MAY 19 1965

006631

DOUGLAS D. CAMPBELL
CONSULTING GEOLOGIST
314 MARINE BUILDING
VANCOUVER 1, B.C.

W.S.R.
K.C.G.
J.H.S.
E.F.
R.D.S.
B.C.B.
P.M.K. ✓
G.W.M.
R.G.M.
C.K.W.
J.S.S.
G.P.R.
K.F.L.
E.C.J.

Mr. Paul Berliz, President,
Mt. Nansen Mines Ltd.,
#420-475 Howe Street,
VANCOUVER, 1, B.C.

May 17, 1965.

115-H
MT. NANSEN

Dear Sir:

Re: TARGET FOR MINE DEVELOPMENT, 1965

After spending ten days recently at the Mt. Nansen properties, presently being explored underground by your company, I have been able to make an assessment of the results and implications of the development to date. Prior to the present time exposures have not been sufficient to properly correlate the surface and the underground data, nor was the Brown-McDade geology entirely understood. Now, all these features can be sensibly integrated and they are presenting a most encouraging target for development in 1965. To facilitate your appreciation of the results to date and the implications for the future I have outlined below a target for the present development at Mt. Nansen which I consider to be reasonable and well supported by existing data.

WEBBER ZONE: Surface stripping and drilling in 1964 exposed 2200 feet of vein zone length of which 900 feet contained ore values in gold and silver. Underground development, 200 feet below surface has exposed 430 feet of vein zone length to date and has revealed 165 feet of ore length, where 100 feet was expected, and an average mining width of about 5 feet, where 3-4 feet was expected. Several diamond drill intersections underground indicate that vein zones yet to be drifted will maintain the favourable grades and widths so far encountered. The underground exposure of that portion of the Webber vein system stripped on the surface will require 1800 feet of additional drifting, this will be accomplished by Autumn, 1965.

HUESTIS ZONE: Surface trenching and sampling up to 1964 indicated the existence of two major vein zones extending for a minimum length of 1500 feet. In addition, several minor vein zones were indicated west of the main zones. Gold-silver ore values across mining widths were obtained in practically every trench, the trenches

being 50-100 feet apart. The present adit encountered the two main vein zones as strong, well mineralized structures and exposed good grade ore across five feet widths on both. To date only one vein zone has been drifted but already has indicated over 100 feet length of ore of 200 feet exposed. It is anticipated that the 1965 program will accomplish at least 2000 feet of drifting at the Huestis.

BROWN-McDADE: Surface trenches of the Brown-McDade zone indicated high grade gold ore in the zone for a length of 1500 feet, the total length exposed in trenches. Recent remapping and resampling of the underground workings reveals a series of en-echelon sheet-like replacement orebodies averaging 6 feet in mining width and aggregating an exposed length of at least 1500 feet. Drilling below the level has established continuity of ore structure and values to a depth of 200 feet below the outcrop. A number of short underground diamond drill holes are all that is needed at the Brown-McDade to confirm the proposed reserves.

POSSIBLE RESERVES:

As briefly outlined below, it is entirely reasonable now to expect that completion of the 1965 underground development of the three Mt. Nansen properties has an excellent chance of indicating the following tonnages:

WEBBER - Probable lengths of ore, from that already exposed plus the surface stripping, is 1100 feet, with an average width of 4 feet. The present level gives a depth of 200 feet, a further projection of 100 feet is reasonable.

$$1100\ (4)\ 300 \div 12 = 110{,}000 \text{ tons}$$

HUESTIS - Of the 3000 feet of two vein zone lengths indicated on the surface it is reasonable now to assume at least 800 feet will be ore-bearing, of which 100 feet is already exposed. The average width appears to be 5 feet. As with the Webber, a 300 feet depth is reasonable.

$$800\ (5)\ 300 \div 12 = 110{,}000 \text{ tons}$$

BROWN-McDADE- This ore zone is well exposed and verified.

$$1500\ (6)\ 300 \div 12 = 225{,}000 \text{ tons}$$

TOTAL TONNAGE - Approximately 445,000 tons

GRADE - It is early yet to predict a precise grade for the above tonnages but results so far indicate that the Webber zone will return at least 0.40 oz Au per ton with an average of about 20 oz Ag per ton. The Huestis appears to grade higher in gold but lower in silver. The Brown-McDade has been well and thoroughly sampled but as yet the writer has not calculated the grade, nonetheless, it appears that it will average around 0.50 oz Au and about 6-10 oz Ag per ton.

It is reasonable from results to date to predict that a total gross grade will average around 0.45 oz Au and 15 oz Ag for the proposed tonnage and could well exceed this figure.

CONCLUSIONS

It is reasonable to predict from results to date, that the present underground development program at Mt. Nansen Mines has an excellent chance of proving and indicating by autumn a reserve tonnage of about 500,000 tons grading 0.45 oz Au and 15 oz Ag per ton.

This figure does not take into consideration the many thousands of feet of strike length of each vein zone not yet exposed or explored in any way. Nor does it take into account the other known vein zones in the area, i.e. Cabin Vein etc., that have not yet received more than perfunctory surface attention. Finally, it does not embrace the obvious depth extensions of any of the vein zones. Thus the ultimate potential of the property has only been slightly considered.

The implication of the 1965 target of 500,000 tons is that this tonnage is sufficient reserve to sustain a 500 t/day mill for about 3 years or a 250 ton mill for 6 years. Considering the excellent unexplored potential of the property, particularly if the 1965 target figure is attained, then the 500 ton mill would definitely be warranted. Construction of the mill could start at the site in the late summer of 1965, as results confirm the above target, and the mill may possibly be completed by late 1966 or early 1967. One consideration as to the location of the mill is the shortage of water in the area. The best site would be on the Brown-McDade side, near Victoria Creek and the airstrip, in this case perhaps a main underground haulage from Brown-McDade to Webber should be carefully considered. Such a haulage would give at least two levels below all the deposits and all head frames and ore haulages would be underground, an important feature in the Yukon climate. Such a main haulage would be somewhat over one mile in length.

At 500 tons per day for the anticipated grade of a gross value of about $38 per ton at present metal prices, and with an estimated mining and milling cost of about $20, the operation should net at least $3 million per annum. The expected increase in silver price would increase this net by $1-2 million.

The foregoing estimates etc. are, of course, far from confirmed but they are intended to provide your company with some idea of the target and results to be expected from the present development so that future preparations and adjustments can be made within a reasonable framework. In the writer's opinion the estimates have been conservative, there is no doubt that a profitable mine exists at Mt. Nansen, it now remains to determine how large a mine it will be.

Respectfully submitted,

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

DDC:vsm

June 23, 1961

MOUNT NANSEN MINES LIMITED

PROFITABILITY ESTIMATE

500 Tons per day

(In $1,000)

	PRODUCTION YEAR 1	2	3	4	5
GROSS SALES	8,833	8,833	8,833	8,833	8,833
Freight	850	850	850	850	850
Smelter	350	350	350	350	350
NET SALES	7,633	7,633	7,633	7,633	7,633
PLANT COSTS					
Mining $7/ton	2,190	2,190	2,190	2,190	2,190
Milling $5/ton	910	910	910	910	910
Administration	265	265	265	265	265
OPERATING PROFIT	4,268	4,268	4,268	4,268	4,268
DEPRECIATION	-	-	-	500	400
PREPRODUCTION COSTS	-	-	-	1,600	-
BEFORE TAX PROFIT	4,268	4,268	4,268	2,168	3,868
DEPLETION ALLOWANCE					600
TAXABLE PROFIT	-	-	-	2,168	3,268
TAX @ 50%				1,084	1,634
NET OPERATING PROFIT	4,268	4,268	4,268	1,084	1,634
CASH FLOW	4,268	4,268	4,268	3,184	3,634

Basis:

300 Tons per day of ore @ $56.00 from Huestis and/or Webber mines and 200 tons per day of ore @ $37.00/ton from Brown-McDade mine. Costs $25.00 per ton.

MOUNT NANSEN MINES LIMITED

PROFITABILITY ESTIMATE

200 Tons per day

(In $1,000)

	PRODUCTION YEAR 1	2	3	4	5
GROSS SALES	4,088	4,088	4,088	4,088	4,088
Freight	340	340	340	340	340
Smelter	140	140	140	140	140
NET SALES	3,608	3,608	3,608	3,608	3,608
PLANT COSTS					
Mining $7/ton	876	876	876	876	876
Milling $4/ton	364	364	364	364	364
Administratior	106	106	106	106	106
OPERATING PROFIT	2,262	2,262	2,262	2,262	2,262
DEPRECIATION	-	-	-	400	300
PREPRODUCTION COSTS	-	-	-	1,300	-
BEFORE TAX PROFIT	2,262	2,262	2,262	562	1,962
DEPLETION ALLOWANCE					240
TAXABLE PROFIT	-	-	-	562	1,722
TAX @ 50%	-	-	-	281	861
NET OPERATING PROFIT	2,262	2,262	2,262	281	861
CASH FLOW	2,262	2,262	2,262	1,981	1,401

Basis

All ore from Webber and/or Huestis mines at $56.00 per ton, none from Brown McDade. Total costs per ton $25.00.

MOUNT NANSEN MINES LIMITED

PROFITABILITY ESTIMATE

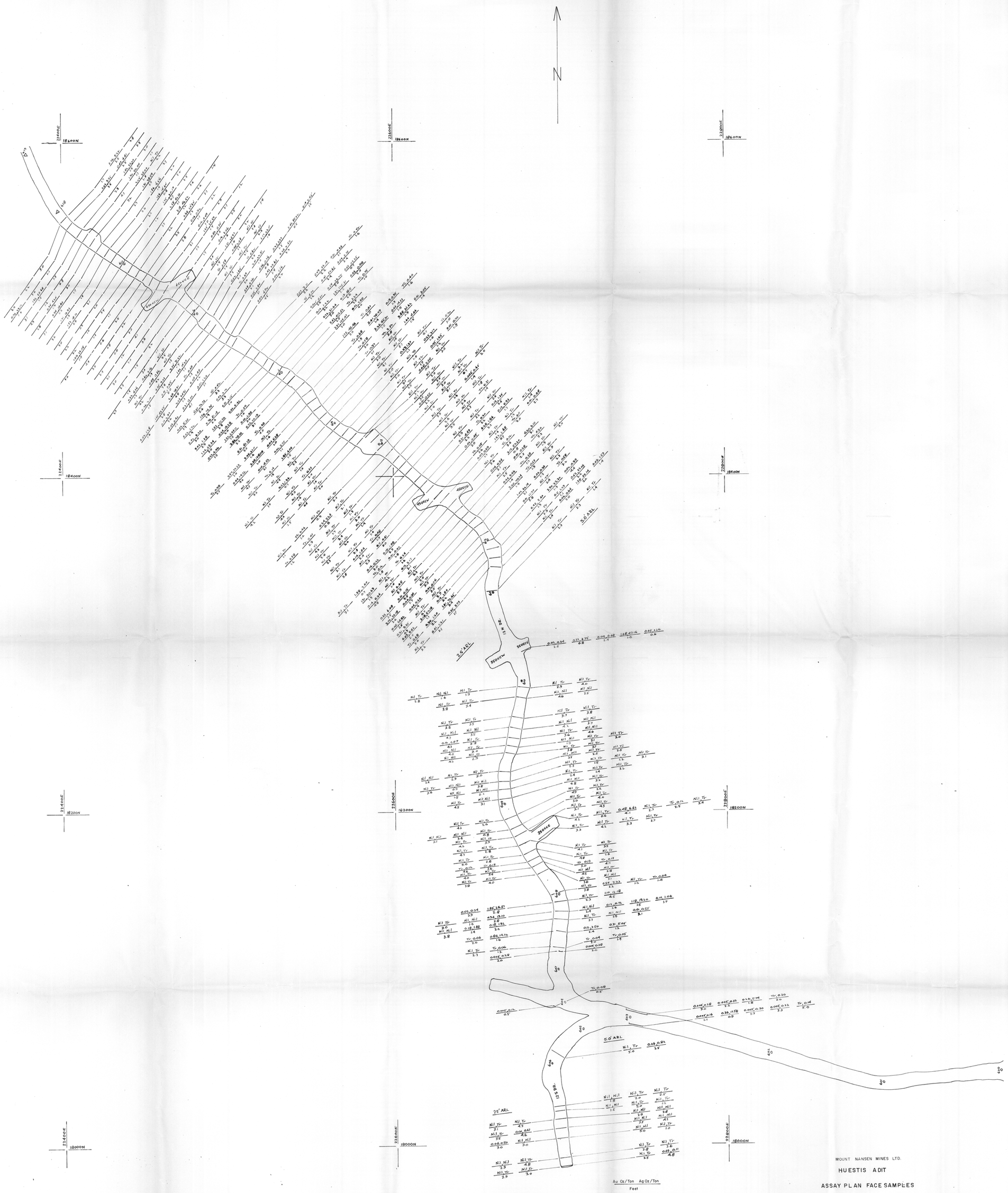
100 Tons per day

(In $1000)

	PRODUCTION YEAR 1	2	3	4	5
GROSS SALES	2,044	2,044	2,044	2,044	2,044
Freight	170	170	170	170	170
Smelter	70	70	70	70	70
NET SALES	1,804	1,804	1,804	1,804	1,804
PLANT COSTS					
Mining $7/ton	438	438	438	438	438
Milling $5/ton	182	182	182	182	182
Administration	53	53	53	53	53
OPERATING PROFIT	1,131	1,131	1,131	1,131	1,131
DEPRECIATION	-	-	-	250	200
PREPRODUCTION COSTS	-	-	-	881	119
BEFORE TAX PROFIT	1,131	1,131	1,131	-	812
DEPLETION ALLOWANCE					120
TAXABLE PROFIT					692
TAX @ 50%	-	-	-	-	346
NET OPERATING PROFIT	1,131	1,131	1,131	-	346
CASH FLOW	1,131	1,131	1,131	1,131	785

Basis

All ore from Webber and/or Huestis mines at $56.00 per ton, none from Brown-McDade mine. Total costs $25.00 per ton.



MOUNT NANSEN MINES LTD.

HUESTIS ADIT

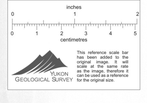
ASSAY PLAN FACE SAMPLES

JUNE 4, 1965 RRD

SCALE

20 10 5 0 5 10 20

FEET



PRELIMINARY DRAFT

MOUNT NANSEN MINES LTD

WEBBER ADIT

ASSAY PLAN — FACE SAMPLES

JUNE 3, 1965 MOH

SCALE

20 10 5 0 5 10 20

FEET