

MACK COPPER PROSPECT
NORDENSKIOLD RIVER

By: Dr. A.C. Skerl
September, 1964

013156 (118-A-B)

12th September 1964

1758 Western Parkway
Vancouver 8, B. C.

MACK COPPER PROSPECT
NORDENSKIOLD RIVER
YUKON TERRITORY

INTRODUCTION

At the request of Mr. Aubrey Simmons I inspected this property on the 1st and 2nd September 1964.

I was accompanied by Messrs. A. Arsenault and R. Newsome whose assistance is gratefully acknowledged.

SITUATION & COMMUNICATIONS

The property is 72 miles north-northwest of Whitehorse and 10 miles due west of about mile 75 on the Alaska Highway north of Whitehorse.

At present it is reached by a two mile walk from a small lake that is due west of the property and on which a Beaver aircraft can be landed.

The claims are midway between the Nordenskiold River and its main tributary the Kirkland Creek.

A 12 to 15 mile road could probably be made by crossing the Nordenskiold River at Montague (el. 2000 ft.) at mile 85 on the Alaska Highway.

For immediate action supplies and equipment can be taken in by helicopter from the Alaska Highway at a cost of about \$30 per trip for a 500 lbs. payload plus \$200 ferrying charge.

TOPOGRAPHY

The district has a relief ranging from 3000 to 4000 feet with the immediate area of the mineralization on high ground.

There are two small lakes each about 600 feet long at half a mile due north and the same distance southeast of the main showing.

HISTORY

In Memoir No. 5 (1910) of the Geological Survey of Canada D.D. Cairnes briefly describes the property and it appears that no work has been done since apart from a possible magnetic survey as indicated by several picket lines that are only a few years old.

GEOLOGY

The property is within the area from $61^{\circ} 10'$ to $62^{\circ} N$ and 136 to $137^{\circ} W$ that has still to be mapped by the G. S. C.

During my limited visit the main rock type that I saw was a massive andesite. It has a suggestion of pillow lava structure near the mineralization which has replaced a presumably discontinuous limestone horizon.

About 1000 feet west of the showings an intrusion of syenitic composition was found that extends for at least 2000 feet further west and probably much more.

MINERALIZATION

The main showing consists of a series of outcrops of magnetite on top of and also on the steep east slope of a hill in the southeast quarter of the Bonanza claim as shown on the accompanying map (scale 1" to 50').

On the lower part of the east slope copper stains are plentiful in the magnetite but not on top of the hill where Cairnes suggests that leaching may have completely removed the copper near the surface.

A tunnel for about 25 feet at the southeast corner of the area of mineralization shows that the copper is in the form of chalcopyrite associated with pyrrhotite.

A chip sample was taken along the north wall of the tunnel for 22 feet. The assay is not yet available but is expected to be about the same as Cairnes reported which was 1.80% Cu with a trace of gold and silver across the face of the tunnel.

The outcrops are found within an oval-shaped area about 600 by 400 feet. They may belong to one large lens of magnetite or just small isolated lenses.

From the attitude of the andesite outcrops to the west I suspect that the deposit has a dip of $20^{\circ} E$ at the top of the hill and that it steepens to possibly $40^{\circ} E$ towards the bottom.

About 700 feet to the south-southwest in the Le Roi Fr. M.C., across a small valley, there is another smaller deposit at elevation 4200 feet that consists of 10 to 12 feet of magnetite well-mineralized with chalcopyrite and with several feet of unreplaced recrystallized limestone. It dips at 25° to $30^{\circ} E$ with andesite on both the hanging and footwall for a length of 50 feet. At 150 feet further south there is an isolated outcrop of copper stained magnetite that is about 3 feet wide.

Cairnes sampled the best four feet in the open-cut of the deposit and obtained

Au 0.025 oz, Ag 3.4 oz per ton, Cu 5.55%.

DISCUSSION

The deposit is similar to several that I have investigated on Vancouver Island where there is a discontinuous limestone horizon in a volcanic series that has been mineralized with magnetite and sometimes chalcopyrite. Examples are the Hartt iron deposits near Kelsey Bay and the original deposit of Cowichan Copper Mines.

The size and grade of such deposits are very important but can be determined only by thorough exploration.

It does not seem possible that the magnetite at the Mack Copper can be produced at a profit since a road haul of 100 miles to Whitehorse would cost \$7 per ton and the rail haul to Skagway another \$5 giving a total hauling cost of \$12 per ton whereas the maximum value of a high grade magnetite concentrate F.O.B. Skagway is about \$9 per ton.

The value of the deposit therefore depends on the copper and to a lesser extent the precious metal content.

The mineralization in the tunnel is encouraging especially as there is little to see on the surface immediately above.

An exploration programme is therefore proposed consisting of a magnetometer survey, geochemical prospecting using the rubenic acid method and a diamond drilling campaign.

PROPOSED EXPLORATION

As indicated on the map (scale 1 in to 50 ft) a base line should be carefully set out at an angle of $17\frac{1}{2}^{\circ}$ south and west of the east boundary of the Bonanza claim starting at no. 1 post. The line should be carefully ranged through the country for 1000 feet north of No. 1 post and for 4000 feet south with stations at measured 100 ft horizontal intervals. It should be tied to any close surveyed posts of the crown grants as a check. From the 100 ft stations cross lines should be set out at right angles to the base line for 500 feet to the west and 300 feet to the east with stations at 50 ft intervals horizontally.

Magnetometer readings should be taken at each of the 50 ft stations and also soil samples. Rock outcrops should also be mapped.

At the same time or later a series of diamond drill holes at $-45^{\circ}W$ and each about 100 feet long would be drilled into the known main deposit as set out on the plan.

These 12 holes would demonstrate whether a sizeable ore-body is present or whether there is only a shallow lens. Favourable results would lead to a larger drilling programme down the dip of the main deposit and also on any new discoveries made by the magnetometer and geochemical surveys.

The only serious problem could be the lack of an adequate water supply for drilling particularly if it is decided to go ahead this fall when freezing conditions at an elevation of 3900 feet could halt the operation.

Mr. Arsenault expects that enough water can be obtained from the swamp area about 500 feet north of the No 1 post of the Bonanza claim and 200 feet lower but the water would be reclaimed by means of a sump.

It would be safer to plan the whole operation for say May or June 1965 when run-off water will be at a maximum and working conditions reasonable.

COSTS

A surveyor and two helpers should be able to set out the grid of stations in ten days whilst the magnetometer work and soil sampling would take about a week for a total cost in salaries and wages of about \$ 750

Drilling would cost about \$5 per ft using a Winkie machine and take about one month to complete 1200 feet for a total of 6,000

Geological engineer for magnetometer and core logging 700

Other costs would be:

Trucking supplies	100
Helicopter - ferrying	400
" - freighting	800
Cook house operation 1 month	1,500
Contingencies	<u>1,750</u>

Total for 1 month operation \$12,000

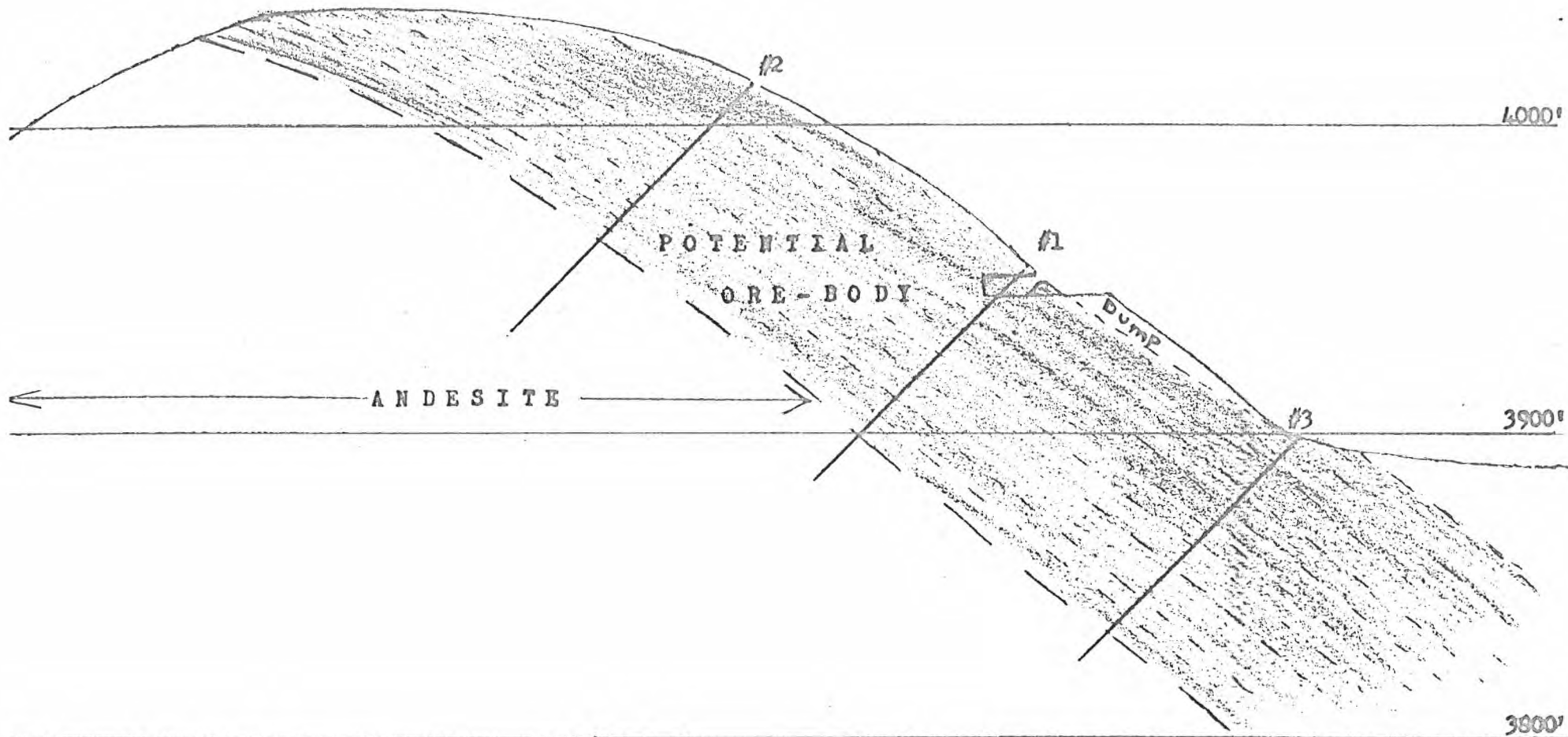
If well organized the whole operation could be carried out in one month.

RECOMMENDATIONS

1. Conduct a magnetic and geochemical survey over the favourable zone for 4000 feet of strike and a width of at least 800 feet.
2. Diamond drill 12 holes as indicated to test the main deposit.

"A. C. Skerl"

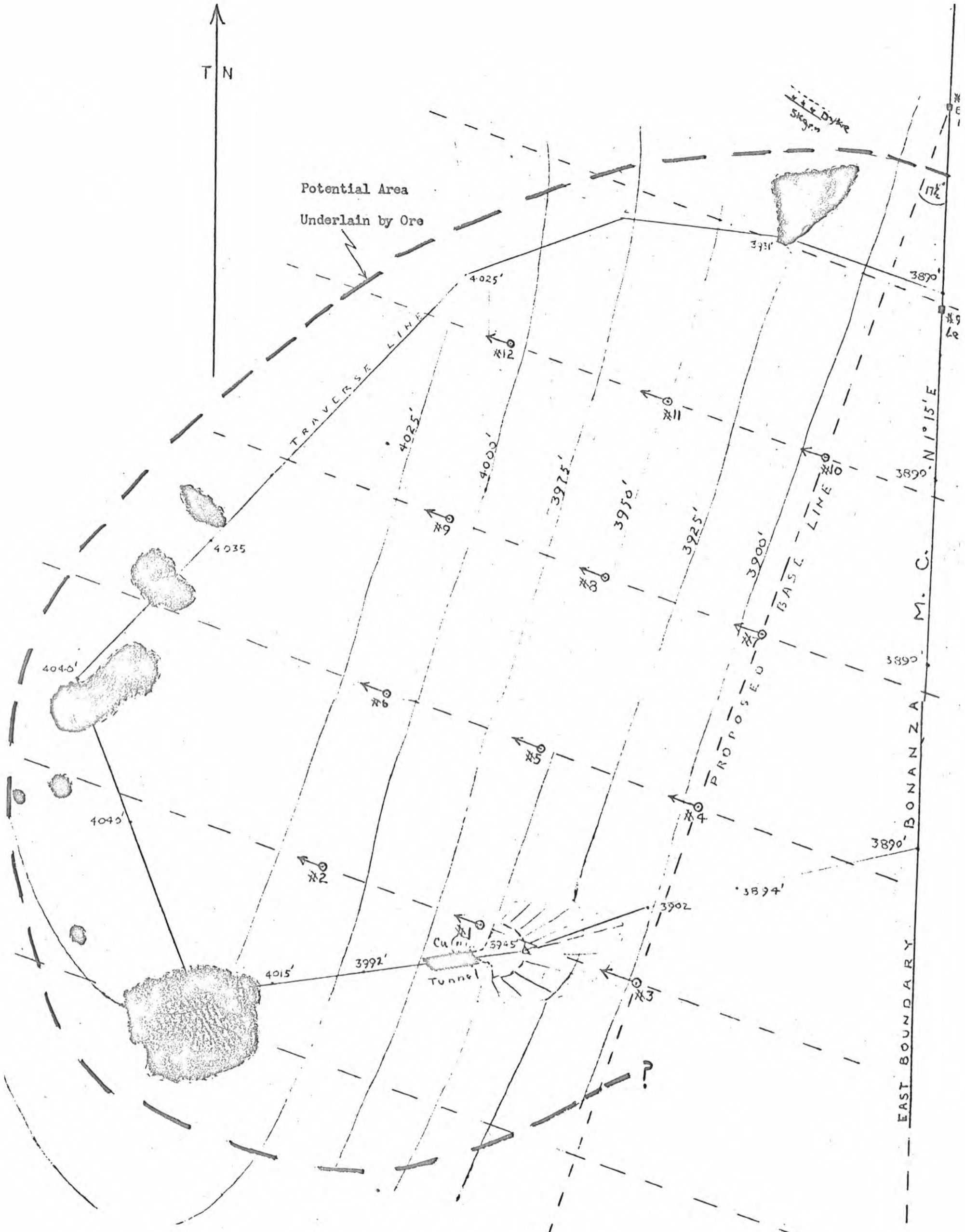
S E A L





MACK COPPER PROPERTY
 SECTION SHOWING PROBABLE
 SHAPE OF MINERALIZATION
 AND PROPOSED DRILLING
 SCALE 1 Inch to 50 Feet

Sept. 1964

H. L. Skelton



N. B.
 Magnetite
 Cu Copper Mineral
 Proposed Drill Holes
 All at -45° WW

MACK COPPER PROPERTY
 PLAN OF BONANZA SHOWINGS
 WITH PROPOSED
 MAGNETOMETER LINES
 AND DIAMOND DRILL SITES
 SCALE 1 Inch to 50 Feet
 Sept. 1964
H. B. Skerf

30th September 1964

1758 Western Parkway
Vancouver 8, B. C.

Mr. J. A. Simmons
1995 Mathers Avenue
West Vancouver, B. C.

Dear Mr. Simmons,

As requested by you I have studied the cost of further development at the Mack Copper property if the preliminary programme that I recommended in my report of 12th September 1964 is successful. The various items are discussed as follows:

1. After freeze-up this year a winter road would be constructed from near Montague to the property for a distance of about 15 miles. It is difficult to estimate the cost but it should not be more than \$10,000. To facilitate finding the best route a study should be made of the air photos.
2. If the results of the preliminary drilling are favourable then a fill-in programme of holes on 50 ft centres would be required to give positive ore which would involve about 6,500 feet of drilling.
3. At the same time the mineralization would be tested down dip beyond the foot of the hill with a grid of holes on 100 ft centres that would involve another 3,000 feet of drilling.
4. Based on the experience of other exploration programme I would expect the cost of the full drilling programme of 10,700 feet including engineering, assaying, transportation, cookhouse etc. to be in the order of \$80,000.
5. Geological mapping and geophysical exploration over the large group of claims now staked around the original crown grants will require an expenditure of at least \$20,000.

Thus, subject to favourable results from the preliminary drilling campaign, an expenditure of \$110,000 can be expected over a period of say six months.

As the outcome of this work it is hoped that at least half a million tons of proven ore and a similar amount of probable ore would be demonstrated with possibilities of still further substantial tonnages.

Yours sincerely,

"A. C. Skerl"

A.C. Skerl, Prof. Eng.

P R O S P E C T U S

ARCTIC MINING AND EXPLORATION LTD. (N.P.L.)

- (a) The full name of the company is ARCTIC MINING AND EXPLORATION LIMITED (NON-PERSONAL LIABILITY) and the address of its head office is Room 1633, 355 Burrard Street, Vancouver, B. C.
- (b) The company was incorporated under the Laws of the Province of British Columbia by Memorandum of Association on the 14th day of October, 1964.
- (c) There have been no amendments to the Memorandum of Association.
- (d) The following are the directors and promoters of the company:
- (i) James Aubrey Simmons, Businessman of P.O. Box 1, Whitehorse, Yukon Territory.
 - (ii) Armand Arsenault, Contractor of P.O. Box 1, Whitehorse, Yukon Territory.
 - (iii) Richard Newson, Mine Foreman, of P.O. Box 1, Whitehorse, Yukon Territory.
 - (iv) James Clinton Snell, Geologist, of P.O. Box 1, Whitehorse, Yukon Territory.
- (e) The auditors of the company are Arthur A. Crawley & Co., 510 - 626 West Pender Street, Vancouver 2, B. C.
- (f) The registry for shares and transfer agent of the company is the Guaranty Trust Co. of Canada, 624 Howe Street, Vancouver, B. C.
- (g) The company is authorized to issue Three Million (3,000,000) shares without nominal or par value with the maximum price to be One (\$1.00) Dollar. Five (5) shares (subscribers) have been issued at 50¢ (Fifty Cents) per share and Seven Hundred and Fifty Thousand (750,000) shares of the company have been issued as fully paid and non-assessable, being for consideration for the transfer to the company of those properties described in m (i)(b) hereof. There is only one class of shares authorized.
- (h) There are no bonds or debentures outstanding or intended to be issued.
- (i) Seven hundred and fifty thousand (750,000) shares of the capital of the company have been deposited in escrow at the offices of the Guaranty Trust Company of Canada, Vancouver, British Columbia. Securities escrowed may only be released from escrow with the consent in writing of the Superintendent of Brokers of the Province of British Columbia. Such securities may only be traded in or transferred with the consent of the said Superintendent of Brokers. If the company does not acquire title or loses its title to the property forming all or part of the consideration for the issue of such escrow shares or if the property has been misrepresented or if the company ceases development work thereon the Superintendent may require cancellation of such number of shares as he deems equitable.

(j) Five (5) shares have been sold for cash at .50¢ per share and no discount or commission has been allowed or paid.

(k) Particulars of the securities other than shares sold for cash are as follows:

Seven Hundred and Fifty Thousand (750,000) shares issued in consideration of properties transferred to the company, as more particularly set forth in paragraph (m).

(l) No shares have been issued or are to be issued nor has any cash been paid or to be paid to any promoter of the company as such.

Seven Hundred and Fifty Thousand (750,000) shares referred to in paragraphs (g) and (k) hereof have been issued to the vendors for properties transferred to the company. The Crown Grants and options have been and are being transferred solely for the cost incurred by the promoters with respect to acquiring of the same.

(m) (i) (a) The company has acquired full title to the following Crown Grants subject to the ordinances of the Yukon Territory.

All that portion of Lot Twenty-one (21), in Group Ten (10), in the Yukon Territory, and otherwise known as the "Leroi" Fractional Mineral Claim, as shown upon a plan of survey of record in the Canada Lands Surveys Records in the Department of Mines and Technical Surveys at Ottawa under Field Book number 11664, which said portion may be more particularly described as follows:

Commencing at Post No. 1 of the said Claim, thence Northwesterly following the eastern limit of said Claim a distance of Five Hundred and Ninety-seven and Eight-tenths (597.8) feet, more or less, to Post No. 5 of the said Claim; thence Northwesterly following the Northeastern limit of the said Claim a distance of One Hundred and Ninety-two and Seven-tenths (192.7) feet, more or less, to Post No. 8 of the said Claim; thence Southwesterly following the Northern limit of said Claim a distance of One Hundred and Eleven and Three-tenths (111.3) feet, more or less, to Post No. 9 of the said Claim; thence Southeasterly in a straight line to the place of commencement and containing by admeasurement One and Eight-one Hundredths (1.81) acres, more or less, together with the right to all minerals within the meaning of the regulations for the disposal of Quartz Mining Claims on public lands;

SAVING, EXCEPTING AND RESERVING all coal and coal mines and all placer mines already located or which may be found to exist within, upon or under such lands; and

SAVING AND EXCEPTING the surface rights of so much (if any) of the said lands within the meaning of the said regulations as have heretofore been sold or disposed of.

An undivided one-half (1/2) interest in Lot Twenty-one (21), in Group Ten (10), in the Yukon Territory, and otherwise known as the "Leroi" mineral claim, as shown on a plan of survey of said Lot of record in the Canada Lands Surveys Records in the Department of Mines and Technical Surveys at Ottawa as Field Book number 11664, containing by admeasurement Thirty and Seventy-one Hundredths (30.71) acres, more or less;

EXCEPTING AND RESERVING thereout all that portion which may be more particularly described as follows: Commencing at Post No. 1 of the said Claim; thence Northwesterly following the Eastern limit of the said Claim a distance of Five Hundred and Ninety-seven and Eight-tenths (597.8) feet more or less to Post No. 5 of the said Claim; thence Northwesterly following the Northeastern limit of the said Claim a distance of One Hundred and Ninety-two and Seven-tenths (192.7) feet more or less to Post No. 8 of the said Claim; thence Southwesterly following the Northern limit of the said Claim a distance of One Hundred and Eleven and Three-tenths (111.3) feet more or less to Post No. 9 of the said Claim; thence Southeasterly in a straight line to the place of commencement; the land hereby granted containing by admeasurement Twenty-eight and Ninety hundredths (28.90) acres, more or less, together with the right to all minerals within the meaning of the regulations for the disposal of Quartz Mining Claims on public lands;

SAVING, EXCEPTING AND RESERVING also all coal and coal mines and all placer mines already located or which may be found to exist within, upon or under such lands; and

SAVING AND EXCEPTING the surface rights or so much (if any) of the said lands within the meaning of the said regulations as have heretofore been sold or disposed of.

An undivided eleven-eightieths ($11/80$) of Lot Fifteen (15) in Group Ten (10), in the Yukon Territory, and otherwise known as the "Bonanza" Mineral Claim, as shown on a plan of survey of said Lot of record in the Canada Lands Surveys Records in the Department of Mines and Technical Surveys at Ottawa under Field Book number 11664, containing by admeasurement Fifty-one and Sixty-five Hundredths (51.65) acres, more or less, together with the right to all minerals within the meaning of the regulations for the disposal of Quartz Mining Claims on public lands;

SAVING, EXCEPTING AND RESERVING all coal and coal mines and all placer mines already located or which may be found to exist within, upon or under such lands, and

SAVING AND EXCEPTING the surface rights of so much (if any) of the said lands within the meaning of the said regulations as have heretofore been sold or disposed of.

An undivided nine-eightieths ($9/80$) of Lot Sixteen (16), in Group Ten (10), in the Yukon Territory, and otherwise known as the "County Antrim" Mineral Claim, as shown on a plan of survey of said Lot of record in the Canada Lands Surveys Records in the Department of Mines and Technical Surveys at Ottawa as Field Book number 11664, containing by admeasurement One Hundred and Sixty (160) acres, more or less;

SAVING, EXCEPTING AND RESERVING all mines and minerals other than copper and copper ore and minerals that are combined with or mixed with copper or copper ore which may be found to exist within, upon or under such lands.

and (b) the following recorded claims:

<u>Name of Claim</u>	<u>Record Number</u>
Saan #1	90499
Saan #2	90500
Saan #3	90501
Saan #4	90502
Saan #5	90503
Saan #6 FR	90504
Saan #7	90505
Saan #8 FR	90506
Saan #9	90507
Saan #11	90508
Saan #12	90509
Saan #22	90510
Saan #23	90511
Saan #24	90512
Saan #13	90513
Saan #14	90514
Saan #15	90515
Saan #16	90516
Saan #17 FR	90517
Saan #18	90518
Saan #20	90519
Hero #1	90778
Hero #2	90779
Hero #3	90780
Hero #4	90781
Hero #5	90782
Hero #6	90783
Hero #7	90784
Hero #8	90785
Hero Extension #9	90786
Hero Extension #10	90787
Hero Extension #11	90788
Hero Extension #12	90789
Hero Extension #13	90790
Hero Extension #14	90791

and (c) It has the assignment of option with Cortlandt Frank George Goulter to acquire Crown granted mineral claim, namely:

"the whole of Lot Twenty (20), in Group Ten (10), in the Yukon Territory, and otherwise known as the "Hazel May" Mineral Claim, as said Lot is shown on a plan of survey of record in the Canada Lands Surveys Records in the Department of Mines and Technical Surveys at Ottawa under number 11164; and containing by admeasurement forty-three and eighty-one hundredths (43.81) acres, more or less, together with the right to all minerals within the meaning of the Regulations for the disposal of Quartz Mining Claims on public lands;

Saving, excepting and reserving all coal and coal mines and all placer mines already located or which may be found to exist within, upon or under such lands; and saving and excepting the surface rights of so much (if any) of the said lands within the meaning of the said Regulations as have heretofore been sold or disposed of."

The said option being between Cortlandt Frank George Goulter as optionor and Armand Arsenault, James Clinton Snell, Richard Newsom, James Aubrey Simmons as optionees.

And it has the assignment of option to acquire:

FIRST: An undivided seventy-one eightieths (71/80) interest in Lot numbered Sixteen in Group numbered Ten (10), in the Yukon Territory, and otherwise known as the "County Antrim" Mineral Claim, containing by admeasurement One Hundred and Sixty (160) acres, more or less; Saving and excepting and reserving all mines and minerals, other than copper and copper ore, and minerals that are combined with or mixed with copper or copper ore, which may be found to exist within, upon or under such lands;

SECONDLY: An undivided sixty-nine eightieths (69/80) interest in Lot numbered Fifteen (15) in Group numbered Ten (10), in the Yukon Territory, and otherwise known as the "Bonanza" Mineral Claim, containing by admeasurement Fifty-one and Sixty-five hundredths (51.65) acres, more or less, together with the right to all minerals within the meaning of the regulations for the disposal of Quartz Mining Claims on public lands;

THIRDLY: An undivided one-half interest in Lot numbered Twenty-one (21), in Group numbered Ten (10), in the Yukon Territory, and otherwise known as the "Leroi" Mineral Claim, containing by admeasurement Thirty and Seventy-one hundredths (30.71) acres, more or less; Excepting and reserving thereout all that portion which may be more particularly described as follows: Commencing at Post No. 1 of the said Claim, thence northwesterly following the eastern limit of the said Claim a distance of five hundred and ninety-seven and eight-tenths (597.8) feet, more or less to Post No. 5 of the said claim; thence northwesterly following the northeastern limit of the said Claim, a distance of One hundred and Ninety-two and seven-tenths (192.7) feet, more or less, to Post No. 8 of the said claim; thence southwesterly, following the northern limit of the said claim, a distance of one hundred and eleven and three-tenths (111.3) feet, more or less, to Post No. 9 of the said claim; thence southeasterly in a straight line to the place of commencement; the land hereby granted containing by admeasurement Twenty-eight and Ninety Hundredths (28.90) acres, more or less; together with the right to all minerals within the meaning of the Regulations for the disposal of Quartz Mineral Claims on public land;

FOURTHLY: The whole of Lot numbered Thirty(30), in Group numbered Ten (10), in the Yukon Territory, and otherwise known as the "Star" Fractional Mineral Claim, containing by admeasurement Fifteen and Seventy Hundredths (15.70) acres, more or less; together with the right to all Minerals within the meaning of the Regulations for the disposal of Quartz Mining Claims on Public Lands.

SAVING, EXCEPTING and RESERVING, in each case, the surface rights of so much, (if any), of the said lands within the meaning of the Regulations for the disposal of such lands as have been heretofore sold or disposed of; and

SAVING, EXCEPTING and RESERVING, in each case, all coal and coal mines, and all placer mines already located, or which may be found to exist within, upon or under such lands;

All of the above lands as shown upon a plan of survey of said Lots, signed by H. G. Dickson, D. L. S., and of record in the Department of the Interior as Field Book number 11664; and subject to the incumbrances, liens and interests notified by memorandum underwritten or indorsed hereon, or which may hereafter be made in the register, and to all stipulations and reservations contained in the original Grant from the Crown.

The said option being between John Cathcart, Harry James Cathcart, as optionors and Armand Arsenault and James Aubrey Simmons as optionees.

- (ii) (a) The Crown grants have been acquired from Richard Frank John Newsom, of Whitehorse, in the Yukon Territory, and the company is obliged to pay therefor the amount which has actually been expended in the acquiring of the Crown Grants.
- (b) The recorded mineral claims have been acquired from Armand Arsenault, James Clinton Snell, Richard Newsom and James Aubrey Simmons, and the company has issued the seven hundred and fifty thousand (750,000) shares referred to in (g) therefor.
- (c) The assignments of the options are from Armand Arsenault, James Clinton Snell, Richard Newsom and James Aubrey Simmons as to the Goulter option as described in (m)(i)(c) and from Armand Arsenault and James Aubrey Simmons to the Cathcart option referred to in (m)(i)(c) (herein termed Cathcart option). The company is to make the payments to exercise the option.

The said Goulter option is for \$10,000.00 payable as follows:

Five Thousand (\$5,000.00) Dollars on February 4th, 1965 and the balance of Five Thousand (\$5,000.00) Dollars on August 4th, 1965.

The Cathcart option is for \$50,000.00 payable as follows:

Five Thousand (\$ 5,000.) Dollars on February 19, 1965
 Ten Thousand (\$10,000.) Dollars on February 19, 1966
 Five Thousand (\$ 5,000.) Dollars on August 19, 1966
 Five Thousand (\$ 5,000.) Dollars on February 19, 1967
 Five Thousand (\$ 5,000.) Dollars on August 19, 1967
 Five Thousand (\$ 5,000.) Dollars on February 19, 1968
 Five Thousand (\$ 5,000.) Dollars on August 19, 1968
 Five Thousand (\$ 5,000.) Dollars on February 19, 1969
 Five Thousand (\$ 5,000.) Dollars on August 19, 1969

- (iii) There is no person or company who received or is to receive from the vendors of property to the company interest in the consideration received or to be received greater in amount than one-twentieth (1/20) thereof.
- (iv) The property is 72 miles north-northwest of Whitehorse and 10 miles due west of about mile 75 on the Whitehorse-Mayo Highway north of Whitehorse.

At present it is reached by a two mile walk from a small lake that is due west of the property and on which a Beaver aircraft can be landed.

The claims are midway between the Nordenskiold River at Montague at mile 85 on the Whitehorse-Mayo Highway.

For immediate action supplies and equipment can be taken in by helicopter from the Whitehorse-Mayo Highway at a cost of about \$30.00 per trip for a 500 lbs. payload plus \$200.00 ferrying charge from their base at Whitehorse.

- (v) There is no underground exploration development, and there is no underground plant and equipment.

- (vi) A Magnetometer Survey on a 9 mile grid layout has been completed in October, 1964. Mapping, surveying and geo-chemical survey is in process of being completed by White & Hasford, Legal Surveys and Engineers of Whitehorse, Yukon. There is no surface equipment on the property.
- (vii) In memoir No. 5 (1910) of the Geological Survey of Canada, D.D. Cairnes, briefly describes the property and it appears that no work has been done since, apart from a possible magnetic survey as indicated by several picket lines that are only a few years old.
- (viii) A Magnetometer Survey on a 9 mile grid layout has been completed in October, 1964. Mapping, Surveying and Geochemical survey is in process of being completed by White & Hasford, Legal Surveys and Engineers of Whitehorse, Yukon. This work is to be paid for by the company.

(n) There are no underwriting or option agreements contemplated but the company proposes to issue, subject to this prospectus, Two Hundred Thousand (200,000) shares at 50¢ per share, subject to the payment or allowance of a commission not to exceed 12 1/2 (twelve and one-half) cents per share.

(o) The company proposes to carry out the recommendations of Dr. A.C. Skerl contained in his report as follows:

"After freeze-up this year a winter road would be constructed from near Montague to the property for a distance of about 15 miles.

If the results of the preliminary drilling are favourable then a fill-in programme of holes on 50 ft. centres would be required to give positive ore which would involve about 6,500 feet of drilling.

At the same time the mineralization would be tested down dip beyond the foot of the hill with a grid of holes on 100 ft. centres that would involve another 3,000 feet of drilling."

The One Hundred Thousand (\$100,000.00) Dollars to be realized from the sale of the Two Hundred Thousand (200,000) shares at .50¢ per share would be expended as follows:

Miscellaneous, Incorporating, Legal, Accounting, Travelling, Trans- portation, Engineering and Assaying, Food, Fuel and Two-Way Radio	\$ 10,000.00
Survey	5,000.00
Payment on Options	15,000.00
Motor Vehicle Tractor and Mining equipment	20,000.00
Prefabricated Buildings	5,000.00
Winter road including two bridges	15,000.00
Salary and Wages	7,000.00
Incidentals, Camp Expense	1,000.00
Administration: Rentals, Secretarial, Printing, etc.	4,000.00
Approximately 3,000 ft. of Diamond Drilling	<u>18,000.00</u>
	<u>\$100,000.00</u>

(p) Expenses incurred in the incorporation of the company, development expenses already incurred and an estimate of future expenditures on preliminary matters would be:

Miscellaneous, Incorporating, Legal, Accounting, Travelling, Transportation, Engineering and Assaying	\$ 7,000.00
Option payments	15,000.00
Rental, Secretarial, printing, etc.	<u>1,000.00</u>
	<u>\$ 23,000.00</u>

These are included in the preceding \$100,000.00.

(q) No substantial indebtedness is incurred or proposed to be incurred other than that set forth in the financial statement filed with the Securities Commission, a copy of which is annexed hereto and forms part of this prospectus. No security has been given for any such indebtedness save and except that with respect to indebtednesses which may be owing under the option agreements, failure to meet the terms of such option may result in forfeiture of the company's rights to such properties.

(r) The principal business in which each director of the company has been engaged in the immediate preceding three years is as follows:

James Aubrey Simmons was president of Arctic Shipping Limited until April, 1962. He was president of New Imperial Mines Limited from 1959 to the latter part of 1962 and subsequently general manager during 1963 and part of 1964. He is now a director of New Imperial Mines Limited.

Armand Arsenault has prior to and during the last three years been president and owner of Armand Arsenault Diamond Drilling Limited with its office at 4853 Main Street, Vancouver, B. C. As the owner of the company he has operated during this period in the Province of British Columbia and the Yukon, and has worked for the Howe Sound Company, Peso Silver Mines Limited, New Imperial Mines Limited and Kerr Addison Mines Limited.

James Clinton Snell prior to and during the early months of 1962 was a student in the School of Mines, University of Alaska, Fairbanks. During the period May, 1962 to May, 1963 he was in charge of mineral exploration and worked for Arctic Exploration Ltd. From the period May, 1963 to December, 1963 he was a geologist for New Imperial Mines. From December, 1963 to April, 1964 he was a student at Gothe Institute, Deyendorf, Germany. He graduated May, 1964 from the University of Alaska. During the period April, 1964 to August, 1964 he was Chief of Exploration for New Imperial Mines and from August, 1964 to present date he is Assistant Mine Manager of New Imperial Mines.

Richard Frank John Newsom was prior to 1963 and during the early months of 1963 shift boss for United Keno Hill Mines. During the period of September, 1963 to September, 1964 he was in charge of prospecting for the Yukon Syndicate. At the present time he is foreman for New Imperial Mines.

(s) The four directors have each a one-quarter (1/4) interest in the Seven Hundred and Fifty Thousand (750,000) shares of the vendors, as shown in (m)(ii)(b).

(t) No remuneration has been paid or is payable to any director or officer as such to the date of this prospectus.

(u) It is estimated that during the succeeding year remuneration to the directors as such will not exceed Fifteen Hundred (\$1,500.00) Dollars and that remuneration to the officers as such will not exceed Fifteen Hundred (\$1,500.00) Dollars.

(v) To the knowledge of the signatories no person is by reason of beneficial ownership of securities of the company or written agreement able or entitled to elect or cause to be elected a majority of the directors of the company. However, if the owners of the Seven Hundred and Fifty Thousand (750,000) vendors' shares act in concert they would be able to elect a majority of the Board. The signatories hereto are not aware of any agreement between any of the said owners of the vendors' shares to act in concert.

(w) No dividends have been paid within the five years preceding the date of this prospectus.

(x) There is no other material facts not disclosed under any of the provisions of this prospectus. During the course of primary distribution all shares previously issued (including shares described above as being deposited in escrow as released from time to time) may be offered for sale and sold from time to time under this prospectus. The Company will receive no part of the proceeds of the sale of any such securities.

(y) The foregoing constitutes full, true and plain disclosure of all material facts in respect of the offering of the securities referred to above as required by the Securities Act, 1962, of the Province of British Columbia, and there is no further material information applicable other than in the financial statements or reports where required.

DATED this 9th day of November, A.D. 1964.

J. A. Simmons "

James Aubrey Simmons

Armand Arsenault "

Armand Arsenault

" James C. Snell "

James Clinton Snell

R. F. J. Newsom

Richard Frank John Newsom

ARCTIC MINING AND EXPLORATION LIMITED

(NON PERSONAL LIABILITY)

(Incorporated under the laws of the Province of British Columbia)

Balance Sheet as at October 31, 1964

ASSETS

CASH		\$	2.50
MINING PROPERTIES - at cost represented by 750,000 shares of no par value issued at 50 cents each (Note 1) and \$6,108.81 to be paid in cash			381,108.81
INCORPORATION EXPENSE			<u>1,750.00</u>
		\$	<u><u>382,861.31</u></u>

LIABILITIES

ACCOUNTS PAYABLE - Mineral claims	\$	6,108.81	
- Legal		<u>1,750.00</u>	\$ 7,858.81

SHAREHOLDERS' EQUITY

SHARE CAPITAL			
Authorized			
3,000,000 shares of no par value			
Issued			
For cash	5	\$	2.50
For mining properties	<u>750,000</u>		<u>375,000.00</u>
	<u>750,005</u>		<u>375,002.50</u>
		\$	<u><u>382,861.31</u></u>

On behalf of the Board:

Director

Director

The accompanying note is an integral part of the statement and should be read in conjunction therewith.

Issued in accordance with our accompanying report of this date.

November 19, 1964

"Arthur A. Crawley & Co."
CHARTERED ACCOUNTANTS.

ARTHUR A. CRAWLEY & CO.

ARCTIC MINING AND EXPLORATION LIMITED
(NON PERSONAL LIABILITY)

Note To Balance Sheet

Under agreements the company has acquired options for the purchase of additional mineral claims.

The first option is for \$10,000.00 payable in cash as follows:

\$ 5,000.00 on February 4th, 1965
5,000.00 on August 4th, 1965

The second option calls for payments in cash of \$50,000.00 as follows:

\$ 5,000.00 on February 19th, 1965
10,000.00 on February 19th, 1966
5,000.00 on August 19th, 1966
5,000.00 on February 19th, 1967
5,000.00 on August 19th, 1967
5,000.00 on February 19th, 1968
5,000.00 on August 19th, 1968
5,000.00 on February 19th, 1969
5,000.00 on August 19th, 1969

ARTHUR A. CRAWLEY & CO.