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REPORT

AN ASSESSMENT OF THE POTENTIAL

of the

PESO SILVER MINES LTD. (N.P.L.) PROPERTIES

in the

MOUNT NANSEN AND MAYO AREAS,

YUKON TERRITORIES

by

W. M. SHARP, P. Eng.

July, 1966.

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July 21, 1966.

Mr. J. D. Wilson,
Assistant General Manager,
Canada Trust Company,
901 West Pender Street,
Vancouver 1, B.C.

Dear Mr. Wilson:

With this, my report " AN ASSESSMENT of the POTENTIAL of the PESO SILVER MINES LTD. PROPERTIES IN THE MOUNT NANSEN AND MAYO AREAS, Y.T. " is respectfully submitted for your perusal.

May I express my regrets if the rather protracted period of preparation of this report has caused some inconvenience to you and your principals, and also my thanks for your considerate patience while I was intermittently involved with other commitments.

Please do not hesitate to inquire in regard to any questions which may arise following your general study of this report.

Yours very truly,

W. M. Sharp, P. Eng.

WMS/jm
Encls.

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INTRODUCTION

On March 25, 1966, Mr. J. D. Wilson verbally outlined to the writer the principal objectives of his principals with regard to a possible examination of the Mt. Nansen and Mayo properties, Y. T. of Peso Silver Mines Ltd. These were formally restated in Mr. Wilson's letter of April 6, 1966. This letter also requested that the writer state a firm price for the work involved. Following the above and the writer's reply, formal authorization for the writer to proceed, within his stated schedule of current commitments, on this assignment - an assessment of the potential of the properties - primarily, the Mount Nansen property and secondarily, the Mayo property, and deleting assessments of management - was provided via Mr. E. T. Linnell's letter of the 9th of May, 1966.

The writer reached Whitehorse on May 30, 1966, and the Mt. Nansen "Wobber" camp on the afternoon of the following day. The writer's field studies were confined to the three local developments - the Wobber, Huestis and Brown-McDade. This field work, undertaken during the May 31st - June 8th period consisted, essentially, of a detailed study and summary of mine geological and assay maps, reports, ore estimates, etc. in the field office files - followed by detailed check-sampling, and geological mapping procedures within selected sections of the underground workings. At the same time the writer inspected the mine plant and facilities in the company of the resident manager, Mr. J. C. Genest. The writer also profited from Mr. Genest's resident-managerial experience at the property in respect to questions pertaining to development procedures, possible future mining problems and procedures, mine plant, water and timber supply, transportation, wage rates, and the general availability of competent surface and underground mine personnel.

Within this report the writer does not include fully-detailed accounts of the present capital structure of Peso Silver Mines Ltd., agreements with other companies concerning relative participations in possible pre-production expenditures and/or profits ensuing from production, payments or receipts due from properties acquired or disposed of or, finally, valuation of the Company's shares. He prefers to leave these analyses, for examination in their present or future context, to better financially-informed persons, or to persons or groups with specific proposals for additional financing.

The writer gratefully acknowledges the co-operation, assistance, and necessary background data provided by Messrs. B.S. Imrie and J. C. Genest of Peso Silver Mines Ltd., and also that provided by Dr. D. D. Campbell, Consulting Geologist to the Company, for information supplementary

to that contained in his definitive reports on the property.

The principal technical references for this report are:

1. Review Report on the Geology and Ore Reserves of the Peso Silver Mines Ltd. Properties, Y.T., Nov. 10, 1965, by Dr. Douglas D. Campbell, P. Eng.

2. Addendum to Report on Peso Silver Mines Ltd. Properties, Y.T. May 10, 1966 - by Douglas D. Campbell, P. Eng.

3. Geological and Assay plans by Dr. D. D. Campbell, P. Eng., M. D. Hampton, P. Brask, and others.

4. Geological Reports (on mine office files) by W. Smitheringale, P. Eng. and R. E. Legg, P. Eng. - specifically directed towards the Brown-McDade development.

5. Reports (consecutive) of metallurgical tests on Webber and Huestis samples of mineralized vein material by Britton Research Laboratories, Vancouver, B.C. 1964 - 66.

6. Report re: Yukon Gold-Silver Ore by the Mineral Processing Division of the Department of Mines & Technical Surveys, Ottawa.

PART A: MOUNT NANSEN PROPERTIES

SUMMARY & GENERAL REMARKS

The Mount Nansen properties of Peso Silver Mines Ltd. lie within a northwesterly-trending general potentially-mineralized area measuring 6 miles by 10 miles. Within this area, Mount Nansen Mines Ltd. owns 269 claims in two groups; Central Nansen Mines Ltd. owns one group of 64 claims; Brown McDade Mines Ltd. owns one group of 70 claims.

The three actively-developing properties are the Webber, Huestis and Brown-McDade.

The Webber vein system has been exposed on the surface for a 1500-foot strike-length; the maximum firmly-indicated depth of mineralization is 225 feet.

The Huestis vein system is similarly exposed on the surface for 1300 feet; the firmly-indicated depth of mineralization is 220 feet.

The Brown-McDade lode, or composite vein structure is presently delimited over a strike-length of 1600 feet, and underground for 1100 feet. The presently-indicated vertical range is about 150 feet; however, this flatter complex zone has a probable dip-length of 250 feet within this interval.

With the exception of the Brown-McDade the vein systems are open to the northwest and southeast; the general geology is such that similar environmental conditions favourable for the occurrence of ore can be expected for several thousands of feet of additional strike-length, and at least a few hundreds of feet of depth.

The Mount Nansen ores are complex sulphide vein deposits. The principal value of the ore lies in its gold and silver content. With an appropriate metallurgical treatment the minor lead-zinc content could have some value. Metallurgical tests to date have not been successful in accomplishing the desired recovery of precious metals.

The more definitive exploration and development has been done on the Webber and Huestis zones. The total of proven, probable and drill-indicated ore reserves is given as:

173,315 tons @ 0.48 oz/ton Au; 1949 oz/ton Ag

With a further addition of possible ore, as based on depth possibilities suggested by a deep diamond-drill intersection of the Huestis structure, and the evident fair depth persistence of the controlling structures, the writer computes the total reserves as:

270,505 tons at 0.51/oz/ton Au; 17.25/oz/ton Ag

On the basis of the apparently favourable prospects for continuity of mineralization there is a fair possibility of increasing this figure to 500,000 tons within the general localities of the present deposits. To date there is unsufficient knowledge of the ore controls to permit substantially sound estimates of additional tonnage potential.

In view of the magnitude of the possible investment in bringing the properties into production, it would seem reasonable to defer major decisions until an adequate number of drill holes had substantiated the single deep vein intersection of the Huestis vein. The character of the mineralization intersected by this hole differs somewhat from that in the level above, hence should be investigated on that basis alone.

Mining Economics

From his personal experience in production on similar narrow veins, and realizing the frequent difficulty of holding stopes to certain limiting widths, the writer assumes further dilution, and re-estimates probable mined-

grade to 275,000 tons at Au= 0.46 oz/ton; Ag= 15.7 oz/ton.

Gross value of possible millfeed= (Gold @ $37./oz; silver @ $1.40/oz.)		$39.00/ton
Indicated recoverable values= (83% Au; 90% Ag)		$33.90/ton

Estimated costs/ton:

Mining, cut & fill	6.00	
Pre-production development, with related plant	3.50	
Milling; 250 t.p.d. rate	4.50	
Surface and transportation	4.50	
Mine services	2.50	
Marketing concentrate fraction	0.50	
General property expense	2.00	$23.50/ton
Estimated Gross Profit/ton -		$10.40/ton
Less Capital Investment, $1,270,000		$ 4.60/ton
Preliminary Indicated Net Profit		$ 5.80/ton.

As much of the short-and-long-term potential of the property depends upon the successful solution of the metallurgical difficulties of treating the complex ore, oxidized as well as fresh, it would appear necessary to arrange for conclusive test work, with corresponding attention to costs.

Respectfully submitted,

W.M. Sharp

W.M. Sharp, P. Eng.

PROPERTIES

The Mount Nansen area is situated some 120 air miles to the northwest of Whitehorse, Y. T. By land it is reached via 100 miles of unpaved highway to Carcross, thence by 40 miles of winter tote-road westward to the property. The direct-line distance from Carcross is approximately 30 miles.

A start has been made on the construction of an adequate all-weather road into the property, with about 15 miles completed before freeze-up last fall. The remaining 25 miles, which would generally follow the route of the existing tote-road, includes a 10 mile section which is about 2/3 complete, 10 miles of unimproved tote-road through similar well-drained over-burdened terrain, and approximately 5 miles of low-lying muskeg terrain. Construction of the latter-mentioned section would involve the hauling of considerable quantities of earth and gravel fill from borrow-pits within the adjacent sections. Mr. B. S. Imrie, Peso's exploration manager, advises that the Dominion Government might assume a 2/3 share of construction costs, if the Company's application for assistance was favourably received.

The following descriptions of Peso's Mount Nansen mineral properties are summarized from Dr. Campbell's Nov. 10, 1965 report:

The mining area within which the Peso Silver Mines Ltd. properties lie measures approximately 6 by 10 miles, and trends northwestward between the headwater regions of Nansen and Victoria Creeks.

The Mount Nansen property consists of four major claim groups, together forming a single, irregularly-shaped block. Of these, Mount Nansen Mines Ltd. owns two groups, totalling 269 claims, Central Nansen Mines Ltd. owns one group of 64 claims, and Brown McDade Mines Ltd. owns one group of 70 claims. All of the currently-developing mineral deposits are on Mount Nansen Mines' and Brown McDade Mines' claims.

The following data are from Peso Silver Mines' Fourth Annual Report, 1965:

Subsidiary Company	Number of Shares Issued	Percentage Owned
* Mount Nansen Mines Ltd.	1,770,876	53.2
* Peso Carmacks Gold Mines Ltd. (N.P.L.)	1,300,000	86.7
Central McQuesten Mines Ltd. (N.P.L.)	637,500	85.0
* Central Nansen Mines Ltd. (N.P.L.)	560,000	74.7
Duncan Ladue Mines Ltd. (N.P.L.)	637,500	85.0
Affiliated Company		
* Brown-McDade Mines Ltd.	1,289,578	48.7

GENERAL FEATURES

The Mount Nansen area has many of the characteristic features of Yukon physiography and climate. In general the topography is subdued, with gently-sloping hills and ridges and intervening shallow draws, or wide, flat valleys. The relief within the mine area is only about 2,000 feet.

The main stream valleys and the lower sections of tributary drainage courses are rather lightly timbered by patchy stands of small spruce. The upper, more exposed terrain is normally bare, or locally, only patchily-timbered. However, dense "buck-brush" covers much of the upland area.

Water is scarce even during the summer months within the general upland areas. At present there is only a limited supply at the Mount Nansen site. This has been adequate for domestic purposes and mine development requirements during the summer run-off periods. However, the latter requirement must be augmented by tank-trucks hauling from permanent streams at lower elevations during post run-off and winter periods.

Temperatures range from minus 50-60 degrees to plus 80-90 degrees between winter and summer. Permafrost to depths of 100 feet or more is usual except on occasional lower or southerly-sloping terrain.

As the area has not been glaciated, the residual overburden consists of frost-heaved broken bedrock and oxidized rocky soil. Within the Mount Nansen area this material is such that it would constitute an ideal type of backfill for use in possible stoping operations. There is an almost unlimited local supply of this material. Much of this would also constitute suitable road-fill for construction over wet or muskeg areas.

HISTORY

The first discovery of lode gold was made in 1930 at Mt. Freegold, fourteen miles north of the Mount Nansen property at the site of the present La Forma mine. Since 1934, when first underground exploration commenced, the property has been further explored by a number of different groups, but it was not until June, 1965, that Discovery Mines Ltd. brought it into production. However, ore mined subsequent to the extraction of initial sections of the primary ore block proved sub-marginal, and the property was shut down after some six months of operation. Obviously, the owners must have elected to gamble on the possible existence of an adequate tonnage and grade of ore to carry the operation, rather than incur the expense of more extensive pre-production exploration and development.

The first gold-lode in the Mount Nansen area was located by prospectors Brown and McDade in 1963. This property was acquired by Leitch Gold Mines, who undertook extensive underground exploration, by drifting and diamond drilling on, and from the present shallow horizon in 1946. Concurrently, Conwest Explorations Ltd. and the Huestis Syndicate explored by trenching, the more northerly Webber and Huestis discoveries. Because of apparently unsatisfactory results, exploration of the Brown-McDade was terminated in 1947.

During 1962-63 the Mt. Nansen Mines Syndicate conducted extensive

surface-trench exploration along the Webber and Huestis vein zones and drilled four holes to test the Webber veins below the more weathered surface exposures.

Peso Silver Mines Ltd. acquired a controlling interest in Mt. Nansen Mines Ltd. in 1964 and accomplished considerable additional extensive stripping, trench sampling, and overburden drill-sampling on the Webber and Huestis vein zones. On the basis of the generally encouraging results obtained from the above exploration, drifting from the present Webber and Huestis portal sites was commenced in December, 1964 and March, 1965, respectively. In 1965 the old Brown-McDade workings were re-mapped and re-sampled, and check-drilled by Mr. Nansen Mines Ltd. during the first half of 1966. Exploratory drifting, diamond-drilling, and raising (Webber) continued on the Webber and Huestis vein systems until May, 1966, at which time all such work was stopped due to exhaustion of the Company's exploration funds.

EXTENT OF EXPLORATION-DEVELOPMENT

(A) WEBBER VEIN SYSTEM (Fig. 2A)

The whole vein complex has been exposed by surface trenching for a N.W. - S.E. length of 1,500 feet, and vertical range of 200 feet.

Sub-surface exploration has traced individual vein segments over the following distances:

No. 1 Vein:	Exposed strike length -	1220'
	Firmly indicated depth -	225'

(Note A: This structure (or No. 2 Vein has not yet been tested, by drilling, for any appreciable distance below the 4265 drift sill.)

No. 2 Vein:	Firmly-indicated strike-length-	910'
	Firmly-indicated depth -	220'

(Note B: The inferred depths of No's. 1 and 2 veins is substantially greater than the above firmly-indicated depths, and is deduced (ore estimates) by consideration of the geometry of individual ore shoots)

(B) HUESTIS VEIN SYSTEM (Fig. 3A)

This multiple-vein system has been exposed on the surface for a N.W. - S.E. strike length of 1,300 feet, and vertical range slightly in excess of 200 feet.

Sub-surface exploration indicates the following vein-dimensions:

No. 12 Vein;	East Branch:	exposed strike length -	1350'
	"	locally-indicated depth (#H22)	500' (+)
	West Branch:	well indicated strike-length -	670'
No. 13 Vein;	well-indicated strike length (2 strands) -		700'
	Firmly-indicated depth -		220'
No. 14 Vein;	Indicated length x depth (DDH #H-12) -		60' x 60'
No. 15 Vein;	" " (") -		60'x 60'

(C) BROWN McDADE LODE (Fig. 4-A)

The general lode, or composite vein structure, has been traced on the surface for a well-indicated total length of 1,600 feet; of this total a 650' section forms the S.E. extension beyond the south drift face, thus constituting a logical target for further underground exploration at drift-level, or lower horizons.

The rather well-indicated length of the composite (overlapping, braiding segmental pattern) structure as exposed within the drifts, cross-cuts, and drill holes is approximately 1,100 feet. The lode and mineralization

within the drift extends some 200' beyond the most northerly exposure within the surface trenches.

The presently-indicated vertical range of mineralization is about 150 ft. However, the corresponding dip range is in the order of 250 ft. The correlation (Fig. 1, sect. A-A) of surface and underground structural elements suggests a generally flatter composite ore structure than is assumed on the basis of the stated 50 - degree dip, or which might be inferred from the measured dip of certain strong, definitive shear strands.

The zone has been traced, by E-M survey methods for well over 6,000 feet. Over this distance the structure maintains its strength - and carries gold-silver mineralization within the typically-favourable granitic rocks, but pinches and weakens within a northerly section through Mr. Nansen greenstones. To the south, on the surface, the structure pinches abruptly; alteration and mineralization diminish proportionately where it enters Yukon group rocks.

The spatial relationships of the Webber, Huestis, Brown-McDade and subsidiary zones are shown on Fig. 1. Also shown is an approximate plan of the contemplated low-level development, collaring about 3,000' southeast of the Huestis portal and extending generally northwestward to the Webber zone via 2 miles of crosscuts, and drifts and/or "laterals". This would permit development at a horizon some 300 feet vertically below the present Huestis-Webber drifts, as computed from very preliminary regional survey data.

GEOLOGY

REGIONAL (Fig. 1)

The regional geology of the Mount Nansen area is outlined rather thoroughly in reports made available to the writer. The intent of the following abbreviated description is to present the salient features of the geological setting of the properties.

The Mount Nansen area lies within the easterly contact - outlier zone of the Coast Range intrusive complex. Major easterly-ranging prongs, or apophyses, of post-Triassic granitic rock occur closely north and south of the mine area. A number of related small, to medium-sized bodies occur within the intervening embayment, or corridor of older and younger metamorphosed sedimentary and volcanic formations.

Rocks underlying the claims area are principally pre-Cambrian to Cambrian "Yukon Group" schists, gneisses, and quartzites, with minor amounts of (Jurassic) Mount Nansen andesites and basalts. Locally, within the Webber and Huestis workings small bodies (stocks) of rhyolite porphyry intrude the older rocks.

MINE GEOLOGY (Figs. 2A, 3A, 4A)

The average of the various bedding or "lamination" attitudes observed within the Webber and Huestis tunnels, where not obviously disturbed by vein-faulting, suggests a general northerly trend of the older metamorphic rocks. Dips are predominantly to the west. Furthermore, a correlation of Huestis-Webber attitudes suggests the presence of a significant monocline or drag-fold - with a prominent westerly steepening in the vicinity of the Webber workings. The alternate inference that the general structure is essentially a drag-fold is substantiated by the numerous, rather apparent minor drag-folds within the generally flatly-dipping rocks containing the Huestis drifts and crosscuts.

The general N.W. trend of the Webber-Huestis fault-vein systems is markedly acute to that of the enclosing metamorphic assemblages. However, bedding adjacent to individual vein fractures is frequently bent, or warped into sub-parallel attitudes. Movement striae on these same fractures normally plunge rather flatly to the north or south. The writer is inclined to believe that the vein-faults were initiated by strike-wise shearing stresses, and that later displacements were related to slumping, or normal-faulting. Pursuing this inference farther, it appears that, from the rather conformable relationship of vein and bedding (westerly) dips within the Webber structures,

that the necessary "open-spaces" for mineralization were developed by variations in the dip (or strike) of the apparently-controlling wall rocks. However, with respect to the easterly-dipping Huestis vein-faults, these appear to have developed by fracturing rather squarely across the dip of the bedding - or as normal gravity fractures. Furthermore, the more optimum open-space-breccia sections of the structure appear best developed where the veins break squarely across firm-brittle, thinly-bedded wall-rock assemblages.

The Brown-McDade lode consists, essentially, of a steeply west-dipping footwall (master) shear from which an imbricating system of flatter dipping mineralized shears and vein segments spring. The flatter mineralized structures are, furthermore, complexly displaced by subordinate shearing sub-parallel to the master shear. These, also, are more-or-less mineralized.

The exploration and development of the typically imbricating, en-echelon distribution of the Brown-McDade ore shoots would require a somewhat differently-oriented (and probably more costly) approach than would be applicable to the Webber and Huestis vein systems.

Typically Mount Nansen vein material consists of massive to disseminated arsenopyrite associated with veining, or replacement (chert) quartz, disseminated pyrite, and minor to appreciable amounts of stibnite, galena, sphalerite, chalcopyrite, and lead-antimony sulpho-salts. Although the bulk of the gold content occurs with arsenopyrite, and the silver with the other sulphides, a considerable proportion of the gold occurs with sulphides other than arsenopyrite. As will be noted later in this report, the complex associations of the precious metals directly affects the possible cost and percentage of extraction of the principal ore values.

With regard to the over-all extent of favourable ground for exploration on each of the three principal vein- and lode-systems, there is no serious restriction on additional strike-length potential, in as far as this might depend upon claim boundaries or unfavourable host-rock types. The limitations here would appear to depend upon the degree of

probability, or frequency of recurrence, of optimum structural situations. At present there is no indication that these have been in any way closely delimited. There is also a fair possibility that other similar veins or structures are presently concealed by the general blanket of overburden.

The principal physical obstacle in the way of developing adequate ore reserves, at reasonable cost, to support an economical scale of mining operations on narrow mining widths, over a sufficient period of time to return the incidental capital investments is the general low relief within the Mount Nansen area. Under this limitation, deep development entails the driving of long tunnels or sinking of an adequate number of shafts to accomplish the same purpose. In specific development situations, both adits and auxiliary winzes may be required. The above alternatives will be considered under the general section of the report dealing with mining economics.

CURRENT MINE PLANT & FACILITIES

1. SURFACE

This consists mainly of the existing exploration camp situated to the north of the Webber portal (Fig. 1). The principal items comprising and servicing this general facility for the company's various exploration - development activities in the area are:

2. CAMP

3 trailer bunkhouses) accommodation for
2 skid-mounted bunkhouses) 46 crew
1 skid-mounted washroom - first aid room
1 assay laboratory; equipped for both fire (gold-silver) and wet (lead-zinc etc.) assaying; 1 sample-preparation shed.
1 office building
2 dry-storage warehouses
1 framed dining hall with storage for supplies;
1 skid-mounted mobile kitchen connected to the dining hall
1 recreation hall
1 garage, insulated-heated, and of size sufficient to service "cats" and other equipment

3. WEBBER TUNNEL PLANT

2 - 50 KW diesel-electric sets (cat 318 & 320) for camp and shop electric power supply
1 machine shop - compressor house, tools
1 dry, with wash, shower, clothes-drying, and sanitary facilities
2 Atlas-Copco 600 c.f.m. rotary-compressors; G.M. diesel power
2 air receivers, 4" dia. and 2" dia. air and water lines to underground
1 mine locie battery charger, - 1 - mine lamp charger
3 vent fans & pipe
1 air-powered, and 1 electric-powered mine fans.
Track in all main headings

4. HUESTIS PORTAL

1 compressor-equipment service - equipment storage building
2 Gardner-Denver 600 c.f.m. rotary-compressors; G.M. diesel power
2 air receivers, air-and-water lines
1 mine locie battery-charger
Track in all main headings

5. BROWN-McDADE PORTAL

1 compressor - garage-equipment service shed
1 Atlas Copco 365 c.f.m. compressor unit.
Track, air-and-water lines to main headings.

6. GENERAL UNDERGROUND PLANT

Several jack-leg and stoper-drills and drill steel.
3 Eimco 12-B mucking machines
3 - 1 1/2 ton "Little Mancha" trammess ("locies")
20 - 24 cu. ft. rocker-dump mine cars

General equipment; Tanner-gas units on Webber & Huestis mine air lines; small tools for underground operations, mechanical and blacksmith tools and equipment
1 general explosives-storage building
1 pump house for periodic mine-water supply

7. SURFACE OPERATIONAL & SERVICE EQUIPMENT

1 Witte 12 KW electric set for back-up power supply
2 Bombardier snow-muskeg vehicles
2 G.M. 4 x 4w.d. trucks; 1 and 3/4 ton
1 International 3/4 ton truck
1 Water tank-truck
1 Ford 3/4 ton pick-up truck
1 Land Rover
1 Jeep "Wagoneer" station wagon
2 Caterpillar bulldozers; D-7 and D-6 models

GENERAL

All compressors and mine equipment are in fair operating condition, but will require some service-overhaul work before any resumption of underground exploration. In addition, Mr. Imrie advises that 2 new Mancha trammers would be required.

ESTIMATED ORE RESERVES & POTENTIAL PER NOV. 10, 1965 & MAY 10, 1966 REPORTS

The following ore reserve data are taken from "ADDENDUM TO REPORT (Nov. 10, 1965) on PESO SILVER MINES LTD. PROPERTIES", May 10, 1966 Douglas D. Campbell, Consultant:

REVISED ORE RESERVES:

	Au, oz/ton	Ag, oz/ton	Tons
WEBBER:			
Proven;	0.41	23.6	30,305
Probable;	0.40	20.3	54,975
Average & total:	0.403	21.5	85,280
HUESTIS:			
Proven;	0.60	15.3	8,765
Probable;	0.64	15.9	38,270
Possible (drill indicated);	-	-	41,000
Average and total:	0.63	15.88	88,035
BROWN-McDADE; (per report Nov. 10, 1965)			
Proven & Probable;	0.61	5.4	32,190
Probable to possible;	-	-	77,945
Average and total:	0.61	5.4	110,135
TOTAL, WEBBER & HUESTIS			
Proven & Probable;	0.484	19.49	132,315
Possible (drill indicated)	(0.60)	(15.88)	41,000
All Categories:	(0.484)	(19.49)	173,315

Dr. Campbell notes; "the above reserves could support a 200 ton/day mill for 3 years, producing 1.33 million ounces of silver per year, as well as the gold. The net profit would be $1.7 million. Since this does not include Brown-McDade, nor consider the undetermined and as yet unlimited potential of all the deposits, it is evident that a profitable mine can probably be operated

new at Mt. Nansen Mines, however, further development will very likely indicate enough ore to suggest that a larger mill rate than 200 tons/day would be optimum." The fore-going production forecast is based on the following gross metal value and operating cost estimates:

Indicated gross value of ore	$40.00 per ton
Costs, based on 250 t.p.d. operations	
(a) Mining	$10.00 per ton
(b) Milling	4.50 per ton
(c) Surface and transportation	4.50 per ton
(d) Marketing, taxes, overhead, etc.	6.00 per ton
Total costs:	$25.00 per ton
Possible reduction	5.00 per ton
Possible total costs:	$20.00 per ton
Indicated gross profit:	$15.20 per ton

Although the actual "cost" of unrecovered gold and silver from the ore is not specifically noted in the above estimates, it is assumed that this is embodied in item (a), on the basis of " indicated recoveries" of gold @ 82% and silver @ 90%.

Dr. Campbell estimates a reasonable potential for the property to be at least three million tons. He derives this amount by taking the present indicated ore reserves (Nov. 10, 1965 report) and assuming that twice as much drifting will double the reserves in each property, and also that (existing) ore shoots and others on the structures will extend to a depth of 1,000 feet - with the provision that if some ore on the known zones does not extend to a depth of 1,000 feet, probably other zones will produce ore to take its place.

CHECK EXAMINATION AND EVALUATION

PRELIMINARY:

Following an on-site appraisal of the current ore reserve and mine development situation the writer concluded both were presently too limited to justify immediate short-term consideration of the provision of full production facilities until other pre-determining factors had been resolved. Two of these, which may be considered as fundamental parameters, are:

(a) The grade of millfeed likely to be derived from stoping to minimum mining-widths - as determined by the width and grade of compositely mineralized vein cross-sections and/or the natural stoping characteristics of the ground (i.e. loose, broken or gougy ore sections.)

(b) The amenability of the ore to concentration or other treatment to extract the precious-metal and, possibly, the associated base-metal content.

The procedure of check-sampling provides some data to at least partially resolve (a). A preliminary estimate of parameter (b) is derived from data accruing from preliminary metallurgical tests of the ore. A more precise estimate of this is contingent upon much more laboratory investigation.

CHECK SAMPLING - ORE BLOCK CALCULATIONS

PRELIMINARY

Channel samples were mailed across the vein on drift backs or cross-cut walls. These were taken at selected check-points, as indicated from a preliminary study of the mine assay plans. In sections of firm, coherent vein material they were taken across a true width of 3 feet - considered to represent a possible average minimum mining width, including some dilution. Within less-coherent, broken, or gougy sections sample lengths corresponded with the probable minimum stoping widths as determined by the total cross-sectional width of such material that, in any case, would

have to be accepted under normal stoping procedures. The extent of this check-sampling was as follows:

Webber underground -	36 samples
Huestis "	22 samples
Brown McDade (north drift only) -	9 samples

Because of the probable sampling time entailed, and also because of the probably less-definitive results which would have been obtained on variably oxidized and/or leached trench exposures check-sampling of surface exposures was not attempted.

Calculations of the original and check-sample data of selected sections follow:

WEBBER:

	Local Check - Samples				Adjacent Peso Samples			
Ore Shoot, or Section	No.	Au oz/t.	Ag oz/t.	Width ft.	Au oz/t.	Ag oz/t.	Width, ft. @ rail plus: 5'	2.5'
119	1733	0.08	8.36	3.0	0.19	5.43	1.1	
					0.20	1.32		2.2
"	1734	0.18	18.12	4.0	0.76	54.08	1.4	
					0.19	7.95		1.2
120	1735	0.20	18.40	3.25	0.54	15.50	0.6	
					0.51	4.61		0.6

WEBBER, cont'd

	Local Check Samples				Adjacent Peso Samples			
Ore Shoot, or Section	No.	Au oz/t.	Ag oz/t.	Width ft.	Au oz/t.	Ag oz/t.	Width, ft. @ rail plus: 5'	2.5'
122	1736	0.22	19.66	3.0	0.52	27.48	1.2	
					-	-		-
"	1737	0.24	21.98	2.5	0.66	65.34	0.5	
					0.46	54.00		1.2
"	1738	0.06	30.58	3.5	0.55	29.35	1.5	
					0.01	2.80		3.0
					0.22	4.52		3.0
	1739	0.02	1.36	3.0	1.18	55.42	0.7	
					0.06	3.10	2.3	
					tr.	0.67		3.0
122 Ex	1740	0.24	5.90	3.5	tr.	0.95	3.2	
					tr.	0.91		3.6
					0.02	2.0	3.2	
-	1741	0.10	1.24	3.0	0.07	12.23	1.0	
					0.29	33.33		1.0
-	1742	0.10	1.34	3.0	1.02	8.30	1.4	
					0.29	15.81		1.4

WEBBER, cont'd

		Local Check Samples			Adjacent Peso Samples			
Ore Shoot, or Section	No.	Au oz/t.	Ag oz/t.	Width ft.	Au oz/t.	Ag oz/t.	Width, ft. @ rail plus: 5'	2.5'
128	1743	0.22	17.40	3.0	0.77	32.79	1.0	
					0.95	52.83	1.6	
					0.13	2.31		1.8
131	1744	0.04	0.22	3.5	0.14	3.28	1.5	
					0.41	3.44	3.5	
					0.18	15.04	1.7	
					0.33	46.49		2.9
131	1745	0.02	2.12	3.0	0.01	3.20	3.0	
					0.67	80.44	0.5	
					0.31	12.20		1.5
					0.69	24.53		1.3
134	1746	0.10	1.26	3.0	0.71	16.88	1.0	
					1.62	121.05		1.0
"	1747	0.06	0.58	3.0	0.71	46.88	1.0	
					1.62	121.05		1.0
					0.17	1.00		2.9
-	1748	0.04	0.34	3.0	tr.	0.19	3.0	
					1.24	53.89		0.6
136	1749	0.30	2.84	3.0	0.40	13.58	1.7	
					0.24	11.00		2.3

WEBBER, cont'd

Local Check Samples					Adjacent Peso Samples			
Ore Shoot, or Section	No.	Au oz/t.	Ag oz/t.	Width Ft.	Au oz/t.	Ag oz/t.	Width, ft. @ rail plus: 5'	2.5'
"	1750	0.94	17.56	3.0	1.02	22.12	1.6	
					0.04	2.68	4.0	
					1.22	70.02		1.4
					0.04	2.58		4.1
"	1751	0.04	0.60	3.0	tr.	0.64	2.0	
					tr.	0.46		2.2
136 Ex.	1752	0.005	0.38	3.0	nil	tr.	2.5	
					tr.	0.33		2.8
134	1753	0.02	0.78	3.0	0.03	0.85	3.0	
					0.23	19.23	1.0	
					0.15	0.83		1.1
					tr.	0.46		3.6
					0.15	11.13		2.4
"	1754	0.005	0.32	3.0	0.38	26.75	3.6	
					tr.	0.11		2.0
"	1755	0.02	2.04	3.0	0.56	62.90	1.4	
					0.20	16.50		1.5

WEBBER, cont'd

Ore Shoot or Section	Local Check Samples No.	Au oz/t.	Ag oz/t.	Width ft.	Adjacent Peso Samples Au oz/t.	Ag oz/t.	Width, ft. @ rail plus: 5'	2.5'
131	1756	0.10	4.72	4.0	0.65	107.02	1.1	
					1.23	56.84		1.0
					0.33	14.50		1.0
"	1757	0.06	2.96	4.0	0.03	4.47	1.5	
					0.02	3.99	2.2	
					0.06	23.04		1.0
					0.02	1.76		2.9
136	1758	1.92	113.66	3.0	0.33	6.43	2.9	
					2.94	202.80	0.7	
					0.20	5.40		3.1
					2.65	179.87		0.6
"	1759	0.88	154.28	3.0	0.04	4.88	2.0	
					0.80	122.24	2.0	
					0.70	72.24		2.0
-	1760	0.06	0.96	4.0	0.07	1.39	5.6	
					0.04	0.94		4.3
139	1761	0.56	29.74	4.0	1.28	45.76	1.6	
					0.22	24.16	3.3	
					0.26	9.58		1.9

WEBBER, cont'd

	Local Check Samples				Adjacent Peso Samples			
Ore Shoot, or Section	No.	Au oz/t.	Ag oz/t.	Width ft.	Au oz/t.	Ag oz/t.	Width, ft. @ rail plus: 5'	2.5'
140	1762	0.32	18.28	3.0	0.14	6.22	3.0	
					0.68	25.24	1.2	
					0.32	17.20		2.1
					0.58	25.96		1.2
"	1763	0.10	0.36	3.0	0.23	10.57	3.0	
					0.29	2.53	2.6	
					0.31	1.39	1.4	
					0.28	31.20		3.1
-	1764	0.16	5.80	3.0	0.20	7.90	1.5	
					tr.	0.33		2.8
145	1765	0.26	62.14	3.0	0.32	66.22	2.5, S.wall	
					0.11	16.33	3.8, S. wall	
"	1766	0.18	4.24	3.0	0.39	3.53	1.0, N. wall	
					0.20	5.10	4.0, N. wall	
"	1767	0.20	5.48	3.0	1.24	21.52	6.0, S. wall	
					0.29	7.53	6.0, S. wall	
"	1768	0.44	33.22	3.0	0.66	146.18	3.8, N. wall	
					0.96	32.26	3.5, N. wall	

Summary:

Assay of Composite #1733-66	0.26	16.8
Calc. " " #1733-66	0.24	16.8

The above includes all samples, both on and between designated ore shoots.

NOTE: The above are "straight averages".

The writer's check samples relate reasonably well to the Peso staff's sampling, with due consideration for differing widths.

Eliminating those samples which fall between presently designated ore blocks, the computed net average grade of the writer's Webber composite is:

Net-Average Au, oz/t.	Net-Average Ag, oz/t.	Pb-Zn%	Av. Width	Gross Value (Au @ 37. Ag @ 1.40)
0.26	19.4	N.A.	3'	$36.80

Of the above 31 samples included in the computation, approximately 9 can be considered as having missed, or partly missed the richest part of the local vein cross-section. Therefore the writer assumes a further positive adjustment to the above net-average grade. Finally, among the corresponding Peso samples within the limits of the writer's composite, Dr. Campbell has "cut" the very local, or erratic plus -1 oz/ton gold samples and plus -100 oz/ton silver sample to 1.0 oz/ton and 100 oz/ton respectively, therefore his over all average for the Webber ore reserves is, most probably, fairly reasonable. This is as follows:

	Au, oz/t.	Ag, oz/t.	Tons	Gross Value per ton
Proven Ore	0.41	23.6	30,305	$48.21
Probable	0.40	20.3	54,975	$43.22
Average & Total	0.403	21.5	85,280	$45.01

Finally, as ore exposed within the drifts appears economically and mineralogically equivalent to surface exposures, and as the corresponding vein structures show no indication of weakening with depth, the writer assumes an increase in "possible" ore reserves (Fig. 2A) of:

54,000 tons of equivalent grade ($40.23)

HUESTIS:

Ore Shoot, or Section	Local Check Samples No.	Au oz/t.	Ag oz/t.	Width ft.	Adjacent Peso Samples Au oz/t.	Ag oz/t.	Width, ft. @ rail plus: 5'	2.5'
13 N-1	1769	0.08	1.04	4.0	0.20	7.22	6.0	
					0.16	5.16		6.0
"	1770	0.16	4.00	4.0	0.82	53.80	4.0	
					nil	tr.		4.0
"	1771	0.18	5.03	4.0	1.44	61.56	3.0	
					0.19	0.43		2.5
					0.18	0.38		3.0
608	1772	0.40	9.60	3.0	0.12	3.50	2.4	
					0.31	5.05	1.2	
					0.86	14.72		1.6
"	1773	0.58	8.02	4.0	1.10	12.18	4.5	
					1.85	26.51	2.8	
609	1774	0.16	2.28	4.7	0.48	6.62	4.1, N. wall	
					tr.	0.12	2.7	
"	1775	0.02	0.54	2.5	nil	tr.	all-S. wall	
610	1776	0.06	3.96	3.0	0.02	0.64	2.5 - N. wall	
					0.33	3.25	0.8, N. wall	
"	1777	0.56	37.52	1.25	-	-	-	S. wall

HUESTIS, cont'd

	Local Check Samples				Adjacent Peso Samples			
Ore Shoot, or Section	No.	Au oz/t.	Ag oz/t.	Width ft.	Au oz/t.	Ag oz/t.	Width, ft. @ rail plus: 5'	2.5'
612	1778	1.64	25.16	3.0	1.38	33.14	2.2	
					0.09	1.59	1.4	
					0.07	1.21		2.1
					0.35	3.73		1.7
"	1779	0.14	3.80	4.0	0.42	2.60	1.3	
					2.90	23.30	1.3	
					2.18	57.18		1.1
					0.14	1.84		3.2
"	1780	1.18	66.18	4.0	3.20	103.74	1.9	
					0.72	33.18		2.6
					0.06	0.36		1.7
"	1781	0.14	2.43	3.0	2.12	57.20	0.8	
					0.20	2.10	3.1	
					0.14	0.34		4.5
612	1782	0.26	5.32	4.0	0.07	0.59	1.7	
					1.52	2.68	0.7	
					1.38	2.60		0.7
"	1783	0.03	0.42	3.0	0.21	4.49	2.2	
					tr.	0.20	3.2	

HUESTIS, cont'd

	Local Check Samples				Adjacent Peso Samples			
Ore Shoot, or Section	No.	Au oz/t.	Ag oz/t.	Width ft.	Au oz/t.	Ag oz/t.	Width, ft. @ rail plus: 5'	2.5'
					0.13	1.35	2.5	
					0.14	1.84		2.4
615	1784	1.54	27.40	3.0	3.26	155.30	1.5	
					0.43	14.33	1.5	
					0.44	14.72		4.0
					2.38	138.08		1.0
"	1785	0.40	19.42	3.25	3.42	413.52	2.5	
					0.22	6.76		1.5
					1.37	244.17		1.5
"	1786	1.46	45.42	3.5	0.07	2.11	2.2	
					0.49	22.19	2.2	
					0.02	5.30		1.7
					0.51	72.73		2.4
"	1787	1.34	36.42	1.5	0.20	3.90	3.0	
					3.40	85.02	0.5	
					1.35	43.55		2.8
					2.69	78.91		0.8
"	1788	1.70	40.76	2.5	nil	tr.	-	
					0.88	17.36		4.2

HUESTIS, cont'd

	Local Check Samples				Adjecent Peso Samples			
Ore Shoot, or Section	No.	Au oz/t.	Ag oz/t.	Width ft.	Au oz/t.	Ag oz/t.	Wdh, ft. @ rail plus: 5'	2.5'
617	1789	0.32	6.92	1.3	1.91	28.59	1.7	
					0.94	10.60		2.2
"	1790	0.62	23.00	2.5	1.90	50.44	1.7	
					0.29	3.87		4.9
					0.39	20.67		1.2

Summary:

Assay of Composite #1769-90	0.66	16.9
Calc. " " #1969-90	0.59	17.0

The above includes all samples both on and between designated ore shoots.

NOTE: The above are "straight averages."

In general the check samples show a reasonably good correspondence with local sections of the very detailed coverage by Peso's staff. Only a few of the writer's samples appear to be so situated as to miss, or only partly include the higher grade cross-section of the vein, hence the average of these is not seriously affected. This correspondence, then can be considered to generally verify the original detailed sampling and Dr. Campbell's computations of average grade - with the additional insurance obtained by cutting certain localized, or erratic assays in the plus -1 oz Au and 100- oz. Ag range.

The following estimates of average grade and tonnage are consequently accepted by the writer. To repeat, these are as follows:

	Au, oz/t.	Ag, oz/t.	Tons	Gross Value per ton
Proven	0.60	15.3	8,765	$43.62
Probable	0.64	15.9	38,270	$45.94
Average & Total:	0.63	15.88	47,035	$45.54

Note: The higher grade allocated to ore in the probable category is essentially due to the inclusion of No. 2 West Branch vein drill intersections within the computations.

May 10, 1965 additions to possible ore include a block based on depth extensions indicated by D.D.H. #H22. This is given as 41,000 tons. On the strength of this drill hole proof of at least local continuity to depths of 360' below the drift horizon, the writer believes a conservative allowance should also be made for No. 12 West Branch @ 11,000 tons.

BROWN McDADE

Ore Shoot, or Section	No.	Au oz/t.	Ag oz/t.	Width, ft.	Au oz/t.	Ag oz/t.	Width, ft.
1-N	1791	0.42	3.00	4.0	-	-	-
"	1792	0.38	4.34	5.0	-	-	-
"	1793	1.40	4.58	5.0	0.18	1.8	8.0
"	1794	0.52	18.84	4.0	-	-	-
"	1795	0.10	0.92	4.0	-	-	-
"	1796	0.40	4.42	4.0	-	-	-
"	1797	0.16	6.72	4.0	-	-	-

BROWN McDADE, cont'd

Ore Shoot, or Section	Local Check Samples No.	Au oz/t.	Ag oz/t.	Width, ft.	Adjacent Peso Samples Au oz/t.	Ag oz/t.	Width, ft.
1-N	1798	0.10	1.30	6.0	-	-	-
2-N	1799	0.44	27.06	6.0	-	-	-

Summary:

	Au oz/t.	Ag oz/t.
Assay of composite #1791-99	0.48	8.00
Calc. " " #1791-99	0.44	7.9

Note: all of the above are "straight averages".

The average of the writer's check-sampling of 1N ore section is in fair agreement with the proven average of all the ore zones. However, the amount of sampling accomplished here is admittedly too meagre for anything more than a very general verification of the over-all average grade. Consequently, Dr. Campbell's estimate of grade and tonnage of proven and probable ore is accepted. To repeat, this is:

	Au, oz/t.	Ag, oz/t.	Tons	Gross Value
Proven & Probable	0.61	5.4	32,190	$30,00

However, due to the rather preliminary state of general exploration on this prospect, and the consequent relatively high degree of conjecture regarding structure and ore reserves, the writer does not feel that an estimate of possible ore is presently justified. For completeness, however, this has been stated as 77,945 tons of the above grade ($30).

GENERAL MOUNT NANSEN ORE RESERVES

These are currently summarized as follows:

	Au, oz/t.	Ag, oz/t.	Tons	Totals: Au, oz/t.	Ag, oz/t.	Tons
Proven	0.41	23.6	30,305			
	0.60	15.3	8,765	0.45	21.7	39,070
Probable	0.40	20.3	54,975			
	0.64	15.9	38,270			
	0.61	5.4	32,190	0.52	15.2	125,435
Possible	0.40	20.3	54,000			
Drill Indicated	0.63	15.9	52,000	0.51	18.2	106,000
Total: all categories -				0.51	17.25	270,505
Gross value per ton, all categories -				$43.02		

The longer range, (say (6-7 year) gross ore potential, assuming concurrent development and production is assumed to be 500,000 tons.

The writer does not feel that too much importance should be attached to ultimate-potential estimates at this time - at least not until such a time as deeper and more extensive lateral exploration add more definitive geological data.

METALLURGY

Description of Ore:

A Mines Branch, Ottawa laboratory report notes that the ore is

chiefly a silicified rock and breccia, containing veining and disseminated arsenopyrite, pyrite, sphalerite, galena, chalcopyrite and other copper sulphides, and containing minute grains of silver-bearing sulpho-salts. The arsenopyrite and pyrite are variably replaced by secondary (oxidation etc.) minerals derived from the primary assemblage.

The gold occurs mainly within the arsenopyrite (and pyrite); silver, mainly with the sulpho-salts (and galena).

The above report advises that very fine grinding would probably be required to substantially complete the liberation (of the gold-silver content.)

Metal Content & Reserves

The writer assumed the following average metal content, as based on analyses of Webber and Huestis bulk samples submitted to Britton Research (metallurgical) laboratories, Vancouver, B.C., and the assays of composites of the writer's own sampling with a further 10% allowance for general dilution from mining, with the adjusted reserve figure, amounting to 275,000 tons:

Gold (Au)	0.46 oz/ton
Silver (Ag)	15.7 oz/ton
Lead (Pb)	1.5 %
Zinc (Zn)	0.5 %
Copper (Cu)	0.05 %
Antimony (Sb)	0.80 %
Arsenic (As)	3.0 %
Iron (Fe)	8.0 %

The above, translated into equivalent weights of ore sulphides - for concentrate weight calculations, is as follows:

Galena (PbS)	1.73 %
Sphalerite (ZnS)	0.75 %
Chalcopyrite ($CuFeS_2$)	0.15%
Stibnite (Sb_2S_3)	1.15 %
Arsenopyrite (FeAsS)	6.50 %
Pyrite (FeS_2)	12.00 %
Sub-total -	22.25 %
Add insoluble & miscell.	2.75 %
Total:-	25.00 %

Hence the computed ratio of concentration,

i.e. $\frac{\text{weight of ore}}{\text{weight of concentrates}}$ = 4- to -1

Summary of Metallurgical Investigations

Preliminary tests showed the absence of free-milling gold and silver in the ore.

The laboratory tests involved:

(a) Multi-stage cyanidation with various chemical reagents to condition the ore-water pulps.

(b) Re-cyanidation of first-stage cyanidation tailings, followed by flotation.

(c) Pre-flotation of certain sulphides for a high-silver concentrate, followed by normal cyanidation of the flotation tailings.

Using some combination of the above treatments, it is expected (Britton) that a concentrator could effect recoveries of 83% of the gold and 90% of the silver content of the ore. Further improvements would probably require roasting of a bulk concentrate, which would also entail an excessive investment in plant and inherent technical problems.

MINING ECONOMICS

With mill heads @ 0.46 oz/ton Au, and 15.7 oz/ton Ag, the gross value of these, excluding associated Pb-Zn content, is $39.00/ton.

The presently-indicated recoverable value is $33.90 per ton.

The ensuing production estimate embodies the following assumptions concerning the scale and type of mining operation which seems most appropriate to the indicated size and present development of the Mt. Nansen orebodies. Furthermore, the initial operation would be based, primarily, on the Webber and Huestis zones:

1. Development of present orebodies to depth of 300 feet below existing adit levels; completion of access road.

2. Scale of operation set at 250 tons per days - based on 3 1/2 years for the presently indicated and projected ore reserves.

3. Mining essentially by cut-and-fill.

4. Milling by flotation and cyanidation - with modifications as indicated.

(A) DIRECT COSTS:

Gross value of mill production		$33.90 per ton
Less estimated marketing expense of silver (gold) concentrate	$0.50	
Mining, cut & fill	$6.00	
General & stope development	$3.50	
Milling	$4.50	
Surface & transportation	$4.50	
Mine Services (incl. power)	$2.50	
General expense at property	$2.00	$23.50 per ton
Estimated Gross Profit:		$10.40 per ton

(B) CAPITAL INVESTMENT

Mill	$500,000.
* Other Plant & Camp	300,000.
Access Road	90,000.
Inventory	75,000,
Existing equipment overhaul & replacement	25,000.
Operating Capital	100,000.
Interest Charges	65,000.
General Provision	115,000.
Total:	$1,270,000.

(* Note: pre-production development included in (A))

Cost per ton	4.60
Preliminary, indicated net profit=	5.80 / ton

Respectfully submitted,

W.M. Sharp

W.M. Sharp, P. Eng.

FORM DD-3

CASSIAR ASBESTOS CORPORATION LIMITED

DIAMOND DRILL CORE GEOLOGY LOG

PROPERTY Clinton HOLE CS-125 DEPTH 474'

AZIMUTH INCLINATION -90° SECTION 18+00W

LATITUDE 10882447 DEPARTURE 10697.7E ELEVATION 1406.59

STARTED June 15/73 FINISHED June 22/73 LOGGED by G. Smith date June 27, 1973

LEGEND	
W	OVERBURDEN
B	SLATE
C	CARBONATE
Q	QUARTZITE
D	DIORITE
V	VOLCANIC
S	SERPENTINE
//////	SHEARING

SCALE:

BOX	FROM	TO	LENGTH FT.	REC'Y FT.	DESCRIPTION	VISUAL LOG
	0	59			GRAPHITIC SLATE -	
					WEAKLY COMPETENT, BROKEN ALONG	
					BEDDING, SOFT, BLACK	
					[illegible]	
	59	100			SHEARED, MUDDY, VERY GRAPHITIC SLATE	
					[illegible]	
	100	102			ALTERED SERPENTINE	
					- SILICEOUS, SANDY-GRANULAR	
					BUFF COLOUR - MOD. CARBONATIZATION [illegible]	
	102	113			ALTERED SERPENTINE	
					- LIGHT GREEN, HARD, SILICEOUS,	
					VERY COMPETENT, WITH TRACE OF	
					SILICIFIED FIBRE	
	113	119			EARTHY LIMONITIC QUARTZ CARBONATE	
					- WITH TRACE OF ALTERED FIBRE	
	119	129			SERPENTINE	
					- SIMILAR TO (102' - 113')	
					- SOMEWHAT DORMAL LIGHT JADE	
					GREEN SERP. WITH MINOR LIMONITE AND	
					FIBRE	
					- HARDER THAN NORMAL, PROBABLY	
					WEAKLY SILICIFIED - COMPETENT.	
	129	132			SANDY, CLAYEY, ALTERED SERPENTINE	
					WITH TRACE OF ALTERED FIBRE	
					BUFF-BROWN COLOUR	
					- SHEAR!	

FORM DD-1

CASSIAR ASBESTOS CORPORATION LIMITED

DIAMOND DRILL CORE GEOLOGY LOG

LEGEND	
W	OVERBURDEN
B	SLATE
C	CARBONATE
Q	QUARTZITE
D	DIORITE
V	VOLCANIC
S	SERPENTINE
▨	SHEARING

PROPERTY Clinton HOLE CS-125 DEPTH 474'

AZIMUTH INCLINATION SECTION 18+00W

LATITUDE 108,824.47 DEPARTURE 106,977.86 ELEVATION 1406.59'

STARTED June 15, 1973 FINISHED June 22, 1973 LOGGED by G Smith date June 27/73

SCALE:

BOX	FROM	TO	LENGTH FT.	REC'Y FT.	DESCRIPTION	VISUAL LOG
	132	139			Soft, muddy, sheared ~~ultramafic~~ Serpentine	
	139	176			Quartz Carbonate	
					Rusty Brown, weakly competent	
					with veins of altered fibre (Silicified)	
					throughout - not as hard and brittle	
					as is typical and generally pale green with	
					not coated with limonite-like alteration	
	176	179 ~~235~~			Altered Serpentine	
					- Pale green, barren, very broken	
					and black (not sheared)	
					- Similar to above but only very	
					minor limonite - no carbonates	
	179	233			Altered Serpentine	
					- Greyish-green to grey-green,	
					moderately hard, granular with	
					minor talc - Brown, (limonite coating)	
					- no trace of fibre	
					- no coating on fractures	
					- no carbonates	
	233	258			Serpentine - fibre bearing	
					- Blocky, light yellowish green	
					weakly competent with minor shears	
					throughout	
					- Amorphous serp on some fractures	
					- Good grade fibre	

FORM D

CASSIAR ASBESTOS CORPORATION LIMITED

DIAMOND DRILL CORE GEOLOGY LOG

PROPERTY Clinton HOLE CS-125 DEPTH 474.

AZIMUTH INCLINATION -90° SECTION 18+00W

LATITUDE 108,824.47 DEPARTURE 10,977.86 ELEVATION Mod. 59

STARTED June 15, 1973 FINISHED June 22, 1973 LOGGED by G Smith date June 27/73

LEGEND

W	OVERBURDEN
B	SLATE
C	CARBONATE
Q	QUARTZITE
D	DIORITE
V	VOLCANIC
S	SERPENTINE
▨	SHEARING

SCALE:

BOX	FROM	TO	LENGTH FT.	REC'Y FT.	DESCRIPTION	VISUAL LOG
	258	422			Black Serpentine - Fibre Bearing	
					- typical light jade green	
					- No shearing, no amorph seams	
					from here	
					- Fibre at 45° to core axis	
					322 - 366 - Mottled, yellowish	
					with greenish tint	
					- At 344 amorphous seam on	
					fracture	
					363 - 366 - Sheared	
					After which serp is	
					more homogeneously jade green	
					(dark) and not mottled and fibre	
					is harsher and generally better	
					quality than before 366'	
					- Better competency after 366	
	422	425			Sheared Barren Serpentine	
	425	466			Massive Serpentine	
					- mottled green & yellow with amorph	
					seam interrupted fibre throughout	
					- Traces of only asbestic fibre violets	
	466	471			Sheared Barren Serpentine	
					- Fish scaley.	
					Intrusive dyke at 469 - 471 (Diorite)	

CASSIAR ASBESTOS CORPORATION LIMITED

FORM DD-2

DIAMOND DRILL CORE FIBRE LOG

PROPERTY Clinton HOLE CS-125 DEPTH 474'

AZIMUTH INCLINATION 90° SECTION 18+00W

LATITUDE 108,824.47 DEPARTURE 106,977.86 ELEVATION 1406.59

STARTED June 15, 1973 FINISHED June 22, 1973 LOGGED by G. Smith date June 22/73

LEGEND

W	OVERBURDEN
B	SLATE
C	CARBONATE
Q	QUARTZITE
D	DIORITE
V	VOLCANIC
S	SERP. 0-1
Y	SERP. 1-3
O	SERP. 3-5
P	SERP. 5-7
R	7+

FROM	TO	LENGTH FT.	REC'Y FT.	FIBRE COUNT % + 1/16" First	Second	Average	VISUAL LOG		CORE SAMPLE	BAG NUMBERS
0	100			Graphitic Slate			B			
100	113			Altered Serpentine			S			
113	119			Quartz Carbonate			C			
119	129			Serpentine			S			
129	132			Sheared Serpentine			S			
132	139			Sheared Graphitic Slate			B			
139	176			Quartz Carbonate			C			
176	233			Altered Serpentine			S			
230	235	5	5	1.6	0.2	0.9	S		235	
235	240		3	4.3	5.7	5.0	P			
240	245		5	1.7	2.1	1.9	Y			
245	250		3	7.8	7.5	7.6	R			
250	255		4	6.5	5.4	5.9	P			
255	260		4	1.9	0.7	1.3	Y			
260	265		5	1.3	0.9	1.1	Y			
265	270			4.2	4.2	4.2	O			
270	275			6.1	4.5	5.3	P			
276	280			4.6	4.7	4.7	O			
280	285			2.7	2.6	2.6	Y			
285	290			6.5	6.3	6.4	P			
290	295			1.4	2.3	1.8	Y			
295	300			4.5	5.3	4.9	O			
300	305			0.5	1.5	1.0	S			
305	310			2.2	2.9	2.6	Y		(235-290)	
310	315			5.1	6.4	5.7	P			
315	320			7.4	5.0	6.2	P		BRG = 4.00%	
320	325			4.2	4.2	4.2	O		Corrosion (+1A.G) = 5.77%	
325	330		3	7.0	5.2	6.1	P		RMG (+1.1) = 6.3%	
330	335			5.2	4.1	4.6	O			

CASSIAR ASBESTOS CORPORATION LIMITED

FORM DD-2

DIAMOND DRILL CORE FIBRE LOG

PROPERTY Clinton HOLE CS-125 DEPTH 474

AZIMUTH INCLINATION 90° SECTION 18+00 W

LATITUDE 108,824.47 DEPARTURE 106,977.86 ELEVATION 1406.59

STARTED June 15, 1973 FINISHED June 22, 1973 LOGGED by G Smith date June 22/1973

LEGEND

W	OVERBURDEN
B	SLATE
C	CARBONATE
Q	QUARTZITE
D	DIORITE
V	VOLCANIC
S	SERP. 0-1
Y	SERP. 1-3
O	SERP. 3-5
P	SERP. 5-7
R	7+

FROM	TO	LENGTH FT.	REC'Y FT.	FIBRE COUNT % + 1/16" First	Second	Average	VISUAL LOG		CORE SAMPLE	BAG NUMBERS
335	340	5	5	40	56	48	O			
340	345			24	35	30	O			
345	350			2.5	4.9	37	O			
350	355			1.1	2.2	1.6	Y			
355	360			6.2	5.4	5.8	P			
360	365			2.6	1.4	2.0	Y			
365	370			0.2	1.1	0.6	S			
370	375			4.7	6.1	5.4	P			
375	380			4.6	6.3	5.5	P			
380	385			3.5	4.0	3.7	O			
385	390			5.4	4.5	5.0	P			
390	395			4.1	3.7	3.9	O		395	
395	400			1.3	0.7	1.0	Y			
400	405			1.2	0.9	1.0	Y			
405	410			0.3	0.2	0.3	S			
410	415			2.0	2.9	2.4	Y			
415	420			1.4	1.5	1.5	Y			
420	425			0.8	1.0	0.9	S			