Tony. Z.

B.Y.G. NATURAL RESOURCES INC.

MT.NANSEN PROPERTY

HEUSTIS & WEBBER ZONES

FEASIBILITY STUDY

BY

NORMAND LECUYER ENTERPRISE INC.

FEBRUARY 1997

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B.Y.G. NATURAL RESOURCES INC.

MT. NANSEN PROPERTY

HEUSTIS & WEBBER ZONES

FEASIBILITY STUDY

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1.0 SUMMARY

A feasibility study was carried out to assess the economics of developing and mining the Heustis and Webber Zones , on B.Y.G. Natural Resources Inc., Mt. Nansen property in the Yukon Territory.

The Heustis and Webber ore zones represent simple vein type deposits that are high grade (avg. 0.327 o.p.t. Au/ 10.73 o.p.t. Ag.), but at the same time quite narrow with a diluted mining width of only 1.22 meters. The total ore reserve of the two zones is 252,500 tonnes, which includes 20 % dilution.

Access using trackless methods is proposed and mining using the shrinkage type stoping method is recommended.

A pre-production period of approximately six months is anticipated, with the pre-production costs estimated at $4.2 million.

Capital for installations, stationary equipment and mobile equipment is evaluated at $1.8 million. The capital cost share for the mobile mining equipment would be reduced as other ore zones are developed and brought to production.

The Heustis and Webber zones are mined at a rate of about 250 t.p.d., limited primarily because of the narrow widths.

At metal prices of $495 / oz. Au and $6.27 / oz. Ag. (Cdn.), the project N.P.V. at 15% amounts to $1.7 million representing a rate of return of about 24 %.

The potential for accessing addditional ore reserves from the Heustis and Webber development are considered to be quite good and would certainly enhance the project economics further.

Therefore, developing the Heustis and Webber Zones, along with others such as the Brown - McDade which contains some 300,000 tonnes, is recommeded at the earliest possible time.

2.0 INTRODUCTION

2.1 GENERAL

Normand Lecuyer Enterprise Inc., was retained by B.Y.G. Natural Resources Inc., to carry out a preliminary feasibility study on the Heustis Webber Zones located on the Mt. Nansen property in the Yukon Territory. Presently, B.Y.G. Natural Resources Inc., are producing from the Brown-McDade oxide open pit mine on the property. The Mt. Nansen property has potential for additional open pit and underground ore reserves that would be economically minable. B.Y.G. Natural Resources Inc., has various other properties in the Yukon and plans are underway to construct a processing facility to handle the refractory type ores in Whitehorse. This processing facility will incorporate pressure oxidation using autoclaves .

Prior reports which served as reference materials include those completed by Robert J. Rodgers, P.Eng. of Surrey B.C.

This study examines the feasibility of mining the narrow vein underground ore reserves existing in the Heustis and Webber Zones. The ore reserves used were those calculated by previous authors which are identified herein. No verification of the reserves was undertaken at this time.

2.2 PROJECT LOCATION

The Mt. Nansen property is located approximately 235 km from the capital city of Whitehorse, Yukon. It is accessible from Whitehorse via the Klondike highway for a

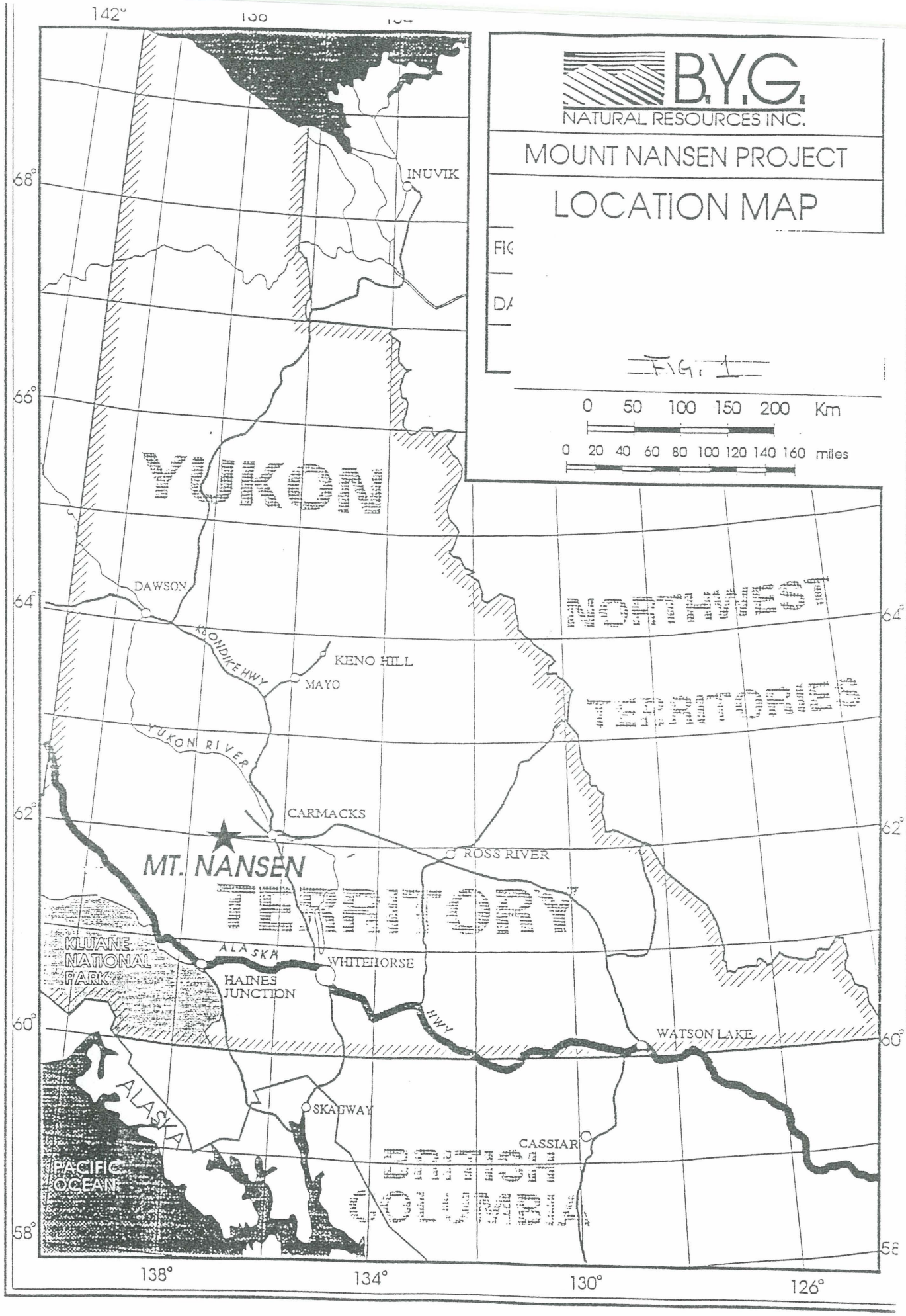
distance of 175 km to the town of Carmacks and then via a gravel road for a distance of about 60 km. The mill facility on site is at an elevation of 1250 m and the topography is hilly with rounded crests and broad valleys. (See Fig. 1).

2.3 PROJECT HISTORY

Placer gold was discovered in Nansen Creek by Captain Henry Seymour Back in 1899 and the first recorded claim was staked by his son Frank H. Back and Tom E. Bee in 1910. Since the discovery small placer operations were undertaken on the Nansen, Klaza and Victoria Creek watersheds.

Prospectors A. Brown and G. McDade discovered the first lode deposit in 1943. After surface trenching and diamond drilling, Leitch Gold Mines Ltd., formed Brown-McDade Mines Ltd., in 1946 to undertake underground development and drilling on the deposit. During the same period, the Heustis Syndicate discovered the Heustis Zone located 1.5 km west of the Brown-McDade zone and Conwest Exploration Ltd., undertook exploration work on the Webber Zone 3 km west of the Brown-McDade Zone. After this initial activity, only sporadic exploration occurred for a number of years.

A group of companies formed the Mt. Nansen Exploration Syndicate in 1962, in order to conduct exploration work. Mt. Nansen Mines Ltd., was formed by the syndicate the following year. Peso Silver Mines Ltd., acquired control of Mt. Nansen Mines Ltd in 1964 and explortion work was conducted on the Brown-McDade, Heustis and Webber zones over the following 3 year period. This work led to a decision in 1967 to place the property into production and a 270 tonne / day mill was built utilising flotation as the processing method. Although some 20,000 tonnes were mined from the Heusits and


B.Y.G.
NATURAL RESOURCES INC.
MOUNT NANSEN PROJECT
LOCATION MAP
FIG
DA
FIG. 1
0 50 100 150 200 Km
0 20 40 60 80 100 120 140 160 miles
142°
136°
68°
66°
64°
62°
60°
58°
INUVIK
YUKON
DAWSON
KLONDIKE HWY
KENO HILL
MAYO
YUKON RIVER
CARMACKS
MT. NANSEN
ROSS RIVER
NORTHWEST TERRITORIES
TERRITORY
KLUANE NATIONAL PARK
ALASKA
WHITEHORSE
HAINES JUNCTION
HWY
WATSON LAKE
SKAGWAY
CASSIAR
ALASKA
PACIFIC OCEAN
BRITISH COLUMBIA
138°
134°
130°
126°

Webber Zones low recoveries resulted in closure in 1969. An attempt to resume operations in 1975-76 proved fruitless due again to low gold recoveries.

The company acquired the Mt. Nansen property in 1984 and B.Y.G. signed an agreement with Chevron Minerals Ltd., in 1985 to undertake exploration on the mineral properties with Chevron also acquired the Tawa property during this period. B.Y.G. then acquired 100% interest in both properties, subject to royalties, in 1989. Mineral exploration resumed in 1994 with drilling on the Brown-McDade and Flex Zones. Subsequently mineral testwork and environmental / permitting was carried out which culminated in the commencement of production from the Brown-McDade oxide open pit in the last quarter of 1996.

2.4 TERMS OF REFERENCE

The terms of reference were established after the author visited the site in January 1997. The terms of reference may be summarized as follows:

1.) Evaluate the economics of mining the Heustis and Webber narrow vein ore reserves located at the Mt. Nansen property.

2.) Evaluate the mining method to be used for mining of these reserves.

3.) Evaluate the development required and the production rate sustainable from the Heustis and Webber Zones.

4.) For the present evaluation, the ore reserves calculated by the former owners are utilised with an approximate mining dilution applied, consistent with the mining method and the ground conditions that are anticipated.

5.) The accuracy of the cost estimates are considered to be at the early feasibility

stage and budget costs for capital equipment were acquired from suppliers.

6.) The references are acknowledged at the end of the report.

3.0 GEOLOGY

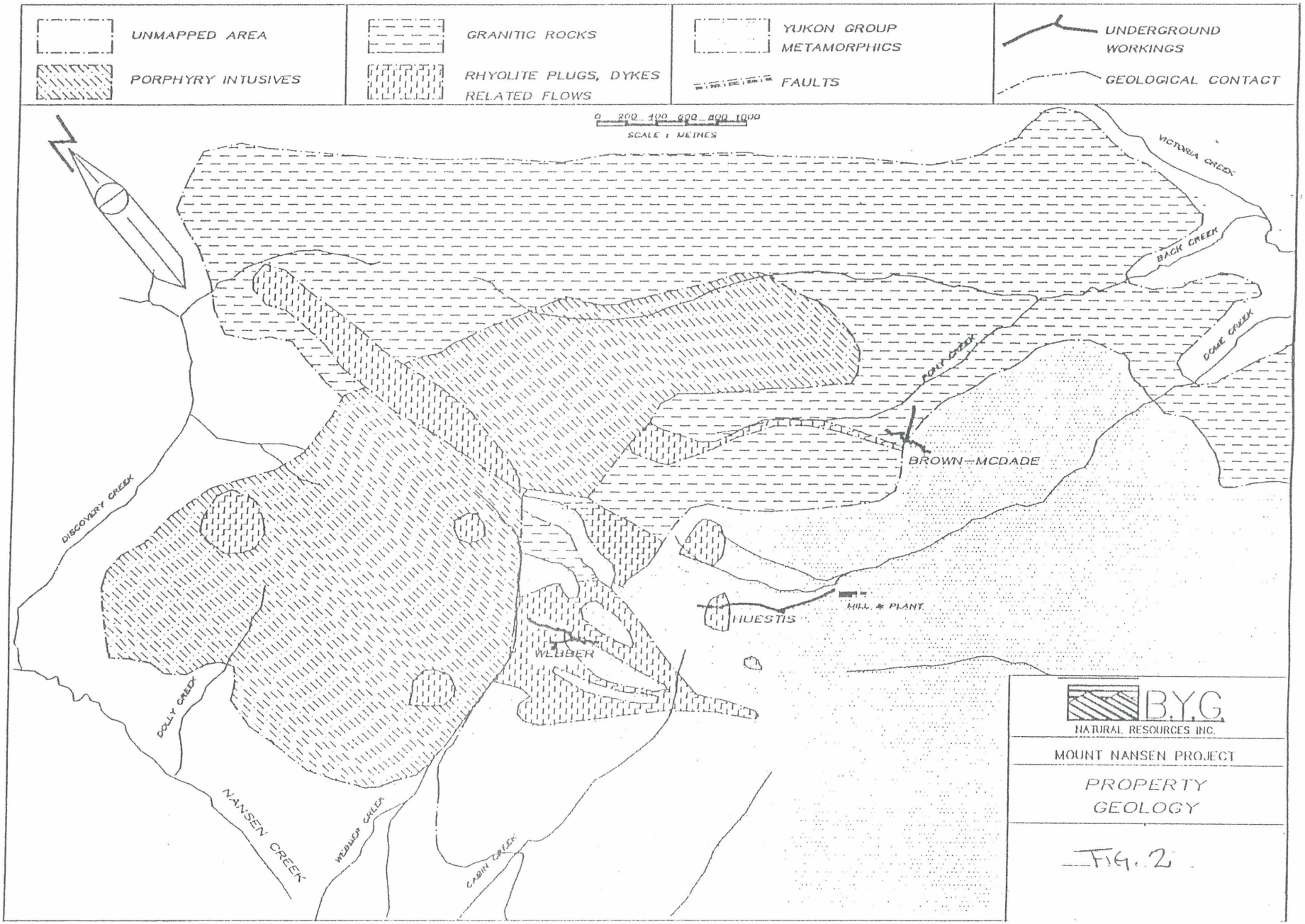
3.1 PROPERTY GEOLOGY

The general geology in the vicinity of the Heustis and Webber Zones is shown in Fig. 2. (Ref. 2).

The southern portion of the Mt. Nansen property is underlain by alternating bands of schists, quartzites and gneisses of the Yukon group. Foliation within the rocks strikes northeast and dips steeply to the northwest. The most common rock found on the property is a quartz-feldspar-chlorite gneiss and where chlorite is present in higher that normal amounts, it is concentrated in narrow bands giving a striped appearance to the rock. These rocks are unconformably overlain by andesite flows and clastics, basalt and shallow dioritic intrusives of the Mt. Nansen group. The rocks of the Mt. Nansen group are found in the western and central areas of the property. The northern and eastern parts of the Mt. Nansen property consist of a coarse grained granodiorite which grades locally into quartz diorite or quartz monzonite. Pink feldspar phenocrysts and stubby hornblende crystals are a common feature of the granodiorite, as is a greenish tinge, resulting from saussurization and chloritization. Pegmatite and aplite dykes cut the granodiorite at a steep angle.

Both granitic and rhyolitic intrusives cut the other rocks on the property. The granitic intrusives can be granodiorite or porphyritic granite.

Five types of hypogene alteration including propylitic, montmorillonite, kaolinite was well as phyllic and silicic alteration were noted during the exploration work. Supergene alteration varies in intensity and depth, depending on the rock type and fracture density.


UNMAPPED AREA
PORPHYRY INTUSIVES
GRANITIC ROCKS
RHYOLITE PLUGS, DYKES RELATED FLOWS
YUKON GROUP METAMORPHICS
FAULTS
UNDERGROUND WORKINGS
GEOLOGICAL CONTACT
0 200 400 600 800 1000
SCALE : METRES
VICTORIA CREEK
BACH CREEK
DOME CREEK
FORT CREEK
BROWN-MCDADE
DISCOVERY CREEK
HUESTIS
MILL & PLANT
WEBBER
DOLLY CREEK
NANSEN CREEK
WEBBER CREEK
CABIN CREEK
B.Y.G.
NATURAL RESOURCES INC.
MOUNT NANSEN PROJECT
PROPERTY GEOLOGY
FIG. 2

Two sets of faults have been encountered on the property and may be described as follows:

SET 1 - strikes north-northwest and dips at 50-75 degrees to the southwest. These are parallel to the veins and are sometimes mineralized locally . They consist of gouge-filled shear zones up to 15m in width.

SET 2 - strikes northeast and dips at 90 degrees. These faults cut the mineralized zones with displacements of up to 30m but generally less than 5m. The major sets in this fault are spaced at about 150 m intervals, while minor faults occur in groups 1-2m apart.

3.2 DEPOSIT GEOLOGY

The mineralized structures on the Mt. Nansen property occur as fault-shear-alteration zones which cut across all rock types encountered on the property.

The mineralized structures show lateral and vertical continuity and there widths are variable. The wider zones are commonly found within the metamorphic rocks. The zones pinch significantly when crossing into the intrusive rocks such as the rhyolite in particular. The widest highest grade portions of a zone are found where the structure splits of bends or is intersected by a northeast trending cross-fault.

The zones generally strike northwest-northeast and dip steeply east or west. The known strike length is up to 600m. and the zones are open down dip. Gouge is encountered along some of these zones, with intense shearing and alteration in the adjacent rocks. Veins and replacement lenses of quartz with carbonates and ore minerals occur within the alteration zone. While the ore and gangue mineralogy vary from vein to vein, they are reasonably consistent within the structure. The veins consist primarily of cherty and

white crystalline quartz. Ore mineralization consists of sulphides, precious metals and sulpho-salts. The gold mineralization occurs as microscopic gold inclusions in the sulphide minerals or in the interstices. Gold values drop off rapidly in the alteration found in the adjacent wall rocks. The gold mineralization is considered to be hydrothermal, with solutions introduced along faults and fractures.

The Heustis zone consists of three narrow relatively simple quartz veins spaced some 60 m apart. The zones strike north-northwest and dip steeply to the east. The Heustis Zone, as with the other zones, appear to be related to the northwest striking fault planes. The wall rocks are fine grained interspered with quartzite and a chloritic gneiss. The precious metal values are found with diffuse fine-grained black sulphide minerals in cherty quartz. The sulphide minerals are pyrite, stibnite, arsenopyrite, sphalerite and galena. In all, on the Heustis vein, some 1720 m of drift and 190 m of raises were driven.

The Webber Zone consists of two narrow relatively simple quartz veins, that strike west-northwest and dip at 70 degrees to the west. The zone appears to be related to northwest striking fault planes, with a prominent hanging wall gouge and subsidiary shears. The wall rocks are silicified, foliated quartzite, quartzite schists and finely banded gneisses, intruded by an extensive body of porphyritic granite. The precious metals are generally found with arsenopyrite. The Webber Zone development on the 1300 m elevation consists of 1190 m of drift and 100 m of raises. The number 1 vein was developed over a length of 200 m and the number 2 vein over 250 m. A second adit was driven 190 m on the 1250 m elevation but did not reach the mineralized zone.

3.3 ORE RESERVES

The ore reserves used for the Heustis and Webber study are shown in Table 1 that follows. The detailed calculations are included in appendix II for reference. These ore reserves were estimated using a minumum diluted mining width of 1.22 m where the mineralization was less that this width.

With the mining method selected and the inability to examine the underground workings (and former stopes) a dilution factor of 20 % was applied to the ore reserve tonnages calculated. The dilution was taken as waste with no grades applied to it. These are most definitely narrow vein structures with a mining width anticipated at 1.22 m . The mining method is discussed in detail in the following section.

3.4 EXPLORATION

Presently, diamond drilling is ongoing on the Mt. Nansen property. The Heustis and Webber Zones while limited in tonnage present the possibility of producing additional reserves both on strike and to depth. Some diamond drilling has been included in the financial projection, but does not represent a major exploration program. The potential offered in the many zones on the Mt. Nansen property will certainly be systematically explored in the future. Access to the known lower elevations of the reserves on both zones will offer an ideal position for further drilling to ascertain extended potential.

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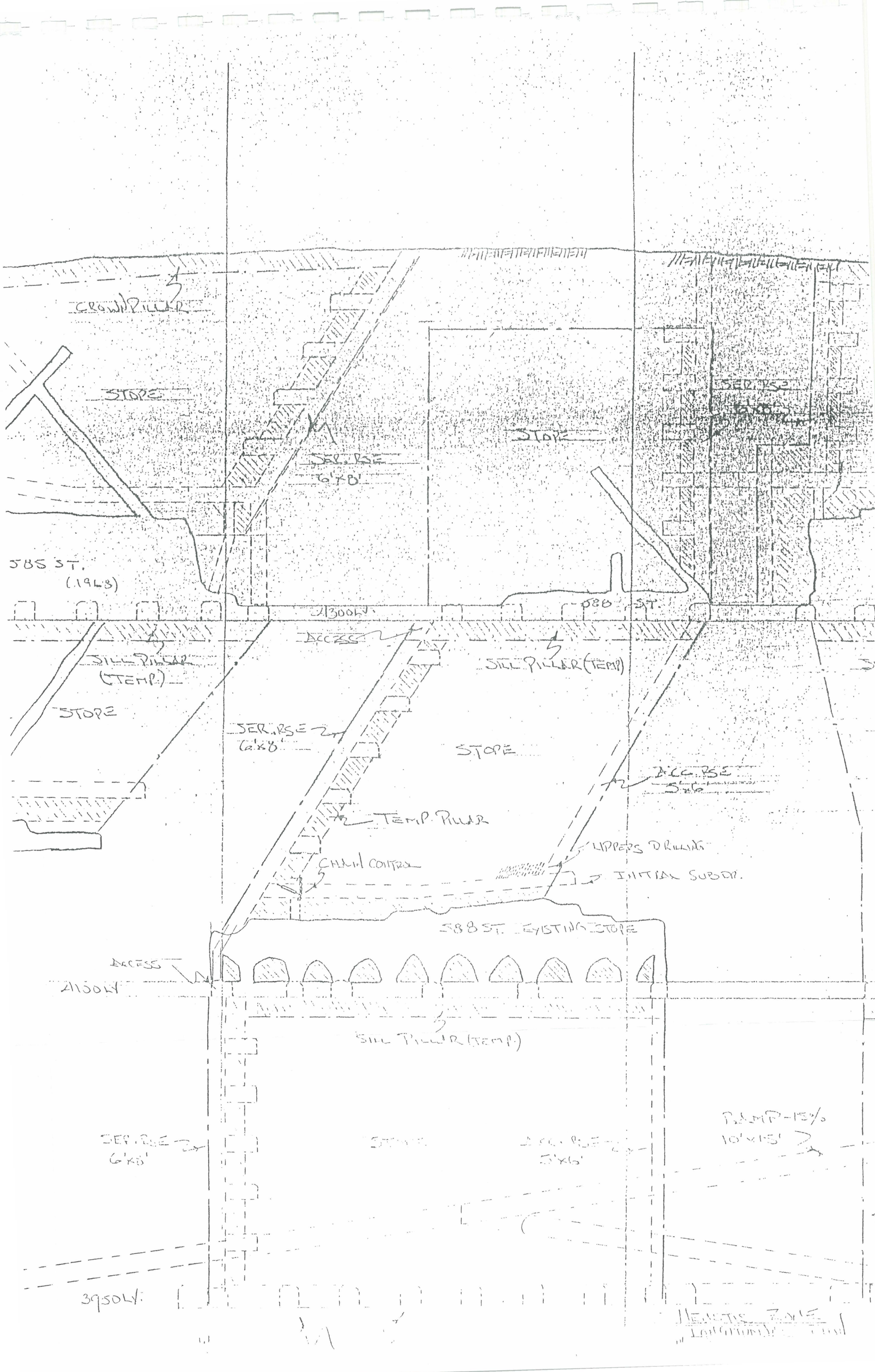
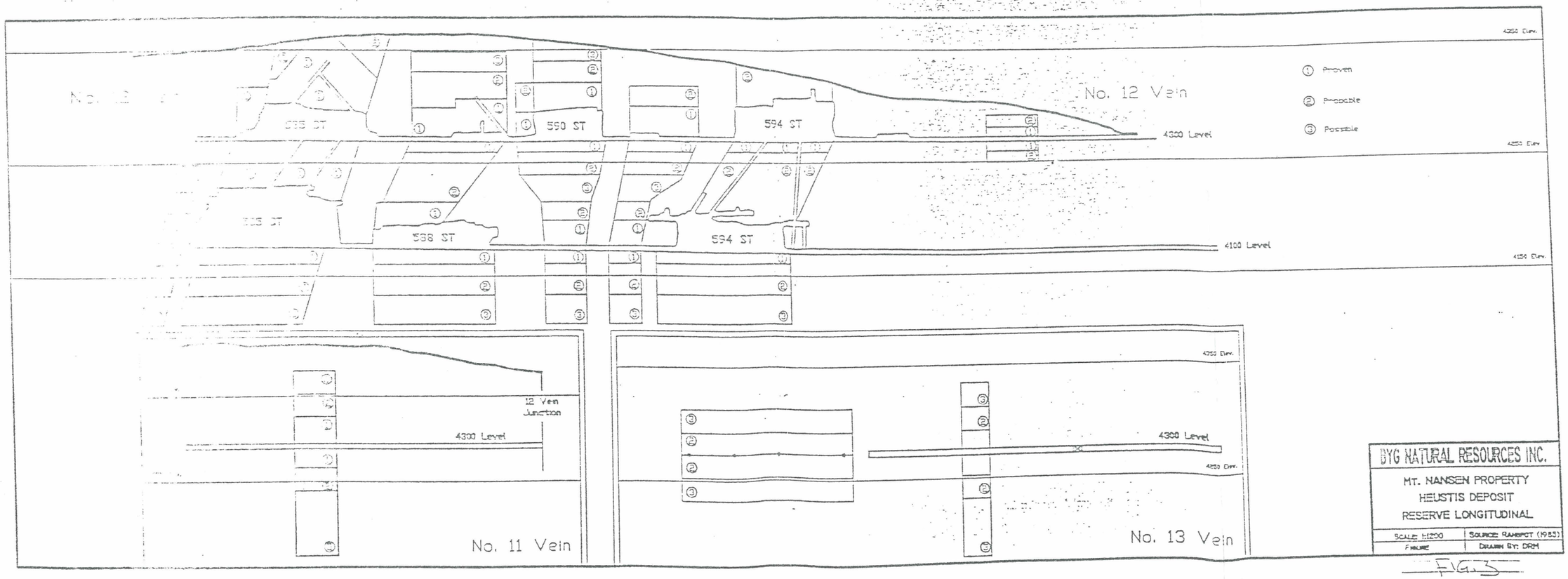
TABLE 1

HEUSTIS & WEBBER PROJECT

ORE RESERVES

CATEGORY	TONNES	Au (g/t)	Ag (g/t)	WIDTH (ft.)
HEUSTIS				
PROVEN	40,964	14,9	277,20	1,22
PROBABLE	44,766	13,1	288,60	1,22
POSSIBLE	38,118	14,3	308,80	1,22
SUB-TOTAL	123,848	14,1	291,00	1,22
DILUTION	24,770	-	-	-
TOTAL	148,618	11,75	242,50	1,22
WEBBER				
PROVEN	30,963	10,3	644,70	1,22
PROBABLE	27,563	10,8	549,70	1,22
POSSIBLE	26,906	7,0	472,10	1,22
SUB-TOTAL	85,432	9,4	559,70	1,22
DILUTION	17,086	-	-	
TOTAL	102,518	7,83	466,40	1,22


CROWN PILLAR
STOPE
SER. RSE 6'x8'
STOPE
SER. RSE 6'x8'
585 ST. (1968)
4300 LEVEL
ACCESS
585 ST.
SILL PILLAR (TEMP.)
SILL PILLAR (TEMP)
STOPE
SER. RSE 6'x8'
STOPE
SER. RSE 5'x6'
TEMP. PILLAR
UPPERS DRILLED
CHEVRON CONTROL
INITIAL SUBDR.
585 ST. EXISTING STOPE
ACCESS
4150 LEVEL
SILL PILLAR (TEMP.)
SER. RSE 6'x8'
STOPE
SER. RSE 5'x6'
PUMP-13%
10'x15'
3950 LEVEL



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MT. NANSEN PROPERTY
HEUSTIS DEPOSIT
RESERVE LONGITUDINAL

SCALE: 1:200	SOURCE: RAMSPOT (1983)
FIGURE	DRAWN BY: DRM

FIG 3

This method appears to have been successful as stopes were opened vertically for 75-100 feet . Therefore, the shrinkage stoping method was retained as the most practical method to use. For the majority of the stopes, new service raises were driven as indicated on the longitudinal section included in appendix VI. At 16 foot intervals, two rounds are taken which will enable leaving a temporary pillar of 8-10 feet thick. Thus after each second lift access to the stope is provided via these openings and access to the service raise is maintained at all times. At the subsequent lift, the access is simply barricaded with lagging to retain the muck. The stope sequence continues with a raise round taken at the opposite end of the stope. Then uppers drilling is done for the height of one lift (8 ft.) followed by loading and blasting the lift in one or several blasts. The vertical drilling increases productivity since drilling is unlimited for the entire lift lenght. If vertical drilling proves to be difficult on grade control, then breasting can be used, but this is not anticipated. Finally, the temporary pillars can be blasted starting with the lowest one and working up to the next level. Sill pillars can be drilled off before the stope is pulled empty and a catwalk installed to do the final loading and blasting of the pillar at a later date. The muck in the stope is lowered as required using the chain control at the bottom of the service raise. The working floor of the stope is levelled off using a scraper that is in the stope. A schematic diagram of this arrangement is shown in figure 4 that follows.

Ground control of the hanging wall is essentially assurred by the stoping method since the majority of the much stays in the stope during mining.

Ventiliation of the stope is provided via the service raise, where small auxilliary fans are used to bring fresh air to the working face. Access is maintained to the stope either up or down via the service raise. Where the stope length was beyond about

120 feet, an access raise was driven at the opposite end of the stope for added safety. Where stopes are started from the level, drawpoint mucking is utilised for the stope length, but where the stope is started higher mucking is via one or two drawpoints, until the stope is completed. This method was used, since it requires the most development in case the existing stope back is too unsafe for access. It is possible that the amount of stope development may be reduced if ground conditions permit.

4.3 UNDERGROUND DEVELOPMENT

The Heustis and Webber veins were previously developed by conventional track type drifts. On the Heustis property stopes were opened up working off of timbered backs or from boxhole type chutes. To re-enter with this type of method was considered time consuming and costly, therefore development using small trackless equipment was felt to provide both economic and operating safety and efficiency. The entries were made via the existing levels which were slashed to the required width. Footwall access drifts are then driven and draw points excavated at 10 m centers at the required locations. On the Heustis zone, a ramp was driven at -15 % from the 4100 level to the 3950 level to access the reserves between these levels. On each level at the vein extremities, ventilation raises are driven to the next level to ensure ventilation and an escapeway .

The Webber veins were developed by driving an access drift parallel to the existing workings and positioning drawpoints as required. To attain the lower reserves, the 4100 adit was slashed and the access drift continued through to the vein locations. Again ventiliation raises are excavated at the vein extremities. While the Heustis and Webber veins are relatively narrow, the mobile trackless equipment will also be used to mine the

Brown-McDade underground ore reserves also. The trackless method of mining appears as an intensive development method but it is felt that using the conventional track method on the existing drifts would be quite slow in comparison and reactivation of the existing stopes off of the level would be difficult and expensive, particularly if the stope backs have deteriorated since the mining activity of 1968-69. The required development for the two zones is indicated in Table 2 , that follows.

4.4 PRODUCTION FORECAST

The development will be initiated on the Heustis zone as it offers the larger ore reserves of the two. A pre-production period of about six months is anticipated and production will follow at a rate of 200 t.p.d. for the first year and 250 t.p.d. thereafter. The production forecast is indicated in the following Table 3 . Development of the Webber zone follows that of the Heustis and after this the Brown-McDade zone will most likely follow suit. The Brown-McDade will offer more potential for production since the average width is about 3.39 m and the underground reserves are estimated at around 300,000 tonnes grading 6.8 g.p.t. Au and 56.8 g.p.t. Ag.

4.5 MINING DILUTION

As shown in the ore reserve calculations in appendix II a diluted minimum mining width of 1.22 m was used for sections where the mineralization is less than this width. The average mining width for the Heustis and Webber Zones is 1.22 m and a dilution of 20 % was added at nil grade to reflect the mining method used and the fact that the workings could not be examined at this time to assess ground consitions. The support afforded by the shrinkage mining method should limit the dilution within that utilised or less providing that good drilling controls are used.

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TABLE 2

HEUSTIS & WEBBER PROJECT

U/G DEVELOPMENT

	HEUSTIS		WEBBER	
ITEM	PRE-PRODUCTION	ONGOING	PRE-PRODUCTION	ONGOING
RAMP 10' x 15'	-	1725'	-	-
ACC.DR. 10' x 15'	2350'	2620'	2985'	2475'
SLASHING (T)	19575	-	4500	-
DR.PTS. 10' x 10'	1245'	2045'	640'	1955'
VENT.RSE. 6' x 8'	170'	710'	-	390'
ACC.RSE. 5' x 6'	400'	470'	-	1280'
SER.RSE. 6' x 8'	830'	1540'	605'	2280'
SUB.DR. 8' x 8'	855'	1445'	249'	1705'
ORE DR. 8' x 8'	-	975'	170'	700'
TOTALS	5850'	11530'	4649'	10785'

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TABLE 3

HEUSTIS & WEBBER PROJECT

PRODUCTION FORECAST

DESCRIPTION	PRE-PROD.	YEAR 1	YEAR 2	YEAR 3	YEAR 4	TOTAL
T.P.D.		200	250	250	270	
DEVELOPMENT						
WASTE (FT.)	3765	7100	8445	-	-	19310
TONNES WST.	55110	65209	84869	-	-	205188
ORE (FT.)	2086	4430	4709	2280	-	13504
TONNES ORE	7803	17798	17378	8809	-	51788
PROD.-STOPING						
TONNES BROKEN	4400	78000	78000	40312	-	200712
TONNES MUCKED	1440	34202	47622	56191	61257	200712
PROCESSING						
TONNES MILLED	-	52000	65000	65000	70500	252500
GRADE						
Au (o.p.t.)	0,378	0,378	0,378	0,316	0,252	0.327 82,568 ounces
Ag (o.p.t.)	7,81	7,81	7,81	11,35	15,00	10,73
PRODUCTION						
Au (oz.)	-	18673	23342	19513	16878	78406 or 95%
Ag (oz.)	-	365508	456885	663975	951750	2438118

4.6 MINE SERVICES

4.6.1 VENTILATION & HEATING

For the Heustis and Webber Zones, the ventilation-escapeway raises are located at the extremities of the workings to provide fresh air for all the workings and the main haulageways. Mine air heaters will be located at the collar of the raise, upstream of the ventilation fan to provide the required heating.

The ventilation requirements were evaluated as follows based on 75 c.f.m. per b.h.p. For the Heustis zone, an auxilliary fan will be required to drive the ramp below the 4100 m level.

ITEM	UNITS	H.P.	C.F.M.
Scooptrams 3 Yd.	2	116	17,400
Trucks 16 ton	2	185	27,750
Service Vehicle	1	41	3,075
Micellaneous			3,000
		615	51,225

The mine air heaters will be of the propane type due to the location of the project.

For the ventilation capacity, a 3.5 MM BTU/Hr. heater will be required for the Heustis and Webber Zones. In all two units will be required since the Webber Zone will be developed as mining continues on the Heustis Zone. The above ventilation requirements were evaluated on the basis of two operating levels on each zone whereby the total equipment would be the maximum expected underground at any one time.

4.6.2 POWER & COMPRESSED AIR

The power and compressed air requirements for the Heustis and Webber Zones is estimated in the following table. In order to accommodate the extra manpower, additional bunkhouse facilities of about 50 men will be required but the kitchen facilities would be adequate. The power costs were estimated using $0.15 /Kwhr for the present analysis but this would require a more detailed study. The unit rate used is considered to be adequate for diesel generated power.

POWER

	ITEM	K.W.
SURFACE	Camp	37.5
	Compressors	450
	Main Vent. Fan (2)	112.5
U/G	Pumps	37.5
	Aux. Vent.	20
	Misc.	10
		667.5 Say 650 KW

Therefore a power demand of 650 kw continuous was utilised giving a consumption of 4 million kwhr, per year. During the last year when only mucking is in progress the consumption was estimated at 50 % of the normal usage.

The compressed air requirements will be for the jumbo drill during the development phase, the airleg and stoper drills, slushers and miscellaneous items. The quantities estimated are listed below.

COMPRESSED AIR REQUIREMENTS

ITEM	C.F.M.
Jumbo Drill	1,000
Airleg/Stoper Drills	1,280
Slushers	350
Misc.	250
TOTAL	2,880

Therefore 3,000 c.f.m. of installed capacity should provide sufficient compressed air for the Heustis and Webber Zones.

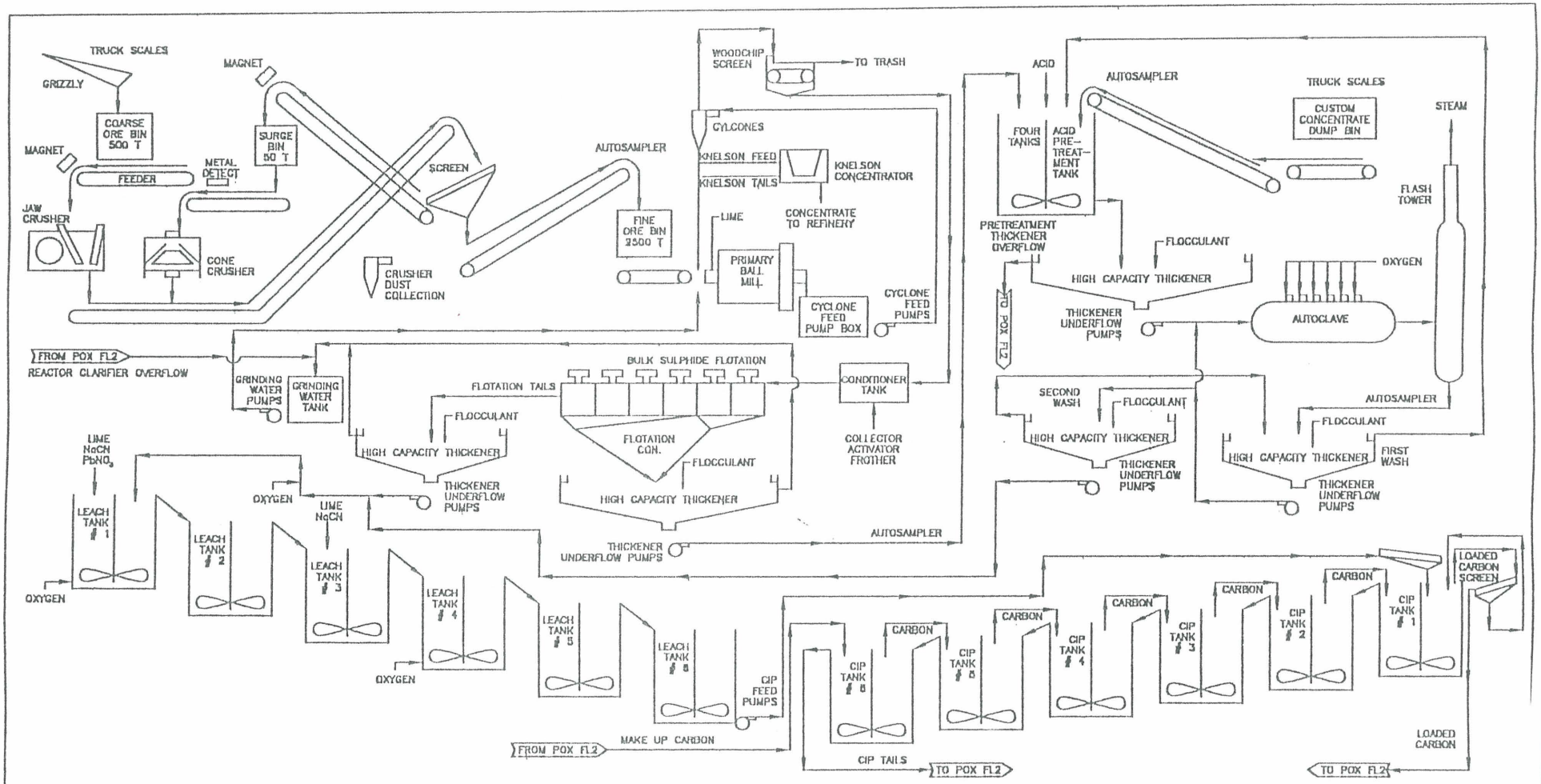
5.0 MILLING

5.1 MILLING PROCESS

The processing of the Heustis and Webber sulphide ore was evaluated based on use of the facility that will be built in Whitehorse. Therefore, the ore mined would be trucked to Whitehorse on a continuous basis. The mill facility at the Mt. Nansen presently processing the Brown-McDade oxide ore could be rehabilitated with the addition of a sulphide circuit but this is not a certainty at this time.

The milling process will produce a sulphide (arsenopyrite) concentrate which is then processed by pressure oxidation and a solution treatment process, producing a chemically stable final product. The pressure oxidation acts to breakdown the arsenopyrite and sulphides liberating the gold which is then dissolved in the leaching circuit. The dissolved gold is then recovered onto carbon and this is then stripped whereby the gold is plated on cathodes in the electrowinning circuit, melted and then poured into bars. A process flowsheet is included in figures 5-5a that follow.

The transportation and processing costs used for this study are $15/tonne and $25/ tonne respectively. These units rates are not based on quotations and are considered approximate at this stage.



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Date Plotted: 2-Oct-96
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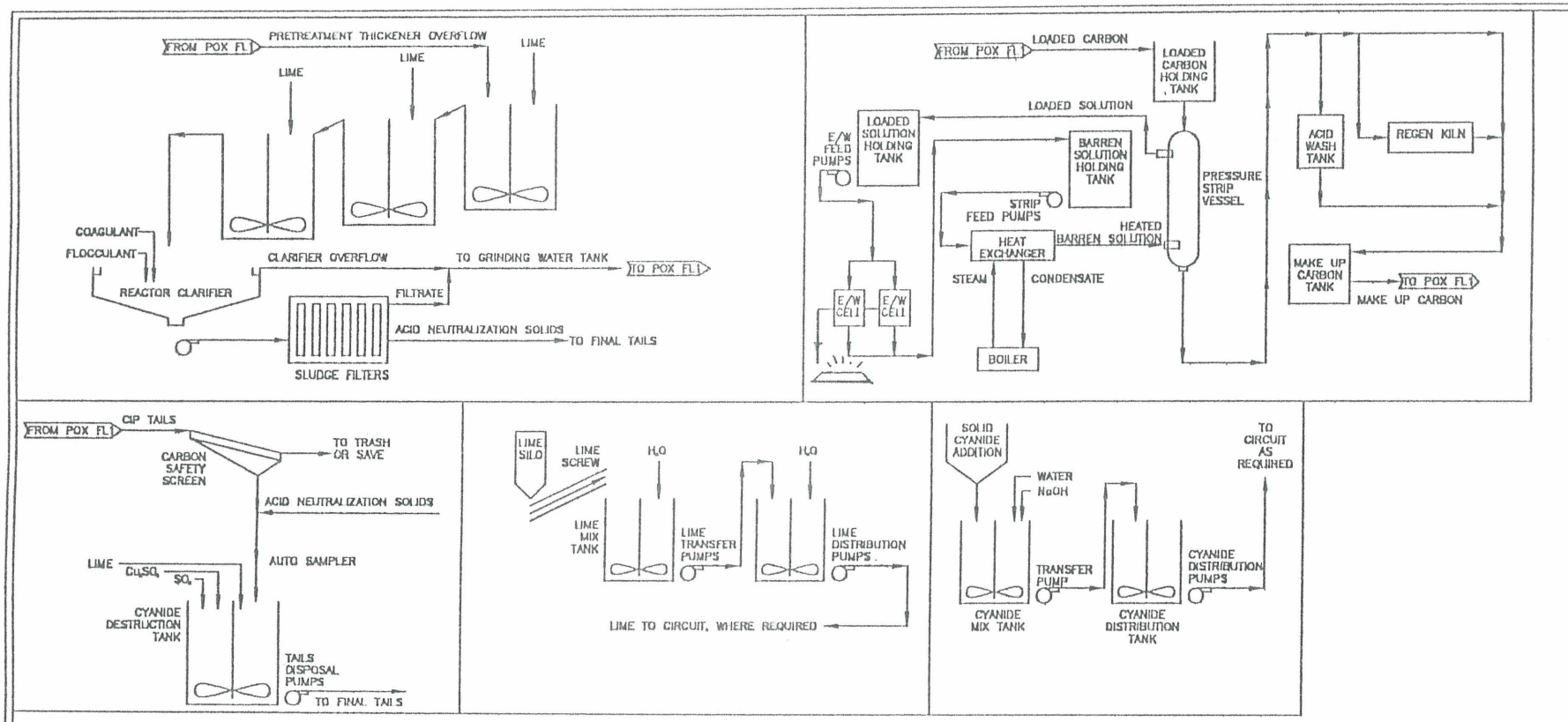
BYG Natural Resources Inc

Custom Facility Scoping Study

Mill Flowsheet, Alternative #1
Sheet 1

rev A

FIG. 5



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BYG Natural Resources Inc

Custom Facility Scoping Study

Mill Flowsheet, Alternative #1
Sheet 2

rev A

FIG. 5a

6.0 ANCILLARY SERVICES

6.1 SITE CONDITIONS

The Heustis and Webber Zones are located in proximity to the Mt. Nansen site where the Brown-McDade open pit oxide ore is presently being mined. The site has a 500 tonnes per day mill facility, a kitchen facility, office-staff building and bunkhouse facility for approximately 40 people. A tailings dam has also been constructed on site. The Heustis and Webber adit locations are easily accessible from existing roads and the portal area may need some minor grading and cleanup.

6.2 SITE INFRASTRUCTURE

The increase in personnel for the Heustis and Webber development and mining would necessitate additional bunkhouse capacity on site. An allowance was also included for additional office space and a shop area to service the mobile underground equipment. Some road improvement allowance is also included to access the adit locations on both veins.

6.3 POWER

Presently at the Mt. Nansen site, power is supplied by diesel generators with two 800 KW units operating and one standby. An allowance for an extra diesel generator has been included in the study and unit power costs were estimated at $0.15/kwhr. Also, an allowance for underground power distribution for the two zones is included in the capital costs. (See appendix III.)

6.4 ENVIRONMENT

The Mt. Nansen area is semi-arid with only about 27 cm. of precipitation during the year, being principally rainfall during the summer months. There is less than 100 cm. of snow during the winter months and the temperature varies from -30 C to 25 C during the summer. This site is in an area of discontinuous permafrost and the north facing slopes are frozen all year round. Vegetation consists of alpine grasses, shrubs and coniferous trees on the south facing slopes.

Environmental studies have been conducted in the past (1985-89) by Norecol Environmental Consultants Ltd., on the Mt. Nansen site. These studies encompassed water quality sampling, hydrology, stream sediment sampling, collection of samples for acid generation tests and reconnaissance for wildlife. Also, compilation and review of data on the Mt. Nansen project area were completed. An Initial Environmental Evaluation (IEE) prepared by T.W. Higgs Associates for B.Y.G. Natural Resources Inc., was completed in late 1994.

The conclusions of all the aforementioned studies was that mining of oxide ores would have minimal impact on the environment and that any impact could be mitigated easily.

While the Heustis and Webber Zones are sulphide ores, it is anticipated that the ore will be trucked to the Whitehorse facility on a continuous basis hence no long term storage will occur on site. Treatment of the ore at the Whitehorse facility will eliminate the need to dispose of sulphide tailings on site. The mine water will be pumped to small sedimentation basins for settling of suspended solids and recirculation of water will be undertaken whenever possible and practicle.

7.0 PRE-PRODUCTION & CAPITAL COSTS

7.1 PRE-PRODUCTION COSTS

The pre-production work would be initiated on the Heustis Zone, followed by the Webber Zone once the Heustis is in production. During the pre-production period some 5850 feet of development are completed , which includes some 7,800 tonnes of ore and some 4400 tonnes are broken in initial stoping activity. The average contribution of the development muck during the mine life is approximately 20 % of the ore quantity.

The pre-production costs are summarized below with detailed development costs and operating costs indicated in appendix IV.

ITEM	COST ($000's)
Development	$2,546
Eng.& Env. Studies	30
Site Preparation	25
Portal Excavation	100
G.M.E.	707
Plant	619
Administration	178
TOTAL	$4,205

The pre-production period is expected to be about six months, once all necessary permits are received. During the pre-production period the ore from development will be stockpiled for a short period only prior to trucking to Whitehorse.

The pre-production costs represent a unit cost of $16.65 per tonne of ore, which is high due to the limited tonnage of these zones.

7.2 CAPITAL COSTS

The capital costs for the Heustis and Webber Zones are detailed in appendix III. The major portion of these costs will serve for the development and mining of the Brown-McDade underground ore reserves also, hence the costs were written off over the tonnage of the three zones. Only the cost of a diesel generator necessary for the Heustis - Webber power requirements was included separately.

The capital cost may be summarized as follows:

ITEM	COST ($000's)
Camp Inst.	$ 150
Elec. Power	(250)
Office/Shop	100
Vent.-Htg.	35
U/G Elec.	60
Pumps	15
Comp.Air Plant	150
Misc.	50
TOTAL	$ 560

Heustis-Webber Tonnage = 252,500
Brown-McDade Tonnage= 298,406

TOTAL = 550,906 Capital Cost/tonne = $1.02

The capital cost for the Heustis - Webber was evaluated at $500,000 which would be $1.98/ tonne.

7.3 CAPITAL EQUIPMENT COSTS

The capital equipment requirements for the Heustis - Webber Zones are indicated in Table 4 that follows. For the development requirements and drawpoint mucking a combination 3 yard scooptram and 16 ton truck were considered to be the most effective and economic. Slushers will also be required to drive subdrifts and for use in the stopes for levelling of the working floor.

While various financing scenarios are possible, the capital equipment cost was included as a lump sum in the pre-production period. The equipment specifications are included in appendix V , for reference.

B.Y.G. NATURAL RESOURCES INC.

TABLE 4

HEUSTIS & WEBBER PROJECT

CAPITAL EQUIPMENT REQ'S.

DESCRIPTION	NO. UNITS	COST/UNIT	TOTAL COST
SCOOPTRAMS	2	283,500	567,000
TRUCKS 16 T	2	295,000	590,000
SER.VEHICLE	1	25,000	25,000
SLUSHERS	5	7,000	35,000
AIRLEGS/STOPERS	15	3,500	52,500
TOTAL			$ 1,269,500

8.0 OPERATING COSTS

8.1 DIRECT MINING COSTS

The direct mining costs for the Heustis - Webber Zones are summarized below. These costs include development cost, beyond that of the pre-production period, as well as the direct stoping costs.

(240,300 T)

ITEM	COST (000's)	COST/T
Development	9,990	$ 41.57
Shrinkage Stoping	4,978	20.72
Stope Mucking	507	2.10
	TOTAL	$ 64.40

The personnel required for the Heustis - Webber project are listed in Table 5 that follows. Direct production in the stopes was estimated at 25 tonnes/ manshift, with over-all performance of about 4 tonnes/ manshift which is reflective of the narrow vein type of mining particlarly with small reserves. As a result of the simultaneous open pit mining the positions of management, administration and some surface services were shared on a 50-50 basis with the pit operations.

8.2 INDIRECT MINING COSTS

The indirect mining costs include those for general mine expenses, plant operation and general administrative and management costs. The indirect labour requirement was evaluated at about 25 people during the mine life. Also no processing or off-site personnel

are included in this amount. The indirect costs may be listed as follows:

(240,300 T)

ITEM	COST (000's)	COST/T
G. M. E.	8,792	$ 36.59
Plant	5,072	21.11
Admin.	1,426	5.93
TOTAL	$ 15,290	$ 63.63

8.3 TRUCKING & MILLING

The Heustis and Webber tonnages were considered to be trucked to the processing facility in Whitehorse for the purposes of the present study, although the feasibility of adding a sulphide circuit to the Mt. Nansen mill remains to be considered since other potential sulphide ore reserves exist on the property. The trucking and milling costs were estimated at $ 15 and $25 / tonne respectively at the present time.

8.4 OPERATING COSTS

The overall operating costs for the Heustis and Webber Zones may be summarized as follows:

ITEM	COST/T
Development	$ 41.57
Stoping	22.82
G.M.E.	36.59
Plant	21.11

ITEM	COST/T
Administration	$ 5.93
Trucking	15.00
Milling	25.00
TOTAL	$ 168.02

The effects of varying the operating costs on the project sensitivity are evaluated in the following section. It should be noted that ongoing diamond drilling is included in the financial projection which amounts to a cost of $2.60 / tonne.

9.0 FINANCIAL ANALYSIS

9.1 FINANCIAL PROJECTION

The mining schedule and financial projection details are included in appendix I that follows. The "Base Case" parameters and results are summarized below:

($000's)

ITEM	VALUE
Pre-Prod. Cost	$ 4,205
Capital Cost	500
Capital Equip. Cost	1,270
Operating Cost	40,864
Ounces Au.	78,405
Ounces Ag.	2,438,118
Gold Price ($Cdn.)	495.00
Silver Price ($Cdn.)	6.27
Total Revenue	54,098
NPV @ 0%	**7,259**
NPV @ 15%	**1,689**
R.O.R. %	**24.11**

With the project parameters utilised, the project rate of return is more than acceptable particularly when considering the fact that items such as the capital equipment will also serve for development and mining of known additional potential in proximity of the Mt. Nansen property.

9.2 SENSITIVITY ANALYSIS

To assess the sensitivity of the project, the operating costs, capital costs,ore grades and metal prices were varied and the effects are indicated in figures 6 to 12. The variances may be presented as follows.

($000's)

ITEM	NPV @ 15%		RATE OF RETURN	
	+20%	-20%	+20%	-20%
Operating Cost	(3579)	6079	- 2.8	49.8
Capital Cost	1381	1997	22.2	26.2
Ore Grades	8334	(4956)	60.1	-12.0
Metal Prices	8329	(4950)	60.0	-12.0

"BASE CASE" N.P.V. @ 15% $1,689

R.O.R. % 24.11

The present analysis indicates that variances in the 20 % range affect the project profitability substantially and the importance of maintaining operating costs and ore grades is quite evident. Less control is possible with respect to metal prices as they are subjected to market fluctuations. The fact that the ore grades are quite high make these zones very attractive but , in turn, the small tonnages make them very sensitive to the various para - meters since the production rate if inflexible.

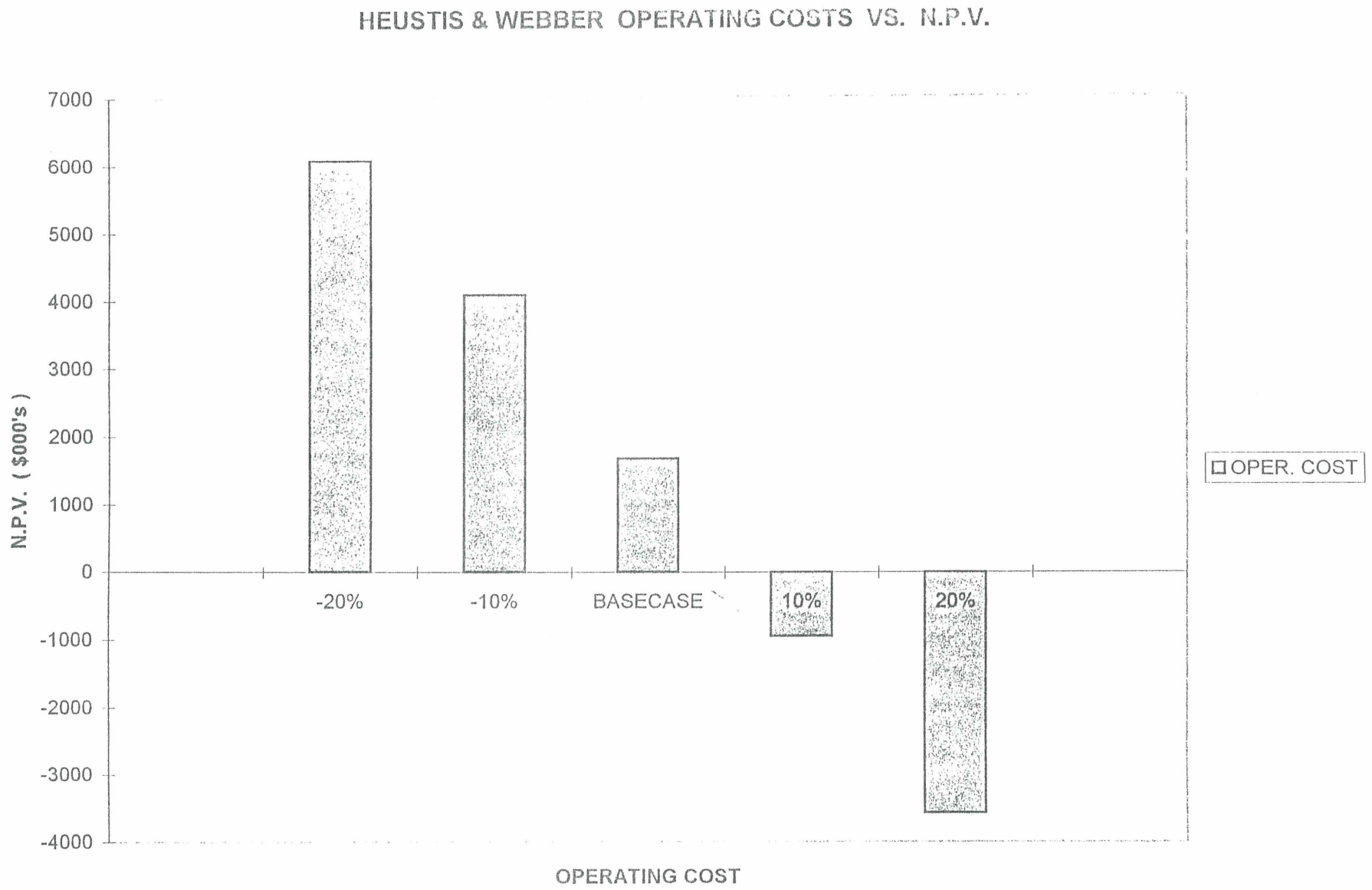
HEUSTIS & WEBBER OPERATING COSTS VS. N.P.V.
7000
6000
5000
4000
3000
2000
1000
0
-1000
-2000
-3000
-4000
N.P.V. ($000's)
-20%
-10%
BASECASE
10%
20%
OPER. COST
OPERATING COST

FIG. 6

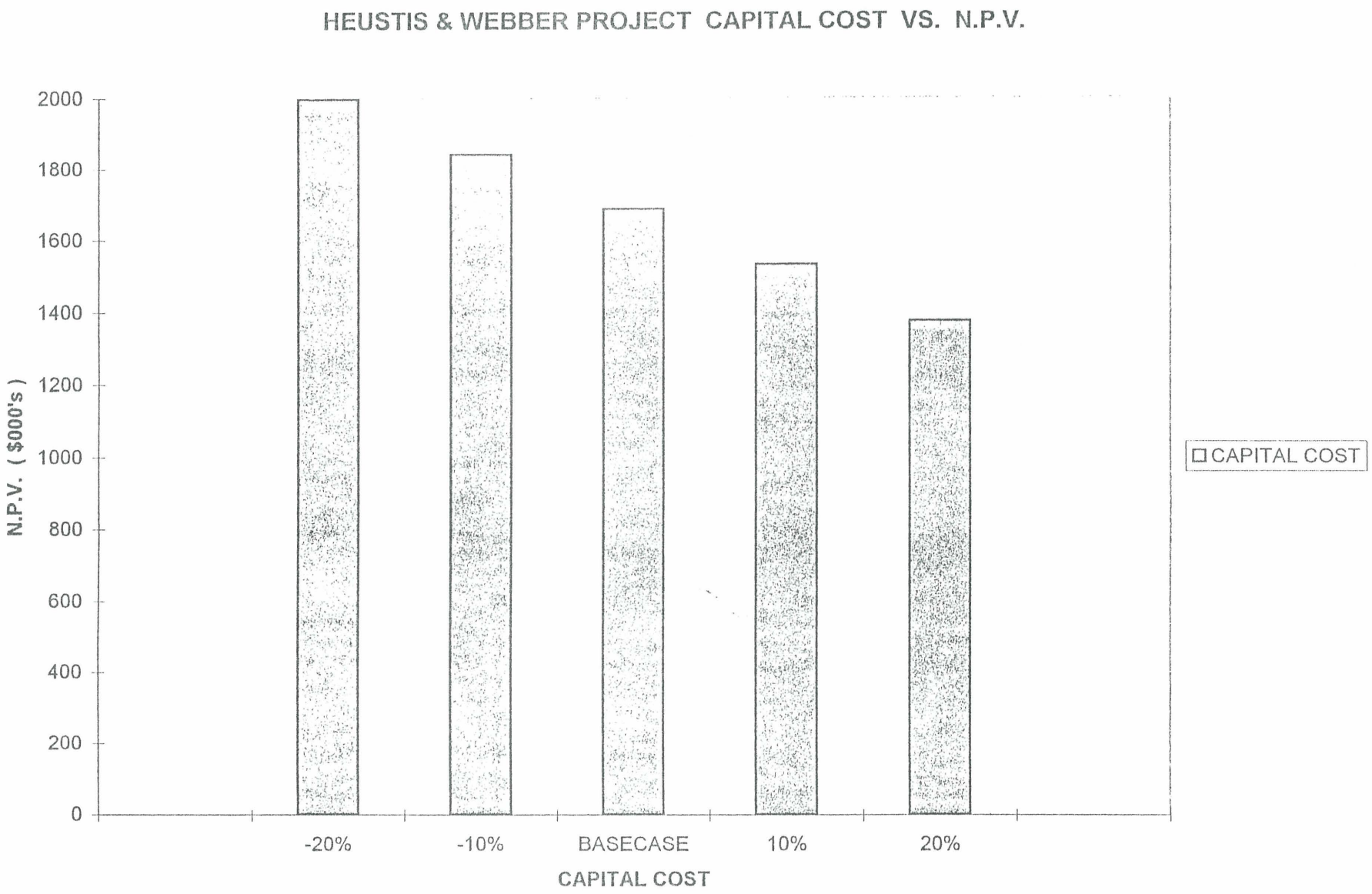
HEUSTIS & WEBBER PROJECT CAPITAL COST VS. N.P.V.
N.P.V. ($000's)
2000
1800
1600
1400
1200
1000
800
600
400
200
0
-20%
-10%
BASECASE
10%
20%
CAPITAL COST
CAPITAL COST

FIG. 7

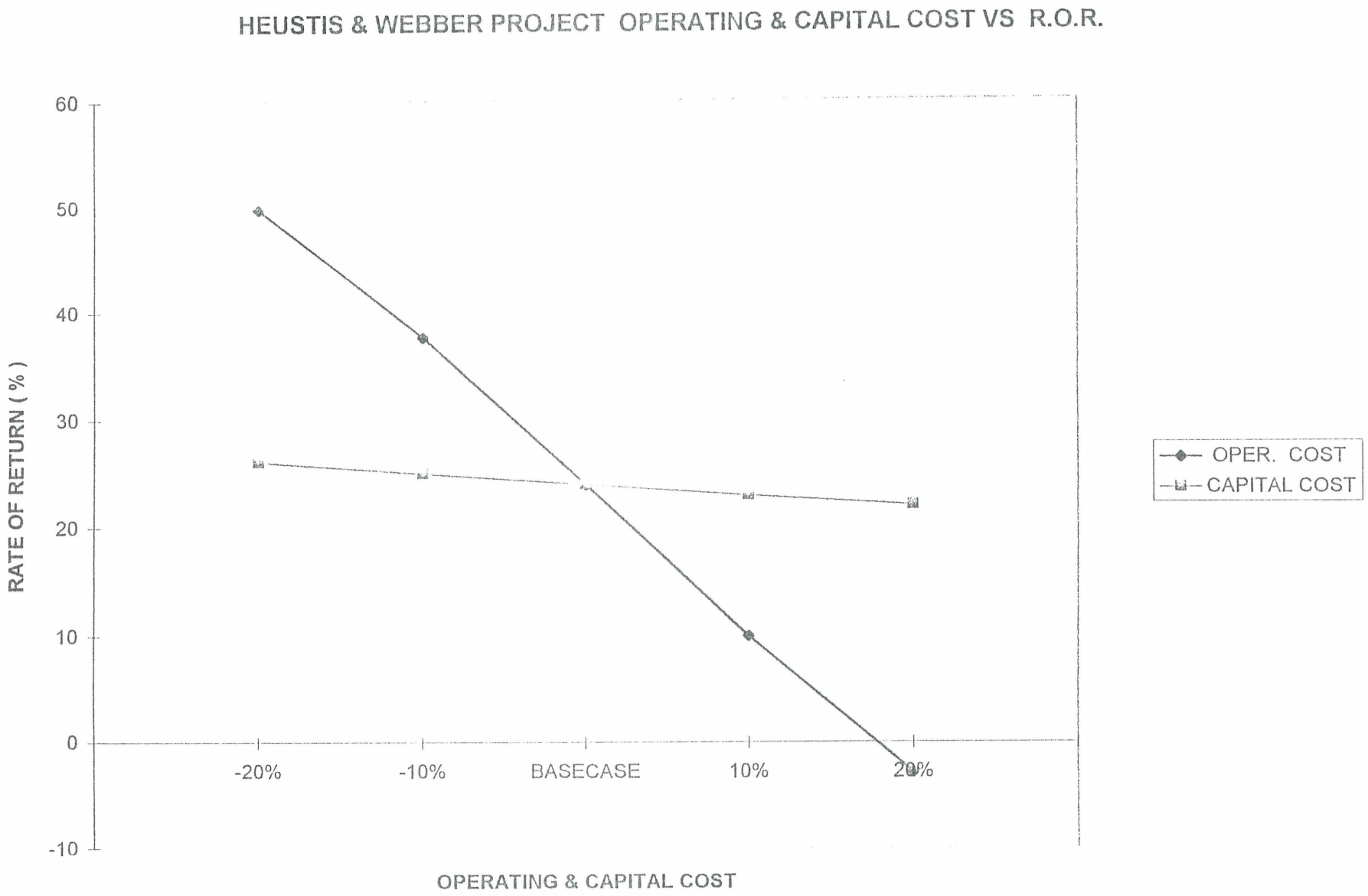
HEUSTIS & WEBBER PROJECT OPERATING & CAPITAL COST VS R.O.R.
RATE OF RETURN (%)
60
50
40
30
20
10
0
-10
-20%
-10%
BASECASE
10%
20%
OPERATING & CAPITAL COST
OPER. COST
CAPITAL COST

FIG. 8

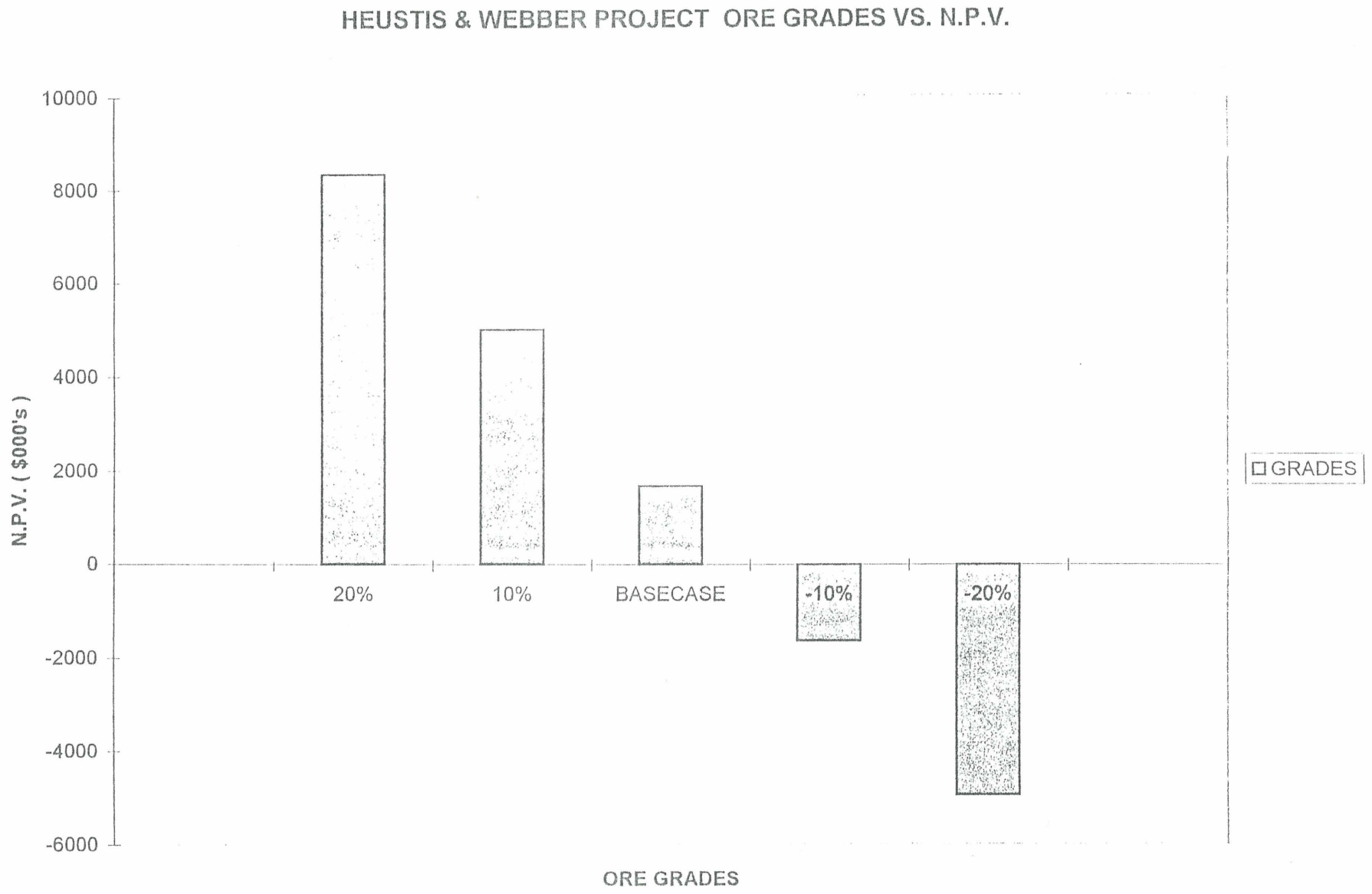
HEUSTIS & WEBBER PROJECT ORE GRADES VS. N.P.V.
10000
8000
6000
4000
2000
0
-2000
-4000
-6000
N.P.V. ($000's)
20%
10%
BASECASE
-10%
-20%
GRADES
ORE GRADES

FIG. 9

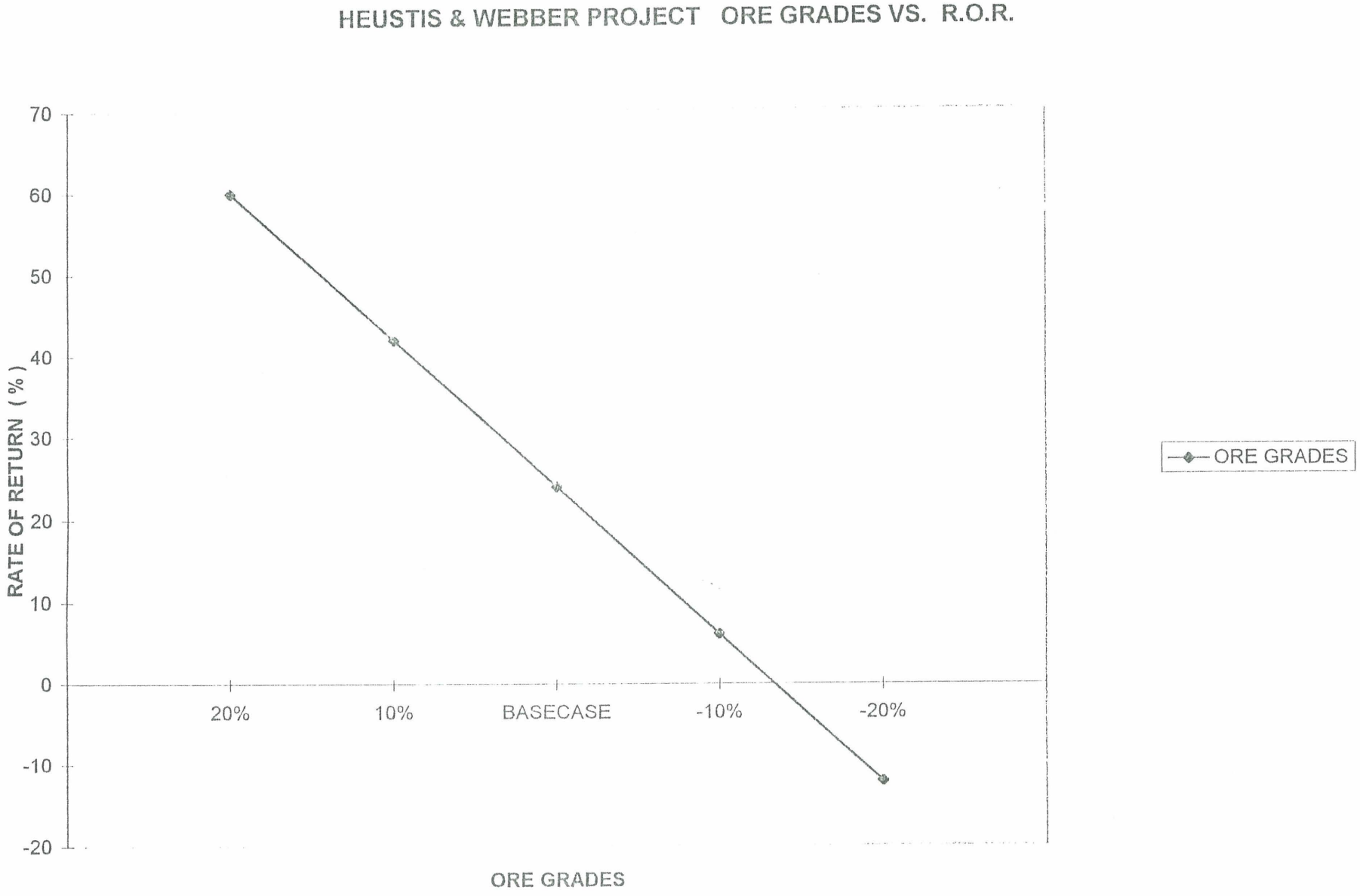
HEUSTIS & WEBBER PROJECT ORE GRADES VS. R.O.R.
RATE OF RETURN (%)
70
60
50
40
30
20
10
0
-10
-20
20%
10%
BASECASE
-10%
-20%
ORE GRADES
ORE GRADES

FIG. 10

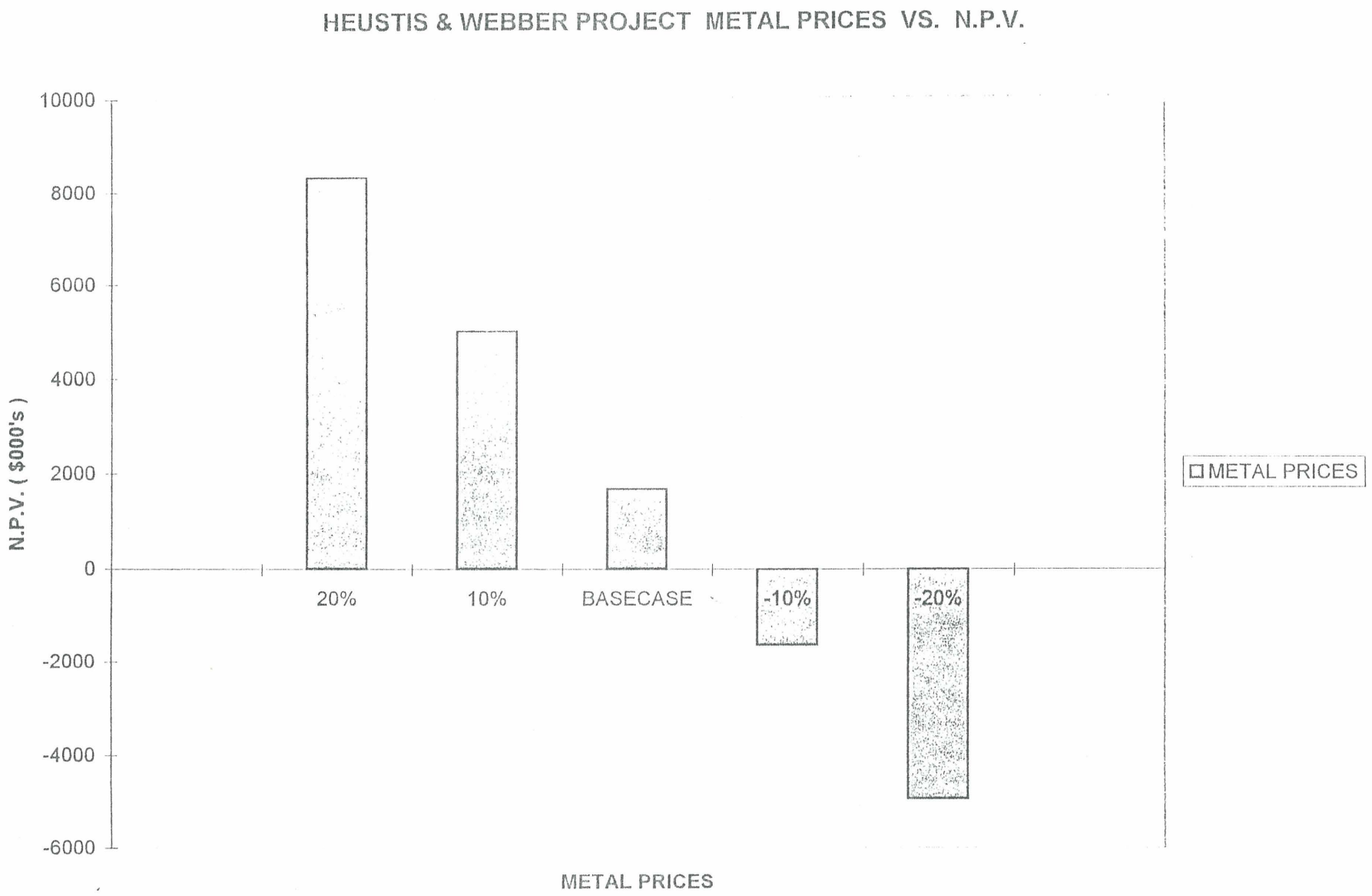
HEUSTIS & WEBBER PROJECT METAL PRICES VS. N.P.V.
10000
8000
6000
4000
2000
0
-2000
-4000
-6000
N.P.V. ($000's)
20%
10%
BASECASE
-10%
-20%
METAL PRICES
METAL PRICES

FIG. 11

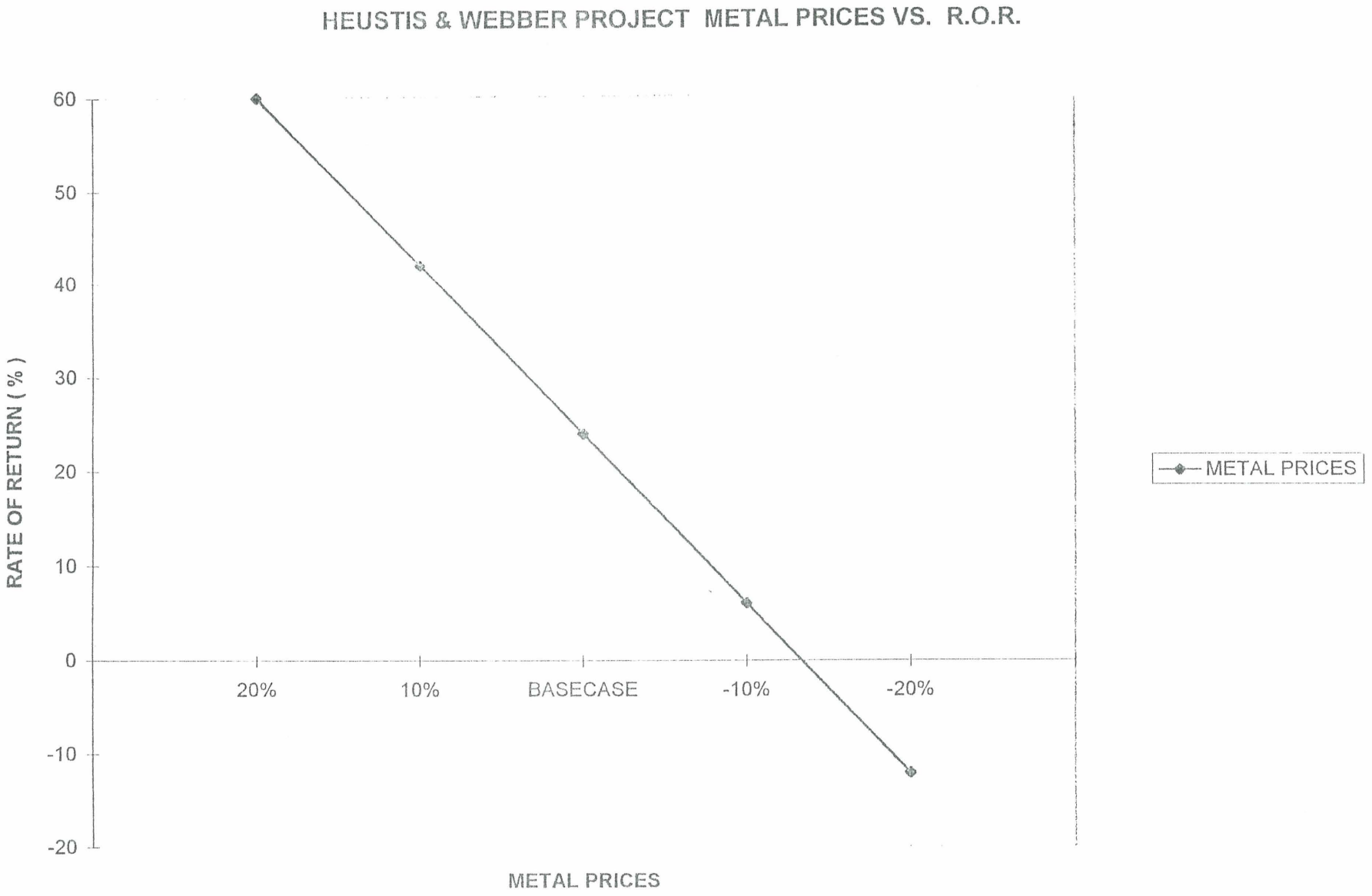
HEUSTIS & WEBBER PROJECT METAL PRICES VS. R.O.R.
RATE OF RETURN (%)
60
50
40
30
20
10
0
-10
-20
20%
10%
BASECASE
-10%
-20%
METAL PRICES
METAL PRICES

FIG. 12

10.0 CONCLUSIONS

The Heustis and Webber project located on the Mt. Nansen property represents a small tonnage, high grade, narrow vein type ore bodies.

The present study indicates that these ore bodies can be developed and extracted at a profit with the metal prices utilised.

The capital investment for installations and equipment would serve to develop the additional underground ore reserves on the property, in particular the Brown-McDade zone which has known reserves of about 300,000 tonnes grading 6.8 g.p.t. Au and 56.8 g.p.t. Ag., in the proven, probable and possible categories. The equipment selected for the Heustis - Webber mining would be ideal for the Brown-McDade as it has an average width of about 3.39 meters.

The Heustis and Webber veins were developed previously by conventional track methods and trackless access is proposed in the present study. This will provide a method to access rapidly and additional reserves found along strike or to depth.

The Heustis and Webber ore reserves should be developed at the earliest possible time, followed by the known additional existing ore reserves on the Mt. Nansen property.

CERTIFICATE

I , **Normand L. Lecuyer**, of Val d'Or, Quebec, wish to certify the following:

1.) I obtained a B.Sc. (Hon.) in Mining Engineering from Queen's University at Kingston, in 1976.

2.) I have been practising my profession for the past 18 years in gold and base metal mining in northwestern Quebec.

3.) This report is based on my experience, as well as information in the form of plans , sections and reports received from B.Y.G. Natural Resources Inc. personnel.

4.) I do not own nor expect to receive any direct or indirect interest in B.Y.G. Natural Resources Inc. , or other associated companies as far as concerns the Skukum Creek Project, located in the Yukon Territory.

Signed : _____

AT _____ **on** _____ **1997**

REFERENCES

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Mt. Nansen Mineral Property
Whitehorse Mining District
Yukon Territory

"Review of Proposed Programme"
Feb. 1995 By: Robert J. Rodgers, P.Eng.

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Mt. Nansen Mineral Property
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"Technical Evaluation Report"
June 1994 By: Robert J. Rodgers, P.Eng.

3.) B.Y.G. Natural Resources Inc.
Mt. Nansen Mineral Property
Whitehorse Mining District
Yukon Territory

"Property Evaluation Report"
Dec. 1994 By: Robert J. Rodgers, P.Eng.

HEUSTIS - WEBBER PROJECT

DATE: FEB 97

SUMMARY OF INVESTMENT,OPERATING COSTS,PRODUCTION
(,000 $)

	PREPRD.	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	TOTALS
PRODUCTION									
-TONS MILLED		52,000	65,000	65,000	70,500				252,500
PRODUCTION (IN CONCENTRATE)									
-COPPER (LBS X 1000)	0	0	0	0	0	0			0
-ZINC(LBS X 1000)	0	0	0	0	0	0			0
-GOLD (OUNCES X 1000)	0	18.673	23.342	19.513	16.878	0.000	0		78.405
-SILVER (OUNCES X 1000)	0	366	457	664	952	0			2,438
OPERATING COSTS									
-MINING		8,534	9,313	4,065	2,353	0	0	0	24,266
-MILLING		1,300	1,625	1,625	1,763	0	0	0	6,313
-PLANT		1,403	1,403	1,403	864	0	0	0	5,072
-ADMINISTRATION		356	356	356	356	0	0	0	1,426
-TRUCKING		780	975	975	1,058	0	0	0	3,788
TOTAL OPERATING COSTS		12,373	13,672	8,424	6,394	0	0	0	40,864
-PREPRODUCTION CAPITAL	4,205								4,205
-CAPITAL EQUIP. & INST.	500								500
-CAPITAL MOBILE EQUIP.	1,270								1,270
-CLOSURE COSTS	0	0	0	0	0	0	0		0
TOTAL CAPITAL & PPD	5,975	0	0	0	0	0	0	0	5,975
OPERATING COSTS PER TON									
-MINING	0.00	164.11	143.28	62.54	33.38	0.00	0.00	0.00	96.10
-MILLING	0.00	25.00	25.00	25.00	25.00	0.00	0.00	0.00	25.00
-PLANT	0.00	26.97	21.58	21.58	12.26	0.00	0.00	0.00	20.09
-ADMINISTRATION	0.00	6.86	5.48	5.48	5.06	0.00	0.00	0.00	5.65
-TRUCKING	0.00	15.00	15.00	15.00	15.00	0.00	0.00	0.00	15.00
TOTAL COSTS PER TON	0.00	237.94	210.35	129.60	90.70	0.00	0.00	0.00	161.84

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SUMMARY OF PRODUCTION AND REVENUES

-TONNES MILLED			52,000	65,000	65,000	70,500		0	252,500
-COPPER GRADE		0.000	0.000	0.000	0.000	0.000	0.000	0.000	
-ZINC GRADE		0.000	0.000	0.000	0.000	0.000	0.000	0.000	
-GOLD GRADE		0.378	0.378	0.378	0.316	0.252	0.252	0.252	
-SILVER GRADE		7.810	7.810	7.810	11.350	15.000	15.000	15.000	
RECOVERIES									
-COPPER	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
-ZINC	0.00	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
-GOLD	0.95	0.950	0.950	0.950	0.950	0.950	0.950	0.950	0.950
-SILVER	0.90	0.900	0.900	0.900	0.900	0.900	0.900	0.900	0.900
PRODUCTION (IN CONCENTRATE)									
-COPPER (LBS)		0	0	0	0	0	0	0	0
-ZINC(LBS)		0	0	0	0	0	0	0	0
-GOLD (OUNCES)		0	18,673	23,342	19,513	16,878	0	0	78,405
-SILVER (OUNCES)		0	365,508	456,885	663,975	951,750	0	0	2,438,118
TONS CONCENTRATE									
-COPPER @ GRADE OF	0.24	0	0	0	0	0	0	0	0
-ZINC	0.56	0	0	0	0	0	0	0	0
METAL PRICES - N.S.R.									
-COPPER @ MKT	1.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-ZINC @ MKT	0.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
-GOLD ($375 US 1.32 EX.)	495.00	495	495	495	495	495	495	495	495
-SILVER ($4,75 US)	6.27	6.27	6.27	6.27	6.27	6.27	6.27	6.27	6.27
REVENUE									
-COPPER		0	0	0	0	0	0	0	0
-ZINC		0	0	0	0	0	0	0	0
-GOLD		0	9,243	11,554	9,659	8,354	0	0	38,811
-SILVER		0	2,292	2,865	4,163	5,967	0	0	15,287
TOTAL REVENUE		0	11,535	14,419	13,822	14,322	0	0	54,098

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SCHEDULE OF MINING WORK COSTS
(,000 $)

DESCRIPTION OF WORK	RATE PER UNIT	PREPRD.	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	TOTALS
1.RAMP 10' x 15'	407.42	0	703	0	0	0	0	0	0	0 703
2.ACC.DR. 10' x 15'	394.57	927	1,034	2,154	0	0	0	0	0	0 4115
3.DR. PTS. 10' x 10'	341.13	425	698	885	0	0	0	0	0	0 2008
4.ORE DRIFT 8' x 8'	254.77	0	248	127	94	0	0	0	0	0 470
5.ACC. RSE 5' x 6'	199.91	80	94	161	95	0	0	0	0	0 430
6.SERVICE RSE 6' x 8'	304.63	253	469	696	183	0	0	0	0	0 1601
7. SER.RSE -MNY. INST.	196.00	163	302	448	118	0	0	0	0	0 1030
8.VENT. RSE 6' x 8'	304.63	52	216	119	0	0	0	0	0	0 387
9. VENT.RSE - MNY. INST.	196.00	33	139	76	0	0	0	0	0	0 249
10.SUB DRIFT 8' x 8'	254.77	218	368	285	213	0	0	0	0	0 1084
11.MUCK RSE 5' x 6'	199.91	0	0	0	0	0	0	0	0	0 0
12.O.P./W.P. RSE 5' x 6'	205.00	0	0	0	0	0	0	0	0	0 0
13.SLASH WASTE	14.31	280	0	64	0	0	0	0	0	0 345
14. SLASH ORE	14.31	0	0	0	0	0	0	0	0	0 0
15.SHRINKAGE STOPING	25.36	112	1,978	1,978	1,022	0	0	0	0	0 5090
16.L.H. STOPING	1.73	0	0	0	0	0	0	0	0	0 0
17.STOPE MUCKING	2.54	4	87	121	143	156	0	0	0	0 510
18. MISC.	2	0	0	0	0	0	0	0	0	0 0
19. ENGINEERING	15,000	15	0	0	0	0	0	0	0	0 15
20. ENVIRON. STUDY	15,000	15	0	0	0	0	0	0	0	15
21. SITE PREP.,ROAD,CAMP	25000.00	25	0	0	0	0	0	0	0	25
22. PORTAL EXC.& MOB.	100000.00	100	0	0	0	0	0	0	0	100
MINE COST		2,	6	7,	1,867	156	0	0	0	18175

SCHEDULE OF SUPERVISION AND LABOUR OVERHEADS

DESCRIPTION OF WORK		PREPRD.	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	TOTALS
-MINE SUPER	HOURS	1040	2080	2080	2080	2080				9360
-MINE ENGINEER	HOURS	1040	2080	2080	2080	2080				9360
-MINE GEOLOGIST	HOURS	1040	2080	2080	2080	2080				9360
-GEO. TECHNICIAN	HOURS	1040	2080	2080	2080	2080				9360
-SURVEYORS	HOURS	2080	4160	4160	4160	4160				18720
-MINING TECHNICIAN	HOURS	1040	2080	2080	2080	2080				9360
-SAMPLERS	HOURS		4160	4160	4160	4160				16640
-TECHNICIAN 4	HOURS									0
-MINE SHIFTBOSS	HOURS	2080	4160	4160	4160	4160				18720
-CHIEF MECHANIC	HOURS	1040	2080	2080	2080	2080				9360
-MECHANIC	HOURS	3120	8320	8320	8320	8320				36400
-CHIEF ELECTICIAN	HOURS	1040	2080	2080	2080	2080				9360
-ELECTRICIAN	HOURS	1040	2080	2080	2080	2080				9360
-MUCKERS (SCOOP)	HOURS		4160	4160	4160	4160				16640
-TRAMMERS (TRUCK)	HOURS		4160	4160	4160	4160				16640
-TIMBERMEN	HOURS		4160	4160	4160	4160				16640
-L.H. BLASTERS	HOURS									0
-SERVICE MEN	HOURS	2080	4160	4160	4160	4160				18720
										0
MONTHLY MATERIAL COSTS										0
-GEO.&ENG. SUPPLIES	MONTHS	6	12	12	12	12				54
-MINE RES.&TRAIN.	MONTHS	6	12	12	12	12				54
-SHAFT MTCE.	MONTHS	6	12	12	12	12				54
-MINE DRY	MONTHS	6	12	12	12	12				54
-MINE DEWATERING	MONTHS	6	12	12	12	12				54
-VENTILATION	MONTHS	6	12	12	12	12				54
-SIGNALS, TELEPHONE	MONTHS	6	12	12	12	12				54
-ASSAYING	MONTHS	6	12	12	12	12				54
-MINERS LAMPS	MONTHS	6	12	12	12	12				54
-SMALL TOOLS	MONTHS	6	12	12	12	12				54
-LEVEL MTCE.	MONTHS	6	12	12	12	12				54
-BULKHEADS,CONST.	MONTHS	6	12	12	12	12				54
-WATER SAMPLING	MONTHS	6	12	12	12	12				54
-MINE AIR HEATING	MONTHS	3	6	6	6	6				27
-CONT. DIA.DRILLING	METERS	0	2500	2500	2500	2500				10000
-BAZOOKA DRILLING	METERS	0	0	0	0	0				0
-WASTE DISPOSAL	MONTHS	6	12	12	12	12				54
-ORE HANDLING	MONTHS	6	12	12	12	12				54
-GROUTING	MONTHS	6	12	12	12	12				54
-UG.SHOP SUPPLIES	MONTHS	6	12	12	12	12				54
-OTHER	MONTHS	6	12	12	12	12				54
-CONSULTANTS	MONTHS	6	12	12	12	12				54

SCHEDULE OF SUPERVISION AND LABOUR EXPENDITURES
(,000 $)

DESCRIPTION OF WORK	COST PER HOUR	PREPRD.	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	TOTALS
-MINE SUPER	54.40	57	113	113	113	113	0	0	0	509
-MINE ENGINEER	37.02	39	77	77	77	77	0	0	0	347
-MINE GEOLOGIST	40.49	42	84	84	84	84	0	0	0	379
-GEO. TECHNICIAN	33.52	35	70	70	70	70	0	0	0	314
-SURVEYORS	30.00	62	125	125	125	125	0	0	0	562
-MINING TECHNICIAN	31.13	32	65	65	65	65	0	0	0	291
-SAMPLERS	28.13	0	117	117	117	117	0	0	0	468
-TECHNICIAN 4	28.13	0	0	0	0	0	0	0	0	0
-MINE SHIFTBOSS	33.52	70	139	139	139	139	0	0	0	627
-CHIEF MECHANIC	32.35	34	67	67	67	67	0	0	0	303
-MECHANIC	30.00	94	250	250	250	250	0	0	0	1092
-CHIEF ELECTICIAN	35.27	37	73	73	73	73	0	0	0	330
-ELECTRICIAN	31.13	32	65	65	65	65	0	0	0	291
-MUCKERS (SCOOP)	35.32	0	147	147	147	147	0	0	0	588
-TRAMMERS (TRUCK)	35.32	0	147	147	147	147	0	0	0	588
-TIMBERMEN	35.32	0	147	147	147	147	0	0	0	588
-L.H. BLASTERS	38.56	0	0	0	0	0	0	0	0	0
-SERVICE MEN	29.88	62	124	124	124	124	0	0	0	559
		0	0	0	0	0	0	0	0	0
MONTHLY MATERIAL COSTS		0	0	0	0	0	0	0	0	0
-GEO.&ENG. SUPPLIES	1,000	6	12	12	12	12	0	0	0	54
-MINE RES.&TRAIN.	1,000	6	12	12	12	12	0	0	0	54
-SHAFT MTCE.	0	0	0	0	0	0	0	0	0	0
-MINE DRY	250	2	3	3	3	3	0	0	0	14
-MINE DEWATERING	500	3	6	6	6	6	0	0	0	27
-VENTILATION	500	3	6	6	6	6	0	0	0	27
-SIGNALS, TELEPHONE	250	2	3	3	3	3	0	0	0	14
-ASSAYING	5,000	30	60	60	60	60	0	0	0	270
-MINERS LAMPS	250	2	3	3	3	3	0	0	0	14
-SMALL TOOLS	500	3	6	6	6	6	0	0	0	27
-LEVEL MTCE.	500	3	6	6	6	6	0	0	0	27
-BULKHEADS,CONST.	1,000	6	12	12	12	12	0	0	0	54
-WATER SAMPLING	750	5	9	9	9	9	0	0	0	41
-MINE AIR HEATING	7,500	23	45	45	45	45	0	0	0	203
-CONT. DIA.DRILLING	65	0	163	163	163	163	0	0	0	650
-BAZOOKA DRILLING	38	0	0	0	0	0	0	0	0	0
-WASTE DISPOSAL	500	3	6	6	6	6	0	0	0	27
-ORE HANDLING	500	3	6	6	6	6	0	0	0	27
-GROUTING	500	3	6	6	6	6	0	0	0	27
-UG.SHOP SUPPLIES	500	3	6	6	6	6	0	0	0	27
-OTHER	500	3	6	6	6	6	0	0	0	27
-CONSULTANTS	1,000	6	12	12	12	12	0	0	0	54
COS		707	2,198	2,198	2,198	2,198	0	0	0	9499

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SCHEDULE OF MILLING WORK

DESCRIPTION OF EQUIPMENT		PREPRD.	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	TOTALS
										0
										0
OWNER CUSTOM MILLING	TONNES		52,000	65,000	65,000	70,500				252500
										0
ORE TRUCKING TO MILL	TONNES		52,000	65,000	65,000	70,500				252500
										0
										0
										0
										0
										0
										0
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										0
										0
										0
										0
										0
										0

SCHEDULE OF MILLING COSTS
(,000 $)

DESCRIPTION OF WORK	UNITS OR AMOUNT	PREPRD.	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	TOTALS
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
OWNER CUSTOM MILLING	25.00	0	1,300	1,625	1,625	1,763	0	0	0	6313
0		0	0	0	0	0	0	0	0	0
ORE TRUCKING TO MILL	15.00	0	780	975	975	1,058	0	0	0	3788
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
		0	0	0	0	0	0	0	0	0
0			0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
0		0	0	0	0	0	0	0	0	0
T[illegible] MILL[illegible] OST[illegible]		0	2,080	2,600	2,600	2,820	0	0	0	10100

SCHEDULE OF PLANT & ADMINISTRATIVE WORK

DESCRIPTION OF EQUIPMENT		PREPRD.	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	TOTALS
PLANT LABOUR COSTS										0
-CAMP OPERATION	MDAYS	5040	15600	15600	15600	7800				59640
-										0
-MECHANIC	HOURS									0
-CARPENTER	HOURS	520	1040	1040	1040	1040				4680
-LOADER OPERATOR	HOURS	1040	2080	2080	2080	2080				9360
-DRYMAN	HOURS	1040	2080	2080	2080	2080				9360
-BIT SHARP. & R.D.	HOURS	1040	2080	2080	2080	2080				9360
-SURF. LABOUR	HOURS	520	1040	1040	1040	1040				4680
PLANT MATERIAL COSTS										0
-HYDRO.POWER DIST.	KWHR/YR	2028000	4056000	4056000	4056000	2028000				16224000
-COMPRESSORS	MONTHS	6	12	12	12	12				54
-SHOP SUPPLIES	MONTHS	6	12	12	12	12				54
-WATER,SEWAGE	MONTHS	6	12	12	12	12				54
-YARDS,ROADS	MONTHS	6	12	12	12	12				54
-SECURITY	MONTHS	6	12	12	12	12				54
-BLDG. MAINT.,HEAT	MONTHS	6	12	12	12	12				54
-ELEC. MATERIALS	MONTHS	6	12	12	12	12				54
-SERV. VEHICLES	MONTHS	6	12	12	12	12				54
-LOADER,TRUCK MTCE.	MONTHS	6	12	12	12	12				54
-MECHANIC MATERIALS	MONTHS	6	12	12	12	12				54
										0
										0
										0
										0
										0
ADMINISTRATIVE										0
-MINE MANAGER	HOURS	520	1040	1040	1040	1040				4680
-ACCOUNTANT	HOURS	520	1040	1040	1040	1040				4680
-WRHOUSE / PURCH.	HOURS	520	1040	1040	1040	1040				4680
-FIRST AID / CLERK	HOURS	520	1040	1040	1040	1040				4680
-SECRETARY	HOURS	520	1040	1040	1040	1040				4680
-SAFETY / PERSONNEL	HOURS	520	1040	1040	1040	1040				4680
-TELEPHONE, TELEX	MONTHS	6	12	12	12	12				54
-TRAVEL, ACCOM.	MONTHS	6	12	12	12	12				54
-INSURANCE	MONTHS	6	12	12	12	12				54
-TRAINING,SAFETY	MONTHS	6	12	12	12	12				54
-RECRUITMENT	MONTHS	6	12	12	12	12				54
-OFFICE SUPP.LEASES	MONTHS	6	12	12	12	12				54
-EMPLOYEE MED.SAFETY	MONTHS	6	12	12	12	12				54
-EQUIPMENT RENTALS	MONTHS	6	12	12	12	12				54
-TAXES(MUN.)	MONTHS	6	12	12	12	12				54
-HEAD OFF. O.H.&ADMIN.	MONTHS	6	12	12	12	12				

SCHEDULE OF PLANT & ADMINISTRATIVE EXPENDITURES
(,000 $)

DESCRIPTION OF WORK	UNITS OR AMOUNT	PREPRD.	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	TOTALS
PLANT LABOUR COSTS		0	0	0	0	0	0	0	0	0
-CAMP OPERATION	30.00	151	468	468	468	234	0	0	0	1789
-		0	0	0	0	0	0	0	0	0
-MECHANIC	30.00	0	0	0	0	0	0	0	0	0
-CARPENTER	22.75	12	24	24	24	24	0	0	0	106
-LOADER OPERATOR	22.75	24	47	47	47	47	0	0	0	213
-DRYMAN	21.45	22	45	45	45	45	0	0	0	201
-BIT SHARP. & R.D.	22.75	24	47	47	47	47	0	0	0	213
-SURF. LABOUR	21.45	11	22	22	22	22	0	0	0	100
PLANT MATERIAL COSTS		0	0	0	0	0	0	0	0	0
-HYDRO.POWER DIST.	0.15	304	608	608	608	304	0	0	0	2434
-COMPRESSORS	2000.00	12	24	24	24	24	0	0	0	108
-SHOP SUPPLIES	500.00	3	6	6	6	6	0	0	0	27
-WATER,SEWAGE	250.00	2	3	3	3	3	0	0	0	14
-YARDS,ROADS	1000.00	6	12	12	12	12	0	0	0	54
-SECURITY	1500.00	9	18	18	18	18	0	0	0	81
-BLDG. MAINT.,HEAT	1000.00	6	12	12	12	12	0	0	0	54
-ELEC. MATERIALS	1000.00	6	12	12	12	12	0	0	0	54
-SERV. VEHICLES	500.00	3	6	6	6	6	0	0	0	27
-LOADER,TRUCK MTCE.	1500.00	9	18	18	18	18	0	0	0	81
-MECHANIC MATERIALS	2500.00	15	30	30	30	30	0	0	0	135
PLANT COSTS-OPERATING		619	1,403	1,403	1,403	864	0	0	0	5691
ADMINISTRATIVE		0	0		0	0	0	0	0	0
-MINE MANAGER	59.61	31	62	62	62	62	0	0	0	279
-ACCOUNTANT	39.45	21	41	41	41	41	0	0	0	185
-WRHOUSE / PURCH.	30.00	16	31	31	31	31	0	0	0	140
-FIRST AID / CLERK	26.25	14	27	27	27	27	0	0	0	123
-SECRETARY	19.50	10	20	20	20	20	0	0	0	91
-SAFETY / PERSONNEL	35.27	18	37	37	37	37	0	0	0	165
-TELEPHONE, TELEX	1500.00	9	18	18	18	18	0	0	0	81
-TRAVEL, ACCOM.	500.00	3	6	6	6	6	0	0	0	27
-INSURANCE	1500.00	9	18	18	18	18	0	0	0	81
-TRAINING,SAFETY	1500.00	9	18	18	18	18	0	0	0	81
-RECRUITMENT	1000.00	6	12	12	12	12	0	0	0	54
-OFFICE SUPP.LEASES	1500.00	9	18	18	18	18	0	0	0	81
-EMPLOYEE MED.SAFETY	1000.00	6	12	12	12	12	0	0	0	54
-EQUIPMENT RENTALS	500.00	3	6	6	6	6	0	0	0	27
-TAXES(MUN.)	1000.00	6	12	12	12	12	0	0	0	54
-HEAD OFF. O.H.&ADMIN.	1500.00	9	18	18	18	18	0	0	0	81
T[illegible] ADM[illegible]RATI[illegible]COSTS		178	356	356	356	356	0	0	0	1604

COST ESTIMATE FOR ANNUAL OPERATING PLAN

CALCULATION OF LABOUR COSTS

Projet: HEUSTIS/WEBBER

Date: FEB. 1997

VACATION PAY	0.040	
C.P.P.	0.030	
U.I.C.	0.015	
-MAX. deduct./year	850.500	0.409
W.C.B.(inc. Silicosis): (C.S.S.T.)	0.080	
-MAX.insur.earning/yr.	48000.000	1.846
MEDICAL	0.060	
O.H.I.P.	0.0000	
STATUTORY HOLIDAYS	0.0400	
OTHER	0.035	0.165
FEES		
-ADMINISTRATION	0.000	
-PROFIT	0.000	0.000

LABOUR WAGE LEVEL	HR.RATE		BON./HR.	UIC/HR.	WCB/HR	FRIN./HR.	TRAV./HR.	TOTALS/HR.
	11.00			0.17	0.88	2.26		14.30
	12.00			0.18	0.96	2.46		15.60
	12.50			0.19	1.00	2.56		16.25
	14.00			0.21	1.12	2.87		18.20
SECRETARY	15.00			0.23	1.20	3.08		19.50
	15.49			0.23	1.24	3.18		20.14
SUR.LAB. & DRYMAN	16.50			0.25	1.32	3.38		21.45
LOADER OPER. /BIT SHARP.	17.50			0.26	1.40	3.59		22.75
SERVICEMAN	18.50	#	4.63	0.35	1.85	4.56		29.88
TRAMMER-MUCK-TIMBER	18.50		9.25	0.41	1.85	5.32		35.32
S.L.R. BLASTER	18.50		12.03	0.41	1.85	5.78		38.56
FIRST AID / CLERK	20.19			0.30	1.62	4.14		26.25
SAMPLER	21.64			0.32	1.73	4.44		28.13
ELEC. & MINING TECH.	24.00			0.36	1.85	4.92		31.13
SURVEYORS/WHS.&PURCH.	23.08			0.35	1.85	4.73		30.00
CHIEF MECH.	25.00			0.38	1.85	5.13		32.35
GEO.TECH. & SHIFTERS	25.96			0.39	1.85	5.32		33.52
SAFETY/PERSONNEL	27.40			0.41	1.85	5.62		35.27
MINE ENGINEER	28.85			0.41	1.85	5.91		37.02
ACCOUNTANT	30.87			0.41	1.85	6.33		39.45
CHIEF GEOLOGIST	31.73			0.41	1.85	6.50		40.49
MINE SUPER.	43.27			0.41	1.85	8.87		54.40
MINE MANAGER	47.60			0.41	1.85	9.76		59.61

SCHEDULE OF PLANT & ADMINISTRATIVE WORK

DESCRIPTION OF EQUIPMENT		PREPRD.	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	TOTALS
PLANT LABOUR COSTS										0
-CAMP OPERATION	MDAYS	5040	15600	15600	15600	7800				59640
-										0
-MECHANIC	HOURS									0
-CARPENTER	HOURS	520	1040	1040	1040	1040				4680
-LOADER OPERATOR	HOURS	1040	2080	2080	2080	2080				9360
-DRYMAN	HOURS	1040	2080	2080	2080	2080				9360
-BIT SHARP. & R.D.	HOURS	1040	2080	2080	2080	2080				9360
-SURF. LABOUR	HOURS	520	1040	1040	1040	1040				4680
PLANT MATERIAL COSTS										0
-HYDRO.POWER DIST.	KWHR/YR	2028000	4056000	4056000	4056000	2028000				16224000
-COMPRESSORS	MONTHS	6	12	12	12	12				54
-SHOP SUPPLIES	MONTHS	6	12	12	12	12				54
-WATER,SEWAGE	MONTHS	6	12	12	12	12				54
-YARDS,ROADS	MONTHS	6	12	12	12	12				54
-SECURITY	MONTHS	6	12	12	12	12				54
-BLDG. MAINT.,HEAT	MONTHS	6	12	12	12	12				54
-ELEC. MATERIALS	MONTHS	6	12	12	12	12				54
-SERV. VEHICLES	MONTHS	6	12	12	12	12				54
-LOADER,TRUCK MTCE.	MONTHS	6	12	12	12	12				54
-MECHANIC MATERIALS	MONTHS	6	12	12	12	12				54
										0
										0
										0
										0
										0
ADMINISTRATIVE										0
-MINE MANAGER	HOURS	520	1040	1040	1040	1040				4680
-ACCOUNTANT	HOURS	520	1040	1040	1040	1040				4680
-WRHOUSE / PURCH.	HOURS	520	1040	1040	1040	1040				4680
-FIRST AID / CLERK	HOURS	520	1040	1040	1040	1040				4680
-SECRETARY	HOURS	520	1040	1040	1040	1040				4680
-SAFETY / PERSONNEL	HOURS	520	1040	1040	1040	1040				4680
-TELEPHONE, TELEX	MONTHS	6	12	12	12	12				54
-TRAVEL, ACCOM.	MONTHS	6	12	12	12	12				54
-INSURANCE	MONTHS	6	12	12	12	12				54
-TRAINING,SAFETY	MONTHS	6	12	12	12	12				54
-RECRUITMENT	MONTHS	6	12	12	12	12				54
-OFFICE SUPP.LEASES	MONTHS	6	12	12	12	12				54
-EMPLOYEE MED.SAFETY	MONTHS	6	12	12	12	12				54
-EQUIPMENT RENTALS	MONTHS	6	12	12	12	12				54
-TAXES(MUN.)	MONTHS	6	12	12	12	12				54
-HEAD OFF. O.H.&ADMIN.	MONTHS	6	12	12	12	12				

SCHEDULE OF PLANT & ADMINISTRATIVE EXPENDITURES
(,000 $)

DESCRIPTION OF WORK	UNITS OR AMOUNT	PREPRD.	YEAR 1	YEAR 2	YEAR 3	YEAR 4	YEAR 5	YEAR 6	YEAR 7	TOTALS
PLANT LABOUR COSTS		0	0	0	0	0	0	0	0	0
-CAMP OPERATION	30.00	151	468	468	468	234	0	0	0	1789
-		0	0	0	0	0	0	0	0	0
-MECHANIC	30.00	0	0	0	0	0	0	0	0	0
-CARPENTER	22.75	12	24	24	24	24	0	0	0	106
-LOADER OPERATOR	22.75	24	47	47	47	47	0	0	0	213
-DRYMAN	21.45	22	45	45	45	45	0	0	0	201
-BIT SHARP. & R.D.	22.75	24	47	47	47	47	0	0	0	213
-SURF. LABOUR	21.45	11	22	22	22	22	0	0	0	100
PLANT MATERIAL COSTS		0	0	0	0	0	0	0	0	0
-HYDRO.POWER DIST.	0.15	304	608	608	608	304	0	0	0	2434
-COMPRESSORS	2000.00	12	24	24	24	24	0	0	0	108
-SHOP SUPPLIES	500.00	3	6	6	6	6	0	0	0	27
-WATER,SEWAGE	250.00	2	3	3	3	3	0	0	0	14
-YARDS,ROADS	1000.00	6	12	12	12	12	0	0	0	54
-SECURITY	1500.00	9	18	18	18	18	0	0	0	81
-BLDG. MAINT.,HEAT	1000.00	6	12	12	12	12	0	0	0	54
-ELEC. MATERIALS	1000.00	6	12	12	12	12	0	0	0	54
-SERV. VEHICLES	500.00	3	6	6	6	6	0	0	0	27
-LOADER,TRUCK MTCE.	1500.00	9	18	18	18	18	0	0	0	81
-MECHANIC MATERIALS	2500.00	15	30	30	30	30	0	0	0	135
PLANT COSTS-OPERATING		619	1,403	1,403	1,403	864	0	0	0	5691
ADMINISTRATIVE		0	0		0	0	0	0	0	0
-MINE MANAGER	59.61	31	62	62	62	62	0	0	0	279
-ACCOUNTANT	39.45	21	41	41	41	41	0	0	0	185
-WRHOUSE / PURCH.	30.00	16	31	31	31	31	0	0	0	140
-FIRST AID / CLERK	26.25	14	27	27	27	27	0	0	0	123
-SECRETARY	19.50	10	20	20	20	20	0	0	0	91
-SAFETY / PERSONNEL	35.27	18	37	37	37	37	0	0	0	165
-TELEPHONE, TELEX	1500.00	9	18	18	18	18	0	0	0	81
-TRAVEL, ACCOM.	500.00	3	6	6	6	6	0	0	0	27
-INSURANCE	1500.00	9	18	18	18	18	0	0	0	81
-TRAINING,SAFETY	1500.00	9	18	18	18	18	0	0	0	81
-RECRUITMENT	1000.00	6	12	12	12	12	0	0	0	54
-OFFICE SUPP.LEASES	1500.00	9	18	18	18	18	0	0	0	81
-EMPLOYEE MED.SAFETY	1000.00	6	12	12	12	12	0	0	0	54
-EQUIPMENT RENTALS	500.00	3	6	6	6	6	0	0	0	27
-TAXES(MUN.)	1000.00	6	12	12	12	12	0	0	0	54
-HEAD OFF. O.H.&ADMIN.	1500.00	9	18	18	18	18	0	0	0	81
T[illegible] ADM[illegible]RATI[illegible]OSTS		178	356	356	356	356	0	0	0	1604

COST ESTIMATE FOR ANNUAL OPERATING PLAN

CALCULATION OF LABOUR COSTS

Projet: HEUSTIS/WEBBER

Date: FEB. 1997

VACATION PAY	0.040	
C.P.P.	0.030	
U.I.C.	0.015	
-MAX. deduct./year	850.500	0.409
W.C.B.(inc. Silicosis): (C.S.S.T.)	0.080	
-MAX.insur.earning/yr.	48000.000	1.846
MEDICAL	0.060	
O.H.I.P.	0.0000	
STATUTORY HOLIDAYS	0.0400	
OTHER	0.035	0.165
FEES		
-ADMINISTRATION	0.000	
-PROFIT	0.000	0.000

LABOUR WAGE LEVEL	HR.RATE		BON./HR.	UIC/HR.	WCB/HR	FRIN./HR.	TRAV./HR.	TOTALS/HR.
	11.00			0.17	0.88	2.26		14.30
	12.00			0.18	0.96	2.46		15.60
	12.50			0.19	1.00	2.56		16.25
	14.00			0.21	1.12	2.87		18.20
SECRETARY	15.00			0.23	1.20	3.08		19.50
	15.49			0.23	1.24	3.18		20.14
SUR.LAB. & DRYMAN	16.50			0.25	1.32	3.38		21.45
LOADER OPER. /BIT SHARP.	17.50			0.26	1.40	3.59		22.75
SERVICEMAN	18.50	#	4.63	0.35	1.85	4.56		29.88
TRAMMER-MUCK-TIMBER	18.50		9.25	0.41	1.85	5.32		35.32
S.L.R. BLASTER	18.50		12.03	0.41	1.85	5.78		38.56
FIRST AID / CLERK	20.19			0.30	1.62	4.14		26.25
SAMPLER	21.64			0.32	1.73	4.44		28.13
ELEC. & MINING TECH.	24.00			0.36	1.85	4.92		31.13
SURVEYORS/WHS.&PURCH.	23.08			0.35	1.85	4.73		30.00
CHIEF MECH.	25.00			0.38	1.85	5.13		32.35
GEO.TECH. & SHIFTERS	25.96			0.39	1.85	5.32		33.52
SAFETY/PERSONNEL	27.40			0.41	1.85	5.62		35.27
MINE ENGINEER	28.85			0.41	1.85	5.91		37.02
ACCOUNTANT	30.87			0.41	1.85	6.33		39.45
CHIEF GEOLOGIST	31.73			0.41	1.85	6.50		40.49
MINE SUPER.	43.27			0.41	1.85	8.87		54.40
MINE MANAGER	47.60			0.41	1.85	9.76		59.61

"BASE CASE"	0.10
YEAR 1	(5,975)
YEAR 2	(838)
YEAR 3	746
YEAR 4	5,398
YEAR 5	7,928
YEAR 6	0
YEAR 7	0
YEAR 8	0
YEAR 9	
YEAR 10	
YEAR 11	
YEAR 12	
NPV @ 0%	7,259
NPV @ 15 %	1,689
RATE OF RETURN	0.2411

OPERATING COST DWN 10%	0	11,248	12,430	7,658	5,813	0	0.00	0.00
OPERATING COST DWN 20%	0	10,311	11,394	7,020	5,329	0	0.00	0.00
OPERATING COST UP 10%	0	13,610	15,040	9,267	7,034	0	0.00	0.00
OPERATING COST UP 20%	0	14,848	16,407	10,109	7,673	0	0.00	0.00

-COSTS UP 10%	
YEAR 1	-5974.98
YEAR2	-2075.25
YEAR3	-621.01
YEAR4	4555.39
YEAR5	7288.24
YEAR6	0.00
YEAR 7	0.00
YEAR8	0.00
NPV @ 0%	3172.39
NPV @ 15%	-945.04
RATE OF RETURN	0.101

-COSTS UP 20%	
YEAR1	-5974.98
YEAR2	-3312.54
YEAR3	-1988.26
YEAR4	3712.97
YEAR5	6648.82
YEAR6	0.00
YEAR7	0.00
YEAR8	0.00
NPV @ 0%	-914.00
NPV @ 15%	-3579.17
RATE OF RETURN	-0.028

COST DWN 10%	
YEAR 1	(5,975)
YEAR2	287
YEAR3	1,989
YEAR4	6,164
YEAR5	8,509
YEAR6	0
YEAR7	0
YEAR8	0
NPV @ 0%	10,974
NPV @ 15%	4,084
RATE OF RETURN	0.378

COST DWN 20%	
YEAR1	(5,975)
YEAR2	1,224
YEAR3	3,025
YEAR4	6,802
YEAR5	8,993
YEAR6	0
YEAR7	0
YEAR8	0
NPV @ 0%	14,069
NPV @ 15%	6,079
RATE OF RETURN	0.498

APPENDIX II

ORE RESERVES

Grade and tonnage estimate for the Heustis deposit.

Sources: Ranspot (1983), Dolmage Campbell (1981).

Units: SI

Conversion factor: 1 ounce (troy) X 31.1034768 = g

Specific gravity: 2.56 t/m^3

Methods:

- Longitudinal section.
- The reserves which collectively define the Heustis deposit occur in mineralized shoots within the developed lateral limits of the deposit. The reserve calculation is based on underground channel samples taken at 1.5 m intervals along the strike of the mineralized shoots.
- A mining cut-off grade of 7.78 g/t Au equivalent has been used for the mineralized shoots occurring on each vein. For these purposes, 31.1 g of silver is considered equivalent to 0.93 g of gold.
- A diluted minimum mining width of 1.22 m has been used for sections where the mineralization is less than 1.22 m wide.
- No cutting factor has been applied.
- Underground workings (mapping and sampling) have been used to constrain the geometry of the mineralization and determine the grade of the deposit. Chip/channel samples have been used in the arithmetic calculation of the reserve grade.
- **Proven** reserves are defined as mineralization (minimum 1.22 m in width) that is exposed in mine openings (drifts, raises, stopes) and at surface. Maximum projections along strike or dip are restricted to 12 m or the limit of definitive drilling data, whichever is less.
- **Probable** reserves are limited to 12 m extensions beyond proven reserves where such extensions are considered geologically and economically reasonably. In addition, projections up to 12 m beyond three or more closely spaced drill intersections can be included as probable reserves if the grade and location are such as to indicate a reasonable assurance of future development.
- **Possible** reserves consist of projections up to 20 m beyond probable (or proven) reserve blocks, and of isolated and less assured drill intersections.

B.Y.G. Natural Resources Inc.

Tonnage Factor: 2.56 t/m3

Method: Longitudinal polyginal

Units: SI

Classes of Reserves:

1. Proven
2. Probable
3. Possible

Geologic/Mining Reserve Calculation Sheet

Heustis Underground

Block				True	Geological/Mining Reserves		
Stope	Vein	Location	Class	Width	Tonnes	Au g/t	Ag g/t
628	11	+4100 L	1	1.22	871	9.6	58.2
628	11	+4300 L	1	1.22	871	9.6	58.2
Total Proven (# 11 Vein)					**1,742**	**9.6**	**58.2**
628	11	+4100 L	2	1.22	871	9.6	58.2
628	11	+4300 L	2	1.22	871	9.6	58.2
Total Probable (# 11 Vein)					**1,742**	**9.6**	**58.2**
Total Proven and Probable (# 11 Vein)					**3,484**	**9.6**	**58.2**
628	11	+4100 L	3	1.22	2,613	9.6	58.2
628	11	+4300 L	3	1.22	871	9.6	58.2
Total Possible (# 11 Vein)					**3,484**	**9.6**	**58.2**
585	12	+4300 L	1	1.22	4,717	17.4	288.0
588	12	+4300 L	1	1.22	2,105	9.6	164.5
590	12	+4300 L	1	1.22	1,176	6.8	273.4
590	12	+4300 L	1	1.22	464	11.5	248.5
591	12	+4300 L	1	1.22	1,452	6.2	103.0
609	12	+4300 L	1	1.22	232	20.8	338.7
583	12	+4100 L	1	1.22	464	16.5	479.9
585	12	+4100 L	1	1.22	6,269	17.4	288.0
588	12	+4100 L	1	1.22	1,491	14.6	330.9
588	12	+4100 L	1	1.22	1,684	9.6	164.5
590	12	+4100 L	1	1.22	929	7.2	47.9
590	12	+4100 L	1	1.22	1,974	11.5	248.5
591	12	+4100 L	1	1.22	639	9.0	123.5
591	12	+4100 L	1	1.22	1,452	6.2	103.0
594	12	+4100 L	1	1.22	2,148	21.2	469.7
609	12	+4100 L	1	1.22	232	20.8	338.7
583	12	+3900 L	1	1.22	464	16.5	479.9
585	12	+3900 L	1	1.22	2,794	32.3	497.0
588	12	+3900 L	1	1.22	2,671	21.5	370.1
590	12	+3900 L	1	1.22	929	7.2	47.9
591	12	+3900 L	1	1.22	639	9.0	123.5
594	12	+3900 L	1	1.22	2,903	10.6	284.6
Total Proven (# 11 Vein) #12					**37,828**	**15.3**	**279.4**

B.Y.G. Natural Resources Inc.

Tonnage Factor: 2.56 t/m3

Method: Longitudinal polyginal

Units: SI

Classes of Reserves:

1. Proven
2. Probable
3. Possible

Geologic/Mining Reserve Calculation Sheet

Heustis Underground

Block				True	Geological/Mining Reserves		
Stope	Vein	Location	Class	Width	Tonnes	Au g/t	Ag g/t
585	12	+ 4300 L	2	1.22	871	17.4	288.0
585	12	+ 4300 L	2	1.22	980	17.4	288.0
585	12	+ 4300 L	2	1.22	1,742	17.4	288.0
588	12	+ 4300 L	2	1.22	1,684	9.6	164.5
590	12	+ 4300 L	2	1.22	1,626	6.8	273.4
590	12	+ 4300 L	2	1.22	464	11.5	248.5
591	12	+ 4300 L	2	1.22	1,452	6.2	103.0
594	12	+ 4300 L	2	1.22	2,148	11.5	189.1
609	12	+ 4300 L	2	1.22	232	20.8	338.7
583	12	+ 4100 L	2	1.22	464	16.5	479.9
588	12	+ 4100 L	2	1.22	1,452	14.6	330.9
588	12	+ 4100 L	2	1.22	1,684	9.6	164.5
590	12	+ 4100 L	2	1.22	929	7.2	47.9
590	12	+ 4100 L	2	1.22	1,742	11.5	248.5
591	12	+ 4100 L	2	1.22	639	9.0	123.5
591	12	+ 4100 L	2	1.22	1,161	6.2	103.0
594	12	+ 4100 L	2	1.22	4,296	12.8	364.2
609	12	+ 4100 L	2	1.22	232	20.8	338.7
583	12	+ 3900 L	2	1.22	464	16.5	479.9
585	12	+ 3900 L	2	1.22	2,794	32.3	497.0
588	12	+ 3900 L	2	1.22	2,671	21.5	370.1
590	12	+ 3900 L	2	1.22	929	7.2	47.9
591	12	+ 3900 L	2	1.22	639	9.0	123.5
594	12	+ 3900 L	2	1.22	2,903	10.6	284.6
Total Probable (# 12 Vein)					**34,198**	**13.9**	**273.6**
Total Proven and Probable (# 12 Vein)					**72,026**	**14.6**	**276.6**
588	12	+ 4300 L	3	1.22	1,684	9.6	164.5
590	12	+ 4300 L	3	1.22	1,626	6.8	273.4
583	12	+ 4100 L	3	1.22	581	16.5	479.9
590	12	+ 4100 L	3	1.22	1,452	8.4	106.4
591	12	+ 4100 L	3	1.22	987	7.8	113.2
583	12	+ 3900 L	3	1.22	697	16.5	479.9
585	12	+ 3900 L	3	1.22	4,890	32.3	497.0
588	12	+ 3900 L	3	1.22	4,674	21.5	370.1
590	12	+ 3900 L	3	1.22	1,626	7.2	47.9
591	12	+ 3900 L	3	1.22	1,118	9.0	123.5

B.Y.G. Natural Resources Inc.

Tonnage Factor: 2.56 t/m3

Method: Longitudinal polyginal
Units: SI

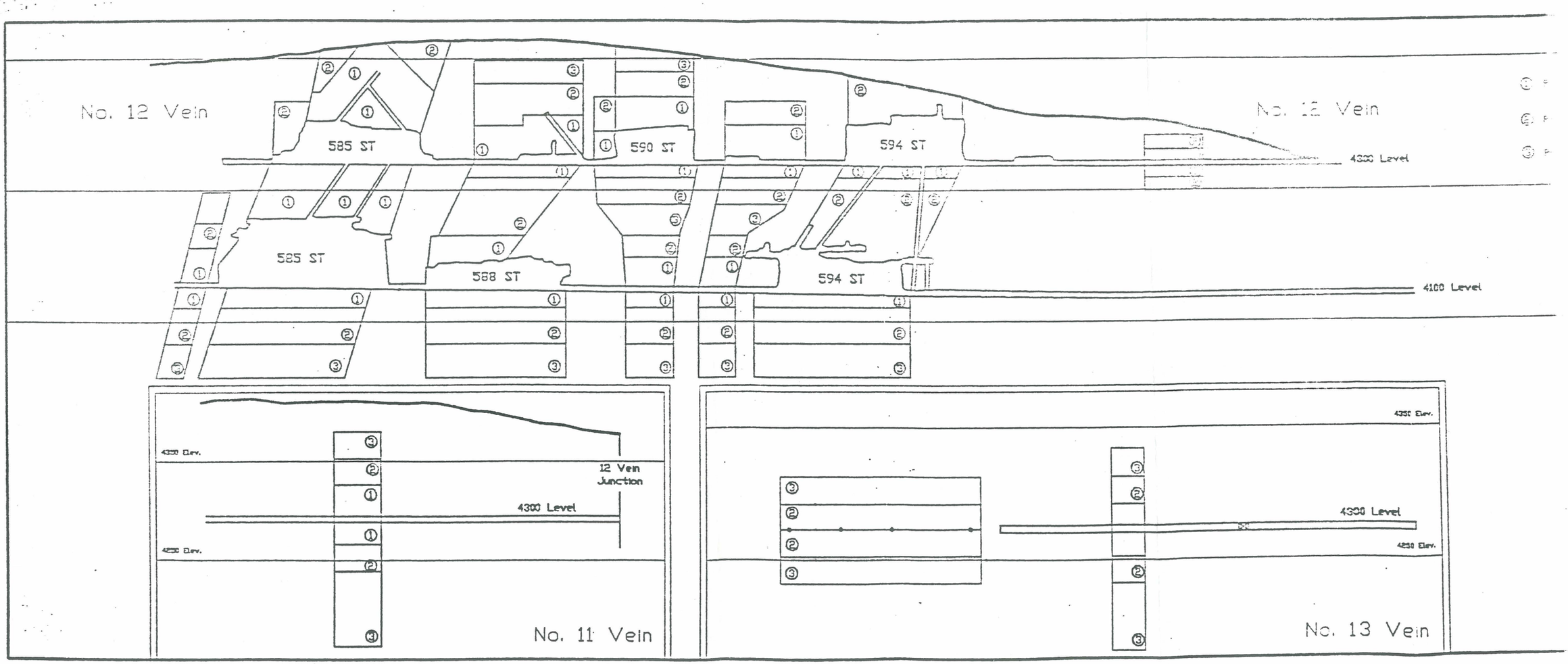
Classes of Reserves:
1. Proven
2. Probable
3. Possible

Geologic/Mining Reserve Calculation Sheet

Heustis Underground

Block				True	Geological/Mining Reserves		
Stope	Vein	Location	Class	Width	Tonnes	Au g/t	Ag g/t
594	12	+ 3900 L	3	1.22	5,080	10.6	284.6
Total Possible (# 12 Vein)					24,415	16.5	304.0
595	13	+ 4300 L	1	1.22	697	10.9	490.2
595	13	+ 4100 L	1	1.22	697	10.9	490.2
Total Proven (# 13 Vein)					1,394	10.9	490.2
593	13	+ 4300 L	2	1.22	3,716	10.6	373.9
595	13	+ 4300 L	2	1.22	697	10.9	490.2
593	13	+ 4100 L	2	1.22	3,716	10.6	373.9
595	13	+ 4100 L	2	1.22	697	10.9	490.2
Total Probable (# 13 Vein)					8,826	10.6	392.2
Total Proven and Probable (# 13 Vein)					10,220	10.7	405.6
593	13	+ 4300 L	3	1.22	3,716	10.6	373.9
595	13	+ 4300 L	3	1.22	697	10.9	490.2
593	13	+ 4100 L	3	1.22	3,716	10.6	373.9
595	13	+ 4100 L	3	1.22	2,090	10.9	490.2
Total Possible (# 13 Vein)					10,219	10.7	405.6
Total Proven (#11, 12 and 13 Veins)					40,964	14.9	277.2
Total Probable (#11, 12 and 13 Veins)					44,766	13.1	288.6
Total Possible (#11, 12 and 13 Veins)					38,118	14.3	308.8
Total Mineral Inventory					123,848	14.1	291.0
Total Proven and Probable (All Veins)					85,730	14.0	283.1

(modified after Ranspot (1983)


No. 12 Vein
585 ST
590 ST
594 ST
4300 Level
No. 12 Vein
585 ST
588 ST
594 ST
4100 Level
4330 Elev.
12 Vein
Junction
4300 Level
4250 Elev.
No. 11 Vein
4350 Elev.
4300 Level
4250 Elev.
No. 13 Vein

58500 E

59,000 E

59,500 E

No. 11 Vein

628

588 590

594

Qtz Porphyry

583 585

591

No. 12 Vein

602

No. 13 Vein

593

595

Legend

Vein

157

Reserve Block

Fault

BYG NATURAL RESOURCES INC.	
MT. NANSEN PROPERTY HEUSTIS DEPOSIT 4300 LEVEL PLAN	
SCALE: 1:1200	SOURCE: RANSPOT (1983)
FIGURE	DRAWN BY: DRM

Grade and tonnage estimate for the Webber deposit.

Sources: Ranspot (1983), Dolmage Campbell (1981).

Units: SI

Conversion factor: 1 ounce (troy) X 31.1034768 = g

Specific gravity: 2.56 t/m^3

Methods:

- Longitudinal section.
- The reserves which collectively define the Webber deposit occur in mineralized shoots within the developed lateral limits of the deposit. The reserve calculation is based on surface and underground channel samples taken at 1.5 m intervals along the strike of the mineralized shoots.
- A mining cut-off grade of 7.78 g/t Au equivalent has been used for the mineralized shoots occurring on each vein. For these purposes, 31.1 g of silver is considered equivalent to 0.93 g of gold.
- A diluted minimum mining width of 1.22 m has been used for sections where the mineralization is less than 1.22 m wide.
- No cutting factor has been applied.
- Surface stripping and underground workings (mapping and sampling) have been used to constrain the geometry of the mineralization and determine the grade of the deposit. Chip/channel samples have been used in the arithmetic calculation of the reserve grade.
- **Proven** reserves are defined as mineralization (minimum 1.22 m in width) that is exposed in mine openings (drifts, raises, stopes) and at surface. Maximum projections along strike or dip are restricted to 12 m or the limit of definitive drilling data, whichever is less.
- **Probable** reserves are limited to 12 m extensions beyond proven reserves where such extensions are considered geologically and economically reasonably. In addition, projections up to 12 m beyond three or more closely spaced drill intersections can be included as probable reserves if the grade and location are such as to indicate a reasonable assurance of future development.
- **Possible** reserves consist of projections up to 20 m beyond probable (or proven) reserve blocks, and of isolated and less assured drill intersections.

B.Y.G. Natural Resources Inc.

Tonnage Factor: 2.56 t/m3

Method: Longitudinal polyginal
Units: SI

Classes of Reserves:
1. Proven
2. Probable
3. Possible

Geologic/Mining Reseve Calculation Sheet

Webber Underground

Block				True	Geologic/Mining Reserves		
Stope	Vein	Location	Class	Width	Tonnes	Au g/t	Ag g/t
101	1	+ 4260 L	1	1.22	523	5.9	150.9
101	1	- 4260 L	1	1.22	464	5.9	150.9
105	1	+ 4260 L	1	1.22	1176	12.1	1153.6
105	1	- 4260 L	1	1.22	523	9.3	456.0
107	1	+ 4260 L	1	1.22	894	7.8	411.5
107	1	+ 4260 L	1	1.22	1230	7.8	411.5
107	1	- 4260 L	1	1.22	894	7.8	411.5
119	1	+ 4260 L	1	1.22	1103	5.6	308.5
119	1	+ 4260 L	1	1.22	406	65.0	284.6
119	1	- 4260 L	1	1.22	1103	5.6	308.5
121	1	+ 4260 L	1	1.22	581	9.3	1004.6
121	1	- 4260 L	1	1.22	581	9.3	1004.6
122	1	+ 4260 L	1	1.22	929	4.4	215.9
122	1	- 4260 L	1	1.22	929	4.4	215.9
107-121	1	+ 4260 L	1	1.22	2090	24.3	1649.7
Total Proven (# 1 Vein)					**13,426**	**11.7**	**655.3**
130	2	+ 4260 L	1	1.22	929	2.2	514.1
130	2	- 4260 L	1	1.22	929	2.2	514.1
131	2	+ 4260 L	1	1.22	523	4.4	257.2
131	2	- 4260 L	1	1.22	523	4.4	257.2
134	2	+ 4260 L	1	1.22	581	4.7	305.1
134	2	- 4260 L	1	1.22	581	4.7	305.1
136	2	+ 4260 L	1	1.22	1396	14.6	1398.7
136	2	+ 4260 L	1	1.22	1161	10.6	147.4
136	2	- 4260 L	1	1.22	1161	14.6	1398.7
139	2	+ 4260 L	1	1.22	232	6.2	593.1
139	2	- 4260 L	1	1.22	232	6.2	593.1
146	2	+ 4260 L	1	1.22	406	7.8	178.2
146	2	- 4260 L	1	1.22	406	7.8	178.2
154	2	+ 4260 L	1	1.22	929	5.9	414.9
154	2	+ 4260 L	1	1.22	813	10.9	459.1
154	2	- 4260 L	1	1.22	929	5.9	414.9
157	2	+ 4260 L	1	1.22	1858	10.6	473.1
157	2	- 4260 L	1	1.22	1858	10.6	473.1
129-130	2	+ 4260 L	1	1.22	2090	14.6	1202.8
Total Proven (# 2 Vein)					**17,537**	**9.3**	**636.5**

B.Y.G. Natural Resources Inc.

Tonnage Factor: 2.56 t/m3

Method: Longitudinal polyginal
Units: SI

Classes of Reserves:
1. Proven
2. Probable
3. Possible

Geologic/Mining Reseve Calculation Sheet

Webber Underground

Block				True	Geologic/Mining Reserves		
Stope	Vein	Location	Class	Width	Tonnes	Au g/t	Ag g/t
Total Proven (# 1 + 2 Veins)					**30,963**	**10.3**	**644.7**
101	1	- 4260 L	2	1.22	464	5.9	150.9
105	1	- 4260 L	2	1.22	523	9.3	456.0
107	1	- 4260 L	2	1.22	894	7.8	411.5
119	1	+ 4260 L	2	1.22	2801	34.5	296.4
119	1	- 4260 L	2	1.22	1103	5.6	308.5
121	1	+ 4260 L	2	1.22	1161	9.3	1004.6
121	1	- 4260 L	2	1.22	581	9.3	1004.6
122	1	+ 4260 L	2	1.22	929	4.4	215.9
122	1	- 4260 L	2	1.22	929	4.4	215.9
Total Pobable (# 1 Vein)					**9,385**	**15.1**	**4,064**
129	2	+ 4260 L	2	1.22	697	3.4	349.6
129	2	- 4260 L	2	1.22	697	3.4	349.6
130	2	+ 4260 L	2	1.22	1148	2.2	514.1
130	2	- 4260 L	2	1.22	929	2.2	514.1
131	2	+ 4260 L	2	1.22	523	4.4	257.2
131	2	- 4260 L	2	1.22	523	4.4	257.2
134	2	+ 4260 L	2	1.22	581	4.7	305.1
134	2	- 4260 L	2	1.22	581	4.7	305.1
136	2	+ 4260 L	2	1.22	2007	13.1	854.7
136	2	- 4260 L	2	1.22	1161	14.6	1398.7
139	2	+ 4260 L	2	1.22	232	6.2	593.1
139	2	- 4260 L	2	1.22	232	6.2	593.1
146	2	+ 4260 L	2	1.22	406	7.8	178.2
146	2	- 4260 L	2	1.22	406	7.8	178.2
154	2	+ 4260 L	2	1.22	1785	8.1	435.8
154	2	- 4260 L	2	1.22	929	5.9	414.9
157	2	+ 4260 L	2	1.22	1393	10.6	473.1
157	2	- 4260 L	2	1.22	1858	10.6	473.1
129-130	2	+ 4260 L	2	1.22	2090	14.6	1202.8
Total Probable (# 2 Vein)					**18,178**	**8.6**	**613.6**
Total Probable (# 1 + 2 Veins)					**27,563**	**10.8**	**549.7**

B.Y.G. Natural Resources Inc.

Tonnage Factor: 2.56 t/m3

Method: Longitudinal polyginal
Units: SI

Geologic/Mining Reseve Calculation Sheet

Classes of Reserves:

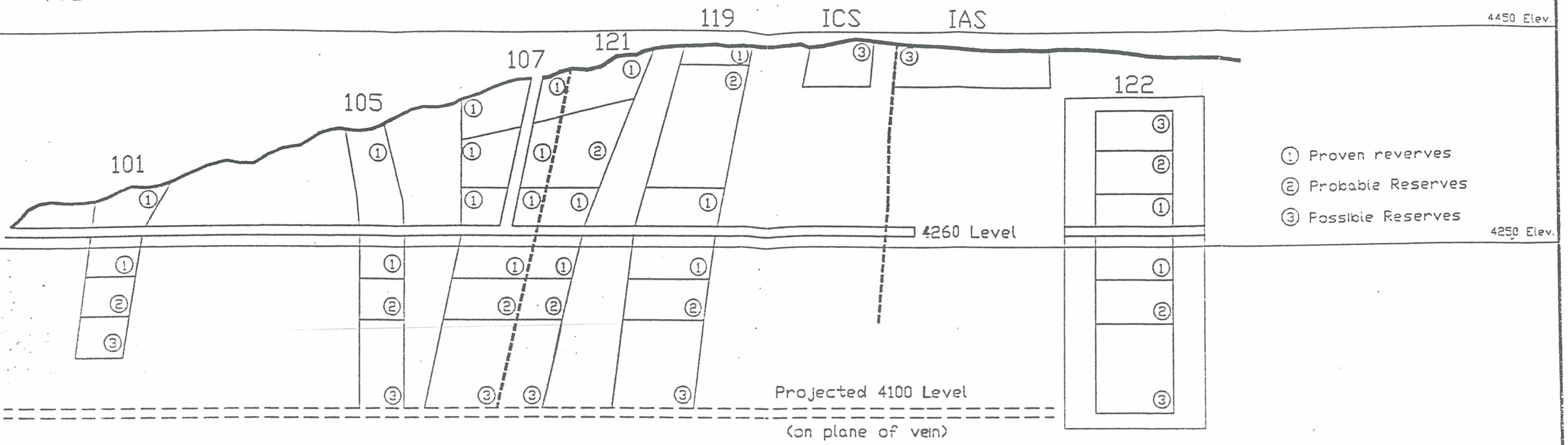
1. Proven
2. Probable
3. Possible

Webber Underground

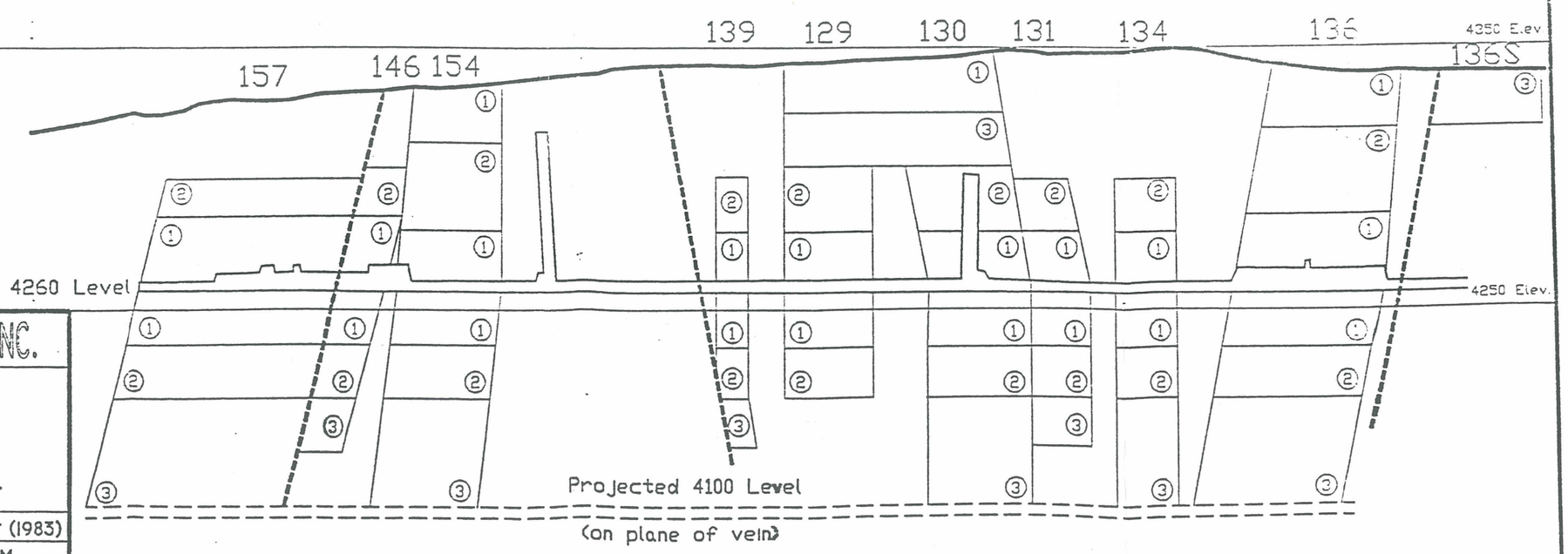
Block				True	Geologic/Mining Reserves		
Stope	Vein	Location	Class	Width	Tonnes	Au g/t	Ag g/t
101	1	- 4260 L	3	1.22	464	5.9	150.9
105	1	- 4260 L	3	1.22	1045	9.3	456.0
107	1	- 4260 L	3	1.22	1789	7.8	411.5
119	1	- 4260 L	3	1.22	2206	5.6	308.5
121	1	- 4260 L	3	1.22	1161	9.3	1004.6
122	1	+ 4260 L	3	1.22	929	4.4	215.9
122	1	- 4260 L	3	1.22	1858	4.4	215.9
1AS	1	+ 4260 L	3	1.22	1858	6.2	391.0
1CS	1	+ 4260 L	3	1.22	639	12.8	122.2
Total Possible (# 1 Vein)					11,949	6.8	379.6
129	2	+ 4260 L	3	1.22	1045	3.4	349.6
129	2	- 4260 L	3	1.22	697	3.4	349.6
130	2	- 4260 L	3	1.22	1836	2.2	514.1
131	2	- 4260 L	3	1.22	523	4.4	257.2
134	2	- 4260 L	3	1.22	1161	4.7	305.1
136	2	- 4260 L	3	1.22	2322	14.6	1398.7
139	2	+ 4260 L	3	1.22	232	6.2	593.1
139	2	- 4260 L	3	1.22	232	6.2	593.1
146	2	- 4260 L	3	1.22	406	7.8	178.2
154	2	- 4260 L	3	1.22	1858	5.9	414.9
157	2	- 4260 L	3	1.22	3716	10.6	473.1
136S	2	+ 4260 L	3	1.22	929	0.0	0.0
Total Possible (# 2 Vein)					14,957	7.2	546.0
Total Proven (# 1 + 2 Veins)					30,963	10.3	644.7
Total Probable (# 1 + 2 Veins)					27,563	10.8	549.7
Total Possible (# 1 + 2 Veins)					26,906	7.0	472.1
Total Mineral Inventory					85,432	9.4	559.7
Total Proven and Probable (All Veins)					58,526	10.6	599.9

(modified after Ranspot, 1983)

No. 1 Vein



No. 2 Vein



BYG NATURAL RESOURCES INC.

MT. NANSEN PROPERTY
WEBBER DEPOSIT
RESERVE LONGITUDINAL

SCALE: 1:1200	SOURCE: RANSPOT (1983)
FIGURE	DRAWN BY: DRM

APPENDIX III

CAPITAL COST SUMMARY

B.Y.G. NATURAL RESOURCES INC.

HEUSTIS & WEBBER ZONES

CAPITAL COST SUMMARY

	COST ($)
1.) Camp Installation	150,000
2.) Electrical Power - Diesel Generator	250,000
3.) Office and Shop	100,000
4.) Mobilize for Decline	Inc.
5.) Portal Excavation at $50K ea.	Inc.
6.) Ore Bin - Not Req'd.	
7.) Ventilation and Mine Air Heating	35,000
8.) U/G Electrical - 4 Levels @ $15K ea.	60,000
9.) Pumps	15,000
10.) Compressed Air Plant - 2 units	150,000
11.) Miscellaneous	50,000
TOTAL	$ 560,000 *

- Write off this capital over the Heustis - Webber and Brown McDade ore reserves except for the diesel generator.

Thus capital applicable to the Heustis - Webber is as follows:

$1.00 / tonne x 252,500 + 250,000 = $ 552,500 Say $ 500,000

B.Y.G. NATURAL RESOURCES INC.

HEUSTIS & WEBBER ZONES

CAPITAL EQUIPMENT REQUIREMENTS

DESCRIPTION	NO. UNITS	UNIT COST	TOTAL COST
Scooptram 3 Yd.	2	$ 283,500	$ 567,000
Trucks 16 Ton	2	295,000	590,000
Service Vehicle	1	25,000	25,000
Slushers	5	7,000	35,000
Airlegs & Stopers	15	3,500	52,500
		TOTAL	$ 1,269,500

- A 2 boom jumbo will be rented and this cost is included in the unit development costs, for the ramps, access drifts and draw points.

2.) Shrinkage Stoping

Performance Est. = 25 Tonnes/ M.S. 2 man crew

	COST / SHIFT	COST / T
1.) Labour		
$18.75 + 75%x 1.3x 8x2	$ 673.40	$ 13.47
2.) Explosives		
0.53#/h x $0.50/# x 1/0.23	57.50	1.15
Nonels=3x$2.75x1/5.6	73.50	1.47
E.B.Cap= 1 x $1.75 x 1/5.6	13.50	0.27
3.) Bits & Steel		
$0.50/f.dr.x3x8x1/5.6	107.00	2.14
4.) Ground Support		
2 bolts x $5.00x 1/5.6	89.50	1.79
5.) Misc.-slusher,services		
mny mtce., etc. 25%	253.50	5.07
TOTAL	$ 1,267.90	$ 25.36

3.) Equipment Operating Costs

Scooptram Est. Cost for 3 tons capacity = $180,000

A.) Hrs/Yr. = 16 hr/d x 260 days = 4160
B.) Yr to Dep.= 15,000 hrs / 4160 = 3.6 Say 4 (15,000 hr. avg. work conditions)
C.) Hourly Invest. Cost = $180,000 x 0.63 x 0.10 / 4160 = $ 2.73
D.) Hourly Dep. Cost = $180,000 / 15,000 = 12.00
E.) Total Owning Cost = 14.73
F.) Fuel Cost = 3gph x 4.5 x $0.45/lit. = 6.08
G.) Prev. Mtce.= 25% x 6.08 = 1.52
H.) Repair Cost =$180,000x .75 / 15,000 = 9.00
I.) Tire Cost = 4 x $750 / 800 hr. x 1.10 = 3.41
J.) Tire Repair = 0.15 x 3.1 = 0.51
K.) Labour - separate

TOTAL = $ 35.25

Use $35.00 / hr.

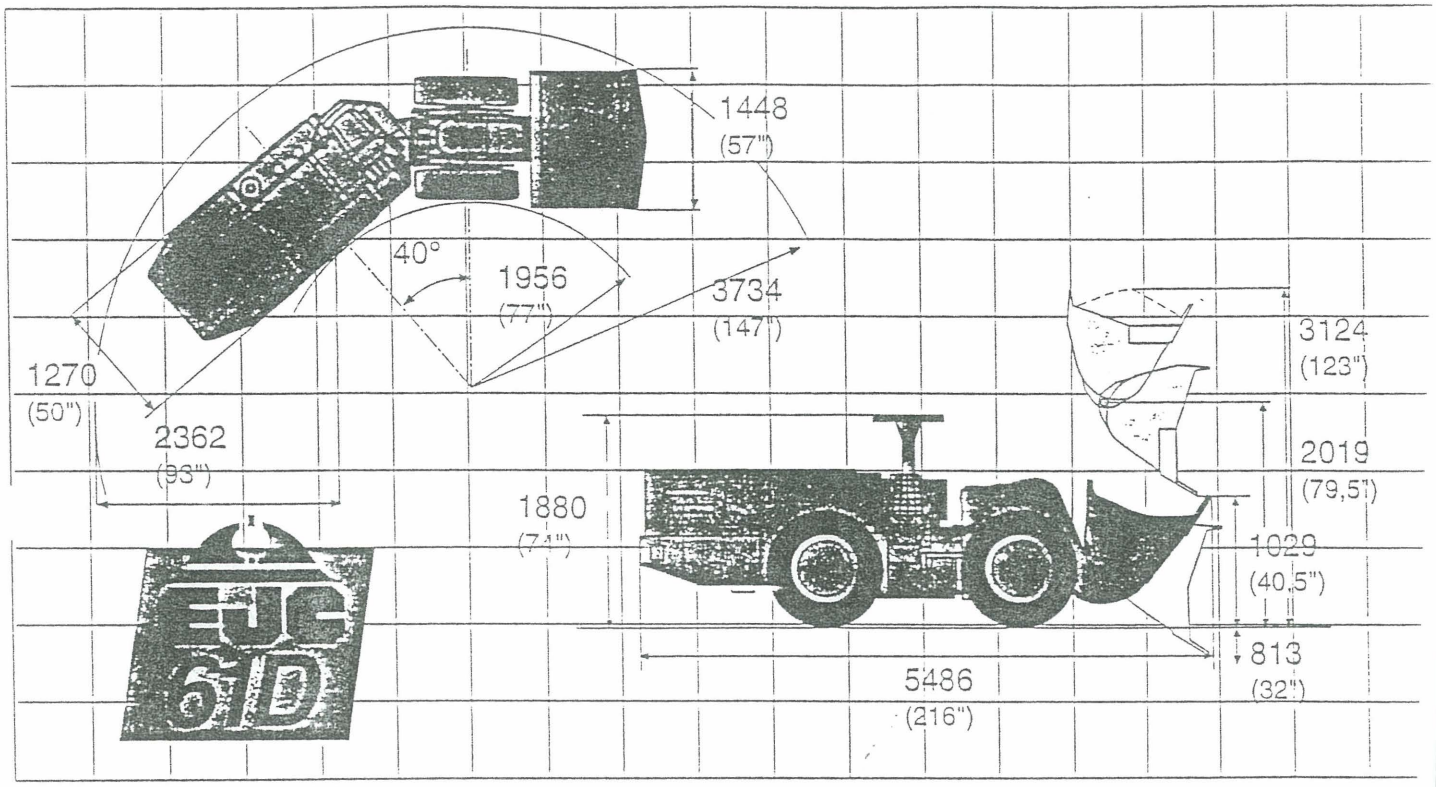
Truck 16 ton capacity est. cost = $ 300,000

A.) Hrs./Yr. = 16 hr/d x 260 days	= 4160
B.) Yr. To Dep.= 25,000 / 4160	= 6.0 (25,000 hr. avg. work conditions)
C.) Hourly Invest. Cost=$300,000x0.58x0.10 / 4160	= $ 4.18
D.) Hourly Dep.Cost=$300,000 / 25,000	= 12.00
E.) Total Owning Cost	= 16.18
F.) Fuel Cost=8gph x 4.5 x $0.45	= 16.20
G.) Prev.Mtce.= 25% x 16.20	= 4.05
H.) Repair Cost= $300,000x0.75/25,000	= 9.00
I.) Tire Cost=4 x 2000 /3500 x 1.10	= 2.08
J.) Tire Repair= 0.15 x 2.08	= 0.31
K.) Labour cost - separate	
TOTAL	$ 47.82

Use $48.00 / hr.

APPENDIX V

EQUIPMENT QUOTATIONS & SPECIFICATIONS



EJC 61D
TECHNICAL SPECIFICATION

DIMENSIONS

CAPACITY

Tramming capacity	2,700 kg (6000 lb)
Breakout force, lift	4,400 kg (9702 lb)
Breakout force, tilt	4,100 kg (9040 lb)
Tipping load	6,455 kg (14233 lb)
Bucket	0.96 m^3 - 1.3 m^3 (1.25 yd^3 - 1.7 yd^3)

BUCKET MOTION TIMES

Raising time	6.5 s
Lowering time	4.3 s
Tipping time	3.0 s

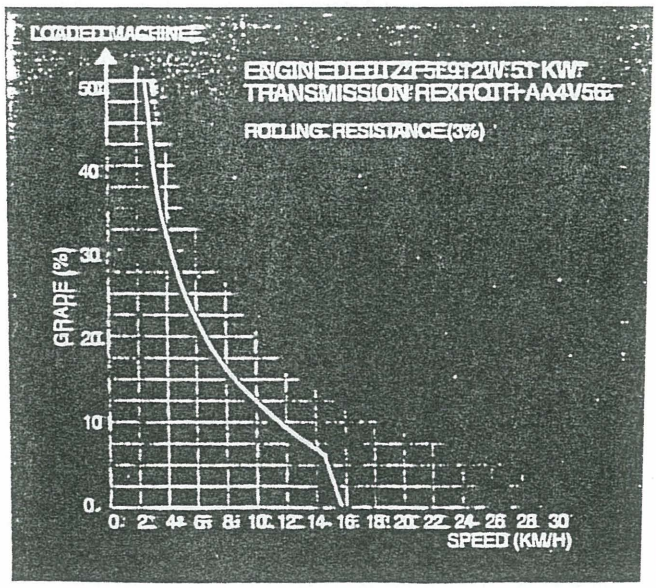
WEIGHTS

Operating weight	5,770 kg (12723 lb)
Shipping weight	5,900 kg (13010 lb)

TANK CAPACITY

Fuel	68 l (18 gallons)
Hydraulic	114 l (28 gallons)

GRADEABILITY & SPEED



POWERTRAIN

STD. ENGINE

Make	Aircooled Deutz diesel
Type	F5L912W
Power	51 kW/2300 rpm (68 hp)
Number of cylinders	5 in line
Combustion principle	Swirl chamber, four stroke
Exhaust purification	Catalytic converter

OPTIONAL

Deutz F5L912WB	41 kW/2300 rpm @ 4500 MASL (55 hp)

TRANSFER CASE

Clark gear drive 2.39:1.

TRANSMISSION

Rexroth AA4V56 hydrostatic transmission with forward and reverse.

AXLES

Front and rear: Clark 12D series with conventional front differential and no spin rear differential. Front and rear axles fixed, center oscillation ± 8°.

BRAKES

Dynamic service braking through the hydrostatic transmission. The park brake is a spring applied hydraulic released wet disc brake mounted on the front driveline. Automatically applied emergency braking system.

TIRES

Standard front and rear 9.00 x 20.18 ply. XMD2.

HYDRAULICS

High quality vane pumps, 10 micron hydrostatic filter, 10 micron return filter, and 100 mesh suction strainer for maximum fluid cleanliness. Open center steer/brake circuit with accumulator charging manifold and open centre bucket hydraulics circuit.

STEERING HYDRAULICS

Centre articulated, hydraulic power steering with ± 40° turning angle. Hydraulic stick direct operated control valve.

BUCKET HYDRAULICS

Open centre vane pump type bucket hydraulic system. Hydraulic stick direct operated control valve. Two lift cylinders and one tilt cylinder.

OPERATOR'S COMPARTMENT

Ergonomically designed for optimum operator comfort and ease of operation. Controls are located for efficient effortless control of functions. A fully adjustable seat with mechanical suspension, ensure maximum comfort and ride.

INSTRUMENTATION

All gauges are in a common panel and are color coded for easy visual assessment of operating conditions. Audio/visual dual alarm system for critical machine functions. Stainless steel instrument panel is a sealed water resistant design.

ELECTRICAL

24–volt DC electrical system, 2 x 12 V 455 CCA batteries, 35 amps high capacity alternator, 5 kW starting motor, 2 front lights and 2 rear lights.

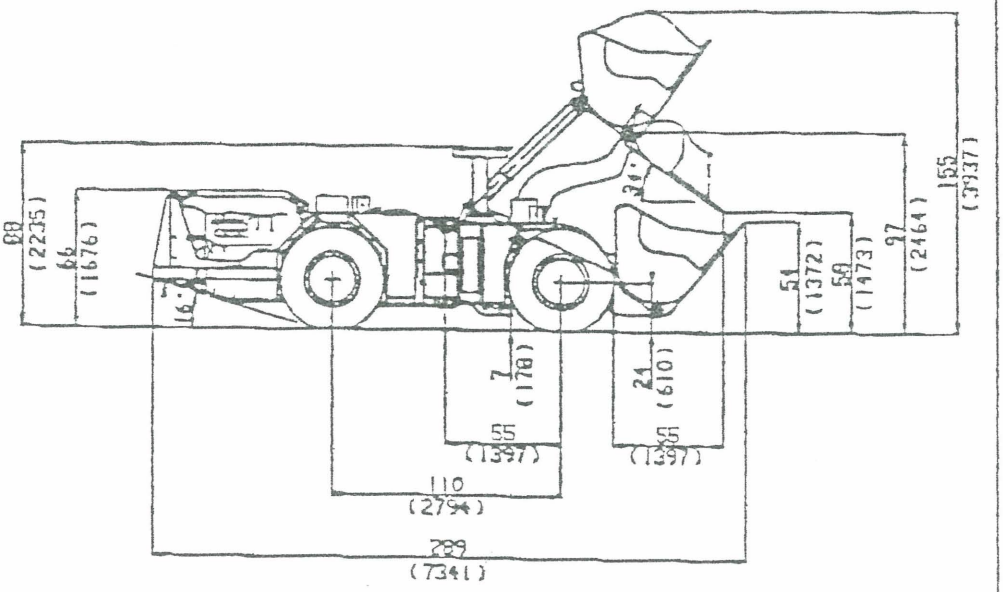
PINS & JOINTS

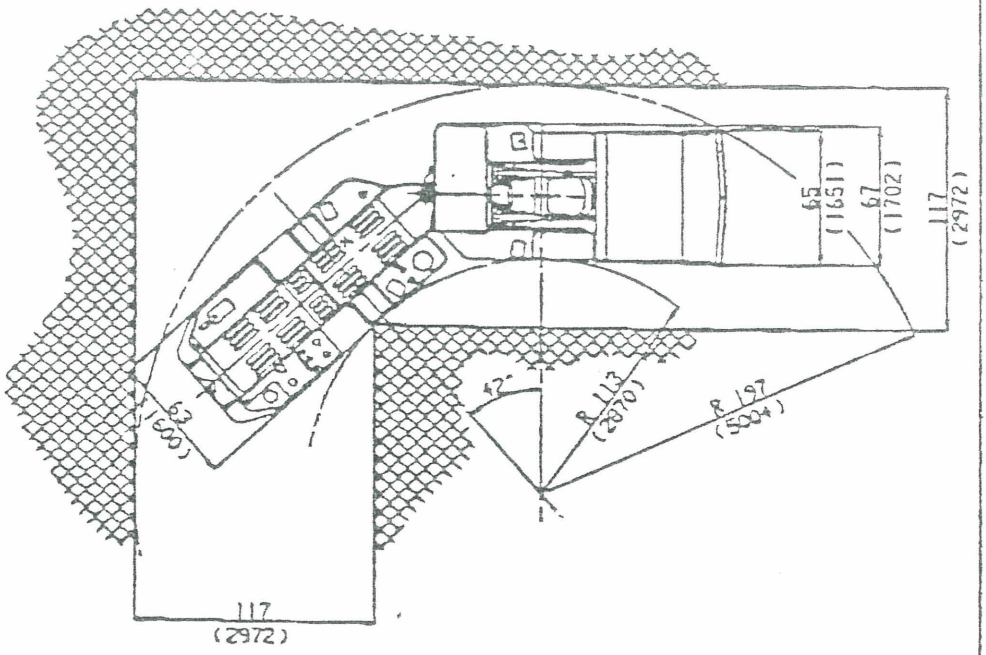
All joints have high strength pins with steel inserts and hardened steel bushings. Manual lubrication from two central grease manifolds is standard.

OTHER OPTIONAL EQUIPMENT

SAE J1040 ROPS, FOPS canopy certified for underground mining, fire suppression, ejector buckets, exhaust, air intake and radio remote control.

MAIN DIMENSIONS
(Dimensions in Brackets are Millimeters)





TECHNICAL SPECIFICATION

MAIN DIMENSIONS

Total length	289 in (7,341 mm)
Total width	67 in (1,702 mm)
Height without canopy	66 in (1,676 mm)
Height with canopy	88 in (2,235 mm)

WEIGHTS

Operating weight		28,000 lbs (12,727 kg)
Total loaded weight		38,000 lbs (17,273 kg)
Axle weights		
Without load	front axle	11,800 lbs (5,364 kg)
	rear axle	16,200 lbs (7,364 kg)
With load	front axle	26,000 lbs (11,818 kg)
	rear axle	12,000 lbs (5,455 kg)

CAPACITIES

Tramming capacity		10,000 lbs (4,540 kg)
Breakout force:	lift	12,600 lbs (5,727 kg)
	tilt	15,400 lbs (6,992 kg)
Tipping load		35,000 lbs (15,890 kg)
Bucket (SAE rating)		3.0 yd^3 (2.3 m^3)

BUCKET MOTION TIMES

Raising time	5.0 seconds
Lowering time	3.5 seconds
Dumping time	5.0 seconds

DRIVING SPEEDS FORWARD AND REVERSE (LOADED)

1st gear	2.8 mph (4.5 kph)
2nd gear	5.6 mph (9.0 kph)
3rd gear	10.6 mph (17.0 kph)

FRAME

Rear and front frame	welded steel box construction
Material	G40.21 - 44w
Center hinge	welded steel box construction with spherical bearings

LIFT ARMS

Solid plate construction

Material	G40.21 - 44w
Weight	1,500 lbs (682 kg)

BUCKET

Material	G40.21 - 44w
Lip	Boron 500 BHN

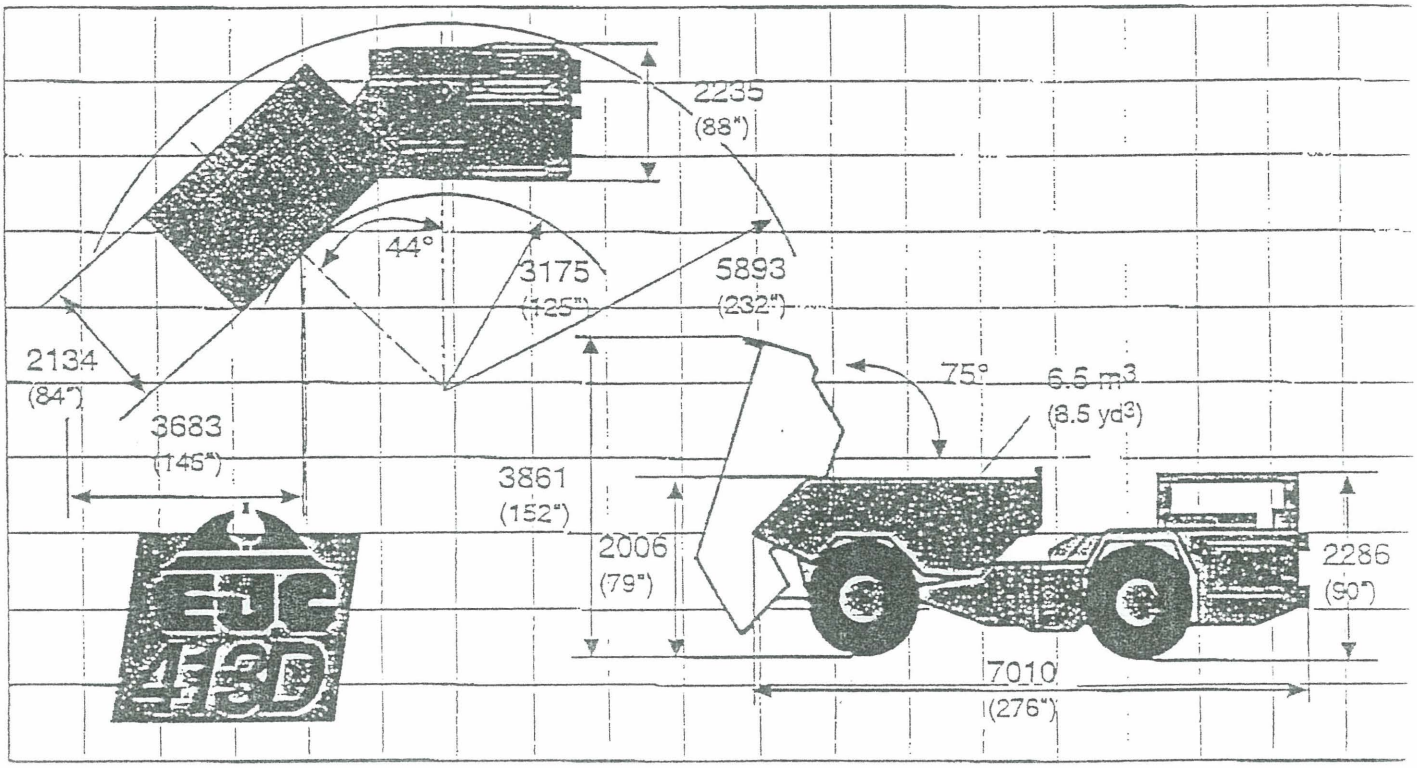
ENGINE

Diesel engine	Deutz F5L-413FRW
Output	116 HP (86.5 kW) @2,300 RPM
Torque	299 ft.lb. (407 Nm) @1,500 RPM
Number of cylinders	5
Displacement	487 in^3 (8.0 litres)
Cooling system	air cooled
Combustion principle	swirl chamber, four stroke
Air filtration	Donaldson dry type
Electric system	24 V
Exhaust gas purification	catalytic purifier

TAMROCK

EJC 100 D

PERFORMANCE CURVES (LOADED)



EJC 413D
TECHNICAL SPECIFICATION

DIMENSIONS

CAPACITY

Payload	11,797 kg (26,000 lb)
Dump box volume	5.4 m³- 7.6 m³ (7.0 yd³ - 10.0 yd³)
Discharge time	14 seconds

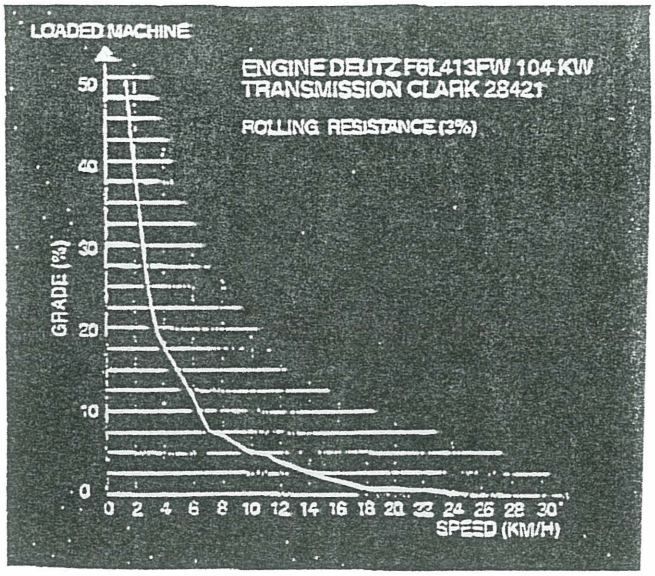
WEIGHTS

Operating weight	14,769 kg (32,550 lb)
Shipping weight	14,537 kg (32,050 lb)

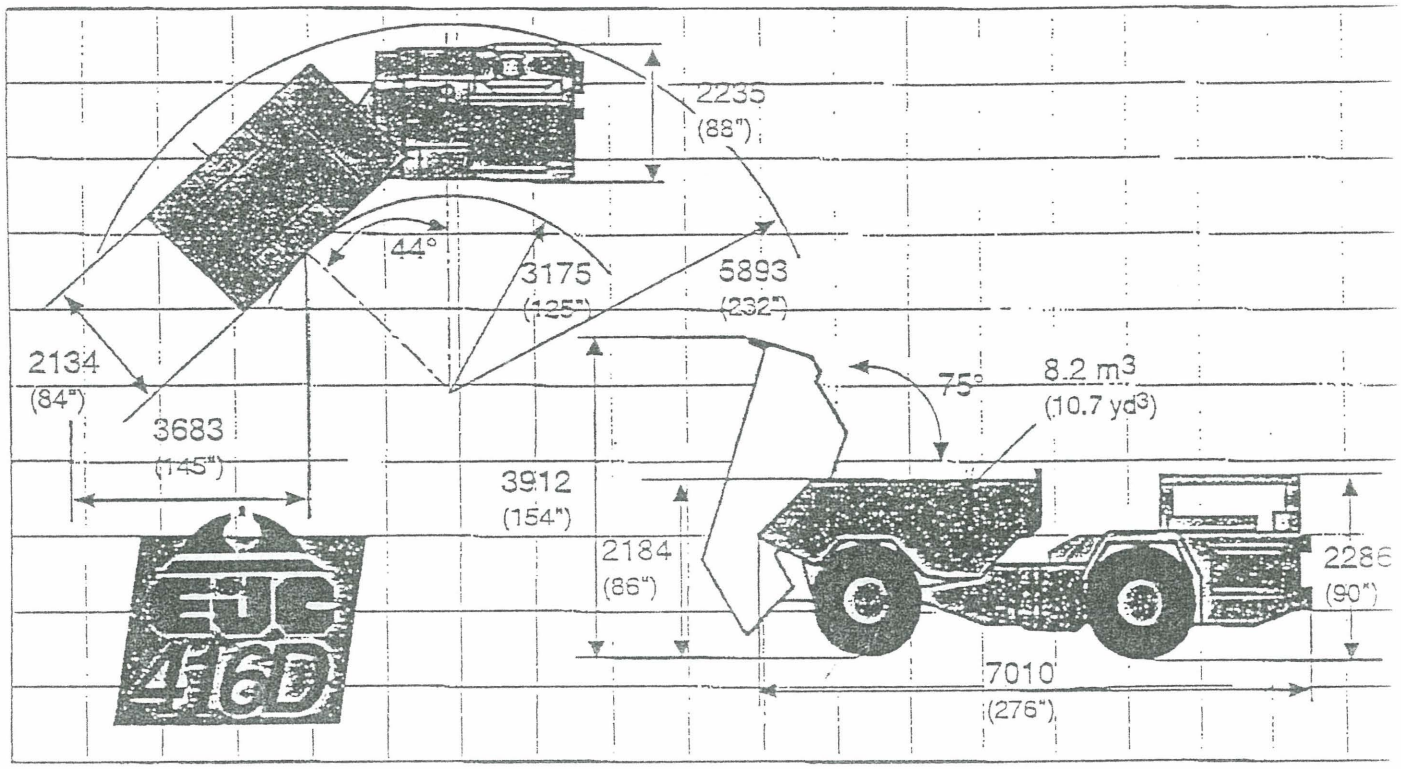
TANK CAPACITY

Fuel	148 l (39 gallons)
Hydraulic	125 l (33 gallons)

GRADEABILITY & SPEED



TAMROCK LOADERS



EJC 416D TECHNICAL SPECIFICATION

DIMENSIONS

CAPACITY

Payload	14,546 kg (32,000 lb)
Dump box volume	6.9 m³- 8.4 m³ (9.0 yd³ - 11.0 yd³)
Discharge time	14 seconds

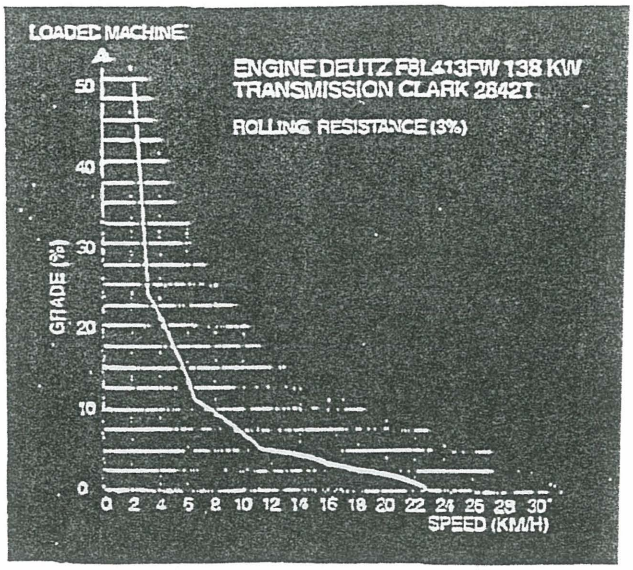
WEIGHTS

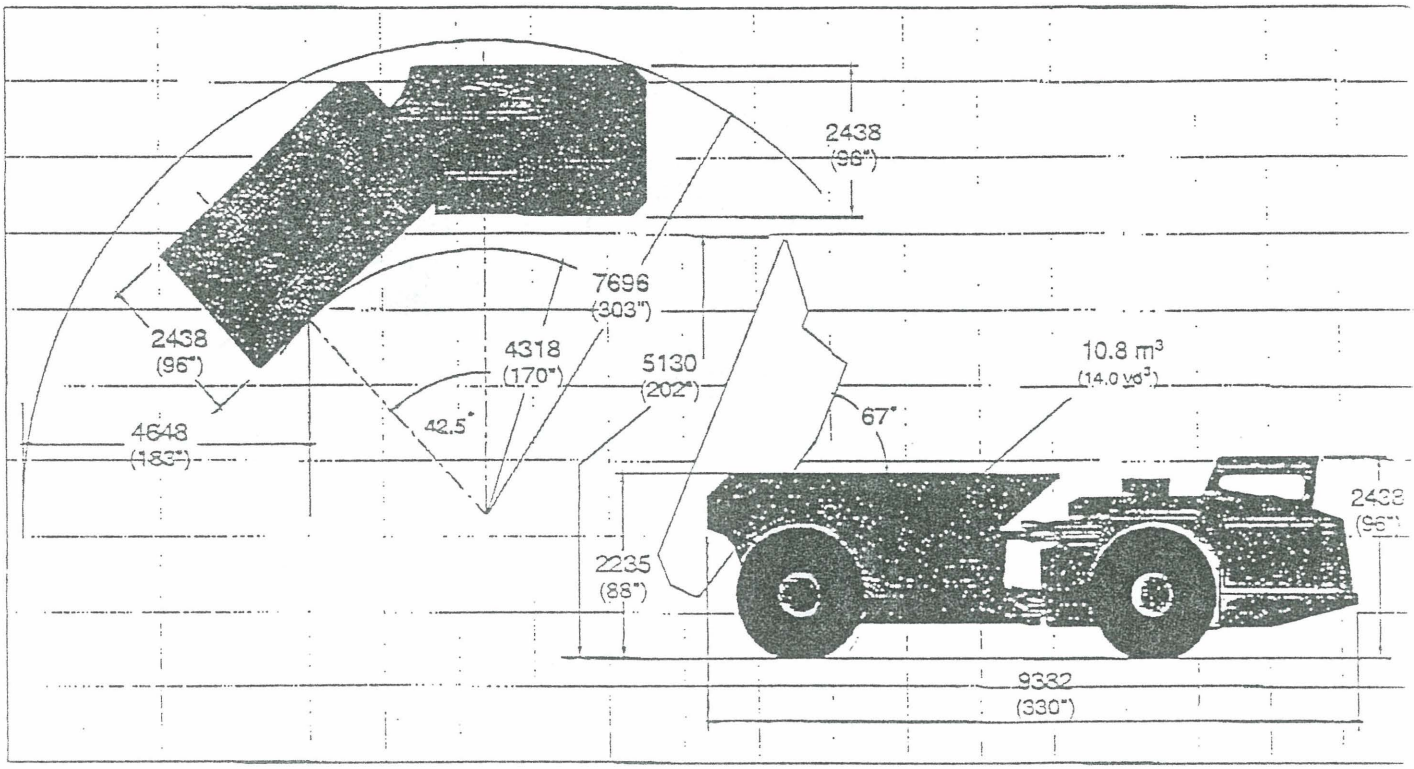
Operating weight	15,027 kg (33,100 lb)
Shipping weight	14,787 kg (32,600 lb)

TANK CAPACITY

Fuel	148 l (39 gallons)
Hydraulic	125 l (33 gallons)

GRADEABILITY & SPEED





EJC 20
TECHNICAL SPECIFICATION

DIMENSIONS

CAPACITY

Payload	20 000 kg (44,000 lbs)
Dump box volume	10.0 m³ - 11.5 m³ (13.0 yd³ - 15.0 yd³)
Discharge time	14 seconds

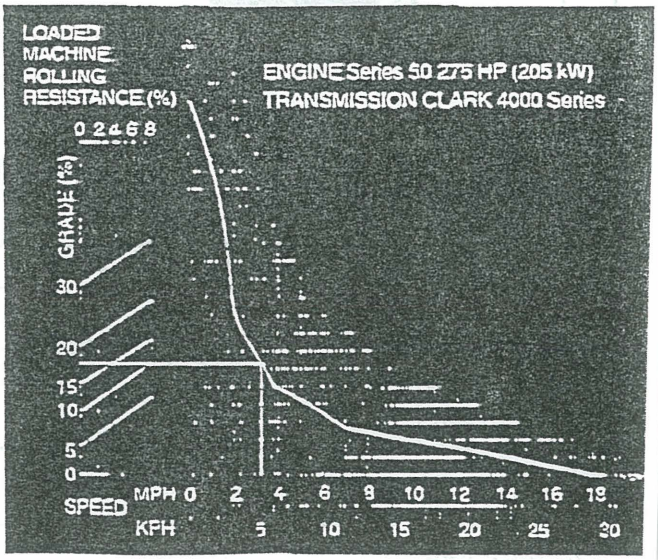
WEIGHTS

Operating weight	19 051 kg (42,000 lbs)
Shipping weight	18 824 kg (41,500 lbs)

TANK CAPACITY

Fuel	310 l (82 gal)
Hydraulic	212 l (56 gal)

GRADEABILITY & SPEED



APPENDIX IV

DEVELOPMENT & OPERATING COST DETAILS

HEUSTIS AND WEBBER ZONES

OPERATING COST ESTIMATES

1.) Dr. Point Mucking and Haulage

-Use an EJC 100 scooptram for mucking drawpoints and an EJC 416 truck for tramming to surface.- For stope mucking use only one mucker-trammer/level. On the Heustis the max. grade is 15%.

Haulage Cycle

	DISTANCE	SPEED	TIME
Level	500'	880'/m	0.57
Ramp	1050'	440'/m	2.40
Level	600'	880'/m	0.68
Surface	400'	880'/m	0.45
Position & Load	-	-	4.00

12.2 m Say 15 m

Trips/ Sh. = 6hrs. x 50m/hr. x 1/15m/trip = 20
Tonnes/Sh.= 20 x 13 = 260

COSTS

	COST/SH.	COST/T
1.) Labour $18.5 + 50% x 1.3 x 8	$ 288.60	$ 1.11
2.)Oper. Cost-Truck $48/hr. x 7.5 hr/sh.	360.00	1.39
3.)Oper. Cost-Scoop $35/hr. x 6 hr/sh.	210.00	0.808
4.)Misc. 10%	88.86	0.340
TOTAL	$ 947.46	$ 3.65

Use $3.65/T
W.O. Labour use $2.54

ENGINE

Make & Model	Deutz F3L-912W
Horsepower Rating	40 at 2300 rpm
Maximum Torque	.96 ft-lb at 1700 rpm
Bore & Stroke	3.94 in x 4.72 in, 100 mm x 120mm
Number of Cylinders	3
Displacement	173 cu in, 2826 cc
Cooling	Air
Electrical System	12V
Exhaust	Catalytic Type
Intake	Dry Type Cleaner
MSHA Ventilation	4500 cfm

TRANSMISSION

Mechanical	4 speed fwd, 1 speed rev.
Model	Warner Gear T19A

AXLES

Front/Rear

Type	Hamworthy 1200 Series
Ratio	14.5:1

BRAKES

Service	Totally enclosed liquid-cooled disc brake
Parking	Spring Applied/Hydraulic Released

WHEELS & TIRES

Tires	7.50 x 15

SEATING

Front	1
Rear (standard) Capacity	8

STEERING

Closed center hydraulic orbitrol type, duel articulated

Turning Angle	40°

ARTICULATION SWIVEL HINGE

Degree of Oscillation	15° Each Way Whole Trailer

SUSPENSION

Front	Leaf Spring
Rear	Leaf Spring

TANK CAPACITIES FOR PRIMEOVER

Fuel	7 1/2 gal, 28 ltr
Hydraulic	7 1/2 gal, 28 ltr

CAPACITY & WEIGHT

Payload	3,000 lbs
Loaded Weight	8,000 lbs

POWER

Engine	Deutz F3L-912W
Rating	MSHA at 23000 rpm - 40 hp

DRIVE TRAIN

FACTORS FOR GRADEABILITY

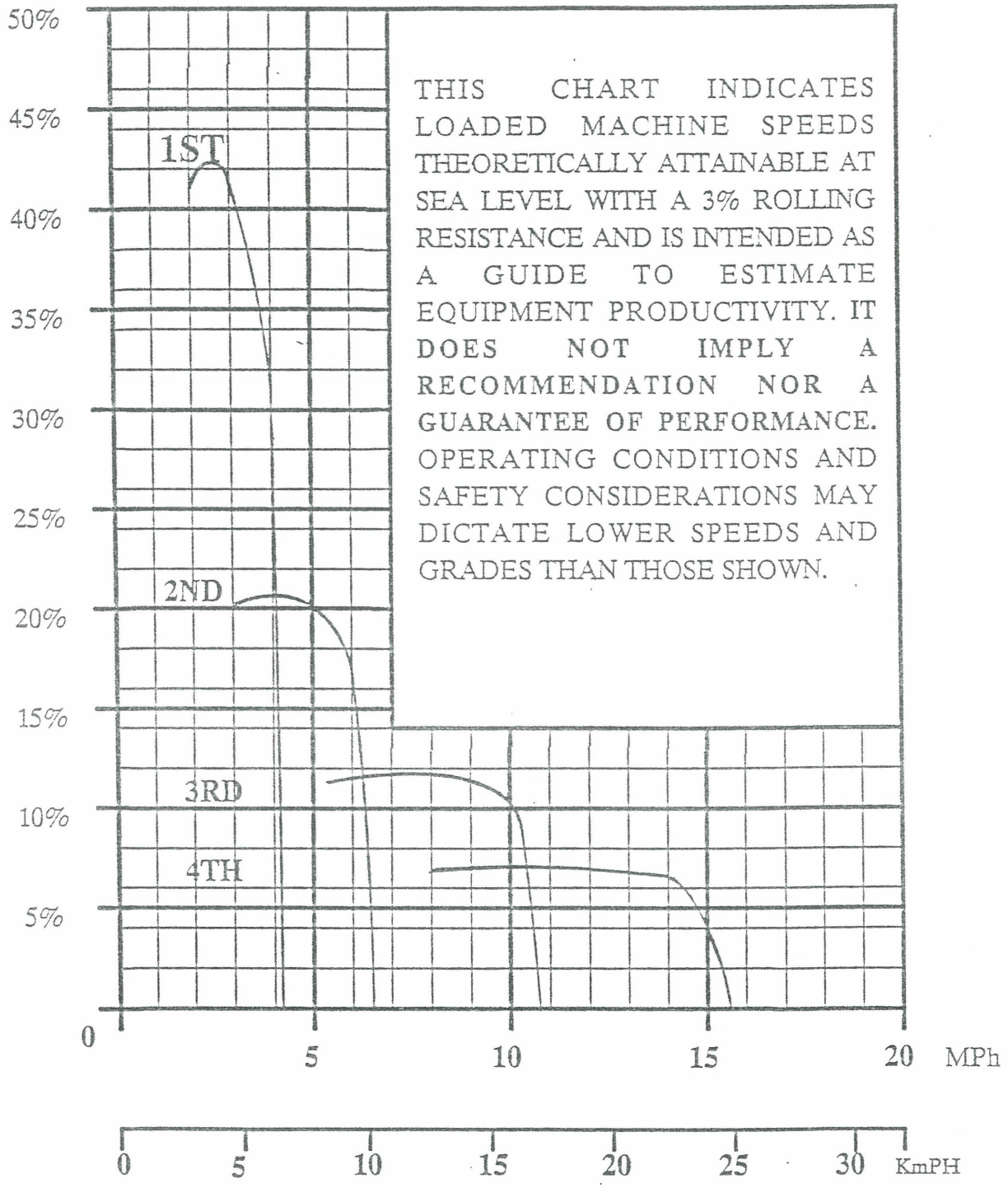
Overall Mechanical Efficiency	80%
Torque Converter	N/A
Transmission	Warner Gear T19A
Ratios	4.02:1, 2.41:1, 1.41:1, 1.00:1
Drive Axles	1200 Series
Ratio	14.50:1
Tire Radius, Loaded (7.50 x 15)	15.1

OPTIONAL EQUIPMENT

Tires	8.25 x 15
Canopy	Rear Unit
Canopy	Operator
Fire Suppression	
Intake	Oil Bath Air Cleaner

EJC 955 : GRADEABILITY GRAPH
(Deutz Engine)

GRADEABILITY



THIS CHART INDICATES LOADED MACHINE SPEEDS THEORETICALLY ATTAINABLE AT SEA LEVEL WITH A 3% ROLLING RESISTANCE AND IS INTENDED AS A GUIDE TO ESTIMATE EQUIPMENT PRODUCTIVITY. IT DOES NOT IMPLY A RECOMMENDATION NOR A GUARANTEE OF PERFORMANCE. OPERATING CONDITIONS AND SAFETY CONSIDERATIONS MAY DICTATE LOWER SPEEDS AND GRADES THAN THOSE SHOWN.

TAMROCK

TAMROCK CANADA LTD.
9667 45th Avenue
Edmonton, Alberta
Canada T6E 5Z8
Tel.: (403) 437-0424
Fax: (403) 437-1147

TELEFAX

DATE: February 28, 1997

TO: BYG

ATTENTION: Normand Lecuyer

FAX NO.: 403 668-2300

SENDER: Lynn Fester

REFERENCE: Quotation 97-1614

PAGES : 5 (including cover page)

Normand,

Following is our Quotation # 97-1614 as per your discussions with Terry Smith.

If there are any problems with this transmission or if you have any questions, please call.

Regards

Lynn Fester
Team Assistant

TAMROCK

ISO 9002
Liverly, Ontario

QUOTATION No. 97-1614

(GST #R105130512)
Quotation is subject to general conditions of sale contained herein.

February 28, 1997
Mr. Normand Lecuyer
Normand Lecuyer Inc.
819 Boul. des Pins
Val D'or, Que.
J9P 2T7

Bonjour Normand:

Thank you for your call this week. It is my pleaseure to be able to provide this quotation for the supply of two only EJC416 Haulage Trucks and one only EJC100 Loader.

The base units and options are as we discussed, however many other options are available. If you have any additional requirements please contact our office at any time.

Finally, as promised, a copy of this quotation along with the technical specificaitons has been sent to your office via Purolator today.

Trusting that all is in order, thank you once again for the opportunity to put Tamrock *"At Your Service"*.

Regards

Terry Smith
Account Manager
Western Canada

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Tamrock Canada Ltd.
9667 45 Avenue
Edmonton, Alberta
Canada T6E 5Z8

Telephone
(403) 437-0424

Telefax
(403) 437-1147

PROPOSAL

EJC416D

1.0 STANDARD COMPONENTS

Deutz F8L413FW diesel engine, 185 HP (138 kW)
Donaldson dry type air cleaners
ECS catalytic exhaust purifiers with silencers
Clark powershift transmission
Clark torque converter
Clark axles with liquid cooled brakes
14.0 x 24-20 ply E4 tires
10.7 yd^3 (8.2 m^3) box
Mechanical single lever dump control
Mechanical single lever stick steer control
Hydraulic transmission shift controls
Electric gauges
24 volt DC electrical system
Central manual lube
SAE type hose fittings
Three (3) sets of manuals (operator's, parts and service)

UNIT PRICE ..... $ 270,890.00

1.1 OPTIONAL EQUIPMENT

Caterpillar 3304 PCTA, 165 HP (123 kW)	n/c
8.5 yd^3 (6.5 m^3) dump box	n/c
SAE ROPS canopy	5,687.00
Emergency steer	6,587.00
Checkfire fire suppression	15,000.00 estimated
Fire resistant fluids	6,000.00

EJC100D

2.0 STANDARD COMPONENTS

Deutz F6L413FW diesel engine, 116 HP (86.5 kW)
Donaldson cyclopac two-stage dry type air cleaner
ECS catalytic exhaust purifiers with silencers
Clark modulated shift transmission
Clark torque converter
Clark axles with liquid cooled brakes
12.00 x 24-20 ply L5S tires
3.0 yd³ (2.3 m³) bucket with 500 BHN lip
Pilot operated single lever joystick bucket control
Pilot operated stick steer control
Electric transmission controls
Electric gauges
24 volt DC electrical system
Central manual lube
SAE type hose fittings
Three (3) sets of manuals (operator, parts, service)

UNIT PRICE ..... $ 255,706.00

2.1 OPTIONS

Caterpillar 3304 PCT, 116 HP (86.5 kW) ..... n/c
SAE ROPS/FOPS canopy 4,814.00
Fire suppression sys., Ansul 8 nozzle (Checkfire II) 15,000.00
Emergency steer system, accumulator 8,400.00
Fire resistant fluids ..... 5,995.00 estimated

MINIMATIC H205D

4.0 STANDARD COMPONENTS

1 x TC200 Carrier
2 x HL500S Rock drill
2 x TF500 Cylinder rope feed
2 x ZRU700 Boom
2 x THC500 Control panel
2 x HP545, 45 kW Powerpack
2 x OW 30 Oil Cooler
1 x MSE20 Main switch
2 x HM 40 + 2 x HM 75 Hydraulic jack
1 x WP 70 H Water pressure valve
1 x WBP2, 4 kW Water booster pump
1 x AK2 Cable reel
1 x KVL 10-2 Central oiler
1 x CD2000 Double flushing compressor for lubricator
4 x 500 W/110V Working lights
6 x 70 W/24 V Driving lights
1 x Telescopic safety canopy

UNIT PRICE ..... $ 605,632.00

4.1 OPTIONS

ROPS/FOPS canopy ..... $ 11,500.00
Checkfire II fire suppression 6,747.00
Emergency steer 7,000.00
FRF 22,000.00

3.0 TERMS AND CONDITIONS

PRICE:	Price firm for 60 days, price is shown in Canadian dollars.
TAXES:	Extra, if applicable
TERMS:	Net 30 days
DELIVERY TIME:	150-180 days ex factory from receipt of firm order, subject to prior sale
DELIVERY TERMS:	FCA Burlington, Ontario

4.0 TECHNICAL TRAINING AND SPARE PARTS SUPPORT

TRAINING AND STARTUP

Upon delivery, the product company will provide a qualified service representative for one (1) week to train your operators and maintenance personnel in proper use, operation and maintenance of the equipment.

SERVICE MANUALS

The following manuals are included:

3 pcs Spare Parts Manuals
3 pcs Service Manuals
3 pcs Operators' Manuals

SPARE PARTS

For budgetary purposes we recommend 10% of the selling price of each piece of equipment for spare parts pricing.

Prior to delivery of the machine, Tamrock Canada Ltd. will issue a Spare Parts Recommendation based on the application and expected operating conditions of the machine combined with historical data on commonly consumed parts.

Mutual review of the Spare Parts Recommendation will be conducted by the customer and Tamrock to ensure correct stocking levels of parts from machine start-up onwards.

5.0 VALIDITY OF QUOTATION

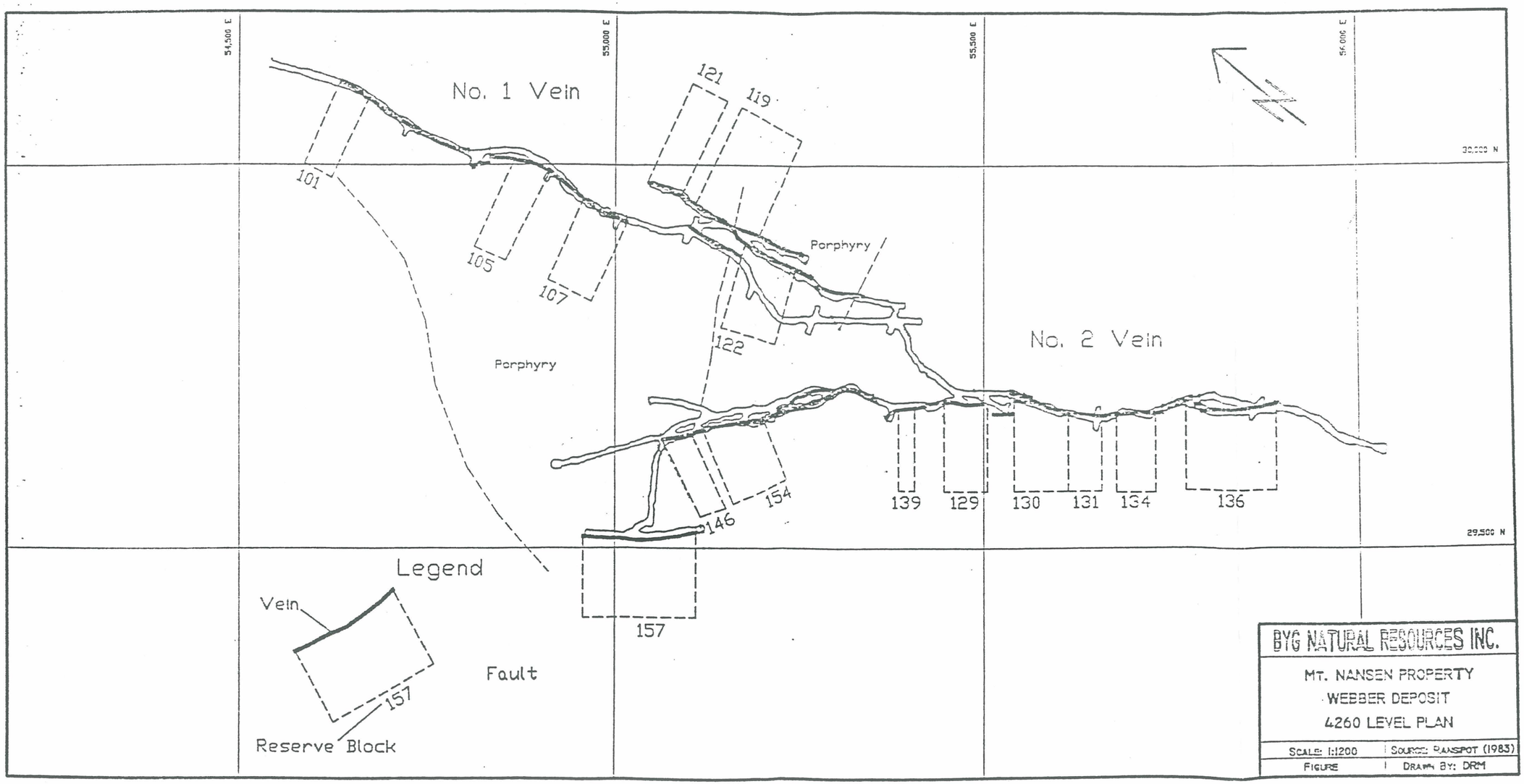
Quotation is valid for 60 days.

6.0 WARRANTY

Please refer to standard warranty on separate paper provided.

APPENDIX VI

PLANS & SECTIONS



BYG NATURAL RESOURCES INC.

MT. NANSEN PROPERTY

WEBBER DEPOSIT

4260 LEVEL PLAN

SCALE: 1:1200	SOURCE: RANSPOT (1983)
FIGURE	DRAWN BY: DRM