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# WHO FOUND CINOLA?

WE WRITE AS SOLICITORS TO EFREM Specogna regarding your feature, "Debating the Discoveries," in the July, 1988, issue. Specogna, along with Giovanni Trinco, did the initial prospecting and, in 1970, made the Cinola discovery referred to in the article.

The article in question consisted of a debate between Fenton Scott and Donald Cranstone as to whether junior or senior mining companies are better prospectors. Part of the debate focused on examination of specific cases, and arguments were presented as to whether a junior or senior company had made the discovery in question. We suggest that the implication of Cranstone's analysis of the Cinola discovery is misleading, insofar as it states that no discovery had occurred as of 1972. Objective evaluators of the situation seem in agreement that Specogna and Trinco made the discovery in 1970. For example, it has

been stated (Champigny, Sinclair, Anders, "Specogna Gold Deposit of Consolidated Cinola Mines an Example of Structured Property Exploration," June, 1980, *Western Miner*, p. 35) that: "Specogna Gold deposit of Consolidated Cinola Mines Ltd. has generated widespread interest since shortly after its discovery in 1970 . . ."

Further, an advertisement placed in the May/June, 1977, issue of *Northwest Prospector* by Consolidated Cinola Mines states:

"Discovered only seven years ago by well-known B.C. independent prospector Efrem Specogna, the Cinola claims are one of the Western world's recent significant gold finds and have been determined the geologically youngest gold deposits of their kind in North America."

Concluding, the Cinola discovery was in fact made by Specogna and Trinco; the feature "Debating the Discoveries" presents an inaccurate and

misleading discussion of the discovery and development of this gold deposit.

Richard P. Clark,  
Bull, Housser & Tupper,  
Barristers and Solicitors.

## Saskatchewan Uranium

I GREATLY ENJOYED THE FEATURE articles dealing with uranium mining in Saskatchewan in the June, 1989, issue. Having worked as a mining engineering technologist with Amok Ltd.'s Cluff Lake project, I found your articles dealt with the technical aspects of mining uranium in the Carswell Dome region of Saskatchewan very clearly.

I would like to add to comments made by Dick Williams, uranium adviser at Energy, Mines and Resources Canada. He noted that "no company has attempted to exploit a high-grade deposit like Cigar Lake by underground methods."

The mining of uranium at Cluff Lake is done not only on surface, but also on an extensive basis underground. The grades of uranium encountered underground at Cluff Lake were certainly "high" when I was there and the ground conditions were extremely difficult.

Several methods of mining the orebody were employed. In the region of the orebody known as Peter River, a cut-and-fill method was used. As the mine progressed onwards and deeper to other orebodies, such as the Dominique-Peter, undercut-and-fill became the method of choice. Because the ground was highly altered with fractures associated with the presence of graphites, water and clay, cavities in such areas would collapse if they were left unsupported. That was the reason undercut-and-fill was employed.

Because of the relatively narrow widths of the orebodies (ore drifts were fewer than 2 m wide), equipment used in such areas had to conform to the reduced size of openings. Loading equipment in drifts consisted of electrically powered load-haul-dump machines, such as the Tele-

## Answer: Specogna and Trinco

WITH REFERENCE TO THE LETTER written in defence of Mr Specogna's claim to discovery of the Cinola deposit, there is no question that Mr Specogna and Mr Trinco found, or discovered, the surface exposure of the Specogna (Cinola) gold deposit, that they staked it in 1971, and that the property was then optioned by several companies in succession.

The confusion arises from taking my statement, "No discovery had occurred at this point," out of context. The context was my original paper in the January, 1988, issue: "a discovery is defined as a mineral deposit attractive enough to have warranted the expenditure necessary to establish its tonnage and grade . . . credit for the discovery of the deposit is given to the company whose work eventually led to the establishment of its tonnage and grade — rather than to the company doing the initial drilling, which walked away from the site, failing to recognize the full significance of its own exploration results."

Admittedly, this is a limited defini-

tion, but it was necessary for the purposes of the study to have a definition that was workable and reasonably consistent.

The history of a property from the initial observation of a surface showing by a prospector to establishment that a deposit exists is sometimes so long and complex that the original observation is not a useful criterion.

In my original paper, as submitted for publication, I included acknowledgement of those properties that were optioned from a prospector. Unfortunately, during a change of editors of *The Northern Miner Magazine*, this was inadvertently omitted from the published paper.

Having been a prospector myself, I have no wish to denigrate the vital role that prospectors can play in the discovery of ore deposits.

If Mr Specogna or Mr Trinco has been inconvenienced by the misunderstanding, I regret it.

Donald Cranstone,  
Dept. of Energy,  
Mines and Resources Canada

# Haida threaten to halt Cinola project

Presented with a choice between saving a salmon spawning ground or allowing the operation of a foreign-owned open pit gold mine, the Haida people of British Columbia's Queen Charlotte Islands have decided there will be no gold mining in the Yakoun watershed.

City Resources (Canada) Ltd, which owns the Cinola Gold Project on Graham Island, reports mineable reserves of 23.8 million tonnes averaging 0.072 oz/ton gold and claims recoveries should average 92 per cent. At an annual production rate of 2.1 million tonnes per year, City expects to recover 1.7 million ounces of gold.

City has spent about \$30 million developing the mine, and Australia's Barrick Mines Ltd, which recently acquired

City, plans to spend \$2 million more. In addition City has said it will post a bond of up to \$20 million as insurance against environmental damage.

But Frank Collison, vice president of the Council of the Haida Nation, says the project poses a serious risk to the environment. Among the Haida's concerns is the toxic effect sulphuric acid, a by-product of the road building and mining process, will have on the Yakoun watershed. The project's mineralization contains acid generating sulphur as well as arsenic and mercury.

City, however, has proposed a "state of the art" environmental plan which includes treating rock with limestone to neutralize acid production.

Haida Nation president Miles Richardson recently told 300 Haida and their sup-

porters, "The gold mine will not proceed. We know we will do whatever is necessary."

And Gerald Johnson, mayor of nearby Port Clements, says, "If the mine goes ahead without all environmental safeguards, I think you'll see Lyell Island-style blockades by the Haida."

Project manager Peter Cowdery says City "can control the environmental problems." And Keith Ferguson of Environment Canada agrees. "We think the technology to control acid mine drainage could work."

Meanwhile, the project is still under review by the provincial government and it will be some time before a decision — a political decision — is made by the provincial cabinet.

# Cream Silver president says Strathcona may become the most expensive park in Canada

By Roderick MacDonald

Frank Lang, president of Cream Silver Mines Ltd, is predicting that Strathcona Provincial Park on Vancouver Island could well prove to be the most expensive park in Canada.

The park became the subject of debate when the British Columbia provincial government allowed Cream Silver to explore an area adjacent to Westmin Resources Ltd's producing HW mine, which also sits within the park's boundaries.

The Westmin mine operates at 40,000 tpd and employs about 500 people. According to Lang, Cream Silver's property was

immediately adjacent and had the same geology. Last year Lang said Cream Silver could employ a similar number of people if it had a mine of the same size. "We'd like an opportunity to find out what we have," he said.

But last September parks minister Terry Huberts announced there would be no new mineral exploration in the park and said he would "arrange fair compensation where legitimately held rights are affected by this policy."

Then, April 28, 1989, Lang received a letter from the Ministry of the Attorney General which said Cream Silver is "not entitled, at law, to compensation as a result of the prohibition of mining exploration and

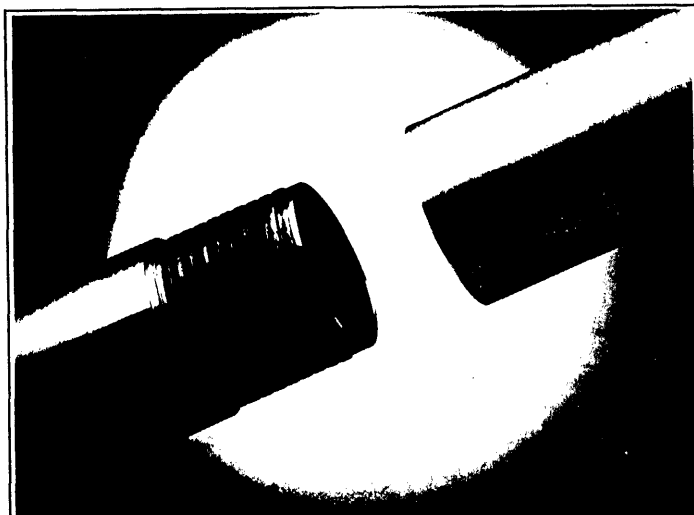
development in Strathcona Park." The letter acknowledges that the company's claims "appear to be promising" and have been held under "frustrating circumstances for 23 years" but says the ministry cannot accept or entertain the company's claim for compensation.

Cream Silver is asking the government for \$72 million in compensation, a figure Lang says is discounted from an appraisal of the property by "two expert authorities."

"Our shareholders are hurt and we are hurt," Lang told the government in his reply to the April letter. "It is with deep regret that we now feel obliged to take legal action. In this regard you will be hearing from our Counsel."

In a recent letter to *The Northwest Prospector* Lang accuses the government of claim jumping and says taking the matter to court "represents a substantial risk to the government and to the people of British Columbia as Cream Silver is not the only company holding claims in this park. It may be that Strathcona Park will be the most expensive park in Canada."

Lang says it is "too much to ask investors to place millions of dollars at risk without a clear idea of what risks they are accepting." He suggests a "Wise-Use" concept of land management must be adopted by government and industry.



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# Barrack buys into City Canada

Barrack Mines Ltd, through its 97 per cent subsidiary Central Coast Exploration Limited NL (CCE), has agreed to purchase 25.1 per cent of City Resources Limited (Australia) shareholding in City Canada and a further 24.6 per cent of City Resources (Asia) Limited shareholding in City Canada. CCE has also agreed to a placement of 2 million units in City Canada at a \$1.31 per unit.

Each unit consists of one common share of the company and one non-transferable share purchase warrant. Two such warrants entitles the holder to purchase one additional common share at \$1.31 per share exercisable within one year.

At the conclusion of the above transactions Barrack through CCE will directly control 54.1 per cent interest of the outstanding capital of City Canada. The agreement also provides an option for Barrack to directly acquire 50 per cent of the Graham Island Cinola Gold Project.

With its three operation gold mines Barrack's production for 1989 is expected to reach 120,000 oz of gold. It also expects to produce 20,000 tonnes of copper during this year.

# Bioleach success

Production-scale bioleach tests at Levon Resources Congress gold project at Gold Bridge, British Columbia have demonstrated that the bioleach process can be successfully scaled up from lab-scale tests.

Recoveries in the bioleach tests reached 90 per cent, identical to those achieved in lab-scale testing.

The bioleach plant was designed and operated by Giant Bay Resources of Vancouver, British Columbia for joint venture partners Levon Resources and Veronex Resources Ltd.

The process is considered a potentially less expensive and an environmentally safer alternative to conventional methods for processing refractory gold ore similar to that found on the Congress property.

The project was monitored by Wright Engineers.

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## Barrack funds Cinola to production

VANCOUVER — Stalled by financial problems of the City group of companies and by threats of environmental opposition, the Cinola gold project in the Queen Charlotte Islands of British Columbia is about to resurface.

The project's owner, **City Resources Canada** (TSE), has worked out an agreement with Barrack Mines of Australia that will provide funding for City to meet its current working capital requirements and for completion of the Cinola project feasibility study.

The agreement is also expected to provide City's equity funding requirement (up to a maximum of \$18 million) for the Cinola project development, although this is subject to the establishment of limited recourse project financing by Barrack.

The new agreement, still subject to regulatory approvals, replaces a previously announced agreement between the two companies earlier this year. Under its terms, Barrack and a third party will jointly subscribe for a private placement of 5 million shares in City Resources at 65¢ per share, with attached warrants.

In return for providing sole risk funding for the completion of the feasibility study, Barrack will acquire an undivided 10% interest in the Cinola project.

Once the feasibility study is completed, Barrack will have an option to acquire a further 40% undivided interest. However, this option is also conditional upon Barrack establishing limited recourse funding for project development and construction.

Once production begins, Barrack would be entitled to 80% and City Resources 20% of the proceeds until Barrack has been paid back in full for its advances, plus 50% of the funds it spent to complete the feasibility study.

### Bill Roscoe lecture

Bill Roscoe of Roscoe Postle Associates will deliver a talk Oct 19 on mining property values and the 1987 stock market crash. The event, jointly sponsored by The Canadian Institute of Mining and Metallurgy's Mineral Economics Committee Discussion Group and the Toronto Geological Discussion Group, will begin at 4:30 p.m. at the Engineers' Club of Toronto, Lower Meeting Room, 105 Victoria Street, Ont. Contact Kerry Smith at 865-1991.

## High grade gold shoot found by Biron Bay in NM

Results just released by **Biron Bay Resources** (ASE) from the Summit gold project in New Mexico indicate that the property contains a high grade ore shoot within a gold-silver deposit delineated by earlier drilling.

Under an agreement with **NovaGold Resources** (TSE), Biron Bay is earning a 60% stake in the property by spending \$1.5 million on exploration and development over three years.

NovaGold, which is retaining a 40% working interest in the property, reported that the ore shoot contains inferred reserves of 1.28 million tons grading 0.197 oz gold and 19.38 oz silver per ton.

NovaGold has the right to convert its 40% interest to a 22% carried interest at any time.

Based on results of a phase-one program consisting of 6,640 ft of drilling along a 2,400-ft strike length, Biron Bay has elected to go-ahead with an accelerated program focusing on the northward extension of the structure.

Results from phase one included 12 ft of grade 0.251 oz gold, 21.85 oz silver, 36 ft of grade 0.157 oz gold and 4.626 oz silver and 107 ft of grade 0.075 oz gold and 12.334 oz silver.

Biron Bay's assumption that a high grade ore shoot is contained within a northwesterly quartz-calcite breccia zone is based on results of six holes (including one wedged hole).

Drill intersections obtained so far are from depths of 500-1,100 ft below surface.

## Careers

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## Société minière

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#### SURINTENDANT DE L'EXPLOITATION MINIERE

Ingénieur, possédant de l'expérience en exploitation de mine à ciel ouvert et souterraine. Le surintendant sera responsable de tous les aspects de l'exploitation minière.

#### SURINTENDANT DE L'USINE DE TRAITEMENT

# Giant

Giant Yellowknife Mines Limited

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The incumbent will be responsible for recruitment and benefits administration for a workforce of approximately 450, as well as the day-to-day administration of the Collective Agreement and labour/management relations.

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## Positive Feasibility Study For Cinola Deposit

Ron Longstaffe, President and Chief Executive Officer of City Resources (Canada) Limited, announced in early December that Wright Engineers Limited of Vancouver, B.C. had released a summary of the feasibility study on the Cinola Gold Project which shows that the deposit can be mined profitably. The project will be an open pit mine at the rate of 6,600 short tons per day with an overall waste to ore stripping ratio of 2.08:1.

Capital costs for the project are C\$110 million including working capital of \$5.4 million and contingencies of \$14.4 million. The after tax discounted cash flow rate of return for the project is 19.18% at a gold

price of US\$450 per ounce and an exchange rate of C\$1.00 = US\$0.76. The feasibility study summarizes that under these conditions, if the project is financed on a 20% equity, 80% debt basis, the debt can be paid back within two years.

Gold production is expected to be 175,000 ounces in the first full calendar year of production, 192,000 ounces in the second year and an average of 114,600 ounces per year over the remaining ten years of mine life. At 90% recovery, total gold production will exceed 1.5 million ounces.

Production is scheduled to begin in October of 1989. The mineable ore reserves

are 27.3 million short tons of gold at an average grade of 0.062 oz/st using a 0.032 oz/st cut-off grade. Operating costs will vary from US\$207 per ounce for 1-2 years of production at design capacity to US\$322 per ounce for years 3-12. Further refinements to the metallurgical process which are being tested in a pilot plant may reduce the indicated capital and operating costs. Ore treatment will utilize the proprietary Arseno process which uses nitric acid to catalyze the oxidation of the sulphide minerals which otherwise render the gold refractory to conventional cyanida-

tion. Gold recovery is anticipated to be 90 percent.

Key environmental issues have necessitated special measures in project design, the company reports and a "Stage II Report" prepared by Norecol Environmental Consultants Ltd. of Vancouver will be submitted to the Mine Development Steering Committee of B.C. early in 1988.

The total mine labour force is estimated at 188 persons, of whom 120-130 will likely be Queen Charlotte residents.

The company says it plans to raise a substantial portion of the project financing by way of a gold loan. Development of the Cinola Gold Project is subject to financing and Government permitting.

## Eastern Gold

From Page 11

Also in the northwestern sector of the province in the Rouyn-Noranda area, Minnova (65%) and Syngold Exploration (35%) are weighing the pros and cons of production for their Deka Property. Preliminary estimates put reserves at 804,000 tons averaging 0.25 oz./t Au.

Campbell Resources, in the Chibougamau district, is taking steps to acquire the minority interest in 67%-controlled Meston Lake Resources, whose Joe Mann Mine went into commercial production in April. In all, the company now operates four mines in the area, and Campbell's annualized gold production level has risen to approximately 60,000 ounces.

In the far northeast of Quebec, along the Labrador Trough, La Fosse Platinum Group has mounted a major search for platinum, palladium and other minerals. This well-funded enterprise has a high-power management headed by Peter

gold (based on 65 drill holes). Forty holes drilled on the newly discovered east zone indicated a structure that, according to Acadia, seems to be higher in gold values and wider than the west zone.

Over in Newfoundland, no doubt spurred on by the success of the Hope Brook find (now an open pit, heap leach operation), drill exploration is at record levels. Big name players here include Noranda and Selco-BP Resources, whose Duck Pond precious-base metals deposit is being given a hard look with a view to a production decision.

Also of significance is Dolphin Exploration's extensive exploration program at Cape Ray, which encompasses both surface drilling and underground work. Several gold zones are under investigation.

The hunt for gold is intensifying in dozens of areas in Eastern Canada, and the year 1988 is shaping up as one of exceptional promise as results of myriad pro-

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Australian companies in deal

# Control of Cinola changes hands

by Vivian L. Danielson

VANCOUVER — The large scale Cinola gold project located in the Queen Charlotte Islands of British Columbia is falling increasingly into the hands of **Barrack Mines Limited** of Australia.

Barrack is a diversified mining company which plans to produce about 120,000 oz of gold this year from its three operating mines. The company also has investments in silicon metal and copper production and an extensive property portfolio.

**City Resources Canada (TSE)** owns 100% of the Cinola gold project, however a series of transactions will result in Barrack controlling about 54.1% of City Canada. The transactions will also provide Barrack with an option to directly acquire 50% of the Cinola project, however this is still subject to minority shareholder approval.

Through its 97%-owned subsidiary, Central Coast Exploration (CCE), Barrack agreed to buy 25.1% of City Resources Australia's shareholding in City Canada and a fur-

ther 24.6% of City Resources Asia's shareholding in City Canada.

CCE also agreed to a placement of two million units (one share and one warrant) in City Canada at a price of \$1.31 per unit. Companies in the City Resources group are reported to be experiencing financial difficulties.

Barrack's agreement with the City Resources group also gives it control of City Australia and that company's mineral project portfolio in Australia, Papua New Guinea and the South Pacific. David Paice, managing director of Barrack Mines, will serve as president and chief executive officer of City Canada on an interim basis. City Canada's board will soon include three representatives from Barrack.

With mineable reserves of 27.3 million tons of 0.072 oz gold, City Canada was planning a 6,660-ton-per-day open pit operation with an over-all stripping ratio of 2.45:1 waste to ore. The mine was targeted to produce 185,000 oz of gold in its first year, 167,000 oz in its second, and about 146,000 oz per

year thereafter.

A feasibility study completed late last year estimated that initial capital costs would be about \$119 million, plus \$52 million in deferred costs that would be expended over

See Page 2

## Cinola

From Page 1

the 12 years of operation and two years of reclamation.

Heavy capital costs aside, the Cinola project has been under fire from environmentalists and some native groups because of its environmentally sensitive location on Graham Island in the Queen Charlottes. Concerns have been raised about the project's impact on water quality and fisheries because of open pit mining and the treatment process required to liberate the gold from the refractory ores.

Because of these and other concerns, the British Columbia government has ordered a full public review of City Canada's mining and environmental studies. The company's work and the government's technical commentary are to be discussed with a number of interested parties at a public meeting later this summer before a mine proposal goes to Cabinet for a decision.

Bulk sampling will also be conducted to aid in metallurgical testing. The Tundra deposit is arsenical and refractory. Initial testing on rock from core gave gold recoveries of 90% using standard flotation techniques and recoveries in excess of 95% after pressure oxidation.

Total has a 49% interest in the property while Noranda and Hemlo

# Survey hits strong anomaly in unexplored area of Gaspé

by Geoff Pearce

A geochemical study conducted by the Geological Survey of Canada has come up with some interesting base metal anomalies in a relatively unexplored area south of Rimouski, Que.

The GSC says it received several requests from exploration companies to release the results from its heavy mineral geochemical survey in the Lower St. Lawrence region.

Partial results were released recently. They indicate a number of heavy metal anomalies within the survey area, situated south of the village of St. Fabien, Que.

A final, detailed report containing results for all 37 elements analyzed is expected later this summer or fall.

The preliminary report contains data for barium, lead, antimony and tungsten.

The results reveal a strongly anomalous zone of lead, antimony and tungsten near the villages of l'Esprit-Saint and Trinite-des-Monts, 25 km south of Rimouski.

The highest lead-antimony values were found in samples taken near Trinite-des-Monts and Esprit-Saint with the best results as follows:

Sample No	Lead ppm	Lead %	Antimony ppm	Tungsten ppm
310	13,962	1.4	1,403	25
317	154,839	15.4	2,145	25
320	10,300	1.0	102	80
329	27,105	2.7	5,105	289
333	4,633	0.5	1,246	25

The information was released to allow exploration companies to take full advantage of the 1989 field season and follow-up these

See Page 2

# Feasibility study starts at Mazarin graphite play

by David Robertson

A flake graphite deposit near Fermont, Que., contains proven ore reserves able to sustain commercial production for many years, **Mazarin Inc. (TSE)** reports.

The company says engineering firm Roche and Associates calculates reserves of almost 8.5 million tonnes (all categories) grading 16.7% graphitic carbon, making the Lac Knife deposit one of the richest in the world.

his company is aiming for annual output of 15,000-25,000 tonnes of graphite concentrate. At that rate, the proven reserves alone would be sufficient for about 25 years production.

An open pit mining method is envisaged. A feasibility study is under way, the preliminary results of which should be available later this month. The full study should be completed by September.

Labeaume says the mine could be in commercial production by

# Noranda increases stake in Falconbridge to 25%

by Peter D. Kennedy

It may be that **Noranda Inc. (TSE)** was simply trying to consolidate its status as **Falconbridge Ltd.'s (TSE)** largest shareholder when it bought 3.5 million of the nickel miner's common shares recently for \$32 a share.

Analysts are also speculating that by increasing its stake in Falconbridge from 20% to 25%, Noranda was attempting to put more pressure on Falconbridge Chairman Bill James to offer Noranda seats on the board of directors.

the free world's second largest nickel producer.

In a bid to acquire Falconbridge's Kidd Creek, Ont., zinc-copper mine, Noranda has spent approximately \$450 million since last summer to buy the 18.5 million Falconbridge shares it now holds.

But analysts are predicting that Noranda will probably need to spend a lot more to gain control of the Kidd Creek orebody which it has been after since the early 1960s. At year end, proven and probable ore reserves stood at 48.9 million



# INTRODUCTION

The major objectives of the Frontier Geoscience Program on the Pacific coast of Canada include a relatively disciplined approach to geological problems which will ultimately lead to an appreciation of the hydrocarbon resource potential of the region. Of necessity, studies must be multidisciplinary and include structure, stratigraphy, sedimentology and biostratigraphy. The following notes dealing with stratigraphic and tectonic observations are intended to supplement and expand our present knowledge of these aspects of the Queen Charlotte Basin as contributions to our continuing research in these fields.

## KEYNOTES

Geographic localities referred to in the stratigraphic discussion are indicated on Figure 1. The succession of rock units as presently understood is represented in Figure 2 (modified after Hamilton and Cameron, in press). Each of the units discussed below can be referred to this column by the numbered sequence 1 to 18 appearing on the margins of Figure 2.

1. The Karmutsen Formation is the oldest known rock unit of the succession and is thus considered as local basement. The very dense and strongly magnetic nature of these basic

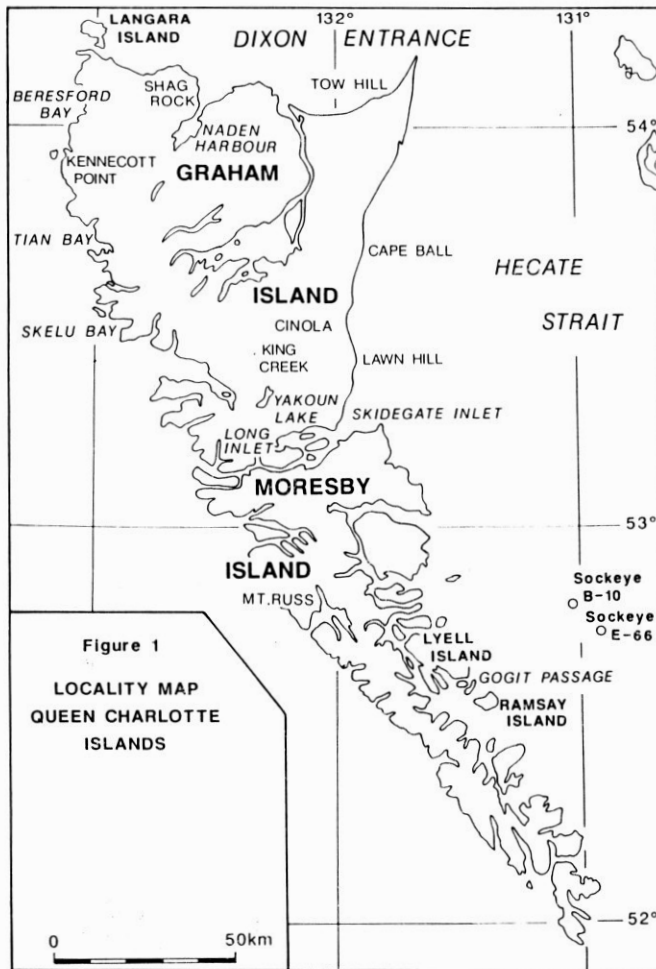


Figure 1. Location map showing geographic positions in the Queen Charlotte Basin.

volcanics make them amenable to geophysical mapping throughout most of the Queen Charlotte Basin. The main exposures are on south Moresby Island with rare outliers on western Graham Island. The profound thickness of crustal rocks inferred from the gravity field on south Moresby Island may either imply older (?Paleozoic) underlying stratigraphy

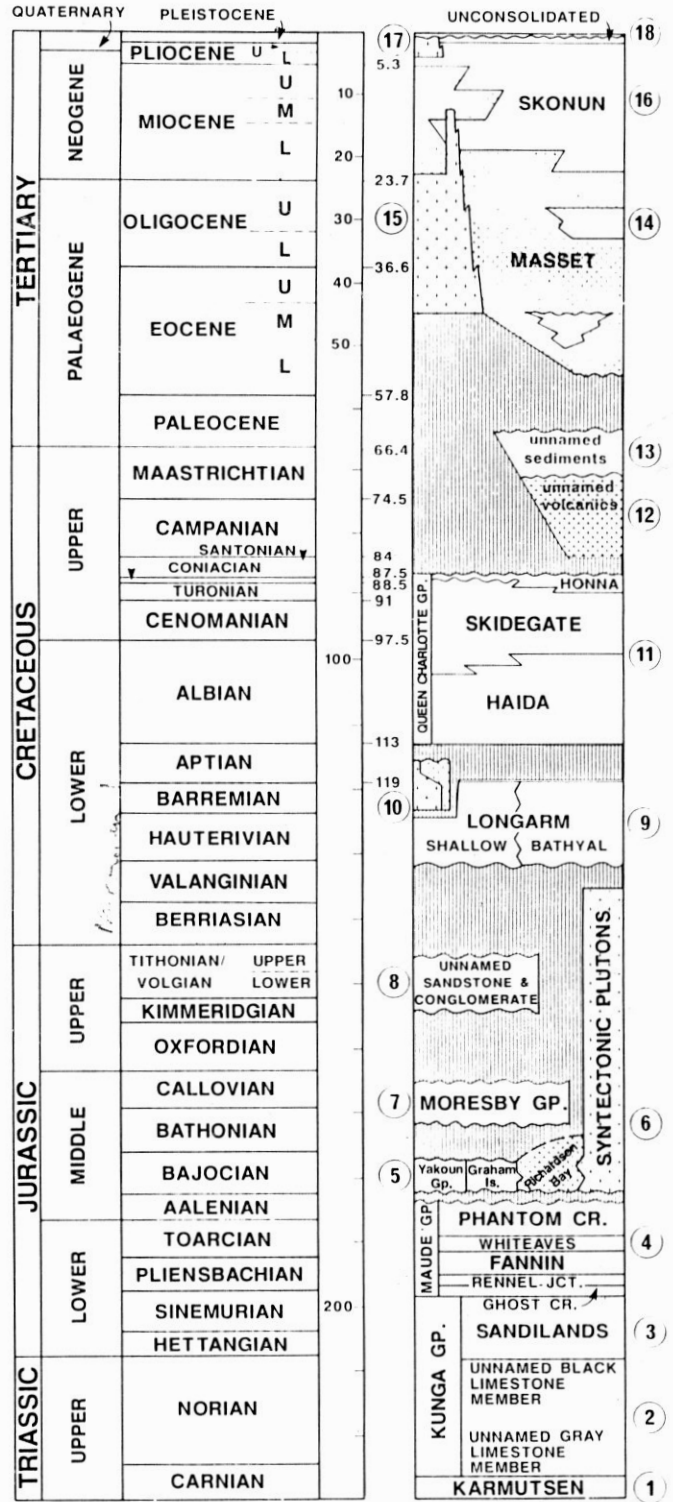


Figure 2. Geological column for Queen Charlotte Basin reflecting the revised stratigraphic succession and facies relationships (modified after Hamilton and Cameron, in press).

