

Fifth Annual Report
Falconbridge Nickel Mines
Limited

*For the Year Ending
December 31st, 1933*

Falconbridge Nickel Mines Limited

Falconbridge - Ontario



PRESIDENT

THAYER LINDSLEY

VICE-PRESIDENTS

HALSTEAD LINDSLEY

J. GORDON HARDY

SECRETARY and TREASURER

NORMAN F. PARKINSON

DIRECTORS

THAYER LINDSLEY

HALSTEAD LINDSLEY

J. GORDON HARDY

W. S. MORLOCK

NORMAN F. PARKINSON

MINE SUPERINTENDENT

ERNEST CRAIG, Falconbridge, Ontario

CONSULTING METALLURGIST

ANTON GRONNINGSATER

TRANSFER AGENTS and REGISTRARS

TORONTO SHARE TRANSFER COMPANY, LIMITED
100 Adelaide St. West, Toronto

AUDITORS

CLARKSON, GORDON, DILWORTH, GUILFOYLE & NASH
Toronto

FALCONBRIDGE NICKEL MINES LIMITED

Report of Directors

1st February, 1934.

To the Shareholders,
Falconbridge Nickel Mines Limited.

I submit herewith the report and audited balance sheet covering the operations of your company for the year ending December 31st, 1933.

Your company has made good progress during the year, and the additions to plant at Falconbridge and Norway have brought about an increased efficiency in operations.

The financial results have also been satisfactory and it is interesting to note that, after paying dividends amounting to \$812,609.97, a further sum amounting to \$658,097.95 has been expended on additions to plant and equipment and in increasing broken ore reserves at the mine. In spite of these large payments, the working capital, with provision for taxation made, has been increased by \$164,316.69. Furthermore, your investment in gold stocks early in the year as a protection against depreciating currencies has been profitable and there still is an estimated profit in your remaining holdings of approximately \$200,000.

You will note on the balance sheet a contingent liability for £15,000. This refers to an existing judgment in the lower courts in Norway on a certain metal sale. In the opinion of our counsel, there are reasonable grounds for appeal, and the case is in consequence being referred to the Norwegian Supreme Court.

Metal shipments have started off well in 1934 but, in view of the many uncertainties that still remain in the general economic and political conditions, it would be unwise to prophesy the outcome for this year.

Once more the Directors wish to express their appreciation to Mr. J. Gordon Hardy, Mr. A. Gronningsater, Mr. E. Craig and the entire staffs at Falconbridge and in Norway for the successful results attained during a difficult year. Recognition is also due to the good work of our sales agents in London and New York, Messrs. Brandeis Goldschmidt and Company.

On behalf of the Directors,

T. Lindsley,
President.

Toronto, January 31st, 1934.

Mr. Thayer Lindsley, President,
and the Board of Directors,
Falconbridge Nickel Mines Limited.

Dear Sirs,

The reports of Mr. Ernest Craig and Mr. Anton Gronningsater herewith, give you details of the Company's operations at Mine, Treatment Plant, and Refinery so that I will confine my statement to a more general outline of these operations.

MINE

Work underground in 1933 was chiefly that of adjustment to a volume almost double that of the previous year. Partly for this reason, and partly because there existed an ample ore-supply anyway, the extent of development in new ground during the year was allowed to lag. This resulted in less new ore being added to the reserves than in 1932, and in a slight decrease in total ore-reserves at the end of the year. But after all this was a minor matter. What was of importance in the year's work was the successful bringing of the ore mined and treated to the approximate grade of the reserves, thus doing away with the somewhat selective treatment of previous years, when high-silica ore had to be placed on dump. This of course, was made possible by the new concentrator and allied equipment. The significant figures of accomplishment during the year, as compared with 1932, are the following:

	1933	1932
Tons Ore Broken	430,645	247,004
Tons Ore Hoisted	267,573	159,573
Tons Broken-Ore Reserve	408,780	227,321
Tons New Ore Developed	160,000	314,648
Tons Total Ore-Reserves	2,817,884	2,920,457
Grade of Reserves % Nickel	2.23	2.25
Grade of Reserves % Copper93	.93

It will be seen from the above that ten years ore-supply remains available within the small area of holdings so far developed, even at the present largely increased rate of extraction. The attached map will be of interest as showing how the underground attack has progressed.

TREATMENT PLANT

The completion and inauguration of the increased plant facilities during the year, marked a very decided step forward in Falconbridge practice and accomplishment. The mine can now be given "a fair deal" by utilizing currently all its output. The flotation-concentrator for the lower-grade high-silica marginal ores; the sintering-plant for agglomerating the concentrates with fluedust and mine-fines; the mechanical equipment for facilitating the blast-furnace smelting, all went into operation smoothly. The major effect of this was that while recovery of metals per ton of ore was brought down to the average of the Reserves, yet the cost per pound of these metals, was not increased, in fact has been reduced. The comparison as to grade of ore treated and metals recovered in matte for the last two years shows:

	1933		1932	
	Nickel %	Copper %	Nickel %	Copper %
Grade of Ore Treated	2.163	.986	2.508	1.045
Less Metallurgical Loss157	.082	.150	.075
Recovered in Matte	2.006	.904	2.358	.970

With 232,661 tons treated during the year, a production of metal in matte was achieved of 9,343,000 pounds nickel and 4,207,000 pounds copper, which was duly shipped to the Falconbridge Refinery. This was considerably in excess of the planned output, but obedient to the market demands it was found possible to push production to this extent.

REFINERY

With the output of refined metals being some 90 days behind the taking into process of the smelter-matte, the enlarged refinery output did not keep pace with smelter production. Also the Refinery enlargement called for the tying up of considerably more metals "in process" with consequent increase in metal inventories. It was therefore towards the end of the year that the full Refinery output was reached.

Its actual output for the year was 7,468,320 pounds of nickel and 3,282,113 pounds of copper for the account of Falconbridge. Added to this was the toll business for a Norwegian customer, which came to 1,719,823 pounds nickel and 1,471,459 pounds copper. This gave a total actual output for the Refinery of 4,594 short tons refined nickel and 2,376 short tons of electrolytic copper. By the end of the year however, the output had reached the rate of 6,000 short tons of refined nickel and 3,000 tons of copper cathodes annually. For 1934 the toll demands for refining will rise to 1,000 long tons nickel annually, thus leaving 4,900 short tons of nickel refining capacity available for Falconbridge use. Here again the pressure of market demands caused the originally planned capacity to be exceeded.

From Mr. Gronningsater's report, it will be noted that excellence of product has received unremitting attention, and with continued good results.

COST OF EXPANSION

The present status of Falconbridge as a producing unit in the nickel industry was not lightly brought about, and it will be of interest to the stockholders to know its cost was defrayed from earnings. During 1932 and 1933 a total of \$934,000 was spent in bringing production capacity up to its present scale. It is also of interest to know that no further expansion is under present contemplation.

SALES

During the year, shipments to consumers totalled 6,336,026 pounds nickel and 3,405,980 pounds copper for Falconbridge account. At one stage sales were actually lost from lack of stock to fill them and production efforts were then consistently directed towards building up refined inventory so that customers demands could be met. By the end of the year the increased production had met this requirement with consequent reassurance of the Falconbridge market. The backlog of forward sales at the end of the year was quite satisfactory so that 1934 is looked forward to with the usual confidence. During the year considerable attention was given to diversifying the Company's products so as to widen their market. Regarding precious metals, sales took care of the whole of their production.

Again I would acknowledge the Company's indebtedness, and my own, to the very excellent services rendered by its staff and employees.

Yours very truly,
J. Gordon Hardy,
Consulting Engineer.

FALCONBRIDGE NIKKEL

and FALCONBRIDGE

FALCONBRIDGE NIKKEL

Consolidated Balance
with Comparative Figures

ASSETS

Current Assets—	Dec. 31, 1933	Dec. 31, 1932
Cash on Hand and in Banks	\$ 513,812.39	\$1,137,026.82
Accounts Receivable—Trade	205,312.06	125,313.71
—Sundry	15,715.01	30,513.24
Securities at cost (Market Value 31st December, 1933, \$840,000)	600,676.20	362,301.34
	<u>\$1,335,515.66</u>	<u>\$1,655,155.11</u>
Amount Receivable on Investments sold (In Suit)	\$ 30,000.00	\$ 30,000.00
Inventory—Refined Metals at cost	\$ 295,850.59	\$ 117,791.35
Matte on hand and in Process at cost	450,868.40	260,654.56
	<u>\$ 746,718.99</u>	<u>\$ 378,445.91</u>
Property Account—		
Mine, Smelter and Refinery Buildings, Machinery and Equipment	\$3,205,893.15	\$2,627,827.41
Less: Depreciation Written Off	849,882.55	538,151.65
	<u>\$2,356,010.60</u>	<u>\$2,089,675.76</u>
Mining Properties and Claims	2,597,046.12	2,558,638.29
	<u>\$4,953,056.72</u>	<u>\$4,648,314.05</u>
Deferred Expenditures—		
Mine Development Expenditures to 31st Dec., 1930	\$ 392,349.87	\$ 392,349.87
Less: Written off to Mining Operations	165,340.45	95,588.81
	<u>\$ 227,009.42</u>	<u>\$ 296,761.06</u>
Broken Ore in Stopes	186,954.46	106,922.25
Mining and Refinery Supplies, etc.	128,658.56	113,334.80
Prepaid Expenses	15,797.78	6,961.64
	<u>\$ 558,420.22</u>	<u>\$ 523,979.75</u>
Raffineringsverket Aktieselskap—		
Special Advance recoverable as a tonnage charge on customs metal as and when refined, less re- payments	\$ 176,073.62	\$ 195,503.44
	<u>\$7,799,785.21</u>	<u>\$7,431,398.26</u>

AUDITOR

We have audited the accounts of Falconbridge Nickel Mines Limited and the Assets and Liabilities of Falconbridge Nikkilverk Aktieselskap as consolidated Balance Sheet correctly sets forth the combined position of the Company

Toronto, 2nd February, 1934.

EL MINES LIMITED

Oslo Subsidiary

VERK AKTIESELSKAP

at, 31st December, 1933

for 31st December, 1932

LIABILITIES

	Dec. 31, 1933	Dec. 31, 1932
Capital Stock—		
Authorized 5,000,000 Shares No Par Value.		
Allotted as at 31st December, 1933—3,283,205 shares	\$6,862,131.64	\$6,724,281.64
Less: Subscriptions overdue (In Suit) 4,500 shares	54,000.00	54,000.00
Issued at 31st December, 1933—3,278,705 shares	\$6,808,131.64	\$6,670,281.64
Current Liabilities—		
Accounts Payable	\$ 94,884.69	\$ 58,900.17
Wages Payable	27,269.08	26,211.93
Accounts Payable re New Construction		186,597.33
Unclaimed Dividends	1,022.50	
Reserve for Taxes	133,000.00	76,000.00
	<u>\$ 256,176.27</u>	<u>\$ 347,709.43</u>
Commission Payable re Overdue Subscriptions	\$ 30,000.00	\$ 30,000.00
Interest not taken into Revenue	\$ 62,579.37	\$ 50,898.57
Surplus	<u>\$ 642,897.93</u>	<u>\$ 332,508.62</u>
Contingent Liability—31st December, 1933—		
Judgment has been rendered against the Company for approximately £15,000 Sterling but appeal has been entered and is now pending before the Supreme Court of Norway.		

On Behalf of the Board:

T. Lindsley, Director.

J. Gordon Hardy, Director.

\$7,799,785.21

\$7,431,398.26

CERTIFICATE

31st December, 1933, and have incorporated in the above Consolidated Balance Sheet, A. Lyng. Subject thereto, we report that in our opinion the above Consolidated Balance Sheet is correct as at 31st December, 1933.

CLARKSON, GORDON, DILWORTH, GUILFOYLE & NASH,
Chartered Accountants.

FALCONBRIDGE NICKEL MINES LIMITED

and its Wholly Owned Subsidiary

FALCONBRIDGE NIKKELVERK AKTIESELSKAP

Consolidated Earnings Statement Year 1933

Metal Sales (gross).....	\$2,979,520.46	
Less: Selling and Delivery Expense.....	171,191.54	\$2,808,328.92
Add: Increase in Metal Inventories.....		368,273.08
		<u>\$3,176,602.00</u>
Operating Costs—Mining, Smelting, Refining, etc.....	\$1,675,536.19	
General and Administrative Expense.....	64,700.39	1,740,236.58
		<u></u>
Operating Profit before providing for Taxes, Deferred Development and Depreciation.....		\$1,436,365.42
Non-Operating Revenue.....		67,806.44
		<u>\$1,504,171.86</u>
Provision for Taxes.....		130,593.44
		<u></u>
Profit for the Year, before providing for Deferred Development and Depreciation.....		\$1,373,578.42
Deferred Development written off.....	\$ 69,751.64	
Depreciation	312,646.01	382,397.65
		<u></u>
		<u>\$ 991,180.77</u>
Profit on Sale of Securities.....		131,818.51
		<u></u>
Net Profit for the Year Transferred to Surplus.....		<u><u>\$1,122,999.28</u></u>

Surplus Account 31st December, 1933

Balance 31st December, 1932.....		\$ 332,508.62
Net Profit for Year 1933, as above.....		1,122,999.28
		<u>\$1,455,507.90</u>
Dividends Paid:		
No. 1 paid 20th January —10c per share	\$ 320,390.50	
No. 2 paid 30th June —10c per share	328,105.52	
No. 3 paid 29th December— 5c per share	164,113.95	812,609.97
		<u></u>
Balance 31st December, 1933, carried to Balance Sheet....		<u><u>\$ 642,897.93</u></u>

FALCONBRIDGE NICKEL MINES LIMITED

FIFTH ANNUAL REPORT YEAR 1933

Falconbridge, Ontario,
January 15th, 1934.

Mr. Thayer Lindsley, President,
and Directors,
Falconbridge Nickel Mines Limited.

Dear Sirs,

I beg to submit the following report for the fiscal year ended December 31st, 1933.

During the first three months of the year, operations were carried on at the rate of capacity developed through alterations and additions effected in December, 1932. Over this period, all ore was treated by direct smelting.

Upon completion, on April 1st, of the Concentrator and Sintering Plant, a shut-down was required to permit tying-in with the existing Smelter plant. Operations were then resumed on April 16th, with the flow sheet increased by the addition of the new units. Since that time, interruptions to production have been occasioned solely by repair campaigns, which form a part of our regular routine.

To show the daily tonnage rate for the year would be misleading when compared with future figures, however, it should be noted that the ore treated per day was increased from 544 tons during the first three months to 779 tons after the additional units were put in operation in April.

MINE DEVELOPMENT

Combined development footages, attained on all levels during the reviewed period, distribute as follows:

Drifting and Cross-Cutting	3,083 feet
Raising	909 feet
Stope Entrances	340 feet
Box Holes	64 only
Diamond Test Drilling	3,071 feet

Practically all development work during the year was carried out within the area in which ore reserves for the report of 1932 were computed.

Of the total of 3,083 feet of drifting and cross-cutting, 852 feet was driven West, and 434 feet driven East on the 500-foot level. The last 300 feet of the West drive indicated narrow and very erratic ore, and is therefore not included in ore reserves. Faulted ground characterized the last 200 feet of the East drive, the fault cutting across the ore-bearing contact in a South-Easterly direction. Here, too, the ore encountered in the fault is very erratic, and is not considered in the compilation of ore estimates.

Driving on the 750-foot level was continued East and West of the main crosscut, following the ore zone, for a distance of 800 feet. The 500 feet driven West indicated an aver-

age ore width of 30 feet, while fair widths were shown in the East drive. Both East and West faces are in ore at the present time.

ORE RESERVES

Below is a tabulation of ore reserves computed as at December 31st, 1933.

Ore Reserves as at December 31st, 1932	2,920,457 tons
Plus New Ore added 1933	160,000 tons
TOTAL	3,080,457 tons
Less: Hoisted during 1933	267,573 tons
BALANCE	2,812,884 tons
Plus addition to Disseminated Ore on Surface Dump	5,000 tons
Total Ore Reserves December 31st, 1933	2,817,884 tons

(Averaging—2.23 Ni.—.93 Cu.)

MINING

The following table sets forth the results of mining activities during the year.

Broken Ore—In Stopes

Balance December 31st, 1932	227,321 tons
Broken During 1933	430,645 tons
TOTAL	657,966 tons
Less: Hoisted from Stopes during 1933	249,186 tons
Broken Ore Reserves December 31st, 1933	408,780 tons

Ore Hoisted

From Stopes, 1933	249,186 tons
From Development, 1933	18,387 tons
From Development Dump, 1933	7,690 tons
From Concentrating Dump, 1933	2,653 tons

Total Ore to Crushing Plant during 1933	277,916 tons
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The small map attached shows the stoping area and location of Broken Ore.

CRUSHING, SORTING AND TRANSPORTATION

From the 277,916 tons of ore delivered to the crushing plant, 16.6%, or 45,624 tons, of waste was eliminated by sorting during the various stages of crushing. The balance, consisting of 232,292 tons, was transported by the aerial tram to the Treatment Plant bins.

REDUCTION PLANTS

The entire Reduction Plant was in operation a total of 324 days during the year. Of the time lost, 19 days is attributable to the synchronization of the new units, while the remaining 22 days were occupied in carrying out routine repairs. Results of operation tabulate as follows:

Total Ore Treated	232,661 short tons
Matte Produced	8,297 short tons
Nickel Produced in Matte	4,671.5 short tons
Copper Produced in Matte	2,103.5 short tons
Metals per ton in Ore	43.31 lbs. Ni.—19.72 lbs. Cu.
Metallurgical Losses per ton of Ore	3.15 lbs. Ni.—1.64 lbs. Cu.

CONSTRUCTION

Completion of the construction items set out in the report of 1932 as having been authorized and then under erection,—i.e.—250 ton Concentrator, two-unit Sintering Plant, and extensions to Smelter Building, Crushing Plant and Ore Bins,—was effected during the early part of the year. Essential additions to facilities and equipment directly and indirectly serving the new and extended units consisted principally of the installation of motor haulage both underground and on the smelter charge floor; flue dust conveying equipment; new disposal system for waste slag; 25,000 cubic foot mine ventilating fan; further waste disposal facilities on surface; and a new and completely equipped machine shop.

GENERAL

An increase in housing facilities was made during the year, along with such extensions to water and sewerage systems as were thus made necessary. Together with the erection of a central office and warehouse, some alterations and additions were made to mine buildings.

In conclusion, I wish to take this opportunity of expressing my pleasure in recording the loyal and efficient co-operation of the staff and employees.

Respectfully submitted,

E. Craig,
General Superintendent.

Toronto, Ontario,
January 23rd, 1934.

Mr. Thayer Lindsley, President,
and Board of Directors,
Falconbridge Nickel Mines Limited.

Dear Sirs,

I beg to submit the following report for the fiscal year ending December 31st, 1933:

SMEILTER

The Smelter operated with the normal minor interruptions throughout the year with the exception of a two weeks shutdown in April at the time of starting up the concentrating and sintering plants, which were under construction at the end of the previous year. The starting of these new departments gave very little trouble and the results obtained have justified our expectations both technically and economically. While the changes have resulted in slightly increased smelting losses, much lower grades of ore than before can be treated with advantage so the net result is a very complete utilization of the mine.

The capacity of the Smelter turned out to be larger than expected and larger than the planned increased capacity of the refinery.

REFINERY

The Refinery operated satisfactorily without any closedown during the year, although until arrival of the increased smelter production in May it occasionally suffered from shortage of matte.

The construction work going on at the end of the previous year for increasing the capacity started to show results in increased production already in the first quarter of the year. However, the unexpected large capacity of the Smelter after starting of the new departments and notice given about increased deliveries of custom-matte necessitated some additional construction work to what was originally contemplated, and the complete extension program was therefore only completed in November, since which time the Refinery has operated at a rate corresponding to 6,000 short tons annually.

Delivery of custom matte took place according to the contract and without interruptions during the year.

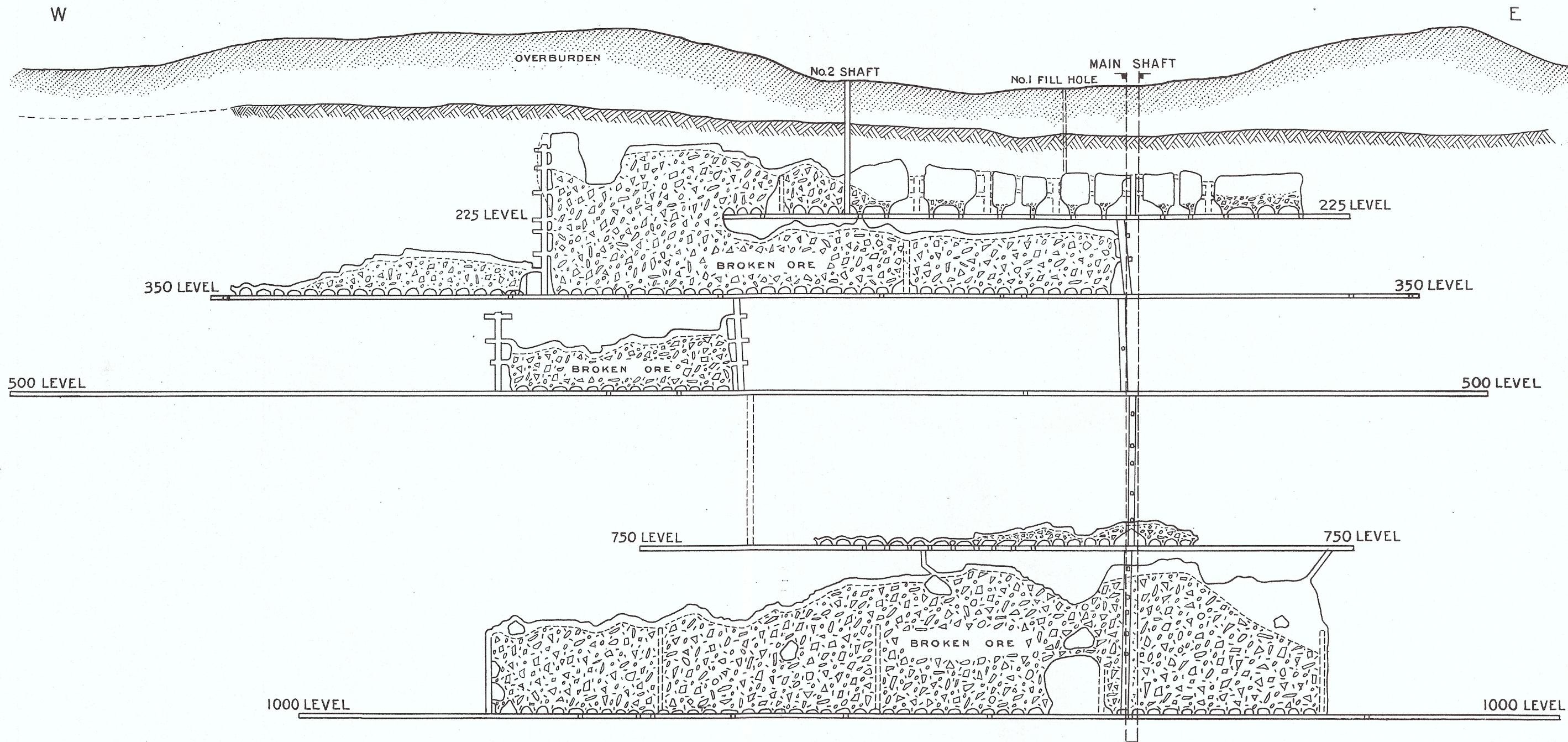
At the end of the year construction work was going on in preparation for separating the precious metals at the Refinery.

The high quality of the nickel was further improved during the year.

For the year 1933, the amount of matte received from the Smelter, the Refinery production, the metals in process and the matte on hand at the end of the year is set out in the following table:

	Short Tons	Contents	
		Ni., Lbs	Cu., Lbs.
Falconbridge Matte Received	8,281.288		
Metal Content less refining losses		9,051,497	3,940,094
Produced in marketable form during the year		7,468,320	3,282,113
Metals in process at end of year		2,165,915	688,436
Matte on hand at end of year	671.859	729,638	325,180

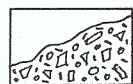
Respectfully submitted,
Anton Gronningsater,
Consulting Metallurgist.



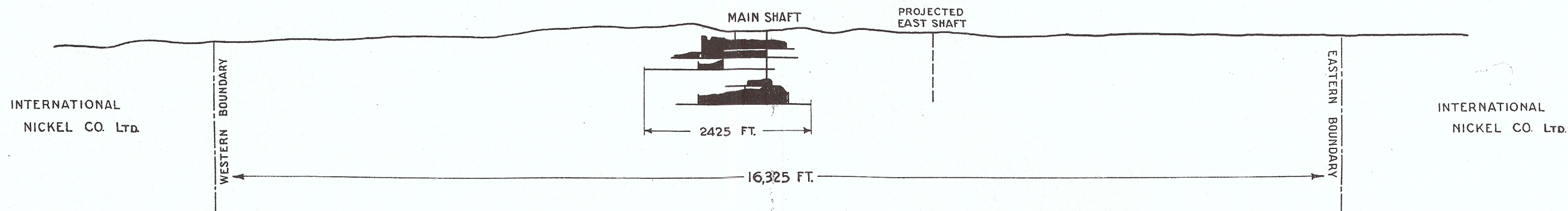
FALCONBRIDGE NICKEL MINES LIMITED

LONGITUDINAL SECTION SHOWING MINE WORKINGS

SCALE
50 0 100 200 FEET



STOPES WITH BROKEN ORE



KEY MAP SHOWING LATERAL EXTENT OF PROPERTY
IN RELATION TO WORKINGS

JANUARY 1ST, 1934
THE MAP SPECIALTY CO., TORONTO