

DOLMAGE, CAMPBELL & ASSOCIATES  
CONSULTING GEOLOGISTS  
808 BANK OF CANADA BUILDING  
VANCOUVER 1, B. C.

Arctic Mining & Exploration Ltd.

105-D-2

Summary Report

MONTANA MOUNTAIN PROPERTIES

November 1, 1966.

Douglas D. Campbell

Consultant

Vancouver, Canada.

November 1, 1966.

CERTIFICATE

I, Douglas D. Campbell, with business and residential addresses in Vancouver, British Columbia, do hereby certify that:

1. I am a consulting geological engineer.
2. I am a graduate of the University of British Columbia, (B.A.Sc., Geological Engineering, 1946), and of the California Institute of Technology, (PhD., Economic Geology and Geophysics, 1955).
3. I am a registered Professional Engineer of the Province of British Columbia.
4. From 1946 until 1957 I was engaged in mining and mining exploration in Canada and the United States as geologist for a number of companies. I was chief geologist for Eldorado Mining and Refining Co. Ltd., when I retired in 1957 to begin private practice as a consulting geologist.
5. Since 1965 I personally have repeatedly examined the Montana Mountain properties of Arctic Mining & Exploration Ltd., and have assessed all available data, government reports and private letters, plans and reports concerning the properties.
6. I have not received, nor do I expect to receive, any interest directly or indirectly in the properties or securities of Arctic Mining & Exploration Ltd. or any associated companies.

Respectfully submitted,



Douglas D. Campbell, P.Eng., Ph.D.

VANCOUVER, CANADA

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INDEX

	<u>Page</u>
SUMMARY	1
INTRODUCTION	2
HISTORY	4
GEOLOGY & ORE OCCURRENCES	5
UNDERGROUND DEVELOPMENT	8
ORE RESERVES	9
CONCLUSIONS & RECOMMENDATIONS	11
DEVELOPMENT PROGRAM 1967	12
CERTIFICATE	

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- 1 -

SUMMARY

Arctic Mining & Exploration Ltd. owns or holds under option a total of 118 crown granted and located mineral claims and fractions on Montana Mountain, 9 miles south of Carcross, Y. T., in the Whitehorse Mining District. These claims lie in two groups, the Arctic Caribou to the north and the Montana to the south. The former group is underlain by granite and the latter group by older volcanics.

One principal gold-silver-quartz vein has been extensively developed underground by drifting and drilling on the Arctic Caribou claims and several other possible ore veins are known but only slightly explored on the same claims.

Two principal gold-silver-quartz veins are known on the Montana claims, one, the Montana, explored in 1915 by a shaft and drift, which are now ice-filled, and in 1965 by bulldozer trenches. The other vein, the Joe-Petty, has been exposed in open cuts for a length of 1000 feet. Surface samples of the Joe-Petty Vein indicate values ranging from trace gold and one ounce silver per ton up to 0.01 oz. gold and 38 oz. silver per ton across 3-6 feet. Comparable samples have been obtained from the Montana.

Most of the surface and underground work done by Arctic Mining & Exploration Ltd. has been concentrated on the Arctic Caribou Vein and has been done since September, 1965. Numerous surface bulldozer trenches plus 5000 feet of drifting and crosscutting and 3000 feet of diamond drilling have been completed by the company. In addition, immediately west of the new workings, and connected to them now, are four old level drifts and a connecting inclined shaft (on vein) which were driven in 1915 and have been de-leed by the new workings. Old records indicate that about 3000 tons of ore grading 1.03 oz Au and 27.7 oz Ag/ton were shipped from these workings from 1910 to 1915. These workings have been de-leed, mapped and sampled by Arctic Mining & Exploration Ltd.

RESERVES:

Results of the new development work by Arctic and the resampling of the old workings, all on the Arctic Caribou Vein, indicate the following reserves:

- 1(a) -

Proven-probable ore - 60,000 tons @ 0.65 oz/ton Au  
13.40 oz/ton Ag  
4% Pb-Zn

Possible ore (old workings) 30,000 tons @ 0.67 oz/ton Au  
16.30 oz/ton Ag

The gross value of the above ore is about \$50 per ton.

### CONCLUSIONS & RECOMMENDATIONS:

It is considered that total costs at Arctic will be \$20-\$25 per ton @ 200 tons per day. To finance and sustain a 200 ton mill it is necessary to have a proven and probable reserve of about 200,000 tons plus a well indicated potential. To indicate this additional reserve the writer recommends a program of continued drilling and raising at the Arctic Caribou to consist of the following:

Arctic Caribou - Drilling, raising, sampling, etc.	\$178,000.
Jean Claim - Drilling & stripping	25,000.
Montana - Drilling	30,000.
Joe-Petty - Stripping and sampling	4,000.
	<hr/>
	<u>\$237,000.</u>

Respectfully submitted,



Douglas D. Campbell, P.Eng., Ph.D.

DOLMAGE, CAMPBELL & ASSOCIATES

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- 2 -

INTRODUCTION

DESCRIPTION OF PROPERTY: Arctic Mining & Exploration Ltd. holds 8 crown granted claims and fractions as well as 110 located claims on the north and east upper slopes of Montana Mountain in the vicinity of Carcross, Y. T., in the Whitehorse Mining Division. The holdings are in two contiguous groups, one, the Caribou, of 84 claims on the south side of Sugarleaf Hill, 5 1/2 miles south of Carcross, Y. T., at elevation 5600 ft., and one, the Montana, of 34 claims on the east side of the Montana Mountain peak, three miles south of Sugarleaf Hill at elevation 5500 ft., between Montana Creek to the north and Pooley Creek to the south.

The claims comprising the two groups are:

<u>Name of Claim</u>	<u>Grant Number</u>
Mars 4	90629
Mars 7	90632
Mars 12-14	90637-90639
Mars 22-26	90647-90651
Mars 32-34	90657-90659
Penwartha Fraction	76332
Empire 1-6	92319-92326
Empire 9-12	92335-92338
Empire 13	92333
Empire 14	92334

CROWN GRANTED MINERAL CLAIMS

<u>Name of Claim</u>	<u>Lot Number</u>
Little Jenny	Lot 31, Group 6
Joe-Potty	30, Group 6
Reliance	32, Group 6
Black Jack	33, Group 6
Montana	34, Group 6
Mountain Hero	35, Group 6

<u>Name of Claim</u>	<u>Grant Number</u>
Eagle 1-6	92327-92332
Eagle 8	92650
Eagle 10	92651
Eagle 7	92656
Eagle 9	92657
Eagle-11	92659
Eagle 12	92659
Eagle 13-16	92652-92655
Eagle 17-20	92744-92747
Eagle 25-28	92748-92751
Eagle 21-24	92752-92755
Eagle 29-36	92756-92763
Douglas Fraction	95276
Brun 1-3	98565-98567
Norm 1-6	98568-98573
Norm 7	98574
Norm 8	98575
Clutch 1-12	92883-92894
Brun 4-8	Y4707-Y4711
Lake 1	93024
Lake 2	93025
Lake No. 3 Fraction	93026
BII 1	97093
BII 2	97094
BII No. 3 Fraction	97095
BII 4-8	97096-97100
Della	74838
Emily	74839
Gladys	74840
Mabel	74841
Nellie	74842
Penny	74843
Theresa	74844
Elizabeth Fraction	77939

CROWN GRANTED MINERAL CLAIMS

<u>Name of Claim</u>	<u>Lot Number</u>
Caribou	Lot 61, Group 754
Pride of Yukon	62, Group 754

MINERAL LEASES

<u>Name of Lease</u>	<u>Lease Number</u>
Kodak	19204
Jean	19287
Hazel M	19285

Main Workings: Near Pooley Creek is the Joe-Patty Vein which strikes slightly south of west and dips 60° to the north. This vein has been exposed over a distance of about 1000 feet by numerous pits, small shafts and short edits, most of which are caved.

Near Montana Creek the Montana Vein is exposed by bulldozer cuts for a few hundred feet on either side of an old inclined shaft collar. The shaft is now plugged with ice but old records indicate that considerable drifting was done from it on one or two levels. The vein strikes north and dips about 30° to the west.

Near Big Thing Creek, on the south side of Sugarloaf Hill, the Arctic Caribou Vein has been exposed by ten bulldozer trenches for a distance of about 1500 feet as well as by an old inclined shaft for a slope distance of 400 feet and by several short drifts from the shaft. These old underground workings have been supplemented during the past year by 5000 feet of new edit and drifts driven by Arctic Mining & Exploration Ltd.

A good all-weather road nine miles in length climbs from Cereross (El. 2100 ft.) to the Arctic Caribou workings, (5500 ft.), and a passable four-wheel drive road about six miles in length extends from the Arctic Caribou to the Montana workings. Cereross may be reached from Whitehorse, Y. T., 40 miles to the north, via highway or by White Pass and Yukon Railway.

All of the property is above timberline where outcrops are relatively scarce in a terrain of frost-heaved rock rubble. Montana Mountain rises steeply from lakes on three sides, Lake Bennett to the west, Nares Lake and Tagish Lake to the north and Windy Arm (Tagish Lake) to the east. The south slope of the mountain is on the B.C. - Yukon border.

HISTORY: All of the properties on Montana Mountain were discovered in 1904-05 and by 1910 most of them were being developed under the control of Conrad Consolidated, a company owned by Col. J. H. Conrad who was the principal promoter of this district. From 1910 until 1912 several thousand tons of high grade silver-gold ore was mined, sacked and shipped from the Montana and the Big Thing (Arctic Caribou) properties, but in 1912 Conrad Consolidated failed because of excessive expenditures and unpaid debts and went into receivership. The claims on the mountain then became tied up in litigation and disparate estates and no further work was done on the properties until Arctic Mining and Exploration Ltd. assembled the various properties in 1965.

## GEOLOGY AND ORE OCCURRENCES

Montana Mountain is underlain by three general rock formations. The northeast corner of the mountain is underlain by Taku note volcanic flow rocks of the Taku Group and the south and west portion of the mountain is underlain by Triassic-Jurassic sedimentary rocks of the Lewis and Leborgo Groups. All of these rock types are intruded by granodiorite stocks which are outliers of the main Coast Range batholith, the eastern edge of which lies along the west shore of Lake Bennett. Most of the north central portion of Montana Mountain is underlain by granodiorite.

The Arctic northern group of claims, the Cariboo, lies entirely within the granodiorite terrain, whereas the southern group, the Montana, is entirely underlain by Taku Group andesitic volcanic rocks. Both rock types are massive and structures are not obvious in surface exposures.

The Arctic Cariboo Vein is offset a few feet or tens of feet by steep north-striking faults. No other obvious faults are known in the area.

The three principal known veins on the properties are: (1) the Joe-Petty, which strikes westward and dips  $60^{\circ}$  north near the south boundary of the Montana Claim group; (2) the Montana, which strikes north and dips  $80^{\circ}$  west near the north end of the same claim group; and (3) the Arctic Cariboo, (earlier termed the Big Thing.), which lies in the Cariboo claim group and which strikes southwestward and dips about  $30^{\circ}$  to the northwest. Other veins occur on the property but are only partially exposed by trenches through the thick blanket of frost-fractured and heaved rock rubble which also covers most of the known veins. Early prospectors probably found the known veins by panning the creeks and finding float. Details of the three main veins are as follows:

### JOE-PETTY:

The Joe-Petty structure is a mineralized shear zone up to 6-8 feet in width that contains several gouge-covered fault planes. The zone is comprised of chloritized and silicified wallrock, gouge, sheared and brecciated quartz as well as wallrock breccias in quartz and vitreous quartz with arsenopyrite and tetrahedrite. The wallrock is reddish-gray vesicular volcanic rock which is locally intensely silicified for a few feet adjacent to the vein zone. The vein zone strikes at  $250^{\circ}$  and dips  $60^{\circ}$  to the northwest and has been traced by the writer for a distance of about 1400 feet in a series of old prospect pits and adits spaced 200-300 feet apart. The eastern portion of this vein was earlier known as the Little Johnnie Vein.

A brief description of the workings on the vein, all of which are located along the north rim of a creek canyon, is given below, from west to east:

- 1) Shaft - 20 ft. deep in strong vein zone 7 feet in width. Complex sheared vitreous quartz with arsenopyrite, tetrahedrite, galena and altered rock.

Channel sample (1965) - 0.01 oz Au  
37.9 oz Ag/6ft.

- 2) Adit - 200 ft. east of shaft. Adit with 30 ft. crescent and 115 ft. of drift exposing 30 ft. wide vein-shear zone. Intermittent fine arsenopyrite and tetrahedrite in vitreous quartz.

Channel sample (1965) -  
At cross cut Tr Au, 0.22 oz Ag/3 ft.  
Face, 85' west Tr Au, 0.74 oz Ag/1 1/2 ft.

- 3) Pit - 250 ft. east of adit. Open-cut exposures 6 ft. width of fault zone with galena, brecciated rock and 2 ft. of quartz in hanging wall, leached and limonitic.

- 4) Little Johnny - 600 ft. east of pit. Old trench sloughed in but pile of tetrahedrite-bearing comb quartz in special dump at side of pit.

The Joe-Petty Vein lies approximately 3000 feet south of the Montana shaft, across a gently sloping grassy upland. A cat road extends half-way from the Montana.

#### THE MONTANA:

Several new bulldozer cuts have exposed the Montana Vein for distances from the shaft collar of 150 feet to the north, where it appears to branch, and 350 feet to the south. Clean fresh exposures were difficult to obtain in the permafrost, however the vein appears to be about 3-4 feet in true width and comprised of white crystalline massive and comb quartz interspersed with arsenopyrite and (possibly) tetrahedrite. The vein strikes due south from the shaft but swings slightly to the west to the north. It dips 25° - 30° to the west. The wallrock is massive green-grey andesite.

Sampling of the surface cuts was hampered by permafrost but results are:

- |   |                                  |
|---|----------------------------------|
| 1) 200 ft. south of shaft -                 | 0.06 oz Au, 1.70 oz Ag/3ft.      |
| -   | 0.02 oz Au, 4 oz Ag/2.75 ft.     |
| 2) 300 ft. south of shaft -                 | 0.06 oz Au, 17 oz Ag/quartz grab |
| 3) Shaft trench, quartz<br>with sulphides - | 0.63 oz Au, 94.3 oz Ag/ grab     |

Dr. D. D. Cairnes reports in 1935, (Mem. 234, Geol. Survey of Canada, p. 212), that the Montana workings consist of a drift adit 700 feet in length and an inclined shaft 320 feet in dip length on vein. The vein is 2-5 ft. in width and has 8-18 inches of sulphide-rich quartz on the hanging wall which assays \$90 per ton @ 1936 metal prices. This sulphide-rich ore contained galena, pyrite, arsenopyrite, pyrargyrite, argentite, tetrahedrite and native silver and was shipped from the property between 1910 and 1912 when the shut-down occurred. All the underground workings are now plugged with ice.

### THE ARCTIC CARIBOU: (Big Thing)

The Arctic Caribou Vein strikes southwestward and dips 20° - 35° to the northwest. It was first explored by an inclined shaft in 1906 where, it is recorded, the quartz contained abundant stibnite, arsenopyrite and pyrite and averaged \$30 per ton (1906 prices). The country rock is granodiorite, which is bleached and leached for 10-15 feet adjacent to the vein. The vein is exposed in surface trenches as comprised of vitreous, massive to coarsely comb quartz amongst which are dispersed arsenopyrite and pyrite, with local secretite.

Surface Exposures: Because of the deep cover of frost-heaved rock rubble there were no exposures of the Arctic Caribou Vein before 1965. In 1965 Arctic Mining began a bulldozer cutting trenches east and west from the shaft collar.

The results of sampling of the four eastern trenches indicated average values on the vein of 1.1 oz/t. Au and 11.6 oz/t. Ag across an average width of 4 feet, spaced over a length of 1000 feet. These results, plus the recorded ore indications in the workings from the old (1916) shaft were deemed sufficient encouragement to warrant further exploration and therefore, beginning in November, 1965, Arctic Mining & Exploration Ltd. drove a new crosscut at the level of the bottom old shaft level (4th) and have exposed the Arctic Caribou (#2) Vein as well as a subsidiary vein (#1) for a total drift length of 2755 ft.

## UNDERGROUND DEVELOPMENT

Old Workings: The old underground workings on the property were plugged at the shaft collar by ice in 1965; however, a set of plans and sections of the workings, made by a surveyor in 1910 was available, along with an old record ledger of samples and assays. Unfortunately exact locations and widths of the underground samples were not always given in the ledger but a general impression of grades of ore was obtained from the listed figures.

Development work began on the property in 1905 and continued until 1912. An inclined shaft was sunk 450 ft. down the dip of the vein at about 25° - 30° so that, with the rise of the hill above the collar, the end of the shaft is under 400 feet of cover. Four drift levels were established off the shaft; the first at 35 ft. slope distance from the collar, the second at 135 ft., the third at 225 ft. and the bottom one at 350 ft. The first level was drifted 60 feet on both sides of the shaft but the vein was heavily leached and lean in sulphides so no further work was done on that level. A series of steep faults displace the vein on the second level and only 80 feet of drifting was done. The third level contains 180 feet of drifting with stoping half way up to the second level. The bottom (4th) level was drifted 235 feet to the east and 335 feet to the west of the shaft, with a few stub crosscuts off the drifts. There was some overhead and underhand stoping done from the fourth level near the shaft.

Reserves: In 1916 D. D. Calmes reported, (Mem. 284, G.S.C., 1957,) that approximately 75000 tons of gold-silver ore were blocked out in the underground workings. He estimated the grade somewhere between \$15 and \$30 per ton at 1916 metal prices. (Au = \$20, Ag = \$0.66). The dump at the shaft collar contains about 3000 tons of ore-grade material which has been generally sorted into high grade and reject.

A report by J. W. Bryant, engineer, dated 1911, states that approximately 3000 tons of ore grading 1.03 oz Au and 27.7 oz Ag, were shipped from the mine; this, plus the 3000 tons on the dump, suggests that 6000 tons of vein material was hoisted. This figure roughly agrees with the volume of excavated rock as calculated from the plan of the underground workings, and, since much of the excavation was in granite where faults displaced the vein, it suggests that much if not most of the vein excavated in the shaft and drifts was of ore grade.

New Workings: Beginning in November, 1965, Arctic Mining & Exploration Ltd. drove a new crosscut edit to explore the Arctic Caribou Vein east of the old shaft. It was planned also to break into the old workings and de-ice them from below to permit mapping and sampling of them. All of the desired objectives have been attained. In the ensuing year 1690 feet of crosscut, 2760 feet of drift, about 200 feet of raising and 3000 feet of underground diamond drilling have been accomplished with the results as listed in the following paragraphs.

ORE RESERVES

RESULTS TO JULY, 1966:

1. The new crosscut adit intersected an unexpected vein, No. 1, 200 feet in from the portal. This vein was then exposed for a length of 700 feet to reveal two ore shoots, one 240 feet and the other 30 feet in length. The ore from both these shoots grades 0.74 oz Au/ton and 6.1 oz Ag/ton with some Pb-Zn across an average mining width of 4 feet. Corresponding ore was subsequently found by surface stripping above the drift. Because this vein comes to the surface at the adit level just beyond the west drift face further exploration of it must be to depth by drilling.
2. The main crosscut was driven for 480 feet northwest from No. 1 Vein to intersect the original Big Thing vein, now termed No. 2 Vein, and to break into the old shaft workings just below their bottom level. The No. 2 Vein was intersected by the crosscut and drifted for 450 feet eastward and 200 feet westward to reveal two ore shoots 100 and 150 feet in length. The 150 ft. ore shoot has been extensively exposed by subsidiary crosscuts and has proven to be exceptionally rich, grading 1.72 oz/t. Au, 57.1 oz/t. Ag and 4% Pb-Zn across an average width of 4 feet.
3. The old workings were rehabilitated, mapped and check sampled to reveal an extensive tonnage of good grade ore well proven by drifts, shaft and stope faces.
4. The total tonnage of proven and probable ore exposed in the new and old workings is about 60,000 tons grading 0.65 oz/ten Au, 18.4 oz/ten Ag and 4% Pb-Zn for a gross value of \$50 per ton.

In addition to the above ore about 30,000 tons grading 0.67 oz/ten Au and 16.3 oz/ten Ag are indicated as possible ore in the old workings.

All samples contributing to the above results have been chip channels and channels taken by supervised samplers and geological engineers.

Cost studies indicate that for production from a deposit such as the Acetic, at a minimum of 200 tons/day in this area, total costs would be between \$20 and \$25 per ton and could be less. For the Acetic ore this would return a net profit of \$20-\$25 per ton, depending on recovery. At 200 tons per day this would be a yearly profit of approximately \$1.4 million. To finance and sustain

a 200 tons mill it is necessary to have a proven and probable reserve of about 200,000 tons and a well indicated potential for several more years production at least. It is evident that approximately half of this target of proven-probable reserve was indicated by the work done up to July, 1965.

## CONCLUSIONS & RECOMMENDATIONS

### CURRENT PROGRAM:

Because No. 2 vein is irregular in shape and shallowly dipping it was much slower than had been expected to expose it by drifting. Even slight changes in dip necessitate major bands in the drift. In view of the fact that the drifting etc. to July, 1966, had provided excellent exposures of the veins, so that their structures and characteristics could be well understood, and in order to speed up exploration of the vein to find additional reserves it was deemed expedient to drive a straight heading beside the vein in the hanging wall for a length of about 500 feet to the west, beyond and down dip of the old workings, and from this drive to test the vein by diamond drilling. Drill tests had already proven that core recovery in the vein was excellent.

The low dip of the vein, (20°) allows extensive up and down dip exploration of the vein by short drill holes collared at stations in crosscuts and line drives above and/or below the vein. Thus, by drilling up from the new crosscut adit No. 2 Vein can be explored up dip from the drift to the surface, a distance of about 400 feet. By drilling down from the new line drive the vein can be explored for an additional 250 feet down dip from the adit level. Also, by drilling from the new workings much of the "possible" ore in the old workings can be confirmed. In addition, the old low level Peerless Tunnel, that enters the mountain from the north, 400 feet below the Arctic adit, will be used this winter as a drill station for a further 400 feet down dip exploration extension of the vein.

At the present time a new diamond drilling contract has been let to carry out the aforementioned drill program in order to indicate as much ore as possible by next Spring. If the target of 200,000 tons is attained in this program then mill planning could be started in 1967.

### POTENTIAL

The vein in the new and old workings will be the primary target for this winter's drilling and already the first few holes have indicated encouraging results, with an ore intersection obtained 100 feet down dip of the old workings and another excellent grade intersection obtained from the "possible" ore up dip of the old workings. Exposures to date indicate that approximately 30% of the vein length on any level contains ore, using this ratio of ore to barren vein it is possible that this winter's drill program will be able to indicate enough new ore to bring up the reserve to the desired 200,000 tons.

In addition to the No. 2 Vein in the old and new workings, the potential of No. 1 Vein will be probed down dip and may prove to add further reserves. On the completion of this winter's program No. 2 Vein will have been explored underground for a length of about 1000 feet and down dip to depths of 200-600 feet. The deeper portions in the Peerless Tunnel will still remain as potential for exploration as will the extensions to east and west.

Potential mill feed beyond the initial three years of production could possibly be derived not only from No. 1 and No. 2 Veins at the present workings but also from the following known but as yet unexplored veins on Arctic claims:

1. Hanging wall veins: At least two ore-bearing veins have been exposed by surface trenches in the hanging wall of No. 2 Vein. At least one hanging wall vein has been intersected by the Peerless Tunnel 1000 feet down dip from outcrop and is of ore grade. Obviously these veins will have to be explored by drilling at some future date.
2. Joan Vein: This vein lies about 1/2 mile southwest of the mine and has been partially exposed by trenches and old adits for a length of 1000 feet. Some of the exposures are ore. The old adits are presently being rehabilitated to permit sampling and mapping of this possible ore structure.
3. Montana Vein: Although some six miles south of the Arctic Caribou veins the Montana Vein could provide reserve feed to a mill. The vein was developed by a shaft and mined in 1915, and, although the shaft is ice-filled, it is evident from the dump and old records that the ore is essentially the same as that on the Arctic Caribou.
4. Joe-Petty: Lying about one mile south of the Montana Vein the Joe-Petty is a wide, steep vein-shear that has been traced for over 2000 feet in an east-west direction but which has as yet been unexplored below the surface.

#### DEVELOPMENT PROGRAM 1967

In accordance with the objectives of underground development at the Arctic Caribou Mine, Carcross, Y. T., as well as surface exploration on adjoining properties, herewith is a breakdown of the work and the costs for such a programme.

ARCTIC CARIBOU:

1. Diamond drilling to explore No. 1 and No. 2 Veins from existing headings 10,000 ft. @ approx. \$7/ft.	\$ 70,000.
2. Rehabilitation of lower tunnel and other headings	10,000.
3. Drilling from lower tunnel. 4,000 ft. @ \$7.	28,000.
4. Development raises and sublevels. 600 ft. @ \$100.	60,000.
5. Sampling, assaying and supervision.	10,000.

JEAN CLAIM:

1. Surface and/or underground drilling.	5,000.
2. Drifting. 300 ft. @ \$60.	18,000.
3. Stripping and sampling.	2,000.

MONTANA:

1. Surface (wireline) drilling. 3,000 ft. @ \$10.	30,000.
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JOE-PETTY:

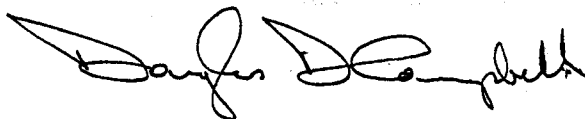
1. Surface stripping and sampling.	<u>4,000.</u>
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TOTAL:- \$ 237,000.

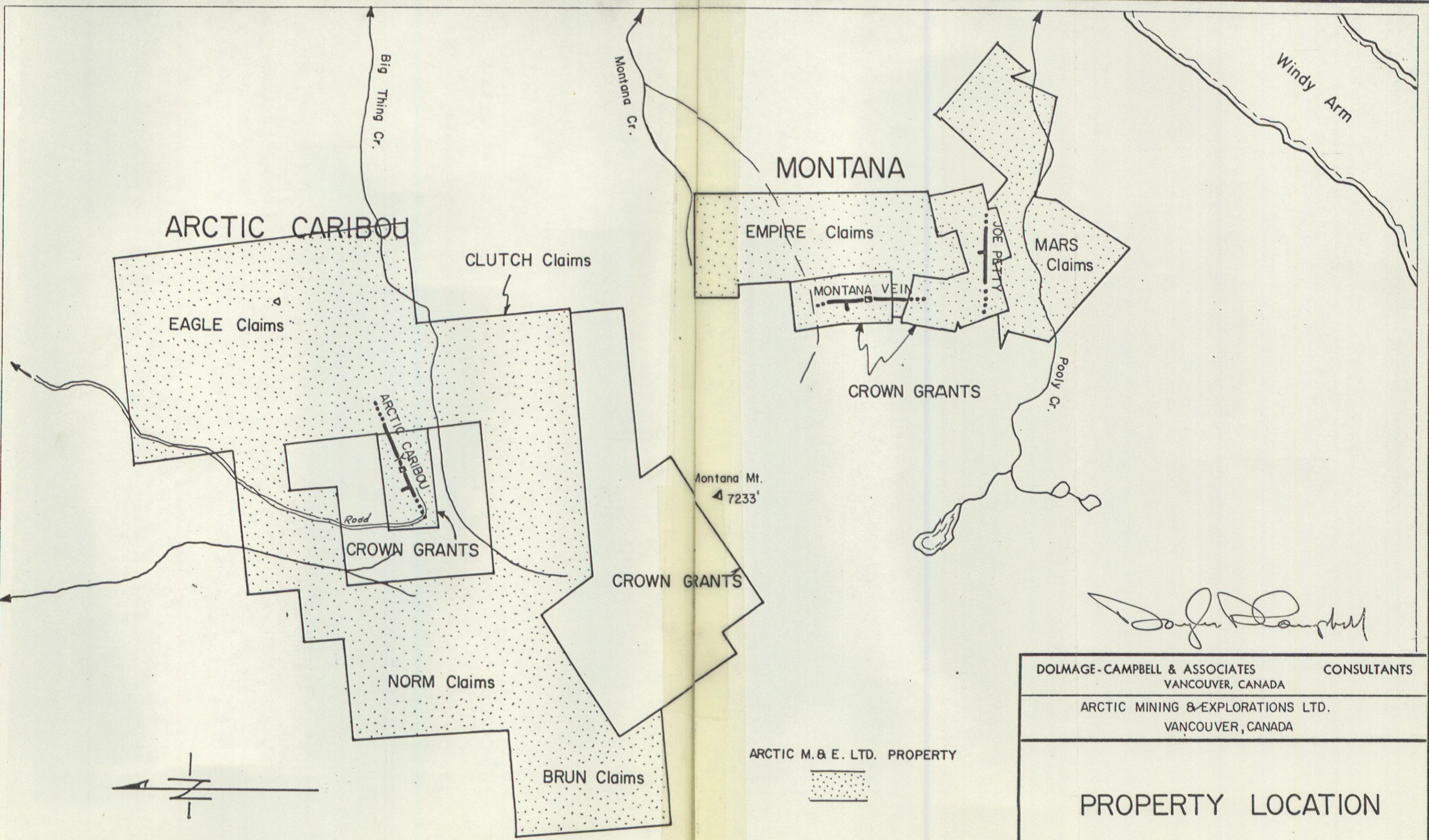
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If the above exploration and development programme is reasonably successful the company will then be in a position to consider construction of a mill to put the mine into production.

Respectfully submitted,



Douglas D. Campbell, P.Eng., PhD.



*Joseph Campbell*

DOLMAGE-CAMPBELL & ASSOCIATES		CONSULTANTS
VANCOUVER, CANADA		
ARCTIC MINING & EXPLORATIONS LTD.		
VANCOUVER, CANADA		
<b>PROPERTY LOCATION</b>		
SCALE: 1 inch = 1/2 mile	Nov. 1 1966	FIG. 1