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GOLDBORO PROJECT

PRESENTATION REPORT

J A N U A R Y 1 9 8 9

DUPLICATE AVAILABLE

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1.0 HISTORICAL BACKGROUND

Exploration Orex was incorporated July 30, 1987. The company was registered for trading on the Montreal Stock Exchange under the symbol "OX" on March 31, 1988.

The main activities of the company consist in acquiring, exploring and developing mining properties. Orex is a member of the Morisco Group and as such, has access to the mining exploration expertise of all members of the group.

Goldboro is the company's number one project at the moment. Orex supervises and manages the Goldboro project.

1.1 Goldboro Property

The Goldboro property consists of a block of 37 mining claims covering a total area of 1,480 acres. There are several former gold mines on the property: Dolliver Mountain, West Goldbrook, Boston-Richardson and East Goldbrook. Two villages, Goldboro and Isaac's Harbour, are located in Guysborough Township close to the property.

Under an agreement between Onitap and Orex, Orex has the right to acquire a 50% interest in the property in exchange for exploration work.

Mineral showings were first found on the Goldboro property as early as 1861. The following year, the Canadian Geological Commission discovered a band of gold-bearing quartz veins. This was called the "Richardson Belt" and later became the site of the Boston-Richardson Mine, which was in operation until 1912. During this period, 414,887 tons of ore were extracted from the property, and total gold production reached 54,871 ounces.

Between 1926 and 1927, three other deposits were discovered in the area, but were only partially developed.

Since the early 1980's, Onitap Resources had been conducting exploration on the property. They started with field surveys and concluded with a 40-thousand foot drilling program that proved the existence of other mineralized gold belts below the Boston-Richardson.

Such was the situation when Orex began exploration work.

PROJET GOLDBORO LOCALISATION GOLDBORO PROJECT LOCATION

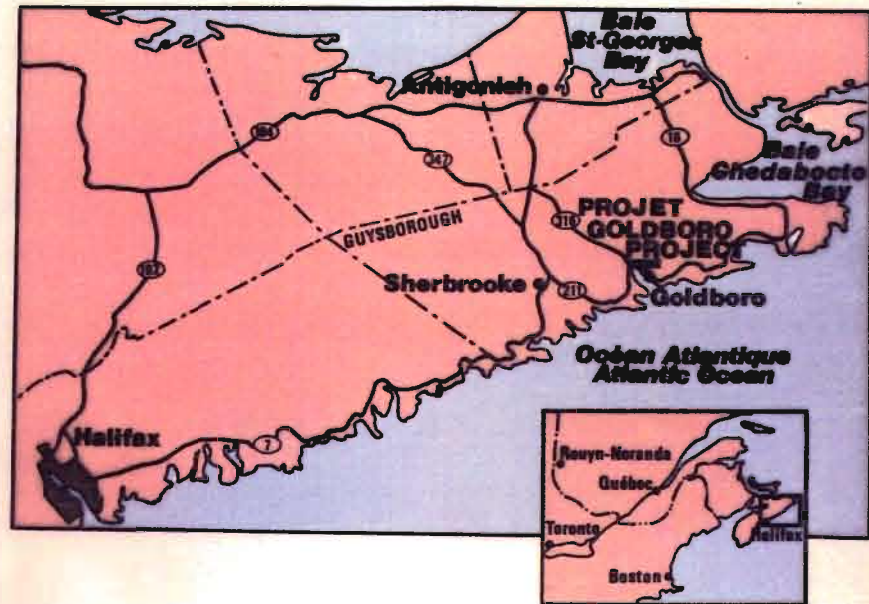


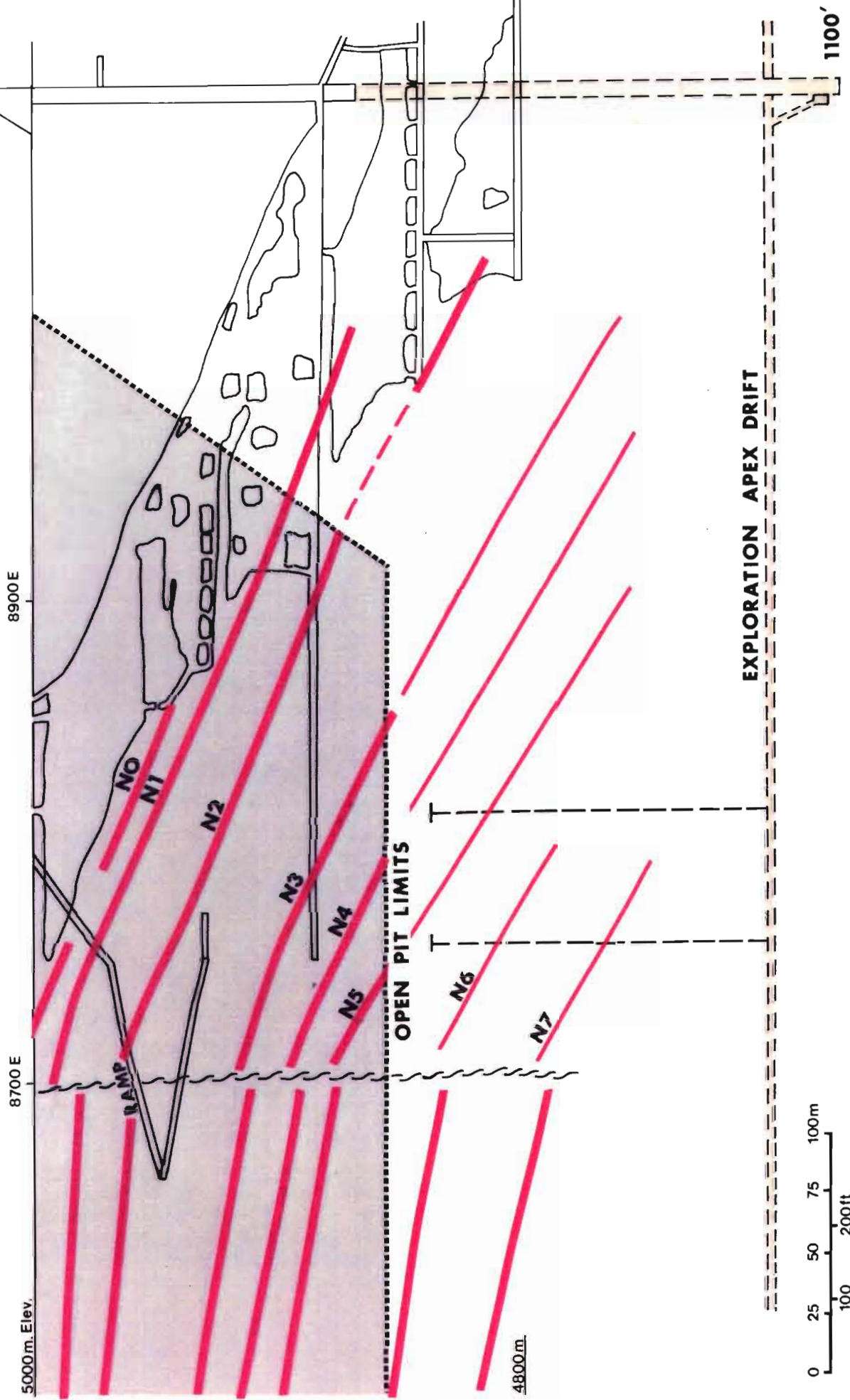
FIGURE 1

GOLDBORO PROJECT

Vertical Projection

WEST GOLDBROOK SHAFT
← 110'

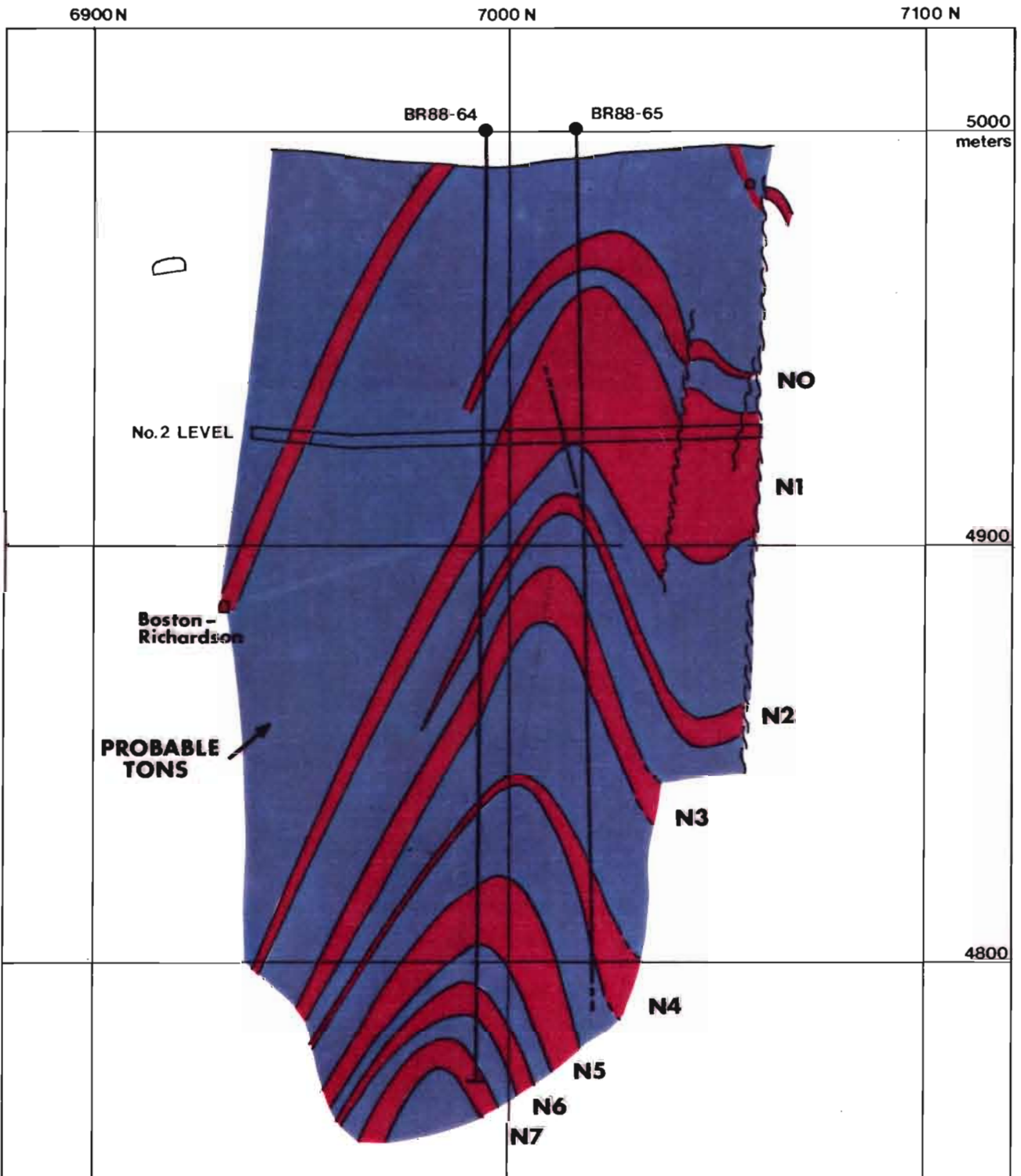
FIGURE 2



GOLDBORO PROJECT

Section 8750 E

FIGURE 3



2.0 PRESENT SITUATION

1987

In 1987, some 40,000 feet of diamond drilling led to the discovery of new mineralized zones under the Boston-Richardson Belt. Visible gold was observed in most of the holes.

This led to reserve estimates of 1,106,036 short tons with a grade of 0.194 ounce of gold per short ton.

1988

Drilling:

During 1988, Exploration Orex Inc. carried out over 35,554 feet of surface and underground definition drilling. This drilling program, done between sections 8,600 E and 8,800 E, allowed the study of known belts beneath the old Boston-Richardson mine. It also included nine holes (5,965 feet) which were drilled near the old West Goldbrook mine, located westward.

Results from this drilling program will enable Exploration Orex Inc. to update and corroborate reserve estimates.

Access decline and mining development:

The development of the decline was done as part of the 1988 exploration program. Over 1,364 feet of decline, with a 15 % slope, were driven. This decline gives access to two cross cuts at the 125 foot and the 250 foot levels (Figure 3). These cross cuts confirm the interpretation of drill data and consequently substantiate the potential of the Goldboro project. This ore will be assayed to verify ore grade estimates. Figures 4 and 5 show the periodic progression of levels and the number of cubic meters excavated and slashed during specific periods.

Shaft rehabilitation and surface infrastructure:

During this phase of the program, a 90 foot headframe and a hoist with a 6 foot drum were set up on site in order to rehabilitate the old Boston-Richardson shaft. This shaft gives access to the 400 foot level, from where definition drilling will be performed.

FIGURE 4
ADVANCES IN METERS

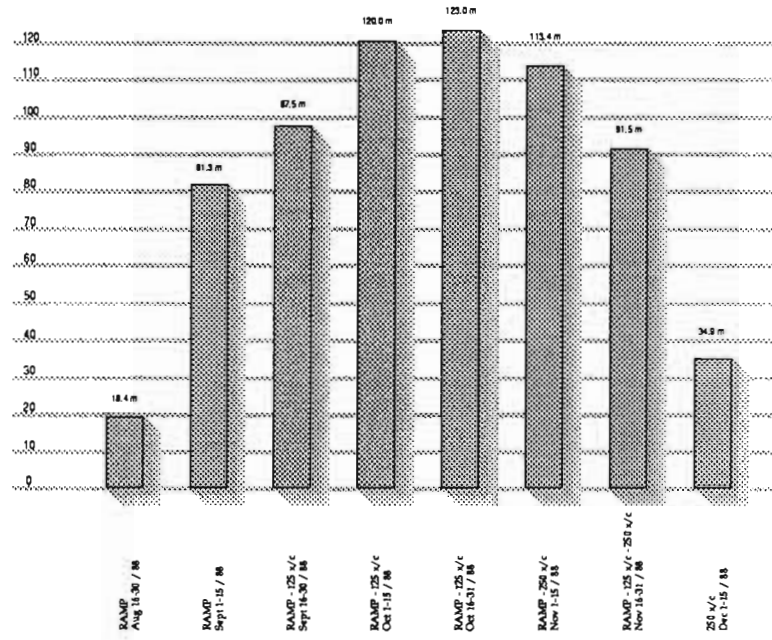
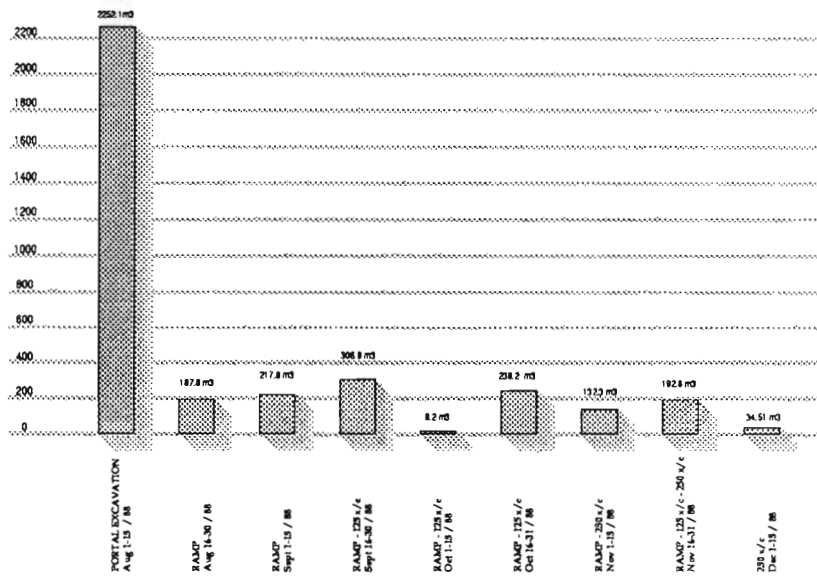


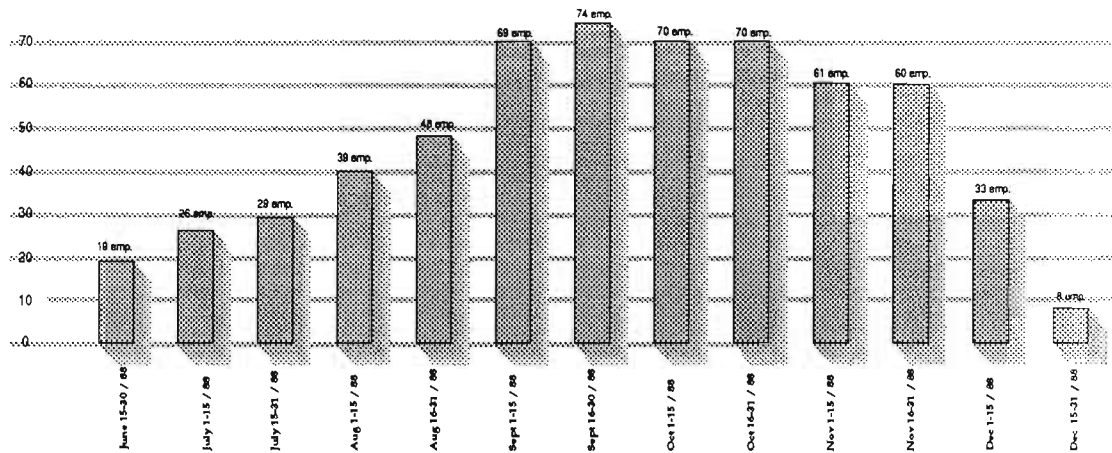
FIGURE 5
SLASHING AND EXCAVATION



Site preparation:

All required surface installations have been set up and are now functional. The number of employees per indicated period (on two working shifts per day) that were working on site during the exploration program is indicated in Figure 6.

**FIGURE 6
GOLDBORO PROJECT EMPLOYEES**



Results:

The 1988 exploration program has brought a totally new dimension to the Goldboro project. The exploration work focused essentially on new belts located beneath the old Boston-Richardson mine. The thickness of the eight mineralized belts identified so far varies between 7 and 40 feet.

A new calculation of reserves is currently being done by an independent engineering consulting firm. The results indicate that the considerable volume of ore found in the first 400 vertical feet justifies the utilization of the open pit mining method. The ore samples from mineralized belts yielded minimal grades of 0.07 ounce Au per short ton.

3.0 FUTURE SITUATION

As a result of its intensive 1988 exploration campaign, Exploration Orex Inc., now favours a totally new approach to the Goldboro project. The results obtained so far have led Orex to start working on the elaboration of an open pit design. The estimated production should be 5,000 st per day. The tonnage presently available in the first 400 vertical feet is 10,000,000 short tons, with a minimal grade of 0.07 oz/st Au. The calculation of this grade includes all the mineralized belts as well as sectors where the material was not analyzed by Exploration Orex Inc. predecessors (grade estimated at 0.00 oz/st Au). It is important to specify that for the time being, this reserve comprises only the sector defined by drilling activities, the extensions not having been considered yet.

The following Table gives a breakdown of planned costs for bringing the Goldboro project into the pre-production phase.

TABLE 1

PLANNED COSTS FOR THE GOLDBORO PROJECT

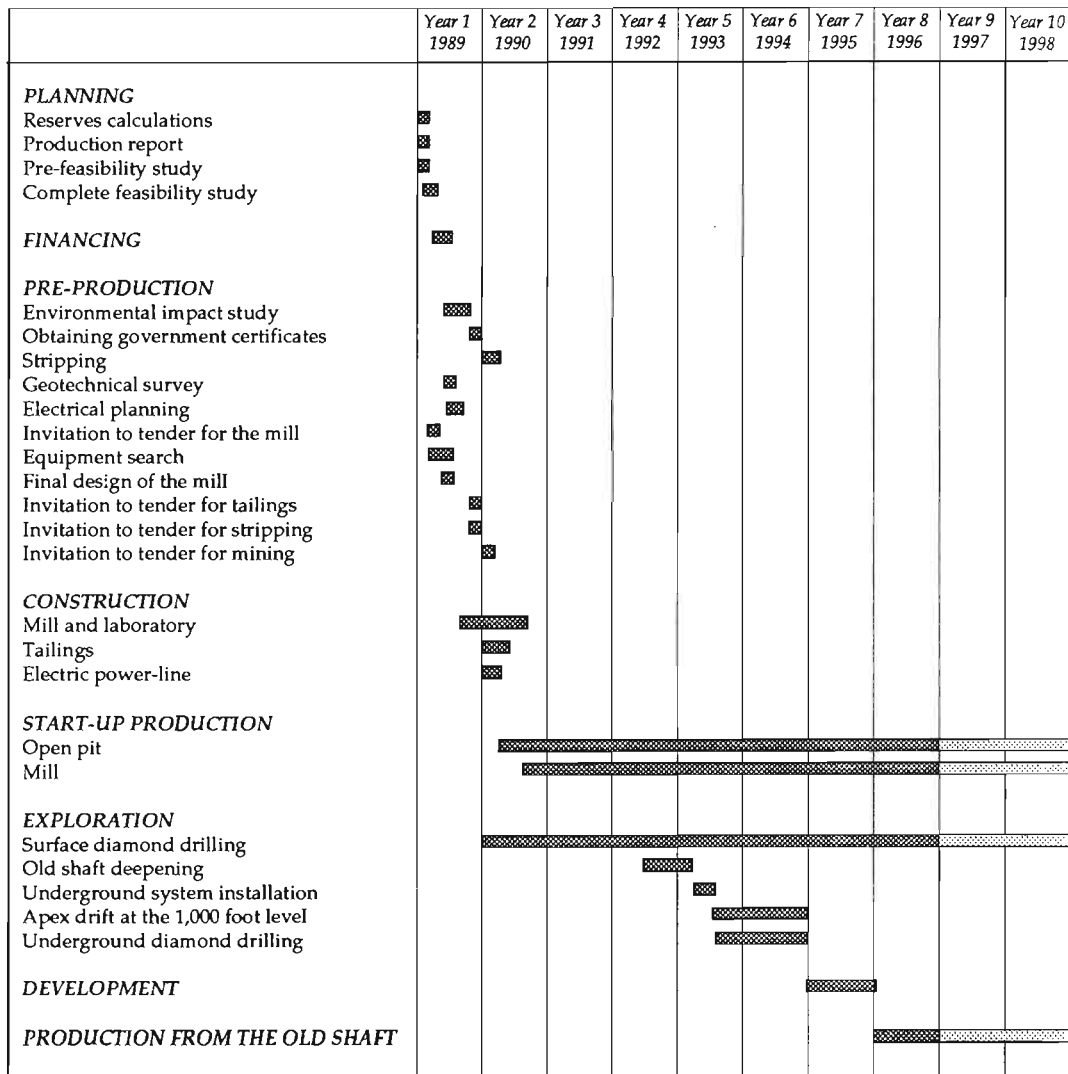
Pre-production phase	Planned costs
Planning	\$ 750,000
Financing	\$ 200,000
Pre-production	\$ 2,240,000
Construction	\$ 33,200,000
Contingency	\$ 3,610,000
TOTAL	\$ 40,000,000

Figure 7 shows the future planification.

The shaft will be deepened to 1,100 feet, that is to say 700 feet more than the present depth. This will permit the construction of a diamond drilling drift along the core of the anticlinal, between sections 8,400 E and 9,500 E. Drilling will be done on all the mineralized belts, between levels 500 and 1,000 feet. The exploitation of this section of the Goldboro orebody is planned to start in 1994.

FIGURE 7

BART CHART, GOLDBORO PROJECT



3.0 *ECONOMIC EVALUATION OF THE PROJECT*

The parameters of the economic model were calculated in a conservative but realistic manner. All the mining costs are derived from standards, by extrapolation on anticipated production. The mining method proposed is based on discussions within the management committee.

3.1 *Explanation of the economic model*

The orebody characteristics are based on:

- **Recuperation** from actual production at Gay's River on similar ore.
- **Grade and tonnage** on an internal study of all the intercepts including a minimum grade of 0.07 oz /st Au as revealed by atomic absorption assaying of mucks from the 250 level cross-cut, with a projected at 5,000 tons per day production based on the size of anticipated reserves.
- The **number of work days** per year is standard to minimize overtime. The economic parameters are based on 350 days.
- The **price of gold** is actual, since even the best economist cannot forecast it with certainty (\$500 C over the life of the project seems realistic).
- The **debt** amounts to \$35,000,000 for the mill and buildings, plus \$5,000,000 for the feasibility study and pre-production development.
- **Duration and interest for the debt** are relatively standard for three years, at 12%.
- The **tax rate** is calculated at 42.74%.
- The **investment that can be amortized** is all the money spent on the project less the flow-through or subsidy funded expenditures.
- **Inflation** is deemed equal to the gold price increase, since both are very difficult to predict; 3% is a conservative number.

- The **required internal rate of return** is set at 15%, which is normal for fair size mining projects, considering the lower risk factor.

The remaining important factors are:

- The **sale value of all assets** at the end of the project is equal to the costs of rehabilitating the area.
- The **net present value, internal rate of return and cash flow** calculations are based on the cash flow tables.
- The **cash flow tables** demonstrate the viability of the project by showing its yearly economic evolution.
- In the cash flow presentation, **total income, operating costs, gross profits, interest on the debt, income tax, debt service and net profits** can all be deducted from the above explanations.
- **Equipment and development** includes annual costs of work done to develop the mining areas plus the cost of maintenance and replacement of the equipment.
- **Amortization** is calculated by using 25% of the total amortizable amount as immediately applicable, 50% as deductible in the first three years (25%, 50%, 25%) and the other 25% as deductible at a rate of 5% per year.

TABLE 2
GOLDBORO-PROJECT - ECONOMIC MODEL

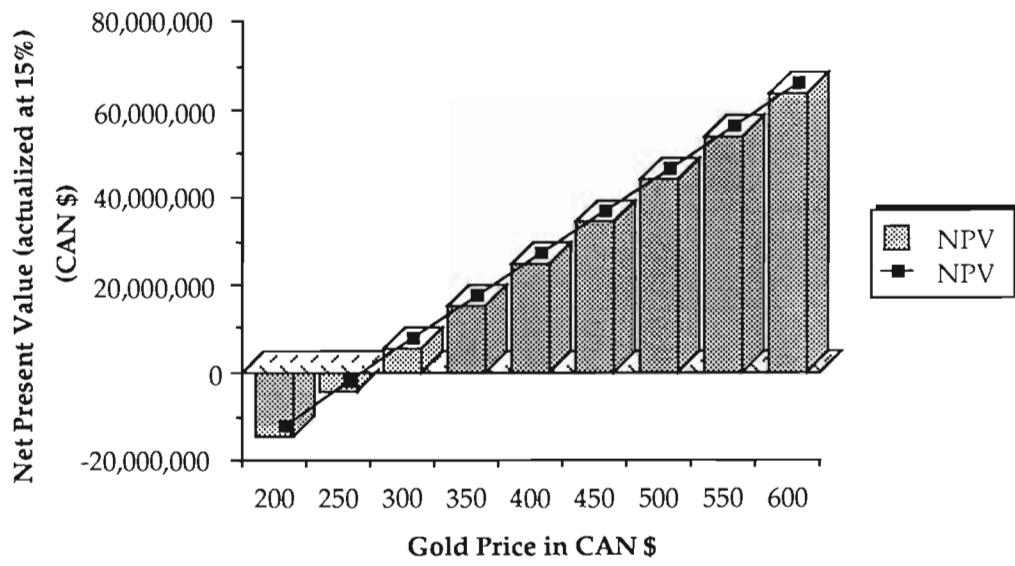
ASSUMED PARAMETERS		MINING COSTS	
MINE AND COMPANY DATA		NATURE OF COSTS	Open Pit
Forecasted recuperation	90%	Mining	\$ 5.77
Average grade (oz/ton)	0.070	Milling of the ore	\$ 3.50
Anticipated reserves (sh tons)	10,000,000	Administration and general	\$ 1.50
Daily production	5,000		
Work days per year	350	TOTAL	\$ 10.77
Gold price in \$C	\$ 500		
ECONOMIC DATA		OTHER COSTS	
Total debt	\$ 35,000,000	Annual development	\$ 300,000
Debt duration (years)	3	Equipment costs	\$ 600,000
Yearly interest on debt	12%		
Tax rate (federal and provincial)	42.74%		
Total investment (to amortize)	\$ 40,000,000		
Inflation	3%		
Yearly gold price increase	3%		
Minimum rate of return required	15%		
<p>The sale value of all assets, at the end of the project, is assumed to be equal to the costs of site rehabilitation.</p>		<p>Exploration costs for the underground portion of the orebody are not included, nor are the revenues from possible underground mining.</p>	
Net Present Value	\$ 44,119,461		
Internal Rate of Return	103.4%		
Global Cash Flow	\$ 114,754,466		
Average Annual Cash Flow	\$ 19,957,298		

TABLE 3
CASH FLOW PROJECTIONS (dollars)

	1989	1990	1991	1992	1993	1994	1995	1996
Total income	0	13,781,250	56,778,750	58,482,113	60,236,576	60,043,673	63,904,983	30,560,276
Operating costs	0	4,714,063	18,856,250	18,856,250	18,856,250	18,856,250	18,856,250	8,754,688
Equipment and development	7,800,000	19,175,000	643,750	848,720	1,147,363	337,653	0	0
Gross profit	0	9,723,438	40,547,500	42,250,863	44,005,326	45,812,423	47,673,733	23,024,338
Interest on debt	900,000	4,200,000	4,200,000	2,955,334	1,561,309	0	0	0
Amortization	1,111,111	4,393,720	4,464,193	4,605,647	4,903,663	4,903,663	3,677,747	0
Federal and provincial income tax	-2,158,370	-2,579,919	9,057,181	16,037,212	17,652,560	19,864,525	18,950,525	13,278,742
Debt service	0	0	10,372,214	11,616,880	13,010,906	0	0	0
Net profits	-2,425,926	-1,080,478	27,639,309	30,361,012	33,092,277	36,267,739	39,858,970	21,805,588

FIGURE 8

NET PRESENT VALUE VERSUS GOLD PRICE
(actualized at 15%)



4.0 SOCIAL AND ECONOMIC BENEFITS ANTICIPATED

A summary evaluation of the social and economic impacts of the Goldboro project was done for this report.

Tens of millions of dollars will be invested in the exploration and development phases. Development includes pre-production, construction of the mill and the succeeding production phase. The project will in turn generate huge amounts. Table 4 below shows the annual operating cost of each of these phases, as well as the deadlines.

TABLE 4
OPERATING COSTS OF THE GOLDBORO PROJECT

	88-89	89-90	90-91	91-92	Subse- quent years (annual)
Exploration- development	X	X	X	X	X
Production (mining)		X	X	X	X
Milling		X	X	X	X
TOTAL	\$14M	\$40M*	\$20M	\$20M	\$20M

* Cost of mill construction included

4.1 Job creation

Table 5 below shows the nature of the work to be done over the next four years and the employment generated by these projects.

TABLE 5
ANNUAL MANPOWER REQUIREMENTS

	88-89	89-90	90-91	91-92	Subsequent years (annual)
Accounting	3	9	5	5	5
Exploration - pre-production					
- Supervision	9	9			
- Surface	24	4	4	4	4
- Underground	20	20			
- Construction	30	20			
Production					
- Supervision		2	14	14	14
- Mining		40	80	80	80
Mill Construction		100			
- Production		4	130	130	130
- Supervision		6	7	7	7
TOTAL	86	214	240	240	240

TOTAL 1988 to 1992: 780 jobs

YEARLY AVERAGE: 195 jobs

Over the next four years, including the present year, the manpower necessary for the development and operation of the project is estimated at 780 person/years, or an average of 195 jobs per year. In the subsequent years, over 240 jobs will be directly created.

The average annual salary per job is approximately \$30,000, which represents an average direct aggregate remuneration of \$7,200,000 for each year of operation. The construction of the mill will add a \$3,900,000 salary benefit. Which means that by 1992, over \$25,500,000 will have been injected as aggregate remuneration into the regional economy of Nova Scotia. With an annual salary increase of 4%, it is evident that by 1992, when the infrastructures will be in place, the mining operation alone will generate direct employment revenues of over 8 million dollars per year.

According to the economic statistics consulted, it seems plausible that the indirect and induced effects of investments in salaries would produce an increase of 1.5 job per direct employment created. This would mean an annual average of about 293 new indirect and induced jobs (see Table 6).

TABLE 6

YEARLY MANPOWER REQUIREMENTS

Jobs	88-89	89-90	90-91	91-92	Subsequent years (annual)
Direct	86	214	240	240	240
Indirect and induced	129	321	360	360	360
TOTAL	215	535	600	600	600

Four-year average indirect and induced job creation: 293 jobs/year

For purposes of preliminary accounting, the salaries produced by the indirect and induced effects were estimated at \$25,000 per year. Thus an additional amount of \$7,325,000 per year will be injected into the regional economy by the Goldboro project (see Table 7).

As for manpower, the Goldboro project will create 488 new jobs and generate an annual aggregate remuneration of more than \$13,000,000 in the area.

TABLE 7
ANNUAL REMUNERATION BENEFITS
AVERAGE OF 195 JOBS PER YEAR*
1988-1992

Jobs Remuneration	Number of jobs Annual average (Including construction of mill)	Aggregate
Direct jobs	195	\$ 5,850,000
Indirect and induced jobs (coefficient 1.5)	293	\$ 7,325,000
TOTAL	488	\$ 13,175,000

* Annual average, direct jobs = $\frac{\text{Total direct jobs 1988 - 89 to 1991 - 92} = 780}{\text{Number of years} = 4} = 195$

4.2 *Impact on goods and services*

Between now and 1992, including the construction of the mill, an annual average of \$17,650,000 worth of goods and services will have been purchased directly in the Goldboro, Antigonish and Halifax areas. This represents a direct investment of over \$70,600,000 during this four-year period.

After 1992, purchases of goods and services for the mining operations will represent an additional \$12,800,000 a year in the community.

4.3 Total economic impact

Our summary evaluation shows that the direct economical benefits of the Goldboro project (salaries and expenses) over the next four years (including mill construction) will be in the order of \$94,000,000, with an annual average of \$23,500,000. The indirect and induced benefits will add another \$29,250,000 in investments in the area over the same period.

The Goldboro project would therefore generate regional investments in the order of \$123,250,000 between 1988 and 1992 (see Table 8).

We also know that purchases related to operating expenses would generate an additional investment of approximately \$20,000,000 per subsequent year in Nova Scotia, and this would lead to spin-offs in the order of \$29,000,000 for the region.

TABLE 8

SUMMARY OF ECONOMIC BENEFITS/YEAR OF OPERATION
(including indirect and induced benefits)

	88-89	89-90	90-91	91-92	Subsequent years (annual)
Salaries:					
- Direct	\$ 2,580,000	\$ 6,420,000	\$ 7,200,000	\$ 7,200,000	\$ 7,200,000
- Indirect and induced	\$ 3,225,000	\$ 8,025,000	\$ 9,000,000	\$ 9,000,000	\$ 9,000,000
Goods and services	\$11,420,000	\$ 33,580,000	\$ 12,800,000	\$12,800,000	\$12,800,000
TOTAL	\$17,225,000	\$ 48,025,000	\$ 29,000,000	\$29,000,000	\$29,000,000

Total economic benefits (direct, induced and indirect) from 1988 to 1992:
\$123,250,000.

* Benefits calculated in 1988 dollars.



The work performed in 1988 led to a better comprehension of the Goldboro deposit, particularly with respect to the gold distribution within the mineralized belts. The belts are thicker than expected with enriched sections of higher grade ore and large portions of lower grade material.

It was then realized that the definition of an underground orebody would necessitate another major investment, more than 8 000 000 \$, for a good medium size gold mine with a fair potential of expansion.

Alternative for production start-up

- Considering ACOA refusal to subsidize this activity;
- Considering the difficult market conditions for financing;
- Considering the high exploitation costs of an underground mine;
- Considering the delays before a final production decision could be taken;
- Considering the higher financial risks.

The company had to investigate several options.

After completing several studies (metallurgical tests and geological interpretation) and getting experts opinions on the subject, the best solution appears to be to start the mine as an open pit situation that will eventually evolve in an underground mining operation.

This alternative offers the following advantages:

- Lower cost for the feasibility studies;
- Lower start-up and operations costs;
- Well-known mining method;
- A more efficient 5 000 tons per day mill;
- The company has enough information in hand to take a production decision;
- The profitability of the project can be estimated with moderate accuracy;
- The minimum head grade is known;
- The operation will continue underground after the upper reserves are exhausted;
- The revenues would be sufficient to finance all exploration and development needed to expand the actual ore reserves and start the underground operations.

CONSEQUENTLY OREX HAS DECIDED TO GO AHEAD AND TO START PRODUCTION AT THE GODBORO PROJECT



To do so, a 3 973 000 \$ budget is needed to finance the following:

1) Feasibility study to complete: 973 000 \$

-Pit design	30 000 \$
-Mill plans	350 000 \$
-Environmental studies	300 000 \$
-New reserves calculations	75 000 \$
-Work to be recommended	150 000 \$
-Economical study	35 000 \$
-Socio-economical impact	33 000 \$

2) Debt for extra work performed in december 1988:
1 200 000 \$

This work was needed to complete the underground evaluation of the project and generated the possibility of an open-pit operation. No decision could have been taken without the results of this work.

3) Day to day operation in the pre-production phase:
1 800 000 \$

This represent the necessary investments for :

- General maintenance of the equipment, security, on site surveillance, etc.
- Pre-production work such as stripping, ore pads construction, tailings preparation, etc.

FINANCING

This total budget of 3 973 000 \$ could be finance in the following manner:

AOCA subvention 973 000 \$ X 75%	:	730 000 \$
Orex internal cash flow 973 000 \$ X 25%	:	243 000 \$
Bank loan guaranteed by the Nova Scotia Government	:	3 000 000 \$