

WESTMOUNT RESOURCES LTD. (WTT-V,T;WTRF-Nasdaq)

GOLDBRAE DEVELOPMENTS LTD. (GOB-V)

NANAIMO LAKE PROPERTY DEAL REPORTED - Goldbrae Developments Ltd. will spend a total of \$1,000,000 to earn a 50% working interest in Westmount Resources Ltd.'s Nanaimo Lakes mineral property on Vancouver Island, B.C. The property lies in the trend from Duncan to Buttle Lake which is underlain by the Sicker formation, a host for massive sulphide and precious metal deposits similar to the Myra Falls mine operated by Westmin Resources Limited.

Previous exploration established mineralization on the property. Surface sampling showed 6 feet of 0.32 oz./ton gold, 2.6 oz./ton silver, 1.82% copper and 2.53% zinc. Fourteen diamond drilling holes all resulted in mineralization. One drill hole encountered 47 feet of 2.1% copper, 3.5 feet of 14.6 oz./ton silver, 1.12% zinc and a trace of gold.

The exploration program is expected to commence in May and will consist of geophysical surveying, geological mapping and geochemical soil sampling, to be followed by diamond drilling. The Westmin Resources-Thistle Mountain-Nexus property is approximately five miles to the west. (SEE MAP OVERLEAF).

SKYLARK RESOURCES LTD. (SKR-V)

HOLE NO.	INTERVAL	OZ GOLD/T	OZ SILVER/T
SKR-85-6	6.2 feet	0.07	14.68
Includes	3.2	0.126	27.96

ANOTHER SUCCESSFUL HOLE IS COMPLETED

Robert J. McGowan, a director of Skylark Resources announces assay results from the sixth consecutive hole in the ongoing diamond drilling program on their Greenwood, B.C. property. Hole SKR-85-6 is located 100 feet north of Hole SKR-84-1. Diamond drilling continues.

CAROLIN MINES LTD. (CLL-V,T)

PROPOSED REFINANCING & DEBT SETTLEMENTS ARE SUMMARIZED - Orval E. Gillespie, president of Carolin Mines Ltd., announces that 4 of its creditors have agreed on a private placement basis to convert \$531,303 of debt into 222,302 shares of Carolin at \$2.39 each. The shares would be held for the greater of 6 months from the day the loan is converted and 12 months from the day on which the creditors advanced the funds, being May 1984 for \$96,681 and October of 1984 for the balance.

Mr. Gillespie also reports that Lion Metals Corporation of London, England is prepared to renew its efforts to arrange a private placement of Carolin shares to raise \$1,500,000 U.S., subject to Carolin raising at least \$5,000,000 Cdn. in Carolin's forthcoming rights offering to its United States shareholders. The private placement would be for 800,000 shares at \$2.60 each with warrants to buy 800,000 more at \$3.05 each within 1 year. The private placement is subject to Carolin shareholders' approval by 4 July 85 and completion of the placement by 4 Aug 85.

The private placement is contingent on the Mercantile Bank of Canada agreeing to accept \$6,500,000 Cdn. and 500,000 shares as full payment of its Carolin loan, which Mercantile is prepared to do, and to State Farm Automobile Insurance Company agreeing to convert its loan to Carolin of about \$10,500,000 Cdn. into 500,000 Carolin shares as arranged last November for an uncompleted transaction.

Carolin owns 50% interest in the Ladner Creek mine near Hope, B.C. The other 50% is owned by the Aquarius group, being Ocelot Industries Ltd. which owns 22.5%; Columbian Northland Exploration Ltd. 17.55%; Aquarius Resources Ltd. 5% and Windjammer Power & Gas Ltd. 4.95%. Carolin's attempt last fall to acquire the Aquarius group's interest in the Ladner Creek Mine was subsequently abandoned. If the proposed rights offering is successful, Carolin will seek to acquire the Aquarius group's interest in the Ladner Creek mine. Mr. Gillespie says, to date, cash calls totalling \$4,818,890 have been made to the Aquarius group, being their share of unpaid costs incurred by Carolin in respect to the mine. No monies have been received.

If Lion Metals completes the private placement of 800,000 shares, Carolin has agreed to pay them a fee of 6% of the monies raised and to grant them a 12 month option to buy 150,000 shares at \$2.60 each, subject to approval of Carolin's shareholders.

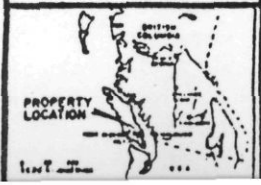
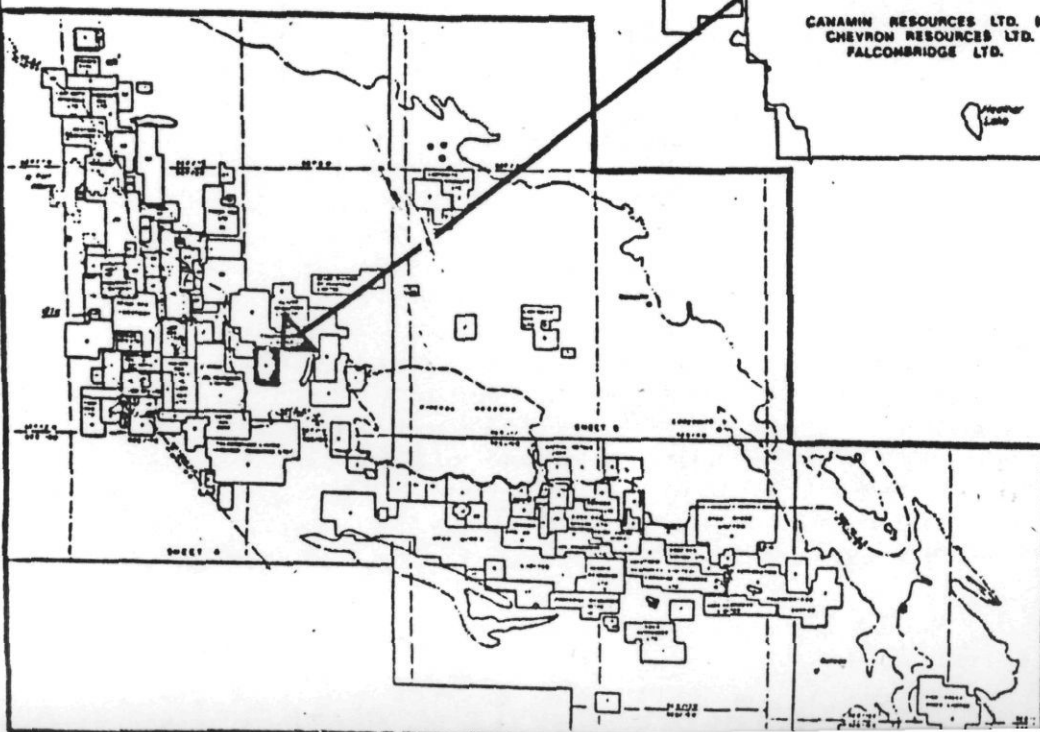
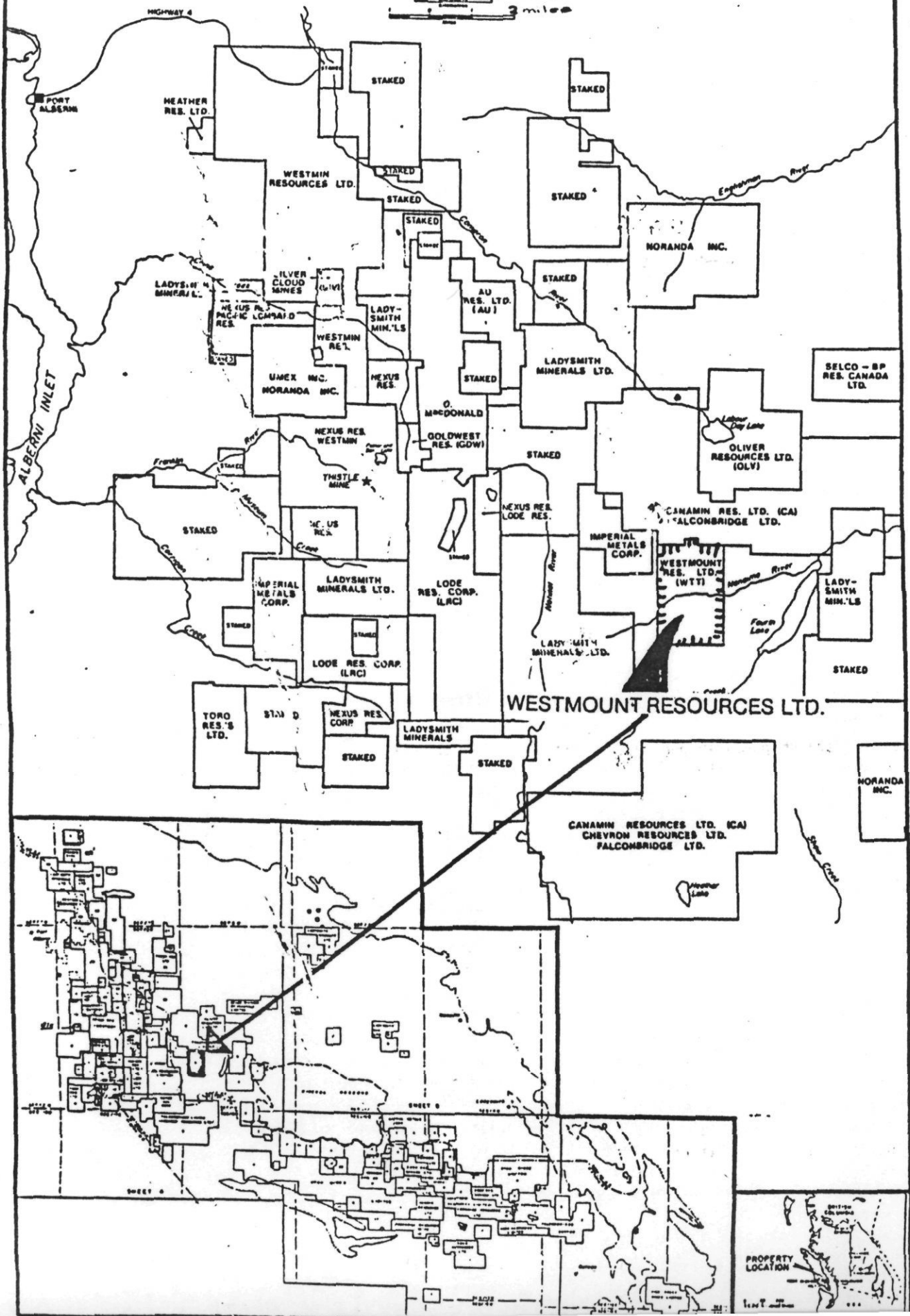
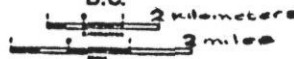
CHAPEL RESOURCES INC. (CPL-V)

DRILL RESULTS FROM GOLD CLAIMS IN CALIFORNIA ARE REPORTED - C.W. Brown, president, announces that Chapel Resources Inc. successfully completed a small drilling program on the Bully Choop mine prospect in Trinity county, California designed to confirm results of an extensive 1984 channel sampling program. After drilling 3 short holes from surface with poor core recovery, a smaller drill was used to drill 6 holes from underground.

Four holes were drilled from No. 3 level West drift in the plane of the Bully Choop vein to test continuity of mineralization below the level. Holes 1 and 3 had gold values of 0.256 and 0.248 oz gold per ton over lengths in excess of 40 feet. Holes 2 and 4 were drilled out of the plane of the vein and encountered only minor gold values. It is estimated the vein's true width could be from 3 to 5 feet based on previous sampling results. One channel sample above the drill setup, ran 0.990 oz gold/t over 5.75 feet.

The final 2 holes were drilled to cut the downward projection of the Occidental North stope below No. 2 level. The first cut a true width of 3.5 feet of high grade mineralization 50 feet below the stope floor with an assay of 1.090 oz gold/t. Mr. Brown says it should be noted that, a channel sample in the stope directly above that high grade intersection, on the section of the 2 holes, assayed only 0.110 oz/ton, and a stope channel sample directly above the second hole which yielded only 0.019 oz/ton, assayed 1.226 oz/ton gold over 6.5 feet. This illustrates the irregular distribution of gold values. Extensive summer work is planned. Mr. Brown is optimistic that the Bully Choop Mine has

SICKER GROUP COMPILATION  
LAND STATUS  
VANCOUVER ISLAND  
B.C.



Canada Northwest Energy, as a participant in a group of companies headed by Taylor Woodrow Energy Limited as operator, will have 20% interest in each of the licences. Marinex Petroleum Ltd., Canada Northwest Energy's 56% owned United Kingdom subsidiary will also obtain a 10% interest in the licences.

PLEXUS RESOURCES CORPORATION (PXS-T, PLUSF-Nasdaq)

LIMITED PARTNERSHIP - Plexus, Inc., a unit of Plexus Resources Corporation, has announced that it has formed and will be

OIL VENTURE FORMED general partner of Plexus Oil and Gas Venture 1985, as a limited partnership. The 1985 drilling activities will be about 25% exploratory and 75% development with an emphasis on oil and smaller involvements in natural gas drilling. Prospects in Montana, Wyoming and Oklahoma have been identified for initial drilling in July.

This is the sixth limited partnership formed by Plexus. It will raise a maximum of \$2,000,000. Plexus will receive management fees and 10% of the partnership revenues before payout and 25% after payout.

GRANVILLE RESOURCES INC. (GVR-V)

CUTLASS INDUSTRIES CORPORATION (CUC-V)

DISTRIBUTION OF SATELLITE - Granville Resources Inc. has completed a distribution contract with Cutlass Industries TV DISH IS CONTRACTED Corporation, of Vancouver, for the one meter diameter television reception satellite dish, called the GVR-2000, for Washington, Oregon and California states. Cutlass agrees to distribute 10,000 units in the first six months and a further 50,000 in the next six months. The distribution periods start upon completion of a mutually acceptable manufacturing agreement with a Far East manufacturer. Granville is to receive \$50 per unit net after expenses. Granville has negotiated acquisition of worldwide manufacturing and distribution rights to the dish from Caleb International Communications. The agreements are subject to regulatory approvals.

The revolutionary size of the GVR-2000 is not only ideal for stationary installations but, in addition, has the optional capacity of being totally portable and it can be operated by a 12 volt battery or cigarette lighter in any vehicle. It can receive the dual frequency transmissions of the new hybrid satellites presently being orbited. It will retail for under \$700 U.S.

A market survey indicates potential sales, for the first year, to exceed 100,000 units within Washington, Oregon and California.

PRYME ENERGY RESOURCES LTD. (PYE-V)

FURTHER DRILLING PROPOSED - Anthony L. Agostino, president of Pryme Energy Resources Ltd., reports that further diamond ON KIRKLAND LAKE PROSPECT drill testing has been recommended on its precious and base metals project in Maisonville township near Kirkland Lake, Ontario. A Noranda Exploration Company Limited engineer has recommended a 1,200-foot drill hole to follow up four earlier holes, totalling 3,567 feet, completed in mid-April. The new test is to intersect interflow tuffs and sediments in the area of an interpreted volcanic vent, 300 feet west of a zinc-bearing sulphide zone intersected in an earlier hole. The Norex summary report suggests that "although the mineralization intersected is not as significant as it first appeared due to the fact that it was drilled down-dip, the mineralized tuff represents a favourable horizon for syngenetic base metal sulphide mineralization".

Norex has an option to earn 60% interest in the 279 claim property by spending \$2,000,000 by Oct31/87, being \$200,000 by 30Apr85 and \$400,000 by Oct31/85 and \$700,000 in 1986 and a further \$700,000 in 1987.

Mr. Agostino says the Norex report covers work to date on a small area of a 141 claim "base metals" block on the overall 279 claim property. Previous preliminary drilling on the 138 claim "precious metals" prospect within the holdings returned gold values ranging to 0.413 ounce gold per ton and 2.94 ounces silver per ton over a 4 foot width.

GOLDBRAE DEVELOPMENTS LTD. (GOB-V)

NEXUS RESOURCE CORP. (NXS-V)

JOINT VENTURE ARRANGED ON - Goldbrae Developments Ltd. and Nexus Resource Corp. are negotiating a joint venture in the VANCOUVER ISLAND VENTURE Thistle gold camp on Vancouver Island on claims in which Goldbrae holds 50% interest from

WESTMOUNT RESOURCES LTD. (WTT-V) straddling the Nanaimo River 6 km west of the Nexus/Westmin Thistle mine (SEE MAP ON BACK OF PAGE 1 IN GCNL 106). Goldbrae president Howard G. Andersen says costs will be shared on a 50/50 basis and Goldbrae will serve as manager. The agreement will call for Nexus to contribute \$2,000,000 to Goldbrae's costs in addition to its own share of the cost of the capital development expenditures following a mining feasibility report.

Mr. Andersen says Ed Holt of Holt Engineering Ltd. recently reported that high grade precious metal values have been encountered in the past in several locations on the property. One diamond drill hole encountered 47 feet of 2.1% copper, 3.5 feet of 14.6 oz./ton silver, 1.12% zinc and a trace of gold. A deep intersection assayed 14.59 oz./ton silver, 0.59% copper and 1.12% zinc across 3.5 feet. Mr. Holt described the chalcopryrite mineralization occurring in some places as "spectacular". All work to date has been concentrated in an area covering less than 10% of the property, however. Mr. Holt recommends a two phase exploration program on the property. Phase I work costing \$200,000 including at least \$90,000 of drilling and Phase II costing \$500,000 for drilling contingent on results of Phase I.

Tom Hughes, P.Eng., Nexus' minerals director, recently visited the property. Two grab samples assayed 9% copper, 7 oz. silver/t, 28 oz. gold/t and 1.38% copper, 1.82 oz. silver/t and 0.288 oz. gold/t, respectively.

Exploration is expected to begin immediately.

**PROPERTY FILE**D'OR VAL MINES LTD. (DQA-V,M,T)

NEW FUNDING FILED - D'Or Val Mines Ltd. has signed two financing agreements which, if successful, will raise \$3,000,000 for exploration in 1985 on the company's Beacon property at Val d'Or, Quebec.

The first agreement is with COGESCO RESOURCES INC., which has filed a preliminary prospectus with the Quebec Securities Commission with the object of raising \$10,000,000 to be spent on selected exploration projects. First amongst these is the Beacon property where Cogesco will expand up to \$2 1/2 million to earn a participating interest in the property.

D'Or Val has assisted in the formation of Cogesco and has representation on the Board in the presence of Peter Ferderber, a director of D'Or Val. Other companies represented are Aur Resources, Noranda Exploration, M.S.R. Resources, PERRON GOLD MINES and Quebec Explorers.

The second agreement is with NIM (Quebec) and Company, Limited Partnership - 1985, which has filed a final prospectus with the object of raising \$4,000,000 for exploration in Quebec. D'Or Val has agreed that it will incur on behalf of the Partnership \$500,000 of Canadian Exploration Expense and in consideration will allot the issue a maximum of 250,000 shares.

WESTMOUNT RESOURCES LTD. (WTI-V)

MOUNT SICKER PROGRAM UNDERWAY - Westmount Resources Ltd. has reported work has commenced on the Nanaimo Lakes gold-silver massive sulphide project on Vancouver Island, B.C. (SEE PROPERTY LOCATION MAP GCNL NO.106 OVERLEAF PAGE ONE). GOLDBRAE DEVELOPMENTS LTD., operator of the project, advises that two new areas of possible massive sulphide mineralization have been identified. A geophysical survey detected a strong chargeability anomaly coincident with over 0.2% copper and high zinc values in the soil approximately 200 meters and on strike with a previously known mineralized zone. This latter area had a drill hole which encountered 47.5 feet of 2.1% copper, 3.5 feet of 14.6 oz/ton silver, 1.12% zinc and a trace of gold. Preliminary geological mapping has also detected a massive sulphide occurrence in volcanic rocks consisting of massive pyrrhotite, pyrite and minor visible chalcopyrite. This is consistent with the model of volcanogenic mineral deposits in the Sicker group of rocks.

Work carried out to date has consisted of geological mapping, linecutting, soil sampling and geophysical surveying. One grab sample assayed 9.0% copper, 7.0 oz/ton silver and 0.028 oz/ton gold, while a second grab sample had 1.4% copper, 1.8 oz/ton silver and 0.288 oz/ton gold.

A diamond drill hole program is expected to commence in the latter part of June to test shallow drill targets. A major drilling program will be carried out in September to test geophysical anomalies and downdip lithology.

Interests in the property are: Westmount 100% with Goldbrae and Nexus holding an option to earn a 50% interest by spending \$1,000,000 on exploration over 5 years. (SEE SOME PROPERTY RESULTS IN GCNL NO.109, PAGE THREE, JUNE 6, 1985)

KANGELD RESOURCES LTD. (KDR-V)

PROPERTY ACQUISITION TO BE CONSIDERED - Frank A. Lang, director of Kangeld Resources Ltd. has announced a meeting called for July 12, 1985 at 11:00, 700-609 Granville St., Vancouver, to consider the non arms length acquisition of five properties. In addition the company has, subject to approval of the Vancouver Stock Exchange, acquired from Donald McKinnon of Timmins, Ontario an option to purchase 151 mineral claims in the Dundonald, Evelyn and German Townships, Ontario. The consideration payable to Mr. McKinnon is \$45,000 (payable \$15,000 down and the balance over two years) and the allotment of up to 200,000 shares together with a royalty of 1% of net smelter returns.

TOREX MINERAL LTD. (TXI-V)

ACQUISITION OFFER ACCEPTED - Torex Mineral Ltd. has had its offer to purchase the 15% net profits interest in the Heniga Lake lead zinc property on the west side of Hudson Bay, N.W.T. accepted by Stratas Corporation. The terms of purchase call for the issuance by Torex of treasury shares for the interest.

Torex is also negotiating to acquire a strategically located property in the Montauban gold camp located 50 miles west of Quebec City, P.Q. At the same time the company is negotiating with a major company to joint venture the property development in the Montauban camp.

CHOPP COMPUTER CORPORATION, INC. (CRP-V)

NEW FUNDING SOUGHT - CHoPP Computer Corporation, Inc has filed a best efforts offering of 250,000 shares.

The company is making every effort to expedite this financing and getting the shares of the company back trading on the Vancouver Stock Exchange which is anticipated by June 28, 1985. Share trading was suspended May 24, 1985, pending an announcement. (SEE GCNL NO.109, P.2, JUNE 6, 1985 FOR SOME DETAIL).

BRICAN RESOURCES LTD. (BRI-V, Nasdaq)

EXPLORATION STARTED ON - Surface exploration has begun on the Dutch Flat property, near Winnemucca, Nevada, in DUTCH FLAT PROPERTY - NEVADA which the (Brican 50% - Bow Valley 50% Joint Venture) holds the right to acquire a 100% interest for \$500,000 (U.S.). Bow Valley may acquire an additional 10% interest by providing the first \$125,000 in exploration expenditure on the property.

A large hydrothermally altered zone has been discovered on the property immediately upstream from the Dutch Flat Mine, a placer gold-mercury-tungsten deposit which produced about 4500 ounces of gold in the past. Preliminary mapping of an altered and mineralized zone 2600 feet long by 600 feet wide in

# PROPERTY FILE

CROSS NEWS LETTER LTD. NO. 194 (1985)

PAGE TWO

OCTOBER 8, 1985

## INTERLAKE DEVELOPMENT CORP. (IRK-V)

<u>INTERVAL, FEET</u>	<u>FOOTAGE</u>	<u>OZ. GOLD/T</u>
4618.6 to 4618.9	0.3 Ft.	0.69
4771.9 4772.9	1.0	0.080
4782.4 4783	0.6	0.094
4963.9 4970.5	3.3	0.1
4967.4 4970.7	3.3	0.710
5072.4 5075.7	3.3	0.232
5180 5192.5	12.5	0.073

### RESULTS REPORTED FROM DRILLING FOR GOLD AT HEMLO & OIL/GAS IN ALBERTA & SASKATCHEWAN

Glen A. Phillips, vice president of Interlake Development Corp. announces that Hole 1L No. 5W on its Hemlo, Ontario, property reached a total depth of 6,012 feet. The Moose Lake Formation package was intercepted between the depths of 4,616 and 5,719 feet. The adjoining table shows assays derived from intervals within this package. The Noranda Joint Venture Group has temporarily suspended drilling on the Interlake property.

In its 1985 oil and gas drilling program, Interlake has participated in drilling 28 wells, resulting in 23 oil wells, 1 gas well, 1 water disposal well and 3 dry holes. In the Manitoba drilling program, the recently completed 2-19-10-28 WIM was placed on production at the rate of 60 barrels of oil per day. Interlake has 12.5% working interest in this property. On the Alberta Thorhild gas producing property, the company participated for a 26.25% working interest in the 6-20-60-21 W4M gas well which tested 500,000 cubic feet per day and will be tied into the gas processing facilities shortly.

A total of 10 new oil wells have been drilled in the Dodsland-Teo Lakes area of SW Saskatchewan. All have been placed on production. The Dodsland waterflood unit has been approved and most of the facilities have been installed. Mr. Phillips expects the flood to begin in November.

In Alberta, Interlake has placed 6 new oil wells on production in the Wilson Creek area. Also, the company acquired additional interests in 2,240 gross acres on this play through Crown land sales and farm-ins during 1985. At least 3 more wells will be drilled on this property in 1985 with 6 new wells being scheduled for the 1986 drilling season. Interlake's interests in these lands vary from 5.625% to 10%.

### GOLDBRAE DEVELOPMENTS LTD. (GOB-V) NEXUS RESOURCE CORP. (NXS-V) WESTMOUNT RESOURCES LTD. (WTT-V,T)

TRENCHING AND DRILLING INDICATE - A massive sulphide zone of significant copper/gold/silver mineralization yielding POTENTIAL FOR OPEN PIT OPERATION values up to 8.6% copper and 0.108 oz/ton gold is being developed along a 400-meter length in the Sicker formation near the Nanaimo Lakes, on Vancouver Island, B.C. The property is owned by Westmount Resources Ltd. from whom it is held under option by Goldbrae Developments Ltd. and Nexus Resource Corp. who together can earn 50% interest by contributing equally to expenditure of \$1,000,000 over 5 years.

The NW and SE sections of the massive sulphide zone have been trenched and diamond drilled along 100 and 80 meters, respectively, yielding the values detailed on the DIAGRAM OVERLEAF. For example, the table of trench samples shows that, in Trench 64-7, a 5 foot sample assayed 5.37% copper and, in Trench 64-9, a 6 foot sample assayed 1.82% copper 0.32 ounce gold per ton, 2.6 oz. silver/t. and 2.53% zinc. Two mineralized horizons have been intersected in the diamond drilling. This is illustrated in the drill holes table in which Hole 64-3 is shown to have returned 47.5 feet in the Upper Horizon grading 2.1% copper and 0.002 to 0.004 oz. gold/t and, in the Deep Horizon, returned 2.7 feet grading 2.23% copper, 0.01 oz. gold/t, 4.0 oz. silver/t and 1.92 oz. zinc/t.

Goldbrae is project manager and Goldbrae's president Howard G. Andersen says the 1985 geological work located a quartz carbonate alteration zone which gave values to 0.175 oz. gold/t. Six holes have been drilled to test this with encouraging results. Assays are not yet complete but holes 85-1 and 85-3 gave anomalous gold to 0.012 oz/t while hole 85-2 gave intermittent assays from 0.011 to 0.044 oz. gold/t over 40 feet. Holes 85-4, 5 and 6 contained significant quartz carbonate alteration and mineralization estimated visually at up to 20% pyrite and minor chalcocite.

While earlier work on the property conceptualized it as a copper property, the 1985 work has discovered a large area of elevated gold values. Drilling of the massive sulphide target is continuing. The elevated gold values in conjunction with the massive sulphides mineralization suggests the possibility of an open pit mine with a grade of approximately 0.08 gold equivalent.

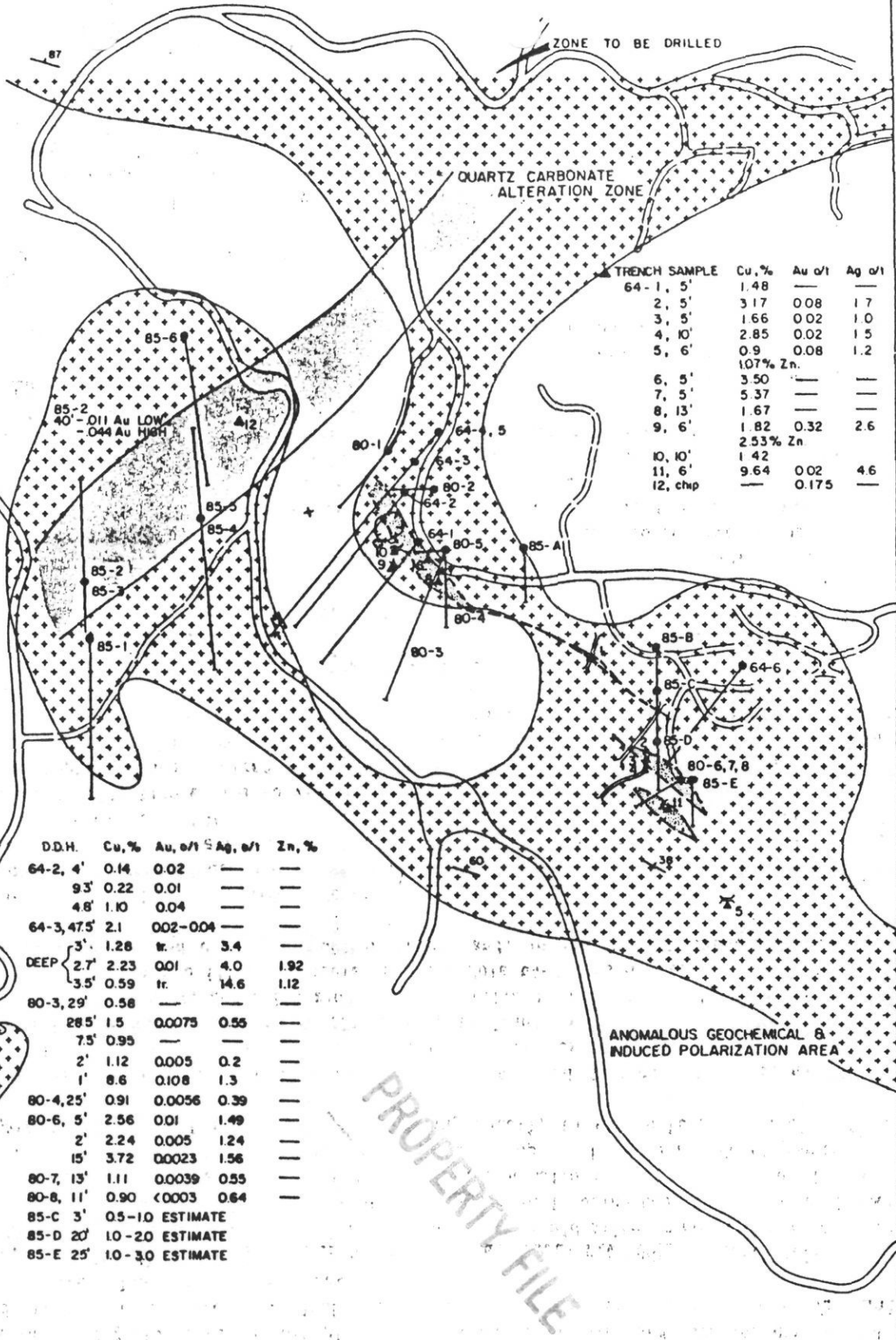
### NANOTEC CANADA INCORPORATED (NNT-V)

LITIGATION SETTLEMENT OUTLINED - Certain subsidiaries, directors and officers of Nanotec Canada Incorporated of Almonte, Ontario, were named as defendants in an action started by MRA Technologies Ltd. concerning a sale of Scientific Research Tax Credits (SRTC) in October, 1984. Agreement has been reached to settle that litigation. Nanotec Research Limited will release documentation granting a \$1,337,500 SRTC to MRA. MRA is surrendering to Nanotec Canada Incorporated 750,000 common shares of the company, subject to regulatory approvals.

As a result of the settlement, Larry Schweizer, president of Nanotec Canada, may have a contingent personal liability to the Receiver-General for Canada in respect of any consequent tax payment obligations of Nanotec Research and the surrendered shares will be pledged to support a limited indemnity of Mr. Schweizer. Ultimately, it is anticipated that these 750,000 shares, (or part of them if some are required to support the indemnity), will be cancelled.

### OSCAR RESOURCES LTD. (OSR-V)

CALIFORNIA GOLD PROPECT ACQUIRED - Thomas R. Tough, P.Eng., president, reports that Oscar Resources Ltd. has agreed to acquire from Carmel Resources Ltd. an option to earn 80% interest in the M claim group in Siskiyou county in northern California. The property consists of 21 claims and adjoins the King Solomon Mine



**LEGEND**

- 85-6 DIAMOND DRILL HOLE
- TRENCH
- TRENCH & DRILL INDICATED MASSIVE SULPHIDES

TRENCH SAMPLE	Cu, %	Au o/l	Ag o/l
64-1, 5'	1.48	—	—
2, 5'	3.17	0.08	1.7
3, 5'	1.66	0.02	1.0
4, 10'	2.85	0.02	1.5
5, 6'	0.9	0.08	1.2
107% Zn			
6, 5'	3.50	—	—
7, 5'	5.37	—	—
8, 13'	1.67	—	—
9, 6'	1.82	0.32	2.6
253% Zn			
10, 10'	1.42	—	—
11, 6'	9.64	0.02	4.6
12, chip	—	0.175	—

D.D.H.	Cu, %	Au, o/l	Ag, o/l	Zn, %
64-2, 4'	0.14	0.02	—	—
93'	0.22	0.01	—	—
4.8'	1.10	0.04	—	—
64-3, 47.5'	2.1	0.02-0.04	—	—
3'	1.28	tr.	3.4	—
DEEP { 2.7'	2.23	0.01	4.0	1.92
3.5'	0.59	tr.	14.6	1.12
80-3, 29'	0.58	—	—	—
28.5'	1.5	0.0075	0.55	—
7.5'	0.95	—	—	—
2'	1.12	0.005	0.2	—
1'	8.6	0.108	1.3	—
80-4, 25'	0.91	0.0056	0.39	—
80-6, 5'	2.56	0.01	1.49	—
2'	2.24	0.005	1.24	—
15'	3.72	0.0023	1.56	—
80-7, 13'	1.11	0.0039	0.55	—
80-8, 11'	0.90	0.003	0.64	—
85-C 3'	0.5-1.0 ESTIMATE			
85-D 20'	1.0-2.0 ESTIMATE			
85-E 25'	1.0-3.0 ESTIMATE			

NEW ZONE TO BE DRILLED

ANOMALOUS GEOCHEMICAL & INDUCED POLARIZATION AREA

PROPERTY FILE



**GOLDBRAE · NEXUS · WESTMOUNT**  
**— NANAIMO LAKES COPPER-GOLD PROJECT —**  
 VANCOUVER ISLAND, B.C.

GBM has 1% before-payout/10% after-payout interest in 2 producing oil wells in the West Butler area of Manitoba. Current production is about 60 to 65 barrels of oil per day. By drilling these wells GBM has earned the right to participate as to a 10% working interest in 6 more wells on a "heads-up" basis. ("Heads-up" means payment of 1% of the costs to earn 1% working interest, payment of 2% of costs to earn 2% working interest, etc.)

GBM has been advised by the operator, Pipestone Petroleum Inc., that one of the final 2 option wells will be drilled before Oct 31/85 and it is planned to drill the other in December. GBM will pay 25% of the costs of these wells to earn 25% before-payout/10% after-payout interest in these wells. Also, GBM will have earned the right to participate as to 10% working interest in 6 more wells on a "heads-up" basis. Thus, GBM has the right to drill a total of 16 wells on this property.

GBM has working capital of about \$180,000.

ASAMERA INC. (ASM-V,T,M)

**PROPERTY FILE**

**FIFTH SUCCESSIVE DISCOVERY WELL - Asamera Inc. and Bow Valley Industries Ltd. announce results of another recent DRILLED IN RAWA AREA, S. SUMATRA** exploration well in the Production sharing Contract area of the Corridor Block in South Sumatra, Indonesia. The Letang-1 wildcat well, drilled 4 miles SW of the Rawa-3 oil discovery and 6 miles WNW of the South Rawa-1 oil and gas field, discovered gas and oil in the Batu Raja limestone. Letang-1, drilled at the crestal position of the structure, encountered a thick Batu Raja limestone section containing 308 feet of limestone with 226 feet of net gas pay and 20 feet of net oil pay. A drill stem test in the uppermost part of the gas pay flowed 3,500,000 cu.ft. of gas/day on a 3/8-inch choke. Oil shows were encountered in the underlying Pretertiary section.

Letang-1 is the fifth successive discovery well in the general Rawa area. A decision on further testing of Letang-1 will be made after a scheduled delineation well, Letang-2, is drilled. Its location is half a mile to the northwest in a down dip position. Interests in the Corridor are Asamera 60%, Bow Valley 40%.

MINERAL EXPLORATION GROUP OF VANCOUVER

**NEXT MEETING DATE - The Mineral Exploration Group of Vancouver will meet on Wednesday, Oct 30/85 in Georgia Hotel at IS OCTOBER 30/85 12 noon for lunch and a talk entitled "Recent Developments at the Thor Lake Beryllium Deposit Near Yellowknife, NWT." The speaker will be Dr.D. Trueman, Vice President, Exploration, Highwood Resources Ltd. of Calgary.**

Admission and Lunch: \$13, at the door. For Oct 23/85 meeting, see GCNL 201(85) p.2.

GOLDBRAE DEVELOPMENTS LTD. (GOB-B) NEXUS RESOURCE CORP. (NXS-V) WESTMOUNT RESOURCES LTD. (WTT-V,T)

**PROGRESS OF DRILLING OF COPPER-GOLD - Howard G. Andersen, president of Goldbrae Developments Ltd., project manager for CLAIMS ON VANCOUVER ISLAND REVIEWED** their joint venture with Nexus Resource Corp. and Westmount Resources Ltd. on a copper-gold project in the Manaimo Lakes area of Vancouver Island, B.C., has presented results of assaying samples of 12 intersections of copper, gold and silver in diamond drill Holes 85-C, 85-D and 85-E (SEE TABLE & DIAGRAM OVERLEAF PAGE 2). Mr. Andersen says the assays confirm earlier estimates of mineralization in these holes in the SE zone on the property. Also, the drilling indicates that the 80-metre long zone extends for a width of some 70 metres. This zone is being further explored with a view to determining its open pit potential. The zone is presently open to depth and further drilling along strike is required.

Quartz Carbonate zone, data on the extensive low grade gold assays are now being compiled.

In the N.W. zone, a step-out hole from DDH 64-3 at a distance of 25 metres has shown mineralization estimated to be comparable to the 47 feet of 2.1% copper in 1964. This new hole, DDH 85-8, continued to depth and intersected a continuation of the earlier 3.5 feet of 1.46 oz. silver per ton. The new hole shows three 10-foot intersections within a 50-foot interval. These contain semi-massive to massive chalcopyrite, sphalerite and galena typical of hydrothermal mineralization. High grade silver mineralization, argentite, has been tentatively identified. The deep zone is currently being investigated with a down the hole EM probe.

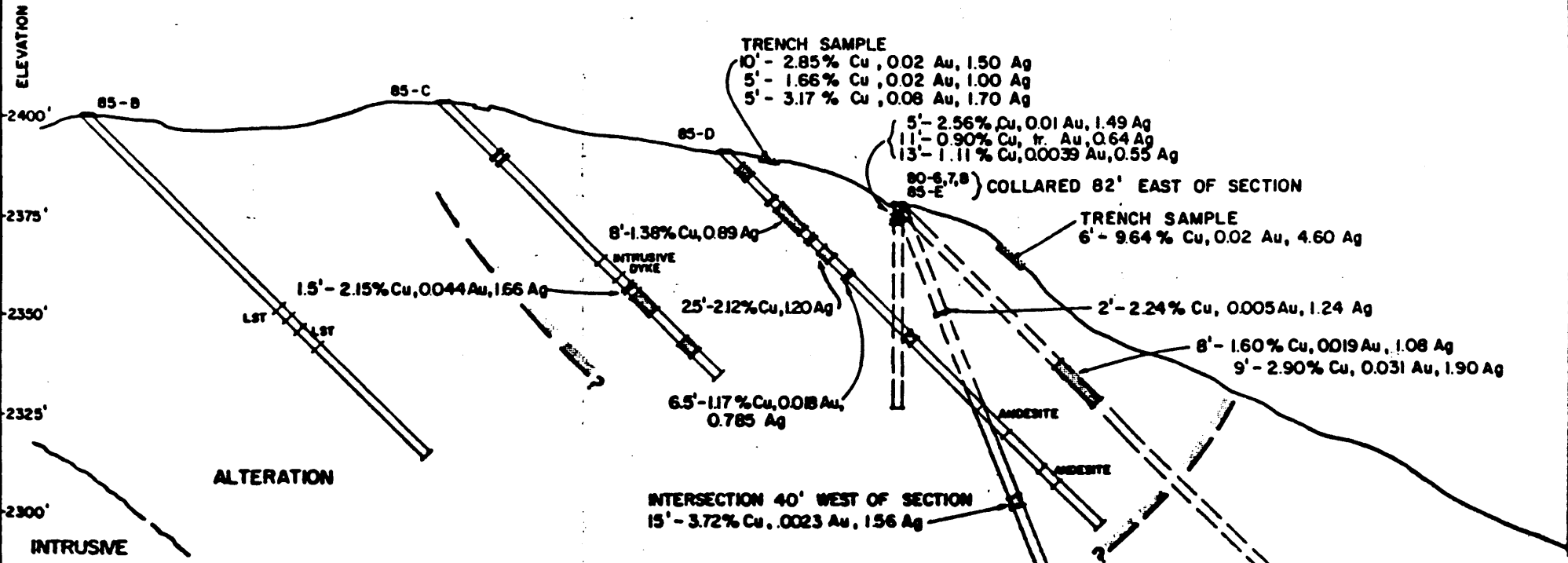
FOR THE RECORD

**VERSATILE CORPORATION (VCC.A-V,T,M)** reports the sale on Oct 21/85 of 2,602,928 Class A subordinate voting units and 5,458,806 Class B common units. Each Class A unit comprised 1 Class A subordinate voting share and one-half Class A subordinate voting share purchase warrant. Each Class B common unit comprised 1 Class B common share and one-half warrant. The class A shares and Class B shares were sold by wholly-owned subsidiaries of Canfor Corporation. The warrants were issued by Versatile.

Immediately after the closing, the warrants were separated from the shares. Each hole warrant is exercisable through Oct 31/88 to buy 1 Class A subordinate voting share for \$5.25.

**UNITED KINGDOM ENERGY INC. (UKY-V)** by 4Dec85, will offer 400,000 common shares at a fixed price of 30¢ each on Vancouver Stock Exchange through Canarim Investment Corp. and Continental Carlisle Douglas as agents. For agreeing to buy any unsubscribed shares, the agents will be issued a total of 200,000 non-transferable warrants exercisable for 180 days from the offering day to buy 1 share at a price yet to be fixed.

**VANCOUVER STOCK EXCHANGE - SHORT POSITION** report for week ended Oct.18/85 is carried OVERLEAF PAGES 3 AND 4 OF THIS NEWS LETTER LTD.



D.D.M.	FROM (R)	TO (L)	LENGTH (R)	Cu, %	Au, oz/t	Ag, oz/t
85-C	82.5	125	1.5	2.15	0.044	1.66
85-D	10	11	1	0.938	0.030	0.80
85-D	36	44	8	1.38	0.008	0.89
85-D	44	56	12	0.262	0.004	0.22
85-D	56	58.5	2.5	2.12	0.006	1.12
85-D	64.5	71	6.5	1.17	0.018	0.785
85-D	122.5	123	0.5	3.33	0.040	1.98
85-E	33	37	4	0.529	0.006	0.45
85-E	53.5	54.5	1	0.419	0.004	0.30
85-E	106	131	25	1.76	0.019	1.22
85-E	106	114	8	1.60	0.019	1.08
85-E	117	126	9	2.90	0.031	1.90

PROPERTY FILE

SECTION 0-00W  
 THROUGH SOUTH EAST MINERALIZED ZONE  
 GOLDBRAE - NEXUS - WESTMOUNT  
 NANAIMO LAKES COPPER - GOLD PROSPECT  
 VANCOUVER ISLAND, B.C.

CHERT & TUFF



For Maps see Prop. Fil

30 - 1

Area of  
92F-182<sup>F</sup> Skarn  
and  
92F-184<sup>FR</sup> Mountain  
(Jubilee)

92 B, C, F

Gunnex Ltd

E + N

MINERAL OCCURRENCE #30  
(including Hunting's #10)

"Fourth Lake Area"

EN. 133

GENERAL INFORMATION:

Location and Access:

N.B. The following refers more to an area than to any particular showing, although there are some minor showings, mostly rust and pyrite, in this area. One of these is Hunting's #10 showing north of river.

The area referred to is a Sicker limestone-diorite contact area, trending N-S east of Fourth Nanaimo Lake and west of Green River, then extending north across Nanaimo River, terminating on the slope of Tangle Mountain. Access is by logging roads on both sides of Nanaimo River and west of Green River.

List of Maps and References:

Gunnex Reports:

- 1) Geological Report No. 2, March-April, 1964, page 5, by H. Laanela.
- 2) Geological Report No. 4, June, 1964, (refers to area north of Nanaimo River), by H. Laanela.
- 3) Geological Report No. 5, July, 1964 (refers to area south of Nanaimo River), by H. Laanela (with map).
- 4) Weekly reports for 1964, by T.F.Schorn, various maps.

Hunting's Survey Report:

Part I, Geology, field notes for July 5, 1962, by A.C.Jones.

Work done by Gunnex 1963/64:

The general area was mapped by H. Laanela during summer, 1964. He thought then that there might be a possibility of finding deeply buried skarn along intrusive and limestone contact, similar to "skarn" showing (see #21

Since then a base line was laid out east of Fourth Lake; later an "extension" was laid out north of this, across river, including #10 showing (Hunting's) and several other interesting areas.

Soil sampling and mag survey were then carried out together; some self potential work was done over highest mag anomaly. Results, plotted on maps, are included.

Also, some prospecting, in conjunction with reconnaissance soil and silt sampling, has been done in the general area, including the contact zone and Hunting's #10 showing.

Staking- No staking of any kind has been done in the area.

PROPERTY FILE 92F182

## Geology:

Large scale mapping (1" :  $\frac{1}{2}$  mile) has been done over the area, with particular attention paid to the limestone belt and diorite contact. Following rock types were observed:

- 1) Sicker volcanics - form the lower, eastern part of the area, overlain to the west by Sicker sediments and both north and south, at higher elevation by Vancouver volcanics. There is a possible fault contact parallel with Green River, between the sediment and volcanics of Sicker Group. The bottom of these volcanics is nowhere to be seen, being the oldest rocks exposed in the Land Grant area.

These volcanics are well altered, mostly andesitic, usually light greenish-gray colour with mottled surface. Sometimes they appear to be pyroclastic or brecciated. Some tuff and cherty horizons are included with minor argillite and jasper of sedimentary origin.

Their gradation into Sicker sediments is imperceptible, - there is no clear cut division, contact being quite arbitrary and disputable. Usually the upper horizons tend to be more cherty than lower horizons which are of clearly volcanic origin. Sediments, cherts and tuffs (both here and in upper sedimentary formation) seem to have waterlain volcanic origin.

Jasper is quite common in some localities, notably along Green River road and on Green Mountain.

- 2) Sicker Sediments - were mapped east of Fourth Lake, in a N-S trending belt, including an area north of Nanaimo River. Generally, they dip west to northwest and are truncated by dioritic intrusives forming the high cliffs just east of the lake. Average dip is about 30°.

Lower Horizons - along Green River, are mostly cherty, with some argillaceous and tuffaceous bands. Going west uphill and into higher horizons more limy sediments are encountered, until limestone is encountered.

Middle horizons - are interbedded limestone, usually rather coarsely recrystallized ("marblized"), and cherty tuffaceous and argillaceous layers, and include some volcanics. None of the limestone horizons are very thick, only from a few feet to some 10 to 20 feet at the most. They are well exposed on steep, logged-off and burned-over steep hillsides west of Green River. North of river limestone is in direct contact (not observed) with intrusives.

Upper horizons - are on top of the hill near intrusive contact and are more volcanic (andesitic) and partly siliceous in content.

The geology here is somewhat similar to the geology of "Skarn" claims, but over a much larger area. Since most of the limy horizons outcrop at a considerable distance away from the intrusive contact, not too much skarn was directly observed nor expected, even though several pieces of skarn float were found. Considerable epidote was found along contact, especially near the north end of the lake where more rock is exposed due to the logging and where the limestone horizons are apparently closer to the surface and closer to the intrusion also (this might explain higher soil anomalies there).

Limestone (with some chert) just north of the river, being in closer proximity to intrusions, shows more alteration and epidotization there, with skarn-like patches in it. It appears to dip more steeply here, up to 75°.

On the basis of geology, an assumption was made that there might possibly be more skarn at depth, say below the 1,000 foot depth or more (see the tentative cross-section diagram), along the projected contact of interbedded limestone (or even below it) with intrusives.

- 3) Vancouver volcanics - form the topographically higher areas at both north and south ends of this belt. These volcanics are in contact with diorite along Fleece Creek and north of Nanaimo River. Toward Tangle Mountain they seem to be intruded by a diorite "tongue" and much shearing and rustiness is observed there.
- 4) Coast Intrusives - mainly dioritic rocks, form the area surrounding Fourth Lake and west of it. They are strongly altered by contamination and hybridization with Sicker and Vancouver groups. In such cases it has often purplish or greenish colour, especially along ridge east of Fourth Lake, near contact.

A "tongue" of diorite seems to intrude Vancouver volcanics north of the river here, causing much hybridization and alteration, with many rusty shears. Hunting's #10 Showing is located near it, on contact zone.

- 5) Nanaimo Sediments - are represented by basal Benson conglomerate near south end of Fourth Lake, overlaying all other rocks.

#### SUMMARY OF WORK DONE (1964):

Besides mapping, some prospecting has been done on the area, mostly in conjunction with other work. No showings of any particular interest were seen.

Hunting's #10 showing north of river has been visited; it consists of pyrite veinlets, with minor copper stains, in volcanic rocks with granitic dykes, all much crushed. On the hill east of Lake, nothing of any particular economic interest has been found by prospecting, except indications of skarn and some pyrite. However, a rock sample (diorite) taken by T.F. Schorn, near base line on hill, assayed 0.3% copper mineralization being disseminated throughout rock. No systematic detail prospecting has been done here.

Mag - Survey (see map) indicates several "highs" in the area, and could possibly be explained with occurrence of skarn or magnetite at depth. There is possibly more room for the "mag work", especially south of Fleece Creek and along south end of limestone belt. Total range in the area is 4,000 - 5,000 gammas.

Self-Potential survey indicates an anomalous area near the highest mag anomaly in the area, apparently close to or right at contact. The anomaly is in excess of 120 millivolts (see map).

Soil sampling indicates some slightly anomalous area toward the north end of the base line, but none toward south, where the overlaying volcanic horizons are quite thick. In fact, no soil anomalies are to be

expected under the circumstances since the projection of limestone beds (see cross section) would put the possible mineralized skarn zone, if it exists, too deeply down to have any surface effect on soils.

Soil results for the "extension", north of river, are not available. It is expected that the values will be higher there.

COMMENT:

Much of the possibilities of finding a skarn zone is pure conjecture based on geological considerations and on similarity with other "skarn" deposits on Island. No advanced exploration work can be recommended at present stage on geological speculation alone, considering the projected depth of this proposed and possible skarn zone. Any diamond drilling, in case it is to be considered, might be in excess of 1,000 feet, possibly in excess of 2,000 feet or more, where cost will become prohibitive.

However, more surface work is recommended, which should include prospecting for skarn and possible sulphide mineralization, paying particular attention to anomalous areas in the contact zone.

More geophysical work is also in order, since this seems to be the only method by which some "clues" may be obtained. This work should then be scrutinized by persons with advanced geophysical training. The problem here is the depth of proposed skarn zone, and hence some method should be used with penetration to depths in excess of 1,000 - 2,000 feet.

One of the methods to be used could be a careful E.M. (electromagnetic survey, possibly using two-way instruments using both high and low frequencies, with maximum coil separation. Although, it is not expected that E.M. survey is quite suitable for detecting skarn type deposits, which generally are discontinuous and hence poor conductors.

More "mag" and S.P. (self-potential) work could be easily done. S.P. might be more suitable than E.M. but here also the problem is depth.

I.P. (induced polarization) survey might be the best method, but it requires a special crew and this work has to be contracted out, making it expensive to run. It also requires line-cutting.

Probably not much reliance can be put on soil sampling, except maybe in the northern area.

Reappraisal of this area seems to be necessary at a later date, when additional work has been done on it; this reappraisal probably would include the considerations of results of drilling on "skarn" claims.

H. Laanela  
February, 1965.

HL:s

REVIEW OF MINERAL OCCURRENCE #30

(end of 1965 Season)

Reports and References:Gunnex Reports:

- 1) Geological Report #13, Sept-Oct, 1965, pages 1-2, by H. Laanela.
- 2) Geological Report #14, Nov. 1965, page 3, by H. Laanela.
- 3) Weekly report on E & N Land Grant, Oct 25-31, 1965, by T.F. Schorn.

Work done by Gunnex, 1965:

An E.M. survey was done in the 4th lake area last fall by Laanela and Webb, using the Sharpe SE300 Transceiver sets (2-frequency, 2-way instruments). Work was greatly hampered by rain and broken cables. Grid cut by D.C. Douglas in the previous fall was used, although the tags and pickets were lost in many cases. 400' instrument separation and parallel-line broadside method, with low frequency, were used (except for occasional checking of high "cross-overs" with high frequency).

The area covered extends from 52N to 136N on the base line, each line averaging about 1800'. On lines in the north half of the area covered so far the results were less encouraging than in the south half. Here numerous cross-overs were noticed, in order of 5-10 degrees total and occasionally higher. These are not considered to be very significant, although more than expected at this coil separation where the possible penetration would not exceed 200'. The hypothetical "skarn zone", if such exists, is expected to lie much deeper, down to 1000' - 2000' range (?), - actually too deep to be picked up by ordinary E.M. instruments; also due to nature of skarn type mineralization no good conductivity should be expected with mineralization even at surface. (see H.O.#21). It is possible that the cross-overs encountered here were due to some shear zones.

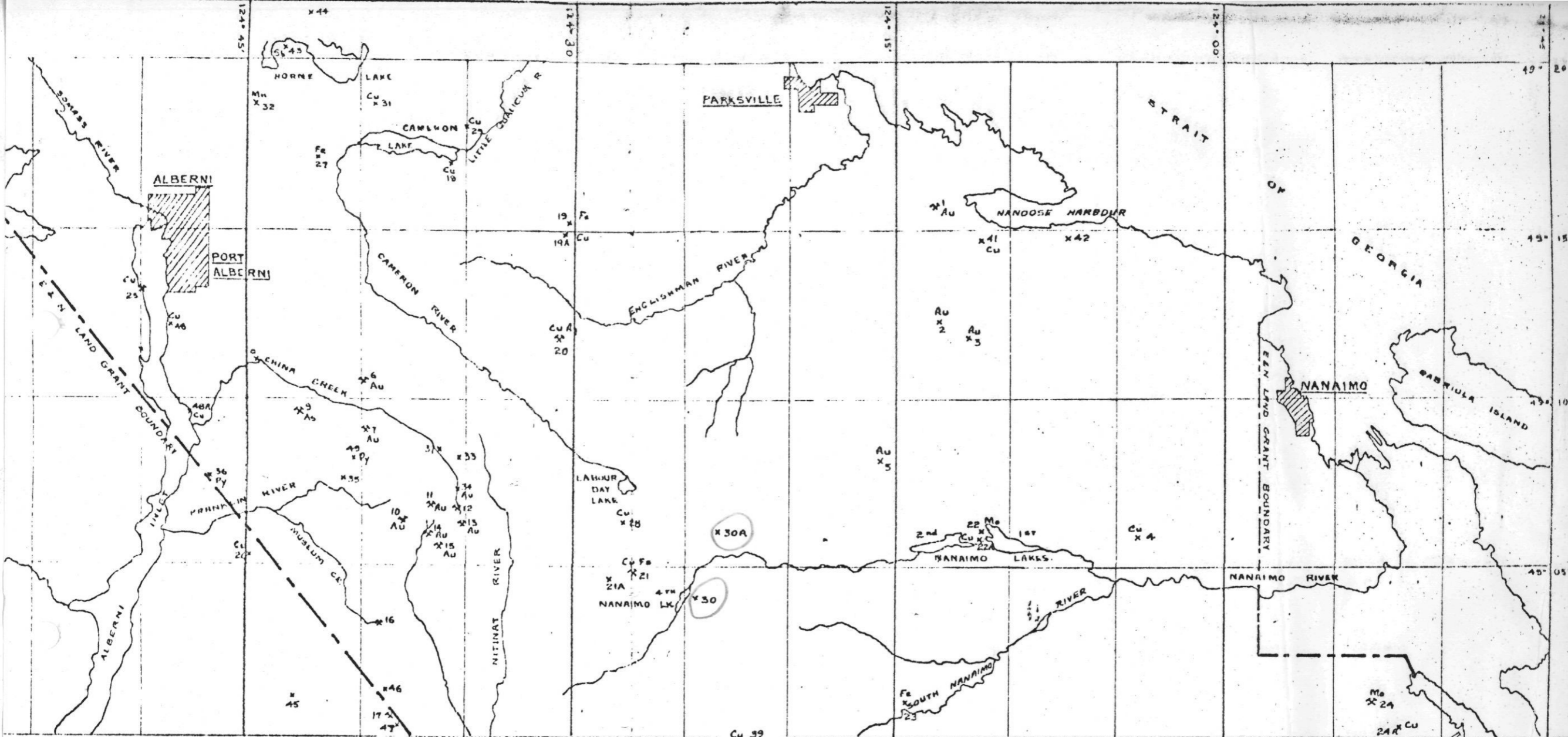
The plan originally was to cover the area by using 400' separation and then re-run it by using either 800' or 1200' separations if possible (i.e. the maximum separation possible) to get the deepest penetration. Time did not permit this.

Comments:

It is still felt that the additional E.M. survey should be completed, including the "extension" north of the river. Possibly some other geophysical methods could be applied also, if cost and time permit.

H. Laanela  
February, 1966

HLSa



SHEET #5      SHEET #4      SHEET #3      SHEET #2      SHEET #1      LADYSMITH

**LEGEND:**

THE FOLLOWING CONSIST OF 2 LOCATIONS:

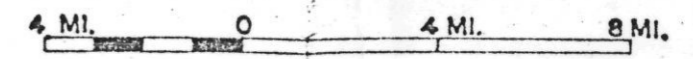
- 17 (13A)
- 21 (21A)
- 22 (22A)
- 24 (24A)
- 30 (30A)
- 48 (48A)

- \* MINOR OR UNEXPLORED MINERAL SHOWING
- \* MINE OR MAJOR SHOWINGS

**EN. 133**

**GUNNEX LIMITED**

INDEX MAP FOR MINERAL OCCURRENCES  
 ALBERNI-NANAIMO MAP-AREA  
 E. & N. LAND GRANT



For Numerous Maps, See i.p. File

92B, C, F

Gunnex Ltd.

E+N

MINERAL OCCURRENCE #21

(Hunting's Survey #8, and including #9)

"Skarn Group" (formerly #8 showing)

EN. 135

GENERAL INFORMATION:

Location and Access:

"Skarn" group claims are located about 30 miles WSW of city of Nanaimo, north of upper part of main Nanaimo River. The main showings are 3 miles due south of Labour Day Lake, and 3 miles west along logging road from Fourth Nanaimo Lake, at an elevation of approximately 2,300' above sea level.

There is a good asphalt-topped logging road from No. 1 Highway, along Nanaimo River to Fourth Lake. Starting from end of First Nanaimo Lake this road becomes, passing a gate, a private logging road of Comox Logging and Railway Company (a subsidiary of Crown-Zellerbach, which company holds the access and timber rights to the area).

From Fourth Lake on the road becomes a good gravel road; then crosses over to north side of river. Less than half a mile past this crossing a steeper side road turns north uphill, off main road. Taking second branch to the left of this road-branch takes one to the showings and to present drill camp near the end of the road. Main trenches are on the last logged off hill and also in timber just west of it, north side of road. 4 original claim-posts and base line at zero point are only 400' uphill from the road.

This road is presently in a rather rough condition in places and can be travelled only by 4-wheel drive vehicles, or trucks.

The main showings, trenches and drill holes are located on the four original claims, numbered 1-4, called "Skarn" zone. Bearing of base line is N35°W, with picket lines at right angles to it.

At present there is a diamond drill camp set up on the property, consisting of 2 tents.

List of References, Reports and Maps:

Since this is arecent discovery, no mention of it is to be found in any of the old reports. This summary is based mainly on our own work during last two years.

- Gunnex Reports: 1) A.P.Hutchison- Report (geological) on #8 Showing, 1963.  
 2) A.P.Hutchison - Geological Report #4, September, 1963.  
 3) T.F.Schorn - various weekly reports (progress notes) for 1963 and 1964. Includes maps plans and sketches submitted separately.  
 4) H.Laanela - Geological Report #4, June, 1964.  
 5) H.Laanela - Geological Report on Skarn Claims June-July, 1964, including general and detail geological maps of the area and claims #1-4 respectively.

PROPERTY FILE

92F182

- 6) H. Laanela - Report on Air-Borne Magnetic Anomaly #39, January, 1965.
- 7) A.G. Jones (Hunting's Survey Corp. Ltd.) - Geological and Geophysical Investigations of Nanaimo Map-Area. Part I, Geological Report, November, 1962.
- 8) Matthews (CPOG) - The Mineral Resources of the Esquimalt and Nanaimo Railway Land Grant, 1962 (no references to this showing).
- 9) Maps of geochemical (soil sampling) and geophysical (E.M., Mag, and S.P.) surveys; plans of trenches, etc. (Most of these maps were reduced in scale and simplified, where necessary, and included here).
- 10) Diamond Drill Hole Log Sheets for Holes #1-3, 1964 and diagrams drawn from this data.

Summary of Work Done by Gunnex, 1963/64:

"Skarn" claims #1-4 were first staked for Gunnex Limited on September 24, 1963 by Mr. T. F. Schorn, and are still in good standing, while exploration is being carried on.

Additional 11 claims, called "Skarn" #5-15 were staked last year west and north of here, to protect our interest in more poorable areas.

(Prior to this apparently some staking was done in this area by several individuals, some of them surveyors for logging companies who noticed magnetic compass deviations in the area during their work. However, these stakings were not followed up by additional work and the claims lapsed).

The copper occurrence was first mentioned by Jones in Hunting's report (#8 and 9 Showings); as a result this group is often referred to as #8 Showing, using a Hunting's reference number. However, it is recommended that from now on the name "Skarn" be used to avoid any mix-up of numbers when referring to this showing or property.

Hunting also reports an air-borne magnetic anomaly, #39, south of the showings. This has been checked by our ground surveys (see report on A.B. Mag Anomaly #39).

All mineral rights, except for gold and silver, are held by CPOG.

Numberous skarn-type copper and magnetite showings were discovered and located by our personnel during 1963 and also 1964 while prospecting, trenching and mapping on this property.

Preliminary geological mapping was carried out by Mr. A.P. Hutchison in 1963. More extensive and detailed mapping was done during the summer of 1964 by H. Laanela, covering an area of 2,800 x 2,800 feet on 1"=100' scale (part of which map is included here).

The general mapping of surrounding area was also done by H. Laanela (part of which is also included here).



Several trenches and numerous pits have been dug and blasted on the property, most of this work being done on claims #3 and 4, and also on claims #1 and 2. (see map). All trenches were rock-sampled and assay results were plotted by Mr. T.F. Schorn.

A "Mag" survey has been done on original 4 claims and later also west of the main showings, particularly on claims #5, 6 and 9 (checking Airborne Mag. anomaly #39). (See map).

An E.M. survey, using a "Sharpe" instrument, with parallel line-vertical loop method and on 1,200 c.p.s. frequency was done on "Skarn" zone (see map).

Some S.P. survey was done over the "Skarn" zone also (see map).

Original soil sampling was carried out over entire 4 claim property, on a 200' x 200' grid along picket lines. All samples were analysed both for THM (Total Heavy Metals) and for copper. Later some detail sampling was done also over more anomalous areas. More samples were taken also from the area west of here, similar to "mag" survey. Later a 200' x 50' detail grid was used (see map).

Diamond drilling was started in full 1964; it had to be stopped temporarily due to the snow conditions. The access road is in process of being re-opened now, and the drilling should be resumed shortly. Drilling is being done by Canadian Longyear Limited. They erected a tent camp at the site, now collapsed under snow.

So far 3 holes have been drilled near NW end of the showing:

Hole #1	-	Location 0+00 - 9+00W,	Azimuth 220°,	Dip 45°,	Length 587'
Hole #2	-	Location 0+60S-10+35W,	Azimuth 220°,	Dip 45°,	Length 564'
Hole #3	-	Location 0+50N-11+40W,	Azimuth 220°,	Dip 45°,	Length 677'

(Azimuths and dip may vary; dips may exceed 50° in some cases). Plans for present are to extend the #3 hole deeper, until out of skarn, when drilling is resumed.

At least a few more holes are planned in addition to these three holes, next ones being probably at the central part of Skarn zone.

(For core-logging interpretation see the diagrams included.)

In addition, stream (silt) sampling, with some prospecting, had been carried out along streams in the general area.

A base line, in conjunction with staking has been cut on the property, with picket lines on the first four claims.

GEOLOGYTopography -

The property is located in the central high mountain range which trends NW along the centre of Vancouver Island and becomes then known as Beaufort Range. Most of the property is sloping southerly, in series of hills and knobs, toward Nanaimo River, from 2,500' to about 2,000' above sea level on the property. Closer to river the terrain drops more steeply. Farther north the terrain becomes a series of diorite ridges.

Outcrops are abundant where area is logged; in timber and bedrock is usually covered by soil and undergrowth, except along bare ridges north of base line.

A few small creeks run through the property, their sides usually quite steep.

Main showings are on two rounded hills along base line. Central part of Skarn zone is in a logged off area, where outcrop is abundant and stripping is relatively easy. Both western and eastern ends of skarn zone are in heavy timber, presenting some problems in access and development.

Snow at this altitude can be found until late spring; the last two winters indicate heavy snowfall.

Regional Geology:

The property is in the central mountain ranges of Island, which is a "structural high"; the uplift is more of a result of faulting than folding. Hence the oldest rocks, Sicker group volcanics and sediments, are exposed in this central area. Flanking these are later volcanics, Vancouver Group, and granitic dioritic Coast Intrusives. Regionally, often Vancouver volcanics are found "capping" earlier Sicker group rocks at higher elevations.

The upper part of Sicker group consists of Sicker Sedimentary Formation, usually chert and tuff, with some marblized limestone and limy horizons which, when in contact with dioritic intrusives, have metamorphosed into skarn type lime-silicate rock, such as here.

Remnants of Cretaceous sediments, mostly basal conglomerates of Nanaimo group, can be found at some localities, noticeably NW of showing, overlaying the earlier rocks.

Youngest rocks mapped are Tertiary Intrusives - feldspar porphyry (dacitic matrix) sills and dykes cutting older rocks, notably in the area surrounding and south of Labour Day Lake, to the north.

General structural trend is a series of long extensive faults trending NW-SE, for example along Cameron River and Green River valleys.

(see also geological table included with map legend).

### Geology of Skarn Zone:

This deals with the geology of original showing, consisting of claims #1 to 4, the area of which was mapped in detail (see map); formerly it was called #8 showing, according to Hunting's Survey.

On these claims, the following sequence could be outlined, starting with youngest rocks:

- a) Minor feldspar porphyry dykes (Tertiary).
- b) Dioritic Coast intrusives, altered near contacts; dykes.
- c) "Marblized", white Sicker limestone.
- d) Limy Sicker sediments, changed into skarn by contact metamorphism due to diorite intrusions. With magnetite and sulphides.
- e) Chert, tuffaceous chert and cherty tuffs of Sicker sedimentaries.
- f) Sicker volcanics - cherty tuffs, tuffs, flows, and pyroclastics of basaltic to andesitic composition. There are also some possible post-Permian basic dykes seen to cut Sicker group.

1. Sicker volcanics cover the lower, southern part and are also found NW of skarn zone. They grade into Sicker sediments, with which they are often interbedded.

Well away from sediments they are found to be largely pyroclastic breccias, andesitic flows and some tuffs, usually coarsely bedded. Striking NNE, dipping west steeply. No economic minerals seen in these rocks.

2. Sicker sediments are mostly cherts and cherty tuffs, with more limy horizons coming in higher, where skarn is to be found. Apparently it is topped by almost pure, white, re-crystallized limestone.

These rocks lay on top of volcanics, striking generally ESE. Toward west the average dip seems to be 60° north and toward east 80° north (and truncated by diorite).

3. Limestone and limy sediments are economically the most interesting rocks in the area, forming the skarn zone near intrusives, and then containing magnetite and sulphides.

Limestone itself does not appear to be changed in any great extent except for re-crystallization ("marble"). At west part one larger depression and several smaller holes, as well as some small caves, are seen, suggesting sink holes. Diamond drill hole #2 apparently hit an underground cave, directly connected with the larger sink hole.

Limestone probably acted as a source of lime and carbon dioxide during metamorphism. Being more plastic under stress, it probably flowed more readily than other sediments which metamorphosed into skarn. This could account for the rather sharp demarcation between limestone and skarn, and also for the fact that there are at least 3 separate, seemingly unconnected (on surface) limestone occurrences, as if the original limestone bed was broken apart and squeezed aside by an intruding diorite "tongue" toward the west end of the skarn zone.

4. Skarn zone: That skarn was formed from limy sediments rather than from pure limestone, and not from volcanics either, is attested by features in skarn that suggest relict bedding, - a layered effect consisting of different bands of minerals having the same general strike and dip as the sediments farther south. In fact, in one place distinct bedding could be seen.

Generally, it is concealed that pure calcium carbonate rocks are relatively stable under metamorphic conditions and suffer little change except recrystallization, while impure, limy rocks are extremely sensitive to changes of pressure and temperature and readily change into new mineral combinations,, thus giving rise to new lime-silicate rocks (skarn). Carbon dioxide is freed, which in turn facilitates further changes. These changes may be rather rapid, limited only by the amount of heat available; if heat becomes insufficient, there will be an abrupt transition between altered and unaltered rocks. This could be illustrated by rather definite boundary between skarn toward north and less altered sediments toward south?

That the reactions took place in rather solid state is illustrated by relict bedding seen in skarn. Granularity of skarn minerals indicates slow cooling, which in turn indicates great depth during the metamorphism; this also is correlated by presence of medium- to high-temperature minerals in skarn, such as garnet, diopside, vesuvianite and epidote. All skarn minerals were probably implaced before economic mineralization took place.

Sediments and volcanics form the foot-wall of the skarn zone to the south.

Diorite is seen intruding skarn from three sides, truncating the beds at north and east. Dyke-like intrusions of diorite at east end of skarn zone seem to be intruded more or less parallel to the bedding. Toward west end of the skarn zone intrusion is more irregular and harder to follow; it is difficult to draw any clear-cut conclusions. However, there seems to be a "tongue" of diorite intruding from the north, across original bedding, pushing pure limestone out of the way, and same time giving rise to metamorphism in underlying limy sediments and volcanics. Often here the contacts between intrusives, sediments, volcanics and metamorphics are rather arbitrary and ill-defined, since diorite itself is also greatly altered and contaminated mostly by epidotization and retains little of its original characteristics.

No direct evidence of faulting was seen to explain some of the discrepancies, although a depression partly following a creek, from 8+00N - 13 +00W to approximately 4+00S - 4+00W suggests a fault.

Skarn zone minerals are rather typical of lime-silicated contact-metamorphic rocks. They are:

- Epidote - greenish yellow, sugary. Very abundant, form large masses of almost pure epidote-skarn, or layers "interbedded" with other minerals, such as garnet. Very common in altered and contaminated diorite also along contact.
- Garnet - of grossularite-andradite composition. Brownish to reddish. Forms also large patches of "interbedded" layers in skarn.

- Diopside - greenish, well developed aggregates of crystals: less abundant, except toward east part where it is quite common.
- Vesuvianite- (idocrase); some reported. Difficult to tell from garnet.
- Quartz - crystals common in places.
- Calcite - only in minor amounts.
- Others - there are at least two minerals that are not indentified: one is black sooty mineral, which Hutchison suggested might be Mn-oxide. Other one, quite abundant, is grayish-green, fibrous minerals which might be some amphibole or pyroxene.

Economic and sulphide minerals, will be discussed separately. They are magnetite, chalcopyrite, pyrite, pyrrhotite and minor galena and sphalerite.

5. Coast Intrusives mapped here are dioritic rocks, which are altered when in contact with skarn, sediments or volcanics. They are part of a larger dioritic body east and southeast of the property, extending as far as east side of Fourth Nanaimo Lake. If in contact with limy rocks, they are epidotized, if in contact with andesitic rocks and other volcanics they tend to have a darker, chloritic-green appearance; often also purplish.
6. Tertiary Intrusives consist of feldspar porphyry dykes and sills. Several small dyke-like bodies were mapped on the west part of the property. Groundmass is usually greenish-gray, fine, sometimes with slender needles of hornblende. Phenocrysts are usually 1/4 inch across and consist of dullish white sodic (Na) plagioclase.

Its relationship to sulphide (or any other) mineralization was not established or rather, there does not seem to be any on present evidence.

#### Minerals

- Pyrite - seen in minor amounts, usually with Cu minerals.
- Pyrrhotite - some seen toward south boundary of skarn zone.
- Chalcopyrite - main ore mineral, seen mostly in trenches and pits scattered over skarn zone.
- Malachite - usually indicative of chalcopyrite below, seen as stain on skarn outcrops.
- Azurite - mostly seen when ore is exposed to weathering after trenching an blasting.
- Galena - reported as minor occurrence.
- Sphalerite - with galena, as minor occurrence.
- Magnetite - fairly abundant toward and close to diorite contact, especially at east end, where it is rather massive. Occurrences correlate well with ground magnetometer

Origin:

Paragenesis of minerals is not known, since no microscopic study has been done here. However, it is assumed that magnetite and sulphides are later, contact-metasomatic minerals in lime-silicate rocks.

Pyrrhotite and magnetite both indicate high temperature - high pressure conditions. (The same could be said for diopside, epidote and vesuvianite, which probably were deposited prior to metallic minerals. Garnet and epidote also suggest replacement in depth).

Chalcopyrite, galena and sphalerite are indicative of intermediate temperatures and pressures, and they could have been deposited later, - after the heat had dissipated somewhat.

Sulphides, especially chalcopyrite, and magnetite occur separately, irregularly, without any definite size, body or shape in the skarn zone. No structural factors have been established, except the proximity of diorite to limy rocks.

In this respect these occurrences here are similar to typical contact - metasomatic ore-deposits: difficult to find, no clues present, difficult to follow; usually small, can be terminated abruptly; as a result, - costly to explore and to develop by conventional methods.

Trenching:

Several trenches and numerous pits have been dug and blasted on the property. Results so far indicate some small high-grade pods of chalcopyrite, with some lower grades in between. Not much continuity has been established. Most of this work is done along some thousand feet of base line and only a few hundred feet from it.

On claim #2 magnetite, some massive, is exposed in several pits, but hardly any copper.

It is unlikely that any new occurrences can be found by surface work.

Geophysics:

- 1) Mag-Survey - Airborne magnetometer survey indicated originally magnetic anomalies in the area. Later checking by ground mag-survey established the magnetite occurrences on claim #2, on #3 also.

In general, the ground mag-survey agrees with known magnetite occurrences in skarn zone, and it could possibly be used as basis for further development work, (see map). For work on claim #9 see report on A.B. Mag Anomaly #39.

- 2) E.M. Survey - Electromagnetic survey results were poor, inconclusive and not indicative of any good conductor on the ground.

This was rather to be expected of this type of mineral deposit even under best of circumstances, due to lack of continuity of such deposits (see map).

- 3) S.P. Survey - was done on Skarn zone, giving readings from -12 to 394 millivolts (see map). Two anomalous areas are indicated.

#### Geochemistry:

- 1) Soil Sampling - Original soil sampling was carried out over entire four-claim property, on a 200' x 200' grid along picket lines.

Since the soils here are mostly thin, nonresidual (transported), azonal, and also mostly on the slopes, the results can hardly be expected to be classical, but rather erratic. As a fact, some very low results, comparatively were obtained directly over known economic (Cu) mineral occurrences, while high results were obtained where no mineralization has been found so far.

All soil samples were analysed both for total heavy metals (T.H.M. = Cu + Pb + Zn, in ppm) and for copper alone.

Considering that 200' x 200' grid might be too large to hit comparatively small target areas, an additional soil-sampling survey was done last fall on 50' x 200' grid over skarn and known mineralized zone, to obtain a more reliable picture of possible soil anomalies. These results are plotted on map (see). For claim #9 see report on A.B. Mag Anomaly #39.

- 2) Comparison between THM and Cu Survey - (based on original 200' x 200' grid survey).

THM Survey - Highest values were up to 2,500 ppm. Two of the highest anomalies were away from the known skarn zone, on claim #3, both trending East-West, over Sicker sediments and volcanics. There is not too much outcrop at either locality, hence more checking might be necessary. It is quite possible that these anomalies are caused by collection of metals in low drainage channels, where soil is thicker, contains more organic material and hence more absorbent.

A lower value anomaly, up to 700 ppm THM, is also indicated between points 0+00 - 12+00W and 2+00S - 8+00W. It seems to coincide with the later copper (with minor galena and sphalerite) occurrence discovered while mapping. Another such smaller anomaly is at the centre of property.

Cu Survey - The same samples were analysed for copper and anomaly maps show that there is hardly any disagreement between these two surveys, except in minor detail. The main reason probably is that Cu values approach those of THM values, indicating that there is very little Zn and Pb present in soils if any.

- 3) For detail (200' x 50') survey results see map included. A highly anomalous area (6000+ ppm of THM and Cu) is indicated near 12S-14W.

- 4) Stream sampling - Several streams were sampled on and near property to find indications of metals in silts. There is a small medium-sized anomaly in the stream just west of the showings.
- 5) Diamond Drilling is not completed on the property. - So far 3 holes have been drilled, the last one being the most promising; this hole will be extended after drilling is resumed. (see cross-section diagrams).

COMMENTS:

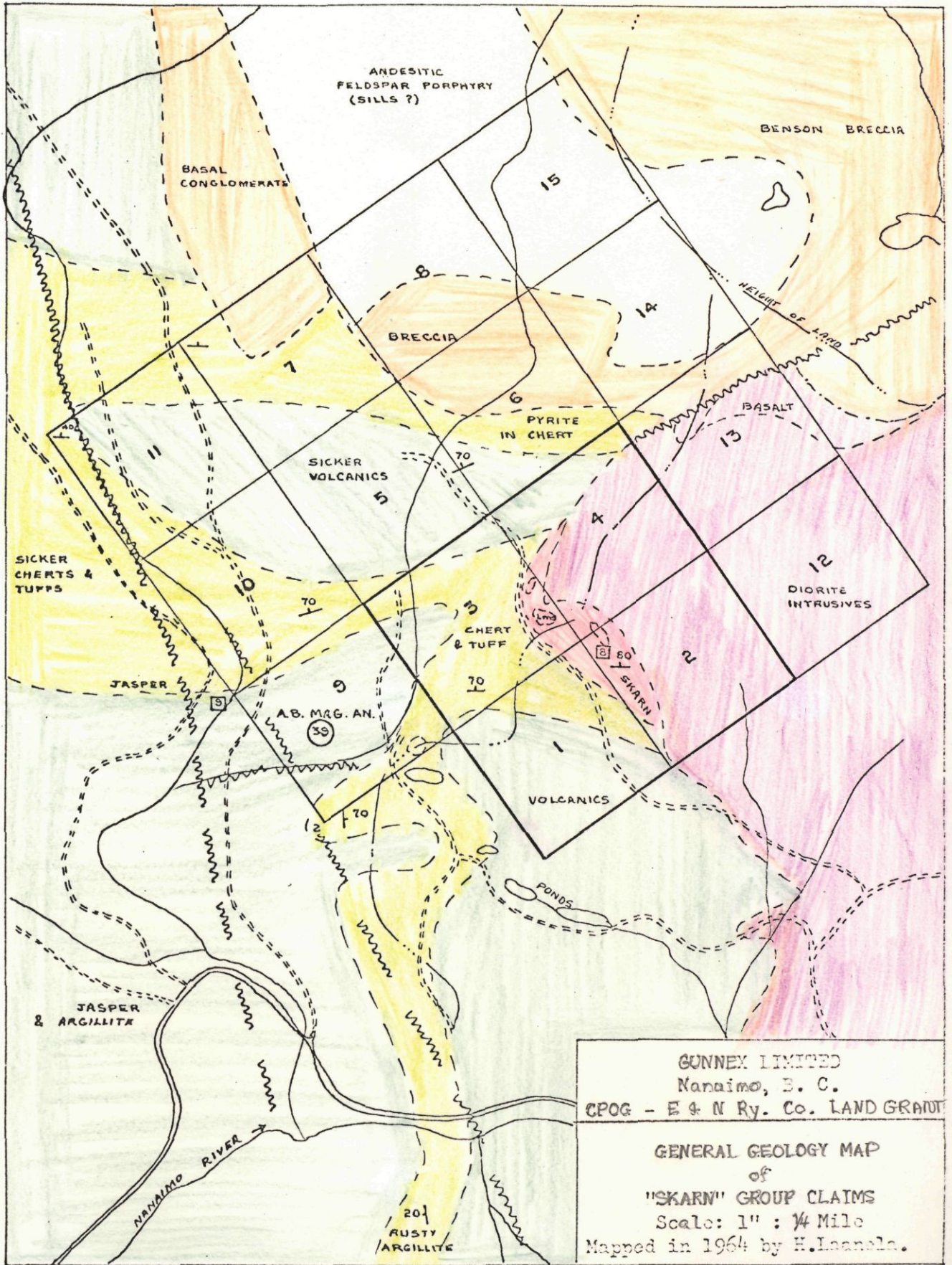
Since more diamond drilling is planned for the showing, no final conclusions will be drawn at this date. Only further drilling, possibly at least several more holes, will give any definite indication of ore at depth, as well as the depth and downward extent of ore zone.

Also, at least some of the anomalies should be more fully investigated. Of course, much of the extent of the future exploration of these anomalies depends on the outcome on drilling. For very little, if anything, is known of extent of underground mineralization; even where present drilling is being carried out the underground picture can only be inferred, due to the erratic and discontinuous nature of the skarn zone there.

H. Luanela  
February, 1965.

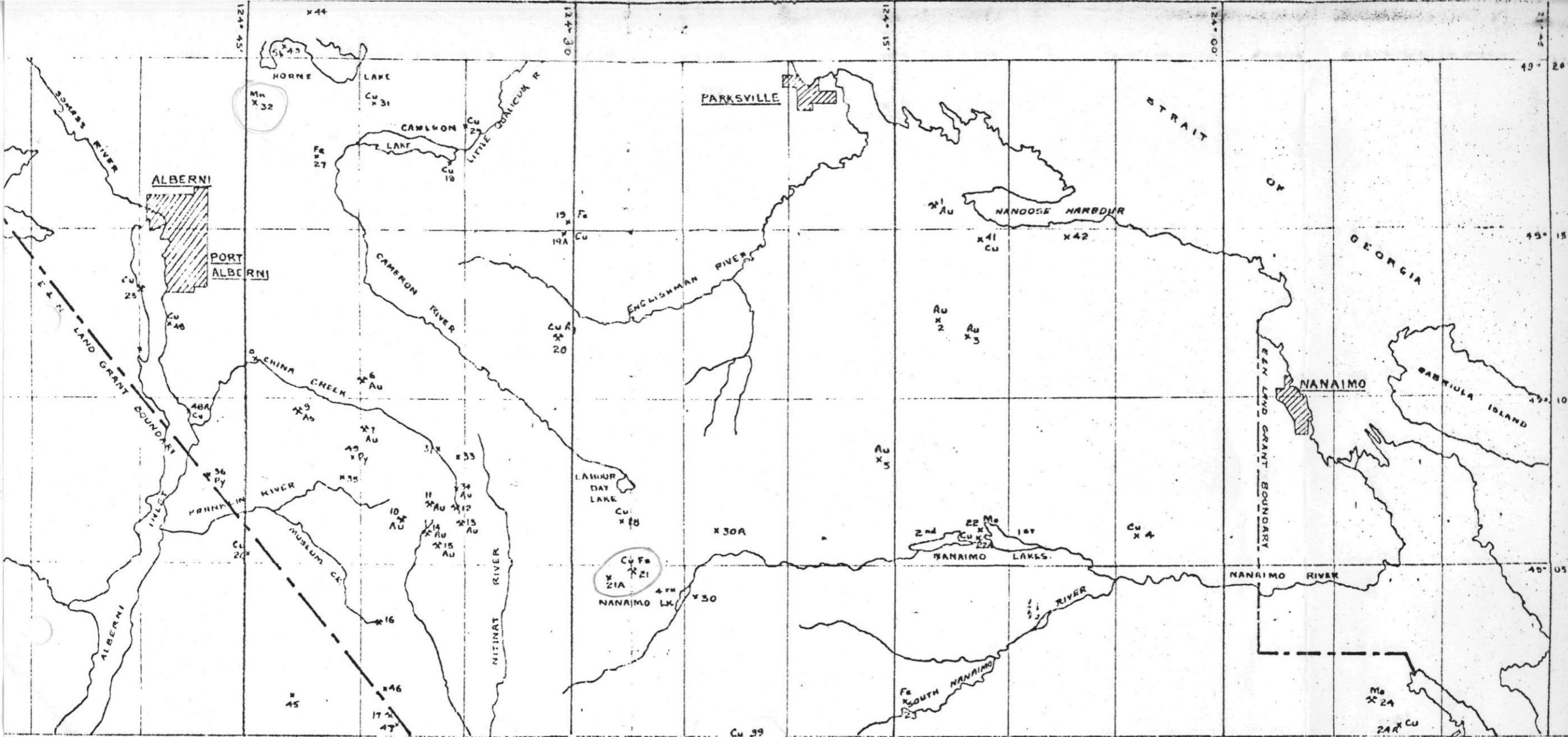
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GENERAL GEOLOGY MAP  
of  
"SKARN" GROUP CLAIMS  
Scale: 1" : 1/4 Mile  
Mapped in 1964 by H. Leanda.



SHEET #5      SHEET #4      SHEET #3      SHEET #2      SHEET #1      LADYSMITH

THE FOLLOWING CONSIST OF 2 LOCATIONS:

- 17 (13A)
- 21 (21A)
- 22 (22A)
- 24 (24A)
- 30 (30A)
- 48 (48A)

**EN. 135**

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**LEGEND:**

- x MINOR OR UNEXPLORED MINERAL SHOWING
- x\* MINE OR MAJOR SHOWINGS

INDEX MAP FOR MINERAL OCCURRENCES

ALBERNI - NANAIMO MAP - AREA

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