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WINDING OF WORLDERN DEVELOPMENT AND MINES

FEB 1 3 1993

INCENTIVES OFFICE

## FINAL SUBMISSION

O.M.I.P. 1994

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compiled by Rachel Prudhomme, M.Sc., P.Eng. President

February 1995

#### **EXECUTIVE SUMMARY**

This O.M.I.P. project was undertaken for two purposes: 1) to conduct grassroots exploration on 10 mining claims where no previous exploration or prospecting work for dimension stone had been done, and 2) to conduct eligible exploration activities on 3 additional claims where limited work was done in the past. All claims belong to a large contiguous block owned by Ontario Quarries Inc. and known as the Harama Marble Quarry site in Parkin Twp., 42 km north of Sudbury. Some of the claims were found to contain a very unique marble suitable for international marketing as dimension stone.

The activities of the 1994 OMIP program included:

- 1. prospecting by conducting traverses;
- 2. accessing the claims with heavy equipment to conduct extensive excavation of test pits;
- 3. mass excavation to strip, trench, expose and permit evaluation of limestone showings;
- 4. exploration drilling and cutting using various means to expose unweathered faces for evaluation;
- 5. cutting for assaying, including small test block extraction;
- 6. cutting and polishing tests at local facilities; and,
- 7. geological evaluation

In total, 57 days of prospecting resulted in the excavation of 55 test pits, stripping of over 18,000 cubic metres of overburden, more than 1300 linear metres of drilling and cutting various small test blocks that were taken for assaying at various finishing plants. Good limestone formations were found.

The colour, texture and pattern of the limestone is promising, as well as the geology of the potential deposits (i.e. fractures and jointing, consistency, natural benching and volume). The stone polishes well, which classifies it as a "marble" by industrial definition. More work will have to be conducted to determine the extent of the showings, fracturing, depth and consistency in colour, texture and pattern. We will also need to define potential for production block extraction, marketability and ASTM properties of all different stone types. The most pressing exploration step to be taken next, though, is to strip and fully expose all of the potential deposits in order to further evaluate the stone and the deposits.

The amount of work done on this 1994 OMIP project greatly exceeded both the projected budget costs and the scope of work that was proposed in our application for designation submitted in February 1994. However, the results obtained were very positive and have caused the owners of Ontario Quarries Inc. to make a decision to continue investing time and money to further explore / develop this property with the ultimate goal of creating a world class marble quarry on these mining claims in the future.

General overviews of the work and results are contained in the main General Report whereas detailed descriptions are in the appendices.

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## 1994 OMIP GENERAL REPORT

#### 1. BACKGROUND INFORMATION AND NATURE OF PROJECT

In September 1992, Ontario Quarries Inc. made an initial purchase of a series of 9 mining claims in Parkin Township, North of Sudbury from prospector Mr. John Brady. In December 1992, an additional group of adjoining claims was acquired from Mr. Brady bringing the total number of contiguous claims owned by Ontario Quarries Inc. to 37. The block of claims is known as the "Harama Marble Quarry".

The claims are located 42 km north of Sudbury, in Parkin Township which is approximately 12 km north of the town of Capreol. Maps showing the general and specific locations of the claims are on pages 4, 5 and 6. Other details regarding property location, access and geology are in Appendix D.

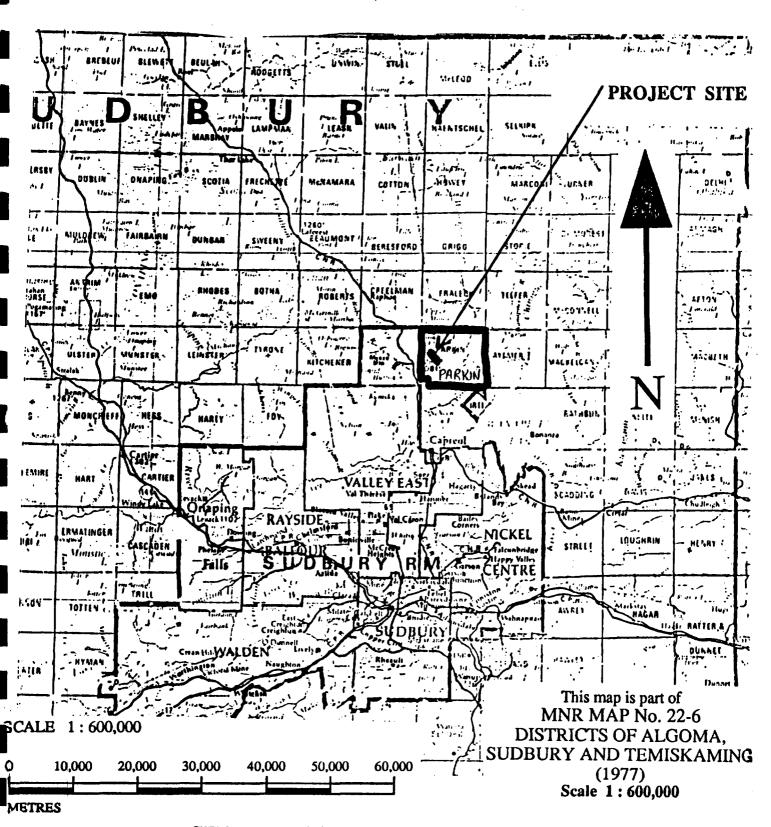
Of the 37 claims, 13 were the focus of this OMIP project. This project has focussed on finding limestone formations which are suitable for extraction as dimension stone. Two large main deposits are known to exist on one of the claims. However, the limestone disappears under the surface and outcrops here and there throughout the claim block. This project permitted grassroots exploration on some of the claims to locate limestone outcrops. The programme also included test pit excavation, stripping and trenching along known deposits, drilling and diamond wire cutting for exploration purposes and "assaying" by cutting and polishing sections such as tiles or small slabs from small test blocks removed from the site.

#### 2. DESIGNATED OMIP ACTIVITIES

The official OMIP application submitted by Ontario Quarries Inc. in March 1994 was designated by the Ministry of Northern Development and Mines. The OMIP activities approved for designation by MNDM contained the following components:

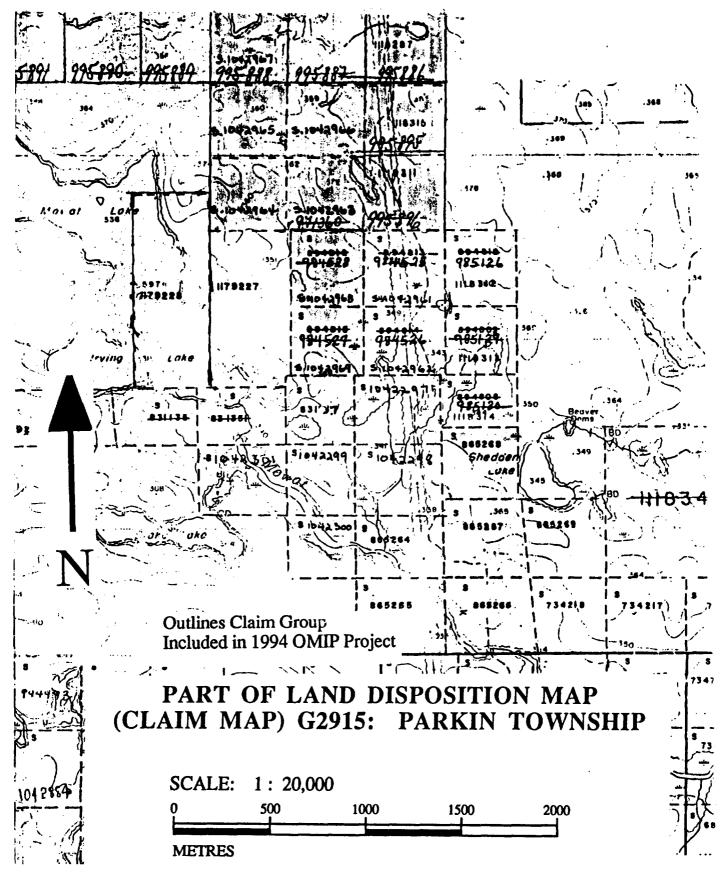
1. Prospecting, map and report preparation and associated costs: 50 days @ \$150	7,500.
2. Geological Surveys: lump sum	5,000.
3. Stripping, trenching, assays, map and report preparation and associated costs: 17,500 cu.m.	152,000.
4. Surface drilling: 1,356 m	101,208.
5. Small Test Block Drilling & Cutting	50,000.
6. Dimension Stone Assaying	16,000.
7. 5% overhead:	16,585.
TOTAL PROJECT	348,293.

The actual expenses were slightly higher than the budget presented here because the amount of work actually done exceeded the amount of work projected to be done in the proposal. Details are in section 6.



GENERAL LOCATION MAP OF PROJECT AREA (Sudbury Region Towship Index Map)





PART OF RECENT LAND DISPOSITION MAP G-2915 (PARKIN TWP) SHOWING LOCATION OF CLAIMS FOR THIS PROJECT

#### 3. NUMBER AND TYPE OF CLAIMS

The work conducted through this OMIP project concentrated on 13 contiguous unpatented mining claims in Parkin Township. The claim numbers are:

S 865266 S 865267 S 865268 S 1042963 S 1042964 S 1042965 S 1042967 S 1042968 S 1042969 S 1118287 S 1118311 S 1118315

All 13 claims are in good standing. They are shown on the claim map provided on page 6.

#### 4. REGIONAL AND LOCAL GEOLOGY

The dimension stone found on this property is a limestone forming part of the Espanola and Serpent formations of the Quirke Lake Group. This limestone (which can be called a "marble" by industry definition) is unique in colour, pattern and texture. The highly attractive and distinct textural patterns present a variety of potentially marketable products. This ranges from a marble breccia consisting of a spectacular mosaic of interlocking varied-sized fragments to bedded marble with both uniform laminations and folded or convoluted gneissic bedding planes. The marble tends to be multicoloured with pink, green, gray and cream colours predominating. Colour is a site-specific characteristic of the deposit, with the breccia marble, cream marble, lined grayish and green marble and the multicoloured marble being concentrated in certain specific geographical areas within the claim group.

The property lies near the contact between Archean greenstone-granitoid rocks to the west and Proterozoic (Huronian) metasediments to the east which unconformably overly the Archean units. The Huronian metasediments have been subdivided into the following litho-stratigraphic formations in this area: Mississagi, Bruce, Espanola, Serpent, Gowganda, and Lorrain. The foregoing rocks have been intruded by dykes of Nipissing-type diabase and olivine-diabase.

The property containing the mining claims is underlain by the Espanola and Serpent Formations of the Quirke Lake Group. The Espanola Formation in Parkin Township consists of two members. The lower member is a limestone interbedded with siltstone and the upper member is a fine-grained siltstone to sandstone. The total thickness of the Espanola limestone formation is between 100 to 200 feet.

#### 5. RESULTS OF OMIP WORK ACTIVITIES COMPLETED IN 1994

#### 5.1 Prospecting

As previously stated, the geology underlying the claim group studied consists of limestone and fine grained wackes of the Espanola formation intruded by mafic intrusive rocks. The interbedded limestones were the focus of all prospecting activities in this project. These, when they take a good polish, have industrial value in international markets as "marbles". They are not pure marbles in the strict geological sense, but they fit the industrial definition of a marble because they polish to a high gloss.

The prospecting activities led to some limestone outcrops being found which warranted further action such as digging test pits. Of the 13 claims, 8 claims showed good limestone potential. The 8 claims are:

S 1042963

S 1042964

S 1042965

\$ 1042066

\$ 10/2068

2 1042969

S 1118311

S 1118315

Claims S1042967 and S1118287 did not show any limestone. The three remaining claims (S865266, S865267 and S865268) were already known to contain good limestone deposits and therefore, those three were subjected to different work which involved extensive drilling and mass excavation to expose the limits of the deposits. That work is described further below in sections 5.3 and 5.4 and in Appendix B.

Details of the prospecting activity, including maps are given in Appendix A.

#### 5.2 Test Pits

Prospecting on foot gave rise to several indications of where test pits should be located. A total of 55 test pits were excavated on the eight claims identified on the previous page, which showed good limestone potential during prospecting activities.

Pits were excavated using heavy equipment such as the track excavator with wide pads shown in the photograph below. A backhoe was not suitable because many areas covered by swamp, muskeg or wet ground made travel and digging difficult. Also, thick brush and rough ground would not permit travelling with rubbertire vehicles or equipment such as backhoes.

Where test pits showed stone other than limestone, no further work was done and the disturbance from the excavation work was rehabilitated by replacing the topsoil that had been stockpiled and by seeding. When limestone was found, it was exposed by stripping and trenching as described in section 5.3 and Appendix B. Details of the results, including photographs, are given for each claim in Appendix A (for prospecting), Appendix B (for stripping, trenching and excavation) and Appendix C (for drilling, cutting and assaying).



TYPICAL EXCAVATOR WITH WIDE PADS USED FOR EXCAVATING TEST PITS

#### 5.3 Stripping, Trenching, Assays, Map and Report Preparation

As described in sections 5.1 and 5.2, prospecting activities that indicated potential limestone deposits were followed by the digging of test pits. If the test pits were not favourable, they were rehabilitated and abandoned. If they showed favourable results, additional stripping and trenching activities were conducted.

Trenching and preliminary stripping were conducted in areas where test pits indicated the possibility of a limestone deposit (claims 1042963, 1042966 and 1118311). Trenching and stripping were also conducted on the three claims where we already knew that there existed good marble potential (claims S865266, S865267 and S865268). Stripping and trenching were accomplished using heavy equipment such as excavators, backhoes and bulldozers hired through our contractor, F.H.R. Construction Ltd. of Sudbury. Trucks were also used to transport topsoil and overburden to storage areas for future use in rehabilitation. The photographs below and on the following page show some equipment and stripping activities.

The main purpose of stripping and trenching was to outline the limestone deposits. There are also other reasons for stripping such as determining whether there is enough material present to warrant future work on the claim, finding the limits of the deposit, locating fractures, dykes or other features that could impact on the deposit's value and identifying rock types including the most important features in dimension stone deposits - i.e. consistency in colour, texture and pattern. Some parts of the deposits were also exposed to allow for topographical mapping of the rock mass before and after OMIP activities. Stripping and trenching activities are detailed (with maps) in Appendix B.



TRIAXLE TRUCK USED TO TRANSPORT TOPSOIL AND OVERBURDEN TO STORAGE AREAS FOR FUTURE USE IN REHABILITATION



STRIPPING IN AREA OF CLAIM 865266 (Zone ST2 - see Appendix B)



STRIPPED AREA ON CLAIM 865267



STRIPPING / TRENCHING IN AREA OF CLAIM 865268 (HIGH GROUNDWATER)



SOME EQUIPMENT USED FOR STRIPPING ACTIVITIES

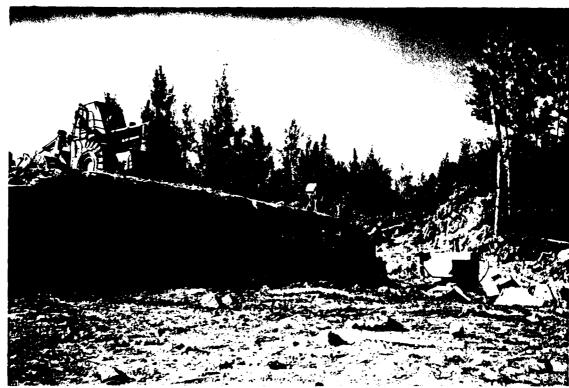
#### 5.4 Surface Drilling, Diamond Wire Cutting and Assaying

This part of the work involved various types of drilling and cutting used for different purposes to further characterize the dimension stone deposit. Details are given in Appendix C.

Drilling for dimension stone is needed primarily to remove weathered surface stone and expose fresh faces for geological evaluation. For marble, this type of drilling is extremely important but consumes a great deal of time and resources because of several factors. First, blasting is not permitted in marble (although it is allowed in granite quarries) because marble is very susceptible to blast damage (i.e. blasting in marble can ruin a potential deposit). Therefore, other types of rock splitting techniques are required to expose the deposit for preliminary geological evaluation. Typically, vertical holes have to be drilled in a pattern where they are very closely spaced (parallel holes drilled on 6" centres is ideal). This permits splitting of the face to carefully expose the fresh unweathered rock behind it. Photographs of this are shown on the following pages and in Appendix C.

Many vertical feet of drilling are required to produce the fresh faces needed for proper preliminary deposit evaluation. For example, to expose 30 metres of a deposit at normal anglesto permit characterization, geological evaluation, identification of rock types and assessment of consistency and fracture patterns, about 400 vertical holes each approximately 12 feet in length would be required. This translates to 4,800 vertical feet of drilling to expose one face of a deposit. If the face still shows signs of weathering (which go quite deep into limestone deposits), more faces of the same deposit need to be cut away and exposed. This method for rock face exposure was used in this OMIP project, along with another method described below.

The other method that was used in this project to expose unweathered limestone was to cleanly cut the faces using diamond wire sawing technology. The diamond wire saw requires considerable drilling as well as preparation work in order to provide the pilot holes needed to fish the diamond wire through for cutting of the face. For each 15 square metre cut, at least 13 metres of drilling are required. Often, the pilot holes do not intersect and therefore, they have to be re-drilled, resulting in more than 18 metres of drilling for a 15 square metre face. Photographs of the diamond wire saw, the condition of a freshly cut face and other drilling equipment used on this project are given on the next pages. Other photos are given in Appendix C.



THE DIAMOND WIRE SAW PRODUCES UNWEATHERED FACES FOR GEOLOGICAL ASSESSMENT OF THE DIMENSION STONE DEPOSIT



DIAMOND WIRE SAW REMOVING WEATHERED SECTION FROM ROCK FACE



SPECIALIZED PNEUMATICALLY DRIVEN IMPORTED BENETTI QUARRY DRILL FOR DRILLING HORIZONTAL PILOT HOLES FOR THE DIAMOND WIRE



**EXCAVATOR-MOUNTED HYDRAULIC DRILL FOR SPLITTING ROCK FACES** 

Diamond wire sawing is the best technique to permit marble deposit evaluation. In this exploration project, diamond wire sawing was conducted extensively by the contractor for 2 main purposes: 1) to expose fresh, unweathered faces for deposit evaluation; and 2) to permit cutting of various small test blocks from different faces to be sent for "assaying" as it is typically done for dimension stone deposits.

"Assaying" or sampling of dimension stone deposits is done by drilling or cutting small test blocks from the limestone deposit. The blocks must then be transported off-site in order to have tiles cut and polished from the test blocks. Accordingly, assaying for dimension stone in this project involved loading and hauling blocks as well as cutting and polishing some tiles from each of the blocks to determine whether the limestone takes a polish well and hence can be described as a "marble" in the industrial sense of the word. This type of assaying was conducted by experienced stone manufacturing specialists such as Khouri Granite or Ellero Marble of Sudbury. A photograph of typical small test blocks sent for assaying is shown below.



TYPICAL BLOCKS TO BE TRANSPORTED TO ASSAYING FACILITY

Because marble dimension stone cannot be blasted to produce small blocks (i.e. because blasting can cause major damage to a potential marble deposit - contrary to granite where blasting is extensively used for the production of sampling or test blocks), it is important that the blocks submitted for assaying be "cut" out with the proper equipment. Ideally, small test blocks should be (as they were for this project) cut using diamond wire saws in order to protect the potential deposit from structural damage. Our contractor, F.H.R. Construction Ltd. of Sudbury, is the only local company that has access to accurate drilling equipment and diamond wire saws that are specifically designed for this type of work.

Once the small test block samples were produced, they were transported over relatively long distances to the assaying site (Khouri Granite and Ellero Marble of Sudbury). Trucks were used to complete the transportation. F.H.R. Construction Ltd. supplied equipment and labour to load and transport the blocks to the assaying facilities.

In addition to small test block sampling, diamond drilling was also conducted. Diamond drilling in dimension stone deposits is a contentious issue. The most experienced quarriers from established quarries in Italy cringe at the thought of drilling core holes in a marble deposit and would never resort to any diamond drilling for exploration purposes. The reason is that holes in stone ruin potential future marble blocks for production purposes because the location of a hole in the wrong place can make the block useless.

Exploration drilling for dimension stone deposits varies significantly from drilling activities for more conventional deposits. Firstly, extensive diamond drilling is discouraged for dimension stone deposits because of the destructive nature of the holes. The prime purpose of quarrying activity is to extract the largest possible intact rectangular blocks of dimension stone for export markets. The location and attitude of the rectangular blocks is determined in the field based on the conditions at the horizontal and vertical free faces that are visible prior to extraction. A diamond drill hole located in the wrong place can ruin an entire block to be extracted. The best and least damaging location for a diamond drill hole in dimension stone cannot be determined ahead of time. Selecting few holes that are strategically placed to provide as much information as possible will minimize the damage to the deposit from holes ending up in the middle of a planned block for extraction. Therefore, it is stongly recommended that holes always be very carefully placed and that diamond drilling in dimension stone be kept to a minimum. It is better to conduct other-than-core surface drilling for dimension stone deposit evaluation.

Another factor that makes exploration drilling different for dimension stone than it is for other more conventional minerals is the fact that great depth is not required. Most limestone formations in this area

only extend to a maximum depth of one to two hundred feet. As we are not searching for a mineable mineral, it is not necessary for us to drill any deeper than the thickness of the limestone bed.

Despite the above, there are three good reasons to conduct diamond drilling in marble. The first is to outline the physical dimensions of the deposit, and in particular the depth and extent of parts of the deposit that are hidden from the surface. This allows an assessment of the deposit volume to be made. The second reason is to examine the condition of the deposit in terms of fracturing. Horizontal fracture planes are helpful for future quarrying as long as they are separated by a distance of at least 6 to 8 feet. The horizontal fractures can assist quarrying by providing natural free faces for block extraction. Diamond cores can also help in assessing the condition of fractures, including the degree of cementation and the angle of main fracture patterns. The third reason that justifies diamond core drilling in marble deposits is to gain insight as to the consistency of colour, pattern and texture of the stone. In order to constitute a good marble deposit, there must be a minimum degree of consistency in colour with depth. The value of an apparently good deposit can be greatly reduced if the colour of the stone changes significantly with depth.

The contractor on this OMIP project conducted diamond drilling on one claim (S865266) in order to try to find where a known deposit is trending. Although there is a significantly large outcrop of breccia marble in one area of the claim, this outcrop appears to be an isolated "island" among the more typical bedrock. Considerable stripping was conducted in the immediate area to try to find out "where the deposit goes". However, although we achieved several metres in depth of stripping, the limestone could not be traced any further. Water in the excavation areas precluded further stripping work. It was decided that drilling a series of short length diamond core holes might give us a clue as to where the deposit continued.

Although the contractor drilled 13 holes, the limestone could not be found to continue in any direction in the immediate vicinity. It is our guess that the limestone formation has folded under at some greater depth and that it will reappear on other claims surrounding S865266 as was the case on claims S865267 and S865268. Visual inspection of the cores indicated fractured rock of no value in dimension stone. There was no need to send cores for assays, since we are not interested in any minerals other than dimension stone. As a result, it would have been a waste of time and money to log or analyse the cores. The holes were abandoned.

Appendix C contains further details on drilling, cutting and assaying.

#### 5.5 Geological Surveys

This work followed stripping, washing, drilling, cutting or exposing the limestone occurrences that are known to exist. The exposure of fresh faces allowed an assessment of stone types to be conducted, as well as a preliminary assessment of colour, pattern, texture and consistency of the stone. Also, a qualified professional conducted preliminary fracture assessment and a topographical survey of the main site using an automatic level and rod to allow mapping of elevations of the exposed faces.

Details of the geological survey and scaled drawings are included throughout this report and the appendices. A full summary is given in Appendix D.

- extensive stripping and rock trenching, including the preparation of plans and reports outlining the results;
- surface sampling and grab sampling for test purposes including the production of small test blocks;
- assaying by cutting and polishing tiles and small slabs from the test blocks sampled.

Results of the work were favourable and the owners of the claims have decided to invest more time and money in exploring and pre-developing this property as a future dimension stone quarry.

#### 7. CONCLUSION

In summary, the work program conducted as a result of this OMIP project included the following:

- prospecting on the property to identify the possible location and trend of building stone deposits, including the preparation of a report and map showing traverses and observations made;
- surface drilling by core drill and by other than core drill, overburden test drilling for exploration purposes and diamond wire cutting to determine the extent, depth and trend of deposits, types (including colours and patterns) of building stone available on the property, uniformity and consistency of deposits in terms of colour and pattern of the building stone and depth of overburden;
- extensive stripping and rock trenching, including the preparation of plans and reports outlining the results;
- surface sampling and grab sampling for test purposes including the production of small test blocks;
- assaying by cutting and polishing tiles and small slabs from the test blocks sampled.

Results of the work were favourable and the owners of the claims have decided to invest more time and money in exploring and pre-developing this property as a future dimension stone quarry.

### **APPENDIX A**

# Details of Prospecting and Test Pit Excavation

#### INTRODUCTION

All prospecting and test pit excavation activities conducted as part of this OMIP project were focussed on finding limestone suitable for development as commercial marble dimension stone deposits. The limestones in this area form part of the Espanola and Serpent formations of the Quirke Lake Group and are known to range from a marble breccia consisting of a spectacular mosaic of interlocking varied-sized blocks to bedded marble with both uniform laminations and folded or convoluted "gneissic" bedding planes. Multiple colours are available in the area where prospecting was conducted, with pink, green, gray and creme colours predominating. Prospecting and test pit excavation was concentrated on 10 claims of the 13 that were included in this OMIP program. The other 3 claims along with some of the 10 previously mentioned were subjected to extensive stripping and excavation work as detailed in Appendix B. The 10 claims covered in this Appendix are:

S 1042963 S 1042964 S 1042965 S 1042966 S 1042968 S 1042969 S 1118287 S 1118311 S 1118315

On the 10 claims listed, a total of 55 test pits were excavated. The total volume of earth removed for test pit excavation was 2,220 cubic metres. Prospecting was spread over 57 full days.

The work on each individual claim is covered on the next pages of this section and in Appendix B.

#### **CLAIM S 1042963**

**Activities:** 

Prospecting:

6 days

Frank Villano

Rachel Prudhomme

Prospector

No. of test pits excavated:

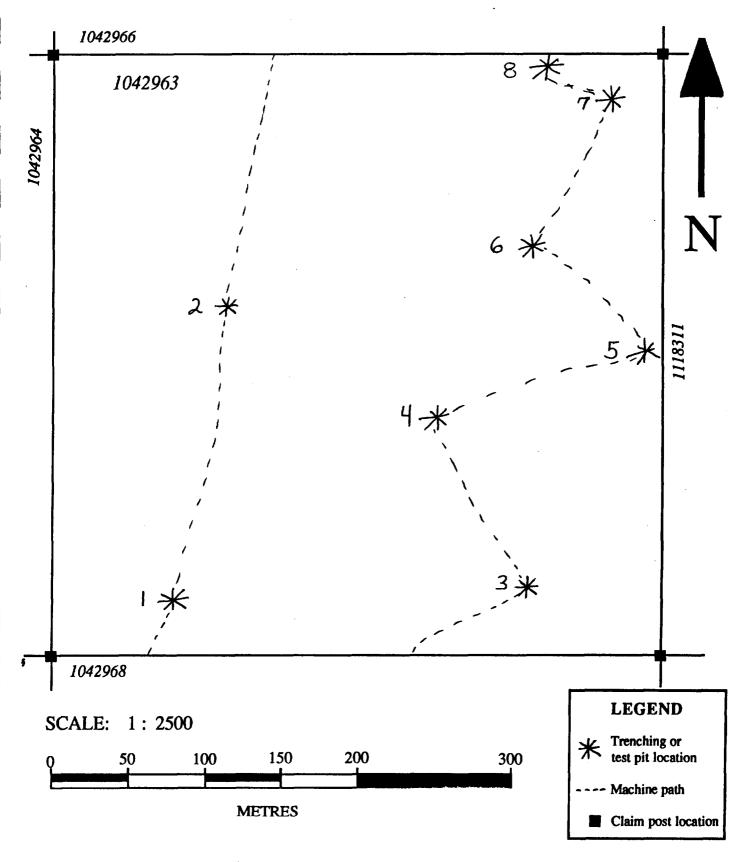
Cubic meters of excavation: 480

**Notes:** 

- the prospecting team ran traverses to determine where test pits should be excavated
- 8 sites were selected for further exploration as shown on accompanying map
- test pits were excavated to a depth where rock was encountered or to a maximum depth of 16 feet if no rock was found

**Results:** 

- overburden consisted mainly of clay of varying depth (0.5 to 1.5 m) to bedrock
- rock found at test pits 1, 2, 3, 5 and 6 consisted mostly of quartzite, diabase, olivine-diabase and greenstone
- some large boulders were located at test pit 4; some of them were limestone =(probably transported by glaciers)
- test pits 7 and 8 showed limestone and were subjected to trenching and stripping as described further in Appendix B



MAP OF CLAIM S1042963 SHOWING WORK

#### **CLAIM S 1042964**

**Activities:** 

Prospecting:

4 days

3

Frank Villano

Rachel Prudhomme

No. of test pits excavated:

Cubic meters of excavation: 144

**Notes:** 

- the prospecting team ran traverses to determine where test pits should be excavated

- there were no interesting outcrops found on this claim

- only 3 sites were selected for further exploration as shown on accompanying map

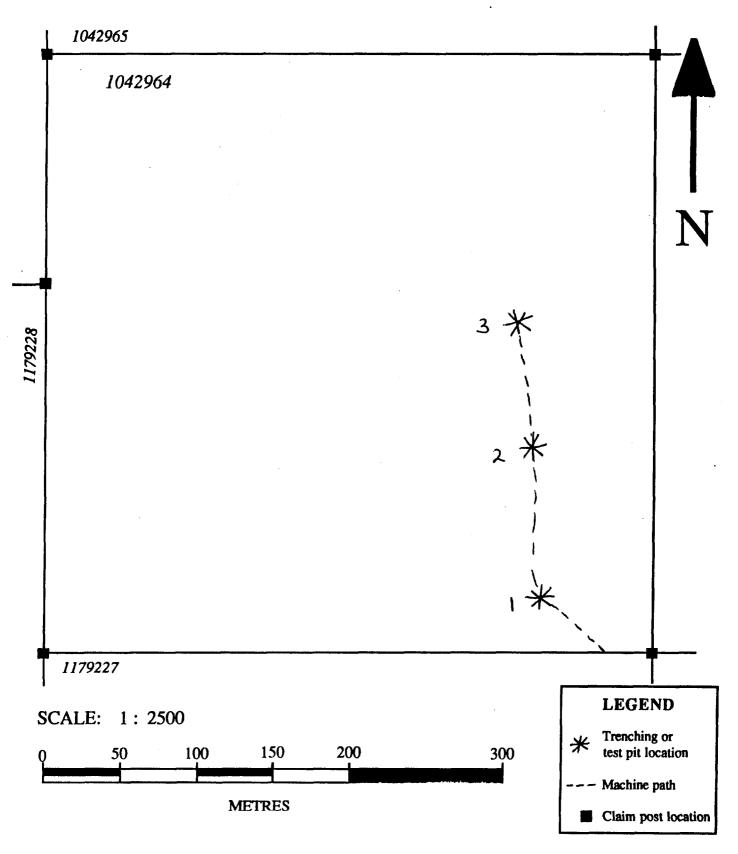
- overburden consisted mainly of clay

- each of the test pit locations was hampered by inflow of groundwater

**Results:** 

- no limestone formation found

- inflow of water into test pit excavations precluded further searching



MAP OF CLAIM S1042964 SHOWING WORK

#### **CLAIM S 1042965**

**Activities:** 

Prospecting:

8 days

Frank Villano

Rachel Prudhomme

No. of test pits excavated:

5

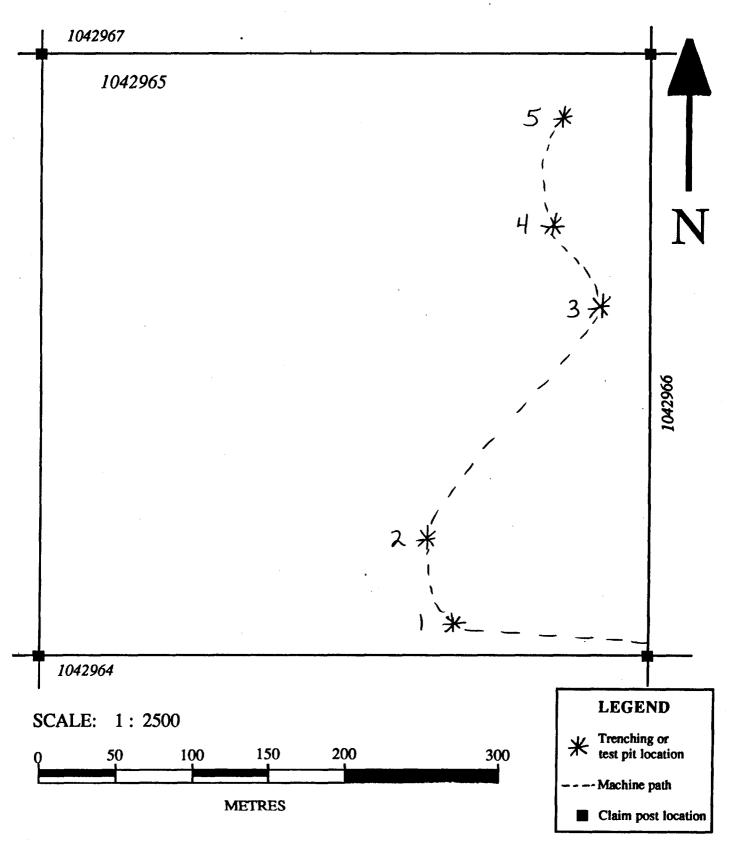
Cubic meters of excavation: 200

**Notes:** 

- the prospecting team ran traverses to determine where test pits should be excavated
- there were some swampy areas on this claim
- in some locations, equipment had difficulties because of sinking of the machine
- we spent more time prospecting because we were trying to find signs of an extension of the deposit found on claim 1118311
- 5 sites were selected for further exploration as shown on accompanying map
- test pits 3, 4 and 5 had to be abandoned because of heavy inflow of groundwater
- test pits 1 and 2 showed muskeg in the overburden followed by a very dense layer of hardpan gravel that was very difficult to dig due to the degree of consolidation of the material

**Results:** 

- no limestone found



MAP OF CLAIM S1042965 SHOWING WORK

#### **CLAIM S 1042966**

**Activities:** 

Prospecting:

6 days

Frank Villano

Rachel Prudhomme

No. of test pits excavated:

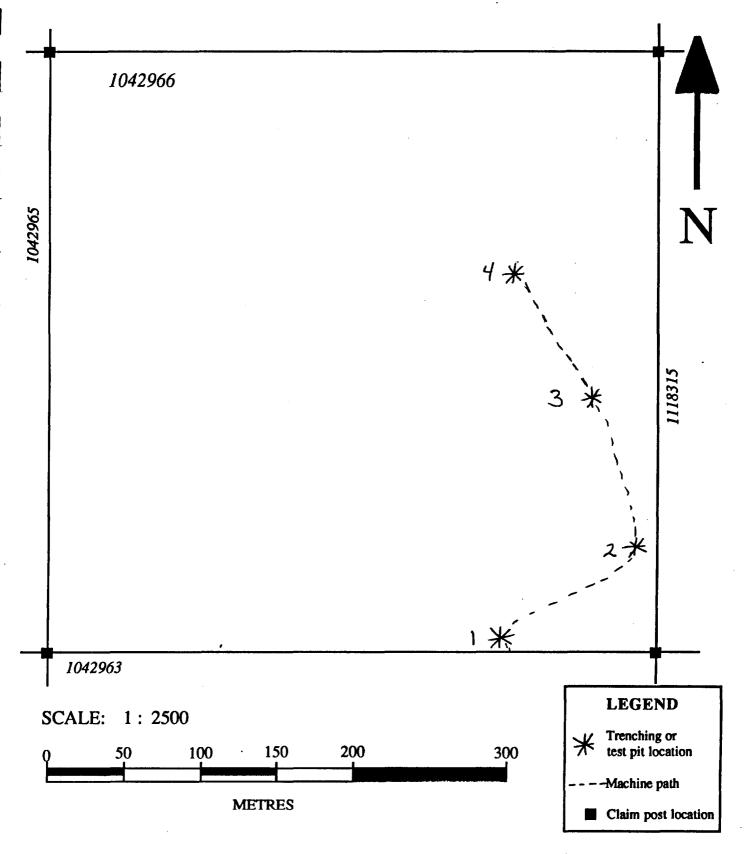
Cubic meters of excavation: 160

**Notes:** 

- the prospecting team ran traverses to determine where test pits should be excavated
- some rock outcrops were present and some showed limestone
- test pit 3 showed many boulders, most of them limestone; after about 4 m. in depth, we could no longer dig because of the large size of the boulders in the excavation
- test pit 4 contained very swampy ground on surface, but after 1 m., boulders consisting of a mix of limestone and others diabase and granite were found
- limestone was found at test pits 1 and 2; more stripping and excavation was done as described in Appendix B

**Results:** 

- limestone found at test pits 1 and 2; further trenching and stripping was conducted



MAP OF CLAIM S1042966 SHOWING WORK

#### **CLAIM S 1042967**

**Activities:** 

Prospecting:

2 days

Frank Villano

Rachel Prudhomme

No. of test pits excavated:

0

Cubic meters of excavation: 0

.

**Notes:** 

- the prospecting team attempted to run traverses to determine where any test pits should be excavated

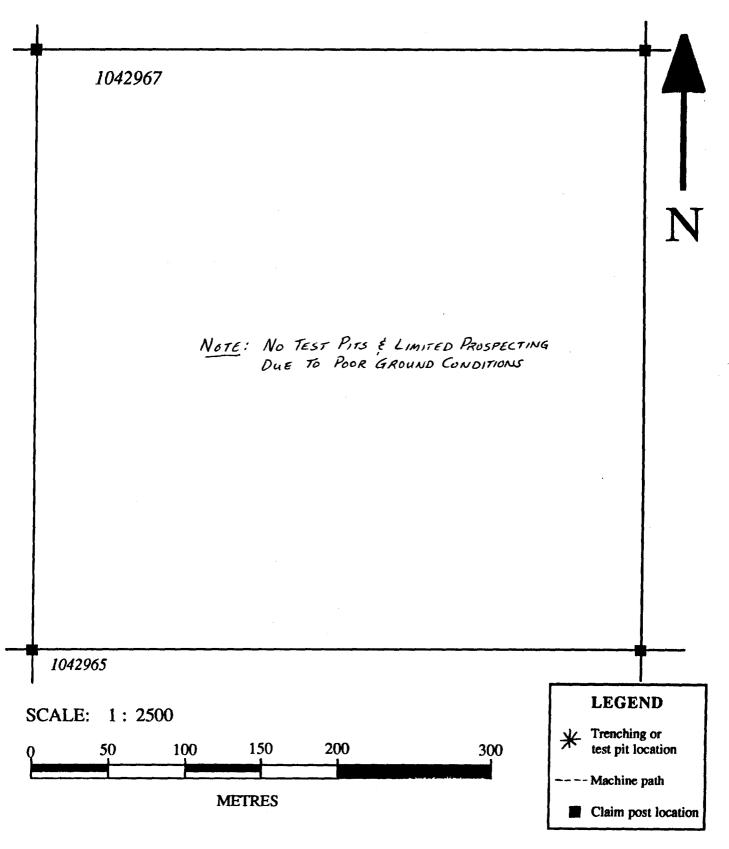
- it was very difficult to manoeuver on this claim because of extensive swamp and muskeg; hence we did not spend much time traversing this claim because of the difficulties in travel

- it would have been too difficult to bring in heavy equipment to excavate any pits because of the site conditions

Results:

- no limestone found

- swampy conditions precluded any extensive work on this claim



MAP OF CLAIM S1042967 SHOWING WORK

#### **CLAIM S 1042968**

**Activities:** 

Prospecting:

8 days

Frank Villano

Rachel Prudhomme

No. of test pits excavated:

7

Cubic meters of excavation: 420

**Notes:** 

- the prospecting team ran traverses to determine where test pits should be excavated

- 7 sites were selected for test pits

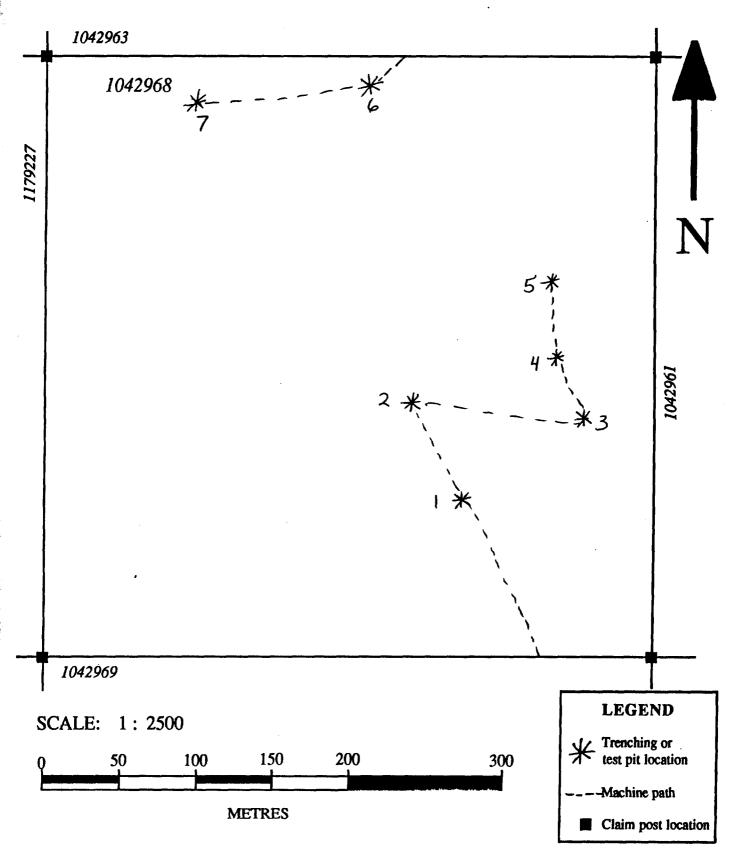
- clay was encountered in most test pit overburden

- clay was followed by either large boulders or bedrock consisting mostly of quartz

diabase, diorite, olivine-diabase and quartzites

**Results:** 

- no limestone found



MAP OF CLAIM S1042968 SHOWING WORK

### **CLAIM S 1042969**

**Activities:** 

Preliminary prospecting:

3 days

Frank Villano

Rachel Prudhomme

No. of test pits excavated:

Cubic meters of excavation: 120

Notes:

- the prospecting team ran traverses to determine where test pits should be excavated

- it was very difficult to manoeuver on this claim because of extensive swamp and muskeg; hence we did not spend much time traversing this claim because of the

difficulties in travel

- there were no interesting outcrops found on this claim

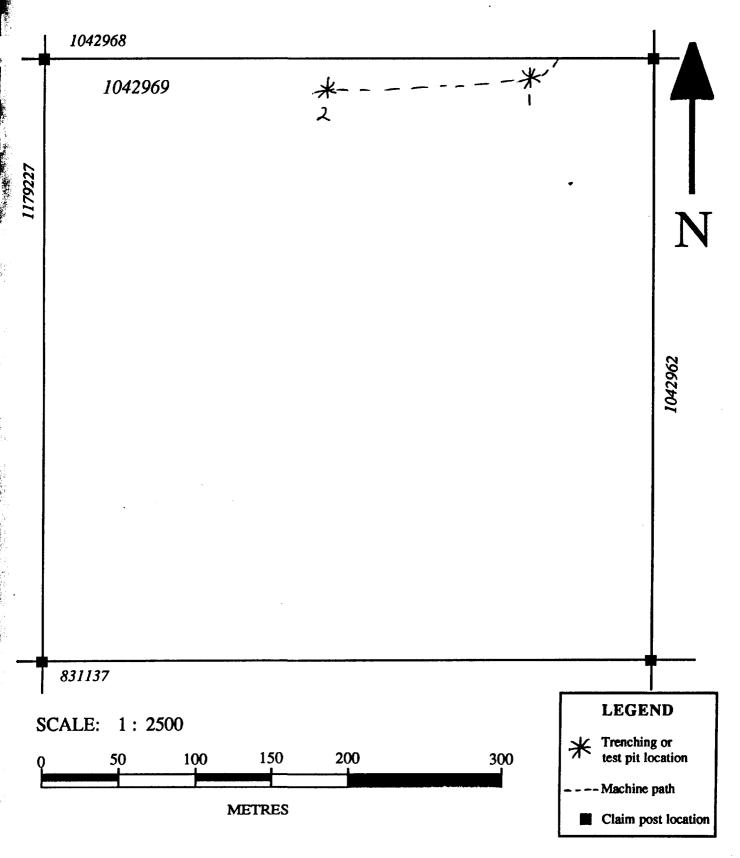
- only 2 sites were selected for further exploration as shown on accompanying map

- it was very difficult to bring in heavy equipment to excavate these pits because of the

site conditions

**Results:** 

- no limestone formation found



MAP OF CLAIM S1042969 SHOWING WORK

### **CLAIM S 1118287**

**Activities:** 

Prospecting:

6 days

Frank Villano

Rachel Prudhomme

No. of test pits excavated:

0

Cubic meters of excavation: 0

**Notes:** 

- the prospecting team ran traverses to determine where test pits should be excavated

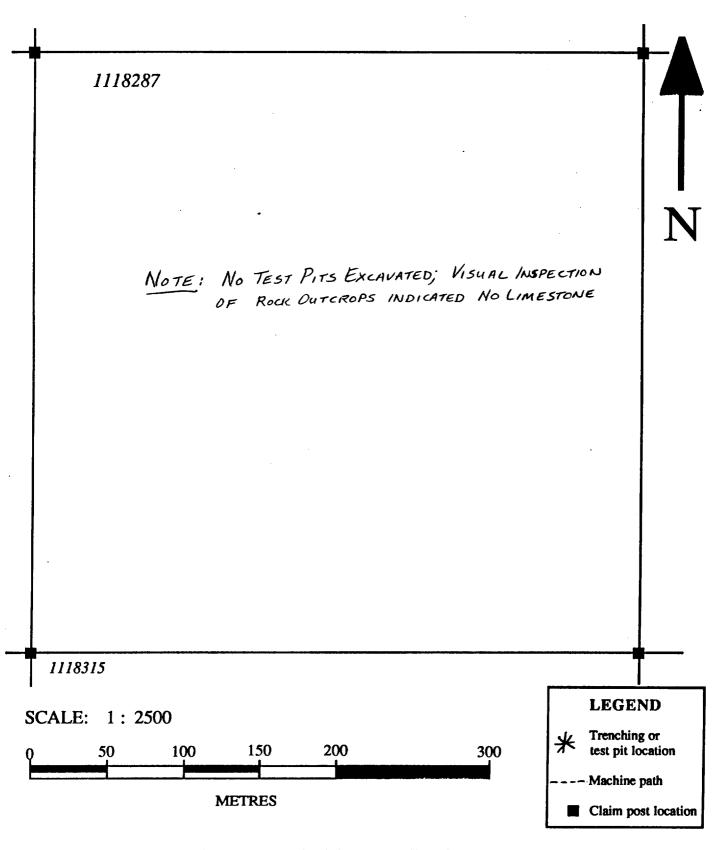
- there were many rock outcrops all consisting of quartzite, diabase, olivine-diabase and greenstone

- no indications of limestone were present

- no test pits were required due to good visibility of non-limestone outcrops

**Results:** 

- no limestone found



MAP OF CLAIM S1118287 SHOWING WORK

### **CLAIM S 1118311**

**Activities:** 

Prospecting:

8 days

Frank Villano

Rachel Prudhomme

No. of test pits excavated:

17

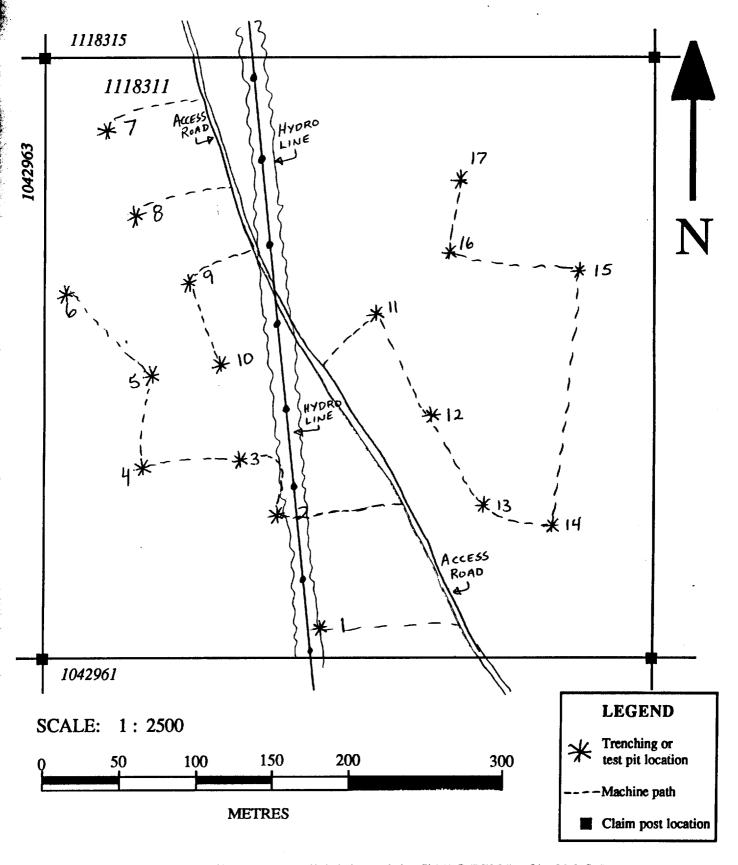
Cubic meters of excavation: 426

**Notes:** 

- the prospecting team ran traverses to determine where test pits should be excavated
- limestone was found and therefore several test pits were excavated to situate the deposit
- test pits 11 to 17 consisted of topsoil containing heavy organic debris including branches; no bedrock was located
- test pit 10 showed 1 m. overburden followed by bedrock consisting of quartzite, diabase, olivine-diabase and greenstone
- test pits 1 to 9 showed good limestone with some spots containing rock and limestone boulders

**Results:** 

- good limestone found
- further stripping conducted, as detailed in Appendix B



MAP OF CLAIM S1118311 SHOWING WORK

### **CLAIM S 1118315**

**Activities:** 

Prospecting:

6 days

Frank Villano

Rachel Prudhomme

No. of test pits excavated:

Cubic meters of excavation: 270

Notes:

- the prospecting team ran traverses to determine where test pits should be excavated

- 9 sites were selected for further exploration as shown on accompanying map

- these were being explored in search of an extension of the deposit found on claim

1118311

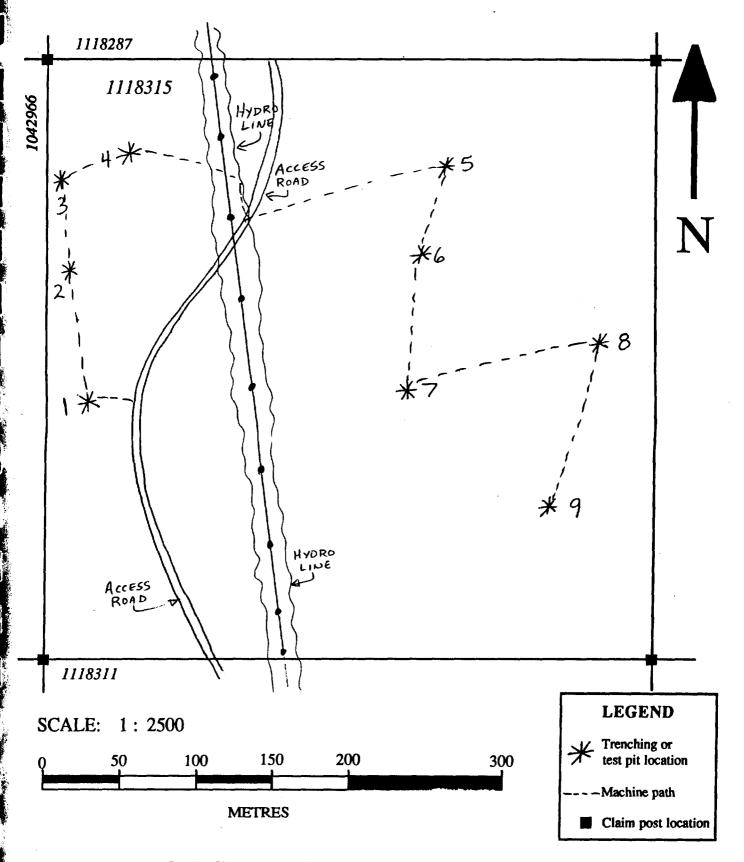
- all of the test pits indicated no limestone

- bedrock consisting of quartzite, diabase, olivine-diabase and greenstone was found at an average depth of 1.5 m. below surface

- some granite and feldspar boulders were located in the excavation (glacial debris)

**Results:** 

- no limestone found



MAP OF CLAIM S1118315 SHOWING WORK

## **APPENDIX A**

# Details of Prospecting and Test Pit Excavation

## **APPENDIX B**

## **Details of Stripping and Trenching**

### INTRODUCTION

This appendix provides maps and photographs outlining more extensive excavation activities than those covered in Appendix A. In total, 6 claims were subjected to additional excavation work characterized as stripping and trenching activities that exceeded test pit excavation covered in Appendix A. The claims are:

Stripping and trenching were conducted in order to determine the extent of deposits that showed good potential as dimension stone finds with possible commercial value.

The stripping and trenching work is divided into two parts:

PART 1: Stripping and trenching on claims where new limestone was found:

Claims 1042963, 1042966 and 1118311

PART 2: Stripping and trenching on claims where limestone was known to exist:

Claims 865266, 865267 and 865268

Each part is individually covered individually in this appendix. Four large individual mass excavations were completed under this section for a total of 15,970 cubic metres. This plus test pit excavation amounts to 18,170 cubic metres of earth being stripped in total for the 1994 OMIP project. The amount proposed in the original designation was 17,500.

## PART 1: Stripping and Trenching on Claims Shere New Limestone Was Found (Claims 1042963, 1042966 and 1118311)

The purpose of stripping and trenching in this section was to expose limestone found during prospecting and test pit excavation to obtain a preliminary estimate of deposit size, jointing characteristics, stone colour and consistency of colour, texture and pattern. It was also important to conduct this work in order to determine the direction in which the deposit trends to that it can be followed onto adjoining claims, if possible.

The prospecting and test pit excavation activities indicated that a good limestone deposit was found straddling claims 1042963 (north-east corner), 1042966 (south-east corner) and 1118311 (intersecting the claim in a north-west direction from the centre). A large number of relatively large test pits concentrated on the deposit on claim 1118311 (see Appendix A) resulted in most of the trenching and stripping being concentrated on the other two claims. The map of the following pages shows the expected trend of the deposit and the location of stripping and trenching activities with respect to these three claims.

Details of the trenching and stripping activities are as follows:

Trenching/stripping location:

as shown on map on following page

**Excavation dimensions:** 

40 m (long) x 3 m (wide) x 0.5 to 1.5 m (deep)

Total volume excavated:

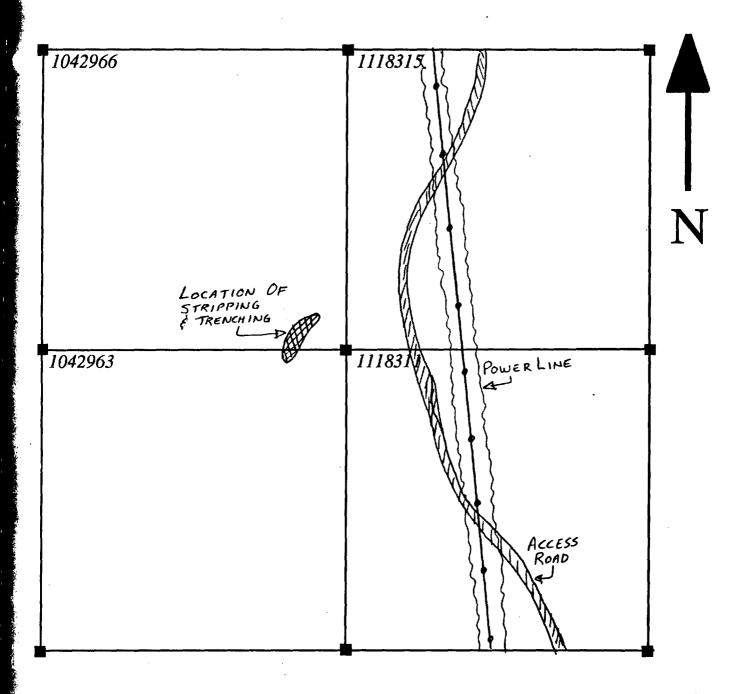
120 cubic metres

Particulars:

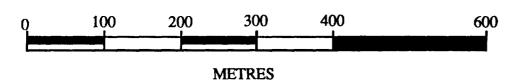
limestone keeps trending downwards (deeper) on 2:1 slope to N-W

Results of Excavation:

- the limestone is pink coloured and contains blu-grayish banding
- the downward trend indicates smooth, angled natural benches at claim 1042966 that would suggest that quarrying would be enhanced
- the smooth quasi-vertical plane would make benching easy to begin
- fracturing and jointing appears to be minimal and therefore, this deposit may be of very high quality
- more work will be required to expose the deposit along vertical planes;
   this would include surface drilling and cutting of vertical faces into
   the stone to assess the stone's value and the deposit's characteristics



SCALE: 1:5,000



STRIPPING / TRENCHING LOCATIONS ON NEW LIMESTONE FIND (CLAIMS 1042963, 1118311 AND 1042966)

## PART 2: Stripping and Trenching on Claims Where Limestone Was Known To Exist (Claims 865266, 865267 and 865268)

Claim 865266 contains most of what we have previously labelled the "Main West Deposit" and the "Main East Deposit". Claims 865267 and 865268 contain what would appear to be extensions of the Main deposits. It is suspected that the Main deposits have folded under and re-appear on the neighbouring claims. A map locating the claims, deposits and excavation work done in 1994 is given on page B-8.

The work done on this claim under this OMIP project focussed mainly on stripping additional overburden from the surface to expose as much of the deposit as possible. We needed to do this work because it was impossible to determine in which direction the subsurface deposit trended. Diamond drilling was also conducted to try to follow the deposit. Details of drilling are in Appendix C.

As is seen on the map on page B-8, the stripping and trenching on these three claims was concentrated in three main areas, labelled Areas ST1, ST2 and ST3. The particulars of each area stripped are given below:

### **AREA ST1:**

Trenching/stripping location:

claim 865266, as shown on map on page B-8

**Excavation dimensions:** 

60 m (long) x 30 m (wide) x 1.5 m (deep)

Total volume excavated:

2,700 cubic metres

Results of Excavation:

- the limestone is mainly the laminated type (not breccia)

- the deposit continues across the access road as was expected

- this limestone has potentially good commercial value

- the fracture pattern are sparse - good quality blocks will be possible

- there is good consistency in colour and pattern

#### **AREA ST2:**

Trenching/stripping location:

claims 865266 and 865267, as shown on map on page B-8

Excavation dimensions:

110 m (long) x 35 m (wide) x 3 m (deep)

Total volume excavated:

11,550 cubic metres

Results of Excavation:

- the limestone is mainly breccia which has good commercial value

- the deposit steps down in ledges of 1 to 1.5 metres, as shown on the

photographs on the next page

- the entire area is underlain by limestone suitable as marble

- many areas are covered by water, as shown in the photographs

- the deposit did trend downward, but not as deep as we expected

### **AREA ST3:**

Trenching/stripping location:

claim 865268, as shown on map on page B-8

**Excavation dimensions:** 

40 m (long) x 20 m (wide) x 2 m (deep)

Total volume excavated:

1,600 cubic metres

Results of Excavation:

- the limestone is mainly beige-creme coloured with "dirty" banding

- the colour is not ideal for commercial applications

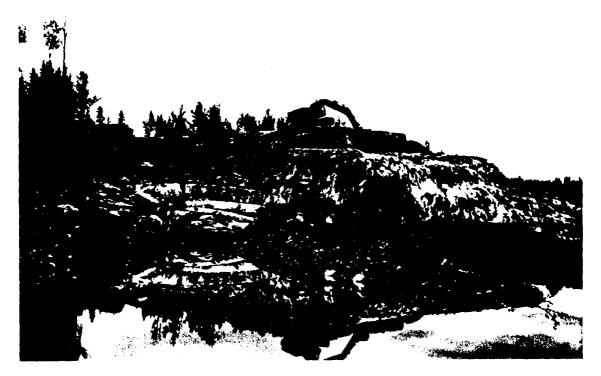
- the deposit shows minimal fracture characteristics

- the entire area is underlain by limestone suitable as marble

- this is not an extension of the main deposit (i.e. breccia or tramonto)



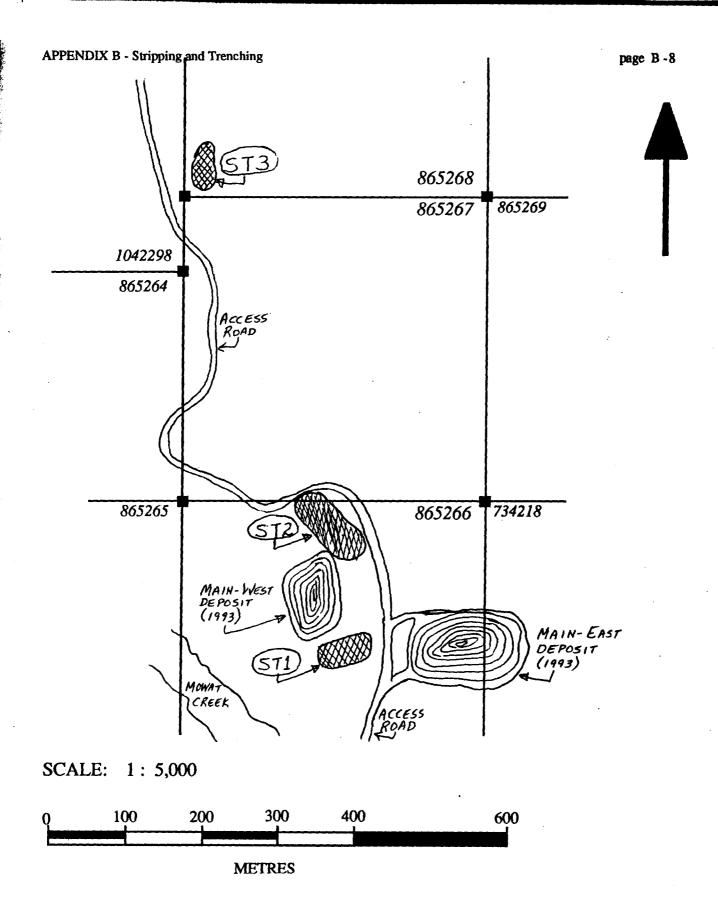
STRIPPING IN AREA ST2 SHOWING NATURAL LEDGES



STRIPPING IN AREA ST2 SHOWING EXTENT OF SURFACE WATER COVER (VIEW FACING CLAIM 865266)



STRIPPING IN AREA ST2 SHOWING EXTENT OF SURFACE WATER COVER (VIEW FACING CLAIM 865267)



STRIPPING / TRENCHING LOCATIONS OF KNOWN LIMESTONE (CLAIMS 865266, 865267 AND 865268)

### **APPENDIX C**

## Details of Exploration Drilling, Diamond Wire Cutting and Assaying

### INTRODUCTION

Exploration drilling for dimension stone deposits varies greatly from exploration drilling for conventional mineral deposits. In fact, diamond drilling is generally discouraged for dimension stone deposits because of the destructive nature of the holes with respect to the deposit's value. In conventional mineral deposits, working the deposit entails fragmenting the ore into small pieces using explosives and then crushing and milling the ore for processing. In such deposits, extensive diamond drilling is critical for the proper assessment of the deposit because assays are needed as well as reserve estimations of deep underground deposits. Because the rock will be finely fragmented, the location of diamond drill holes with respect to the deposit will not devalue the financial return expected on the ore. On the contrary, extensive diamond drilling will qualify the deposit, resulting in fewer unknowns and increased value of the option.

The case is very different for dimension stone deposits. Although it is good to conduct a limited amount of diamond drilling on dimension stone deposits to establish certain parameters (such as colour, pattern, consistency with depth, fracture frequency and total reserves) extensive diamond drilling is discouraged because the deposit can be ruined by the presence of core holes. The prime purpose in quarrying dimension stone is to extract the largest possible rectangular blocks of intact material. The ideal location and angle of extraction of blocks is determined in the field based on conditions at the free faces that become visible only immediately before extraction. If a core hole was drilled in the wrong place, and entire marble block can be ruined, resulting in financial losses. The unfortunate truth is that the best and least damaging location for a diamond drill hole in dimension stone cannot be determined ahead of time. Therefore, selecting as few holes as possible in strategically placed locations will provide the maximum information needed with minimum damage to the deposit. Too many diamond drill holes will lead to holes ending up in the middle of blocks, thereby making them worthless.

Another factor that makes exploration drilling different for dimension stone is that great depth is not needed. The Espanola Limestone formations on our claims in Parkin Twp are known to extend to a maximum of one to two hundred feet. Because dimension stone quarries are typically quite shallow in depth, it is not necessary for us to drill any deeper than the thickness of the limestone bed. Typically, holes of about 50 feet are sufficient.

It is very important to conduct surface drilling other than core drilling (i.e. hydraulic drilling of faces) for dimension stone in order to expose broad, unweathered lengths of face of the deposit. This allows us to determine whether the deposit is of geological and commercial value. During the exploration stage, drilling other than core drilling is more valuable in providing information on the quality of a dimension stone

deposit than diamond drilling of cores. This should be supplemented with diamond wire cutting of weathered face sections to expose fresh rock for geological and commercial potential assessment.

For this OMIP project, Ontario Quarries Inc. hired a contractor to carry out all drilling, diamond wire cutting and handling for assaying. This appendix reports the activities and findings in each of 3 categories:

PART 1. Surface Drilling
PART 2. Diamond Wire Cutting
PART 3. Assaying

Each is detailed below.

### PART 1. SURFACE DRILLING

One contractor was hired to conduct all drilling. Surface drilling ("other-than-core") prevailed, as it should in dimension stone for reasons mentioned above and as detailed in the main section of this report. The surface drilling was divided between hydraulic drilling of closely spaced holes for splitting rock to expose large vertical faces of the deposits for assessment, diamond drilling to locate subsurface trends in the deposit and pilot hole drilling to allow diamond wire cutting of the face to expose fresh unweathered rock and also to produce small test blocks for assaying. Some of the equipment that was used for drilling on this project is shown in photographs 5, 6 and 7.

Part of the "other than core drilling" (hydraulic drilling) involved closely spaced vertical hydraulic drilling (see photos 1 and 2 for example of the effect). This is necessary so that thicknesses of weathered rock can be removed to expose broad unweathered faces of the deposit for assessment. This, along with diamond wire cutting, are the most suitable techniques to conduct exploration aimed at assessing the value of a limestone deposit such as this one.

The exposure of lengths of unweathered deposit allowed us to determine the most important parameters that will indicate with any degree of certainty whether the limestone is quarriable. The parameters that determine this are colour, texture, pattern, the presence and frequency of fractures and the presence of natural horizontal benches that would assist in future block extraction. The exposed unweathered deposit also allowed us to locate and better characterize waste contacts (i.e. the diabase dyke). Results of these parameters are given in the geological report in Appendix D.

The diamond wire saw requires considerable drilling as well as preparatory work in order to provide the pilot holes needed to fish the diamond wire through for cutting of the face. The other part of "other than core drilling" therefore involved drilling pilot holes for diamond wire cutting. For each 15 square metre cut (5m x 3m), at least 13 linear metres of drilling are required. Often, the pilot holes do not intersect and therefore, they have to be re-drilled, resulting in more than 20 metres of drilling for a 15 square metre face.

Diamond drilling in dimension stone deposits is a contentious issue. The most experienced quarriers from established quarries in Italy cringe at the thought of drilling core holes in a marble deposit and would never resort to any diamond drilling for exploration purposes. The reason is that holes in stone ruin potential future marble blocks for production purposes because the location of a hole in the wrong place can make the block useless.

The diamond drilling that was conducted was aimed at finding the trend of the main deposit on claim 865266, as it is known to fold under and we were not able to follow it with surface excavation. We suspect that the deposit folds quite deeply and re-appears on neighbouring claims. However, this has not yet been confirmed. The results of the diamond drilling were not favourable. Several holes were drilled and abandoned because no limestone was present. Many of the holes had to be re-started due to poor subsurface conditions. In all, the diamond drilling exercise was disappointing. The only thing we were able to determine for certain is that the limestone is either not present beyond the locations that have been stripped and excavated on claim 865266, or the limestone has folded so deeply (i.e. more than 150 feet) that it is not feasible to extract using conventional stone quarrying technology. This confirms that the deposit which is now visible on surface on claim 865266 as a result of stripping is the extent of the deposit that is quarriable on this claim. The reserves have been estimated at over 7 million tonnes and therefore, quantities are sufficient for 200 years or more of production from this claim alone. A total of 13 holes were attempted by the contractor without success. None of the cores were suitable for logging as no limestone was found.

### PART 2. DIAMOND WIRE CUTTING

The diamond wire cutting activity which was conducted for this project also involved exposing significant faces of unweathered rock for preliminary deposit evaluation. Diamond wire sawing is the best technique available to permit marble deposit evaluation. In this exploration project, diamond wire sawing was conducted extensively by the contractor for 2 main purposes: 1) to expose fresh, unweathered faces for deposit evaluation in various areas; and 2) to permit cutting of various small test blocks cut from different faces and sent for "assaying" as it is typically done for dimension stone deposits. Our contractor is the only local company to own diamond wire saws. Photographs 4 and 5 show the saw and face exposed.

### PART 3. ASSAYING

Assaying in dimension stone deposits can only be done by drilling or cutting small test blocks from the limestone occurrence as part of the sampling process and then by having tiles cut and polished from the test blocks. Accordingly, assaying for dimension stone in this project involved cutting and polishing some tiles from each of the blocks to determine whether the limestone takes a polish well and hence can be described as a "marble" in the industrial sense of the word. This type of assaying was conducted by experienced stone manufacturing specialists such as Khouri Granite or Ellero Marble of Sudbury.

Once the small test block samples were produced, they were transported over relatively long distances to the assaying sites (Khouri Granite and Ellero Marble of Sudbury). Trucks were used to complete the transportation. F.H.R. Construction Ltd. supplied equipment and labour to load and transport the blocks to the assaying facilities. They also looked after handling at the plant and instructed the plant on the types of cuts to be produced. Photo 8 shows the typical type of block sent for assaying.

Assaying involved cutting and polishing a limited number of tiles and slabs from the blocks received. Results showed that although some sulphides are sometimes present, the material polishes very well and hence can be marketed in the future as a "marble" under the industrial definition.

### SUMMARY OF DRILLING, CUTTING AND ASSAYING ACTIVITIES

The following summarizes the amount of work invoiced by the contractor in each of the three categories:

ACTIVITY	QUANTITY	COST
Exploration Drilling including all equipment, labour and supplies Diamond Wire Sawing including all equipment, labour and supplies Assaying, including loading, transporting and unloading	1356m. lump sum lump sum	101,208. 50,000. 16,000.

All work was paid to F.H.R. Construction Ltd. of Sudbury. Although the contractor did more work than required and exceeded the quantities and cost allocated for this work, he agreed to invoice for the amount that we had budgetted for the project.



PHOTO 1 - VERTICAL FACES OF UNWEATHERED ROCK PRODUCED BY HYDRAULIC DRILLING AND SPLITTINGOF CLOSELY SPACED HOLES

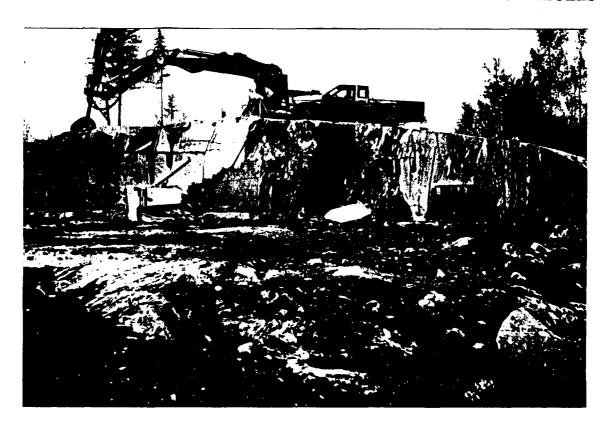


PHOTO 2 - VERTICAL FACES OF UNWEATHERED ROCK PRODUCED BY DIAMOND WIRE CUTTING TECHNOLOGY



PHOTO 3
DIAMOND WIRE SAW USED TO EXPOSE FRESH FACES OF ROCK



PHOTO 4 DIAMOND WIRE SAW

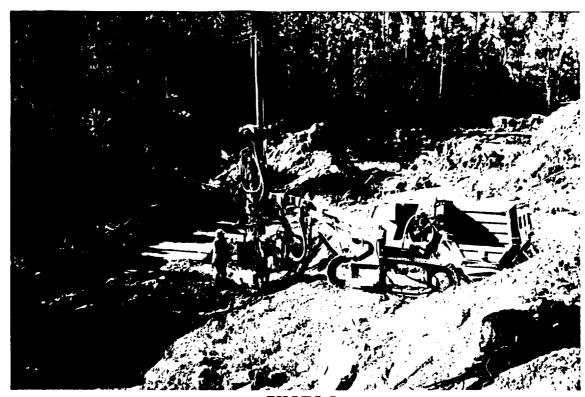


PHOTO 5 HYDRAULIC DRILL UNIT USED TO PRODUCE FACES SEEN IN PHOTOS 1 AND 2



PHOTO 6 - CRAWLER-MOUNTED DRILL UNIT USED TO PRODUCE VERTICAL FREE FACES AND VERTICAL PILOT HOLES FOR DIAMOND WIRE

ONTARIO QUARRIES Inc. / February 1995



PHOTO 7 - SPECIALIZED BENETTI QUARRY DRILL USED TO PRODUCE HORIZONTAL PILOT HOLES FOR DIAMOND WIRE SAW



PHOTO 8
TYPICAL BLOCKS CUT AND SENT FOR ASSAYING

## **APPENDIX D**

Geological

### INTRODUCTION

The geological information and mapping / drafting in this project has formed part of every section in this report and has been distributed accordingly. This section will summarize the findings that have been distributed throughout the report with specific emphasis on geology.

This appendix is divided into 6 general sections:

PART 1 - General Geology

PART 2 - Dimension Stone Potential of the Claims

PART 3 - Topographical Data and Map

### PART 1. GENERAL GEOLOGY

The project site is located in Parkin Township which is approximately 12 km north of the town of Capreol, Ontario and 42 km north of Sudbury. It is located within the Region of Sudbury, Ontario, and is in the Sudbury mining district. The location of the work performed under this OMIP project can be further defined as being positioned at a latitude ranging from 46° 51' and 46° 53' and a longitude ranging from 80° 54' 45" to 80° 55' 30".

The property is shown on Claim Map (Land Disposition Plan) G-2915, Parkin Township. A portion of this map showing the project location was given in the main section of this report on page 6. The NTS (topographical) map which shows this area is known as EMR Canada Map No. 41-1/15, entitled "Milnet, Ontario", Edition 3. It has a scale of 1:50,000 and a contour interval of 50 feet. A portion of this map showing the project site was also given in the main report. It is presented as the "Location Map of Project Area", on page 5 of this report. This map is also known as "NTS reference 41 1/15".

Access to the project site is via paved road (Hwy 69N) North of Sudbury for 25 km to Capreol, from where a paved road (RR 84, formerly Hwy 545) leads north 12 km to the Vermillion River bridge. Just prior to the bridge (200 m south of the river crossing), there is a Hydro access road that branches off East of RR84. This Hydro road leads directly to the project site. The distance along the access road from the RR84 intersection to the project site is 6.5 km. The site is reached just after the access road crosses Mowat Creek. Most of the road has recently been upgraded by Ontario Quarries Inc. with the assistance of a N.O.R.T. Committee grant. The access route to the project site is clearly shown on the map on Page 7 of the main report.

APPENDIX D - Geological

page D-3

There are 13 claims included in this project. All claims are in Parkin Township as previously described and as shown on the accompanying maps. All claims are in good standing. The claims are the following:

\$ 865266 \$ 865267 \$ 865268 \$ 1042963 \$ 1042964 \$ 1042965 \$ 1042966 \$ 1042967 \$ 1042968 \$ 1042969 \$ 1118287 \$ 1118311 \$ 1118315

Title to the above 13 claims belongs exclusively to Ontario Quarries Inc. The above thirteen claims form part of a large group of contiguous mining claims consisting of 38 claim units owned by Ontario Quarries in Parkin and Hutton Townships. The claims were purchased outright in 1992 in an option agreement with Mr. John Brady, prospector, from Sudbury Ontario. The claims were originally staked for potential gold and sulphides mineralization. The claims are shown on page 6.

The subject property lies near the contact between Archean greenstone-granitoid rocks to the west and Proterozoic (Huronian) metasediments to the east which unconformably overly the Archean units. The Huronian metasediments have been subdivided into the following litho-stratigraphic formations in this area: Mississagi, Bruce, Espanola, Serpent, Gowganda, and Lorrain. The foregoing rocks have been intruded by dikes of Nipissing-type diabase and olivine-diabase.

The property containing the 13 mining claims is underlain by the Espanola and Serpent Formations of the Quirke Lake Group. The Espanola Formation in Parkin Township consists of two members. The lower member is a limestone interbedded with siltstone and the upper member is a fine-grained siltstone to sar one. The total thickness of the Espanola limestone formation was published by Meyn (1970) to be

probably between 100 to 200 feet. No other information was available on the thickness of the limestone formation. However, diamond drilling conducted by Ontario Quarries Inc.in the vicinity of the claims as part of its O.M.I.P. work has proven beyond any doubt that the limestone formation exceeds 200 feet.

### PART 2. DIMENSION STONE POTENTIAL OF THE CLAIMS

The geology underlying the claim group consists of interbedded limestone and fine grained wackes of the Espanola formation intruded by mafic intrusive rocks. OMIP activities carried out by Ontario Quarries Inc. has revealed several main distinct areas underlain by limestone deposits. The areas all contain different qualities and colour of limestone ranging from beige to pink to gray to green and some black. Textures and patterns of limestones found to date vary from bedded or laminated to brecciated. All limestones from this property polish very well and could be suitable for application as dimension stone. The deposits show good characteristics and the preliminary reserve estimations indicate that there is enough material for a few hundred years of full quarry production.

All OMIP activities have helped ascertain that in many places, the major horizontal fracture planes will in fact be beneficial to quarrying activities. In some locations, the blocks can be removed from the face without having to make a horizontal cut below the block. The natural fracture plane gives way easily in some areas so that the blocks are removed using three vertical cuts only.

In general, the horizontal fractures are found to be spaced far enough apart (1.5 to 3 metres) to allow for future extraction of excellent sized blocks for export. Vertical fractures are erratic and could cause some problems with large block extraction. Fracture patterns and frequency in general are consistent with those found in successful quarry operations visited overseas and pictured in international trade journals.

Through the OMIP program, we were also able to determine that many of the fractures within the deposit anneal with depth. Various fractures have tightly cemented with calcite or other cementing minerals. There is a system of angled fractures that will make quarrying in some sections a bit more difficult. There is, however, a predominance of perfectly horizontal fractures which are not tightly cemented. These can be of tremendous assistance in quarrying by offering a natural horizontal free face for block removal.

Consistency of colour, pattern and texture as well as volume of consistent material are the most important factors to determine in the financial feasibility of a dimension stone deposit. The activities done through our OMIP program indicated that colour, pattern and texture are somewhat consistent on a vast scale from

one deposit to another. However, colour and pattern can vary erratically within short distances. As a result, it will likely be necessary to conduct careful planning for future production so that some reasonable degree of consistency can be offered to future buyers. It would also appear that careful sorting of production blocks will be necessary on a permanent basis.

The exploration drilling and diamond wire cutting operations were successful in that several fresh unweathered faces were cleanly split and exposed for detailed geological evaluation and for deposit assessment. In general, it was found that the colour, pattern and texture of the stone are consistent vertically but are somewhat inconsistent horizontally (i.e. colour varies every few feet horizontally, but remains relatively constant with vertical depth). Waste contacts with the diabase dyke intruding the area were more visible, enabling them to be characterized geologically. This gave us a better indication of the surface area of the Main East-West Deposit.

### PART 3. TOPOGRAPHICAL DATA

A topographical survey was conducted on the Main East Deposit site using an automatic level and rod to allow mapping of elevations of the exposed faces before and after splitting. The survey was conducted by a professional engineer with several years of experience in land surveys. The results of the survey are shown on the next two pages.

### **CONCLUSION**

The geology of the limestone formations on the claim group studied is conducive to more work to allow exploration for a dimension stone quarry. The jointing and fracture patterns will help quarrying by providing free faces for block extraction (especially the horizontal fractures). The colour, texture and pattern of the stone has the potential for good market appeal. The deposit shows limited consistency in colour and pattern. More work needs to be done to determine more accurately the consistency with depth. Although significant reserves have been proven, more work also needs to be done to trace the sub-surface trends of the deposits found.

## TOPOGRAPHIC DETAIL BEFORE OMIP ACTIVITIES PART OF CLAIM S865266, PARKIN TOWNSHIP

