

Third Annual Report
Falconbridge Nickel Mines
Limited

*For the Year Ending
December 31st, 1931*

Falconbridge Nickel Mines Limited

Falconbridge - Ontario

PRESIDENT

T. LINDSLEY

VICE-PRESIDENTS

HALSTEAD LINDSLEY

J. GORDON HARDY

SECRETARY and TREASURER

NORMAN F. PARKINSON

DIRECTORS

THAYER LINDSLEY
J. GORDON HARDY

HALSTEAD LINDSLEY
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

100 Adelaide Street West, Toronto,
February 22nd, 1932.

To the Stockholders of
Falconbridge Nickel Mines Limited.

The Directors present to the Shareholders the following reports by the Consulting Engineer, the Mine Superintendent and the Consulting Metallurgist on the operations for the year ending 31st December, 1931, and the Balance Sheet at that date.

In view of the general financial depression during 1931, the working capital position at the end of the year, as shown in the Balance Sheet, is satisfactory.

Your Directors wish to express their sincere appreciation of the untiring efforts of the Consulting Engineer, Mr. J. Gordon Hardy, the Superintendent, Mr. Ernest Craig, the Consulting Metallurgist, Mr. A. Gronningsater, and of the entire staff for the successful results attained during a difficult year.

On behalf of the Board.

T. Lindsley,
President.

Toronto, February 18th, 1932.

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

Dear Sirs,

The 1931 record of operations is set out in detail in the accompanying reports of Mr. Ernest Craig, in so far as your Mine and Smelter at Sudbury are concerned, and of Mr. Anton Gronningsater regarding your Refinery in Norway. I would add to these reports the following comments:

MINE

The ore production of 133,721 tons was maintained from within the limits of the blocks shown in 1930 work to the extent of 35% from above the 225-foot level, 44% from the stopes above the 350-foot level and 16% from the 1,000-foot level stopes. The remaining 5% came from development outside those limits, largely from the 350 west drive. The grade was held at 2.453% nickel and 1.007% copper, after picking out 17.8% of high-silica material uneconomical for direct smelting, but which is stockpiled for mill-feed when we install a concentrator.

Since our ore reserves are ample, 1931 development work was strictly limited and mainly consisted of the westerly extension of the 350-foot level. Here a new oreshoot is in the making, outside of the 1930 limits, of more than average grade and of good width. Within the above 1930 limits, however, a large amount of opening up was performed, the principal items being: a communication-raise from the 1,000-foot level (the present bottom of the mine) taken up to the 750-foot level, where connection was made with the main shaft; a station put in hand on the 500-foot level and an incline shaft started from surface through which to pass gravel for stope-filling. Diamond drilling was also used considerably in delimiting the ore zone and determining the geological structure.

This more intimate investigation of our developed ore demonstrated that certain marginal areas carried substantial tonnages of high-silica concentrating ore, and in re-calculating our Ore Reserves, with this information before us we were able to increase said Ore Reserves to 2.7 million tons. With this lower but merchantable ore included, the average grade now figures out at 2.31% nickel and .94% copper.

SMELTER

We suffer in continuity of operation at the Smelter by its being a one-unit plant and having to shut down when necessary repairs have to be made to the blast furnace. Lost time in this connection was exceeded by breakdown of our converter-blowing equipment, so that in all the plant lost practically a month out of the year. Pressing production beyond normal capacity when operating won some of this back, and 109,520 tons were smelted at an average rate of 326 tons of ore per operating day. Metallurgical losses were held down to a particularly low figure, averaging 2.83 lbs. of nickel and 1.51 lbs. of copper per ton of ore.

REFINERY

At the end of 1930 the Refinery in Norway was pretty well choked with matte shipments from the Smelter, but completion of construction and adjustments soon cleaned up this situation in 1931 and kept the Smelter busy maintaining matte supply. Particularly so since our toll business was upset by labour troubles in Norway. Hence the production of refined nickel and copper considerably exceeded the year's receipts at the Refinery, as will be noted from the details given in the accompanying reports.

MARKETING

In such a depressed year as 1931, the disposal of the Company's products presented more than usual difficulties. This applied particularly to its nickel, since it was possible to

sell all its copper in Europe, and the precious metal output had not yet reached the marketable stage. Selling the year's production of nickel totalling 5,305,222 lbs. plus the stock carried forward from 1930 was a different matter, and the best that could be done during 1931 was to dispose of 3,205,235 lbs., or 52.6% of the above total. This left a stock of refined nickel at the end of the year of 2,888,466 lbs., worth, if sold at the average net price of 1931, around \$925,000 Canadian funds. It is of particular interest to note that forward sales made for delivery in 1932 exceed this tonnage and bring to the fore again the question of increasing capacity. To effect these sales our product had to be pushed not only in Europe but also in the Far East and, finally, in the U.S.A. Its quality has had to withstand searching tests and competition, with the result that we have held our customers and extended their list.

EARNINGS

With our cash position strained at the beginning of the year due to delinquency of financing contracts, it was foreseen that we might have to borrow in 1931 on our inventory as collateral. It is, therefore, a great satisfaction to report that this step was not necessary; that we at no time owed other than current indebtedness for operation; and that we closed 1931 in a more liquid position than when we started, after running at full capacity throughout the year. Our increase in refined nickel inventory, of course, embraces our profits.

OUTLOOK

1931 being our first full year of complete operation, its results inspire us to go forward with renewed confidence, while gravely aware of the difficulties of this period. Merchandising is done under extreme pressure; the many currencies we sell in are always fluctuating and credit risks add their share in restricting sales. Happily our production end is sound, bolstered by ample raw material, and the efforts in this connection of Mr. Ernest Craig in Canada, with his lieutenant Mr. Richard Gill, and of Mr. Anton Gronningsater and Mr. S. B. Steen in Norway deserve the Company's grateful recognition.

Yours very truly,

J. Gordon Hardy,

Consulting Engineer.

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Consolidated Balance

ASSETS

Current Assets—	Dec. 31, 1931	Dec. 31, 1930
Cash on Hand and in Bank	\$ 114,191.41	\$ 18,019.60
Accounts Receivable—Trade	114,369.85	47,317.15
" " —Sundry	18,598.54	5,713.76
Securities at Market	6,600.00	157,629.99
	<u>\$ 253,759.80</u>	<u>\$ 228,680.50</u>
Receivable on Investments Sold (In Suit)	\$ 30,000.00	\$ 30,000.00
Inventory—Refined Metals at Cost	\$ 628,486.67	\$ 187,539.50
Matte on Hand and in Process at Cost	303,432.40	495,450.45
Mining and Refinery Supplies, etc.	99,496.25	107,621.14
	<u>\$1,031,415.32</u>	<u>\$ 790,611.09</u>
Property Account—		
Mine Smelter and Refinery Buildings, Machinery and Equipment	\$2,209,013.61	\$2,138,545.74
Less: Depreciation written off	326,503.89	115,934.74
	<u>\$1,882,509.72</u>	<u>\$2,022,611.00</u>
Mining Properties and Claims	2,555,985.53	2,555,985.53
	<u>\$4,438,495.25</u>	<u>\$4,578,596.53</u>
Deferred Expenditures —		
Mine Development	\$ 392,349.87	\$ 392,349.87
Less: Written off to Operations	55,153.01	21,268.11
	<u>\$ 337,196.86</u>	<u>\$ 371,081.76</u>
Broken Ore in Stopes	59,669.91	33,615.27
Deferred Refinery Expenses	19,371.88	85,380.95
Incorporation Expenses	2,270.00	2,270.00
Prepaid Expenses	2,592.01	4,048.15
Commission on Shares Sold	175,000.00	175,000.00
	<u>\$ 596,100.66</u>	<u>\$ 671,396.13</u>
Raffineringsverket Aktieselskap—		
Special Advance recoverable as a tonnage charge on customs metal as and when refined, less repayments	209,298.40	215,995.85
Deficit	252,641.92	263,172.61
	<u>\$6,811,711.35</u>	<u>\$6,778,452.71</u>

AUDITORS

We have audited the accounts of Falconbridge Nickel Mines Limited for the year ended December 31, 1931. The Balance Sheet the Assets and Liabilities of Falconbridge Nikkelverk Aktieselskap as certified by the auditors. The consolidated Balance Sheet correctly sets forth the combined position of the Company.

Toronto, 23rd February, 1932.

ECOMINES LIMITED

owned Subsidiary

VERK AKTIESELSKAP

t, 31st December, 1931

LIABILITIES

	Dec. 31, 1931	Dec. 31, 1930
Capital Stock—		
Common Stock—3,195,055 Shares	\$6,670,281.64	\$6,670,281.64
Current Liabilities—		
Accounts and Wages Payable	67,964.99	51,597.30
Commission Payable re Overdue Subscriptions	30,000.00	30,000.00
Reserve for Income Taxes	3,229.24	1,475.00
Interest not taken into Revenue	40,235.48	25,098.77

Contingent Liability—December 31, 1931—

Balance of Contracts for Completion of
Capital Expenditures at Nikkelverk
Refinery \$18,657.00

Approved on behalf of the Board of Directors:

THAYER LINDSLEY }
N. F. PARKINSON } Directors.

\$6,811,711.35 \$6,778,452.71

CERTIFICATE

ending 31st December, 1931, and have incorporated in the above Consolidated Balance
in Auditor, A. Lyng, subject thereto, we report that in our opinion the above Consoli-
December, 1931.

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

FALCONBRIDGE NICKEL MINES LIMITED

THIRD ANNUAL REPORT YEAR 1931

Falconbridge, Ontario,
January 25th, 1932.

Mr. Thayer Lindsley, President,
and Directors,
Falconbridge Nickel Mines Limited,
100 Adelaide Street West,
Toronto, Ontario.

Dear Sirs,

While we did not enjoy 100% operating time during the year under review, I feel justified in stating that results obtained were very favourable, especially in view of the three-week shut-down caused by the failure of converter blowers. Other production delays were all of short duration and directly attributable to the necessity of re-lining the furnaces, or power interruptions.

MINE DEVELOPMENT

Combined development footages completed on all levels during the period under review are distributed as follows:

Drifting and Cross-Cutting, including Slashing	993 feet
Raising	257 feet
Box Holes	41 only
Station Cutting	3,112 cu. ft.

Of the total 993 feet of drifting and cross-cutting recorded, 520 feet was driven West along the ore zone on the 350-foot horizon. This work indicated quite good widths of ore, particularly in the area opened up by the final 250 feet of drifting. The grade was found to be somewhat better than the average mine run, over an approximate average width of 40 feet.

DIAMOND DRILLING

The total diamond drilling footage amounted to 3,154 feet, of which 2,114 feet was test drilling for the purpose of defining ore widths throughout the working area. The balance of 1,040 feet was drilled North across the ore body from the 500 and 750-foot stations, in order to determine ore widths between our present working levels. A cross section of this drilling shows an average width of 31 feet between the 350 and 1,000-foot levels, the grade of same approximating average mine run.

ORE RESERVES

It having become apparent that considerable disseminated ore would enter the profitable column provided that a concentrator was available, our reserves were recast accordingly. In these figures, all the ground embraced in last year's estimate was included, plus new tonnage developed during 1931 on the West end of our workings, amounting to 263,626 tons,

and less the ore extracted during 1931. The figures as of December 31st, 1931, then are 2,725,382 tons, averaging 2.31 % nickel and .94 % copper.

MINING

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

Broken Ore—In Stopes

Balance December 31st, 1930	64,074 tons
Broken during 1931	194,054 tons
Total	258,128 tons
Less: Hoisted During 1931	133,721 tons
Broken Ore Reserves, December 31st, 1931	124,407 tons

The small map attached shows the stoping area and location of broken ore reserves.

CRUSHING, SORTING AND TRANSPORTATION

From the 133,721 tons of ore hoisted, 17.86 %, or 23,882 tons of combined waste and disseminated ore was eliminated during the various stages of crushing. The balance of 109,839 tons was transported via aerial tram to the smelter storage bins.

SMELTING

The smelter was in operation a total of 336 days, or 91.34 % of the total possible operating time. Results tabulate as follows:

Tons Smelted	109,520
Matte Produced	4,363.2 short tons
Metals Recovered Ni. 2,569.4 short tons; Cu.—1,033.5 short tons	
Metals Per Ton in Ore	49.06 lbs. Ni.—20.15 lbs. Cu.
Metals Recovered per Ton Ore	46.23 lbs. Ni.—18.64 lbs. Cu.
Metallurgical Losses	2.83 lbs. Ni.— 1.51 lbs. Cu.

Of the total of 4,363.2 tons of matte produced, 4,276.8 tons were shipped to your Company's Refinery at Kristiansand, Norway.

GENERAL

The results of the year's operation, both with respect to underground development and smelting, have been very satisfactory, and much credit is due the staff and employees for their co-operation and loyalty.

Respectfully submitted,

E. Craig,
Superintendent.

Toronto, Ontario,
February 13th, 1932.

Mr. Thayer Lindsley, President,
Falconbridge Nickel Mines Limited,
100 Adelaide Street West,
Toronto, Ontario.

Dear Sir,

I beg to submit the following report for the fiscal year ending December 31st, 1931:

SMEILTER

The Smelter operated with only the normal minor interruptions throughout the year, with the exception of a three weeks' shutdown in April to correct trouble with the converter blowers.

There was a gradual improvement in operating results during the year, and it is believed that the limits for the present equipment have now been reached, both as to capacity and costs. The high metal recovery has been maintained.

REFINERY:

The Refinery has operated satisfactorily without closedown during the year, with an average production of somewhat more than eight metric tons a day, which is not far from the possible capacity of the present plant. For a while the production was not quite maintained on account of a lockout slowing up delivery of custom matte, and at the end of the year less than the normal amounts of metals were on hand in the form of matte and in process.

The usual adjustments of a new refinery went on gradually during the year; the coming year should see normal operating results, both as to capacity and costs, reached for the present equipment.

Construction of the department for concentration of precious metal slimes was completed during the year and production commenced of concentrated marketable material from the accumulated stock of precious metal slimes.

The high quality of the nickel has been steadily maintained, and the reputation of the nickel in this respect has been established on the market.

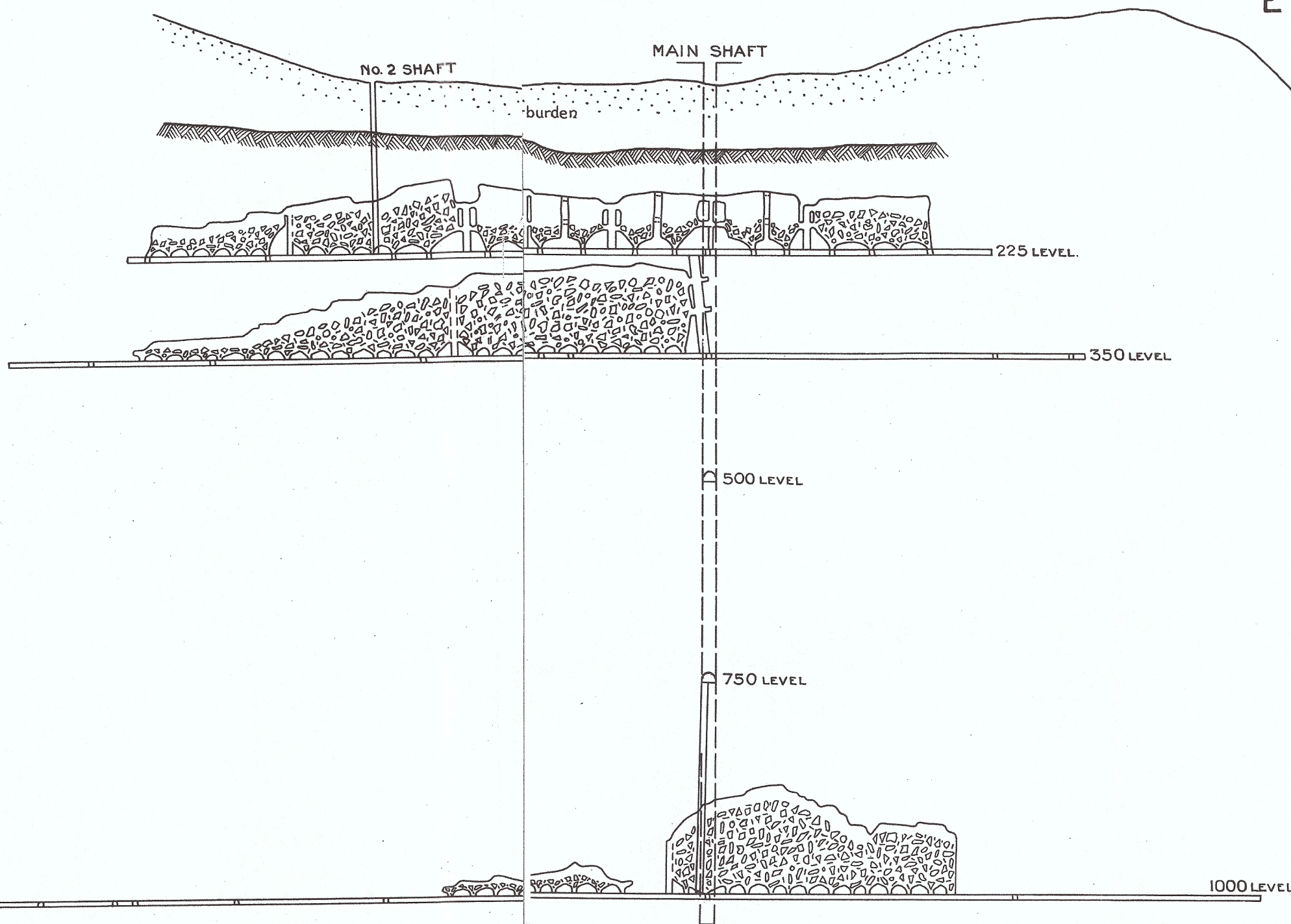
For the year 1931 the amount of matte received from the Smelter, the Refinery production, the metals in process and the matte on hand at the end of the year is set out in the following table:

	Short Tons	Contents	
		Ni. lbs.	Cu. lbs.
Falconbridge Matte Received less refining losses	3,935.8	4,526,675	1,825,953
Produced in Marketable Form to end of year ----		5,305,222	2,389,381
Metals in Process -----		1,073,096	348,216
Metals in Matte on Hand -----	99.2	113,929	51,012

Respectfully submitted,
Anton Gronningsater,
Consulting Metallurgist.

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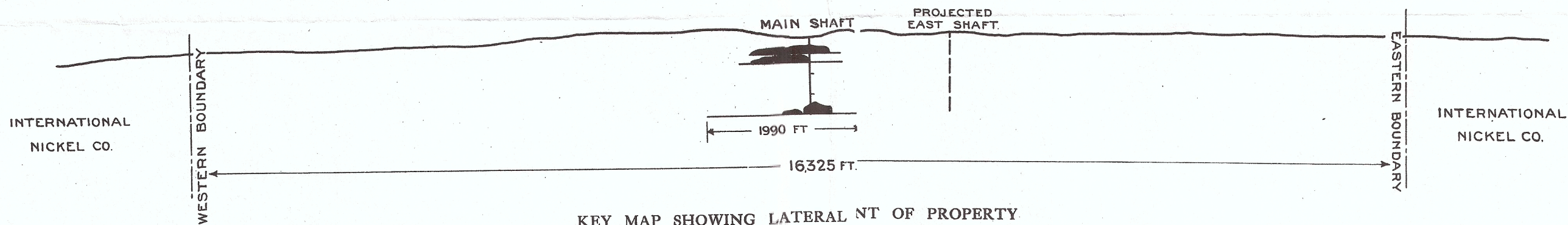


FALCONBRIDGE NICKEL MINES LIMITED
LONGITUDINAL SECTION SHOG MINE WORKINGS

SCALE: 1 IN. =



STOPES WITH BROOK ORE



KEY MAP SHOWING LATERAL EXTENT OF PROPERTY
IN RELATION TO SHAFTS