total of 130,290 tons with a value of \$15.54 a ton. Total metal receipts of \$2,025,875 from 2,293,022 ozs. of silver and 1,004,194 lbs. of lead. Earnings per share 18.7¢, after writing off 10¢ a share for depreciation and deferred development. Loan of \$1,850,000 due Mining Corporation indicates no dividend payments are likely in 1951. No particular change in grade or tonnage seems likely this year but recent increase in silver price from about 84¢ to 94.62¢ an ounce should mean an extra \$225,000 a year, or 7½¢ a share. Outlook for shares. Fair.

Price range of shares 1950-1951: High \$2.25, low 73¢, recent price \$1.88, equal to 10 times earnings.

Other Subsidiaries: ANGLO PORCUPINE GOLD - A prospect in which Noranda has a 50% interest; GASPE COPPER - details are given early in this study; NORANCON EXPLORATION - wholly owned subsidiary, formed to carry on aerial exploration; NORANDA HOTEL; NORBEAU MINES - a gold prospect in which Noranda holds about a 55% interest. QUEBEC SMELTERS - inactive, no properties.

The above is a partial list of the many other companies in which directly, or indirectly, Noranda has interests.

NOTE: Any considerable upward revision in the official price of gold would have a beneficial effect upon earnings of those companies marked - \* - .

Principal share holdings of marketable Stocks:

No. shs.	Company	Recent Price	Market Value of Noranda Holdings	1950 Div'd. Rate	Indicated Dividends Received by Noranda in 1950
518,089	Anglo Huronian	\$12.00	\$6,217,068	40¢	\$ 197,064
1,104,778	Aunor	3.20	3,535,290	23¢ #	254,099
130,365	Can. Wire & Cable	70.00	9,125,550	2.50 ##	317,912A
1,884,646	Hallnor	4.20	7,915,513	31¢	584,240
619,013	Kerr Addison	17.50	10,832,727	78¢ #	482,235
270,403	Mining Corp.	18.25	4,934,854	45¢ ##	100,800
710,000	Norbeau	.90	639,000	-	-
2,293,236	Pamour	.88	2,018,047	4¢	91,729
2,240,636	Waite Amulet	12.00	<u>26,887,632</u>	95¢ #	<u>2,128,604</u>
			\$72,105,661		\$4,156,383 ##

# - slight increase probable.

## - higher distribution seems likely.

# - present payments at rate of \$1.00 a year.

A - adjusted

## - Dividends of \$120,000 (U.S.) from La India not included.

In addition a substantial interest is held in Amalgamated Larder (quoted 17¢) and Norbec (quoted 10¢); an unstated interest in New Rouyn Merger (quoted 6¢); minor interest in Highland Bell (quoted 95¢).

Investment Income and Net Profits

<u>Year</u>	<u>Invest. Income</u>	<u>Net Profits</u>	<u>Year</u>	<u>Invest. Income</u>	<u>Net Profits</u>
1928	\$ 83	\$ 1,360	1940	\$2,333	\$10,094
1929	546	4,287	1941	3,547	11,063
1930	451	3,842	1942	3,135	10,684
1931	237	2,374	1943	3,699	11,601
1932	357	3,600	1944	3,739	9,238
1933	323	4,816	1945	3,762	9,000
1934	516	4,915	1946	3,450	6,287
1935	319	5,901	1947	3,654	6,729
1936	349	9,268	1948	5,129	9,959
1937	481	9,274	1949	5,488	12,716
1938	799	9,585	1950	4,670	11,774
1939	1,908	11,161			

Earnings Per Share

1928	\$0.76	1934	\$2.19	1940	\$4.51	1946	\$2.81
1929	0.91	1935	2.63	1941	4.94	1947	3.00
1930	1.72	1936	4.14	1942	4.77	1948	4.45
1931	1.06	1937	4.14	1943	5.18	1949	5.68
1932	1.61	1938	4.28	1944	4.12	1950	5.26
1933	2.15	1939	4.98	1945	4.02		

Dividends Paid

	<u>Rate</u>	<u>Amount</u>		<u>Rate</u>	<u>Amount</u>
1930	\$2.50	\$5,598,630	1940	\$4.00	\$8,959,088
1931	.50	1,119,886	1941	4.00	8,959,088
1932	1.10	2,844,914	1942	4.00	8,959,088
1933	1.50	3,457,314	1943	4.00	8,959,088
1934	2.00	4,479,544	1944	4.00	8,959,088
1935	2.00	4,479,544	1945	4.00	8,959,088
1936	3.00	6,719,316	1946	4.00	8,959,088
1937	3.25	7,279,259	1947	2.00	4,479,544
1938	4.00	8,959,088	1948	3.25	7,279,259
1939	4.00	8,959,088	1949	4.00	8,959,088
			1950	4.00	8,959,088

Total Dividend Payments to the end of 1950 \$146,287,978

Price Range of Shares

<u>Year</u>	<u>High</u>	<u>Low</u>	<u>Year</u>	<u>High</u>	<u>Low</u>
1926	21.00	12.00	1939	83.87	69.00
1927	24.87	20.00	1940	78.75	42.75
1928	76.50	17.00	1941	58.00	45.50
1929	70.00	25.00	1942	52.00	35.75
1930	44.25	12.00	1943	52.50	40.00
1931	29.62	11.75	1944	60.50	48.25
1932	23.25	12.50	1945	63.50	50.00
1933	39.25	19.00	1946	72.75	45.00
1934	45.00	29.75	1947	54.00	42.00
1935	47.87	31.00	1948	58.00	43.00
1936	75.00	44.50	1949	69.62	48.50
1937	83.00	36.75	1950	74.75	63.00
1938	84.00	48.00	1951 *	85.50	70.50

\* prices to May 1.

Range of Copper Prices at New York - ¢ per lb..

<u>Year</u>	<u>High</u>	<u>Low</u>	<u>Aver.</u>	<u>Year</u>	<u>High</u>	<u>Low</u>	<u>Aver.</u>
1928	16.37	13.87	14.68	1940	12.37	10.37	11.40
1929	23.87	16.62	18.23	1941	11.87	11.87	11.87
1930	17.87	9.37	13.11	1942	11.87	11.87	11.87
1931	10.37	6.12	8.24	1943	11.87	11.87	11.87
1932	7.37	4.87	5.67	1944	11.87	11.87	11.87
1933	9.00	4.87	7.15	1945	11.87	11.87	11.87
1934	8.87	7.87	8.53	1946	19.37	11.87	13.92
1935	9.12	7.87	8.76	1947	23.87	19.37	21.15
1936	11.87	9.12	9.58	1948	23.37	21.37	22.20
1937	16.87	9.87	13.27	1949	23.37	15.87	19.36
1938	11.12	8.87	10.10	1950	24.50	18.25	21.50
1939	12.37	9.87	11.07	1951 *	24.50	24.50	24.50

\* to May 1.

The information contained in this study, while carefully compiled and based on information we believe to be correct, is not guaranteed by us.