

87-106-15593

3/88

GEOLOGIC
AND
DIAMOND DRILLING REPORT

FOR

Owner/Operator: CANDOL DEVELOPMENTS LTD.
SEHEL T CARBONATE GROUP
SEHEL T PENINSULA, BRITISH COLUMBIA
VANCOUVER MINING DIVISION
NTS 92G / 12W
49° 36.1' N. LAT., 123° 53.2' W. LONG.

BY

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FILMED

MARCH, 1987

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

15,593

SUMMARY

The writer was retained by Ingot Exploration Ltd. to supervise a diamond drill programme carried out on the Sechelt Carbonate Claims of Candol Developments Ltd. Ingot Exploration Ltd. has been retained by Candol as exploration managers.

The Sechelt Carbonate Claim Group is composed of the Plain, Till, Zinc and Adit #1-4 claims, all owned by Candol Developments Ltd. The property is located on the Sechelt Peninsula, 6 kilometres north of Halfmoon Bay and 65 kilometres northwest of downtown Vancouver. Access is by gravelled logging roads.

Property Geology consists of northerly elongated pendants of highly altered Jervis Group carbonates and volcanics overlying Coast Range diorite and quartz diorite.

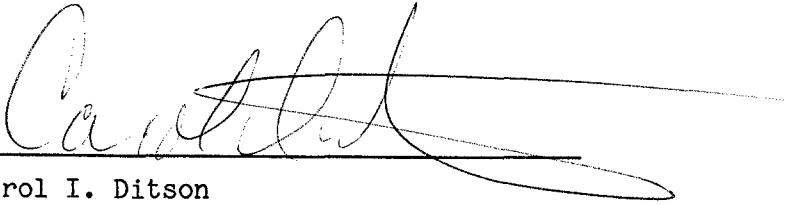
High grade dolomitic and calcitic marbles have been known to exist on this property since 1969 and, although extensive prospecting and several reserve estimates and preliminary feasibility studies have been done since, little has been done to promote possible or probable reserves into the "measured" or "proven" category. Open pit extraction of dolomite with on-site crushing and shipment by barge is envisioned for this property. There are no known alternate dolomite sources on the west coast with similar purity.

This diamond drill program, begun in December, 1986, was initiated to test reserves contained in one large dolomite body located on the Plain claim. A total of 583.08 metres of NQ core was drilled, in a grid pattern, along an 840 metre road constructed for that purpose.

As a result of this program 3.5 million tonnes of drill indicated geologic reserves of dolomite were calculated with an average purity of 96.7% dolomite which places it within the industrial "high purity" range.

Other dolomite bodies known to exist on the property remain relatively unexplored and unsampled. These may increase current reserve estimates.

Recommendations for future work programs include preliminary geologic mapping (scale = 1:1000) and sampling of these areas in addition to further development of the present project area. To this end, detailed geologic mapping (scale = 1:500), trenching of unexposed contacts and additional drilling and sampling are recommended for further definition of the orebody.

A handwritten signature in cursive script, appearing to read 'Carol I. Ditson', written over a horizontal line. The signature is fluid and extends to the right with a long, sweeping tail.

Carol I. Ditson

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LOCATION

The Sechelt Carbonate Group Claims are situated close to the centre of the Sechelt Peninsula at 122° 53' W longitude and 49° 36' N latitude, approximately 6 kilometres north of Halfmoon Bay and 65 kilometres northwest of downtown Vancouver.

Geographically located in the Caren Mountain Range, these three claims extend from the headwaters of Anderson Creek on the north to include the drainage system of Carlson Creek from its initiation to Carlson Lake on the southeast. The southern boundary of the claim group lies approximately 600 metres south of the southernmost tip of Carlson Lake.

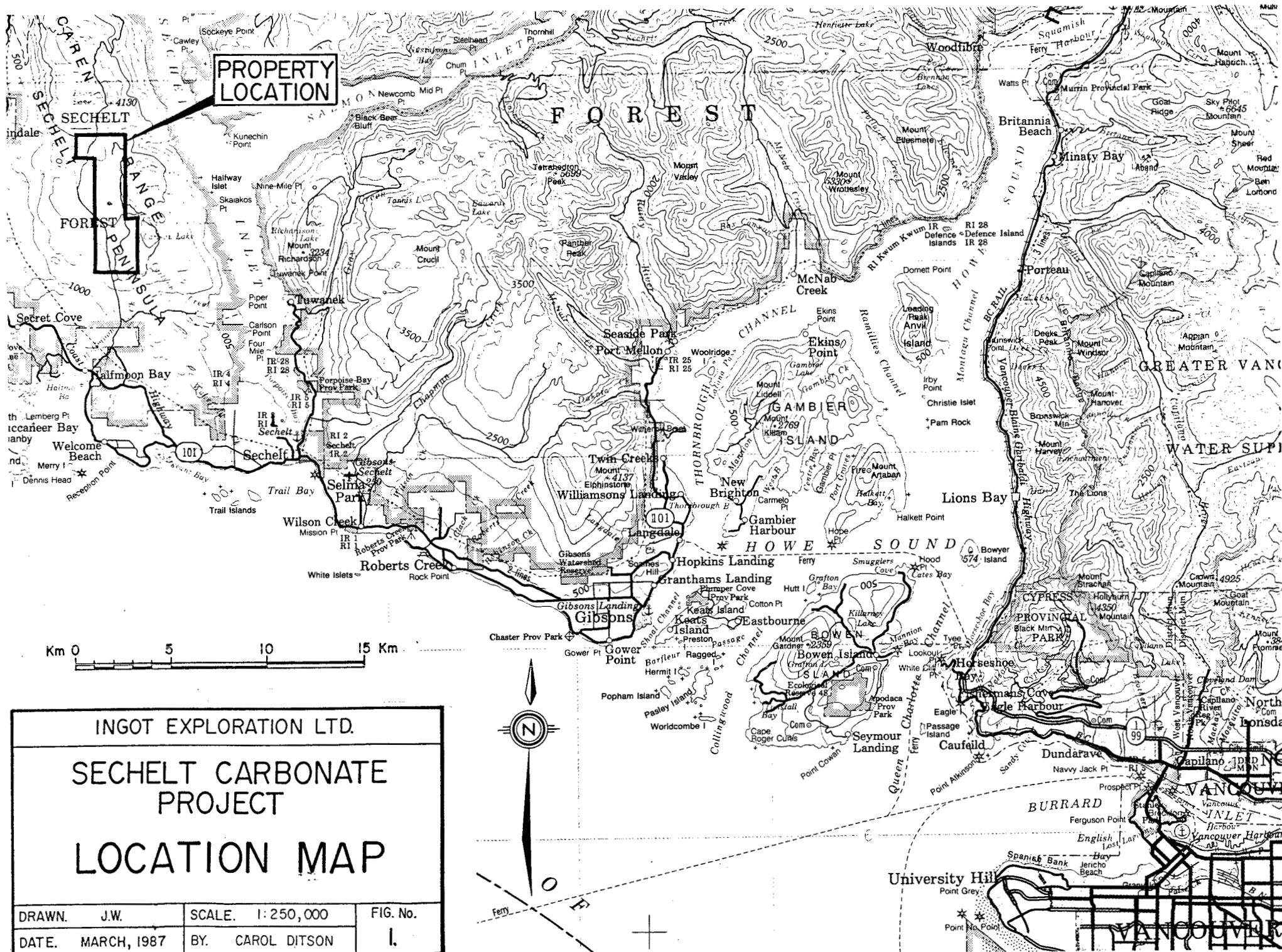
The Adit #1-4 claims are located on the west shoreline of the Sechelt Inlet, four kilometres east of the Sechelt Carbonate Group. These claims are held solely to provide a means of nearby shoreline access to the Carbonate Claim Group should such become necessary or expedient at a future date.

ACCESS

Access from Vancouver is via the B.C. Ferry system from Horseshoe Bay to Langdale (a 45 minute sailing), then northwest along Highway 101 for a distance of approximately 31 kilometres to the Trout Creek Road turnoff. Trout Creek Road, located 300 metres past (west of) Trout Lake, is an improved logging road which accesses a complex system of northerly trending logging roads. This network, combined with several secondary mining roads, provides excellent access to most portions of the claim group.

Total travel time from downtown Vancouver is approximately 2.5 hours; from the town of Sechelt, approximately 25 minutes.

The claims are accessible by 4-wheel drive vehicle during most of the year as the climate is mild. Heavy accumulation of snow can pose a problem during the winter months, however, this is rare. Light to moderate snow accumulations, negotiable by 4-wheel drive vehicle, generally melt after a



**PROPERTY
LOCATION**

Km 0 5 10 15 Km



INGOT EXPLORATION LTD.		
SECHELT CARBONATE PROJECT		
LOCATION MAP		
DRAWN. J.W.	SCALE. 1:250,000	FIG. No.
DATE. MARCH, 1987	BY. CAROL DITSON	1.

few days preventing heavy snow build up. Road clearing equipment is readily available should snow ploughing be required.

As noted previously, the property is accessible by water with the Adit #1-4 claims providing an eastern shoreline access a scant 4 kilometres downhill from the claims. It is envisioned that quarried dolomite crushed on site, could be economically barged from Sechelt Inlet to a processing site or directly to customers and distributors.

There is an abundance of resources available in the area that serve to facilitate mining exploration and development in addition to aiding any future quarry operations.

A high voltage transmission line (230 KV) crosses the northwest corner of the Zinc claim. Timber and water are available for construction on the site; labour, materials, equipment, transport and communications are readily available at Halfmoon Bay, Sechelt or in Vancouver. Adequate accommodation is available in the area.

TOPOGRAPHY

Relief on the Sechelt Carbonate Claims Group varies from gentle to moderately rugged in a series of northerly trending ridges and gullies.

Steep to near-vertical cliffs comprise much of the western side of the Carlson Creek drainage. Elevations range from approximately 457 metres at the southwest corner of the Till claim to slightly above 1,020 metres along the eastern edge of the Plain claim.

Karst topography is evidenced by numerous small lakes, occasional sinkholes and dykes which, when observed cutting through a limestone unit, often stand a foot or more above the surface of the limestone, attesting to differing dissolution potentials.

Much of the claim area is covered with overburden, ranging in depths to over 20 feet (Weymark, 1983), some of which is muskeg-swamp. Most of the claim area has been logged and is now covered with a dense secondary growth of coniferous and deciduous timber.

PROPERTY

The Sechelt Carbonate Group of minerals claims cover 1,359 hectares (3,358 acres) and consists of three modified grid system claims, totalling 53 units of 25 hectares (61.8 acres) each, and four 2-post claims of 20.9 hectares (51.7 acres), totalling four unit equivalents.

Claims details are itemized below. A claim map is included as Figure 2.

<u>Claim</u>	<u>Units</u>	<u>Number</u>	<u>Record Date</u>	<u>Expiry Date</u>
Plain	18	92	May 31, 1976	May 31, 1989
Till	20	1,140	January 12, 1982	January 12, 1988
Zinc	15	2,007	October 20, 1986	October 20, 1987
Adit 1	1	1,177	April 15, 1982	April 15, 1987
Adit 2	1	1,178	April 15, 1982	April 15, 1987
Adit 3	1	1,179	April 15, 1982	April 15, 1987
Adit 4	<u>1</u>	1,180	April 15, 1982	April 15, 1987
Total	57 units			

A Notice to Group (#1018) was filed on May 12, 1983 affecting the Adit #1-4 claims, now known as the "Adit Group".

The Adit #1 claim does not comprise a full unit as a portion of the ground staked extends into the Sechelt Inlet.

The claims, situated in the Vancouver Mining Division, are shown on B.C. Department of Mines and Petroleum Resources Mineral Claim Map 92G/12W.

SECHELT

ZINC
2007(10)

PLAIN
92(5)

TILL
1140(1)

ADIT 3 ADIT 1
ADIT 4 ADIT 2

CLAIM
GROUP



INGOT EXPLORATION LTD.		
SECHLT CARBONATE PROJECT		
CLAIMS & PROPERTY TOPOGRAPHY		
DRAWN. J.W.	SCALE. 1:50,000	FIG. No.
DATE. MARCH, 1987	BY. CAROL DITSON	2

HISTORY

The Sechelt Carbonate Property was originally explored by Rudolph C. Riepe with the first claim, the Estelle claim, being staked by him in November, 1969. Within a year, a further 24 claims were staked by Mr. Riepe (the Nad #1-7, Sad #2-7, Helga, Helga West, Sharon, Sharon West, Estelle West, Patty, Patty West, Terry, Terry West, Wendy and Wendy West claims). In August, 1970, the claim group was sold to Peninsula Lime and Magnesia Ltd. and later named the Pen Lime Group.

In September, 1970, Peninsula Lime contracted R. Darney and C. Ikona of Pamicon Developments Ltd. to perform preliminary geologic mapping and tonnage estimates. Pamicon's report covers two small areas of the property; the southeast of the present Plain claim (Peninsula's intended production area) and the central portion of the Plain claim (their intended plant site). Extrapolating from surface indications, Messrs. Darney and Ikona estimated 106,000 tons of combined probable and possible white dolomite reserves and 520,000 tons of high calcium limestone. The three samples that Pamicon had assayed revealed the carbonates to be of extreme purity, containing less than 1.6% impurities. Pamicon's subsequent report recommended magnetometer surveys, trenching and diamond drilling.

A 1970 B.C. Department of Mines and Petroleum Resources G.E.M. report indicates that, as of August, 1971, a crusher plant was in place and Peninsula Lime and Magnesia had commenced quarrying limestone and dolomite to produce stucco chips and slab stone for the building industry.

In November, 1972, Peninsula Lime forfeited ownership of a portion of the claim block. This area was subsequently restaked for Rudolph Riepe and named the MC #1-5 claims. In November, 1973, when one further intervening claim was allowed to lapse, Mr. Riepe restaked that ground also, naming this the Ruby claim.

The MC-Ruby property was subsequently explored for copper mineralization which appeared to be related to carbonate/intrusive contacts and shear zones

within the carbonate units. In late 1973, Rudy Riepe combined with Weymark Engineering Ltd. to perform aerial and ground geophysical, geochemical and geological surveys (assessment report #4803). Further investigation to test the extent and nature of the sulfide mineralization was recommended.

There is no further mention of activity on this property until 1976 when it appears the emphasis shifted from sulfide mineralization to the carbonates as a potential source of magnesium for industry. In May, 1976, Paul Price staked the present Plain claim for Rudy Riepe. This claim overlapped much of the area of the MC and Ruby claims which were subsequently allowed to lapse in 1978. In the interim, J.M. Ashton Associates submitted a feasibility report on dolomite processing (1977) and a proposal to establish a dolomite grinding plant on the Sechelt Peninsula as a source of magnesium-rich fertilizer (1978).

Sometime prior to November, 1980, Mr. Riepe had acquired another 21 units of ground adjoining the Plain claim on the north and west. He subsequently approached Kaiser Resources Ltd. to determine their interest in optioning the property for further exploration and development. Kaiser conducted a thorough study of the property's potential for dolomite, limestone and peat recovery, processing, marketing and transportation to industry. Pertinent conclusions from their November 3, 1980 report are outlined herewith:

- total indicated and inferred reserves
 - dolomite: 117,500,000 tons
 - limestone: 27,500,000 tons
- the dolomite and limestone present on the property are of exceptional purity (dolomite 98.3%, limestone 99.1% pure)
- a number of products and by-products could be produced at low enough cost to compete with, and perhaps undercut, domestic and world markets.

It was subsequently recommended that Kaiser acquire an option on the Sechelt property and a five phase program was set out for its development. On November 6, 1980, a memo sent from Kaiser Resources to R.G. Heers of British

Columbia Resource Investment Corporation (B.C.R.I.C.) suggesting that they proceed with the development of this property. For reasons unknown to this author, neither Kaiser nor B.C.R.I.C. proceeded with the proposed option.

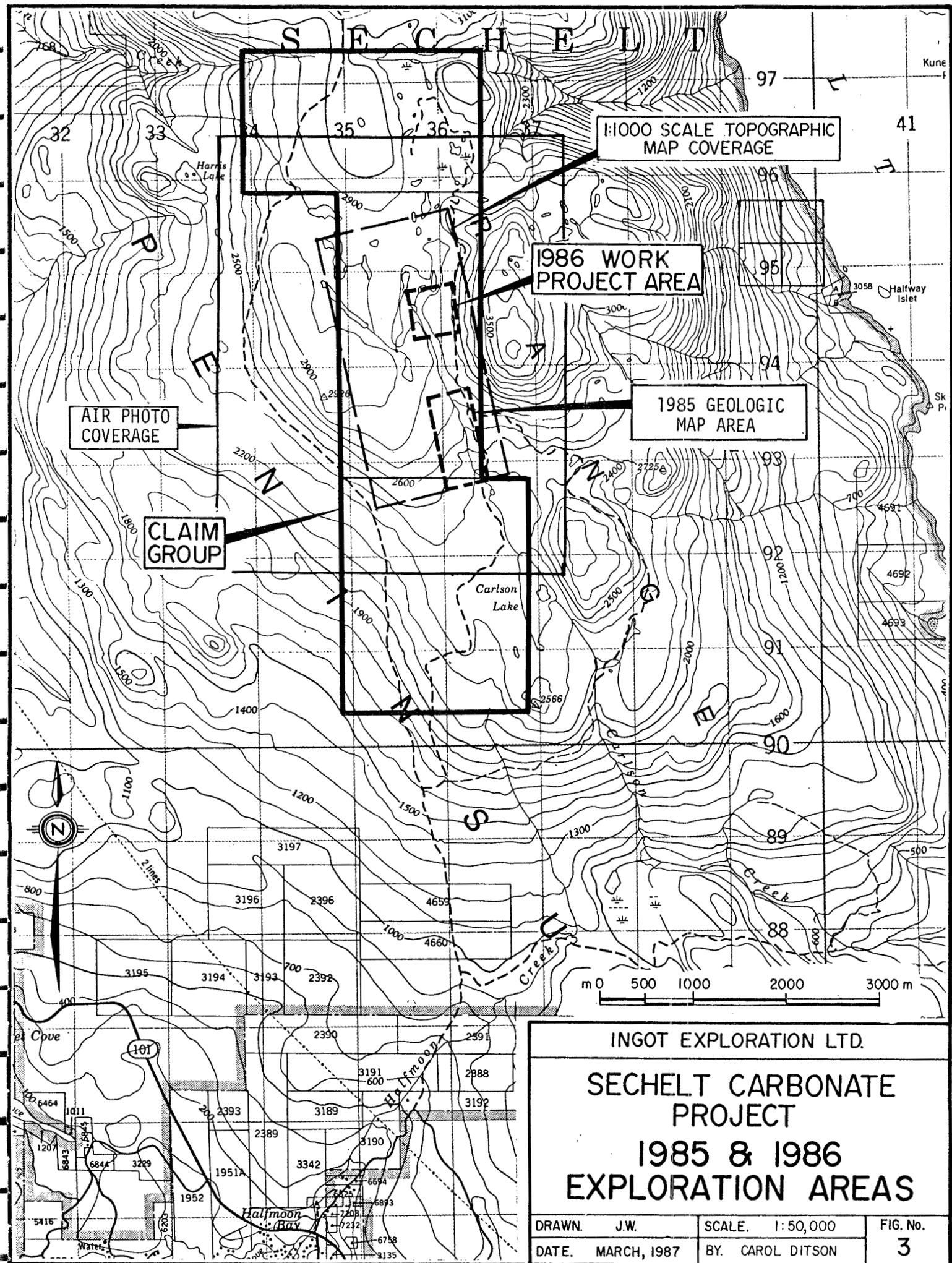
During 1982, the present Till and Adit #1-4 claims were staked by R. Riepe and the 21 units to the north and west of the Plain claims (Zinc and Base claims) were restaked by Constance E. Vodden acting as agent for herself.

On March 3, 1983, a legal sale agreement affecting the Plain, Till and Adit #1-4 claims was executed between Rudolph Riepe and Candol Developments Ltd. and Candol subsequently undertook to explore and develop the Sechelt Carbonate prospect. Weymark Engineering Ltd. submitted a "Primary Report" (April 6, 1983) to Candol in which they recommended a two phase program to include 5,000 feet of diamond drilling to further test the copper-lead-zinc-silver potential of the property. In May, a proposal for development of the Sechelt Industrial Mineral Project was submitted to Candol by D.R. Hjorth, P.Eng. and shortly thereafter (September, 1983), Wright Engineers Ltd. submitted a second "Primary Report" with respect to the carbonate potential of the property. Their sampling indicated the dolomites to be of high purity (average 97.28%) and having considerable lateral continuity at surface. Wright Engineers recommended a program of diamond drilling and bulk sampling combined with market research to establish current and projected demands for potential products and by-products.

In September, 1983, Candol made application to the B.C. Ministry of Lands, Parks and Housing for land leases for the purpose of quarrying limestone and dolomite and for the establishment of docking facilities to allow for barge shipping of the carbonates.

In February, 1985, Candol commenced an eight hole diamond drilling program. A total of 840 metres of NQ core was drilled and logged. Seventy-nine percent of the core was assayed and found to be relatively pure carbonate. Most of the unassayed rock consisted of intrusive dykes ranging in thickness from 0.1 to 0.6 metres (Bechtel, 1986).

S E C H E L T



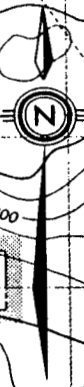
1:1000 SCALE TOPOGRAPHIC
MAP COVERAGE

1986 WORK
PROJECT AREA

1985 GEOLOGIC
MAP AREA

AIR PHOTO
COVERAGE

CLAIM
GROUP



INGOT EXPLORATION LTD.		
SECHLT CARBONATE PROJECT		
1985 & 1986 EXPLORATION AREAS		
DRAWN. J.W.	SCALE. 1:50,000	FIG. No.
DATE. MARCH, 1987	BY. CAROL DITSON	3

In March, 1985, Candol amalgamated with Ingot Resources Ltd. to co-venture in further development of the Sechelt property. There is no corporate or other relationship between Ingot Resources Ltd. and Ingot Exploration Ltd. or its parent corporation, Ingot Management Ltd.

A short program of geologic mapping was commenced in September, 1985 by Carol Ditson. A small area located less than a kilometre to the south of the 1986 drill project area, in the vicinity of Peninsula Lime and Magnesia's workings, was mapped on a scale of 1:1000 to identify the boundaries of the calcite in that area.

During February, 1986, Bechtel Inc. was contracted by Candol to visit the property and review existing data in order to assist in planning the next stage of exploration and development (Bechtel, 1986). Bechtel recommended a two phase program of market evaluation and exploration ("Resource Assessment") to be conducted concurrently. The suggested exploration program consisted of detailed geologic mapping to be followed by a 1,000 metre drilling program, seismic surveying to measure overburden depth and bulk sampling for process tests.

In August, 1986, the Zinc and Base claims owned by Constance Vodden, lapsed and in October most of that area was restaked for Rudy Riepe as the Zinc claim.

The subject diamond drill program commenced December 8, 1986. The details of this program will be dealt with in another section of this report.

On December 15, 1986, a Bill of Sale was recorded in the office of the Mining Recorder, Vancouver Mining Division, transferring all interest in the Plain, Till, Zinc and Adit #1-4 claims to Candol Developments Ltd.

REGIONAL GEOLOGY

The Sechelt Peninsula is situated at the western edge of the Coast Plutonic Complex, a geologic province of the Canadian Cordillera. The Coast Plutonic

Complex bounded on the east by the Intermontaine Belt and on the west by the Insular Belt, is a northwesterly trending belt consisting primarily of granodiorite and quartz diorite, with diorite concentrations in the west (Roddick, 1976). As the Coast Mountains were emplaced over a long period of time as a succession of intrusions rather than as a single unit, dating of these rocks is a complex issue. Ages are generally considered to range from late Jurassic-early cretaceous in the west to Eocene in the east.

Scattered across the Complex are elongate, northwesterly trending pendants of older sedimentary and volcanic rocks of various formations which lie unconformably atop the plutonic rocks. These "pendants" have been metamorphosed and intruded by later dykes. It is thought that many of these bodies could be remnant synclinal elements, the most deeply downfolded portion of an isoclinaly folded magmatically invaded roof (Bacon, 1957).

Metamorphism in the Coast Plutonic Complex ranges from sub-greenschist to the highest Amphibolite grade (Roddick, 1976).

PROPERTY GEOLOGY

The volcanic and carbonate units present on the Sechelt Carbonate property have been considered by various authors as belonging to the Gambier Group of lower Cretaceous age (Roddick, Muller & Okulitch, 1976), the upper Triassic Karmutsen formation (Roddick & Woodworth, 1979) and the Jervis Group (Bacon, 1957), to name a few. As very little inland mapping of the Sechelt Peninsula had been accomplished, Bacon in 1957 used Jervis Group to include all rocks of pre-batholithic age. Inasmuch as subsequent correlations are contradictory and, as all previous writings on the subject property refer to Jervis Group, it is considered appropriate to continue with this usage.

Jervis group volcanics and carbonates occur as northerly trending, elongate roof pendants sandwiched between and resting unconformably over late Jurassic/early Cretaceous Coast Range diorite and quartz diorite. Later dating andesite dykes cut all of the foregoing.

Although geologic mapping has been performed on the property, it has been confined to very localized areas. The only detailed mapping of carbonate units was accomplished in 1985 by the writer who mapped a small area of calcitic carbonate rock approximately 2 kilometres south of the drill area reported here.

Plan view geology of the 1986 drill project area (Figure 5 of this report) is compiled primarily from information obtained from drill core. Surficial mapping will be necessary, when snow cover permits, in order to confirm surface contacts.

A large, northerly trending body of dolomite has been outlined, ranging from 30 - 80 metres in width and extending for a distance in excess of 500 metres. The dolomite is bounded on the west by a narrow, continuous band of mixed dolomite and calcite. East of the dolomite, calcite predominates.

Two narrow, discontinuous bands or pods of calcite have been identified within this dolomite body. The first, visible on surface just north of drill hole 92P86-7, is not seen in drill core. The second is present in drill core in drill hole 85-5 and may or may not outcrop on surface.

The dolomite is cut by a large northwesterly trending andesite dyke, ranging in thickness from approximately 2 to 20 metres at surface. The wider, southern portion of this dyke appears to follow the southeastern boundary of the dolomite.

Intrusions are generally more massive and closer to surface on the northerly and narrowest portion of the dolomite body, but become sparse, narrow fingers south of the large andesite dyke discussed above.

A second body of dolomite is present in the drill area, seen outcropping on surface and in fault contact with calcite at the end of drillhole 92P86-13. the extent of this body is unknown and requires further exploration.

LITHOLOGIES

Lithologies present on the claim group are discussed herewith. Thin section preparation and petrographic analysis was performed on most rock units by Vancouver Petrographics Ltd. whose findings are included in the following discussion. Vancouver Petrographics' report comprises Appendix "C" of this report.

Calcitic Marble

Fine to course grained marbles, varying in color from white to medium grey, are commonly finely and consistently banded. Microscopic work revealed that the presence of an opaque mineral (graphite?) along seams, combined with recrystallization of calcite along these seams, is most likely responsible for the banding seen in hand sample.

Mineralogically, these marbles were found to contain minor amounts of serpentine, diopside, olivine and talc, often present as pods within conformable banding giving the appearance of an augen gneiss. Traces of opaque minerals (pyrite, graphite?, magnetite?) are also present.

Evidence indicates that at least some of these calcitic marbles were originally ultramafic rocks, subsequently serpentinized, then later metasomatically altered to calcite with a large input of calcium at the expense of magnesium (Payne, February, 1987). The accompanying loss of magnesium may have played a role in the formation of dolomitic marbles also present on the property. An opposite opinion suggests the high graphitic content of these marbles is indicative of a depositional environment. However, no other rock units of recognizable sedimentary origin have ever been found on the property and this question may remain unresolved.

The Calcitic marbles show very little obvious response to stress. Occasionally banding is contorted to migmatitic proximal to an intrusion. Some faulting is evidenced by seams of increased to pure graphite along which motion has occurred. It is the author's belief that banding in the

marbles is a direct result of regional stresses. The graphitic, recrystallized seams are very likely bands along which pressure solution has occurred and fluids have subsequently migrated. Banding in calcitic marbles parallels response to regional metamorphism (i.e. lineations and foliations) observed in other rocks on the property.

Field exposures of calcite have rounded, often pitted surfaces resulting from dissolution. Weathering rind, when present, is white.

Dolomitic Marble

These fine to medium grained marbles are most often a mottled light to medium grey color, although massive white dolomite is also present on the property. The common mottled, occasionally brecciated appearance results from the presence of numerous, thin anastomosing veinlets, usually dark grey in color (graphite?) that cut the marble in many directions. Light colored stringers of dolomite and calcite are also common.

Compositionally, the magnesium content of the dolomite is variable. Assays ranged from a rare low of about 35% $MgCO_3$ (16.8% MgO) to a high of 41.82% $MgCO_3$ (20.00% MgO). Average magnesium content of the dolomite identified in this drill program was 39.09% $MgCO_3$ (18.68% MgO).

The dolomitic marbles, when subjected to regional stress, tend to deform cataclastically. Brecciation is common along faults; abrupt, numerous single glide surfaces with dissimilar appearing material on both sides is characteristic of faulting, as compared to wide shear zones seen in calcitic marbles.

Dolomite outcrops have an extremely rough, almost botryoidal appearance from preferential dissolution along multi-directional veining systems. Weathered surfaces are tan colored.

Andesite

Fine to medium grained, often cherty, greenish-grey dyke rock is often porphyritic. Phenocrysts are plagioclase laths or plagioclase hornblende combinations and vary in number and size from one exposure to another. The groundmass is also composed of plagioclase and hornblende.

Chlorite and epidote are commonly present as alteration products resulting from greenschist facies metamorphism, however, relatively unaltered grey andesites are also found on the property and most likely represent a younger intrusive event. Stringers containing calcite, epidote and minor quartz commonly cut the andesites in one to three directions.

Andesitic dykes range in thickness from a few inches to several metres. Unaltered andesites have been observed cross cutting all other lithologies on the property.

Andesite dykes generally show a great deal of linearity and lateral continuity. Where they intrude calcitic marble, they are generally concordant with banding. In addition, andesite bodies often follow dolomite/limestone contacts. Andesites for the most part, appear to have intruded passively as contacts with other lithologies are abrupt and usually devoid of thermal alteration effects.

Basalt

This dark grey massive rock is composed of plagioclase, chlorite, augite and rare olivine with tremolite scattered throughout as a result of greenschist metamorphism. Texturally, this rock is variable ranging from slightly inequigranular to porphyritic; phenocrysts, when present, are plagioclase and pyroxene. Thin, subparallel veinlets include quartz and pyrite.

Basalt, as seen in drill core, is associated only with the carbonate units, paralleling and cutting calcitic banding at an angle. Contacts measured in drill core suggest that swarms of these bodies converge at depth, indicating

them to be shallow dykes rather than volcanic flows. Absence of vesiculation supports this likelihood.

Basalt, in hand specimen, is extremely difficult, often impossible to distinguish from fresh andesite as olivine is seldom a constituent. If mafic phenocrysts are present and identifiable as pyroxene (augite) the rock is a basalt; if phenocrysts are amphibole (hornblende), it is an andesite. Both however, commonly contain only plagioclase phenocrysts necessitating microscopic work for identification.

Amphibolite

These dark grey, fine to medium grained rocks are composed primarily of hornblende and plagioclase with minor biotite, altering to chlorite. A vague foliation is present in hand specimen, resulting from segregations of plagioclase and hornblende/biotite in bands (Littlejohn, 1987). Fine calcite veinlets, carrying a variety of accessory minerals, tend to parallel the foliation. Narrow stringers of acicular tremolite are also present.

Sulfide composition of these rocks tends to exceed that of other lithologies on the property, varying up to 10% in drill core. The sulfides present were mainly pyrite and pyrrhotite with traces of chalcopyrite and ilmenite. Pyrrhotite and ilmenite are most likely responsible for the spotty magnetism present in hand specimen.

Amphibolites were observed only in the bottom half of drill hole #14 and have never been identified on surface, therefore, their mode of occurrence is somewhat uncertain. Vancouver Petrographics believe them to be metamorphosed volcanics but whether they were surface flows or shallow intrusions is unknown at present.

Metavolcanics

These are highly altered, often colorful assemblages of silicate minerals, found to contain variable amounts of diopside, garnet, potassium feldspar,

tremolite, plagioclase, chlorite, sericite, various accessory minerals and, usually, a few percent pyrite. A few sections of drill core were composed almost entirely of pinkish-brown garnet of no apparent value.

These are massive, fine grained (often cherty) rocks with no apparent texture and a mottled appearance resulting from patchy accumulations of mineral constituents.

Metavolcanics appear over a diverse scale, ranging from pods and stringers of a few centimetres dimension to veins (pods?) up to and possibly exceeding 10 metres. Contacts are generally very irregular (wavy) although seldom gradational. Often patches of calcite occur within metavolcanic assemblages. It is interesting to note that very large metavolcanic bodies are often directly adjacent or proximal to a significant fault. This may indicate that these skarn-like assemblages have been formed by the alteration of carbonates by siliceous fluids moving along fault zones.

Although this assemblage is suggestive of a skarn environment, it can also result from strong calcium-carbonate metasomatism of intermediate to mafic volcanic suites at fairly high temperatures and pressures (Littlejohn, 1987). As carbonate alteration was observed in thin section analysis of most other rocks on this property, the volcanic origin is likely and textures often appear to support this hypothesis. A small portion of the metavolcanic assemblage from drill hole 92P86-14 appears to be overprinting diorite; a few "patches" of apparent diorite were observed, fading into the diopside assemblage.

Diorite

Medium to coarse grained diorite is composed predominantly of plagioclase with tremolite, potassium feldspar and epidote. Calcite, sphene, apatite and sulfides are present as trace elements. Tremolite and calcite are believed to have replaced original hornblende; epidote and K-spar are also present as alteration products.

This diorite is somewhat inequigranular, indicating a possible sub-volcanic origin. It has been suggested from petrologic work that the diorite may be related to the relatively unaltered basaltic and andesitic intrusions discussed previously. Andesite/diorite cross cutting relationships indicate that andesite is younger, however, diorite and basalt could well be related to the same intrusive event. They have undergone the same type and degree of alteration and have not been observed together in field or drill core.

Quartz Diorite

Quartz diorite was not seen in drill core, although it is present on the property to the immediate south of the present drill area.

Petrologic work was not performed on quartz diorite. Hand specimen analysis showed these diorites to consist of plagioclase, potassic feldspar, quartz and biotite which has been extensively replaced by chlorite. Sulfides are present in minor amounts.

Texturally, these rocks are medium to coarse grained and often show a slight foliation or gneissosity which parallels banding in calcitic marbles.

Crenulated biotite was observed at one outcrop.

ALTERATION

Alteration on the Sechelt Carbonate property is extensive and usually pervasive, with several stages of metamorphism having occurred.

Petrologic evidence indicates that the calcitic marbles examined were originally ultramafic rocks which were serpentinized and later metasomatically altered to calcite (Payne, 1987). Littlejohn indicates that the altered volcanic rocks he studied could also have resulted from calcium carbonate metasomatism of intermediate to mafic rocks under relatively high temperatures and pressures. Mineralogic assemblage and lack of fabric in these rocks suggests metamorphism to amphibolite facies under conditions of hydrostatic stress, i.e. sea floor burial. Serpentinization of the

ultramafic assemblage most likely occurred under the same conditions, perhaps even liberating the CaCO_3 responsible for altering the volcanics.

The next stage in the alteration history of these rocks is the pervasive calcium metasomatism of both the resultant serpentine and diopside/garnet assemblages. As there exists evidence (samples 92P86-11-150 and 92P86-10-386) of later greenschist metamorphism overprinting marble, it appears likely that ca-metasomatism occurred during burial. This reaction, which requires a large input of calcium and releases magnesium to the system, may also account for dolomitization by trapped magnesium.

Greenschist metamorphism, occurring at lower temperatures and pressures than amphibolite facies, overprints the above rocks in addition to affecting most other rocks on the property. This stage of retrograde metamorphism represents mineralogic adjustment to shallowing depths of burial caused by uplift of the newly formed Coast Plutonic Complex. Epidote and calcite appear with quartz and pyrite in patches and veinlets; chlorite and tremolite replace mafic minerals.

Lastly, regional metamorphism from east-west directed stresses has resulted in a north-south trending fabric in many of the rocks present on the property, i.e. banding in calcitic marble and foliation in quartz diorite and amphibolite in addition to small scale shearing and major faulting. Dolomitization may also have occurred concurrently as a direct result of regional stress (Wanless, 1979).

MINERALIZATION

Although portions of this property have been explored for economic grades of base and precious metals (copper, lead, zinc and silver), Weymark Engineering Ltd. (1983) found such mineralization to be confined to intrusive contacts with carbonate and metavolcanic units. They should, therefore, not serve to complicate open pit mining of carbonates.

Sulfides observed in drill core were primarily pyrite with some pyrrhotite and very minor chalcopyrite and ilmenite. Pyrite is present throughout as fine cubic disseminations, although in both calcitic and dolomitic marbles these disseminations are very rarely more than a trace and should not pose any contamination problems. Three narrow bands, less than .3 metres in width, of high pyrite content were, however, observed within the calcite units in drill core. All were associated with high silica content and were conformable to banding. In dolomitic marble pyrite is occasionally present, in association with serpentine as blebs and stringers. The pyrite content is relatively minor (less than a few percent) except in a .5 metre section from drill hole 92P86-8 which contained up to 10%. The lateral extent of these occurrences is unknown but is not extensive as they were not correlatable between drill holes. Drill hole #92P86-13 was the only observed example of vein sulfides. Small veins and stringers cutting dolomite consisted of sphalerite, pyrite, chalcopyrite and a fine needlelike silvery mineral, possibly Jamiesonite or boulangerite. This occurrence was limited and not observed elsewhere.

STRUCTURE

Attitudes on the Sechelt property, as discovered from previous mapping, are not readily obtainable due to scarcity of outcrop. Attitudes consist of banding in calcitic, sometimes dolomitic marbles, and foliations in amphibolite, altered andesite (volcanic greenstone) and quartz diorite.

At first glance, all attitudes appear roughly parallel, averaging north-south and dipping steeply to the east. On closer examination, marble and greenstone generally strike north to slightly northeasterly, not concordant with quartz diorite which is foliated in a northwesterly direction. Quartz diorite folia appear to parallel the trend of major faulting in the area.

Banding in calcite appears to adjust readily to stress, veering in a northwesterly direction when in contact with large intrusions. In diamond drill hole 92P86-13, the common banding at 45° (to drill core axis) is

overprinted with a second set of vague, spotty banding at 30° , most likely conforming to the trend of an adjacent fault.

Examination of drill core indicates that carbonate/intrusive contacts are, with little exception, near vertical. In spite of this, when seen in planar view, geologic contacts parallel carbonate banding in only the most general sense, with narrow dykes often cutting banding indiscriminantly. Calcite is sometimes seen to have a contorted, mylonitic appearance proximal to intrusive rocks, however, contacts are most often clean with marbles appearing undisturbed by the intrusion. This may be attributable to realignment of banding resulting from regional stresses following the intrusive event.

Examination of drill core indicates that faulting, at least in the drill project area, is more extensive than indicated from surface mapping to the south. Extensive overburden, which may in part result directly from faulting, does serve to hinder tracing of surface indications.

Lineaments seen in map view (interpreted as faults) combined with faults mapped to the south, indicate faulting in a predominantly northwesterly direction (160° - 165°) with a few faults directed slightly to the northeast, 30° from the first set. Surface lineaments are often seen to extend for distances exceeding 100 metres; a few faults have also been correlatable between drill holes over distances of approximately 100 metres.

Calcitic and dolomitic marbles respond differently to shear stress. Calcite, by far the more ductile, tends to form fairly wide shear zones ranging from a few inches to a few metres in thickness. Graphite can comprise up to 90% of the shear with calcite becoming "smeared out" along the direction of movement giving the appearance of veins. Shears in dolomite, by far more numerous than in calcite, exhibit a typical brittle response to stress. Clean breaks frequently place two quite visually different dolomites in contact with each other. Narrow (less than 2 centimetre) zones of brecciated dolomite and clay often accommodate movement. Inactive brecciated shears can become recemented by dolomite; in

drill hole 92P86-8, one such healed shear at 25° (angle to core axis) was superimposed with an uncemented breccia at 40° , indicating a change in the regional stress regime.

Shear zones often follow lithologic contacts, however, do not appear to always be the cause of such contact. One unique shear zone, containing a silica breccia, was correlatable between drill holes 8 and 11.

Direction of motion and amount of offset along faults and shears has not been resolved from drill core and can only be guessed at from topographic indications. Surficial mapping will be necessary to resolve this. One fault, which likely correlates between drill holes 10 and 13, appears to have a large rotational component as banding and contacts shallow considerably to the east of this shear.

1986 DIAMOND DRILL PROGRAM

Preparation for the drill program began in early December, 1986 with 840 metres of road building. Five drill sites were placed at 100 metre intervals along this road, the first being 38 metres from the starting point. Four large holes were also dug by excavator from which water could be readily supplied to the drill.

Drilling commenced on December 12, 1986 and continued through January 21, 1987 with a two week break for the holidays. Two drillers worked one ten-hour shift per day. The drill used was a skid mounted Longyear 38 diamond drill. A total of 583.08 metres (1,913 feet) of NQ core was drilled with dip angles ranging between 40° and 45° . Details of the six drill holes are tabulated below. See Figure 5 for drill hole locations.

<u>Hole Number</u>	<u>Length</u>		<u>Azimuth (Corrected Magnetic)</u>	<u>Inclination</u>
	(feet)	(metres)		
92P86-7	303	92.35	90°	43°
92P86-8	348	106.07	270°	42°
92P86-10	435	132.59	85°	41°
92P86-11	230	70.10	270°	45°
92P86-13	372	113.39	90°	40°
92P86-14	<u>225</u>	<u>68.58</u>	270°	40°
	1,913	583.08		

Although 14 drill holes, divided among the five drill sites, were initially planned and prenumbered, only six were completed in this program. The rest are scheduled for completion later in 1987.

A D-4 Caterpillar was kept on site at all times and a D-6 was readily available to clear roads of snowfall if required. The D-4 was used to apply back pressure to the drill rig as the shallow angle holes often caused the drill to back away from the direction of drilling. This Cat was also required to move the skid mounted drill from site to site in addition to hauling the drill core to the main road as the newly built one was seldom driveable due to mud conditions.

An assistant was hired to assist in drill core transport and sample splitting/bagging. Once drill core had been removed from the site, it was transported to a dry, suitably lit area for logging, usually Candol's large combination core shack/equipment storage A-frame structure located in a locked compound a few kilometres southwest of the drill project area. Some core was logged in Candol's office in Sechelt. Core logs, along with the appropriate legend of symbols and abbreviations, are included in this report as Appendix "A".

Samples for assay consisted of 10 foot (3.048 metre) intervals of carbonate rock only. Intrusive rocks and a few sections of obviously impure, pyritic carbonates were excluded from assay. Assay and exclusion intervals are noted on core logs. All core was split, then samples were bagged and taken

to Bondar-Clegg & Co. Ltd. in North Vancouver where they were assayed for $MgCO_3$ and $CaCO_3$. The assay results and analytical method comprise Appendix "B" of this report.

Samples from drill hole 13 were combined into composite samples consisting of 30 feet per composite. For all other drill holes, 10 foot samples were assayed separately, except hole 14 which was not assayed due to insufficient lengths of carbonate. A total of 86 samples was assayed, including the 8 composite samples.

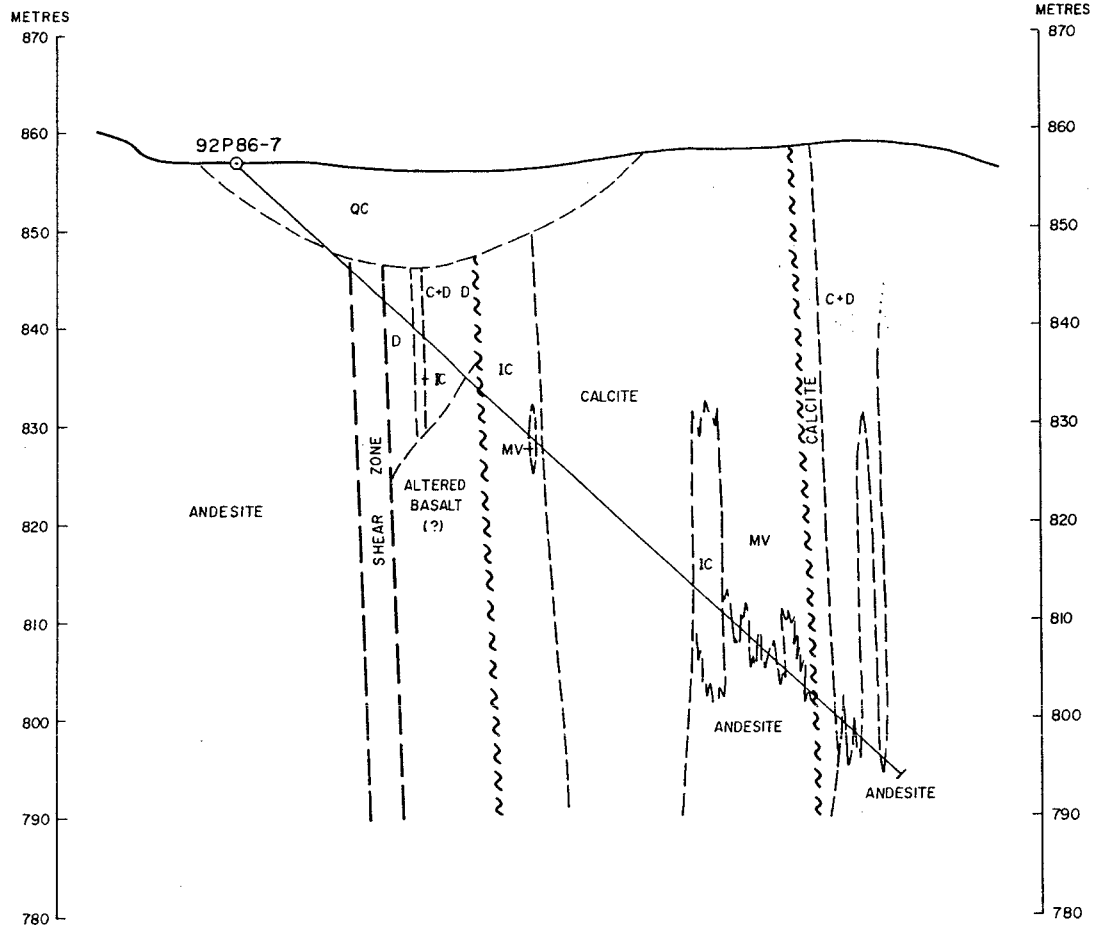
Upon receipt of the initial assay results, a composite dolomite sample was made from three representative dolomite samples each from each of drill holes numbers 8, 11 and 13 and was then assayed for minor metals. The results of these assays are shown separately in Appendix "B".

In addition to the above, fourteen samples of various lithologies were collected and sent to Vancouver Petrographics Ltd. in Fort Langley, B.C. for petrologic analyses from thin sections also prepared by them. Their reports, dated January 9, 1987 and February, 1987, constitute Appendix "C".

All drill core are stored in Candol's core shack, located on the property. Assay pulps and sample rejects have been retained for storage at Bondar-Clegg, North Vancouver.

In view of the fact that no surficial mapping has been done in the area presently under investigation, lithologic contacts shown in Figure 5 are a projection of the contact angle seen in drill core, correlated between drill holes and modified by topographic considerations. Data from this drill program was utilized in conjunction with data from the 1985 drill program to compose a planar view of geology and aid in ore reserve estimates.

Cross sections were constructed from drill core data for all 1986 drill holes as well as for 1985 holes #85-5, 6 and 7. These sections are included herein as Figures 4a through 4i of this report.



LEGEND

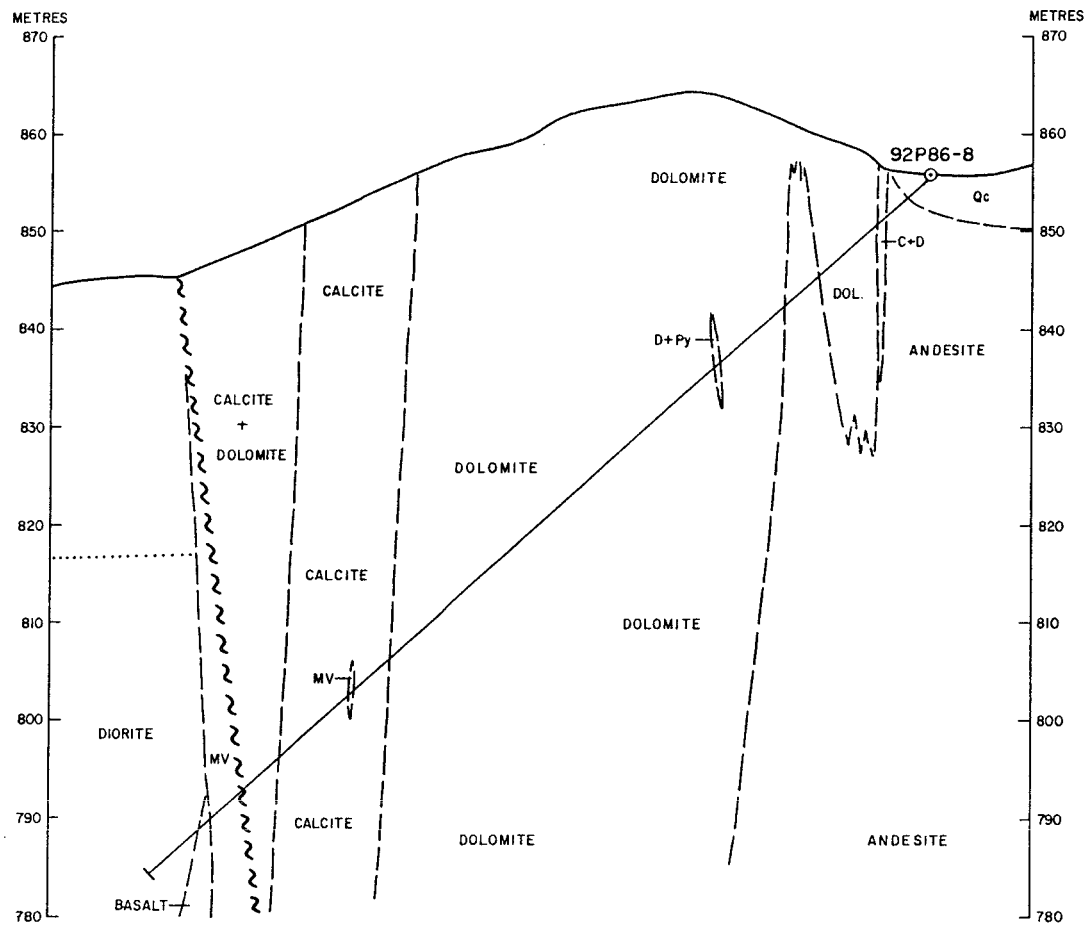
- QC QUATERNARY COVER
- CRETACEOUS OR OLDER
- A ANDESITE: Porphyritic to massive greenish-gray, fine-grained intrusive rocks, moderately altered to greenschist facies
- COAST RANGE INTRUSIONS (JURASSIC-CRETACEOUS)
- Qd QUARTZ DIORITE: Medium to coarse grained massive gray rock
- d DIORITE: Medium to coarse grained, massive often greenish diorite is altered to greenschist facies.
- JERVIS GROUP (UNDETERMINATE AGE)
- B BASALT: Dark gray, fine grained, massive to porphyritic intrusive rock.
- D DOLOMITIC MARBLE: White to medium gray, frequently fine grained, massive carbonate.
- C CALCITIC MARBLE: White to dark gray banded carbonate with variable grain size.
- MV METAVOLCANICS: Highly altered. Mafic volcanic assemblage
- Ic Impure carbonates
- Porph. Porphyritic
- Py Pyrite

SYMBOLS

- DIAMOND DRILL HOLE
- SURVEY STATION
- SHEAR ZONE
- FAULT
- GEOLOGIC CONTACT (ESTIMATED)
- GEOLOGIC CONTACT (VERY APPROXIMATE)



INGOT EXPLORATION LTD.		
SECHLT CARBONATE PROJECT		
GEOLOGICAL SECTION		
D.D.H. 92P86-7		
LOOKING NORTH		
DRAWN. JW	SCALE. 1:500	FIG. No.
DATE. MARCH, 1987	BY. CAROL DITSON	4a



LEGEND

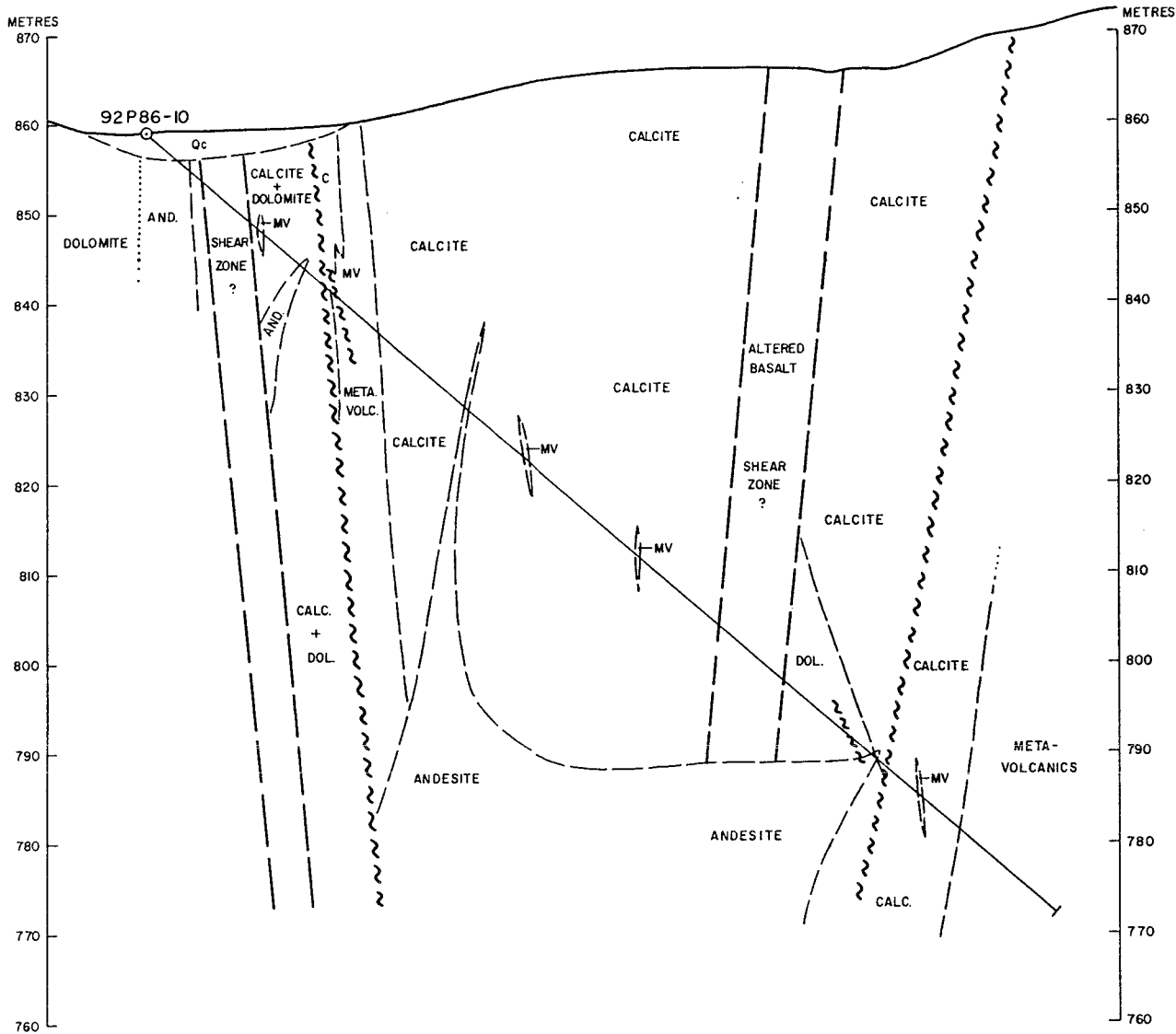
- QC QUATERNARY COVER
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- C CALCITIC MARBLE: White to dark gray bonded carbonate with variable grain size.
- MV METAVOLCANICS: Highly altered. Mafic volcanic assemblage
- Ic Impure carbonates
- Porph Porphyritic
- Py Pyrite

SYMBOLS

- DIAMOND DRILL HOLE
- SURVEY STATION
- SHEAR ZONE
- FAULT
- GEOLOGIC CONTACT (ESTIMATED)
- GEOLOGIC CONTACT (VERY APPROXIMATE)



INGOT EXPLORATION LTD.			
SECHLT CARBONATE PROJECT			
GEOLOGICAL SECTION			
D.D.H. 92P86-8			
LOOKING NORTH			
DRAWN	J.W.	SCALE	1:500
DATE	MARCH, 1987	BY	CAROL DITSON
			FIG. No. 4b



LEGEND

- QC** QUATERNARY COVER
- CRETACEOUS OR OLDER**
- A** ANDESITE: Porphyritic to massive greenish-gray, fine-grained intrusive rocks, moderately altered to greenschist facies
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- C** CALCITIC MARBLE: White to dark gray banded carbonate with variable grain size.
- MV** METAVOLCANICS: Highly altered. Mafic volcanic assemblage
- Ic** Impure carbonates
- Porph.** Porphyritic
- Py** Pyrite
- SYMBOLS**
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- SURVEY STATION
- SHEAR ZONE
- FAULT
- GEOLOGIC CONTACT (ESTIMATED)
- GEOLOGIC CONTACT (VERY APPROXIMATE)



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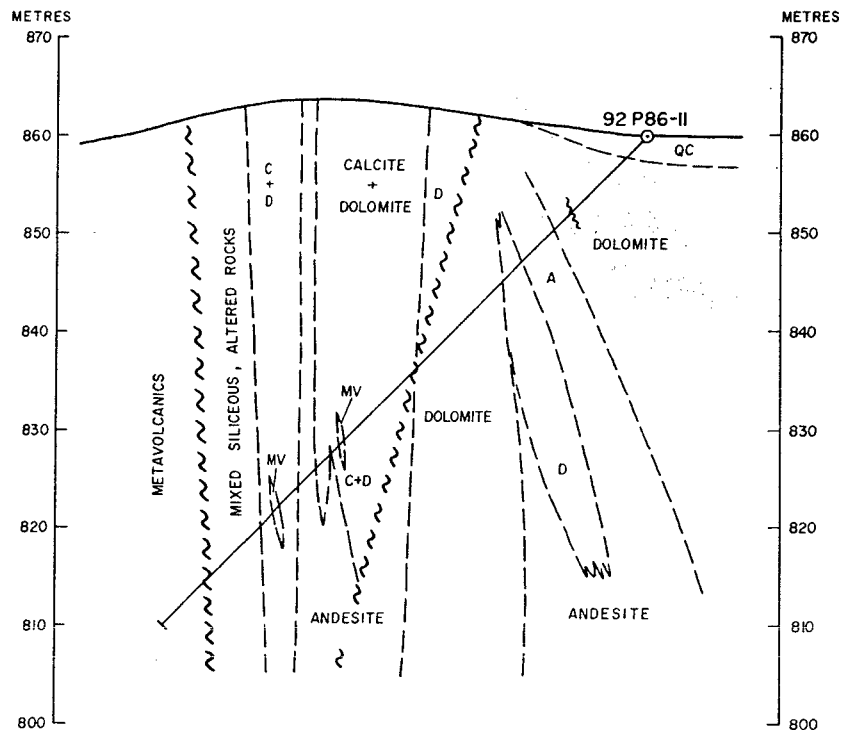
SECHLT CARBONATE PROJECT

GEOLOGICAL SECTION

D.D.H. 92 P86-10

LOOKING NORTH

DRAWN. J.W.	SCALE 1:500	FIG. No.
DATE. MARCH, 1987	BY. CAROL DITSON	4c

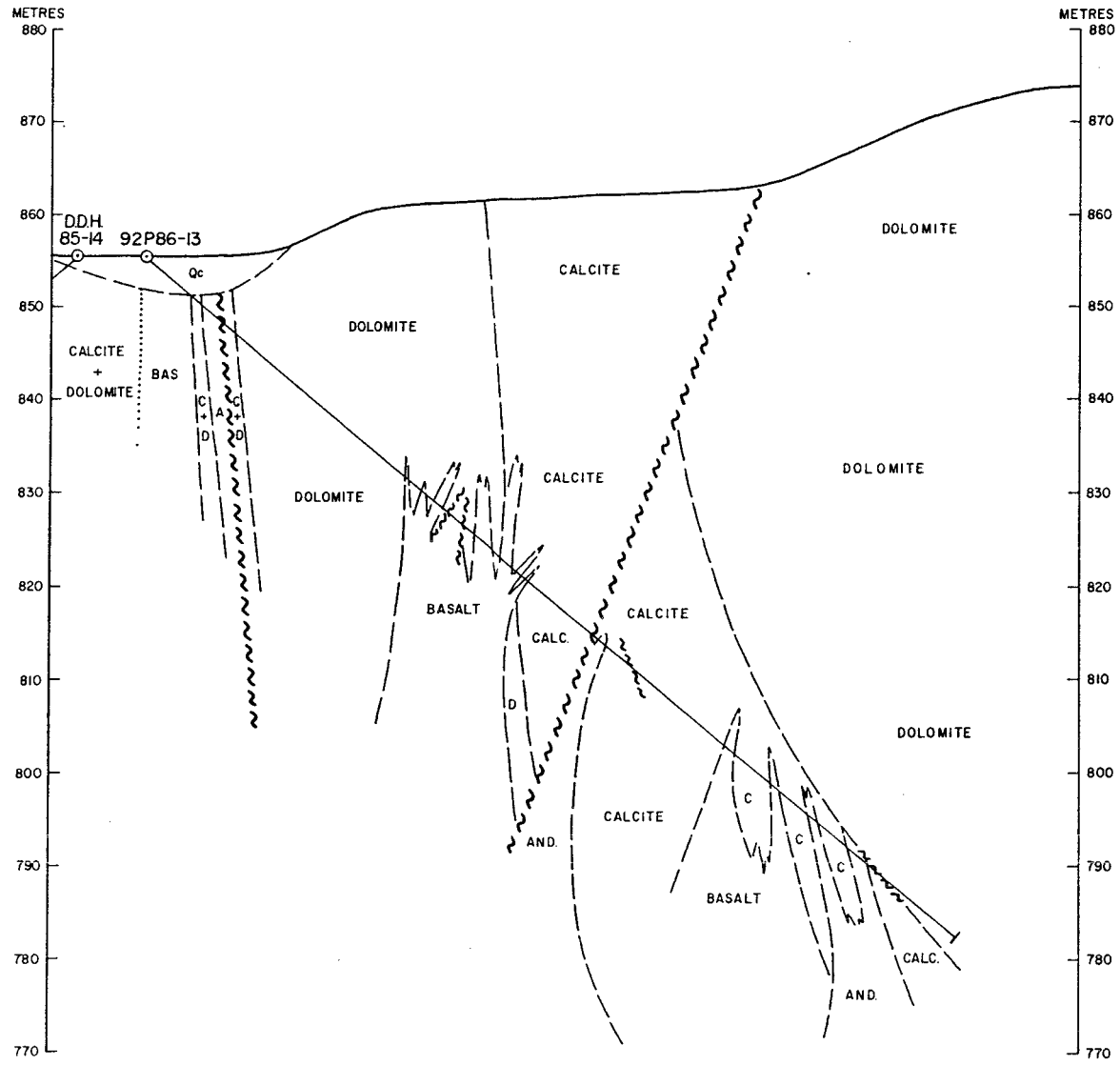


LEGEND

- QC QUATERNARY COVER
- CRETACEOUS OR OLDER**
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- MV METAVOLCANICS: Highly altered. Mafic volcanic assemblage
- Ic Impure carbonates
- Porph Porphyritic
- Py Pyrite
- SYMBOLS**
- DIAMOND DRILL HOLE
- SURVEY STATION
- SHEAR ZONE
- FAULT
- GEOLOGIC CONTACT (ESTIMATED)
- GEOLOGIC CONTACT (VERY APPROXIMATE)



INGOT EXPLORATION LTD.			
SECHELT CARBONATE PROJECT			
GEOLOGICAL SECTION			
D.D.H. 92P86-II			
LOOKING NORTH			
DRAWN	JW	SCALE	1:500
DATE	MARCH, 1987	BY	CAROL DITSON
			FIG. No. 4d



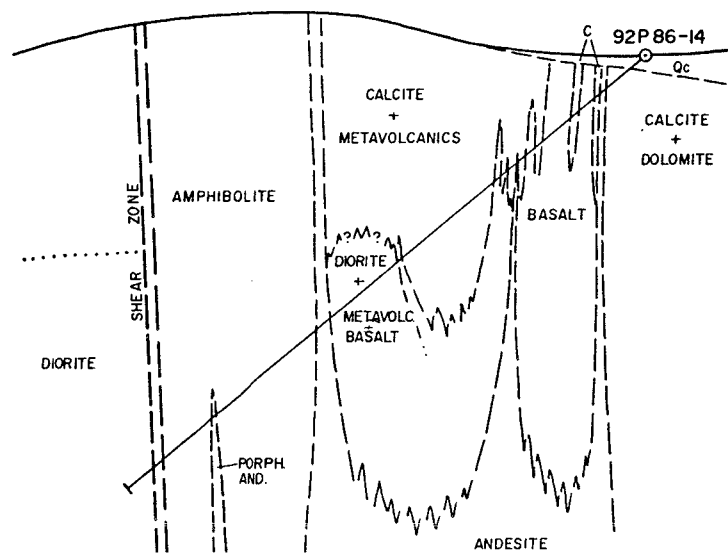
LEGEND

- QC** QUATERNARY COVER
- CRETACEOUS OR OLDER**
- A** ANDESITE: Porphyritic to massive greenish-gray, fine-grained intrusive rocks, moderately altered to greenschist facies
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- Ic** Impure carbonates
- Porph.** Porphyritic
- Py** Pyrite
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- SURVEY STATION
- SHEAR ZONE
- FAULT
- GEOLOGIC CONTACT (ESTIMATED)
- GEOLOGIC CONTACT (VERY APPROXIMATE)



INGOT EXPLORATION LTD.			
SECHLT CARBONATE PROJECT			
GEOLOGICAL SECTION			
D.D.H. 92P86-13			
LOOKING NORTH			
DRAWN	J.W.	SCALE	1:500
DATE	MARCH, 1987	BY	CAROL DITSON
			FIG. No. 4e

METRES
870
860
850
840
830
820
810
800



METRES
870
860
850
840
830
820
810
800

LEGEND

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- △ SURVEY STATION
- — — SHEAR ZONE
- — — FAULT
- — — GEOLOGIC CONTACT (ESTIMATED)
- · · · · · GEOLOGIC CONTACT (VERY APPROXIMATE)

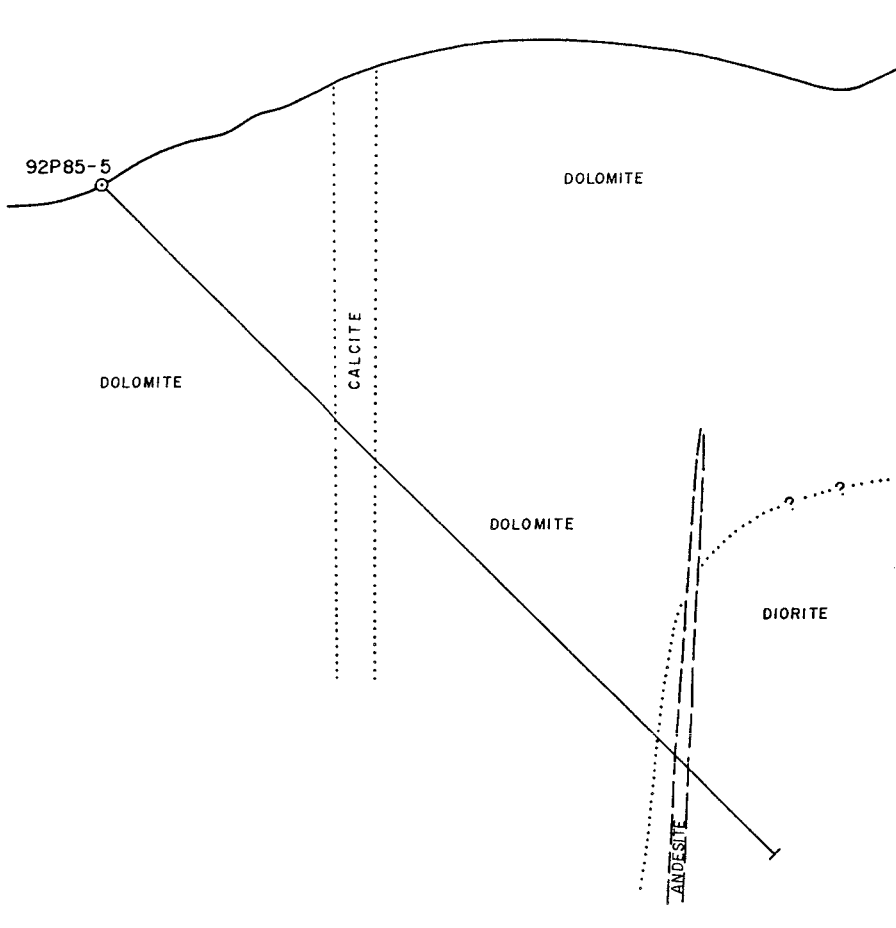
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SECHLT CARBONATE
PROJECT
GEOLOGICAL SECTION
D.D.H. 92P86-14
LOOKING NORTH

DRAWN	J.W.	SCALE	1:500	FIG. No.
DATE	MARCH, 1987	BY	CAROL DITSON	4f

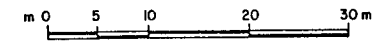
METRES
850
840
830
820
810
800
790
780
770
760



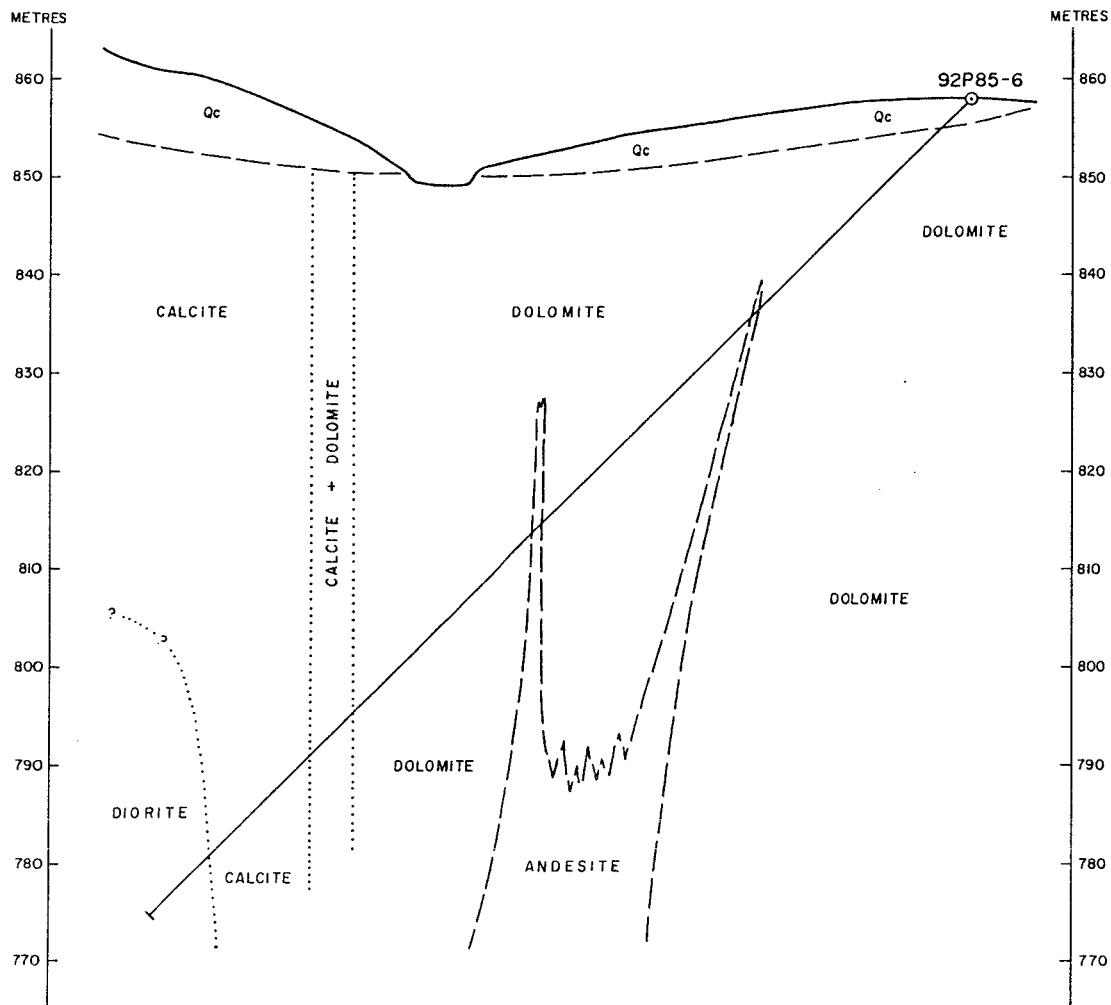
METRES
850
840
830
820
810
800
790
780
770
760

LEGEND

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- SURVEY STATION
- SHEAR ZONE
- FAULT
- GEOLOGIC CONTACT (ESTIMATED)
- GEOLOGIC CONTACT (VERY APPROXIMATE)



INGOT EXPLORATION LTD.			
SECHLT CARBONATE PROJECT			
GEOLOGICAL SECTION			
D.D.H. 92P85-5			
LOOKING NORTH			
DRAWN. J.W.	SCALE. 1:500	FIG. No.	
DATE. MARCH, 1987	BY. CAROL DITSON	4g	

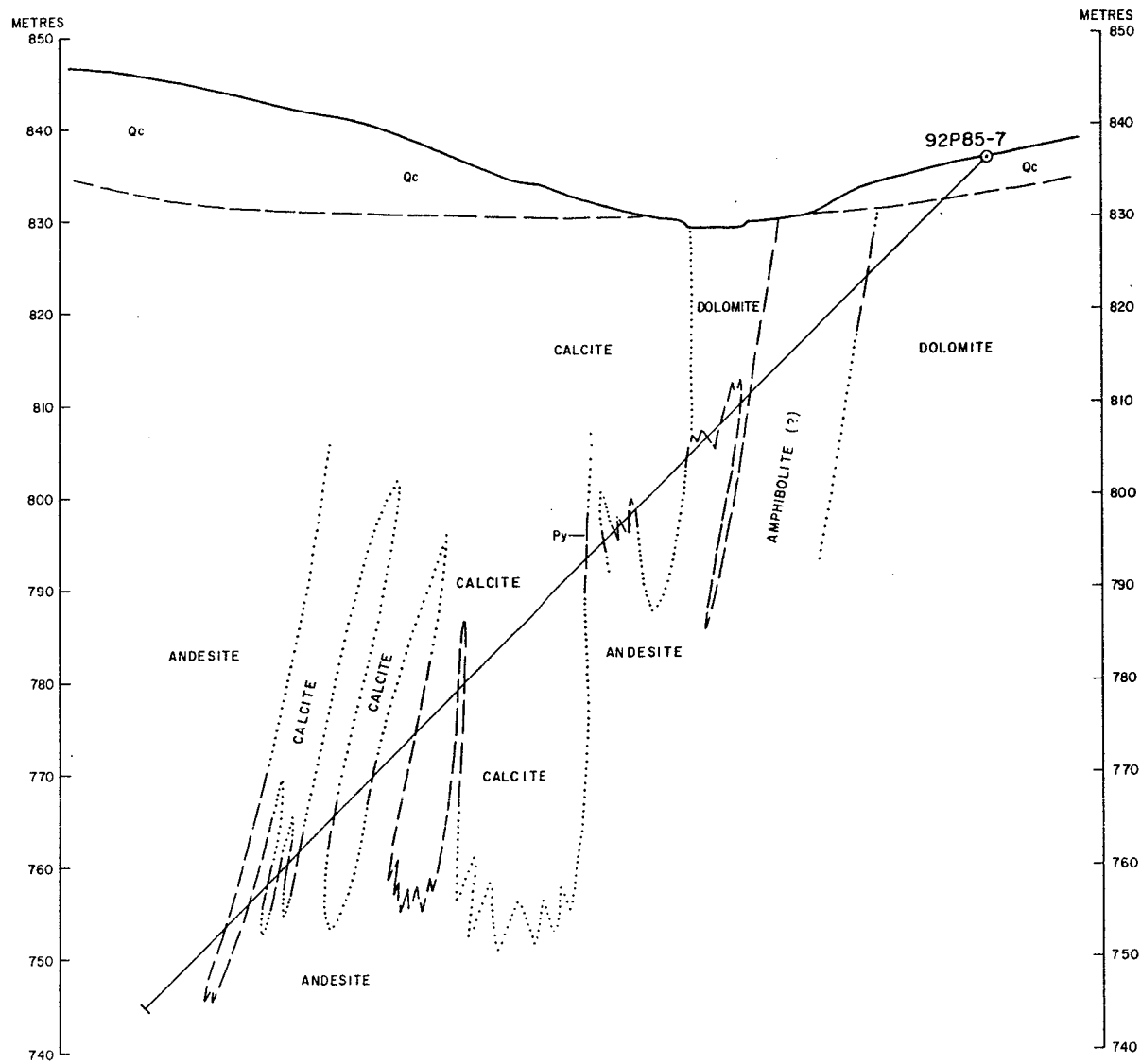


LEGEND

- QC QUATERNARY COVER
- CRETACEOUS OR OLDER
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- Ic Impure carbonates
- Porph. Porphyritic
- Py Pyrite
- SYMBOLS**
- DIAMOND DRILL HOLE
- SURVEY STATION
- SHEAR ZONE
- FAULT
- GEOLOGIC CONTACT (ESTIMATED)
- GEOLOGIC CONTACT (VERY APPROXIMATE)



INGOT EXPLORATION LTD.			
SECHLT CARBONATE PROJECT			
GEOLOGICAL SECTION			
D.D.H. 92P85-6			
LOOKING NORTH			
DRAWN.	J.W.	SCALE.	1:500
DATE.	MARCH, 1987	BY.	CAROL DITSON
			FIG. No. 4h



LEGEND

- QC QUATERNARY COVER
- CRETACEOUS OR OLDER**
- A ANDESITE: Porphyritic to massive greenish-gray, fine-grained intrusive rocks, moderately altered to greenschist facies
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- Porph. Porphyritic
- Py Pyrite
- SYMBOLS**
- DIAMOND DRILL HOLE
- SURVEY STATION
- SHEAR ZONE
- FAULT
- GEOLOGIC CONTACT (ESTIMATED)
- GEOLOGIC CONTACT (VERY APPROXIMATE)



INGOT EXPLORATION LTD.			
SECHLT CARBONATE PROJECT			
GEOLOGICAL SECTION			
D.D.H. 92P85-7			
LOOKING NORTH			
DRAWN	JW	SCALE	1:500
DATE	MARCH, 1987	BY	CAROL DITSON
			FIG. No. 4i

DISCUSSION OF SAMPLING RESULTS

Of the 86 samples assayed as a part of this program, 41 samples were dolomite from drill holes 92P86-8, 10, 11 and 13. Average $MgCO_3$ and dolomite purity are tabulated below for the applicable 1986 drill holes as well as for holes 85-5, 6 and 7 of the 1985 program. Results of the 1985 program are included as they are instrumental in definition of ore reserve calculations for the subject dolomite body. The applicable 1985 drill logs and assay results comprise Appendix "D".

Drill Hole Number	Number Dolomite Samples	Average		Average Purity
		<u>$MgCO_3\%$</u>	<u>MgO%</u>	
92P86-8	20	40.17	19.2	96.95
92P86-10	5	35.30	16.9	95.73
92P86-11	8	36.96	17.7	94.16
92P86-13	8	39.10	18.7	98.01
92P85-5	24	40.61	19.4	95.52
92P85-6	28	41.76	20.0	97.68
92P85-7	6	41.07	19.6	97.76

Overall average for the 99 samples above is 40.19% $MgCO_3$ (19.2% MgO) content with a 96.7% purity. This exceeds the "high class" purity lower limit of 95%. The one drill hole which does not individually exceed the definition for high class purity is hole 92P86-11 which lies in a much intruded and faulted narrow neck of dolomite which is not recommended for an open pit mining operation. Drill holes 92P86-8 and 85-5, 6 and 7, which all lie within the recommended pit area, can individually and collectively be defined as being of high purity.

CONCLUSIONS

Study of the data acquired in the 1985 and 1986 drill programs have indicated the following:

- An elongate body of dolomitic marble, over 500 metres long and having an average width of 55 metres, has been outlined to a depth of 50 metres.
- This ore body contains approximately 1,360,000 cubic metres of dolomite, representing in excess of 3.5 million tonnes of dolomite on a drill indicated geologic reserve basis.
- Average purity of these reserves is 96.7%, well above the accepted "high class" purity lower limit of 95%. Average MgCO₃ content was 40.19%.
- North of drill hole 92P86-8, the dolomite unit narrows, is shallowly intruded and cut by faulting, making it unsuitable for an open pit mining operation.
- The wider, southern portion of this dolomite, however, contains approximately 1,000,000 cubic metres of dolomite, in excess of 2.9 million tonnes of drill indicated reserves.
- A second dolomite body is present on the northern portion of the project area, in fault contact with calcite at the end of drill hole 92P86-13. The extent of this unit is, at present, unknown. Where tested, this dolomite unit proved 90 metres of depth and of very high purity and could, very likely, provide additional reserves.
- Other dolomite bodies are known to exist on this large property but remain relatively unexplored. It is extremely likely that one or more of these will provide additional reserves.

RECOMMENDATIONS

<u>Definition of 1986 Work Area:</u>	<u>\$ Cost</u>
- 4,500 metres flagged, brushed lines (E-W)	
- at 50 metre intervals with 25 metre stations	4,500
- 600 metres cut baseline (N-S)	1,000
- Detailed geologic mapping (scale 1:500)	
- 20 man days, Report, Drafting	8,500

\$ Cost

- Road building
 - minimum 400 metres along west side of dolomite body with 4 drill sites 5,500
- Diamond Drilling (approximately 2,200 feet)
 - fill in on east side of dolomite (planned holes 2, 4, 5) approximately 1,000 feet
 - drill west side of dolomite (3-4 holes) approximately 1,200 feet 84,000
- Trenching to define dolomite contact where covered with overburden and not subsequently exposed by road building. 5,000

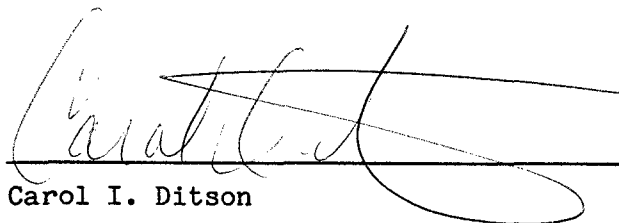
Further Exploration:

- Preliminary reconnaissance geologic mapping (scale 1:1000) to locate and define dolomite bodies on other parts of property (30 days). 10,000
- Sampling of dolomite from other parts of property. 3,000
- Percussion drilling of northern and southern dolomite zones for additional tonnages (20 holes). 30,000

Topographic Map Preparation:

- 1:500 scale, map sheet 4 and 6 only 1,500

153,000


Carol I. Ditson

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APPENDIX "A"

1986 DIAMOND DRILL LOGS

with Legend

DRILL HOLE RECORD

PROJECT SECHST CARBONATE DRILL HOLE NO. 1986 Logs SCALE _____ PAGE NO. _____ OF _____

LENGTH	ASSAYS					EXPLANATION	Py%	CARBON	V. CAL	V. DOX	% ANGLE	SERP.	TALC	CHERT	MICA	CHLORITE	SILICA	TEXTURE	COLOR	STRUCT.	ROCK	EXPLANATION		
	Ca	Mg																						
						ASSAYED INTERVALS - INTERVALS MARKED "NO ASSAY" HAVE BEEN EXCLUDED FROM SAMPLES - ASSAYED INTERVALS ARE 10 FOOT SAMPLES - ASSAY RESULTS FOR CA AND MG ARE REPORTED.																C	CARBONATE	
																							D	DOLOMITE
																								ANDESITE DYKES
																							x	BASALT DYKES (+ FLOWS ?)
																							x	DIORITE
																						+	METAVOLCANICS (DIOPSIDE - GARNET ASSEMBLAGES)	
																						+	AMPHIBOLITE	

LEGEND

TEXTURES
 P₀ PORPHYRITIC
 Ph PHANERITIC
 A APHANITIC
 C CHERTY
 M MOTTLED
 B_x BRECCIATED
 M_i MIGMATITIC
 R REPLACEMENT

STRUCTURES
 B BANDED
 S SHEARS
 C CONTACT
 F FRACTURES
 * NOTE: %/B ANGLE
 IS THE ANGLE OF CORE
 AXIS to BEDDING OR STRUCTURE

COLOR
 W WHITE
 L LIGHT GRAY
 M MEDIUM GRAY
 D DARK GRAY
 B BLACK
 G GREEN
 Br BROWN
 P PINK
 Y YELLOW

DRILL HOLE RECORD COVER SHEET

INGOT EXPLORATION LTD.
for CANDOL DEVELOPMENTS LTD.

Project: SECHELT CARBONATE
Claim: PLAIN
Area: SECHELT PENINSULA, B.C.
Contractor: HERB ALLEN, MERRIT, B.C.

Hole No. 92 P 86-17
N.T.S. 92 G / 12 W
Grid Ref. 435908 E, 5494507 N.
Elevation 857 m A.S.L.
Bearing 90°

	Type	Size
Hole	<u>CORE</u>	<u>NO</u>
	Started	Completed
Date	<u>JAN 9, 1987</u>	<u>JAN 11, 1987</u>
Logged by:	<u>CAROL DITSON</u>	

Inclination

At Collar	<u>43°</u>
At	_____
At	_____
At	_____
At	_____

Total length 303 ft, 92.35 m.

COMMENTS

LENGTH	ASSAYS				SAMPLE NUMBERS	PY %	CARBON	UN. CAL.	UN. DOX	% ANGLE	SEGA.	TALC	CHERT	MICA	CHLORITE	SILICA	TEMPER.	COLOR	STRUCT.	ROCK
	CaO	MgO																		
	NO ASSAYS																			
10																				
20																				
30																				
40																				
50						✓	✓													ANDESITE
60						✓	✓	45												SHEAR ZONE
70	62.25	30.45			69248															DOLOMITE

CASING

ANDESITE

SHEAR ZONE
-80-90% GRAPHITIC IN PLACES.

DOLOMITE

DRILL HOLE RECORD

PROJECT SECHLT CARBONATE DRILL HOLE NO 92P86-7 SCALE IN FEET PAGE NO. 2 OF 5

LENGTH	ASSAYS				SAMPLE NUMBERS	PY%	CARBON	V.V. CAL	V.V. DOX	CH. ANGLE	SERP.	TALC	CHERT	MICA	CHLORITE	SILICA	TR. TUR	CALOR	STRUCT.	ROCK	
	CaO	MgO																			
80																					
	NO ASSAY.																				
90	74.35	13.91			69249																
100	81.05	13.88			69250																
110	NO ASSAY.																				
120																					
130																					
140	87.00	8.68			69026																

CALCITE METAVOLCANICS WITH 15% PYRITE
 CALCITE (IMPURE)
 METAVOLCANICS
 CALCITE (DOLOMITIC?)
 - MOTTLED, BANDED & BRECCIATED IN DIFFERENT AREAS
 - BANDING WAVES ALL OVER, LOOKS MORE DOLOMITIC BUT VERY REACTIVE WITH ACID. DE DOLOMITIZED?

DOLOMITE WITH NARROW VEINETS OF SILICIC MATERIAL
 BASALT (?)
 - HIGHLY SERPENTINIZED & CHALCITIZED
 - PROMINENT FRACTURE SET AT 80'
 SHEAR ZONE
 - CLAYS, TALC & SERPENTINE

HIGHLY SERPENTINITIC CARBONATES AND COARSE GRAINED FELSIC INTRUSIVE (DIORITE?) (SMALL SECTION IDENTIFIABLE)

METAVOLCANICS
 HIGHLY SERPENTINITIC CARBONATES
 CALCITE
 - BANDING EXTREMELY VARIABLE, OFTEN PARALLEL CORE AXIS, SOMETIMES MODERATE-HIGH ANGLE
 - BRECCIATED IN PLACES
 - OBVIOUSLY SUBJECTED TO MUCH STRESS, HAS "FLOWED", SOMETIMES BRECCIATED AS A RESULT

DRILL HOLE RECORD

PROJECT SECRET CARBONATE DRILL HOLE NO 92P86-7 SCALE IN FEET PAGE NO. 3 OF 5

LENGTH	ASSAYS				SAMPLE NUMBERS	P ₄ %	CARBON	V.N. Ca	V.N. Pb	Zn	SERP.	TALC	CHERT	MICA	UNCLARIFIED	SILICA	TRIFLUORIDE	COLOR	STRUCT.	ROCK	
	CaO	MgO																			
	68.25	7.53			69027																
160	9.40	5.23			69028																
170	43.30	3.97			69029																
180	90.70	5.02			69030																
196	86.70	8.36			69031																
200	89.45	7.11			69032																
210	75.45	26.45			69033	R															
220	NO ASSAY																				

3" ANDESITE DYKE (HB-PLAG PORPHYRY)
 IMPURE, SILICEOUS CARBONATES WITH
 POCKETS OF FELSIC INTRUSIVE (DIORITE?)

ANDESITE

DRILL HOLE RECORD

PROJECT SECHELT CARBONATE DRILL HOLE NO Q2P86-7

SCALE IN FEET PAGE NO. 4 OF 5

LENGTH	ASSAYS				SAMPLE NUMBERS	PY%	CARBON	V% CAL	V% DOX	S% ANSIE	SERA	TALC	CHERT	MICA	CHLORIT	SILICA	TEKTUR	COLOR	STRUCT	ROCK	
	CaO	MgO																			
230	NO ASSAY					✓															ANDESITE (50%) WITH AREAS OF METAVOLCANICS AND SERPENTINITIC ALTERATION.
240																					
250																					
260																					
270						TR			45	✓						AM	B				SHEAR ZONE CALCITE - WELL BANDED
280						TR	✓	✓		✓	✓			✓	✓	AM					MIXED CALCITE & DOLOMITE WITH NARROW ANDESITE DUKES
290						3								✓	✓	P ₆	G				ANDESITE - PORPHYRITIC PHENOCRYSTS APPEAR ROUNDED (SPHERULITES?) - GRADES INTO HORNBLende-PLAG PORPHYRY TOWARD BOTTOM OF SECTION
200						TR			45												CALCITE
						3			45					✓	✓	C	G				ANDESITE

Bonjar-Clegg & Company Ltd.
130 Pemberton Ave.
North Vancouver, B.C.
Canada V7P 2R5
Phone: (604) 983-0681
Telex: 04-352697



Certificate
of Analysis

92 P 86-7

REPORT: 427-0266 (COMPLETE)

REFERENCE INFO:

CLIENT: INGOT EXPLORATION LTD.
PROJECT: NONE GIVEN

SUBMITTED BY: UNKNOWN
DATE PRINTED: 23-JAN-87

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	CaCO3 Calcium Carbonate	11	0.01 PCT		
2	MgCO3 Magnesium Carbonate	11	0.05 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D DRILL CORE	11	2 -150	11	ASSAY PREP	11

REPORT COPIES TO: MR. M. FRASER

INVOICE TO: MR. M. FRASER

92P86-7

REPORT: 427-0266

PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS		CaCO3 PCT	MgCO3 PCT	
	From	To			
D2 69026	140	150	87.00	8.68	95.68 (4.32)
D2 69027	150	160	88.25	7.53	95.78 (4.22)
D2 69028	160	170	91.40	5.23	96.63 (3.37)
D2 69029	170	180	93.30	3.97	97.27 (2.73)
D2 69030	180	190	90.70	5.07	95.77 (4.23)
D2 69031	190 - 200		86.70	8.36	95.06 (4.94)
D2 69032	200 - 210		89.65	7.11	96.71 (3.29)
D2 69033	210 - 220		75.45	26.45	101.9 1.9 !
D2 69248	71 - 81		65.25	30.95	96.15 (3.85)
D2 69249	86 - 96		74.35	13.91	88.26 (11.74)
D2 69250	96 - 100		81.05	13.38	94.43 (5.57)

DRILL HOLE RECORD COVER SHEET

INGOT EXPLORATION LTD.
for CANDOL DEVELOPMENTS LTD.

Project: SECHELT CARBONATE
Claim: PLAIN
Area: SECHELT PENINSULA, B.C.
Contractor: HERB ALLEN, MERRIT, B.C.

Hole No. 92P86-8
N.T.S. 92G 112W
Grid Ref. 435907E, 5494500W.
Elevation 857M A.S.L.
Bearing 270°

	Type	Size
Hole	<u>CORE</u>	<u>NQ</u>
	Started	Completed
Date	<u>JAN. 5, 1987</u>	<u>JAN 8, 1987</u>

Inclination	
At Collar	<u>42°</u>
At	_____
At	_____
At	_____
At	_____

Logged by: CAROL DIXON

Total length 348 ft. 106.07m.

COMMENTS

DRILL HOLE RECORD

PROJECT SECHERT CARBONATE DRILL HOLE NO. 92P868 SCALE IN FEET PAGE NO. 2 OF 5

LENGTH	ASSAYS				SAMPLE NUMBERS	PY %	CARBON	UN. CAL	VAL. DE	VA. ANH	SE. A	TALC	CHERT	MICA	CHLORIT	SILICA	TEXTURE	COLOR	STRUCT.	ROCK
	CaO	MgO																		
80	56.10	39.73			69025													m		D
90	55.45	39.73			69226					45								L m L	B	D
	NO ASSAY.					✓	✓	✓		70	✓							A W B	D	D
100	56.95	40.78			69227													L m		D
110	56.55	39.73			69228													Bx		D
120	56.15	39.73			69229															D
130	57.35	39.73			69230													Bx		D
140	56.10	39.73			69231															D

DOLomite + SERPENTINE (up to 50%) + PYRITE (up to 10%) AS BLEBS & STRINGERS

DOLomite

- MINOR SERPENTINE
- PYRITE DISSEMINATED (TR) AND AS BLEBS & STRINGERS ASSOCIATED WITH TALC SEAMS
- BANDING OFFSET BY BRITTLE DEFORMATION ON ORDER OF ≥ 1 mm.
- A FEW SHEAR ZONES OF BRECCIA, CLASTIC MATRIX DOLomite
- WHITE DOLomite STRINGERS ARE ALSO OFFSET BY BRITTLE DEFORMATION.

DRILL HOLE RECORD

PROJECT SECHREST CARBONATE DRILL HOLE NO 92P86-8 SCALE IN FEET PAGE NO. 3 OF 5

LENGTH	ASSAYS				Sample Numbers	Py %	Carbon	Vn. Cal	Vol. Dol	Gr. Dol	Sera	Talc	Chert	Mica	Chal. C.	Silica	Sulfur	Color	STRUCT.	ROCK
	CaO	MgO																		
	52.10	41.82			69232	70	✓				✓								m	D
160	56.75	41.82			69233	160													L	D
170	56.70	41.78			69234	170													m	B
180	57.20	40.78			69235	180			60	30									B	D
190	56.95	39.73			69236	190		✓	15										S	D
200	56.50	40.15			69237	200			10										S	D
210	56.50	39.73			69238	210			55	100	✓								L	C
220	56.50	41.82			69239	220													m	S

~ BANDING STEEPENS ABRUPTLY from 60° to 30°
 - SHEAR SURFACE NOT EVIDENT
 - PRIMARY DEPOSITIONAL FEATURE OR FAULTING IN CALCITE LATER DISGUISED BY DOLOMITIZATION(?)

SOME COARSE GRAINED WHITE CALCITE VEINS HERE.

ABRUPT CONTACT BETWEEN LIGHT & MEDIUM GRAY DOLOMITE IS CLAY COATED.
 ~ 2 SHEARS SUPERIMPOSED, BOTH BRECCIATED HEALED ONE AT 250 RECENT ONE AT 40°

DRILL HOLE RECORD

PROJECT SECHELT CARBONATE DRILL HOLE NO 92P868 SCALE IN FEET PAGE NO. 4 OF 5

LENGTH	ASSAYS				SAMPLE NUMBERS	PY%	CARBON	V.V. CAL.	V.V. DOX	% MAGNE.	SERP.	TALC	CHERT	MICA	CHLORIT.	SILICA	TUFF	COLOR	STRUCT.	ROCK	
	CO ₂	MgO																			
230	57.48	28.69			69240																
240	77.56	18.82			69241					✓	✓								D	D	
250	65.20	7.90			69242					60									L	C	
	NO ASSAY									75									B	C	
260	89.57	0.57			69243														M	B	
270	91.16	6.69			69244															C	
280	42.50	5.23			69245															C	
290	74.60	20.91			69246															C	
																				C	
																				C	
																				D	

~ HEAVY CONCENTRATION (25%) OF WHITE-YELLOW TALE/SERPENTINE OVER 6" SECTION

CALCITE
 - CONTACT ABRUPT FROM MASSIVE MEDIUM-DARK GRAY DOLOMITE TO LIGHT GRAY BANDED CALCITE
 - OFTEN HAS FRACTURED APPEARANCE OF DOLOMITE BUT FIZZES HEARTILY WITH ACID

METAVOLCANICS (PYRITIC)
 CALCITE
 - WELL BANDED IN PLACES.

MIXED CALCITE & DOLOMITE
 - BANDED WHERE CALCITE
 - DEGREES OF DOLOMITIZATION SEEM VARIABLE FROM ACID RESPONSE.

PROJECT

SECHLT CARBONATE

DRILL HOLE RECORD

DRILL HOLE NO 02P86-8

SCALE IN FEET

PAGE NO. 5 OF 5

LENGTH	ASSAYS				SAMPLE NUMBERS	Py %	CARBON	UN. CAL.	V. D. D.	% ANGLE	SERA	TALC	CHERT	MICA	CHLORITE	SILICA	TELURIA	COLOR	STRUCT.	ROCK	
	CaO	MgO																			
	70.10	35.10			69247																
310	NO ASSAY.								30												
320									45												
330									60												
340									30												
350																					

SHEAR ZONE
 - HEAVY GRAPHITE, SERPENTINE, BRECCIATION
 - PYRITE
 - MYLONITIC IN PLACES

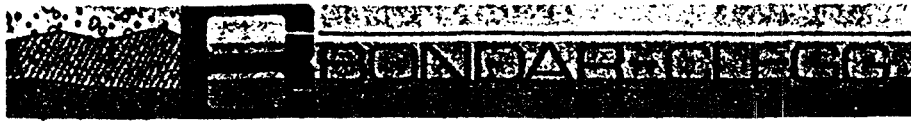
METAVOLCANICS (?)
 HEAVILY SILICIFIED, BRECCIATED ROCKS

BASALT
 - PORPHYRITIC WITH PLAGIOCLASE & PYROXENE
 PHENOCRYSTS

DIORITE
 - COARSE GRAINED HORNBLende DIORITE
 - EPIDOTE SURROUNDS SMALL STRINGERS
 - QUARTZ VEINS.

END OF HOLE

Bondar-Clegg & Company Ltd.
130 Pemberton Ave.
North Vancouver, B.C.
Canada V3P 2R5
Phone: (604) 985-0681
Telex: 04-352667



Certificate
of Analysis

92 P 86-8

REPORT: 427-0157 (COMPLETE)

REFERENCE INFO:

CLIENT: INGOT EXPLORATION LTD.
PROJECT: NONE GIVEN

SUBMITTED BY: UNKNOWN
DATE PRINTED: 23-JAN-87

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	CaCO3 Calcium Carbonate	14	0.01 PCT		
2	MgCO3 Magnesium Carbonate	14	0.05 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D DRILL CORE	14	2 -150	14	ASSAY PREP	14

REPORT COPIES TO: MR. M. FRASER

INVOICE TO: MR. M. FRASER



92 P 86-8

REPORT: 427-0157

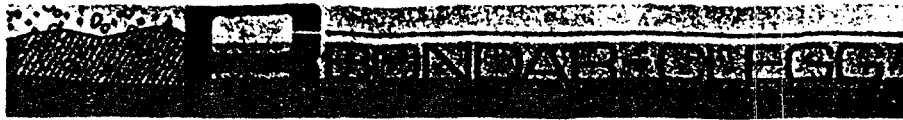
PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CaCO3 PCT	MgCO3 PCT		
69021 D2 92P 86-8 22'-32'		57.35	39.73	97.08	(2.92)
69022 D2 92P 86-8 32'-42'		57.25	40.78	98.03	(1.97)
69023 D2 92P 86-8 42'-67'		59.30	37.64	96.94	(3.06)
69024 D2 92P 86-8 67'-77'		56.95	39.73	96.68	(3.32)
69025 D2 92P 86-8 77'-87'		56.10	39.73	95.83	(4.17)
69226 D2 92P 86-8 87'-99'		55.45	39.73	95.18	(4.82)
69227 D2 92P 86-8 99'-109'		56.95	40.78	97.73	(2.27)
69228 D2 92P 86-8 109'-119'		56.85	39.73	96.58	(3.42)
69229 D2 92P 86-8 119'-129'		56.95	39.73	96.68	(3.32)
69230 D2 92P 86-8 129'-139'		57.35	39.73	96.08	(3.92)
69231 D2 92P 86-8 139'-149'		56.40	39.73	96.13	(3.87)
69232 D2 92P 86-8 149'-159'		56.10	41.82	97.92	(2.08)
69233 D2 92P 86-8 159'-169'		56.75	41.82	98.57	(1.43)
69234 D2 92P 86-8 169'-179'		56.70	40.78	97.48	(2.52)

} = 19.99 % MgO

Bonder-Clegg & Company Ltd.
130 Pemberton Ave.
North Vancouver, B.C.
Canada V7P 2R5
Phone: (604) 985-0681
Telex: 04-352667



Certificate
of Analysis

92 P 86-8

REPORT: 427-0187 (COMPLETE)

REFERENCE INFO:

CLIENT: INGOT EXPLORATION LTD.
PROJECT: NONE GIVEN

SUBMITTED BY: UNKNOWN
DATE PRINTED: 23-JAN-87

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	CaCO3 Calcium Carbonate	13	0.01 PCT		
2	MgCO3 Magnesium Carbonate	13	0.05 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
DRILL CORE	1	-150	1	ASSAY PREP	13
D DRILL CORE	13	2 -150	13		

REPORT COPIES TO: MR. M. FRASER

INVOICE TO: MR. M. FRASER



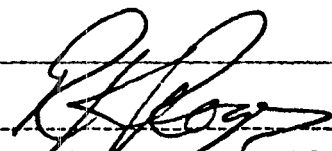
92 P 86-8

REPORT: 427-0187

PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CaCO3 PCT	MgCO3 PCT	
92P 86-8 (PREFIX)				
D2 69235	179'-189'	57.27	40.78	98.05 (1.95)
D2 69236	189'-199'	56.95	39.73	96.68 (3.32)
D2 69237	199'-209'	56.50	40.15	96.65 (3.35)
D2 69238	209'-219'	56.50	39.73	96.23 (3.77)
D2 69239	219'-229'	56.50	41.82	98.32 (1.68)
D2 69240	229'-239'	57.48	38.69	96.17 (3.83)
D2 69241	239'-249'	77.56	18.82	96.38 (3.62)
D2 69242	249'-260'	85.20	7.90	93.10 (6.90)
D2 69243	260'-270'	89.57	8.57	98.14 (1.86)
D2 69244	270'-280'	91.16	6.69	97.85 (2.15)
D2 69245	280'-290'	92.50	5.23	97.73 (2.27)
D2 69246	290'-300'	74.60	20.91	95.51 (4.49)
D2 69247	300'-306'	70.10	25.10	95.20 (4.80)


 Registered Assayer, Province of British Columbia

DRILL HOLE RECORD COVER SHEET

INGOT EXPLORATION LTD.
for CANDOL DEVELOPMENTS LTD.

Project: SECHELT CARBONATE
Claim: PLAIN
Area: SECHELT PENINSULA, B.C.
Contractor: HERB ALLEN, MERRIT, B.C.

Hole No. 92P86-10
N.T.S. 92G 112W
Grid Ref. 435611E, 5494608.5N
Elevation 860m A.S.L.
Bearing 85°

	Type	Size
Hole	<u>CORE</u>	<u>NO</u>
	Started	Completed
Date	<u>JAN 17, 1987.</u>	<u>JAN 21, 1987.</u>
Logged by:	<u>CAROL DITSON</u>	

Inclination

At Collar	<u>41°</u>
At	<u> </u>
At	<u> </u>
At	<u> </u>
At	<u> </u>

Total length 435 ft, 132.59 m

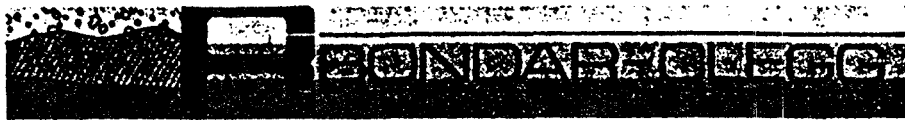
C O M M E N T S

DRILL HOLE RECORD

PROJECT **SECHLT CARBONATE** DRILL HOLE NO. **92P8670** SCALE **1/4" = 1' FEET** PAGE NO. **5** OF **6**

LENGTH	ASSAYS				SAMPLE NUMBERS	Py %	CARBON	UN. CAL.	VAL. DE. %	M. BANE	SE. A.	TALS	CHERT	MICA	CALCIT.	SILICA	TEPHR.	COLOR	STRUCT.	ROCK		
	CaO	MgO																				
	NO ASSAY																					
310	59.78	35.97			69065																DOLOMITE - MOTTLED, SOME VERY FAINT BANDING	
320	58.36	37.64			69066				20													
330	57.23	39.10			69067																	
340	61.92	33.46			69068				20												2" CARBON SEAM WITH SHEARS AT 20° (LATERAL MOVEMENT)	
350	NO ASSAY								35													
350	69.54	8.99			69069				60												ANDESITE CALCITE - WELL BANDED, ANGLE INCREASES TOWARD BOTTOM OF SECTION 6" SHEAR ZONE, ALL GRAPHITE	
360									35													
370	93.08	4.10			69070																	
370	NO ASSAY								45													METAVOLCANICS (DIOPSIDE) - BANDED

Bondar-Clegg & Company Ltd.
130 Pemberton Ave.
North Vancouver, B.C.
Canada V7P 2R5
Phone: (604) 985-0581
Telex: 04-352667



Certificate
of Analysis

92 P 86-10

REPORT: 427-0296 (COMPLETE)

REFERENCE INFO:

CLIENT: INGOT EXPLORATION LTD.

SUBMITTED BY: UNKNOWN

PROJECT: NONE GIVEN

DATE PRINTED: 5-FEB-87

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	CaCO3 Calcium Carbonate	26	0.01 PCT		
2	MgCO3 Magnesium Carbonate	26	0.05 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D DRILL CORE	26	2 -150	26	ASSAY PREP	26

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INVOICE TO: MR. H. FRASER



92P86-10

REPORT: 427-0296

PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CaCO3 PCT	MgCO3 PCT
2086-10 D2 69046	From Fe 56' 66'	78.96	4.60
" D2 69047	66' 76'	75.62	4.08
" D2 69048	78' 88'	74.88	3.03
" D2 69049	111' 121'	89.95	3.20
" D2 69050	121 131	89.74	3.45
" D2 69051	131 - 141	92.52	2.30
" D2 69052	141 - 150	87.64	6.48
" D2 69053	151 - 162	89.63	4.08
" D2 69054	162 - 172	83.15	11.14
" D2 69055	172 - 186	83.25	11.71
" D2 69056	186 - 196	87.64	8.68
" D2 69057	196 - 206	87.45	9.37
" D2 69058	206 - 216	86.81	8.57
" D2 69059	216 - 226	86.60	10.46
" D2 69060	226 - 239	80.53	14.12
" D2 69061	239 - 249	82.83	12.03
" D2 69062	249 - 259	89.95	6.80
" D2 69063	259 - 269	88.71	8.57
" D2 69064	269 - 276	65.37	30.32
" D2 69065	309 - 319	58.78	35.97
" D2 69066	319 - 329	58.36	37.64
" D2 69067	329 - 339	57.73	39.10
" D2 69068	339 - 353	61.92	33.46
" D2 69069	353 - 363	89.54	8.99
" D2 69070	363 - 375	93.08	4.10
" D2 69071	376 - 385	96.22	2.30

DRILL HOLE RECORD COVER SHEET

INGOT EXPLORATION LTD.
for CANDOL DEVELOPMENTS LTD.

Project: SECHelt CARBONATE
Claim: PLAIN
Area: SECHelt PENINSULA, B.C.
Contractor: HERB ALLEN, MERRIT, B.C.

Hole No. 92P86-11
N.T.S. 92G/12W
Grid Ref. 435606 E, 5494610 N
Elevation 860 M A.S.L.
Bearing 270°

	Type	Size
Hole	<u>CORE</u>	<u>NQ</u>
	Started	Completed
Date	<u>JAN 12, 1987</u>	<u>JAN 16, 1987</u>

Inclination	
At Collar	<u>45°</u>
At	_____
At	_____
At	_____
At	_____

Logged by: CAROL DITSON

Total length 230 ft, 70.10 m.

COMMENTS

DRILL HOLE RECORD

PROJECT SECHLT CARBONATE DRILL HOLE NO 92P86-11 SCALE 10 FEET PAGE NO. 1 OF 4

LENGTH	ASSAYS				SAMPLE NUMBERS	PY %	CARBON	V% Ca	V% Mg	SERA	TALC	CHERT	MICA	CHLORITE	SILICA	TUFFS	COLOR	STRUCT.	ROCK	
	AD	MgO																		
	NO ASSAYS																			
10	56.71	36.60			69034	TR	✓									A	M	D	CASING DOLOMITE	
20	56.42	39.32			69035												D			
30	57.75	35.55			69036										L	B	D	THIS SECTION ASSOCIATED WITH TAN COLORED VEINETS (SOFT, NO REACTION TO ACID, DOLOMITE OR OTHER CARBONATE?) CLEAN BREAK BETWEEN GRAY & WHITE DOL.		
40	56.14	34.50			69037										W	S				
50	NO ASSAY					2	✓		✓					✓	10	6	C	ANDESITE	- MUCH VEINED WITH CALCITE & APATITE - SOFT, PROBABLY BEING REPLACED BY CALCITE SOME 3"-4" CARBONATE PATCHES ALSO PRESENT (WHITE, MOTTLED).	
60						TR	✓										M	S		C
70	57.55	37.64			69038	TR											A	M	D	DOLOMITE
	NO ASSAY																			ANDESITE (34 VEIN) DOLOMITE - TRACE SERPENTINE
						TR														

DRILL HOLE RECORD

PROJECT SECHERT CARBONATE DRILL HOLE NO. 92P86-11 SCALE IN FEET PAGE NO. 2 OF 4

LENGTH	ASSAYS				SAMPLE NUMBERS	P4 %	CARBON	UN. CAL.	VAL. DO.	GRAVEL	SERA.	TALC	CHERT	MICA	CHALC.	SILICA	TEXTURE	COLOR	STRUCT.	ROCK		
	CaO	MgO																				
	57.34	35.55			69039																D	
80																						
	58.07	36.81			69040																D	
90																						
	57.08	39.73			69041																L	
100																						
	72.56	21.96			69042																D	
	NO ASSAY																				D	
110						TR	✓		30									A	Z	S	8" SHEAR ZONE, ALL CLAYS MIXED CALCITE (30%) & DOLOMITE (70%) CALCITE CRUDELY BANDED.	
						TR	✓		50 90	✓								L	B	C	CALCITE WITH MINOR DOLOMITIC SECTIONS BANDED INCONSISTENTLY	
120																						
	89.65	5.02			69044																C	
130																						
	85.02	10.32			69045																C	
140																					C + D	
	NO ASSAY																					
					PETROLOGY SAMPLE	I				✓				✓	✓	R	G	B	✓	✓	C	METAVOLCANICS WITH MINOR CALCITE IRREGULAR, WAVY CONTACTS CALCITE WITH MINOR DOLOMITE. STRIPES OF METAVOLCANICS

DRILL HOLE RECORD

PROJECT SECHLT CARBONATE DRILL HOLE NO. 92P86-11 SCALE IN FEET PAGE NO. 3 OF 4

LENGTH	ASSAYS			SAMPLE NUMBERS	PYRO	CARBON	VN. CAL	VN. DE	CHALK	SERP.	TALC	CHERT	MICA	CARBON	SILICA	TELLUR	COLOR	STRUCT.	ROCK				
	CaO	MgO																					
	NO ASSAY																						
160					TR																ANDESITE - IRREGULAR CONTACTS AVERAGE 500. CALCITE - PODS OF UNREPLACED SERPENTINITIC SILICATES - A COUPLE PODS OF MASSIVE PYRITE (Y ₂)		
160					TR			15													ANDESITE		
170					TR			70													DOLOMITE - FINE VEINS OF GREEN SERPENTINE		
170					J																CALCITE - PODS & STRINGERS OF SERPENTINE 1/4"		
180					15																METAVOLCANICS (2) - DIOPSIDE SKARN (?) - LOTS OF PYRITE IN PODS & STRINGERS		
180					2																MIXED CALCITE & DOLOMITE - SERPENTINE, EPIDOTE, PYRITE, FELDSPAR IN PODS & STRINGERS. - BANDING IN CALCITE INCONSISTENT, AVG. 45°		
190								45													- SILICIFIED CARBONATES & DYKES		
190								45															
190								45															
200																						- DIORITE & ANDESITE PORPHYRY DYKES	
200																							
200																							
210																						- DYKES & SILICA BRECCIA (Si MATRIX, LITHIC CLASTS) - METAVOLCANICS PREDOMINANTLY GARNET	
210																							
210																							
220																						- METAVOLCANICS & DYKES	

PETROLOGY
SAMPLE
92P86-11-175

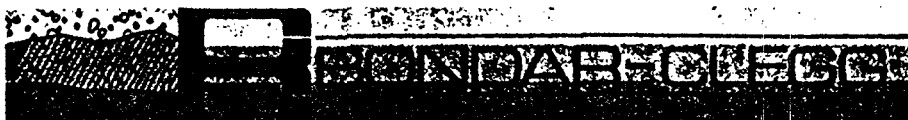
- MIXED
SILICEOUS
ROCKS.
VERY ALTERED

DRILL HOLE RECORD

PROJECT SECRET CARBONATE DRILL HOLE NO. 92P86-11 SCALE IN FEET PAGE NO. 4 OF 4

LENGTH	ASSAYS				SAMPLE NUMBERS	PY %	CARBON	VN. CAL	VA. DOG	O/A. PAXE	SEPA	TALS	CHERT	MICA	CHALCIT	SILICA	TUFFS	COLOR	STRUCT.	ROCK	
	CaO	MgO																			
230	NO ASSAY				230																METAVOLCANICS -GARNET + Diopside

Bondar-Clegg & Company Ltd.
130 Pemberton Ave.
North Vancouver, B.C.
Canada V7P 2R5
Phone: (604) 985-0681
Telex: 04-352667



Certificate
of Analysis

92 P 96-11

REPORT: 427-0295 (COMPLETE)

REFERENCE INFO:

CLIENT: INGOT EXPLORATION LTD.
PROJECT: NONE GIVEN

SUBMITTED BY: UNKNOWN
DATE PRINTED: 5-FEB-87

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	CaCO3 Calcium Carbonate	12	0.01 PCT		
2	MgCO3 Magnesium Carbonate	12	0.05 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D DRILL CORE	12	2 -150	12	ASSAY PREP	12

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INVOICE TO: MR. M. FRASER



92P 86-11

REPORT: 427-0295

PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CaCO3 PCT	MgCO3 PCT
9034	D2 92P86-11 9'-19'	56.71	36.60
9035	D2 92P86-11 19'-29'	56.92	39.32
9036	D2 92P86-11 29'-39'	57.75	35.55
9037	D2 92P86-11 39'-64'	56.19	34.50
9038	D2 92P86-11 64'-74'	57.55	37.64
9039	D2 92P86-11 74'-84'	57.34	35.55
9040	D2 92P86-11 84'-94'	58.07	36.81
9041	D2 92P86-11 94'-104'	57.08	39.73
9042	D2 92P86-11 104'-115'	72.56	21.96
9043	D2 92P86-11 115'-125'	91.95	5.12
9044	D2 92P86-11 125'-135'	89.65	5.02
9045	D2 92P86-11 135'-148'	85.02	10.25

DRILL HOLE RECORD COVER SHEET

INGOT EXPLORATION LTD.
for CANDOL DEVELOPMENTS LTD.

Project: SECHELT CARBONATE
Claim: PLAIN
Area: SECHELT PENINSULA, B.C.
Contractor: HERB ALLEN, MERRIT, B.C.

Hole No. 92P86-13
N.T.S. 92G/12W
Grid Ref. 435884E, 5494700N
Elevation 858 m A.S.L.
Bearing 90°

	Type	Size
Hole	<u>Core</u>	<u>NQ</u>
	Started	Completed
Date	<u>Dec 18, 1986</u>	<u>Dec 21, 1986</u>
Logged by:	<u>Carol Ditsow</u>	

Inclination
At Collar 40°
At _____
At _____
At _____
At _____

Total length 372 ft., 113.39 m.

C O M M E N T S

DRILL HOLE RECORD

PROJECT SECHULT CARBONATE DRILL HOLE NO 92P86-13 SCALE IN FEET PAGE NO. 1 OF 5

LENGTH	ASSAYS				SAMPLE NUMBERS	PY %	CARBON	V.N. CAL	VAL. DOL	%BANDS	SERP	TALC	CHERT	MICA	CALCITE	SILICA	TRILITE	COLOR	STRUCT.	ROCK
	CaO	MgO																		
0-10	NO ASSAYS																			
10-20																				
20-25						TR	✓		45	✓							Po D	Sx	B C + D	CASING
25-30								30												
30-35						TR	✓		30								Po G	F	B C + D	
35-40								45	✓											
40-45	68.13	30.32			69169, 69170, 69171		✓		45	✓							Ph W B	B C + D		
45-50								30												
50-55								45	✓								Ph W B	B C + D		
55-60								30												
60-65								45	✓											
65-70	58.95	39.94			69172, 69173, 69174															
70-75																				

BASALT (3).
 MIXED CALCITE & DOLOMITE
 - CALCITE INCONSISTENTLY BANDED.
 - SERPENTINE

ANDESITE
 - 2 SETS OF CROSSING FRACTURES.
 - FRACTURES AT 30° COATED WITH ACICULAR TREMOLITE

2" OF FANAT GOUGE
 MIXED CALCITE & DOLOMITE
 - BANDED
 - FRACTURES AT 30° & 45°

DOLOMITE
 - 2 FAINT SETS OF BANDING, APPEARS ORIGINAL SET AT 45° OVERPRINTED BY SET AT 30°.
 - GREEN SERPENTINE IN PLACES
 - GRAPHIC SEAMS & PODS (LARGEST 4")
 - FRACTURES ALSO 45° & 30°

PETROLOGY SAMPLE
 92P86-13-30

DRILL HOLE RECORD

PROJECT SECHLT CARBONATE DRILL HOLE NO. 92P86-13 SCALE 10 FEET PAGE NO. 2 OF 5

LENGTH	ASSAYS				SAMPLE NUMBERS	Py No	CARBON	UN. CAL.	VAL. DEX.	SIBANE	SERP.	TALC	CHERT	MICA	CHLORIT.	SILICA	TRITUR.	COLOR	STRUCT.	ROCK
	CaO	MgO																		
80	58.95	39.94																		D
90																				D
100	59.49	37.64			69175, 69001, 69002															D
110																				D
120	NO ASSAY																			D
125	69.76	16.73			69004, 69005, 69006															D
130	NO ASSAY																			D
135								90												C
138								35												D
140	NO ASSAY																			C
142								90												C
145								25												D
148					PETROLOGY SAMPLE 92P86-13-139			30%												D
150																				X
152																				X
154																				X
156																				X
158																				X
160																				X

BASALT - AUGITE + OLIVINE PHENOCRYSTS, Mb PORPHYROBLASTS

DOLOMITE

BASALT
DOLOMITE
- ASTIMIZING CARBON SEMMS
- SOME BRUCITE

BASALT
DOLOMITE
- SERPENTINE + DIOPSIDE (?) PRESENT

BASALT
- TRACE CHALCOPYRITE
- FAULT CONTACTS - COA BROKEN WITH FAULT GOUGE
- BOTTOM BRECCIATED / GRADUAL

DRILL HOLE RECORD

PROJECT SECHLT CARBONATE DRILL HOLE NO. 92P86-13 SCALE IN FEET PAGE NO. 4 OF 5

LENGTH	ASSAYS				SAMPLE NUMBERS	Py %	CARBON	VN. CA.	VN. DO.	GRAINE	SERR.	TALC	CHERT	MICA	CHALC.	SILICA	TRILCA	CALCA.	STRUCT.	ROCK		
	CrO	MgO																				
230									35										S	C	2" SHEAR ZONE ORIENTED 35°	
240	86.95	8.78			69010, 69011, 69012				40										B	C		
250									45										B	C		
260									20										B	C		
270	89.44	6.69			69013, 69014, 69015				30										B	C		
280	NO ASSAY.								25										B	C	BROWNISH COLOR (FE PRESENT IN SIDERITE OR AXINITE ?)	
290	NO ASSAY.								80										A	M	C	BASALT (?) 5% PYRITE & PYRRHOTITE IN VEINS & STRINGERS (NO > PY)
									60											C	C	CALCITE
									30										PH	B	C	
									30											B	C	
									35										A	C	X	BASALT PYRITE DISSEMINATIONS, BLEBS & STRINGERS
									45										M	C	X	
									10										PH	L	B	CALCITE FINE BANDING, INCONSISTENT & VERY STEEP ANGLE.
									25										M	C	C	

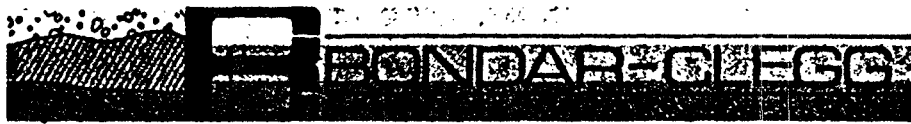
DRILL HOLE RECORD

PROJECT SECHLET CARBONATE DRILL HOLE NO. 92P86-13 SCALE IN FEET PAGE NO. 5 OF 5

LENGTH	ASSAYS		SAMPLE NUMBERS	PY%	CARBON	W. CAL	V. DO	GRAN	SERP	TALC	CHERT	MICA	CHLOR	SILICA	TITAN	COLOR	STRUCT.	ROCK		
	CaO	MgO																		
	NO ASSAY																			
310	71.00	25.10	69016, 69017, 69018				35													ANDESITE *BOTTOM CONTACT CUTS BANDING IN CALCITE BELOW WITH A 90° ANGLE.
							35													CALCITE -GREEN & YELLOW SERPENTINE AT BOTTOM OF SECTION
320	NO ASSAY		PETROLOGY SAMPLE 92P86-13-319				90													MIXED CALCITE & DOLOMITE
							20													ANDESITE MIXED CALCITE & DOLOMITE -6" BAND OF SERPENTINE IN CENTER.
330																				MIXED ANDESITE DYKES, METAVOLCANICS AND MINOR CALCITE
																				CALCITE -SERPENTINE RICH AT BOTTOM
340							10													MIXED CALCITE, DOLOMITE & SERPENTINE
							35													DOLOMITE -ABRUPT CONTACT -COLOR CHANGE, FRACTURE WITH TALC & GRAPHITE -PARTLY MOTTLED, PARTLY BANDED -VEINS & STRINGERS OF SPHALCRITE, PYRITE, CHALCOPYRITE & FINE SILVERY NEEDLELIKE MINERAL (JAMESONITE, BULLANGERITE?)
350	57.77	39.31	69019				45													
																				-SERPENTINE BECOMES YELLOWISH HERE. (GREEN ABOVE).
360	57.66	40.77	69020				50													
	NO ASSAY																			METAVOLCANICS DOLOMITE
370							35													PETROLOGY SAMPLE 92P86-13-372

Bondar-Clegg & Company Ltd.

130 Pemberton Ave.
North Vancouver, B.C.
Canada V7P 2R5
Phone: (604) 985-0681
Telex: 04-352667



Certificate
of Analysis

92 P 86-13

REPORT: 427-0149 (COMPLETE)

REFERENCE INFO:

CLIENT: INGOT EXPLORATION LTD.
PROJECT: NONE GIVEN

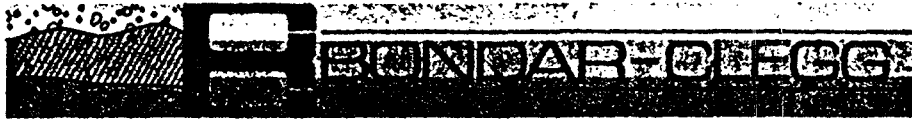
SUBMITTED BY: M. FRASER
DATE PRINTED: 16-JAN-87

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	CaCO3 Calcium Carbonate	8	0.01 PCT		
2	MgCO3 Magnesium Carbonate	8	0.05 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D DRILL CORE	8	2 -150	8	CRUSH,PULVERIZE -150 COMPOSITE CHARGE	26 24

REPORT COPIES TO: MR. M. FRASER

INVOICE TO: MR. M. FRASER




92 P 86 - 13

REPORT: 427-0149

PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CaCO3 PCT	MgCO3 PCT	Σ	
25'-199'	D2 69004-69006 COMP	69.76	16.73	86.49	Excluding 134-179 (Total 29', 69004-125-134, 69005-179-189, 69006-189-199)
199'-235'	D2 69007-69009 COMP	84.51	4.18	88.69	
235'-265'	D2 69010-69012 COMP	86.95	8.78	95.73	
265'-310'	D2 69013-69015 COMP	89.44	6.69	96.13	Excluding 267.5-272, 287-291, 304-310.
310'-352'	D2 69016-69018 COMP	71.00	25.10	96.10	Excluding 320-332
34'-64'	D2 69169-69171 COMP	68.13	30.32	98.45	
64'-94'	D2 69172-69174 COMP	58.95	39.94	98.89	
94'-125'	D2 69175, 69001, 69002	59.49	37.64	97.13	


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Certificate of Analysis

REPORT: 527-D149 (COMPLETE)

92 P-86-13

REFERENCE INFO:

CLIENT: INGOT EXPLORATION LTD.
PROJECT: NONE GIVEN

SUBMITTED BY: M. FRASER
DATE PRINTED: 12-FEB-87

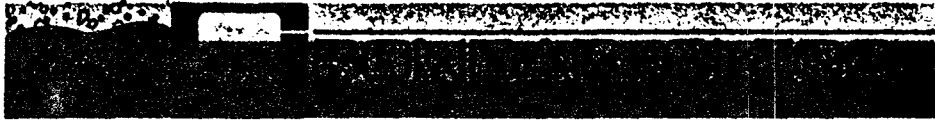
ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	CaCO3 Calcium Carbonate	2	0.01 PCT		
2	MgCO3 Magnesium Carbonate	2	0.05 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
R ROCK OR BED ROCK	2	2 -150	2	CRUSH,PULVERIZE -150	2

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MS. CAROL DITSON

INVOICE TO: MR. M. FRASER

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REPORT: 527-0149

92 P 86-13

PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CaCO3 PCT	MgCO3 PCT
2 P. 86-13 352-362 R2 69019		57.77	39.31
" 362-372 R2 69020		57.66	40.77

[Handwritten Signature]

DRILL HOLE RECORD COVER SHEET
INGOT EXPLORATION LTD.
for CANDOL DEVELOPMENTS LTD.

Project: SECHELT CARBONATE
Claim: PLAIN
Area: SECHELT PENINSULA, B.C.
Contractor: HERB ALLEN, MERRIT, B.C.

Hole No. 92P 86-14
N.T.S. 92G/12W
Grid Ref. N35877E, 5494700N
Elevation 858 M A.S.L.
Bearing 270°

	Type	Size
Hole	<u>CORE</u>	<u>NQ</u>
	Started	Completed
Date	<u>Dec 12, 1986</u>	<u>Dec 17, 1986</u>
Logged by:	<u>CAROL DITSON</u>	

Inclination
At Collar 40°
At _____
At _____
At _____
At _____

Total length 225 ft, 68.58 m

COMMENTS

DRILL HOLE RECORD

PROJECT SECHET CARBONATE DRILL HOLE NO 92P86-14 SCALE IN FEET PAGE NO. 2 OF 3

LENGTH	ASSAYS				SAMPLE NUMBERS	PY	CARBON	UN. CAL.	VAL. DEX	DIA. ANGLE	SERP.	TALC	CHERT	MICA	CHLORITE	SILICA	TEXTURE	COLOR	STRUCT.	ROCK
	NO ASSAYS																			
80																				
90																				
100																				
110						TR	✓								✓	A				METAVOLCANICS WITH BASALTIC STRINGERS
						TR	✓		30			✓	✓		✓	A	B	B		DIORITE, CONTACT INDISTINCT - FADES INTO MV'S METAVOLCANICS (GARNET, DIOPSIDE, FELDSPAR)
120						0-2	✓		15						✓	A-C				MIXED BASALT AND METAVOLCANIC (BASALT ALTERING TO MV?)
						TR			45			10	✓		✓	A	L	S	+	DIORITE - 2 CLAY-FILLED SHEARS, 1 WITH BRECCIATION
130						TR	✓								✓	A	G	B		METAVOLCANIC (?) - SIMILAR ASSEMBLAGE (DIOPSIDE + ANHITE?) HOWEVER APPEARS TO BE OVERPRINTING DIORITE HERE - TRACE PYRRHOTITE - MINOR, DK. GRAY, NARROW DUKES.
140						TR									✓	A	G	B		ANDESITE - PYRRHOTITE ON SOME FRACTURE SURFACES - CONTAINS INCLUSIONS OF AMPHIBOLITE NEAR CONTACT
						✓	✓		45				✓	✓	✓	A	D	B		AMPHIBOLITE - SLIGHTLY MAGNETIC BANDING - FAINT MINERALOGIC BANDING - PYRITE & PYRRHOTITE PRESENT AS DISCS & STRINGERS

PETROLOGY
SAMPLE
92P86-14-110

APPENDIX "B"

ASSAYS AND ANALYTICAL METHOD

ANALYTICAL METHOD

Calcium Carbonate (CaCO₃)

A .5 gram sample is dissolved in hydrochloric acid, boiled, treated with ammonium hydroxide, then filtered. The filtered residue is discarded and the filtrate is boiled to remove excess ammonium hydroxide. Calcium oxalate is precipitated by addition of ammonium oxalate, then filtered. The calcium oxalate is combined with dilute sulfuric acid and titrated with potassium permanganate. Sample is dried, weighed and calculated for calcium carbonate.

Magnesium Carbonate (MgCO₃)

A .2 gram sample is digested in a standard solution of hydrochloric, nitric and perchloric acids and boiled till fumes are given off. The sample is then cooled, reboiled with hydrochloric acid and tested for MgCO₃ using an atomic absorption spectrophotometer.

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92 P 86-7

REPORT: 427-0266 (COMPLETE)

REFERENCE INFO:

CLIENT: INGOT EXPLORATION LTD.
PROJECT: NONE GIVEN

SUBMITTED BY: UNKNOWN
DATE PRINTED: 23-JAN-87

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	CaCO ₃ Calcium Carbonate	11	0.01 PCT		
2	MgCO ₃ Magnesium Carbonate	11	0.05 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D DRILL CORE	11	2 -150	11	ASSAY PREP	11

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92 P 86-7

REPORT: 427-0266

PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS		CaCO3 PCT	MgCO3 PCT	Loss on Ignition	
	FROM	TO			PERCENT	REMARKS
D2 69026	140	150	87.00	8.68	95.68	(4.32)
D2 69027	150	160	88.25	7.53	95.78	(4.22)
D2 69028	160	170	91.40	5.23	96.63	(3.37)
D2 69029	170	180	93.30	3.97	97.27	(2.73)
D2 69030	180	190	90.70	5.07	95.77	(4.23)
D2 69031	190	200	86.70	8.36	95.06	(4.94)
D2 69032	200	210	89.65	7.11	96.71	(3.29)
D2 69033	210	220	75.45	26.45	101.9	1.9 !
D2 69248	71	81	65.25	30.95	96.15	(3.85)
D2 69249	86	96	74.35	13.91	88.26	(11.74)
D2 69250	96	100	81.05	13.38	94.43	(5.57)

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92 P 86-8

REPORT: 427-0157 (COMPLETE)

REFERENCE INFO:

CLIENT: INGOT EXPLORATION LTD.

SUBMITTED BY: UNKNOWN

PROJECT: NONE GIVEN

DATE PRINTED: 23-JAN-87

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	CaCO3 Calcium Carbonate	14	0.01 PCT		
2	MgCO3 Magnesium Carbonate	14	0.05 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D BRILL CORE	14	2 -150	14	ASSAY PREP	14

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INVOICE TO: MR. M. FRASER



92 P 86-8

REPORT: 427-0157

PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CaCO3 PCT	MgCO3 PCT	
69021 D2 92P 86-8 32'-32'		57.35	39.73	97.08 (2.92)
69022 D2 92P 86-8 32'-42'		57.25	40.78	98.03 (1.97)
69023 D2 92P 86-8 42'-67'		59.30	37.64	96.94 (3.06)
69024 D2 92P 86-8 67'-77'		56.95	39.73	96.68 (3.32)
69025 D2 92P 86-8 77'-87'		56.10	39.73	95.83 (4.17)
69226 D2 92P 86-8 87'-99'		55.45	39.73	95.18 (4.82)
69227 D2 92P 86-8 99'-109'		56.95	40.78	97.73 (2.27)
69228 D2 92P 86-8 109'-119'		56.85	39.73	96.58 (3.42)
69229 D2 92P 86-8 119'-129'		56.95	39.73	96.68 (3.32)
69230 D2 92P 86-8 129'-139'		57.35	39.73	96.08 (3.92)
69231 D2 92P 86-8 139'-149'		56.40	39.73	96.13 (3.87)
69232 D2 92P 86-8 149'-159'		56.10	41.82	97.92 (2.08)
69234 D2 92P 86-8 159'-169'		56.75	41.82	98.57 (1.43)
69234 D2 92P 86-8 169'-179'		56.70	40.78	97.48 (2.52)

} = 19.99 % MgO

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92 P 86-8

REPORT: 427-0187 (COMPLETE)

REFERENCE INFO:

CLIENT: INGOT EXPLOKATION LTD.
PROJECT: NONE GIVEN

SUBMITTED BY: UNKNOWN
DATE PRINTED: 23-JAN-87

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	CaCO3 Calcium Carbonate	13	0.01 PCT		
2	MgCO3 Magnesium Carbonate	13	0.05 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
DRILL CORE	1	-150	1	AGSAY PREP	13
D DRILL CORE	13	2 -150	13		

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92 P 86-8

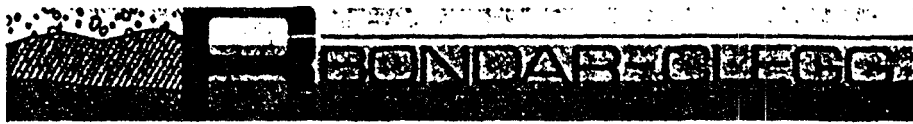
REPORT: 427-0187

PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CaCO3 PCT	MgCO3 PCT	
92P 86-8 (PREFIX)				
D2 69235	179'-189'	57.27	40.78	98.05 (1.95)
D2 69236	189'-199'	56.95	39.73	96.68 (3.32)
D2 69237	199'-209'	56.50	40.15	96.65 (3.35)
D2 69238	209'-219'	56.50	39.73	96.23 (3.77)
D2 69239	219'-229'	56.50	41.82	98.32 (1.68)
D2 69240	229'-239'	57.48	38.69	96.17 (3.83)
D2 69241	239'-249'	77.56	18.82	96.38 (3.62)
D2 69242	249'-260'	85.20	7.90	93.10 (6.90)
D2 69243	260'-270'	89.57	8.57	98.14 (1.86)
D2 69244	270'-280'	91.16	6.69	97.85 (2.15)
D2 69245	280'-290'	92.50	5.23	97.73 (2.27)
D2 69246	290'-300'	74.60	20.91	95.51 (4.49)
D2 69247	300'-306'	70.10	25.10	95.20 (4.80)

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Telex: 04-352667



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92 P 86-10

REPORT: 427-0296 (COMPLETE)

REFERENCE INFO:

CLIENT: INGOT EXPLORATION LTD.

SUBMITTED BY: UNKNOWN

PROJECT: NONE GIVEN

DATE PRINTED: 5-FEB-87

ORDER	ELEMENT		NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	CaCO3	Calcium Carbonate	26	0.01 PCT		
2	MgCO3	Magnesium Carbonate	26	0.05 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D DRILL CORE	26	2 -150	26	ASSAY PREP	26

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22P86-10

REPORT: 427-0296

PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CaCO3 PCT	MgCO3 PCT
2086-10 D2 69046	From To 56' 66'	78.96	4.60
" D2 69047	66' 76'	75.62	4.08
" D2 69048	78' 88'	74.88	3.03
" D2 69049	111' 121'	89.95	3.20
" D2 69050	121 131	89.74	3.45
" D2 69051	131 - 141	92.52	2.30
" D2 69052	141 - 150	87.64	6.48
" D2 69053	151 - 162	89.63	4.08
" D2 69054	162 - 172	83.15	11.14
" D2 69055	172 - 186	83.25	11.71
" D2 69056	186 - 196	87.64	8.68
" D2 69057	196 - 206	87.45	9.37
" D2 69058	206 - 216	86.81	8.57
" D2 69059	216 - 226	86.60	10.46
" D2 69060	226 - 239	80.53	14.12
" D2 69061	239 - 249	82.83	12.03
" D2 69062	249 - 259	89.95	6.80
" D2 69063	259 - 269	88.71	8.57
" D2 69064	269 - 276	65.37	30.32
" D2 69065	309 - 319	58.78	35.97
" D2 69066	319 - 329	58.36	37.64
" D2 69067	329 - 339	57.73	39.10
" D2 69068	339 - 353	61.92	33.46
" D2 69069	353 - 363	89.54	8.99
" D2 69070	363 - 375	93.08	4.10
" D2 69071	376 - 385	96.22	2.30

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92 P 96-11

REPORT: 427-0295 (COMPLETE)

REFERENCE INFO:

CLIENT: INGOT EXPLORATION LTD.
PROJECT: NONE GIVEN

SUBMITTED BY: UNKNOWN
DATE PRINTED: 5-FEB-87

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	CaCO3 Calcium Carbonate	12	0.01 PCT		
2	MgCO3 Magnesium Carbonate	12	0.05 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D DRILL CORE	12	2 -150	12	ASSAY PREP	12

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92P86-11

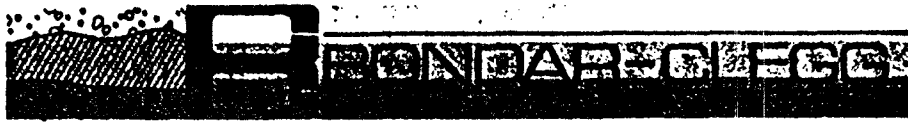
REPORT: 427-0295

PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CaCO3 PCT	MgCO3 PCT
69034	D2 92P86-11 9'-19'	56.71	36.60
69035	D2 92P86-11 19'-29'	56.92	39.32
69036	D2 92P86-11 29'-39'	57.75	35.55
69037	D2 92P86-11 39'-64'	56.19	34.50
69038	D2 92P86-11 64'-74'	57.55	37.64
69039	D2 92P86-11 74'-84'	57.34	35.55
69040	D2 92P86-11 84'-94'	58.07	36.81
69041	D2 92P86-11 94'-104'	57.08	39.73
69042	D2 92P86-11 104'-115'	72.56	21.96
69043	D2 92P86-11 115'-125'	91.95	5.12
69044	D2 92P86-11 125'-135'	89.65	5.02
69045	D2 92P86-11 135'-148'	85.02	10.25

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92 P 86-13

REPORT: 427-0149 (COMPLETE)

REFERENCE INFO:

CLIENT: INGOT EXPLORATION LTD.
PROJECT: NONE GIVEN

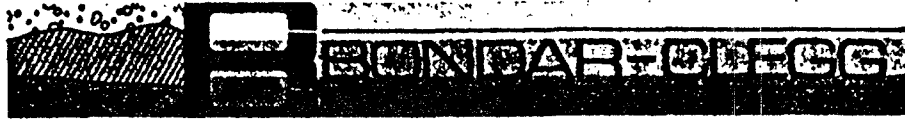
SUBMITTED BY: M. FRASER
DATE PRINTED: 16-JAN-87

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	CaCO3 Calcium Carbonate	8	0.01 PCT		
2	MgCO3 Magnesium Carbonate	8	0.05 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
D DRILL CORE	8	2 -150	8	CRUSH,PULVERIZE -150 COMPOSITE CHARGE	26 24

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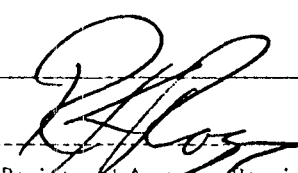
92 P 86 - 13

REPORT: 427-0149

PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CaCO3 PCT	MgCO3 PCT	Σ	
25'-199'	D2 69004-69006 COMP	69.76	16.73	86.49	Excluding 134-179 (Total 29', 69004-125-134, 69005-179-180, 69006-180-199)
199'-235'	D2 69007-69009 COMP	84.51	4.18	88.69	
235'-265'	D2 69010-69012 COMP	86.95	8.78	95.73	
265'-310'	D2 69013-69015 COMP	89.44	6.69	96.13	Excluding 267.5-272, 287-291, 304-310.
310'-352'	D2 69016-69018 COMP	71.00	25.10	96.10	Excluding 320-322
34'-64'	D2 69169-69171 COMP	68.13	30.32	98.45	→
64'-94'	D2 69172-69174 COMP	58.95	39.94	98.89	
94'-125'	D2 69175, 69001, 69002	59.49	37.64	97.13	


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REPORT: 527-0149 (COMPLETE)

92 P-86-13

REFERENCE INFO:

CLIENT: INGOT EXPLORATION LTD.
PROJECT: NONE GIVEN

SUBMITTED BY: M. FRASER
DATE PRINTED: 12-FEB-87

ORDER	ELEMENT	NUMBER OF ANALYSES	LOWER DETECTION LIMIT	EXTRACTION	METHOD
1	CaCO3 Calcium Carbonate	2	0.01 PCT		
2	MgCO3 Magnesium Carbonate	2	0.05 PCT		

SAMPLE TYPES	NUMBER	SIZE FRACTIONS	NUMBER	SAMPLE PREPARATIONS	NUMBER
R ROCK OR BED ROCK	2	2 -150	2	CRUSH,PULVERIZE -150	2

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MS. CAROL DITSON

INVOICE TO: MR. M. FRASER

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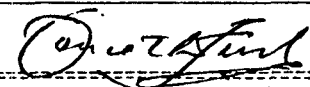
REPORT: 527-0149

92 P 56-13

PROJECT: NONE GIVEN

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	CaCO3 PCT	MgCO3 PCT
2 P. 82-12 352-362 R2 69019		57.77	39.31
" 362-372 R2 69020		57.66	40.77

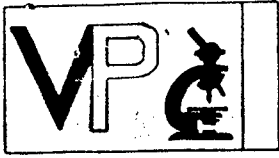


Registered Assayer, Province of British Columbia

APPENDIX "C"

PETROLOGIC REPORTS

Vancouver Petrographics Ltd.



Vancouver Petrographics Ltd.

JAMES VINNELL, Manager
JOHN G. PAYNE, Ph. D. Geologist

P.O. BOX 39
8887 NASH STREET
FORT LANGLEY, B.C.
VOX 1J0

Report for: Carol Ditson,
202 - 1910 West 6th Avenue,
VANCOUVER, B.C., V6J 1R7

PHONE (604) 888-1323

copy and invoice to:

Invoice 6298
February 1987

Ingot Exploration,
Box 10326, Pacific Center
2400 - 609 Granville Street
VANCOUVER, B.C., V74 1G5
attn: Malcolm Fraser

Samples: 92P86 series: 10-386, 11-150, 11-175
Quarry

Summary and Discussion:

All samples (including the three from the previous study [Inv.6247]) reacted quickly with dilute, cold HCl, indicating the presence of calcite. Although some higher-relief carbonate was present in some samples, it was tested by exposure of the thin section to dilute, cold HCl under the microscope, and found to be calcite as well. The moderate Mg-content of some samples from the previous study is due to the presence of olivine and serpentine.

- 92P86-10-386 extremely fine grained marble, replaced by patches and veins of coarser grained calcite and minor epidote and chlorite
- 92P86-11-150 fine grained marble cut by vein zones and patches containing coarser grained, higher-relief calcite, and seams, patches, and veinlets of chlorite and of talc/sericite. Opaque and calcite/aragonite occur in late veinlets along the earlier veins. Some cataclastic deformation of calcite occurred in the early vein zones.
- 92P86-11-175 diopside skarn, cut by veins of calcite-chlorite-tremolite-(pyrite); The rock contains patches of chlorite-(tremolite-calcite-pyrite), probably of replacement origin; the patches contain relic fragments of diopside.
- Quarry coarse to medium grained marble with prominent foliation; cut by abundant seams in which recrystallization of calcite produced an extremely fine grained aggregate. Opaque is common in some of the seams, and accounts for the color variation in the hand sample.

John G. Payne
John G. Payne

92P86-10-386

Marble replaced by coarser grained Calcite

The rock is an extremely fine grained marble composed of calcite, with minor patches of chlorite and disseminated opaque. Thin opaque-chlorite seams may represent original bedding. The rock contains ragged porphyroblasts of calcite, and is cut and replaced by veins and patches of coarser grained calcite, locally with minor epidote and chlorite.

host rock	
calcite	35-40%
opaque	minor
chlorite	0.1
replacement zones	
calcite	60-65
opaque	minor
epidote	0.1
chlorite	minor

The host rock is an extremely fine grained marble dominated by anhedral, equant calcite grains averaging 0.01-0.03 mm in size. It contains patches up to 0.1 mm in size of extremely fine grained chlorite, and scattered anhedral to euhedral grains of pyrite from 0.03-0.15 mm in size. In parts of the rock are anhedral porphyroblasts up to 2 mm in size of calcite. These commonly have irregular borders against groundmass calcite. The porphyroblasts probably are related in origin to the replacement patches of calcite.

The rock is cut by irregular veins and replacement zones of medium to coarse grained calcite, with a few very coarse grained zones. Some coarse grains contain irregular dusty seams and patches of opaque, and similar opaque-rich seams commonly occur along borders of host rock and replacement patches and veins. Some of these seams also contain patches and lenses of chlorite. Chlorite also forms a few subhedral flakes up to 0.1 mm in length. Pyrite forms subhedral to euhedral cubic grains up to 0.2 mm in size. Epidote occurs in clusters of fine grained calcite as prismatic, subhedral to euhedral grains averaging 0.1-0.15 mm in length. Some of these are broken along an irregular basal parting.

The rock is a fine to locally medium grained marble with a granular to moderately interlocking texture. It is cut by vein zones and patches up to 5 mm wide containing recrystallized calcite, talc/sericite, and chlorite, with local concentrations of opaque.

host rock	
calcite	75-78%
Mineral X	0.3
opaque	minor (pyrite)
replacement veins, patches, seams	
calcite	15-17
talc/sericite	5- 7
chlorite	2- 3
opaque	0.2

The rock is dominated by equant calcite grains averaging 0.2-0.5 mm in grain size, with local coarser grained patches. Textures range from granular to moderately interlocking. Dusty opaque forms scattered patches and seams up to 0.1 mm in size. Pyrite? forms a few subhedral to euhedral grains up to 0.1 mm across.

A few patches up to 0.7 mm in size are strongly altered relic silicate grains of unknown original composition. They are replaced completely by extremely fine grained material containing abundant dusty, light to medium brownish grey semiopaque, which masks any other minerals present.

The rock is cut by a major vein zone up to several mm wide and numerous smaller veinlets and seams. These contain lenses and seams of extremely fine grained talc/sericite and others dominated by extremely fine grained chlorite with minor dusty to extremely fine grained opaque. Irregular patches also consist of extremely fine grained talc/sericite. The major vein contains a broad core (up to 4 mm wide) dominated by medium to coarse grained calcite, showing a higher relief than normal. Some veins up to 1.5 mm wide consist of cataclastically deformed and granulated calcite. Calcite also forms replacement patches up to several mm across of grains similar to those in the core of the main vein zone.

The vein zones locally contain late veinlets up to 0.2 mm wide (averaging 0.05-0.1 mm) dominated by calcite/aragonite, in which grains are oriented perpendicular to the planar dimension of the vein. Grain size is extremely fine to very fine. Along the largest of these veinlets is a lensy zone up to a few mm long and from 0.03-0.1 mm wide of opaque.

92P86-11-175

Diopside Skarn cut by Veins of Calcite-Chlorite-Tremolite; patches of Chlorite-Tremolite-Pyrite-Calcite-(Ti-oxide)

The rock is a fine to locally medium grained skarn dominated by diopside with minor apatite. It is brecciated and cut by numerous veins and veinlets of calcite-tremolite-chlorite. The hand sample contains patches up to a few cm across dominated by chlorite with lesser tremolite, pyrite, and calcite, and with minor Ti-oxide.

rock	
diopside	75-80%
apatite	minor
veins	
calcite	12-15%
chlorite	3- 4
tremolite	2- 3
apatite	minor
pyrite	minor
fragments?	(8-10% of hand sample, 3- 5% of thin section)
chlorite	2- 3
tremolite	0.5
pyrite	0.5 (in hand sample only)
calcite	0.2 diopside 0.5%
Ti-oxide	0.1

Diopside forms a massive aggregate of grains ranging from 0.05 to 0.2 mm in size, with patches of subhedral prismatic grains up to 1 mm in length, and with a few megacrysts up to 1.7 mm in length.

Apatite forms subhedral to anhedral grains averaging 0.05-0.1 mm in size.

The rock is cut by veins averaging 0.1-0.5 mm in width. These are dominated by very fine grained calcite, with seams and patches of extremely fine grained chlorite, and with scattered grains and clusters of grains of tremolite. Tremolite locally forms ragged grains up to 0.6 mm in size. Apatite occurs with chlorite as subhedral prismatic grains up to 0.1 mm in length. Pyrite occurs in one vein with tremolite as very irregular grains averaging 0.02-0.05 mm in size.

The rock contains patches dominated by extremely fine grained chlorite, with scattered grains and aggregates of tremolite and of pyrite (in hand specimen only), and with minor patches of calcite and of Ti-oxide. Ti-oxide forms irregular grains from 0.02-0.1 mm in size. Pyrite patches are up to 2 mm across. The patches contain relic fragments of diopside, suggesting that they formed by replacement of the rock, probably at about the same time as the veins were introduced.

QUARRY

Deformed Marble (Calcite)

The rock is a coarse to medium grained marble showing a prominent foliation defined by slight color banding and by elongation of calcite grains. It is cut by numerous seams in which calcite was recrystallized to an extremely fine grained, granular aggregate. Opaque forms minor disseminated grains and seams; seams are associated with recrystallized calcite seams, and probably are responsible for the color variation in hand sample.

calcite	99.8%
opaque	0.2

Calcite forms elongated grains up to a few mm in length. These show a preferred orientation parallel to foliation. The rock was deformed and recrystallized along seams up to 0.1 mm in width. These seams occupy about 15-17% of the rock. In them, calcite was recrystallized to granular aggregates averaging 0.02 mm in grain size. Many of the seams are subparallel to foliation. A few prominent seams cut moderately to steeply across the foliation.

Opaque forms disseminated grains averaging 0.03-0.07 mm in size. Some are surrounded by a thin limonitic halo, suggesting that the opaque is Fe-sulfide.

In the recrystallized seams of calcite, opaque forms discontinuous, wispy lenses from 0.1-0.5 mm in length.

Comments on sections previously described by A.L.Littlejohn, Invoice 6247

P92 86-13-272

Serpentine may in part be chlorite; these minerals are difficult to distinguish at this grain size. The rock contains clusters and single grains of apatite from 0.03-0.07 mm in size associated with patches of diopside and of serpentine/chlorite. Some of the apatite grains are subhedral prismatic in habit, and others are anhedral. Serpentine/chlorite in some patches contains abundant dusty opaque, possibly magnetite.

92P 86-13-319

I would interpret this rock differently than Al Littlejohn. The silicate mineral is dominantly olivine. This is recognized by the parallel extinction in prismatic grains and by the generally higher birefringence and poorer cleavage than in clinopyroxene (diopside). Alteration of olivine is patchy to serpentine. Patches in which serpentine occurs in tabular pseudomorphs probably are after clinopyroxene. The mineral identified as phlogopite probably is talc.

92P 86-13-139

This sample is similar to 86-13-319, with both olivine and diopside present as fresh to moderately altered grains, which can be distinguished optically. Olivine probably is moderately more abundant than diopside. More-strongly-altered grains are dominated by serpentine, and their origin is uncertain. However, probably most were olivine. The tabular to bladed pseudomorphs up to 2 mm in size probably are secondary after clinopyroxene porphyroblasts or phenocrysts. The mineral identified as phlogopite probably is talc. Some talc appears to be secondary after olivine.

The composition of 92P 86-13-319 is similar to that of pure dolomite because it contains abundant Mg-bearing silicates (olivine and serpentine, and minor diopside). Check the SiO_2 content of this rock; no quartz is present, so all the SiO_2 is in the silicates.

I would interpret the sections containing olivine and clinopyroxene as original ultramafic rocks, which were serpentinized and later altered to calcite-(talc), with a large input of Ca at the expense of Mg. An alternate hypothesis, depending on field relations, is that they are contact-metamorphosed marbles in which Mg-rich silicates were formed during metamorphism from Ca-Mg carbonates and introduced SiO_2 . These silicates would then have been partly serpentinized.

As in the other samples in the suite, calcite is the only carbonate identified.

John G. Payne

Canook Calcite

Inv. 6247

57650

app.

14.1.87



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January 9, 1987

Samples: 92P86-13-130, 139, 319, 372; 92P86-14-26.5, 48, 55, 110, 157, 208.

Summary:

A) VOLCANIC ROCKS: 92P86-14-26.5, 92P86-13-130.

These are weakly altered (metamorphosed ?) mafic volcanic rocks. The first is a basalt consisting of plagioclase and augite with chlorite and tremolite; calcite occurs in veinlets. The second is an andesite consisting mainly of plagioclase and chlorite, including plagioclase phenocrysts; calcite occurs in veinlets and is associated with pervasive epidote.

B) ALTERED VOLCANIC ROCKS: 92P86-14-48 and 55.

These samples are highly altered volcanic rocks, probably similar to Group A above. The sample at 55 is strongly and pervasively altered with very fine diopside and garnet, in patches. The plagioclase is altered to K-spar. Veins of tremolite cut through the rock, associated with epidote. The sample at 55 contains patches of diopside and the much of the sample consists of epidote, sericite and chlorite, occurring in patches. It is sheared and sulphides are associated with this and the epidote alteration.

C) ALTERED INTRUSIVE/SUBVOLCANIC ROCK: 92P86-14-110.

This is a dioritic rock, perhaps associated with the Group A volcanics, which has been altered with tremolite, K-spar and epidote.

D) MAFIC METAVOLCANICS (AMPHIBOLITE): P9286-14-157 and 206.

These samples consist dominantly of hornblende intergrown with plagioclase and lesser biotite. There is a vague foliation. Sulphides (mainly pyrite and pyrrhotite, minor chalcopryrite) are disseminated throughout and along the foliation and are apparently associated with very weak calcite-epidote-tremolite-K-spar-quartz alteration occurring in fine stringers along the foliation. Biotite is altering to chlorite.

Summary (cont.)

E) SERPENTINE MARBLES; 92P8613-139, 319 and 372.

These samples consist mainly of calcite with large patches of dark green serpentine (vein-like) and with smaller patches of yellowish serpentine throughout. The yellowish serpentine is an alteration of diopside which is embedded in the calcite; the dark green serpentine is an alteration of tremolite (?). The carbonate is replacing the serpentine and apparently the serpentinisation occurred during the addition of carbonate. These may be altered volcanic rocks (Group B) which have undergone intense replacement by calcite.



A. L. Littlejohn, M.Sc.

92P 86-13-130: PORPHYRITIC ANDESITE.

This sample is a fine to medium grained massive volcanic rock containing a few plagioclase phenocrysts in a fine plagioclase-chlorite groundmass; occasional hornblende phenocrysts are also present. Mild epidote alteration (greenschist metamorphism) has occurred and is associated with a few fine veinlets containing calcite and quartz also. Minerals are:

plagioclase groundmass	66%
chlorite	16
plagioclase phenocrysts	10 (moderately sericitic)
opaques	3
epidote	3
hornblende	2
calcite	minor
quartz	trace
tremolite	trace
apatite	trace

Plagioclase phenocrysts form broad euhedral to subhedral grains 1 to 2mm in size. Moderate sericite development has occurred in large diffuse patches in most of them. The groundmass plagioclase mostly forms euhedral laths 0.1 to 0.3mm in size but shapeless interstitial grains also occur between these; very fine acicular apatite grains are included in these. The groundmass laths are often "dirty" with incipient sericite. Chlorite forms very fine grains which occur in shapeless interstitial patches up to 0.3mm in size occurring between the groundmass laths and in places forming a partly interconnected around them. Hornblende forms bladed grains which are mostly about 0.3mm in size and intergrown with the groundmass plagioclase laths; there are a few thin bladed phenocrysts up to 1.5mm in size. Opaque minerals (mainly magnetite/hematite) form ragged cubic grains up to 0.1mm in size which are disseminated throughout amongst the groundmass plagioclase. A few aggregates are also present.

Mild epidote alteration is associated with a few thin (less than 0.3mm) veinlets which consist mainly of epidote and calcite but with quartz occurring for short parts of the veinlet. Calcite is dominant and the epidote is embedded within it. Most of the epidote is disseminated throughout the rock amongst and partly within the groundmass plagioclase laths. It forms shapeless or rounded grains up to 0.1mm in size and may occur in small clusters. Rare patches of calcite less than 0.3mm in size are associated with the disseminated epidote. Adjacent to the veinlets there are sometimes clusters of feathery tremolite grains about 0.1mm in length, developing within the plagioclase.

92P 86-13-139: SERPENITINISED DIOPSIDE MARBLE.

This sample consists largely of calcite within which are embedded small diopside grains. These are partly altered to serpentine and have also been partly replaced by carbonate. Also within the calcite are patches of serpentine several millimeters in size which consist of coarse tabular or bladed pseudomorphs after tremolite (??). Minerals are:

calcite	55%
serpentine	25 (after tremolite ?)
diopside	13
serpentine	5 (after diopside)
phlogopite	2

Calcite forms an aggregate of subrounded/subrhombic grains with irregular interlocking margins which are mostly 0.5 to 2.0mm in size. Embedded within this, and often concentrated in clusters several millimeters in size, are rounded to tabular diopside grains 0.2 to 0.8mm in size. Some of these are completely or partly altered to serpentine; others have been partly or completely replaced by very fine calcite. The alteration occurs in patches one or two millimeters in size; much of the diopside is completely unaltered.

There are dark green patches, with diffuse margins, of serpentine throughout the rock. These may be vein-like and several millimeters in size. The serpentine occurs in tabular to bladed pseudomorphs 1 to 2mm in size which could have been tremolite. A closely spaced system of fine veinlets and patches of calcite are present within the pseudomorphs.

Phlogopite forms broad flakes 0.1 to 0.5mm in length which are scattered within the calcite amongst the clusters of diopside. A few of the phlogopite flakes appear to have formed after diopside during the serpentinisation of these.

92P 86-13-319: SERPENTINISED DIOPSIDE MARBLE.

This sample is a massive coarse to medium grained rock consisting largely of calcite. Yellowish spots and patches occur within the mass of carbonate. These are serpentinised diopside grains. Minerals are:

calcite	70%
serpentine	27 (mainly after diopside)
diopside	3
phlogopite	minor
hematite	trace

Calcite forms an aggregate of subrounded/subrhombic grains with irregular interlocking margins. These are mostly 0.5 to 2.5mm in size. Embedded within this are rounded to tabular patches of serpentine which are mostly 0.2 to 0.8mm in size. These have mostly been derived from diopside, relicts of which occur in the serpentine along with a few only slightly altered grains. Distribution of the diopside grains is uneven, with clusters and small aggregates common, although it does occur throughout. Ragged flakes of phlogopite up to 0.2mm in length are commonly associated with the altered diopsides; very fine hematite is sometimes present as well. There are a few patches one or two millimeters in size in which the serpentine occurs in tabular pseudomorphs, perhaps after tremolite (??). Calcite is replacing these.

P92 86-13-372: MARBLE (WITH SERPENTINE/DIOPSIDE).

This sample is a medium grained rock consisting largely of calcite. There is a vague foliation due to concentration of small patches of serpentine, after diopside, in widely spaced, thin diffuse streaks. Fine opaques (perhaps sulphides or Fe-oxides) are also scattered along this indistinct foliation. Yellowish fractures at the edges of the hand specimen are serpentine concentrations. Minerals are:

calcite	98%
serpentine	2
opaques	minor
diopside	trace

Calcite forms an aggregate of subrounded interlocking grains about 0.5mm in size. Scattered within this and concentrated in thin indistinct streaks are clusters of serpentine occurring in rounded to ovoid patches 0.1 to 0.3mm in size. Traces of relict diopside are present in these. Some of the serpentine patches are replaced by calcite and this forms a "dirty" very fine grained carbonate patch within the mass of clear calcite. Ragged, shapeless to cubic opaque grains mostly less than 0.05mm in size are also present throughout the rock between the calcite grains and tend to be concentrated in fine whisps and streaks along the vague foliation.

92P 86-14-26.5: BASALT.

This is a fine grained, slightly inequigranular, massive volcanic rock consisting mainly of plagioclase, chlorite and augite with tremolite disseminated throughout as a result of greenschist metamorphism and alteration through a few thin calcite veins. Pyrite is scattered throughout and is associated with the veining. Minerals are:

plagioclase	36%
chlorite	26
augite	18
tremolite	14
calcite	4 (mainly veinlets)
pyrite	1
Fe-Ti oxides	1
quartz	minor (veinlets)

Plagioclase forms subhedral laths and shapeless grains 0.1 to 0.2mm in size which are intimately intergrown with extremely fine chlorite occurring around and within the plagioclase grains. The plagioclase is "dirty" with incipient sericite/calcite alteration as well as with chlorite. Rare subhedral grains of plagioclase about 0.8mm in size are present and these are also partly replaced by chlorite. Development of tremolite has occurred within the plagioclase and the chlorite throughout the rock. This forms ragged bladed to feathery grains mostly 0.1 to 0.4mm in length, scattered throughout and sometimes occurring in small clusters. Fe-Ti oxides (intimate mixtures of cryptocrystalline hematite and rutile) occur in ragged aggregates up to 0.1mm in size which are disseminated amongst the plagioclase/chlorite/tremolite.

Augite forms tabular to subrounded grains mostly 0.2 to 0.6mm in size which are intergrown with the plagioclase throughout the rock. Rare grains up to 1.2mm in size are present. The augite is altering to very fine tremolite around their edges and along cleavages and fractures. This is sometimes associated with extremely fine calcite and chlorite.

Calcite mostly occurs in a few veinlets up to 1mm wide which occur in a widely spaced, generally subparallel system. They may be discontinuous and usually have rather indistinct margins. The calcite forms elongated, subrhombic grains up to 0.5mm in size along with very much finer shapeless grains. Fine quartz is sometimes present enclosed within the carbonate and some parts of very thin veinlets are dominantly quartz. Highly irregularly shaped patches of very fine calcite have developed within the rock near the veins and throughout the rock, occasionally with quartz. These patches are less than 1mm in size. Cubic opaque grains (pyrite from the hand specimen) up to 0.5mm in size occur in clusters and aggregates within the veins; these are also scattered throughout.

92P 86-14-48: ALTERED VOLCANIC ROCK.

This sample is a thoroughly altered rock of uncertain parentage. Thin to broad veins which are white in colour cut through pale greyish-green material with diffuse patches of reddish material. The white veinlets and veins are tremolite; the greyish-green material is an intimate mixture of feldspars (both plagioclase and K-spar in patches, with veins of K-spar), diopside, epidote; the reddish patches also contain garnet. The mineral assemblage is akin to that in skarns although this has not necessarily been produced directly at an intrusive contact; strong pervasive calcium-carbonate alteration (metasomatism) at fairly high temperatures and pressures in many intermediate/mafic volcanic suites results in such an assemblage; strong carbonate alteration occurs in other samples of this suite. Minerals are:

K-spar	35%
tremolite	23
plagioclase	18
clinopyroxene	14
garnet	8
epidote	6
sericite	4
calcite	minor
sphene	trace
opaque (sulphide?)	trace

The K-spar is an alteration of plagioclase. Veinlets 0.1 to 0.5mm in width are present throughout and consist of shapeless interlocking grains from 0.05 to 0.3mm in size. The veinlets may be discontinuous and margins gradational into the large patches of K-spar (and other minerals). These consist of finer grains than in the veinlets and are gradational into patches where plagioclase has remained. This forms subrounded interlocking grains less than 0.1mm in size. In places the potassium alteration has resulted in the development of broad ragged sericite flakes up to 0.1mm in size rather than K-spar.

Both the patches of K-spar and smaller patches of plagioclase are intimately intergrown with diopside and garnet. These form rounded to shapeless grains less than 0.1mm in size and the intergrowths consist of about equal proportions of feldspar and/or garnet; the garnet/feldspar intergrowths may be graphic-like. Garnet tends to occur within K-spar rather than with plagioclase where fine diopside is dominant. Diopside also forms tabular grains up to 1mm in size which occur in elongated patches two or three millimeters in size (clear "stripes" in the yellow-stained part of the offcut block). Relatively large garnets may be intergrown with these. Small aggregates of sphene are sometimes present amongst the large diopside grains.

(continued)

P92 86-14-48 (cont.)

Tremolite and epidote formed later than garnet and diopside in the mineralizing sequence. The main vein of tremolite is 3 to 8mm in width and consists of a compact mass of shapeless to platy grains 0.05 to 0.3mm in size grading into patches of tabular grains up to 1mm in length. Within this there are dark patches a few millimeters in size which are very turbid and extremely fine grained. This is mainly cryptocrystalline epidote intimately intergrown with the fine tremolite and are apparently relict feldspathic patches which have been incompletely replaced by the tremolite.

The dark epidote/tremolite patches sometimes contain small aggregates of shapeless epidote grains up to 0.5mm in size and these also occur adjacent to the vein. The edge of the main vein is not sharp and there is a thin diffuse zone of cryptocrystalline epidote at the margins. A few fine shapeless opaque grains (probably pyrite) are intimately intergrown with the relatively coarse epidote. Rounded epidote grains less than 0.05mm in size are present in plagioclase patches along with diopside.

In addition to the wide tremolite vein there is a fairly closely spaced network of thin tremolite veinlets up to 0.5mm in width, but mostly less than 0.1mm. These consist of platy to bladed tremolites up to 0.3mm in size. Margins are quite sharp and they cut through the rather cloudy tremolite in the main vein, although they may pass imperceptively into the cloudy tremolite in places. A small amount of fine calcite is intergrown with the tremolite in these veinlets, and fine stringers of calcite alone also occur.

92P 86-14-55: ALTERED, SHEARED MAFIC VOLCANIC ROCK.

This sample is a thoroughly altered rock, probably of mafic volcanic origin but textures and mineralogy have been totally obscured by the coarse patchy alteration. The dominant alteration mineral is epidote which is pervasively replacing an intimate intergrowth of chlorite/sericite (relicts from the original volcanic?). Vein-like patches of clinopyroxene (diopside?) are present and these are also being replaced by epidote. There is a shear system cutting through the rock and coarser epidote, intimately intergrown with sulphides (mainly pyrite), has developed around this. The shears themselves are filled with chlorite with some K-spar and tend to cut through massive patches of epidote. Minerals are:

epidote	40%
sericite	28
chlorite	18
clinopyroxene	9
opaque (pyrite)	5
tremolite	minor
K-spar	minor
apatite	trace

The narrower part of the section (divided at the main shear) consists mainly of an intimate intergrowth of sericite and chlorite with grain size about 0.01mm. The sericite tends to be concentrated in ovoid to tabular patches 0.1 to 0.3 in size (relict plagioclase??) and the chlorite tends to occur in fine, closely spaced, interconnected network around these. Rounded grains of epidote up to 0.1mm in size are scattered within this intergrowth, sometimes coalescing into small aggregates. A few small apatite grains are scattered amongst the chlorite-sericite.

The wider part of the section consists mainly of an intimate intergrowth of epidote and sericite with grain size about 0.05mm. The intergrowth has a fine, crude graphic-like texture and this grades into massive patches of epidote a few millimeters in size. Bladed tremolite grains and chlorite flakes up to 0.2mm in length are scattered within this. The patches of fine epidote or epidote-sericite grade into larger patches near the shear zone in which the epidote occurs in aggregates of tabular to shapeless grains of variable size 0.2 to 1.2mm in size. These are closely intergrown with ragged, irregularly shaped opaque grains (apparently mainly pyrite) ranging in size from 0.1 to 1.0mm. These tend to be concentrated in clusters and aggregates one or two millimeters in size. Tremolite is occasionally intergrown with the epidote and pyrite.

(continued)

92P 86-14-55 (cont.)

Within the a large massive epidote patch in the wide part of the section there is a vein-like patch of clinopyroxene a few millimeters in size (the pale coloured patch on the offcut block). The pyroxene forms rounded to tabular subidiomorphic grains 0.1 to 1.0mm in size. The pyroxene is being replaced by the massive patch of epidote. Small clusters of finer clinopyroxens occur within the sericite-chlorite parts of the section and these are also being replaced by epidote.

The shearing appears to be later than the main epidote alteration, cutting through the coarser epidote grains and massive patches of finer material, although they are related. Shears are 0.1 to 0.5m in width and may be discontinuous. They are dominantly filled with fine streaks of chlorite with elongated patches of K-spar.

92P 86-14-110: ALTERED DIORITE.

This is a medium grained, somewhat inequigranular massive rock consisting largely of plagioclase. It is perhaps a subvolcanic dyke rock. It has been altered by tremolite and epidote in a system of partly interconnected patches and veinlets and this is associated with development of K-spar in the plagioclase. Minerals are:

plagioclase	70%
tremolite	18
K-spar	7
epidote	5
calcite	minor
sphene	minor
apatite	trace
opaque (sulphide ?)	trace

Plagioclase forms an aggregate of broad subhedral grains mostly 0.5 to 2.0mm in size which have irregular interlocking margins. Small apatite grains are included in them, often occurring in clusters of two or three. A small amount of hornblende may have been intergrown with the plagioclase but has all been replaced by tremolite (and minor calcite). The hornblende(?) forms bladed grains about 1mm in size. These now consist of an aggregate of fine ragged pale to dark green tremolite grains intimately intergrown with a small amount of very fine calcite.

Most of the tremolite is colourless and forms broad platy grains mostly 0.2 to 1.0mm in size, which are sometimes partly skeletal, and which occur in a partly interconnected patchwork of a few grains replacing the plagioclase. Fine bladed to acicular grains occur in small clusters within the plagioclase and these may coalesce into small patches between and within the plagioclase. The finer platy grains occur also occur in a system of veinlets (which may connect the patches) where they are closely associated with epidote. This forms shapeless to tabular grains of variable size from 0.1 to 0.5mm. The larger ones occur tend to be concentrated in a system of widely spaced, parallel vein-like patches one or two millimeters in length. The small ones are closely intergrown with finer tremolite in thin veinlets and are also scattered within the plagioclase grains. A small amount of fine calcite also occurs in the veinlets.

The introduction of tremolite and epidote is associated with the development of fine (less than 0.1mm) K-spar which has replaced the plagioclase in diffuse patches, often in a zone around the epidote and tremolite, particularly where these are intimately intergrown.

Clusters of small sphene grains are also present around epidote-tremolite intergrowths. Rare opaque grains less than 0.2mm in size are intimately intergrown with coarser epidote.

92P 86-14-157: MAFIC METAVOLCANIC ROCK (AMPHIBOLITE).

This is a medium to fine grained meta-volcanic (regional, thermal ?) rock consisting largely of hornblende with lesser plagioclase. There is a poorly developed foliation due to concentration of the plagioclase in a system of elongated patches (with diffuse or gradational margins) one or two millimeters in length. Fine veinlets of calcite-tremolite-epidote-K-spar occur along the foliation and have resulted in the development of chlorite from biotite(?) which also occurred in small aggregates. Minerals are:

hornblende	60%
plagioclase	30
chlorite	9 (after biotite)
opaque (pyrite)	1
apatite	trace
tremolite	trace
K-spar	trace
calcite	trace
epidote	trace

Hornblende forms rounded to squat idiomorphic grains mostly 0.1 to 0.3mm in size which are intergrown with similarly sized, subrounded interlocking plagioclase grains. The plagioclase tends to be concentrated in ovoid patches amongst larger patches of hornblende alone, resulting in a crude patchwork texture, although there is a gradation into patches of one or the other with fine hornblende scattered between plagioclase grains and fine plagioclase scattered between hornblende grains. Small chlorite flakes are also scattered between plagioclase in some parts. Most of the chlorite is concentrated in ovoid aggregates about 1.5mm in size occurring amongst the hornblende. Flakes are about 0.2mm in size. Small apatite grains are intergrown with the hornblende and plagioclase.

There are a few very thin veinlets along the weak foliation which consist of extremely fine calcite and tremolite. The tremolite often occurs within the chloritic aggregates. There is a thin diffuse zone of cryptocrystalline epidote at the edge of the veinlets and fine grains sometimes occur in the chlorite. A small amount of K-spar occurs in these veinlets but most is present in veinlets which cut across the foliation. The plagioclase is sometimes cloudy with incipient K-spar and sericite.

092 86-14-206: MAFIC METAVOLCANIC ROCK (AMPHIBOLITE) WITH SULPHIDES.

This is a medium to fine grained, somewhat inequigranular rock consisting mainly of an intergrowth of hornblende and plagioclase. It is rather massive although there is a vague foliation due to concentration of hornblende (and biotite) in diffuse elongated patches. Mild alteration with calcite along veinlets is probably associated with development of sulphides (mainly pyrrhotite and pyrite. Minerals are:

hornblende	48%
plagioclase	40
biotite	8 (moderate alteration to chlorite)
pyrite	2
pyrrhotite	1
calcite	1 (mainly veinlet)
quartz	minor
apatite	trace
ilmenite	trace
K-spar/sericite	trace

Hornblende forms squat idiomorphic grains 0.05 to 0.2mm in size along with bladed grains up to 1mm in size. These occur in a granular intergrowth with subrounded plagioclase grains 0.1 to 0.3mm in size. The larger amphibole grains tend to be concentrated in indistinct patches a few millimeters in size and the smaller ones also grade into small concentrations. Biotite forms flakes 0.1 to 0.2mm in length which occur scattered between the plagioclase grains and are concentrated in elongated or ovoid patches one or two millimeters in size amongst the hornblende or surrounding small clusters of it. Both the biotite and hornblende concentrations are elongated along a rather indistinct foliation. Primary accessory minerals are apatite and ilmenite (perhaps pyrrhotite also ??). The apatite forms tabular/rounded grains up to 0.2mm in size which are intergrown with the plagioclase; the ilmenite forms tabular grains less than 0.1mm in size occurring in small clusters amongst the hornblende.

Calcite forms ragged, elongated subrhombic grains up to 0.3mm in size and very much finer shapeless grains occurring in a veinlet about 0.5mm in width. Contacts are rather diffuse and small patches have developed in the plagioclase close to the veinlet and throughout the rock. This is associated with development of incipient K-spar and sericite in some plagioclase and there is also a very fine stringer of K-spar cutting through the section. A small amount of fine quartz is intergrown with the calcite and aggregates and clusters of two or three grains about 0.2mm in size have developed in the rock amongst the plagioclase. The alteration has resulted in moderate development of chlorite from the biotite.

Sulphides are disseminated throughout between the plagioclase and hornblende, sometimes being concentrated in clusters, vaguely elongated along the vein directions. Pyrite is dominant and forms subcubic grains 0.05 to 0.2mm in size, coalescing into somewhat skeletal aggregates. Pyrrhotite forms shapeless grains 0.1 to 0.5mm in size. Small clusters and aggregates tend to be associated with biotite. Fine chalcopyrite grains are scattered amongst the clusters of pyrite and pyrrhotite.

DRILL HOLE RECORD COVER SHEET

Bechtel

Preliminary log

Project: Condol Developments Ltd.

Claim: Plain

Area: Sechelt Peninsula, B.C.

Contractor: Herb Allen, Merit, B.C.

Hole No. 92P-855

Latitude _____

Departure _____

Elevation 2746 ft 834 m

Bearing 15° uncorrected magnetic

	Type	Size
Hole	<u>Core</u>	<u>NA</u>
	Started	Completed
Date	_____	_____

Inclination

At Collar 45°

At _____

At _____

At _____

At _____

Logged by: C. Neil Urchurch & Rudy Riepe
relogged Mar 6, 1986

Total length 317 ft 96.62 m

COMMENTS

APPENDIX "D"

1985 DIAMOND DRILL LOGS

with Assay Results and Legend

(Drill Holes 85-5, 85-6, 85-7)

DRILL HOLE RECORD

PROJECT Candal

DRILL HOLE NO 5

SCALE in feet

PAGE NO. 2 OF 5

LENGTH	ASSAYS				SAMPLE NUMBERS											STRUCT.	ROCK
	CaO	MgO	SiO ₂														
	28.5	22.0	1.60		69356												
	29.5	22.0	2.20		69357												
	36.5	16.0	3.80		69358												
	48.4	5.10	4.80		69359												
	47.7	6.30	3.10		69360												
	32.7	19.60	1.80		69361												
	32.7	18.20	4.70		69362												

D
D
C
?
D

Assays show decreased MgO (6%).

DRILL HOLE RECORD

PROJECT *Candol*

DRILL HOLE NO *5*

SCALE *in feet*

PAGE NO. *4* OF *5*

LENGTH	ASSAYS				SAMPLE NUMBERS														STRUCT. ROCK
	CaO	MgO	SiO ₂																
	33.7	20.6	1.80		69371	230													
	35.6	19.6	1.70		69372	240													
	34.5	17.0	3.40		69373	250													
						260													
				No Assays															
						270													
						280													
						290													

Felsic intrusive, medium grained
"Dyke"
Felsic intrusive, medium grained

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Geochemical
 Lab Report

REPORT: 125-0351

92 P 85-5

PROJECT: SIMP

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Cu PPM	Pb PPM	Al2O3 PCT	CaO PCT	Fe2O3A PCT	LOI PCT	MnO PCT	MnO PCT	SiO2 PCT	TiO2 PCT	NOTES
D 69348	0'-10'	<2	60	0.50	31.00	0.20	44.70	19.50	0.03	1.70	0.02	
D 69349	10'-20'	10	80	0.60	30.50	0.30	45.00	20.00	0.02	1.50	0.02	
D 69350	20'-30'	10	30	0.50	31.00	0.20	45.10	20.50	0.03	1.30	0.02	
D 69351	30'-40'	10	40	0.60	31.00	0.20	44.60	20.50	0.03	1.70	0.02	
D 69352	40'-50'	<2	<5	0.60	33.50	0.20	42.90	18.50	0.03	3.50	0.02	
D 69353	50'-60'	10	30	0.60	29.50	0.20	44.40	20.00	0.02	1.90	0.02	
D 69354	60'-70'	4	10	0.70	28.50	0.20	40.70	20.00	0.03	5.00	0.03	
D 69355	70'-80'	10	10	0.60	28.50	0.20	43.00	21.00	0.03	5.00	0.02	
D 69356	80'-90'	7	<5	0.40	28.50	0.20	45.70	22.00	0.05	1.60	0.02	
D 69357	90'-100'	<2	<5	0.50	29.50	0.20	45.00	22.00	0.05	2.20	0.02	
D 69358	100'-110'	9	<5	0.50	36.50	0.20	42.70	16.00	0.03	3.80	0.02	

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Geochemical
 Lab Report

REPORT: 125-0378

92-P-85-5

PROJECT: SIMP

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Al2O3 PCT	CaO PCT	LOI PCT	Fe2O3* PCT	MgO PCT	MnO PCT	SiO2 PCT	TiO2 PCT	Cu PPM	Pb PPM	NOTES
D 69359	110' - 120'	0.90	48.40	40.85	0.30	5.10	0.03	4.80	<0.05	15	30	
D 69360	120' - 130'	0.70	47.70	41.95	0.25	6.30	0.02	3.10	<0.05	20	5	
D 69361	130' - 140'	0.60	32.70	44.45	0.30	19.60	0.06	1.80	<0.05	10	20	
D 69362	140' - 150'	0.90	32.70	42.40	0.45	18.20	0.08	4.70	<0.05	15	30	
D 69363	150' - 160'	0.40	37.50	44.30	0.35	16.00	0.05	1.50	<0.05	4	<5	
D 69364	160' - 170'	0.40	32.80	43.95	0.20	19.50	0.04	2.60	<0.05	6	<5	
D 69365	170' - 180'	0.70	32.10	43.10	0.30	18.20	0.04	3.00	<0.05	20	10	
D 69366	180' - 190'	0.70	32.10	43.60	0.35	18.30	0.05	2.60	<0.05	20	10	
D 69367	190' - 200'	0.40	31.10	44.40	0.25	20.00	0.04	3.40	<0.05	15	<5	
D 69368	200' - 210'	0.40	33.20	44.15	0.30	12.10	0.04	2.90	<0.05	7	5	
D 69369	210' - 220'	0.20	31.70	45.45	0.10	20.60	0.03	1.40	<0.05	20	<5	
D 69370	220' - 230'	0.20	31.70	44.85	0.35	20.60	0.04	1.20	<0.05	20	<5	
D 69371	230' - 240'	0.40	33.70	44.70	0.30	20.60	0.04	1.80	<0.05	20	10	
D 69372	240' - 250'	0.60	35.60	43.00	0.35	19.60	0.05	1.70	<0.05	10	10	
D 69373	250' - 260'	0.80	34.50	44.60	0.35	17.00	0.03	3.40	<0.05	20	<5	

DRILL HOLE RECORD COVER SHEET

Bechtel

Preliminary log

Project: Candol Developments Ltd.

Claim: Plain

Area: Sechart Peninsula, B.C.

Contractor: Herb Allen, Merit, B.C.

Hole No. 2P85-6

Latitude _____

Departure _____

Elevation 2746 ft 837m

Bearing 275° uncorrected magnetic

	Type	Size	Inclination	
Hole	<u>Core</u>	<u>NQ</u>	At Collar	<u>45°</u>
			At _____	_____
	Started	Completed	At _____	_____
Date	_____	_____	At _____	_____
			At _____	_____

Logged by: C. Neil Upchurch & Rudy Rieja Total length 385 ft 117.35m
relogged Mar 6, 1986

COMMENTS

DRILL HOLE RECORD

PROJECT Candel

DRILL HOLE NO 6

SCALE in feet

PAGE NO. 1 OF 6

LENGTH	ASSAYS				SAMPLE NUMBERS	STRUCT.	ROCK
	CaO	MgO	SiO ₂				
							0-12 "overburden"
			No Assays				
	33.0	20.5	0.80		69374		
	38.0	17.0	2.20		69375		
	32.1	18.5	2.30		69376		
	35.5	14.0	1.50		69377		
	33.0	20.0	1.10		69378		
	30.5	20.6	0.90		69379		
	33.4	20.7	1.20		69380		

12-289 Mostly Dolomite with some silicate rock intercepts as indicated. Distinct banding is not apparent in core from this hole.

DRILL HOLE RECORD

PROJECT Candel

DRILL HOLE NO 6

SCALE in feet

PAGE NO. 2 OF 6

LENGTH	ASSAYS			SOME NUMBERS	CORRECTIONS	TEMPERATURE	PRESSURE	WATER	GAS	GRAVITY	SOUND	E.P.	STRUCT.	ROCK
	CaO	MgO	SiO ₂											
	32.1	20.7	0.60	69381										
	34.0	19.3	1.40	69382										
	34.5	17.5	2.10	69383										
	32.8	18.9	1.30	69384										
	32.1	20.0	1.10	69385										
	32.1	18.7	1.60	69386										
	31.1	20.0	1.00	69387										

SOME NUMBERS

No Carbonate rock assays

30

"dyke" - dark green, orthomitic, siliceous

D

D

DRILL HOLE RECORD

PROJECT Candol

DRILL HOLE NO 6

SCALE in feet PAGE NO. 4 OF 6

LENGTH	ASSAYS			SAMPLE NUMBERS														STRUCT. ROCK
	CaO	MgO	SiO ₂															
	31.3	21.1	0.50	69396	230													D
	31.0	21.0	0.65	69397	240													D
	30.7	21.5	0.55	69398	250													D
	31.3	21.1	0.40	69399	260													D
	30.6	21.5	1.15	69400	270													D
	31.4	20.8	2.50	69401	280													D
	44.0	5.00	9.80	69402	290													C & D

Mixed Calcite and dolomite, with calcite increasing down the hole.

DRILL HOLE RECORD

PROJECT Candol

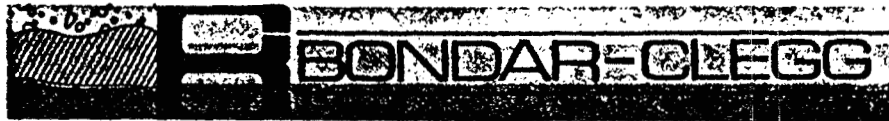
DRILL HOLE NO 6

SCALE in feet

PAGE NO. 5 OF 6

LENGTH	ASSAYS			Sample Numbers									STRUCT. ROCK
	Cu	Mn	Pb										
	49.8	4.80	3.90	69403									
	37.3	14.50	5.60	69404	30								
	31.7	11.50	6.80	69405	320								Carbonate with serpentine
	42.9	8.30	11.0	69406	330								Brucite
	48.5	3.50	7.15	69407	340								Impure carbonates
	47.5	2.50	8.70	69408	350								
358				No Assays	360								
					370								Felsic intrusive - medium grained, porphyritic. believed to be the edge of large body.

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Geochemical
 Lab Report

REPORT: 125-0378

92P85-6

PROJECT: SIMP

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Al2O3 PCT	CaO PCT	LOI PCT	Fe2O3A PCT	MgO PCT	MnO PCT	SiO2 PCT	TiO2 PCT	Cu PPM	Pb PPM	NOTES
D 69374	10' - 20'	0.60	32.00	43.85	0.35	20.50	0.05	0.80	<0.05	5	15	
D 69375	20' - 30'	1.10	38.00	43.75	0.40	17.00	0.03	2.20	<0.05	25	5	
D 69376	30' - 40'	1.10	32.10	45.00	0.35	18.50	0.03	2.30	<0.05	6	5	
D 69377	40' - 50'	0.50	35.50	45.50	0.20	19.00	0.03	1.50	<0.05	4	<5	
D 69378	50' - 60'	0.50	33.00	45.65	0.20	20.00	0.02	1.10	<0.05	10	5	
D 69379	60' - 70'	0.60	30.50	45.45	0.25	20.60	0.04	0.90	<0.05	20	<5	
D 69380	70' - 80'	0.60	33.40	46.10	0.20	20.70	0.02	1.20	<0.05	8	<5	
D 69381	80' - 90'	0.40	32.10	44.65	0.15	20.70	0.02	0.60	<0.05	10	10	
D 69382	90' - 100'	0.90	34.00	44.55	0.35	19.30	0.03	1.40	<0.05	15	10	
D 69383	102' - 110'	0.70	34.50	45.05	0.25	17.50	0.05	2.10	<0.05	15	5	
D 69384	110' - 120'	0.70	32.80	45.35	0.25	18.90	0.03	1.30	<0.05	10	5	
D 69385	120' - 130'	0.70	32.10	45.25	0.30	20.00	0.04	1.10	<0.05	20	<5	
D 69386	130' - 140'	0.90	32.10	44.80	0.35	18.70	0.04	1.60	<0.05	15	5	
D 69387	140' - 150'	0.70	31.10	45.30	0.25	20.00	0.03	1.00	<0.05	15	10	
D 69388	150' - 160'	0.50	32.10	45.60	0.25	20.30	0.03	0.90	<0.05	<1	5	
D 69389	160' - 170'	0.60	32.10	45.40	0.25	20.00	0.03	1.00	<0.05	5	10	
D 69390	170' - 180'	0.50	31.70	45.70	0.25	20.00	0.04	0.70	<0.05	9	5	

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Geochemical
 Lab Report

REPORT: 125-0398

92P 85-6

PROJECT: SIMP

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Al2O3 PCT	CaO PCT	LOI PCT	Fe2O3 PCT	MgO PCT	SiO2 PCT	TiO2 PCT	Cu PPM	Pb PPM	NOTES
D 69391	180' - 190'	0.65	31.10	45.75	0.25	20.80	0.85	0.02	8	15	
D 69392	190' - 200'	0.65	32.50	45.45	0.20	20.00	1.10	0.02	7	15	
D 69393	203' - 210'	0.65	31.70	45.50	0.20	20.00	0.90	0.02	9	<5	
D 69394	210' - 220'	0.60	31.70	45.60	0.15	20.00	0.95	0.02	8	<5	
D 69395	220' - 230'	0.45	32.50	45.90	0.20	20.00	0.65	0.02	10	<5	
D 69396	230' - 240'	0.40	31.30	46.10	0.15	21.10	0.50	0.01	9	<5	
D 69397	240' - 250'	0.50	31.00	46.00	0.20	21.00	0.65	0.02	9	25	
D 69398	250' - 260'	0.45	30.70	45.90	0.20	21.50	0.55	0.02	9	<5	
D 69399	260' - 270'	0.35	31.30	46.25	0.20	21.10	0.40	0.01	7	15	
D 69400	270' - 280'	0.50	30.60	45.65	0.20	21.50	1.15	0.02	7	15	
D 69401	290' - 290'	0.30	31.40	44.65	0.15	20.80	2.50	0.01	7	<5	
D 69402	290' - 300'	1.20	44.00	38.90	0.30	5.00	9.80	0.04	9	<5	
D 69403	300' - 310'	1.20	49.80	40.75	0.30	4.00	3.90	0.04	9	<5	
D 69404	310' - 320'	0.60	37.30	41.05	0.35	14.50	5.60	0.03	10	25	
D 69405	320' - 330'	2.70	31.70	34.80	1.30	11.50	16.80	0.14	20	20	
D 69406	330' - 340'	0.80	42.90	36.60	0.45	8.30	11.00	0.04	7	<5	
D 69407	340' - 350'	2.25	48.50	37.80	0.75	3.50	7.15	0.08	20	15	
D 69408	350' - 360'	2.15	47.50	38.25	0.45	2.50	8.70	0.06	25	25	

DRILL HOLE RECORD COVER SHEET

Bechtel

Preliminary log

Project: Candol Developments Ltd.

Claim: Plain

Area: Sechart Peninsula, B.C.

Contractor: Herb Allen, Merit, B.C.

Hole No. 92P85-7

Latitude _____

Departure _____

Elevation 2743 ft 836 m

Bearing 200° uncorrected magnetic

	Type	Size
Hole	<u>Core</u>	<u>NA</u>
	Started	Completed
Date	_____	_____

Inclination

At Collar 45°

At _____

At _____

At _____

At _____

Logged by: C. Neil Urchurch & Rudy Riepe
relogged Mar 6, 1986

Total length 418 ft 127.4m

COMMENTS

DRILL HOLE RECORD

PROJECT Candel

DRILL HOLE NO 7

SCALE in feet

PAGE NO. 3 OF 6

LENGTH	ASSAYS			SAMPLE NUMBERS								STRUCT. ROCK
	CaO	MgO	SiO ₂									
	53.0	2.30	2.80	69414								C
	54.0	3.40	1.80	69415	160							C
	50.0	2.80	5.80	69416	170							C
												} No carbonate rock assays } "Dyke" - green, siliceous rock
	53.0	2.40	4.00	69417	180							C
												} No carbonate rock assays } "Dyke" - green, siliceous rock } "Dyke" - green, siliceous rock
					190							C
												} No carbonate rock assays } Zone of heavy pyrite in calcite
	54.0	1.00	0.20	69418	200							C
												C
	54.5	1.80	3.70	69419	210							C
												C
	54.0	2.00	2.40	69420	220							C

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Geochemical
Lab Report

REPORT: 125-0398

92 P 85-7

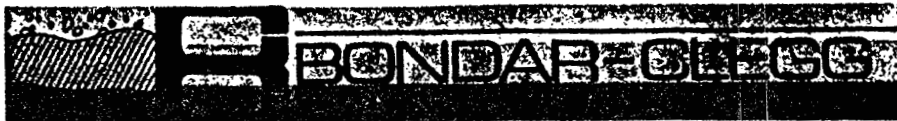
PROJECT: SIMP

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Al2O3 PCT	CaO PCT	LOI PCT	Fe2O3* PCT	MgO PCT	SiO2 PCT	TiO2 PCT	Cu PPM	Pb PPM	NOTES
D 69409	20' - 30'	0.25	32.30	46.25	0.20	20.40	0.50	0.04	10	20	
D 69410	30' - 40'	0.20	32.00	46.20	0.20	21.00	0.40	0.01	8	15	
D 69411	40' - 50'	0.50	32.50	45.35	0.30	20.00	0.95	0.02	7	20	
D 69412	50' - 58'	1.05	34.80	43.95	0.40	17.30	2.00	0.04	6	15	



REPORT: 125-0418		92P85-7										PROJECT: SIMP	PAGE 1
SAMPLE NUMBER	ELEMENT UNITS	Al2O3 PCT	CaO PCT	LOI PCT	Fe2O3 PCT	MgO PCT	MnO PCT	SiO2 PCT	TiO2 PCT	Cu PPM	Pb PPM	NOTES	
D 69413	146' - 150'	0.60	50.00	41.30	0.65	4.50	0.04	3.60	<0.05	4	5		
D 69414	150' - 160'	0.60	53.00	41.70	0.40	2.30	0.03	2.80	<0.05	3	5		
D 69415	160' - 170'	0.20	54.00	42.60	0.25	3.40	0.02	1.80	<0.05	2	5		
D 69416	170' - 180'	1.70	50.00	39.00	1.10	2.80	0.05	5.80	0.05	4	5		
D 69417	180' - 200'	0.60	53.00	40.80	0.65	2.40	0.04	4.00	<0.05	5	5	- Excluding (81-182' 183'-189' 198-199')	
D 69418	200' - 210'	0.70	54.00	41.00	0.65	1.00	0.04	0.20	<0.05	6	5		
D 69419	210' - 220'	0.70	54.50	39.80	1.25	1.80	0.05	3.70	<0.05	6	5		
D 69420	220' - 230'	0.70	54.00	41.10	0.70	2.00	0.09	2.40	<0.05	6	10		
D 69421	230' - 240'	0.40	54.00	42.50	0.30	0.60	0.04	1.40	<0.05	7	10		
D 69422	240' - 250'	0.70	56.00	42.00	0.35	0.70	0.03	2.20	<0.05	4	5		
D 69423	250' - 260'	0.70	56.00	42.00	0.25	0.65	0.02	1.40	<0.05	7	5		
D 69424	260' - 270'	0.80	55.50	41.40	0.70	1.35	0.04	2.10	<0.05	7	5	- Excluding (260'-264')	
D 69425	270' - 280'	0.60	54.00	41.20	0.55	2.00	0.02	2.40	<0.05	5	5		
D 69426	280' - 285'	0.80	45.50	36.90	0.45	4.10	0.04	10.40	<0.05	7	5		



REPORT: 125-0444

52P85-7

PROJECT: SIMP

PAGE 1

SAMPLE NUMBER	ELEMENT UNITS	Al2O3 PCT	CaO PCT	LOI PCT	Fe2O3A PCT	MgO PCT	MnO PCT	SiO2 PCT	TiO2 PCT	Cu PPM	Pb PPM	NOTES
D 69427	307' - 320'	4.10	10.80	8.65	3.15	4.50	0.07	42.00	0.35	26	15	
D 69428	320' - 326'	6.00	5.75	3.85	3.50	3.70	0.08	50.00	0.55	25	10	
D 69429	371' - 381'	1.20	53.00	40.80	0.60	0.50	0.05	5.30	0.05	11	10	

APPENDIX "E"

STATEMENT OF EXPENDITURES

CERTIFICATE OF EXPENDITURES

Drill Road and Drill Site Construction		\$ 9,871
Diamond Drilling		56,360
Vehicle Rentals		1,856
Core Splitting		4,364
Expediting and Site Supervision		11,446
Consulting Geologists	- Fraser	8,750
	- Bechtel	18,205
	- Ditson	12,673
Assaying		1,987
Petrologic Analysis		905
Survey		<u>2,000</u>
TOTAL		<u><u>\$ 124,053</u></u>

APPENDIX "F"

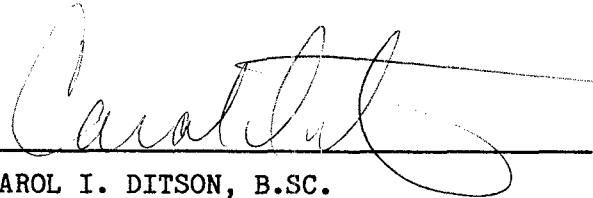
CERTIFICATES

CERTIFICATE

CAROL I. DITSON, B.SC.

I, Carol Isobel Ditson, of #202 - 1910 West Sixth Avenue, Vancouver, British Columbia, do hereby certify that:

1. I hold a B.Sc. Degree in Geology from the University of British Columbia (1985).
2. I have been involved in mineral exploration in British Columbia since 1979.
3. I have no direct or indirect interest in the property or securities of either Ingot Exploration Ltd. or Candol Developments Ltd., nor do I expect to receive any.
4. I have based this report on work performed on the subject property in September, 1985 and between December 8, 1986 and January 24, 1987 in addition to a review of privately and publicly held data.
5. I consent to the use of this report by Ingot Exploration Ltd. for whatever purposes they deem necessary.



CAROL I. DITSON, B.SC.

March 23, 1987

APPENDIX "G"

CONVERSION FACTORS

January 26, 1987

CANDOL DEVELOPMENTS LTD.

CONVERSION FACTORS

CaCO_3 to CaO (x by 0.5603)

CaCO_3 to Ca (x by 0.4004)

MgCO_3 to MgO (x by 0.47807)

MgCO_3 to Mg (x by 0.2883)

39% MgCO_3 = 18.6

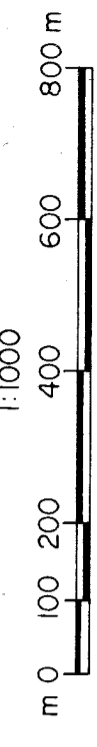
40% MgCO_3 = 19.1% MgO

41 MgCO_3 = 19.6

As provided by:

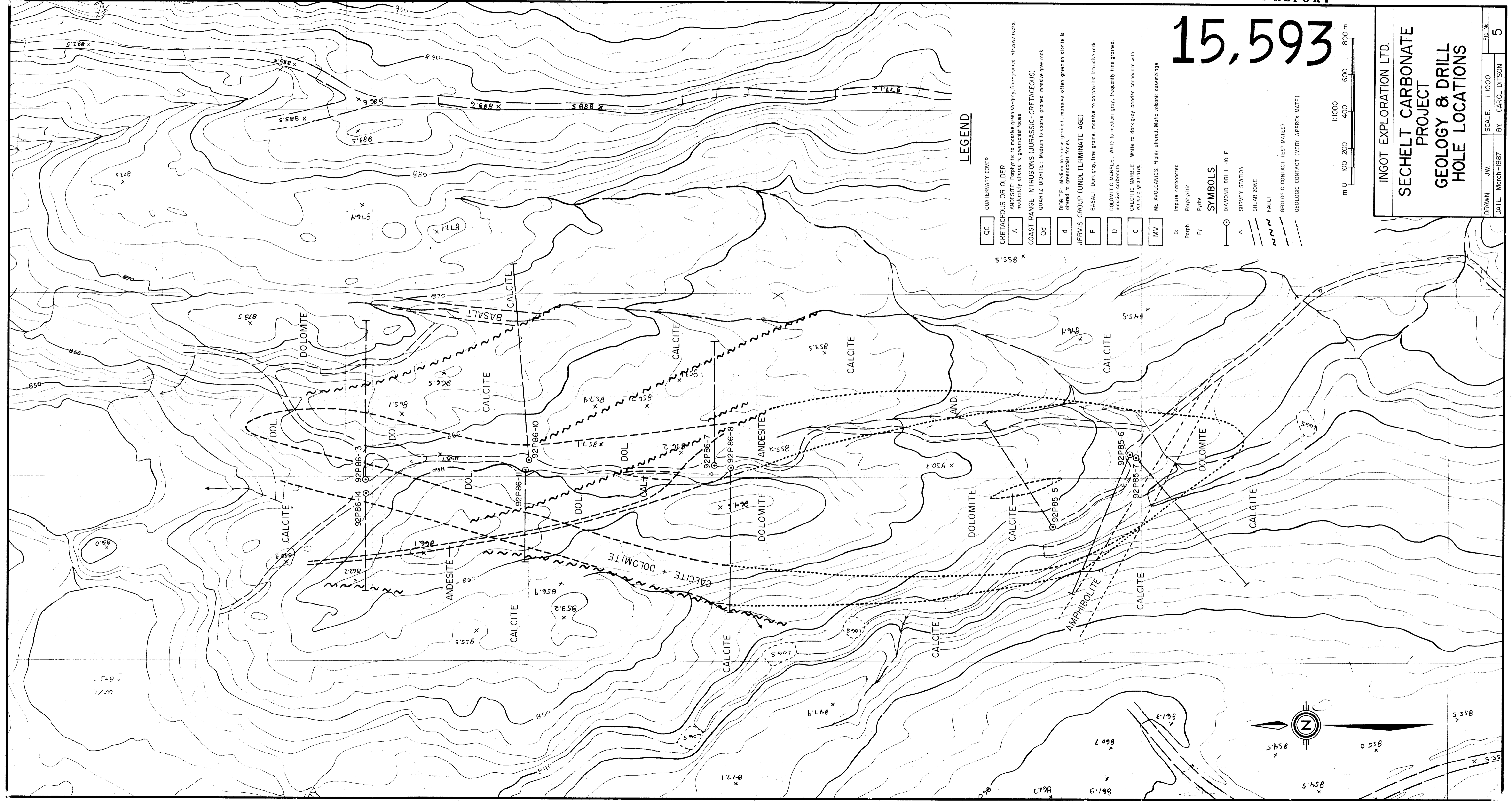
A. Basham
Manager
Bondar-Clegg & Co. Ltd.
Analytical Chemists
Vancouver, B.C.

15,593



INGOT EXPLORATION LTD.
SECHELT CARBONATE PROJECT
GEOLOGY & DRILL HOLE LOCATIONS

DRAWN: J.W.	SCALE: 1:1000	FIG. No.
DATE: March-1987	BY: CAROL DITSON	5



LEGEND

- QC QUATERNARY COVER
 - CRETACEOUS OR OLDER
 - A ANDESITE: Porphyritic to massive greenish-gray, fine-grained intrusive rocks, moderately altered to greenschist facies
 - COAST RANGE INTRUSIONS (JURASSIC-CRETACEOUS)
 - Qd QUARTZ DIORITE: Medium to coarse grained massive grey rock
 - d DIORITE: Medium to coarse grained, massive often greenish diorite is altered to greenschist facies
 - JERVIS GROUP (UNDETERMINATE AGE)
 - B BASALT: Dark gray, fine grained, massive to porphyritic intrusive rock.
 - D DOLOMITIC MARBLE: White to medium gray, frequently fine grained, massive carbonate.
 - C CALCITIC MARBLE: White to dark gray banded carbonate with variable grain size.
 - MV METAVOLCANICS: Highly altered. Matrix volcanic assemblage
 - Ic Impure carbonates
 - Porph Porphyritic
 - Py Pyrite
- SYMBOLS**
- DIAMOND DRILL HOLE
 - △ SURVEY STATION
 - /// SHEAR ZONE
 - ~ FAULT
 - - - GEOLOGIC CONTACT (ESTIMATED)
 - - - GEOLOGIC CONTACT (VERY APPROXIMATE)

