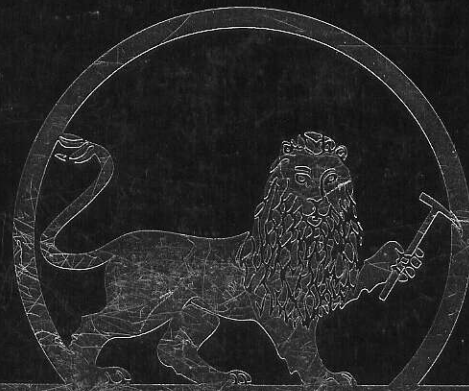


830886



LEO D'OR MINING INC.

CX

E X E C U T I V E S U M M A R Y

1. Leo D'or Mining Inc. is a privately owned company created for the purpose of economically exploiting its claim on a massive occurrence of marble located on Vancouver Island.
 2. The project consists of the development of the only known marble source in Western Canada. The marble under the company control is of sufficient quantity to meet world demand for hundreds of years.
 3. In addition to exploitation of the quarry, the company will proceed, as soon as feasible, with the establishment of a supporting plant to process raw marble blocks into polished slabs and tiles. The undersized broken marble will be sold as source of calcium carbonate to the industrial, chemical users.
 4. Management, in the person of M. Madari, is well qualified to develop and operate this project. Financial management has been engaged, and the remaining personnel will be engaged as necessary. Groups of legal, engineering and technical advisors assist the management.
 5. Markets for the product are worldwide. The product is of the highest quality and samples have been readily accepted to date. The company will serve less than 1% of the available market.
- (2)

-
6. Governmental financial sources have been canvassed, and support is indicated subject to equity financing being obtained. Commercial sources have indicated available debt financing, supported by government guarantees.
 7. The project earnings indicate a better than average return for the equity holders at an early stage of the project. At final stages of the project, when annual mining of 100,000 tons of block and production and sale of 7 million sq. ft. of slab and tile is accomplished.

An earnings summary shows Net Income after tax of:

Year one	\$ 9,456,000
Year two	20,462,000
Year three	20,873,000
Year four	21,115,000
Year five	<u>21,526,000</u>
TOTAL	\$93,432,000

8. The subrogated debt proposed for investors to allow for return of funds while satisfying governmental requirements of equity will carry shares as a bonus to allow the investors to participate in the earnings of the venture.

THE COMPANY

Leo D'or Mining Inc. is incorporated under the Companies Act of British Columbia as a private company.

At the present time all outstanding shares are owned by Massoud Shariatmadari and Denise Shariatmadari, the founders of the company.

Leo D'or Mining Inc. was created to be the vehicle to commercially develop a huge deposit of high quality marble discovered by Mr. Shariatmadari at the Northeastern end of Bonanza Lake, southwest of Port McNeill on Vancouver Island.

THE PROJECT

In June 1981, Mr. Shariatmadari discovered a huge deposit of high quality marble at the Northeastern end of Bonanza Lake, Kokish Valley, near Port McNeill, Vancouver Island. In 1985, Mr. Shariatmadari staked the property for the company, as it is the only known property in the Western Hemisphere capable of producing large blocks. The claim covers an area of some 225 hectares and includes a portion of the lake. Ground elevations range from 875 feet at lake level to some 3,000 feet at the high point of the property. Available geological mapping performed by Klohn Leonof Geologists, shows that most of the claim consists of Quatsino Formation marble. The upper units are represented by a hill of white onyx, while the lower units represent massive light grey, grey to black marble. Although no drilling has been done on the site, it is possible to roughly estimate the exposed marble deposit, taking the road elevation as base. For this estimation, the following available figures were used:

Elevation of : + 875' = sea level
Elevation top of Onyx Hill: x 3100 sea level
Average height = 700 meters
Approximate length 1200
Approximate width 1200
Specific gravity 2.7

multiplying the above, the volume of marble is 1 billion, or ^{m3} 2,716,666,000 tons - 50% of which will be considered undersized and sold separately as calcium carbonate.

While this process is under way, the latest equipment will be ordered to permit diamond wire cutting of the blocks from the quarry site. Under this method, the raw blocks for sale and for delivery to the factory are cut from the mountain in precise dimensions to facilitate maximum recovery, and uniform sizing for export sale. The equipment will allow for production of 100,000 tons of block per year. 60% of this output will be sold abroad as rough blocks.

A factory will also be established to process the rough blocks into cut and polished tiles and slabs for commercial sale in North America and abroad. The factory will consume 40% of the block production from the quarry.

A principal advantage for the company is its proximity to tidal waters. Both rough blocks and finished tiles and slabs will be shipped by ocean freighters to markets in Europe, Asia and America.

The initial stage is estimated to take five months, with commercial block extraction to commence immediately. The diamond wire saws, and supporting equipment for extraction of block are to be available for utilization commencing in the sixth month.

The manufacturing plant equipment will be in place for trial runs in the ninth month of the order, with the first commercial quality production available in limited quantities that month. Full commercial production is achieved in month twelve.

MANAGEMENT

President, Massoud Shariatmadari was born in 1927 and obtained his M.Sc. Geological Engineering Degree from the Royal School of Mines, University of London in England in 1953. Following eight years of service with the United States Aid Missions and United States Corps of Army Engineers in Italy and Tehran, Mr. Shariatmadari spend 18 years as Senior Geologist, Managing Director and owner of the Zaminshenas Geological Works, which included discovery, exploitation and operation of four marble mines, and a further 18 other open pit and underground mines. Mr. Shariatmadari emigrated to Canada in 1980, and following a short assignment with B.C. Hydro, he established the business which evolved to become Leo D'or Mining Inc.

Executive Vice-President, Denise Shariatmadari, was educated in England and has a diploma from the London Chamber of Commerce. Following six years service with various major corporations in Britain in Executive Assistant roles, she emigrated to Canada and continued to work in various advisory and administrative positions. She then established Educar Business Consultants International which provides consultation to major companies and individuals in stress management and the more human approach in effective leadership.

MARKETS

The market for marble is world-wide, and consumption has been increasing in a material way in the 1980's, in part as the economic influence of peoples who have been traditional marble users increased throughout the world.

A major use of marble has been in construction, both in commercial buildings, and more recently in North America, in residential buildings. For example, the United States marble consumption has increased from 11 million square feet in 1980 to 135 million square feet in 1987. The increase would have been much higher if it wasn't for the fact that Japan at present buys 90% of the marble produced by Italy, and there is a shortage of supply in the U.S.

Because of the weight involved, marble pricing is a factor of distance from supply to destination. The plant located in North America will have a distinct advantage over marble from other world sources for sale in the Central and Western United States, and will be competitive to other sources throughout the world by virtue of its location in close proximity to tidal waters.

With a planned production representing less than 1% of world demand, and very satisfactory operating margins, the company will be immune to the negative influence on market variations.

We have received Letters of Intent and request for supply from Europe and the Far East distributors, and the participants in the Verona Exposition of marble appreciated the samples from Leo D'or. The laboratory tests performed by Geotex Consulting Engineers on various samples have proved that the marble on average is 99.5% pure calcium carbonate, most pure in nature and favourable for industrial applications, especially in pulp mills, pharmaceutical and chemical industries.

The company will commence development of the property using jack hammers and other manual methods to extract rough blocks for export to markets on a trial basis to introduce the marble and confirm the demand which has already been expressed to the company. The undersized will be stored at the north end of the site for future sale and shipment to industrial users.

S.P.A. 1975/1981
C. E. S. 04379
Espresso B 00011
01041. 041 0711

Tel. (059) 82.60.82 (3 linee nr. aut.)
TELEX 811148 MAR-MO I
TELEFAX (059) 82.63.69
C.F./Part. IVA 0016 289 0366

9

COMEXPO srl
Viale Corassori, 54
41100 Modena

Campogalliano li,28/09/1989.....

Ve riferimento

OGGETTO.

FF / SF

RE: LEO D'OR MARBLE QUARRY

Dear Sirs,

after examination of the marble samples shown by your partner "Leo D'Or Mining Inc.", we are herewith confirming to you that there is a strong demand of the shown types of marble in Italy and Europe.

We are furthermore expressing our interest in purchasing large volumes of the above marble on conditions that size and quality of the extracted marble correspond to market requirements and the price: are: competitive.

The purchasing would be confirmed after testing each single lot and verifying their characteristics on place. For this purpose we would like to visit you in the next months to inspect the marble quarry.

We will contact you again in the next weeks to agree the program of visit; in the meantime please accept our best regards.

Very Truly yours,

FABIO FERRI, President

MAR - MO s.p.a.

Via Madonna n. 9
41011 CAMPOGALLIANO (MO)
Cod. Fisc. / P. IVA 0010280300

Indirizzo telegrafico: MARMO - Campogalliano - Modena - Italia / Spedimento alle Poste in adempimento dell'Art. 1 del Regolamento
Unica Direzione del servizio di Postamento e Ricevimento Linea CASSINATE, LINEA MODENA
Distribuzione autorizzata dalla WORLD MARBLE di ROMA REGISTRO

Salvatori Alfredo & C. 
S.N.C.

C.C.I.A. Lucca Br
Poste Italiane SpA
Partita IVA N. 0075001045
Telex 80182 ALB

VIA AURELIA, 139 TEL. (0584) UH. 769200 - Ab. 81440
85046 QUERCETA (Lu)

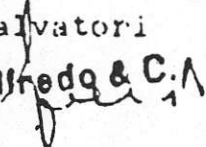
11, Nov. 3, 1971

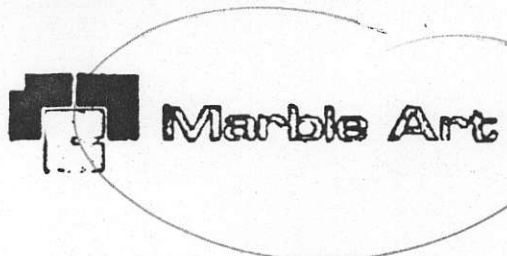
TO : Messrs. LEO D'OR QUARRY FIRING INC.
ATTY MR. Massoud Madani 670 No. Verdard

Following our meeting in Italy where you showed us the samples of white blocks and grey marble, with this letter we confirm you our interest for your product.

We are ready to purchase your blocks for the Italian market. We are willing to buy 30,000 tons as we agreed of CND \$ 300 per ton, F.O.B. Vancouver.

Best regards

Alfredo Salvatori
Salvatori Alfredo & C.A.




3610 Cornett Rd, Vancouver, BC V5M 2H2
Tele: 436-0322
Fax: 436-0277

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December 4, 1989

Leo D'or Mining Inc.
1431 Howe St.
Vancouver, BC
V6Z 1R9

Attention: Massud Madari, President

Dear Mr. Madari:

RE: Marble quarried at "Leo D'or Mining site"

Thank you for letting us have samples of marble quarried at Leo D'or Mining site.

Please take note that our co., after having viewed the samples of your marble, (black, white, grey, yellow) is interest in being supplied by your company on a steady basis. We would also be interested in distributing your products as "EXCLUSIVE DISTRIBUTOR" for British Columbia and Alberta.

Please inform us at your earliest convenience on period of availability of your products.

Best regards,

Tom De Donno

11/01

Inc. International mex

602 College Avenue
P.O. Box 7
Elberton, Ga. 30635 USA
Tel: (404) 283-4417
Service Center: (404) 283-3373
Fax: (404) 283-6867

Mr. M.S. Madari
President
Leo D'Or Mining Inc.
1431 Howe Street
Vancouver, B.C.
Canada V6Z 1R9

August 10, 1989

Dear Sir:

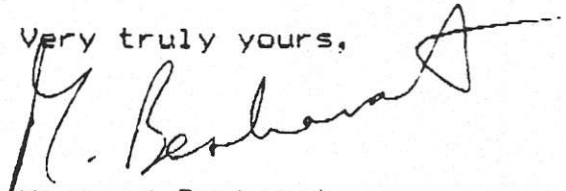
Re: Marble Samples

Following our meeting in Vancouver, I have introduced your samples of marble to our distributors and colleagues, who have been expressing a desire to buy your slabs and tile products.

As indicated, you hope to complete your line of products by July. I am prepared to proceed with sale contracts here on your behalf. I would like to know your terms of supply.

I have an approximate figure of 600,000 sq.ft. of marble slabs (Translucent White and Blue Streak in White samples) and 4,000 tiles of the same quality and colour of standard 30 x 30cm. We might have additional sales if we could have a credit line established for us.

I would appreciate it if you would inform us of your terms and conditions and date of delivery program.

Very truly yours,

Massoud Besharat
President

FINANCING

The total project cost is forecast to be \$15,158,000, composed of the following elements:

Land acquisition	\$ 60,000
Quarry assets	4,893,000
Mill assets	7,756,500
Office assets	290,500
Working capital	<u>2,158,000</u>
 TOTAL	 \$15,158,000 =====

The proposed financing consists of the following:

Western Economic Diversification	
interest free loan	\$ 500,000
Commercial loans (with government guarantee, as necessary)	11,058,000
Subrogated loans	<u>3,600,000</u>
 TOTAL	 \$15,158,000 =====

The commercial loans represent financing of equipment at 70% of cost, and financing of real estate, buildings and improvements at 50% of cost. These loans bear interest at 18% per annum for the purposes of forecasting. Repayment is projected to be over three years for the equipment and four years for the real estate loan. The Government of British Columbia has the provision of some guarantee support for the commercial loans under active consideration.

The Government loan from the Western Economic Diversification Office (WED) is interest free and is projected to be repaid in the third year of the project.

The subrogated loans are required to secure the governmental support to the financing. Under the terms of the subrogation, no repayment can be made until the government supported debt is effected in Year 5. The debt bears interest at 18% for budget purposes. The subrogated debt will include a bonus of common shares representing up to 24% of the voting capital stock of the company. The company will entertain proposals for a formula for redemption of these shares from earnings of the company. In page 13 we have projected a new approach, where we may start mining 5 marble blocks per day and export them overseas - and use the profit for building credit to order machinery for expansion of mining and building the factory as per forecasts. This will require 500,000 dollars from shareholders, and will be attainable in the 3rd month of mining.

The forecast on page 12 is based on mining 100,000 tonnes of marble per year (16 blocks per day) - cutting and polishing 40,000 tonnes into 7.5 million sq. ft. of slab and tile in the intended factory - and exporting the remaining 60,000 tonnes to factories abroad.

It costs \$65.00 per tonne to mine a block of marble (2.05 x 1.50 x 1.85) and is priced at ~~\$400.00~~ per tonne, F.O.B. Vancouver.

The cost of production of marble slab and tile is \$1.75 per sq. ft. and sells 4 - 6 dollars per sq. ft. wholesale at the factory.

W. J. D'Or

FORECASTS

The following are summary financial statements of the proposed operations:

BALANCE SHEETS
ASSETS

(000's)

	<u>Year 1</u>	<u>Year 2</u>	<u>Year 3</u>	<u>Year 4</u>	<u>Year 5</u>
Current Assets	10,106	31,348	51,643	72,829	91,157
Fixed Assets (cost)	13,000	13,000	13,000	13,000	13,000
Depreciation	<u>(1,020)</u>	<u>(3,330)</u>	<u>(5,640)</u>	<u>(7,950)</u>	<u>(10,260)</u>
Net Fixed Assets	11,980	9,670	7,300	5,050	2,740
Other Assets	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>	<u>5,000</u>
Total Assets	<u>27,087</u>	<u>46,018</u>	<u>64,003</u>	<u>82,880</u>	<u>98,897</u>

LIABILITIES AND EQUITY

Current Liabilities	511	725	557	522	465
Term Loans	7,533	6,472	3,911	1,851	0
Deferred Taxes	(14)	303	144	0	0
Equity	<u>18,056</u>	<u>29,918</u>	<u>59,391</u>	<u>80,506</u>	<u>97,432</u>
Total Liab. & Equity	<u>27,087</u>	<u>46,018</u>	<u>64,003</u>	<u>82,880</u>	<u>98,897</u>

INCOME STATEMENTS

Sales	18,728	45,651	45,651	46,651	45,651
Cost of Sales	<u>3,928</u>	<u>7,065</u>	<u>7,065</u>	<u>7,065</u>	<u>7,065</u>
Gross Margin	18,728	38,586	38,871	38,871	38,871
Admin. Expense	1,253	2,018	2,018	2,018	2,018
Financial	<u>1,502</u>	<u>2,003</u>	<u>1,594</u>	<u>1,186</u>	<u>491</u>
Net Income	15,973	34,564	35,258	35,667	36,362
Income Tax	<u>6,517</u>	<u>14,102</u>	<u>14,385</u>	<u>14,552</u>	<u>14,836</u>
Net Income	<u>9,456</u>	<u>20,462</u>	<u>20,873</u>	<u>21,115</u>	<u>21,526</u>

LEO DYOR MINING INC
 PROJECT FUNDING PROPOSAL
 WESTERN ECONOMIC DEVELOPMENT
 GOVERNMENT OF CANADA

Assumes:

Workers	85
Foremen	2
Crane Operator	1
Compressors	12,000
Generators	6,000
Jack Hammers	12,000
Drill Rods	10,000
Powder	7,500
Bulldozer	14,000
Crane	5,000

BASED ON PRODUCTION OF FIVE BLOCKS PER DAY

CASH FLOW:

	Month One	Month Two	Month Three	Month Four	Month Five	Month Six	Total
Receipts:							
Sale of Production	0	0	585,000	780,000	780,000	780,000	2,925,000
W.E.D. Loan	500,000						500,000
Shareholders	500,000						500,000
Total Receipts	1,000,000	0	585,000	780,000	780,000	780,000	3,925,000
Payments:							
Klohn Leonoff	39,297	51,768	70,691	86,264	69,075		317,094
Road Building	130,000	130,000	130,000				390,000
Road & Mining Engineering	20,000	20,000	20,000				60,000
Mine Clearing		50,000	50,000				100,000
Equipment Rental		66,500	66,500	66,500	66,500	66,500	332,500
Labour		109,375	109,375	109,375	109,375	109,375	546,875
Foremen		12,250	12,250	12,250	12,250	12,250	61,250
Crane Operator		4,375	4,375	4,375	4,375	4,375	21,875
Freight to Port		9,750	7,800	7,800	7,800	7,800	40,550
Administration	20,000	30,000	40,000	50,000	60,000	60,000	260,000
Total Payments	209,297	484,018	510,991	336,564	329,375	260,300	2,130,544
Excess	790,703	(484,018)	74,009	443,436	450,626	519,700	1,794,456
Balance Opening	0	790,703	306,685	380,694	824,131	1,274,756	0
Balance Closing	790,703	306,685	380,694	824,131	1,274,756	1,794,456	1,794,456



November 22, 1989

Mr. Massoud Shariat Madari
President
Leo D'Or Mining Inc.
1431 Howe Street
Vancouver, British Columbia
V6Z 1R9

Dear Mr. Madari:

I understand that my staff have completed their preliminary review of your business plan, and have had discussions with you concerning your request for government financing to establish a marble processing plant in Port McNeill. The export, import replacement and employment potential make this a most exciting development initiative for Vancouver Island.

I am pleased to inform you that the Management Committee responsible for the administration of the Federal/Provincial Industrial Development Agreement (IDA) has recently determined that you are eligible to apply for financial assistance under the Industrial Diversification Program. You will be receiving written confirmation of this decision shortly.

Please accept my best wishes for the success of your project.

Yours sincerely,

Stanley B. Hagen
Minister



Province of
British Columbia

Ministry of
Regional and
Economic Development

712 Yates Street
Victoria
British Columbia
V8V 1X5

April 11, 1990

Mr. Massoud Shariat Madari
Leo D'Or Mining Inc.
1431 Howe Street
Vancouver, British Columbia
V6Z 1R9

Dear Mr. Madari:

I am writing concerning your plans to establish a marble quarry and processing plant in British Columbia. We confirm that we have received and reviewed your request for Government support for your project.

It is our understanding that discussions are currently being held to confirm the levels of conventional bank financing and equity support available to assist in funding the project. Upon confirmation of the availability and levels of these sources of other funding, the Province will consider Leo D'Or's request for assistance.

The assistance to be considered by the Province may be in the form of a loan, a loan guarantee, or a combination of both. Any request for government financing would require the approval of the Provincial Cabinet.

Also, please note that government support would be subject to the normal environmental considerations for this type of business. Accordingly, it will be necessary for Leo D'Or to obtain permits from all of the appropriate regulatory agencies.

We wish you success with your plans and can assure you that we will do all we can to help facilitate the project.

Yours truly,

A handwritten signature in black ink, appearing to read "Larry Vincent".

Larry Vincent, C.G.A.
Manager
Business Finance Branch



Government
of Canada

Gouvernement
du Canada

Western Economic
Diversification

Diversification de l'économie
de l'Ouest

PO Box 49276
Bentall Tower 4
1200 - 1055 Dunsmuir St
Vancouver, B.C.
V7X 1L3

C P 49276
Tour Bentall 4
1200 - 1055 rue Dunsmuir
Vancouver (C - B)
V7X 1L3

May 15, 1990

Denise Shariatmadari
Vice President
Leo D'Or Mining Inc.
1431 Howe Street
Vancouver, B.C.
V6Z 1R9

Dear Mrs. Shariatmadari:

RE: Western Diversification Assistance to the
Leo D'Or Mining Inc. Marble Project

It was a great pleasure to meet with you last April 18th, and a review of your follow-up letter of April 20, 1990 has proved to be most interesting.

After some further telephone discussion with both Mr. Madari and yourself, as well as consultation within WD, the following points are intended to summarize the status of your application to WD, as per your request.

1. Your application of April 20, 1990 to WD constitutes a work project which is distinguished from the mining proposal already under review by the Province of B.C. The project submitted to WD relates to the same marble deposit, but the work to be done is confined to further geological investigation and sample production, in order to make commercialization possible in the immediate future, through the above noted mining project.
2. WD funding is considered for projects involving new products; new markets; new technology; new exports; or industry-wide productivity improvements. Since neither your marble product, nor any similar marble, is currently produced in Western Canada, your project would appear to meet the eligibility criteria as a new product. It is also an advantage that the eventual production would be largely for export.

.../2

Head Office
Suite 1500, Canada Place
9700 Jasper Avenue
Edmonton, Alberta
T5J 4H7

Siège social
Suite 1500, Place du Canada
9700 avenue Jasper
Edmonton, Alberta
T5J 4H7

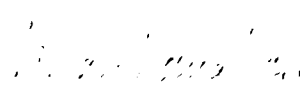
Canada

3. Potential assistance would be in the form of an interest free repayable contribution, which could not exceed 50% of the assisted project costs. Some costs are not eligible, and these would be categories such as: real estate, licensed road vehicles, management salaries, sales commissions and overhead expenses.
4. WD's role is to "top-up", not replace funding available from other sources or your own equity, so you must be able to show that you already have significant financing of your own, and from other sources.

The attached sheets summarize the information WD requires in a detailed funding proposal submission. The Klohn Leonoff proposal already provides a description of some of the work to be carried out, and the Leo D'Or Mining Inc. feasibility report includes background and marketing information. However, it will be necessary to provide a more detailed breakdown of the project costs (other than the \$317,094 specified by Klohn Leonoff) and Leo D'Or Mining inc. financial statements for the last 3 years, as well as an overall indication of the private sources of financing for the \$1 million project.

I look forward to receiving further details of this project as soon as they become available, so that WD will be able to evaluate and respond to your proposal.

Yours sincerely,


Vivian Vaughan, P.Eng.
Development & Assessment Officer
British Columbia Region

VV/bl



Bank of British Columbia
Division of Hongkong Bank of Canada
4480 West 10th Avenue, Vancouver, B.C. V6R 2H9

June 13, 1990

Leo D'or Mining Inc.
1431 Howe Street
Vancouver, BC
V6Z 1R9

Attn: Mr. M. Sharitmadari

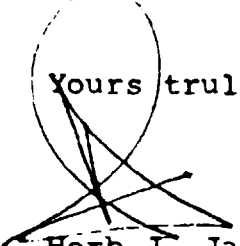
Dear Sirs:

Reference is made to several recent meetings held with you and/or Company representatives, and this letter is provided as advice to confirm the Bank's position as regards to the mining project on Vancouver Island.

While this letter is not to be construed as a formal commitment for funding, the Bank would be receptive to a formal application to say \$500,000.00 providing a matching level of funds is in place from either Company shareholders and/or any other source(s).

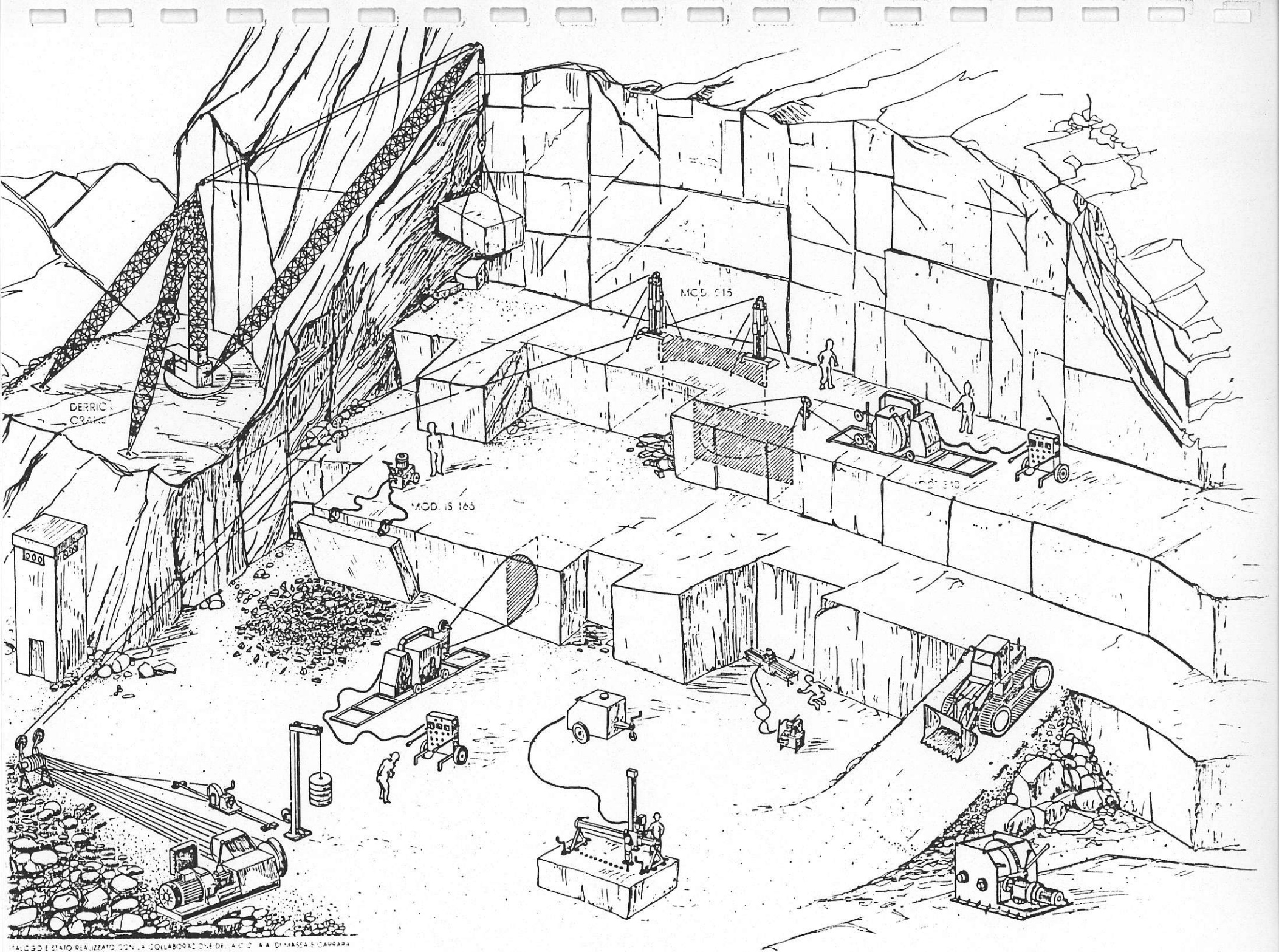
We trust the foregoing to be satisfactory and would like to take this opportunity to extend our best wishes for the project.

Yours truly,

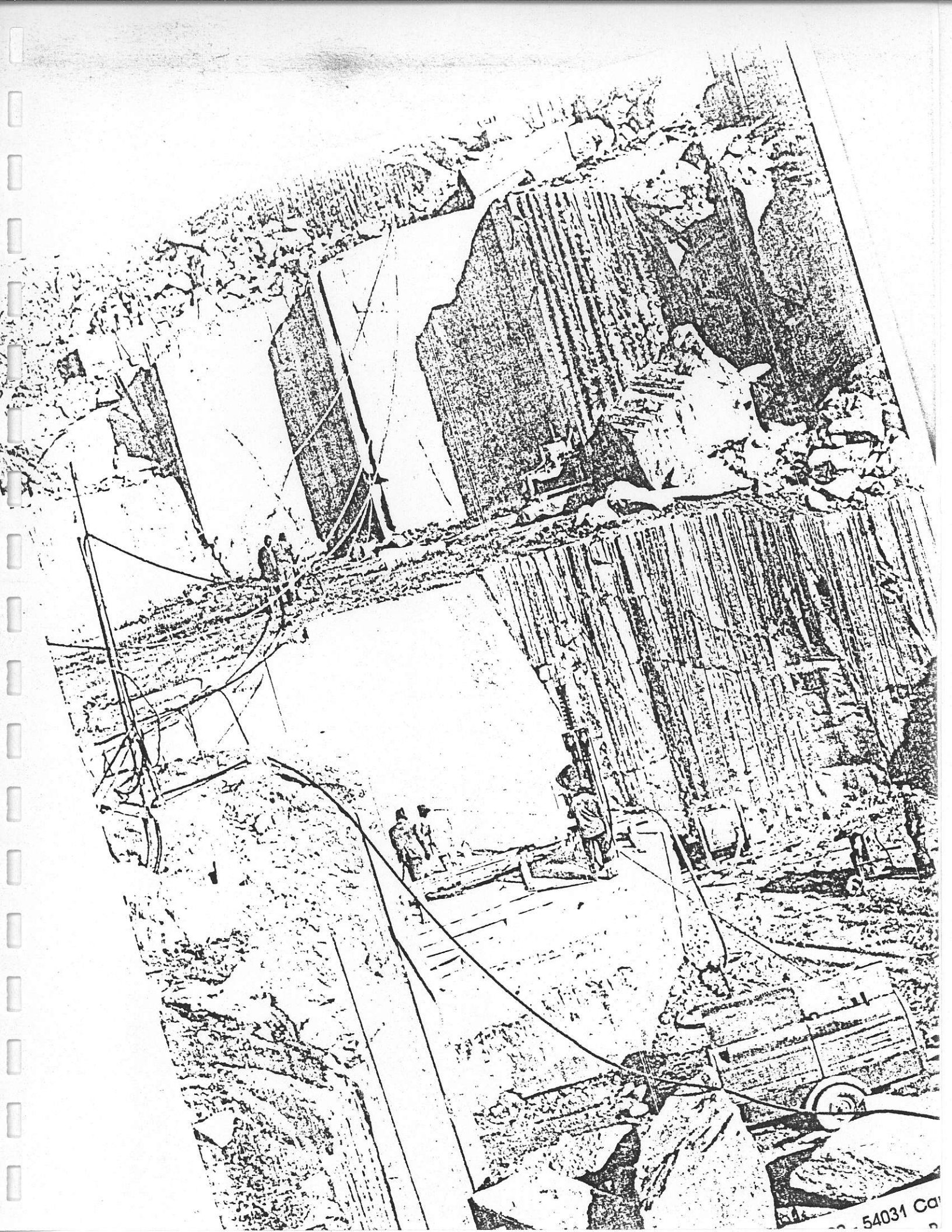


Herb J. Jamieson
Manager

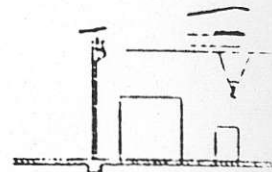
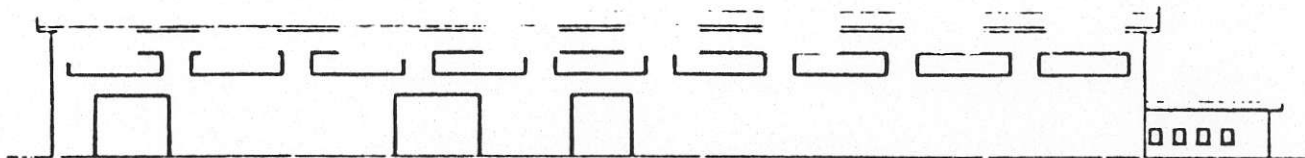
HJ/aw



FALCO È STATO REALIZZATO CON LA COLLABORAZIONE DELLA C.I.A. DI MASSA E CARPARA



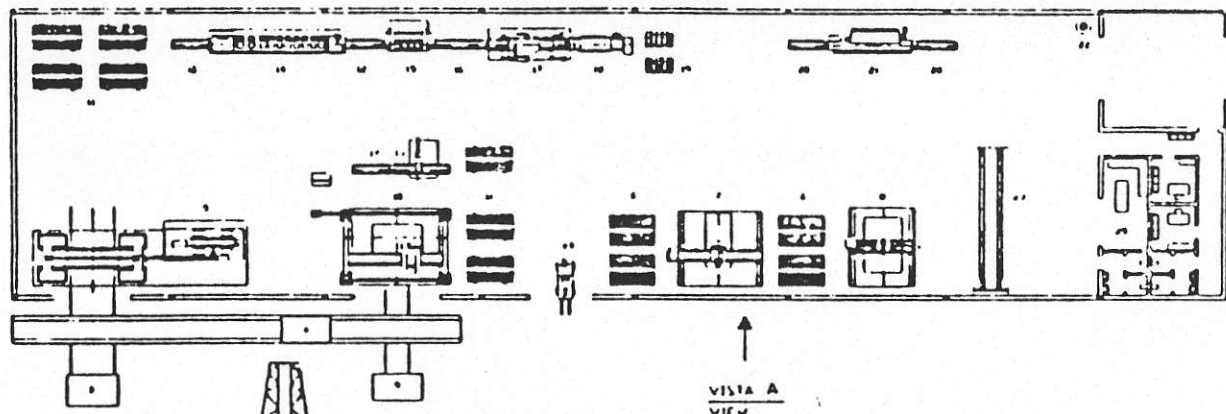
54031 Ca



VISTA A
VIEW

factory plan for one line production

5106 & 112



VISTA A
VIEW



DIAMOND BM 70-80-100

Alta produzione in minor tempo!

High productions obtained in minor time!

Haute production en moins de temps!

Elevada producción en menos tiempo!

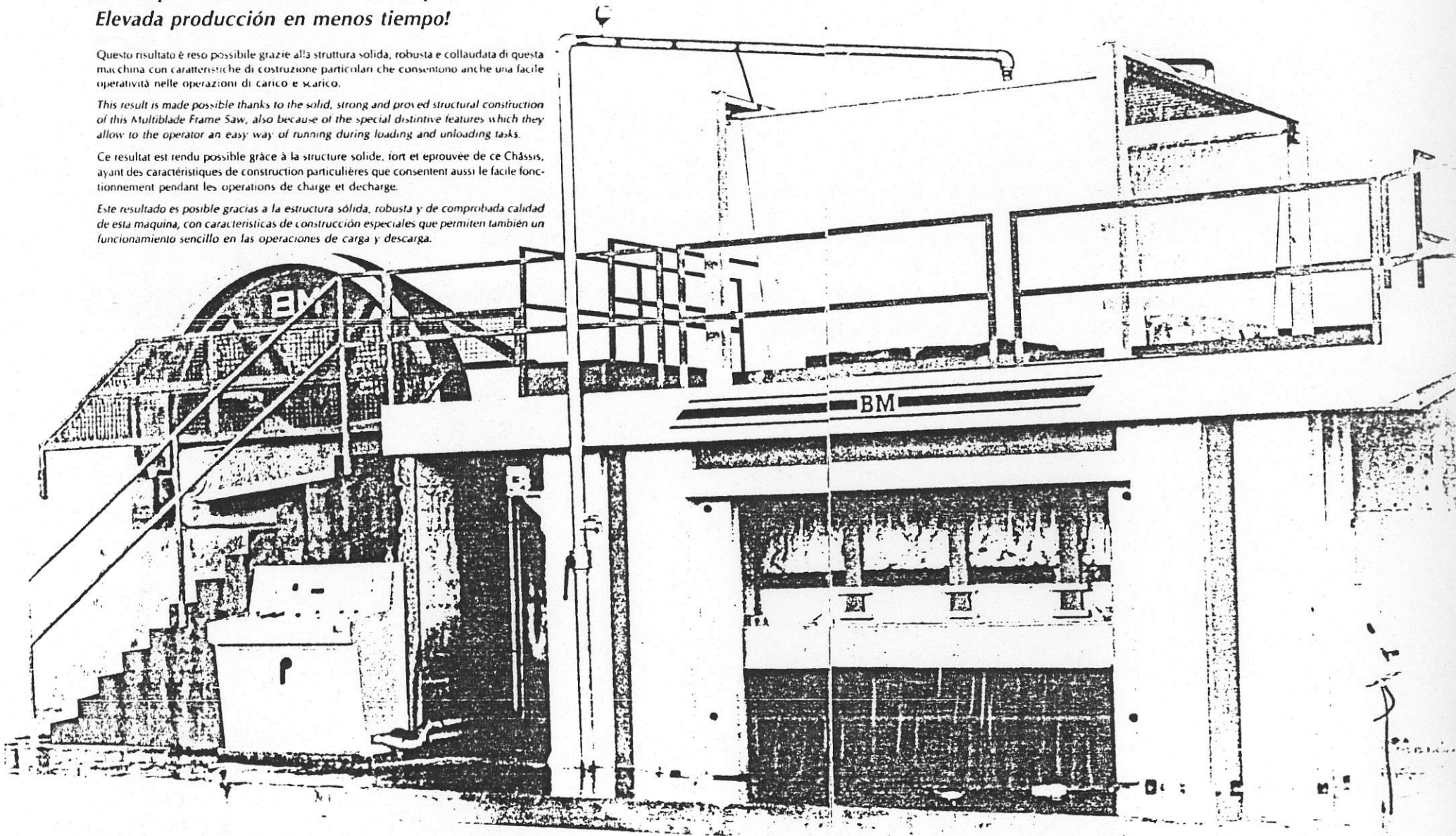
Questo risultato è reso possibile grazie alla struttura solida, robusta e collaudata di questa macchina con caratteristiche di costruzione particolari che consentono anche una facile operatività nelle operazioni di carico e scarico.

This result is made possible thanks to the solid, strong and proved structural construction of this Multiblade Frame Saw, also because of the special distinctive features which they allow to the operator an easy way of running during loading and unloading tasks.

Ce resultat est rendu possible grâce à la structure solide, forte et éprouvée de ce Châssis, ayant des caractéristiques de construction particulières que consentent aussi le facile fonctionnement pendant les opérations de charge et decharge.

Este resultado es posible gracias a la estructura sólida, robusta y de comprobada calidad de esta máquina, con características de construcción especiales que permiten también un funcionamiento sencillo en las operaciones de carga y descarga.

Gang Saw for Cutting marble blocks.



TOM...CA D...GLI...SCHI...CON...MAT...A, PER...LUCID...A, ED

AI TESTATURA SU MARMO, E RIFINITURA SU MARMO MODULARE.

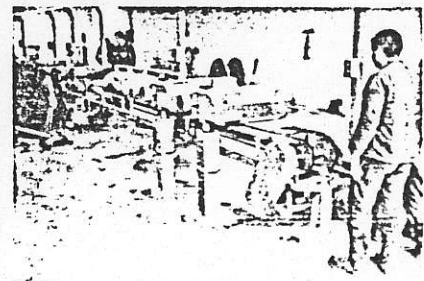
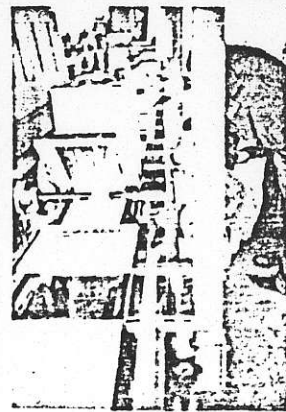
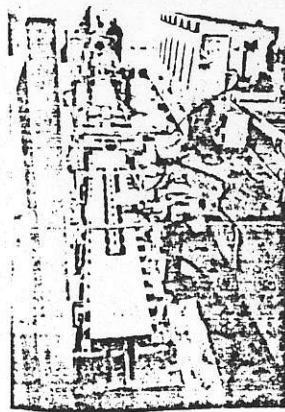
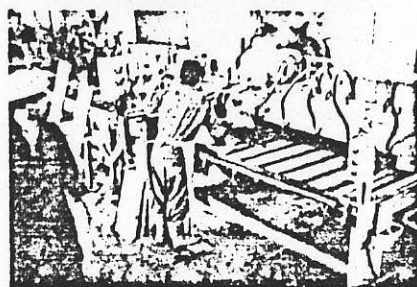
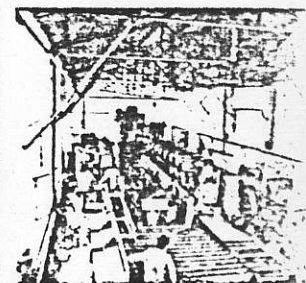
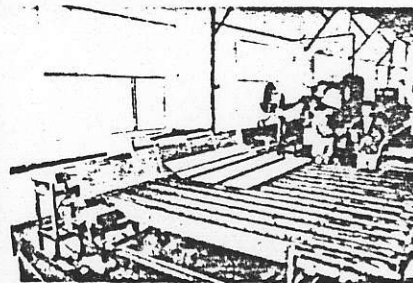
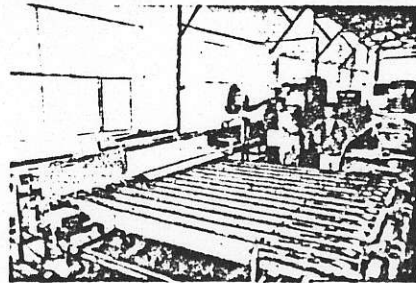
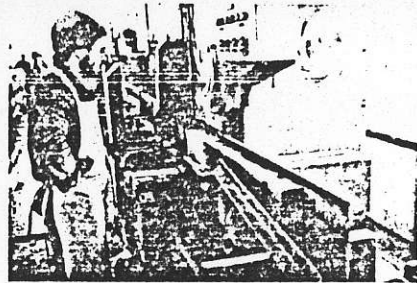
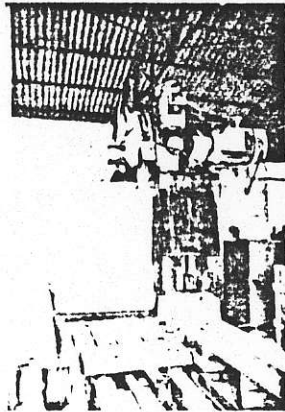
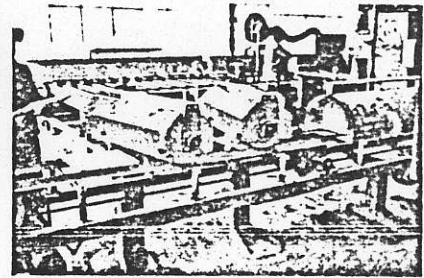
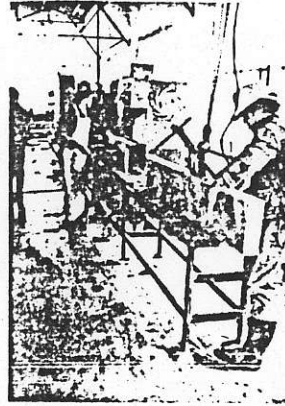
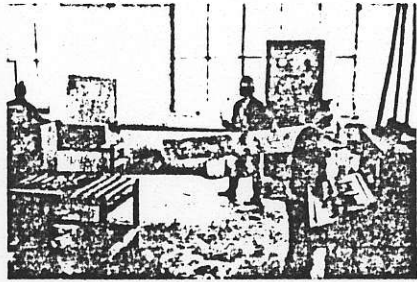
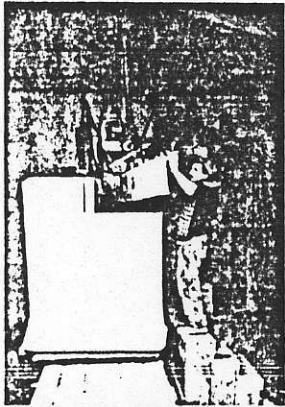
TOMATIC LINE, WITH BLOCK-CUTTER AND SPLITTING, FOR POLISHING, AND

CROSS-CUTTING ON MARBLE, AS WELL FINISHING OF MODULAR MARBLE

大理石块切割、分劈并可抛光横切

按标准型式作精加工的自动生产线。

Panel - sizing units



LINEA SC-381

Veduta dalla parte opposta col trasferitore automatico in primo piano.

LINE SC-381

View from the opposite side with automatic transfer table in the foreground.

Dati Salienti:

- Altezza taglio Tagliablocchi max. 40 cm
- Altezza taglio Scoppiatrice msx. 40 cm
- Larghezza Lucidatura max. 60 cm
- Larghezza Attestatrice max. 60 cm

Main Data:

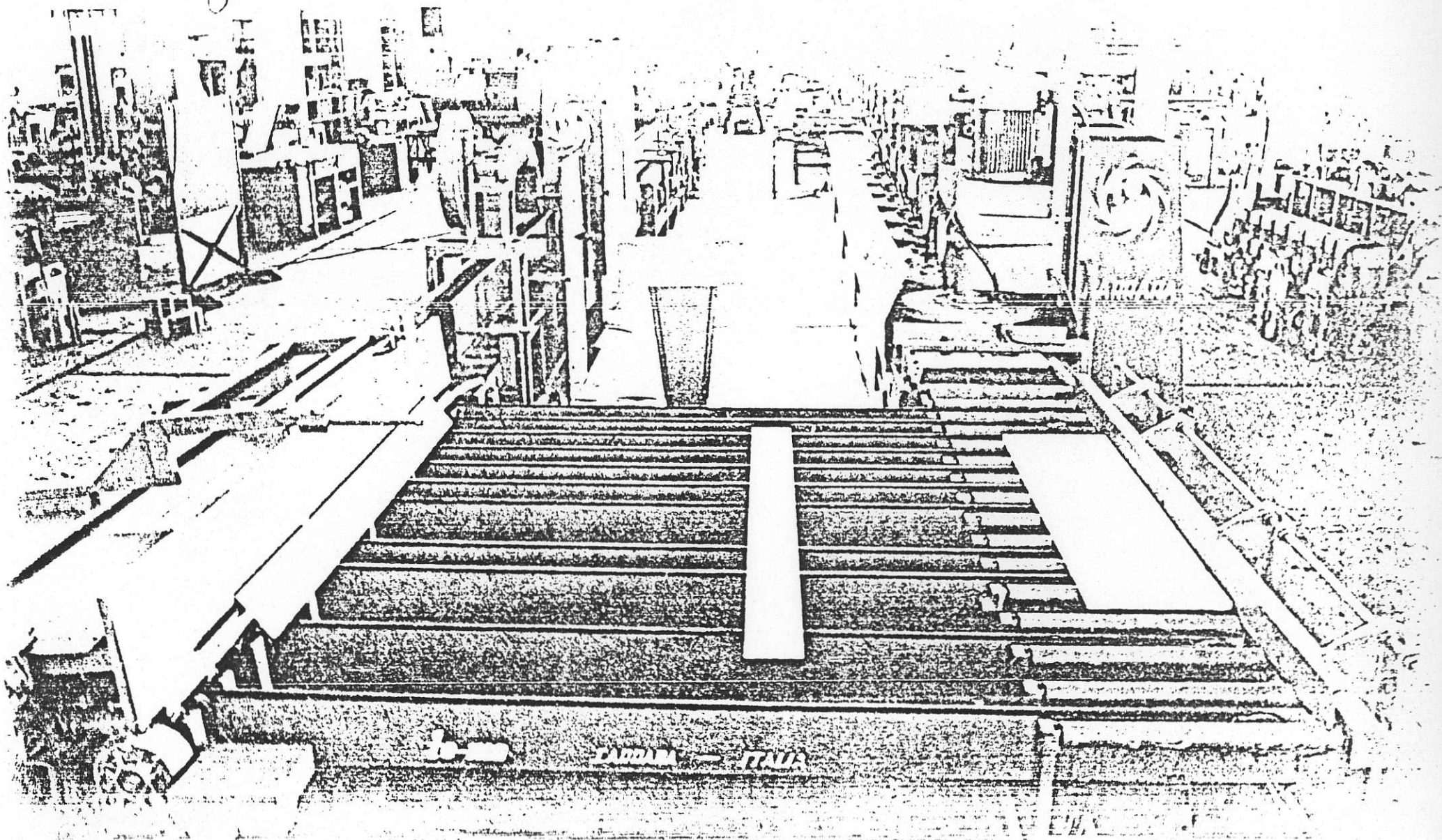
- Max. Cutting Depth of Block-Cutter is 40 cm
- Max. Splitting Depth is also 40 cm
- Max. Polishing Width is 60 cm
- Max. Cross-cutting Width is also 60 cm

SC-381型生产线从对面以自动传送器为前景的视图

主要资料

- 块料切割深度可达40公分
- 块料分离深度也可达40公分
- 最大磨光面宽60公分
- 正交切割最大宽度60公分

Polishing



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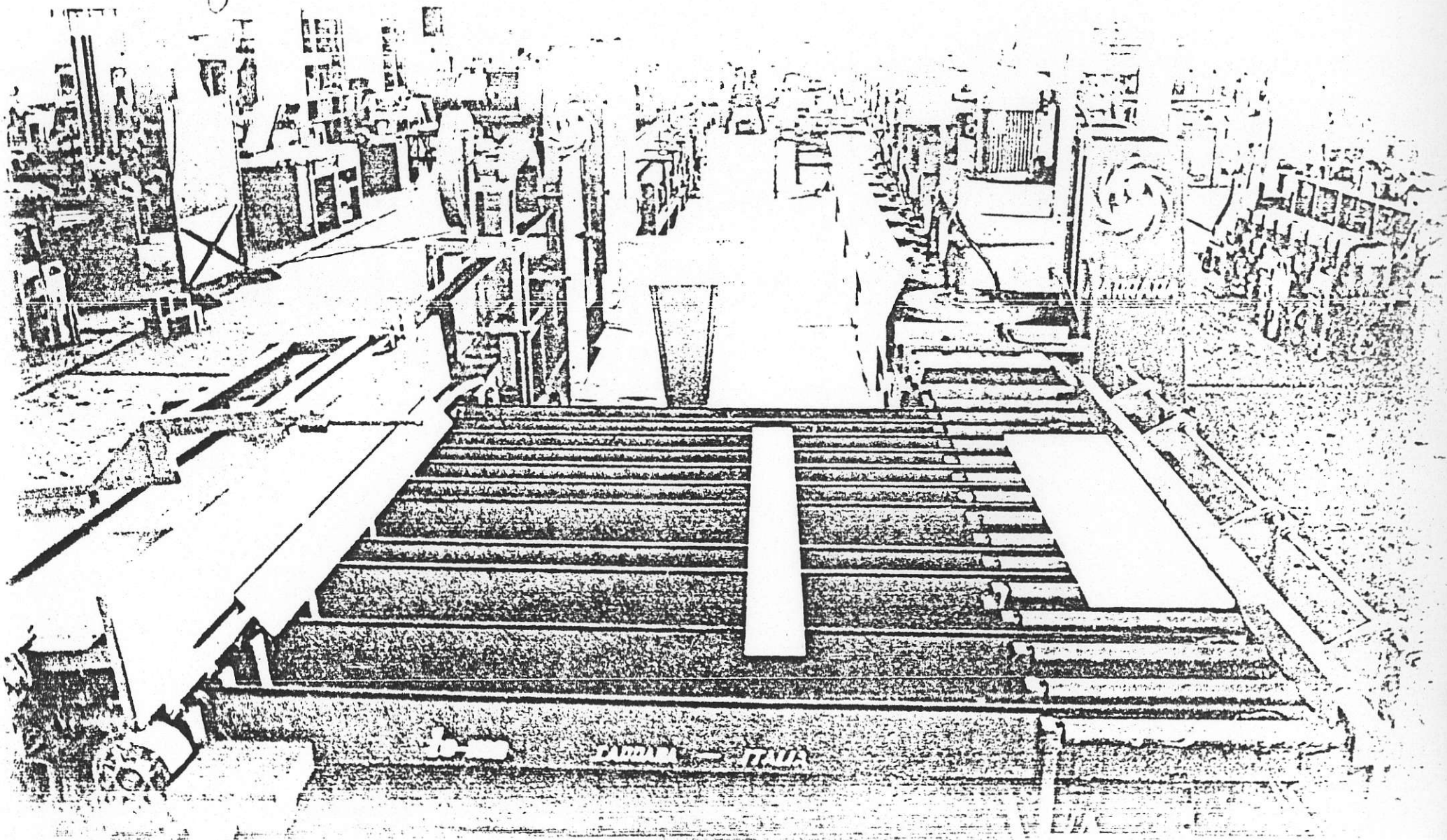
- Max. Cutting Depth of Block-Cutter is 40 cm
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Polishing



GEOLOGICAL REPORT ON
LEO D'OR PROPERTY
NIMPKISH - BONANZA
NANAIMO MINING DIVISION
VANCOUVER ISLAND
BRITISH COLUMBIA

WESTCOAST MARBLE LTD.
M.S. MADARI

OCTOBER, 1986

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M.S. MADARI

OCTOBER, 1986

1-1: LOCATION AND ACCESS

The Leo D'Or claim is located at 20.250 m. on the well graded, all season road between Beaver Cove (by the north west of Georgia Strait) and the Island Highway. This road is frequented by Crown Forestry trucks and personnel and is well kept. It is 25 km. from Beaver Cove or Highway and is about 43 km. from Port McNeill. The claims are on Map 92L-7 and at Latitude 50.27 N and Longitude 126.47 at NE end of Bonanza Lake, elevation 1000 - 3000 feet.

1-2: TOPOGRAPHY & CLIMATE

The terrain generally consists of steep slope tending towards the road, and in 3 places cut by gullies. The angle of the slope is \pm 80 degrees and from the elevation of the road to the top of the outcrop of massive marble, rises 2000 feet within a distance of 500 m.

The climate is mild and wet, and the area is seldom covered by snow. The Bonanza lake probably plays a major role in this climatology, as well as the Gulf stream in Georgia Strait.

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The climate is mild and wet, and the area is seldom covered by snow. The Bonanza lake probably plays a major role in this climatology, as well as the Gulf stream in Georgia Strait.

2: LITHOLOGY

Three formations of rock form the area under title Leo D'Or.

a - Karmustsen Formation

This formation comprises of tholeitic volcanic rocks, upto 6000 m. thick, which underlie the Quatsino marble; they are composed of pillow lava, tuff and breccia, and in some places cut through by granite intrusives. These beds were formed in upper triassic, lower karmian period. This formation covers the southern part of Leo D'Or.

b - Quatsino Formation

This formation comprises of crystalline metamorphic limestone overlaid by the abovementioned Karmustsen Formation.

The metamorphic process has been complete, forming massive and thick bedded blocks of marble. This rock covers 90% of the Leo D'Or area. In extreme south and in contact with granite bed and breccia tuff, a vein of mineral bearing quartz is exposed; also in extreme north and close to the road, intrusion of gran-diorite and quartz monzonite into the marble beds has formed sulphide ores, within the cleavages and cavities. The mid portion of the marble beds (+ 1200 m. long) are intact, and appear to be white, while within, the marble close to the mineralized section tend to have creamy, rusty traces penetrating the marble - but they are less than 10% of the total area.

c - Island Intrusions - Bonanza Group

The Bonanza Group are in many places mixed with the Island Intrusions but right in the north of Leo D'Or, they are quite distinct. While the eocene section

into which fill up the gap between the layers of intrusives are surfaced as black argilite (west of the lake), the Bonanza volcanics are exposed in forms of granite (potash feld spar, quartz) dykes. It is believed that both formations which overlie the marble beds are about 150-185 million years old and the tectonic activities were violently influenced by plutonic eruptions.

2-3: PHYSICAL AND CHEMICAL PROPERTIES OF MARBLE

Although the samples drawn from the Leo D'Or marble deposit were obtained from the surface, but due to compaction and density of the rock, the results have been highly satisfactory.

The samples were drawn by the personnel of the Ministry of Energy, Petroleum and Mines, and tests were performed by Laboratory of the Ministry of Transportation & Highways.

CHEMICAL ANALYSIS - LEO D'OR

<u>Sample</u>	<u>Ca O</u>	<u>Mgo</u>	<u>Inso.</u>	<u>R2O3</u>	<u>Fe2O3</u>	<u>Mno</u>	<u>P2O2</u>	<u>S</u>	<u>Ign. loss</u>	<u>Ho 105C</u>
Leo D'Or	55.10	0.10	0.96	0.49	0.06	0.01	0.03	0.07	43.54	0.13

PHYSICAL ANALYSIS - LEO D'OR

<u>Sample</u>	<u>Modulus of Rapture(MPA)</u>	<u>Bulk Specific Gravity</u>	<u>Absorption</u>	<u>Compressive Strength</u>
Leo D'Or	7.46	2.71	0.10	15,800 Psi

AUG 15 1989

CHAPTER 3 - RECOMMENDATIONS

3-1: QUARRY INVESTIGATION

As shown in the Geo Map, it is recommended that an area within km. 20.500 to 21.200 be selected and the bush and the surface rocks be removed for an area of 20 m. along the road to road elevation and move 20 m. into the facis - the rocks should be studied for compaction (Hammer Sound Method) and color - if desirable, large blocks be prepared and shipped.

It is estimated that 800 cubic m. of rocks will be displaced, and it is my belief that more than half of them will be useable. It is recommended that no blasting be applied and if absolutely essential, then gun powder should be minimally used - use of jacks is quite desirable. This operation if weather allows, will take 30 working days.

3-2: MINERAL INVESTIGATION

The following are recommended for mineral investigations:

- a) An accurate grid be established on the site with east-west base line and north-south tie lines.
- b) A VLF electromagnetic survey over the new grid and a
- c) Comprehensive geo-mapping and geo-chemical analysis corresponding to the grid line be carried out.
- d) If concentrated mineral anomalies are found, core drilling and sampling for analysis and evaluation is recommended.

M.S. MADARI

Geophysical Works

1 - VAE Electromagnetic = \$2,000 - 3,000

Leo D'Or Marble

Chemical Analysis

Sample Name of Claim		CaO	Mgo	INsol	R2O3	Fe2O3	Mno	P2O3	S	Ing.Loss	H.O. 105 c
Leo D'Or	1	55.10	0.10	0.96	0.49	0.06	0.010	0.03	0.07	43.54	0.13
	2	55.06	0.12	1.08	0.16	0.05	0.006	0.01	(0.01)	43.56	0.01

Physical Analysis

Sample Name of Claim		Modulus of Rupture (MPA)	Bulk Specific Gravity	Absorption	Comprehensive Strength
Leo D'Or	1	7.46	2.71	0.10	15,800 PSI
	2	7.52	2.70	0.11	14,900 PSI

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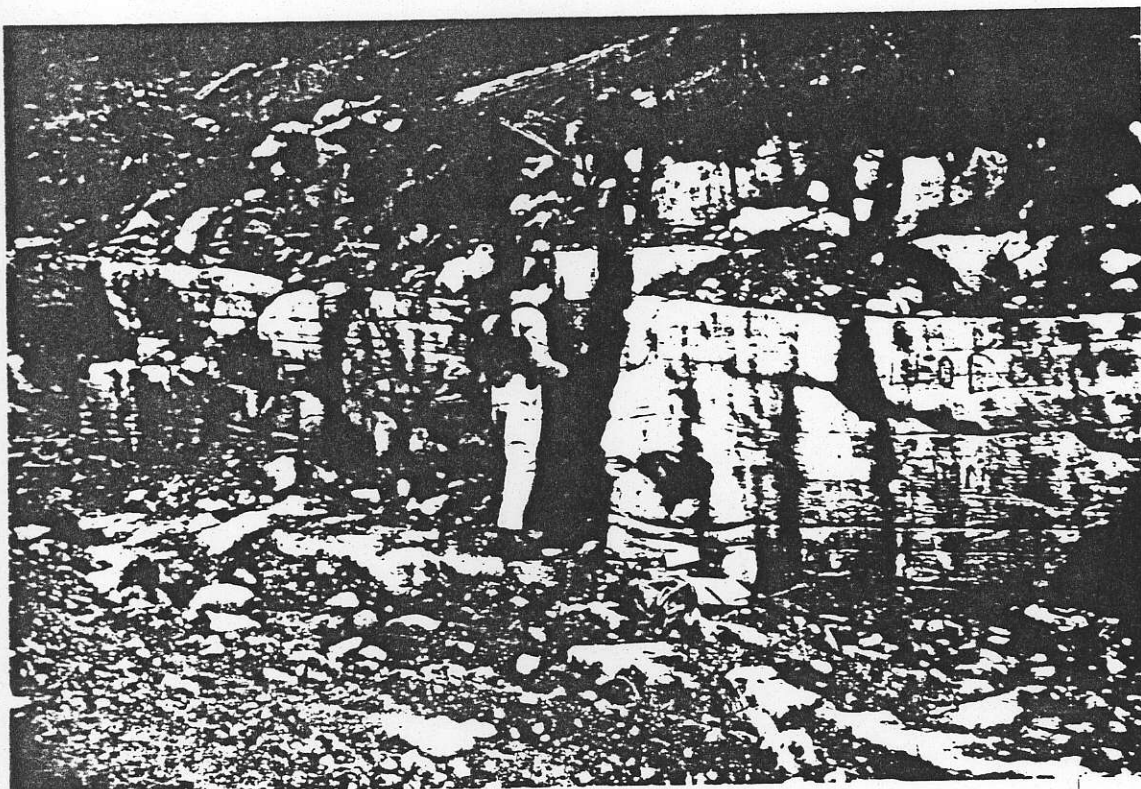
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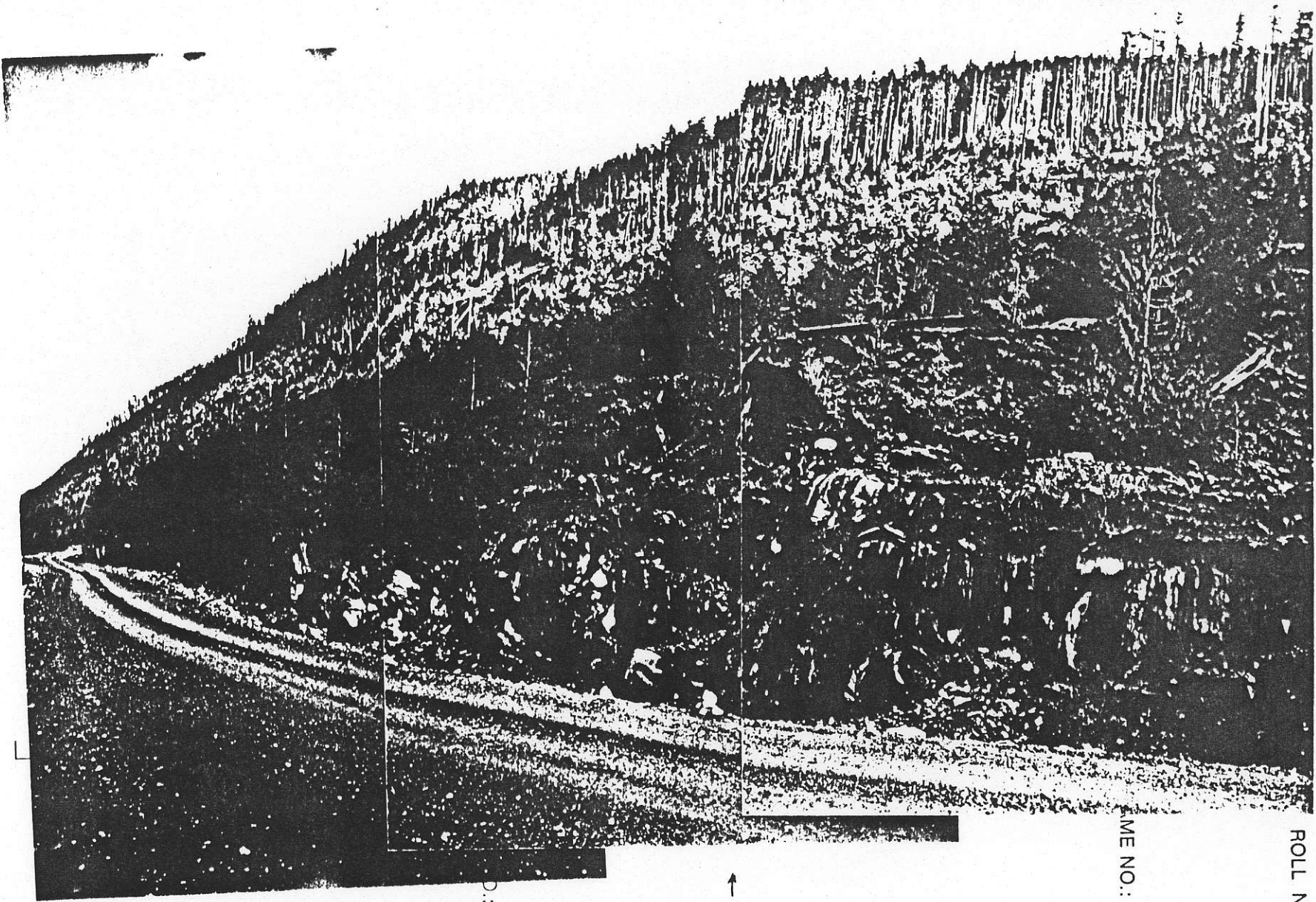
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BANDING BETWEEN LH 3&4
ON ROAD



FRAME NO.:

BANDING AT STATION ZERO
OPPOSITE 21 KM MARKER



PROJECT NO.:

DATE:

ROLL NO.:

TIME NO.:

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CHANGE PT #4
" 20 " 31 " 22

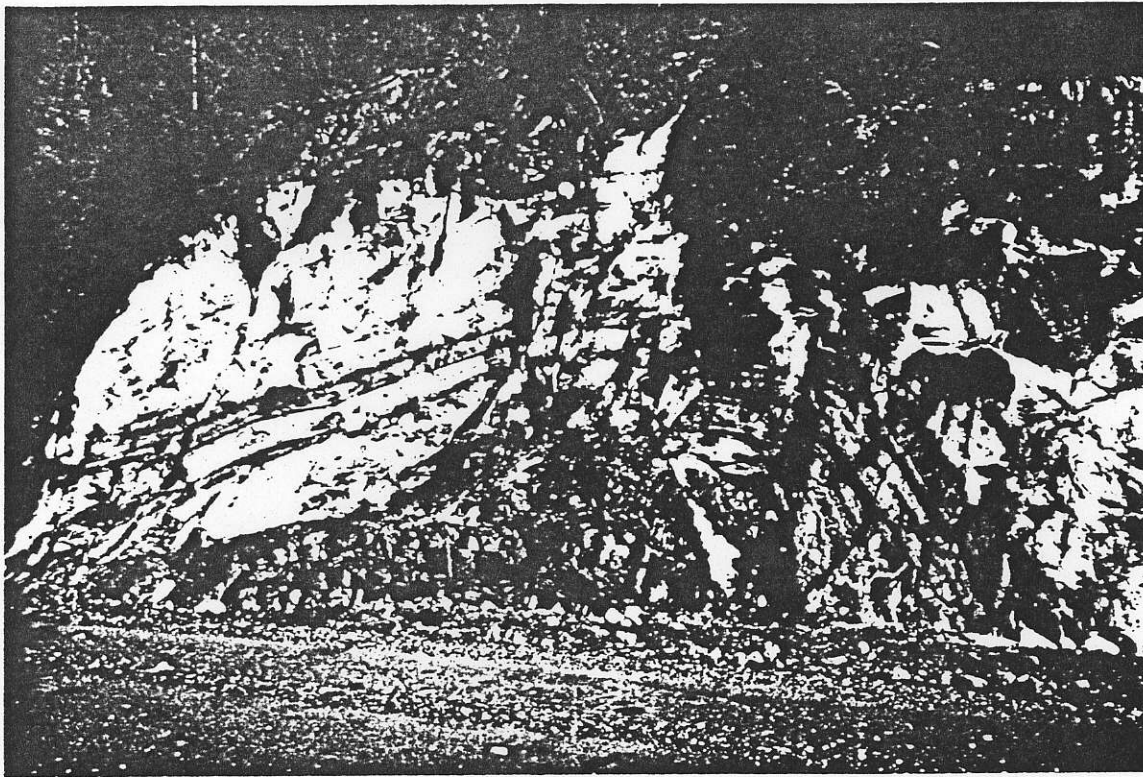
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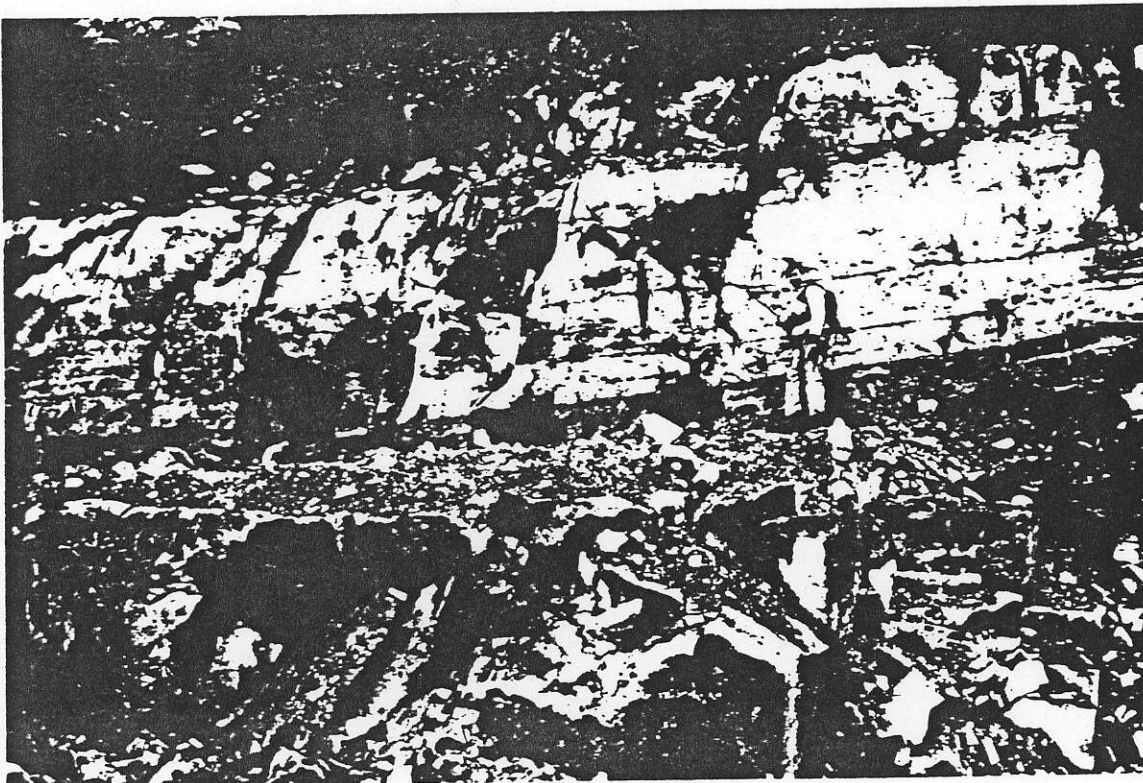
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NO.:

FOLDED
BANDING

4A



NO.:

DARK GRAY
BANDING
N 61° W
37°

5A

X

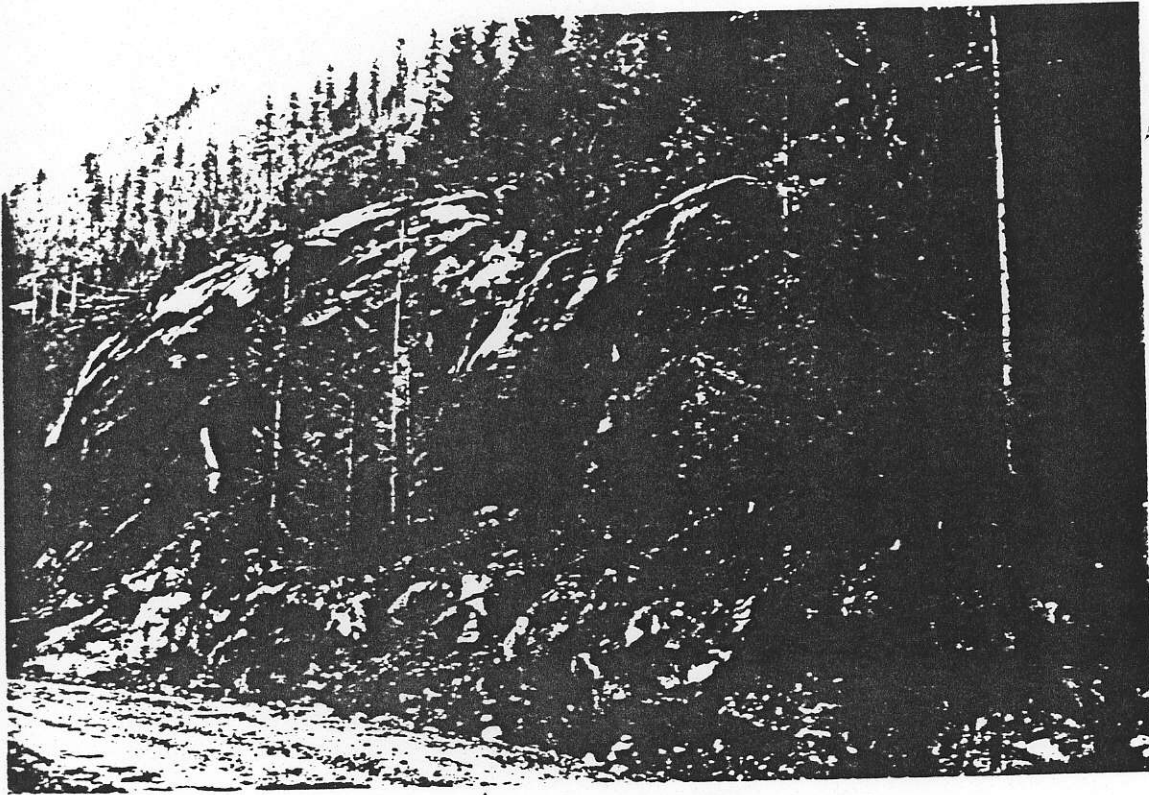


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CAVE # 1 , NOTE VARILBKE BANDING



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 CAVE # 2

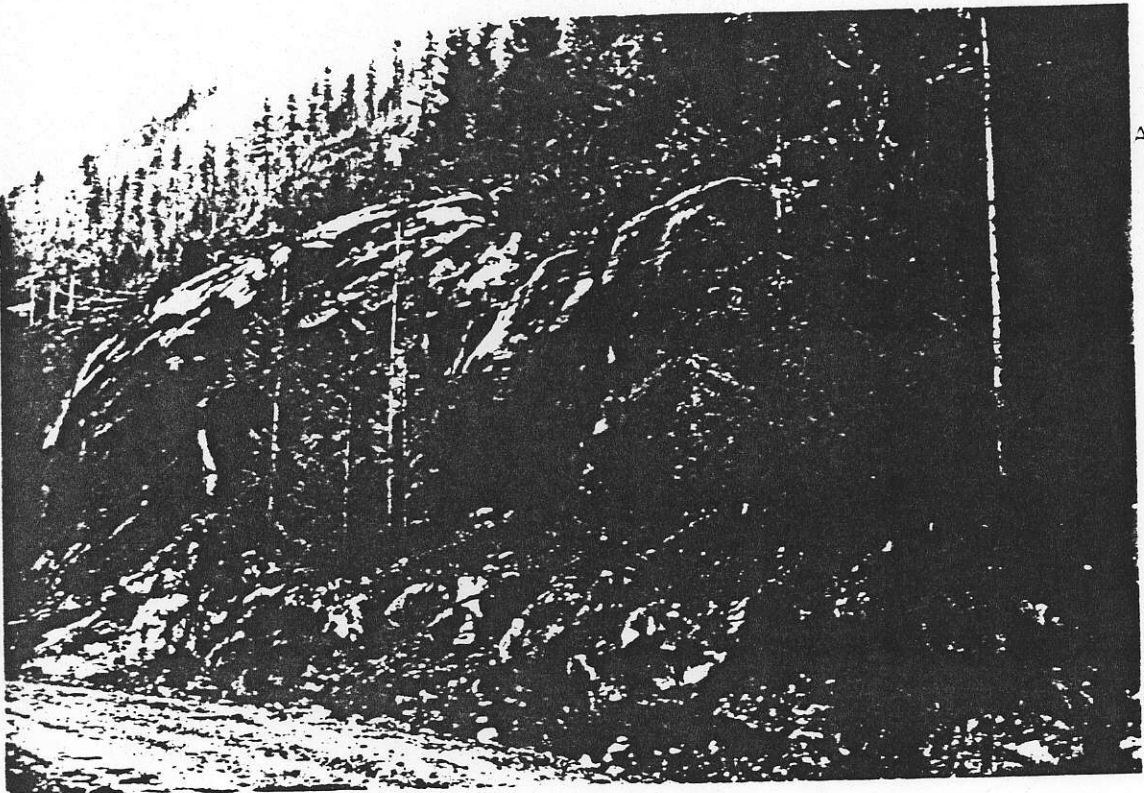


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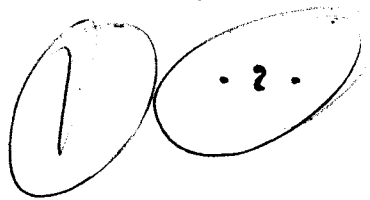
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CAVE # 1 , NOTE VARIABLE BANDING



NAME NO.:

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 CAVE # 2



April 8, 1988

FIELD WORK

The field work consisted of detailed geologic mapping and sampling. Traverse lines were run approximately east from the edge of the existing Crown Forest logging road using compass and topofil chains. The traverse lines were spaced approximately 50 m apart as measured along the Crown Forest road. Mapping stations were located along each traverse line at outcrops. Rock chip samples were taken at all stations and taken back to our Richmond laboratory for detailed colour evaluation and further laboratory testing. A descriptive note was made between stations when significant change in rock colour or rock type were noticed.

A base map was prepared using the eastern edge of the Crown Forest road as a base line. The road alignment and road width were surveyed using a Brunton compass and topofil chain line. A B.C. Hydro power line which runs approximately parallel to, and between 80 m to 110 m east of the road, was located on the base map by triangulation.

The road alignment, power line and station locations are shown on Drawing D-1002. Field descriptions of the rock observed at each station are included on Drawing D-1002.

Initially, the geologic mapping was intended to cover the entire claim area shown on Drawing B-1001. However, snow prevented exploration of the higher eastern parts of the property. Following discussions with Mr. Jim Stewart at the site, the areal extent of the field mapping was reduced to the area shown on Drawing D-1002.

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3. GENERAL GEOLOGY

The claim area is underlain for the most part by either Upper Triassic age limestones of the Quatsino Formation or Jurassic age granodiorites of the Island Intrusions. Discontinuous dykes or sills of basalt of unknown age were frequently observed intruding the limestone.

The limestones have been metamorphosed by the intrusions of the granodiorite and recrystallized to a marble.

1 COLOUR AND GRAIN SIZE VARIATIONS

The marble varies in colour from a very light grey to a dark grey or almost black. In some areas the colour varies gradationally and appear to be mottled grey and white whereas at other sites, distinct bands of colour varying from several centimetres to several metres in width were observed. The bands vary in colour from very light grey to black. The contacts between colour bands vary from very sharp to gradational. The orientations of the colour bands vary from horizontal to near vertical.

The grain size of the marble varies from fine to coarse grained. The majority of the marble (approximately 75%) is medium grained. The very dark grey marble was predominantly fine grained, while most of the coarse grained texture observed was contained in the very light grey marble.

3.2 WEATHERING

All of the geological mapping, with the exception of the interior mapping of two caves, was done on surface exposures of marble. No drilling was undertaken at this time. Consequently, most of the rocks observed were weathered to some degree.

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Crevice karst is present throughout the claim area. The crevices, which follow joints or faults, may be up to 1 to 3 m wide and 3 to 15 m deep. Generally the crevices extend laterally for up to 15 m.

Caves were observed at two locations along the existing Crown Forest road. The caves were explored for a distance of 8 m and 25 m respectively and the cave outlines are shown on Drawing D-1002. Both caves could not be explored to their source due to narrowing of the passages but are assumed to end either at sinkholes or crevices. The larger of the two caves explored ends very close to the location of a wide deep crevice mapped on the surface. Both caves were dry at the time of exploration.

Springs were observed at several spots within the mapped area. One major spring flowed from rubble at an estimated rate of 20 to 30 gpm. The location is shown on Drawing D-1002. Other springs, which were little more than trickles, appeared to be flowing along and exiting from joints in otherwise massive blocks.

STRUCTURES

Bedding in the marble has a regional dip of approximately 20°. The strike varies considerably. Locally, the beds are folded into tight synclines or anticlines, the limbs of which dip locally as steeply as 40° to 60°. The fold axes vary in plunge from 0° up to 65°.

A major fault has been mapped by Muller et al. (1974) running north-south through Bonanza Lake. Minor faults, probably sympathetic to the Bonanza Lake fault, were observed running east-west at several outcrops along the road. Movements on the small faults, quantified by offsets in the marble banding, vary from 3 to greater than 1 m. The faults are generally steeply dipping to both the north and south.

Faulting and folding were observed frequently in the northern third of the mapped area and were infrequently observed in the south.

Joints in the area are generally steeply dipping. The strike of joints varies from parallel and perpendicular to the slope (parallel and perpendicular to the main fault in Bonanza Lake) to 30° to 60° from slope directions. Joint spacing varies from several centimeters to as much as 10 m. Closely spaced joints form blocky outcrops while widely spaced joints form massive outcrops. Massive or blocky outcrops occur randomly within the mapped area.

3.5

INTRUSIVES

The major intrusive which is believed responsible for the marblization of the Quatsino limestone was observed at approximately marker 22 km, south of the Leo D'or claim area. The rock exposed on the road is a medium grained, medium to light grey granodiorite.

Dykes of basalt rock were observed throughout the mapped area. The dykes vary in thickness from 30 cm to several metres. The majority observed are approximately 60 cm thick. The dykes vary from vertical to almost flat lying. All are discontinuous and could not be traced for more than 10 to 15 m.

LABORATORY TESTING

Chip samples of marble have been submitted to Geotex Consultants for thin section analysis and X-ray diffraction. The results have not yet been reported.

A single sample of marble was dissolved in concentrated hydrochloric acid in the Klohn Leonoff laboratory. Approximately 97% to 99% of the sample by weight was completely dissolved within several minutes. The residue was dried and examined under a hand lens. The remaining residue (2% to 3% by weight) consisted of an unidentified white mineral and iron

particles. The iron was estimated visually to be one half of the residue by volume. Additional testing is underway to provide a range of iron content and identify the nature of the residue.

PRELIMINARY CONCLUSIONS

Prior to the start of field work, Klohn Leonoff was requested by Mr. J. Stewart to identify, if possible, areas of consistent colour within the mapped area.

A single preferred site approximately 160 m long x 100 m wide (approximately 4 acres) has been identified for further evaluation. The outline of the area is shown on Drawing D-1002. The site consists of very light grey to white marble, with varying amounts of iron staining. Very little colour banding was observed within this area. The majority of the rock is massive although some areas are blocky and dissected by joints. The area is close to the road and is considered accessible. Crevice karst and springs were observed within this preferred site. However, there does not appear to be any site within the claim which does not contain karst.

The overall slope of the ground within the identified area is 30°, although individual faces as steep as 45° are present.

A volume of marble available within the area of consistent colour has been estimated, assuming that the rock at depth is similar to that observed on the surface, and that the average ground surface slope over the site is 30°. We have further assumed that rock waste due to close joint spacing or karst will be 50% and that quarry slopes will extend up at approximately 60° from the outline of the preferred site as shown on section A on Drawing B-1003. We estimate that a rock volume of 240,000 m³ is potentially available for quarrying. Assuming a unit weight of 2752 kg/m³ (172 psf) the total tonnage available for quarrying is

660,000 tonnes. Volume will vary depending upon the design quarry slopes eventually determined.

Development of a marble quarry at the Leo D'or claim area is considered to be technically feasible. Blocks of marble will be removed by either very light explosive or wedging by expanding cement and should not therefore interfere with the operation of the existing B.C. Hydro power line. However, support of the transmission towers on the perimeter of the quarry will require closer examination at a later stage.

Groundwater at the site is expected to be concentrated in karst channels at a variety of depths. The actual flows cannot be easily determined prior to development but are not expected to cause insurmountable problems.

Access to the preferred site shown on Drawing B-1001 will be relatively convenient. We understand that a written road use agreement has been granted by Crown Forest Industries for use of its private logging road.

FUTURE WORK

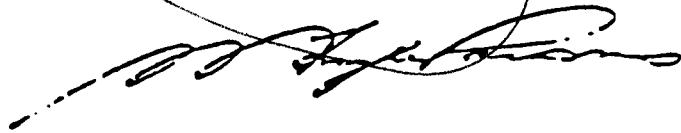
Additional field work in the form of drilling is recommended to assess the variation in colour and the variation in iron content of the subsurface marble.

Samples recovered should be subjected to ASTM tests for strength and abrasion resistance. In addition, accelerated weathering tests should be conducted on fresh samples, particularly samples with iron particles, to determine the reaction and acceptability of weathering with respect to the product.

April 8, 1988

We recommend that the White Mountain Marble Corporation approach B.C. Hydro to determine what limitations, if any, would be imposed by Hydro for future quarry developments in the vicinity of the existing power line.

Yours very truly,
KLOHN LEONOFF LTD.



S.E. Scott E. Broughton
Project Engineer



Iain G. Bruce, P.Eng.
Project Manager

Encl.
Drawing B-1001 - General Locations
D-1002 - Geologic Map
B-1003 - Schematic Section A

IGB/lid

REFERENCES

Muller J.E., Northcote, K.E. and Carlisle, D. 1974. Geology and Mineral Deposits of Alert Bay - Cape Scott Map area, Vancouver Island, British Columbia. Geological Survey of Canada, paper 74-8, 77 pp.



KLOHN LEONOFF
CONSULTING ENGINEERS

Our File: PB 3942 0101

May 2, 1988

White Marble Mountain Corporation
220 - 7525 King George Highway
Surrey, British Columbia
V3W 5A8

Peter Lightfoot

Mr. J.D. Stewart

Laboratory Test Results and Additional
Photographs for Leo D'Or Claim Area
Bonanza Lake

Dear Sir:

Further to our letter dated April 8, 1988, providing you with a summary of the field observations and a preliminary evaluation of the Leo D'Or marble claim at Bonanza Lake, we are enclosing the results of laboratory tests recently undertaken on 11 samples of marble and one sample of intrusive dyke rock. The samples were tested by Geotex Consultants Limited to determine the mineralogy of the rock. The mineralogy was determined using X-ray diffraction, oil immersion tests or thin section analysis. Two copies of the Geotex report dated April 18, 1988 are attached. Detailed petrographic descriptions of each sample are enclosed in the Geotex report. A summary of the results are given below.



The X-ray diffraction tests indicate that the marble consists almost entirely of calcite (99 1/2%) with only very minor traces of quartz, chlorite or muscovite present. No dolomite was detected. All samples when crushed for X-ray diffraction were described as fetid. A strong sulphurous smell was previously reported by Klohn Leonoff staff to be present in some rock samples.

Oil immersion tests were conducted on samples of reddish brown prismatic crystals previously described as rods. The mineral has been identified as goethite, an iron oxide which has formed as a result of weathering. The goethite is derived from a former iron bearing mineral of unknown composition.

Three samples of marble were prepared for thin section analysis. Minor quantities of opaque minerals, probably sulphides, were noted in thin sections of marble examined from station 24-7 and block sample 1. The marble grains were observed to be poorly interlocked in samples from stations 21-6 and 24-7 examined by thin section. The samples with poor degree of interlock were noted to be friable prior to testing. The poor

May 2, 1988

degree of interlock may be solely the result of weathering caused by proximity to the ground surface. However, additional thin section analysis is recommended for samples recovered at depth by drilling during the next phase of claim evaluation. The deeper samples will require strength testing as previously recommended in our letter of April 8, 1988.

In addition, as requested, please find enclosed three full copies of a set of photographs taken by Klohn Leonoff staff during the week of March 21 to March 25, 1988 at the Leo D'Or marble claim.

Should you have any questions with respect to the results of the laboratory testing please do not hesitate to call.

Yours very truly,
KLOHN LEONOFF LTD.



Iain G. Bruce, P.Eng.
Project Manager

Encl. - Photographs (3 sets)
- Geotex report (2 copies)

IGB/ld

TABLE 1

JOB 5220 Z1

UPDATED APRIL 25, 1989

**BONANZA LAKE, BRITISH COLUMBIA
LEO D'OR MARBLE CLAIMS**

PROPOSAL FOR ENGINEERING SERVICES

PHASE I

TASK 1. PROPERTY SURVEYING AND GRID LAYOUT

<u>John Leonoff Personnel</u>	<u>Rate</u>	<u>Estimated Hours</u>	<u>Sum</u>
Project Manager - I. Bruce	\$80.20	8	\$641.60
Project Engineer - M. Davies	\$53.36	8	\$426.88

Disbursements

McElhanney Engineering Services Ltd. (Campbell River)

-mobilization and setup =	\$1,800
-daily rate (2 man crew, all inclusive) =	\$730
-estimated days to complete 20 km of line =	25
-sum of above items =	\$20,050

ESTIMATED COST OF THIS TASK \$21,118

TASK 2. GEOLOGICAL MAPPING

Klohn Leonoff Personnel	Rate	Estimated Hours	Sum
Project Manager - I. Bruce	\$80.20	96	\$7,699.20
Project Engineer - M. Davies	\$53.36	96	\$5,122.56
<hr/>			
Disbursements			
Accommodation and Meals	\$1,000		
Travel	\$2,288		

ESTIMATED COST OF THIS TASK \$16,110

TASK 3. GEOPHYSICAL SURVEY

Klohn Leonoff Personnel	Rate	Estimated Hours	Sum
Project Manager - I. Bruce	\$80.20	8	\$641.60
Project Engineer - M. Davies	\$53.36	8	\$426.88

Disbursements

White Geophysical Inc.

- perform 4 lines x 1.5 km. of 2-way expanding Wenner Array
Induced Polarization Survey

- perform 4 x 1.5 km. lines of Magnetometer Survey

- mobilization and demobilization

- interpretation of data

- estimated cost of all above = \$10,000

ESTIMATED COST OF THIS TASK \$11,068

TASK 4. REPORTING

Kohn Leonoff Personnel	Rate	Estimated Hours	Sum
Senior Reviewer - M. Parsons	\$100.00	8	\$800.00
Project Manager - I. Bruce	\$80.20	40	\$3,208.00
Project Engineer - M. Davies	\$53.36	40	\$2,134.40
Drafting - D. Tisdale	\$59.16	40	\$2,366.40
Secretarial - L. Davidson	\$38.33	20	\$766.60
Disbursements			\$500.00

ESTIMATED COST OF THIS TASK \$9,775

TOTAL ESTIMATE FOR PHASE I \$58,072

ANALYSIS OF MARBLES,
ANANZA LAKE, VANCOUVER ISLAND

ANALYSIS OF MARBLES,

ANANZA LAKE, VANCOUVER ISLAND

consulting Engineers, 10180 Shellbridge Way,
the Leo D'Or marble claim which is being
tion. The petrography and mineralogy of the
of partial or complete X-ray diffraction
crushed grains from 2 samples, and petro-
samples.

light grey weathering, white to medium grey
weathered surface. Nearness to the weathered
position of the samples, but it will affect the
The marble samples consist of approximately
calcite grains ranging from 0.5 to 2 mm in
quartz, and probably chlorite, talc and/or
samples which were crushed are fetid, and as
this latter observation may be a result of
the outcrop surface. Two of the samples are
by weak to concentrated HCl. They are
may have been altered by the HCl but were
apolite, a common contact metamorphic
The fifth sample comes from a narrow meta-

Peter B. Read
April 18, 1988

the presence or absence of quartz. Standard thin section examination was carried out on four samples. Two samples were crushed and the minerals examined under a petrographic microscope using immersion oils of known refractive indices.

3. DESCRIPTION OF SAMPLES:

The mineralogy of the samples, and the method of determination are summarized in Table 1. The results show that the samples are more than 99% calcite, dolomite is absent, quartz and layer silicates total about ½%, and opaque minerals are less than ½%. Descriptions of the samples examined in thin section and under oil immersion follow.

(a) Sample BLK 1:

White, medium grain (1-2 mm) slightly friable, marble with very minor limonitic staining associated with thin streaks of very finely disseminated sulphides? observed only under 45x in the binocular microscope.

Thin Section:

The following minerals are present in amounts given by a visually estimated mode:

1. Calcite (99 3/4%):

Shapeless grains 0.5 to 2.0 mm in diameter which show extensive deformation twin lamellae.

2. Quartz (½%):

Rounded, 1 mm in diameter clots of fine, less than 0.01 mm in diameter, interlocking, shapeless grains. The clots probably represent original white chert grains which have been recrystallized by contact metamorphism.

(b) Sample 21-4:

Oil immersion of red-brown prismatic grains up to 2 mm long shows that they are now composed of goethite. As a result of weathering or hydrothermal activity, the goethite is a replacement of a former Fe-bearing mineral - probably a silicate.

(c) Sample 21-6:

White, medium grain (1-2 mm), extremely friable marble.

Thin Section:

The following minerals are present in amounts given by a visually estimated mode:

1. Calcite (99½%):

Shapeless grains 0.5 to 1.5 mm in diameter with common deformation twin lamellae and very poor interlocking texture possibly caused by weathering of the sample.

2. Quartz (½%):

A single lens, 6 mm long, composed of fine, less than 0.01 mm in diameter interlocking grains which probably represent chert that has been recrystallized by contact metamorphism.

(d) Sample 24-6:

Oil immersion shows a colourless mineral with refractive indices in the range 1.550 ± 0.005 with a birefringence in the range 0.010-0.015, and a uniaxial negative interference figure. These optical properties are characteristic of scapolite and because this sample is a marble residue after dissolution with concentrated HCl, the scapolite must be Na-rich. Ca-rich scapolite dissolves in concentrated HCl.

(e) Sample 24-7:

White, medium grain (0.5 to 2 mm), extremely friable marble.

Thin section:

The following minerals are present in amounts given by a visually estimated mode:

1. Calcite (99½%):

Shapeless grains 0.5 to 1.5 mm in diameter with common deformation twin lamellae and very poor interlocking texture probably caused by weathering of the sample.

2. Opaque Minerals - Sulphides (½%):

Fine, equant grains less than 0.1 mm in diameter restricted to a few thin streaks with fine granular apatite?.

3. Apatite? (½%):

Shapeless grain less than 0.05 mm in diameter restricted to a few thin streaks and spatially associated with sulphides.

(f) Sample Dyke:

Medium grey-green aphanitic, pyrrhotitized metabasalt dyke.

Thin Section:

The following minerals are present in amounts given by a visually estimated mode.

1. Plagioclase (45%):

Fine, 0.01 mm to rare 0.2 mm in diameter grains, very rarely polysynthetically twinned, which form a matrix for the clinopyroxene. The twinning is too rare to allow a plagioclase composition determination.

2. Clinopyroxene (diopside or diopsidic augite) (40%):

Colourless, somewhat fibrous, prismatic grains which \underline{z} against \underline{c} of approximately 45° . Some of the grains are up to 1.5 mm long, but most are

0.3 mm in length. The mineral has $2V_z = 60^\circ$. The grains show no relict igneous form, but instead a metamorphic habit.

3. Opaque Minerals - Pyrrhotite (10%):

Equant grains 0.01 to 1.0 mm in diameter disseminated throughout. Examination under a binocular microscope shows that the mineral has a hardness about 4 and is magnetic.

4. Clinzoisite-epidote (5%):

Colourless to pale yellow-green pleochroic shapeless grains 0.3 to 1.0 mm in diameter.

Remarks: A metamorphic texture has obliterated the former igneous texture of the rock.

RUN DATE: 03/20/91
RUN TIME: 15:44:12

MINFILE / pc
MASTER REPORT
GEOLOGICAL SURVEY BRANCH - MINERAL RESOURCES DIVISION
MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

MINFILE NUMBER: 092L 339

NATIONAL MINERAL INVENTORY:

NAME(S): LEO D'OR

STATUS: Prospect
NTS MAP: 092L07W
LATITUDE: 50 23 44
LONGITUDE: 126 47 55
ELEVATION: 0450 Metres
LOCATION ACCURACY: Within 500M
COMMENTS: On the Leo D'or claim, east of the north end of Bonanza Lake (Assessment Report 16111).

MINING DIVISION: Nanaimo
UTM ZONE: 09
NORTHING: 5584709
EASTING: 656466

COMMODITIES: Marble

MINERALS

SIGNIFICANT: Marble
MINERALIZATION AGE: Upper Triassic
ISOTOPIC AGE:

DATING METHOD: Unknown

MATERIAL DATED:

DEPOSIT

CHARACTER: Stratiform
CLASSIFICATION: Sedimentary

Massive
Industrial Min.

HOST ROCK

DOMINANT HOST ROCK: Sedimentary

STRATIGRAPHIC AGE

Upper Triassic

GROUP

Vancouver

FORMATION

Quatsino

IGNEOUS/METAMORPHIC/OTHER

LITHOLOGY:

Marble
Limestone
Biotite Quartz Monzonite

GEOLOGICAL SETTING

TECTONIC BELT: Insular
TERRANE: Wrangellia
METAMORPHIC TYPE: Contact

PHYSIOGRAPHIC AREA: Vancouver Island Ranges

RELATIONSHIP:

GRADE:

CAPSULE GEOLOGY

The Leo D'or marble prospect is located approximately 30 kilometres southwest of Port McNeill on northern Vancouver Island. The property is located at the northeast end of Bonanza Lake on a tree covered slope which rises from the lake shore to the east at an average slope of 30 degrees.

A band of limestone of the Upper Triassic Quatsino formation (Vancouver Group), up to 2.5 kilometres wide, trends northward along the east side of Bonanza River and Bonanza Lake for 6.25 kilometres. To the west, the limestone is in fault contact with basaltic flows of the Upper Triassic Karmuteen Formation (Vancouver Group). An elongate stock of coarse-grained biotite quartz monzonite of the Early to Middle Jurassic Island Plutonic Suite intrudes the limestone from the southeast. On the Leo D'or property, the limestone has been recrystallized to marble by these intrusions. Discontinuous dykes of basalt, averaging 60 centimetres in width, are observed throughout the area.

Bedding in the marble has a regional dip of approximately 20 degrees; strike varies considerably. Locally, the beds are folded into tight synclines or anticlines, the limbs of which dip as steeply as 40 to 60 degrees. The fold axes vary in plunge from 0 to 65 degrees. A major fault trends north through Bonanza Lake and minor east trending faults cut through the property. The faults on the property have offsets up to 1 metre and are generally steeply dipping to both the north and south. Joints in the area are also steeply dipping and have variable strikes. Joint spacing varies from several centimetres to as much as 10 metres.

The marble varies in colour from very light gray to dark grey or

MINFILE NUMBER: 092L 339

RUN DATE: 03/20/91
 RUN TIME: 15:44:12

MINFILE / pc
 MASTER REPORT
 GEOLOGICAL SURVEY BRANCH - MINERAL RESOURCES DIVISION
 MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

PAGE: 7
 REPORT: RGEN4000

CAPSULE GEOLOGY

almost black, to mottled grey and white. In some areas distinct black to light grey bands of marble, varying from several centimetres to several metres, occur. The grain size of the marble varies from fine to coarse grained, the majority (approximately 75 per cent) is medium grained. Light brown to light orange surface staining is caused by the oxidation of iron impurities in the marble. The percentage of iron is estimated to vary from 0 to 4 per cent, locally.

During a preliminary engineering study of the area, a preferred site, approximately 160 by 100 metres, was outlined for further evaluation based on its consistency of colour. The overall slope of the ground is 30 degrees, although individual faces are as steep as 45 degrees. The site consists of very light grey to white marble, with varying amounts of iron-staining on weathered surfaces. Very little colour banding was observed within this area. The majority of the rock is massive and for the most part hard and resistant to weathering. Some areas are blocky and dissected by joints.

A volume of marble available within the investigated area of consistent colour has been estimated, assuming that the rock is similar at depth to that on surface. It is further assumed that rock waste due to close joint spacing or karst would be 50 per cent, and that the quarry slopes would extend up at about 60 degrees. Based on these assumptions, a rock volume of 240,000 cubic metres (about 660,000 tonnes) would be available for quarrying (Broughton and Bruce, 1988). Petrographic analysis of the marble indicates that it consists of approximately 99.5 per cent grey to white calcite (Read, 1988).

Considerable potential exists to define a much larger reserve of marble over the entire property based on a visual observation of the extent of marble exposed at surface.

BIBLIOGRAPHY

- EMPR ASS RPT 14937, 16111
 EMPR IND MIN FILE (*Broughton, S.E. and Bruce, I.G. (1988): Summary of Fieldwork and Preliminary Evaluation - Bonanza Lake Marble Property, Klohn Leonoff Ltd.; Statement of Work Done to Date - Proposal for Geological Engineering Services, Claim - Leo D'Or Marble, Klohn Leonoff Limited, April 18, 1990)
 EMPR PF (Read, P.B. (1988): Petrographic Analysis of Marbles, Leo D'Or Marble Claims, by Geotex Consultants Limited)
 GSC P 70-1A; 72-44; 74-8
 GSC MAP 4-1974; 255A; 1029A; 1552A
 GSC OF 7; 170; 463, Sheet 2

DATE CODED: 901203
 DATE REVISED: 910320

CODED BY: GJP
 REVISED BY: GJP

FIELD CHECK: N
 FIELD CHECK: N

PROVINCE OF BRITISH COLUMBIA
MINISTRY OF ENERGY, MINES AND PETROLEUM RESOURCES

PERMIT

APPROVING PROGRAM FOR RECLAMATION AND
CONSERVATION OF THE LAND SURFACE
MINERAL EXPLORATION
(Issued pursuant to the Mines Act)


Permit: MX-8-89
Issued to: Leo D'or Mining Inc.
Address: 1431 Howe Street
Vancouver, B. C. V6Z 1R9

For exploration work at the following properties:
Leo D'or Property

Located at: NTS: Lat.: 50° 27N' Long.: 126° 67'
Mining Division: Nanaimo
Access: Crown Forest Industries Logging road

The Permit is issued pursuant to Section 10 of the Mines Act
and is subject to the appended conditions.

Issued this 30th day of May in the year 1991.


R. Bone, for R.W. McGinn, P. Eng.
Chief Inspector of Mines



Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources

**APPROVAL OF WORK SYSTEM
AND
PERMIT
APPROVING RECLAMATION PROGRAM
SAND AND GRAVEL PITS AND QUARRIES
(Issued pursuant to the *Mines Act*)**

Permit No. Q-8-25

Issued to Leo D'or Mining Inc.

Address 1431 Howe Street
Vancouver, B. C. V6Z 1R9

for work at the operation located on land described as follows:

Quarry on Bonanza Lake
Lat 50° 27N Long. 126° 67'
Nanaimo Mining Division

The registered owner of the land is Massoud Shariatmadari

Address 1431 Howe Street
Vancouver, B. C. V6Z 1R9

This approval and permit is issued pursuant to sections 6, 7, 8, 9, 10 and 11 of the *Mines Act* and is subject to the appended conditions.

Issued this 30th day of May in the year 1991


R. Bone for R.W. McGinn *Chief Inspector of Mines*



KLOHN LEONOFF
CONSULTING ENGINEERS

Our File: PB 5220 Z101
MIN 11

April 27, 1989

Leo D'Or Mining Inc.
1431 Howe Street
Vancouver, British Columbia
V6Z 1R9

Mr. Massoud S. Madari

Proposal for Geological Engineering Services
Bonanza Lake Marble Property

Dear Sir:

This letter presents our proposal for engineering, geological and geophysical mapping and topographic surveying on the Bonanza Lake Marble Property, in response to your telephone request of April 24, 1989. The scope of services proposed upon is based on the telephone conversation between yourself and our Mr. Iain Bruce on April 24, 1989.

SITE DESCRIPTION

The Leo D'Or claim is located approximately 30 km southeast of Port McNeill on northern Vancouver Island, at the northeast end of Bonanza Lake. The claim covers an area some 1500 m square and includes a portion of the lake. The only access to the property is via a Crown Forest Industries private logging road.

Work has been undertaken at the site by Klohn Leonoff for the White Mountain Marble Corporation, previous Project Managers to Leo D'Or Mining. The work which was undertaken in March, 1988 was limited in scope due to restricted access to most of the area by snow cover. The site is forested and comprises rugged terrain with high relief. Topographic maps of the claim area show elevation ranges of 875 ft at lake level to almost 3000 ft at the high point on the property. Soil cover is generally shallow and numerous bedrock outcrops exist.

Available mapping at a scale of 1:250,000 shows that most of the claim area is underlain by Quatsino Formation limestone. The property is located near a massive granitic intrusive, referred to as the Bonanza Lake Batholith, thus the limestone has been marbleized. This granitic intrusion is present at the eastern edge of the claim area. The Quatsino Formation limestones rest paraconformably on Karmutsen volcanics and these rocks may also be present on the property.

Available geologic information on the Quatsino Formation indicates it is comprised of an upper massive limestone unit and a lower limestone interbedded with siltstone. Thicknesses for the upper and lower units are reported to be 250 ft and 460 ft respectively at a site near Beaver Cove, just north of the project area. In the vicinity of the granitic intrusion the limestone is reported to be highly silicified with irregular rusty colored veining and bedded or brecciated structures.

SCOPE OF WORK

It is our understanding that Leo D'or wish to undertake a more detailed assessment of the property to establish a detailed surface map of topography and establish geological limits of the limestone unit within the claim area using geologic mapping, geophysical mapping and drilling. The purpose of the mapping will be to determine the structure and thickness of the marble formations, determine what colours are available and estimate strength and purity of the deposit from both chemical and physical tests.

As requested, we have prepared this proposal to undertake geologic mapping and drill inspection and coordinate geophysical mapping, drilling and surveying by others. We have prepared the cost estimate for each task separately so that individual tasks can be defined and

Geologic mapping, in conjunction with surveying and geophysical mapping should be undertaken initially (Phase I), to provide an estimate of the areal extent and depth of zones within the claim area. This should then be followed soon after by Phase II, the drilling and laboratory testing, of Phase I proves promising. A summary of the tasks proposed and brief description of our understanding of the scope is outlined below.

PHASE I

Task 1 - Surveying

The property survey and grid layout will comprise clearing and marking 100 m spaced grid lines running parallel to the east-west direction, perpendicular to the Bonanza Lake shoreline. We have not allowed for surveying between outlines in the north-south direction. We intend to subcontract McElhanney Surveyors to undertake surveying and clearing. We have estimated that 20 km of line would require approximately 25 days to cut and survey. Surveying would not be undertaken perpendicular to the outlines.

Task 2 - Geological Mapping

Geological mapping would be undertaken by Klohn Leonoff personnel. Mapping would consist of identifying surficial geological features and obtaining grab samples along the survey grid lines. Rock type, colour, and strength would be assessed for each outcrop. We estimate this would require approximately eight days to complete for a 2-man crew.

Task 3 - Geophysical Survey

To compliment the surface mapping and assist in defining the vertical extent of the marble deposit, a geophysical survey consisting of both Induced Polarization (IP) and magnetometer is proposed. We propose to subcontract the geophysical survey to White Geophysical Inc. We recommend that an IP survey, an electrical geophysical technique

consisting of an expanding array of electrodes known as a Wenner Array, be used. This technique has the most chance of identifying the marble/intrusive boundary to depths in the order of 100 m. It is recommended that the IP survey be conducted along four of the cut grid lines. This should provide an adequate estimate of the depth of the deposit for feasibility purposes. In addition to the IP survey, we recommend a ground-magnetometer survey be carried out along the same four grid lines. The magnetic properties of the igneous intrusive basement unit should be sufficiently different from the marble to permit a refined estimate of basement depth.

Task 4 - Preliminary Report

It is considered that Phase I of this project described above will provide an approximate outline of the marble deposit and a preliminary estimate of rock variability and quality. Following completion of the field work in this phase we propose to summarize the results in a data report and submit this to Leo D'Or for review prior to the start of Phase II. If Phase II were started prior to completion of Phase I this report would consist of a letter with summary drawings only. If Phase I were cancelled then a complete data report would be submitted for your records.

PHASE II

Additional data as to the nature of the unweathered deposit at depth will be required if Phase I results are promising and a decision to proceed with Phase II is made. This phase would consist of three tasks which include drilling, laboratory testing and reporting as noted below.

Task 1 - Drilling

As requested by Mr. Madari we have obtained a cost estimate for approximately 1000 lineal metres of coring using NQ triple tube wireline apparatus to recover core. We have assumed the drilling will be conducted at eight to ten locations on the property. Due to time constraints drilling is proposed in two 10-hour shifts. All drill core would be recovered by the drillers and logged in the field by our site engineer during the daylight shift. The core would be boxed and shipped to Leo D'Or storage in Vancouver. Due to the rugged topography of the site and lack of site access, it is assumed that this drilling program will require helicopter support. We have assumed that 10 drill rig shifts will be required for the project and that each shift will require approximately four hours of flying time to complete. A round trip flight from the heliport to the site will add one-half hour to each shift.

Task 2 - Laboratory Testing from Klohn Leonoff

The commercial viability of developing the property into a marble quarry depends upon available colours, colour consistency, limestone purity and durability. Marble used commercially for building stones must meet certain physical and mechanical requirements for strength, durability, and appearance. A currently accepted standard for suitability is produced by the American Society for Testing and Materials (ASTM). We propose to subject samples of the limestone to the ASTM testing to determine their preliminary compliance with this standard. Strength testing would be undertaken by Warnock Hersey Professional Services Ltd. Strength testing would be undertaken on one sample set per hole or block samples if possible.

In addition to the strength testing identified, laboratory testing to evaluate chemical quality is recommended. We propose to have chemical testing undertaken by Geotex to evaluate the percentage of calcium

carbonate using chemical or x-ray testing. We estimate that the testing of the samples would be undertaken on approximately 100 to 200 samples.

Task 3 - Reporting

A summary report combining all the subconsultants data reports would be provided by Klohn Leonoff. The report will be a data report providing Leo D'Or with a summary of geological and geophysical properties and areal extent of the deposits. The report will not make any recommendations on the commercial feasibility of the property. In addition, this phase of the report will not include any engineering design of quarry slopes, access road alignments or plant facilities.

PERSONNEL

Our project team for this assignment would be under the direction of Project Manager Dr. Iain Bruce who has a strong engineering geology background and is familiar with the Leo D'Or property. Dr. Bruce would be assisted by Mr. Mike Davies. Mr. Davies has considerable experience in exploration geology and geological engineering. The project would be reviewed by Dr. M. Parsons, the Regional Manager for the Klohn Leonoff British Columbia office. Curriculum vitae for Dr. M. Parsons, Dr. I. Bruce and Mr. M. Davies are appended to this letter.

COST ESTIMATE

Table 1 presents a preliminary cost estimate for the proposed investigation. This is our best estimate of the cost of the program for the scope of work requested by Mr. Madari. It should be regarded as an estimate only which may change depending upon scope changes as the project proceeds. We estimate that approximately \$230,762 would be required to complete the work outlined. The basis for the Klohn Leonoff charges are provided on the attached Schedule of Services, Charges and Conditions of Agreement.

April 27, 1989

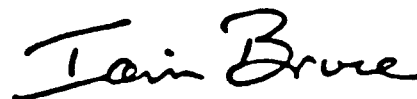
Klohn Leonoff will be pleased to undertake the project management and technical supervision for this project. We will be pleased to review and authorize all invoices for Leo D'Or from the various subconsultants required for this project. However, we request that Leo D'Or contract directly with all the subconsultants required for this project.

Klohn Leonoff has previously undertaken work on the Leo D'Or claim for White Mountain Marble Corporation. An invoice for \$3400 is still outstanding for work which was completed in March, 1988. Prior to commencement of any work on this project we would expect our previous outstanding invoice to be paid.

Klohn Leonoff has a company policy with new clients that a deposit is requested in advance of beginning work. We would request that an amount of \$15,000 be deposited in a separate KL account which would be credited toward our final invoice. We also request that all invoices be paid in full within one month of invoicing.

We trust you will find this proposal satisfactory and look forward to working with you.

Yours very truly,
KLOHN LEONOFF LTD.



Iain G. Bruce, P.Eng.
Project Manager

Encl.

IGB/lb

TASK 2. GEOCHEMICAL AND OTHER LABORATORY TESTING

John Leonoff Personnel	Rate	Estimated Hours	Sum
Project Manager - I. Bruce	\$80.20	8	\$641.60
Project Engineer - M. Davies	\$53.36	8	\$426.88

Disbursements

1) Geotex Consultants

- x-ray diffraction testing, 200 samples at approximately
\$20 per sample = \$4,000

2) Warnock Hersey Professional Services Ltd.

- ASTM exterior grade marble Index testing, approximately \$500
per test set times approximately 1 test per hole = \$5,000

ESTIMATED COST OF THIS TASK \$10,068

(*) Extra costs may be involved to perform ASTM standards tests
for exterior grade marble due to sample type and size requirements.

TASK 3. PROJECT MANAGEMENT AND REPORTING

<u>John Leonoff Personnel</u>	<u>Rate</u>	<u>Estimated Hours</u>	<u>Sum</u>
Senior Reviewer - M. Parsons	\$100.00	16	\$1,600.00
Project Manager - I. Bruce	\$80.20	96	\$7,699.20
Project Engineer - M. Davies	\$53.36	120	\$6,403.20
Intermediate Engineer	\$51.43	24	\$1,234.32
Drafting - D. Tisdale	\$59.16	40	\$2,366.40
Secretarial - L Davidson	\$38.33	40	\$1,533.20

Disbursements

Telephone and FAX \$500.00

Printing \$300.00

ESTIMATED COST OF THIS TASK \$21,636

TOTAL ESTIMATE FOR \$172,690

TOTAL ESTIMATE OF BOTH PHASES = \$230,762

MICHAEL P. DAVIES, P.Eng.
Geotechnical Engineer



EDUCATION

- . B.A.Sc. (Honours), Geological Engineering, (Geotechnical Option), University of British Columbia, 1985
- . M.A.Sc., Civil Engineering, University of British Columbia, 1987

PROFESSIONAL AFFILIATIONS

- . Association of Professional Engineers of British Columbia
- . Canadian Geotechnical Society

SUMMARY OF EXPERIENCE

Mr. Davies is a Geotechnical Engineer experienced in site investigations, design and small project planning and reporting. The majority of his work has entailed geotechnical investigations for building foundations and slope stability evaluation. His experience also includes extensive use and interpretation of state-of-the-art in situ testing equipment. He has worked on projects throughout western Canada and Ontario.

PROFESSIONAL RECORD

- 1988-present - Geotechnical Engineer, Klohn Leonoff
- 1986-1988 - Geotechnical Engineer, GeoPacific Consultants Ltd.
- 1985-1988 - Geotechnical Project Consultant, ConeTec Investigations Ltd.
- 1985-1987 - Graduate Studies in Geotechnical Engineering, University of British Columbia
- 1985-1987 - Teaching Assistant, University of British Columbia
- 1985 (summer) - N.S.E.R.C. Graduate Research Engineer
- 1984 (summer) - N.S.E.R.C. Undergraduate Research Assistant
- 1983 (summer) - Field Geologist, Therm Exploration
- 1981-1982 (summer) - Junior Geologist, DuPont of Canada Exploration

KEY PROJECT EXPERIENCE

- 1988-present - Seepage and liquefaction potential analyses for design of 30 km² oilsands tailings disposal site, Syncrude Canada Ltd., Fort McMurray, Alberta.
- 1986-1988 - Site investigation and design for geotechnical aspects of 25 acre residential development site near Terrace, British Columbia.
- Slope stability investigations and analyses, West Vancouver and Surrey, British Columbia.
- Field investigations and preparation of geotechnical reports for numerous residential and commercial developments, Lower Mainland, British Columbia.
- Seismic evaluation for dyke stability, Richmond, British Columbia.





EDUCATION

- . B.Sc. (Eng.) in Geological Engineering
Queen's University, Ontario, 1973
- . Ph.D. in Rock Mechanics and Geotechnical
Engineering, University of Alberta, 1978

PROFESSIONAL AFFILIATIONS

- . Association of Professional Engineers
of British Columbia, Alberta and Yukon Territory
- . Canadian Geotechnical Society
- . International Association of Engineering Geologists
- . International Society of Rock Mechanics
- . Secretary/Treasurer Tunneling Association of Canada
Vancouver Branch

SUMMARY OF EXPERIENCE

Dr. Bruce is a Geotechnical Engineer with a strong technical background in engineering geology and rock mechanics. His extensive experience includes the design of access roads, tailings dams and waste dumps for a variety of remote mining projects, design of deep and shallow foundations on various soil and rock types for large industrial structures and slope stability and engineering geology assessments for large civil projects. Dr. Bruce has supervised numerous major site investigation programs. He has worked in Papua New Guinea, Mexico, the United States and northern and western regions of Canada.

PROFESSIONAL RECORD

- 1979-present - Geotechnical Engineer, Klohn Leonoff
- 1978-1979 - Geotechnical Engineer, Hardy Associates (1978) Ltd.
- 1974-1978 - Graduate Research at the University of Alberta
- 1973-1974 - Construction Supervisor and Survey Party Chief,
J.D. Lee Associates
- 1972 (Summer) - Field Geologist

KEY PROJECT EXPERIENCE

1979-present

Project Engineer responsible for the following:

- Feasibility and cost benefit assessment of overall waste disposal schemes at Ok Tedi Gold mine, Papua New Guinea.
- Preliminary design and feasibility assessment of proposed quarry operations for both a marble quarry at Bonanza Lake on Vancouver Island and clay shale quarry near Abbotsford, British Columbia.
- Feasibility level design of a tailings containment scheme for the Mt. Nansen Gold Project, Yukon Territory.

Associate



EDUCATION

- B.Sc. in Geological Engineering, University of Saskatchewan, 1960
- M.Sc. in Hydrogeology, University of Saskatchewan, 1964
- Ph.D. in Hydrogeology, University of Michigan, 1969

PROFESSIONAL AFFILIATIONS

- Association of Professional Engineers of British Columbia and Alberta
- Canadian Water Resources Association
- Association of Geoscientists for International Development
- International Association of Hydrogeologists

SUMMARY OF EXPERIENCE

Dr. Parsons is an experienced hydrogeologist and project manager in the fields of water resources development and environmental engineering. He has undertaken hydrogeological research and investigations of groundwater resources in many parts of Canada including British Columbia, the Prairie Provinces, Ontario, and the Maritimes. Since joining Klohn Leonoff, he has undertaken and directed engineering geology, groundwater and surface water investigations associated with hydroelectric, mining, irrigation, municipal, and environmental projects.

He has engineering and management experience in water resources development at the international level, as a former employee of the Canadian International Development Agency and in a consulting capacity. Of many international assignments completed in Asia, Africa and the Caribbean area, the most recent were associated with coal mining in Venezuela, water supply planning in St. Lucia, and irrigation in Nepal and Sri Lanka.

PROFESSIONAL RECORD

- | | |
|---------------|---|
| 1986-present | - Manager, B.C. Region, Klohn Leonoff |
| 1985-1986 | - Manager, International Operations, Klohn Leonoff |
| 1981-1984 | - Manager, Water Resources Division, Klohn Leonoff |
| 1979-1980 | - Head, Geology Division, Klohn Leonoff |
| 1974-1979 | - Senior Hydrologist and Resource Manager, Canadian International Development Agency |
| 1971-1974 | - Research Hydrogeologist and Head, Maritimes Research Section, Inland Waters Directorate, Environment Canada |
| 1964-1971 | - Research Hydrogeologist, Inland Waters and Geological Survey of Canada |
| 1963 (summer) | - Technical Officer, Geological Survey of Canada |
| 1960-1962 | - Staff Geologist, Hudson's Bay Oil and Gas Co. Ltd. |

