WILLIAM M. SHARP, M.A.SC., P.ENG. CONSULTING GEOLOGICAL ENGINEER 3280 CHESTERFIELD AVENUE NORTH VANCOUVER, B.C. V7N 3M9

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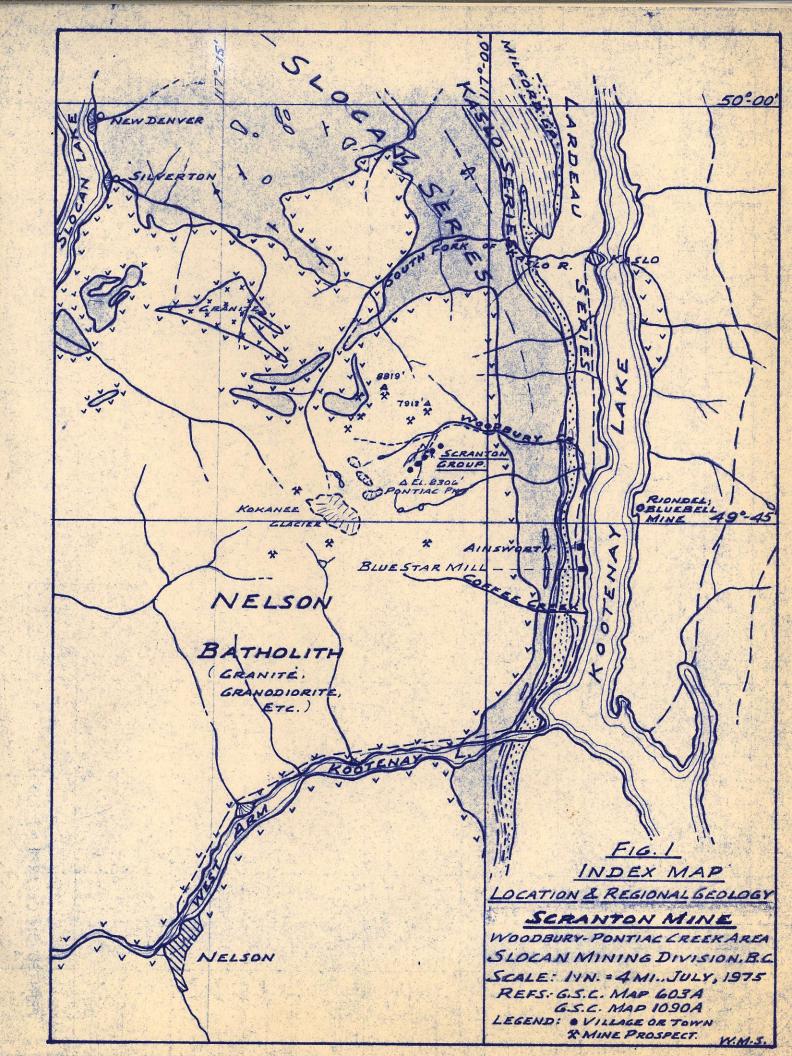
September 2, 1975

President & Directors, Silver Star Mines Ltd. (N.P.L.), c/o Suite 1900-1055 W. Hastings Street, Vancouver, B. C.

> INTERIM REPORT 75-1 CURRENT STATUS & DEVELOPMENT-MINING OPERATIONS SCRANTON PROPERTY OF SILVER STAR MINES LTD. SLOCAN MINING DIVISION, B.C.

PRELIMINARY

This report follows upon the writer's July 26, 1971 Interim Report 71-1 to Silver Star Mines Ltd. Like the previous report, it is based on the file of engineering, geological, and sample/assay data resulting from the writer's consulting association with the property since 1952. However, because of the important changes in metal prices, wages and salaries, and Federal-Provincial government policies that have occurred since 1971, and which have markedly affected exploration and mining economics, the writer has re-interpreted the data to accord with the currently existing operating factors. The current interpretations are, in part, based on observations made, and extra sampling accomplished by the writer in the course of short underground examination made during the third week of July, 1975. At the time of this visit, contract miners were making preparations for mining, development, and delivery to the Ainsworth mill of some 5,000 - 10,000 tons of ore from the 'West Sunset' section of the property. These operations are now in progress.



Drawings supplementing this report are:

Fig. 1 - Index Map, Scranton Mine, scale, 1 in. = 4 mi.

Dwg.

No. 1 - Silver Star - Scranton, Plan & Longitudinal Vertical Projection (West Sunset - S.W. Sunrise Section); scale, 1 in. = 80 ft.

PROPERTY LOCATION, ACCESS & WORKINGS

The Scranton property locates at about seven miles due west of Kootenay Lake and eleven miles southwest of Kaslo, B. C. The mine camp and working adits of the property are adjacent to Pontiac Creek and lie at, and above the 5600 foot elevation. Access to these is by means of 10 miles of good gravel road which departs from the Nelson-Kaslo highway at about 3 and 3½ miles, respectively, north of Ainsworth and the flotationconcentrator.

The various old and new mine workings which relate to the Sunset - S.W. Sunrise section of the Scranton vein are shown on Dwg. No. 1. These expose the local gold-sliver-lead-zinc mineralization over a general vertical range of 1,150 feet. However, the present mineralogical evidence suggests that oregrade mineralization may be expected to persist to depths well below the elevation of the lowest workings within this interval.

CLAIMS

To the extent of the writer's information, it appears that there have been no important changes in the claim group over the past five years. Hence, the S.W. - N.E. linear group of 8 contiguous claims essentially consists of the 'Granite' -L.6278, 'Sunrise' - L5991, 'Grandview' - L.6279, 'Scranton' -L.7452, 'Pontiac' - L.2265, and 'Tecumsie' - L.2261 Crown - granted claims and the 'Charlie' (Rec. No. 17638) and 'Bob' (Rec. No. 17637) * located claims. Also, the writer has been verbally advised that all claims comprising the 'Scranton' group are in good standing.

MINING & MILLING FACILITIES

The system of access/development crosscuts, drifts, and raises which open the 'West Sunset' and, to a lesser extent, other ore zones comprise the most valuable item of current mine plant. Other items include a mine camp providing adequate accomodation for a small crew, and shops, mine-service buildings, and power and mining equipment which, pending repairs, will be quite adequate for the currently-envisaged mining-development program.

Useable mechanical equipment includes one 500, one 600, and one 210 c.f.m. compressors; air receivers; one 25 kW and one 4 kW diesel-electric units; two steel sharpeners; four stopers and four jack-leg rock drills; two Eimco 12B mucking machines; two small battery locis (trammers) and battery chargers; seven side-dump and two end-dump ore cars; two or three timber (flat) cars; one underground (small) diamond drill; a variety of small tools; one 1¼ c.y. front-end loader; one light pick-up and one 4 x 4 six passenger truck. Also on hand is a fair supply of mine timber, 20-1b. rail, 2" and 4" pipe, miscellaneous machine and equipment parts, and track switches and frogs.

As regards milling plant, Silver Star Mines Ltd. has a long-term lease on the now operating 150-170 t.p.d. flotationconcentrator near Ainsworth.

GENERAL HISTORY & PRODUCTION RECORD

The first ore discoveries made within the area now covered by the present Scranton claim group were made about

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1892. These apparently located within the vein interval containing the old Grandview mine workings. Between 1898-1906 ore was discovered within the area of the Upper Pontiac workings and, possibly during this same period, in the area of the old Sunrise and Granite Workings. Several small shipments of sorted ore resulted from the above-noted discoveries.

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Between 1929-39 the claims were purchased and consolidated by Scranton Mines Ltd., and during the following 10 years this group commenced surface and underground exploration. Following this, during 1948-53, Scranton Consolidated Mines Ltd. developed and mined the near-surface parts of the Lower Pontiac and Sunset orebodies, and trucked the ore to local mills, where it was treated on a custom basis. During this period the writer surveyed and mapped most of the accessible showings, and personally sampled or check-sampled the main underground and surface veinexposures.

Exploration and development of the West Sunset veininterval was started by Silver Star Mines Ltd. in 1967 with drifting and raising on the 5,900 level and, subsequently, similar operations on the 5,700 level --- all of which, with a minor amount of stoping, continued until July 31, 1970 --- when financing problems necessitated a shut-down.

Exploration and development of the West Sunset (originally termed '6040') vein interval was started in 1967 with drifting on the 5,900 level and, with lengthy interruptions, continued until July 31, 1970, when inadequate financing forced a cessation of drifting and mining on and from both the 5,700 and 5,900 levels.

The following is a summary of the recorded ore production from the area now comprising the Scranton claim group.

Period	Source	Tons	Au.oz/ton	Ag.oz/ton	Pb.%	Zn.%
1892-1906	Grandview & Upper Pontiac	1428	0.2	14.5	5.9	3.1
1949-1952	Lower Pontiac & Sunset	5635	0.22	10.0	11.9	10.6

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During the 1969 - 1970 period 4200 tons of low grade which largely derived from development produced some 218 tons of lead concentrates and 238 tons of zinc concentrates. Part of this derived from stopes started from the 5700 and 5900 levels (A-1 & A-2 ore blocks).

The following is a summary of exploration and development work accomplished within the West Sunset section of the property between 1967 and 1970:

Level	Drifts & X-Cuts	Raises	Percussion-Drill Exploration	Diamond-Drill Exploration
5700	1058 Lin. ft.	337 Lin. ft.	nil	nil
5900	980 Lin. ft.	330 Lin. ft.	292 Lin. ft.	nil.
Totals	2038 Lin. ft.	667 Lin. ft.	292 Lin. ft.	nil

Between the east end of the Sunset workings and the west face of the 5900 level the percentage of the gross strikelength of structure comprising ore-grade material, herein designated as the lateral ore frequency, is scaled at 29.5%. However, the writer prefers to estimate the ore frequency over the whole Sunset-Granite vein-interval as more probably being about 25%.

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GEOLOGY & MINERALIZATION

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General

On its general northeasterly trend, the Scranton vein-lode traverses an easterly rim zone of the regional 'Nelson' granite-granodiorite batholith. This structure, comprising a strong zone of shearing and fracturing, has been quite continuously exposed over a 1½ mile strike-length between the respective ends of the 'Upper Pontiac' and 'Granite' workings. The present geological evidence suggests that potentially ore-bearing extensions of the structure occur to the southwest and northeast.

Along its strike (and dip) the Scranton structure occurs principally as a single mineralized fissure (vein), and locally as a more-or-less mineralized multiple vein zone (lode). Typically, the granitic wall rocks and/or inclusions of wall rock in the vein or lode are highly fractured and moderately to strongly altered - the latter involving additions of silica (quartz veining and silicification), kaolin, sericite, and pyrite and, more rarely, chlorite. Locally, as within the 6040 adit and outer section of the 5900 adit, predominantly pyritic (soft, finegrained gray type) material contains important amounts of gold and silver. This may comprise a second phase of pyrite mineralization, or may only consist of a better mineralized crushed and softened part of pyrite mineralization of one age.

The vein/lode has a general northeasterly trend, with southeasterly dips ranging on the average between $40^{\circ} - 90^{\circ}$. Within the Lower Pontiac section low to flat-rolling dips occur where the vein approaches and traverses a major flat-lying inclusion of altered 'Slocan' sediments. Some 1500 - 2000 tons of high-grade ore were mined from this warped, flatly (15-25°) dipping vein segment.

Galena, sphalerite, and pyrite, with associated sulphosalts, occur with more or less quartz as massive, or banded-tobunchyfillings. Mineable vein intervals normally range between 1 - 5 feet in width. Diamond-drill exploration of the Sunrise

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Basin segment in 1953 indicated local widths in excess of 10 feet where the vein 'split' to form a lode comprising two to three moderately well mineralized strands. Average vein widths in the West Sunset section are in the range of $2\frac{1}{2}$ to 3 feet.

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The accumulated sampling records show gold and silver values in ore respectively ranging from trace to 2.36 oz/ton and trace to 70.8 oz/ton - the significant feature of these being that the gold and silver content is often not proportional to that of lead and zinc in the same sample. Locally, high gold-silver values are found to occur with low to trace leadzinc values; therefore, sampling of all occurrences of lead-zincpyrite, or pyrite alone is mandatory - particularly where the latter occurs as the soft greyish material noted above.

West Sunset-Grandview Interval

This particular lode interval lies within the Grandview and west half of the 'Charlie' claims. Geologically, it is limited by the Sunset and Grandview cross-faults - both N.N.W.-striking, steeply-dipping structures which effect respective major and minor displacements of the vein system.

Between the Grandview and Sunset cross-faults, the gross strike length of the lode segment is about 1500 feet. Its vertical range, between the Sunset workings and Grandview ridge, is close to 1200 feet; the gross dip-extent would be in the order of 1300 feet. To date, this lode segment has been partly explored and developed over a net strike-length of about 900 feet - principally at the 5700' and 5900' horizons of the structure. The 40-foot long '6040' adit lies within the general '5900' lode segment.

To date, drifting on the 5900 level has directly exposed consecutive ore shoots over 70-foot, and 180-foot drift lengths; the gross indicated-length of these is about 260 feet, containing good mineralization over actual widths ranging between about $1 - 3\frac{1}{2}$ ft.

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Drifting on the 5700 level has opened consecutive 45 ft. and 227 ft. lengths of mineralization - these comprising the 250 ft. dip-extensions of the ore zones intersected by the 5900 drift. Within the smaller outer shoot the actual ore widths range between 0.8' and 2.3' - excluding slightly altered mineralized wall rock sections; the inner drift samples on the inner (A-1) ore shoot were computed at 227' x 2.86' @ Au, 0.15 oz/ton; Ag, 5.7 oz/ton; Pb, 6.1%; Zn, 4.4%. The better mineralized vein-intervals on both the 5700 and 5900 levels strike N45^OE and dip at an average 55^O southeast. Drifting on both levels was stopped due to a lack of finances, and not because of any real evidence that mineralization would not continue beyond both faces.

The vein within the old Grandview east drift (el. 6623') consists of 3-foot wide zone of crushed granite-sparsely veined by quartz, and containing minor pyrite; the writer does not have any records of possible sampling in this working but in view of its ridge-top location, this is not thought be a critical omission.

Granite-Sunrise Interval

This vein-lode section is about 1600 feet long, and extends from the crest of Grandview ridge (loc. cross-fault) to the most southwesterly Sunrise trench.

The lode maintains a fairly consistent southwesterly strike through the old westerly Grandview workings, Sunrise Basin, and through the outer half of the S.W. Sunrise adit; within the inner half of this adit the vein bends to a more southerly strike. Over these same intervals the dip changes from nearly vertical, to steeply northwest, to steeply and moderately southwest.

Probable, and potential ore grade material is indicated and inferred, within three distinct sections, for a total length of approximately 640 feet, or over roughly two-fifths of the delimited length. To date the most firmly indicated section comprises the (indicated) ore shoot opened by the inner half of the S.W. Sunrise drift, and which is noted as coinciding with a local, but typically-favourable southerly lode deflection, or warp. The Sunrise Basin (indicated) ore shoot is less strongly mineralized, but is significantly wider, and different in several respects - mainly, in that the Sunrise drift ore comprises quartz and massive-banded Fe-Pb-Zn sulphides in about equal proportion, whereas, the drill-indicated 'Basin' ore shoot apparently consists of predominant quartz and bleached silicified and sericitzed fractured granite, with a smaller proportion of sulphides disposed as erratic veins and gobs. However, there is a fair possibility that the proportion of sulphides to quartz increases at depth on the latter ore shoot.

From close-spaced channel sampling of the drift mineralization and supplementary surface sampling, the S.W. Sunrise exposure is calculated at:

> 190' x 2.3' @ Au, 0.092 oz/ton; Ag, 3.27 oz/ton; Pb, 9.1%; Zn, 5.1%

The Sunrise Basin 'indicated' ore block is computed from the following (1953) diamond drill hole intersections:

Hole No.	Indicated Width, ft.	Oz/ton Au	Oz/ton Ag	% Pb	% Zn	Notes
3	6.0	0.039	4.9	4.0	1.1	multiple veining
5	10.0	0.035	8.1	5.5	0.9	17 13
6	2.3	0.030	7.0	5.1	0.6	'hanging wall' vein
9	10.5	0.020	7.0	7.0	4.2	multiple veining
* 7	5.0	0.030	6.5	4.5	0.85	one vein
* 11	4.2	0.020	4.2	2.8	3.1	'footwall' vein only
Avg. 180' :	x 170' x 6.76	' @ 0.03	6.9	5.5	1.9	- weighted average

* Holes #7 and #11 are not directly included in the computation, but serve to adjust the average of the 4 contributing holes, and to define the limits of the 'indicated' block.

The above assays <u>may</u>, or <u>may not be representative</u>, in <u>view of the generally low core recoveries made</u>; however, the writer assumes that they have been averaged conservatively, and that the true gold content will be greater, or more in accordance with the generally-indicated range for Scranton ore. Holes #7 and #11, viewed in relation to the 'indicated' zone, allow inferences of vertical and lateral extensions.

A 'geologically-inferred' ore block below the Grandview westerly workings is deduced from fragmentary, but significant intersections made by d.d. holes Nos. 1 and 2, from the reported grade and probable extent of ore originally derived from the westerly part of the old Grandview mine, from the fair possibility of continuity with the 'Basin' ore zone, and from its generallyfavourable geological situation. Hole No. 1, in near surface position, intersected loose rubble containing some thoroughly oxidized vein material only. Hole No. 2, with a relatively deeper penetration, intersected a 7-foot section of oxidized, pyritized granite, pyrite, and soft, oxidized material containing some fragments of galena. The weighted average of consecutive 5.ft. and 2 ft. 'core samples' d.d.h. No. 2 amounted to Au, 0.18 oz/ton, and Aq, 4.0 oz/ton.

ORE RESERVE ESTIMATES

Preliminary Statement

The current ore reserve estimates are based on the same sample/assay data as were used for the writer's July, 1971 estimates. However, because of significant changes since then in respect of metal prices, smelter charges, mining (labour and material) costs, less favourable government tax concessions, and restrictions and charges on profit, the writer has considered it absolutely necessary to recalculate the ore reserves on the basis of the current economic situation.

The definitions of the various catagories of ore reserves are shown on accompanying Dwg. No. 1.

In this report, ore evaluations and estimates of mining costs and profits are based on the 'indicated' ore reserves (table) within the West Sunset mine section only, where ore reserves appear to be sufficient to sustain production at a 100 tons per day rate for at least one year. Detailed economic estimates pertaining to 'inferred' ore reserves within the West Sunset section, and to 'indicated' and 'inferred' reserves within the Grandview - S.W. Sunrise section are justifiably deferred until such time as further exploration and development have provided the requisite data.

The current indicated and Class - A inferred ore reserves within the Sunset - S.W. Sunrise section of the property are shown by the following table:

SCRANTON MINE

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TABI	E: CURRENT	ORE RESERVES, SUN	SET -S.W. SUN	RISE SECTIO	N
	TOTAL	S - INDICATED & C	LASS-A INFERR	ED	
'Indicated	Ore				
Block	(1) Tons	(2) Oz/ton Au.	(3) Oz/ton Ag.	(4) Pb.%	(5) Zn.%
A-1	11,700	0.20	6.7	7.7	7.4
A-2	2,975	0.22	5.8	6.9	7.0
A-3	3,000	0.125	6.1	6.2	5.1
B-1	2,240	0.3	4.5	4.5	4.5
B-2	1,050	0.3	4.5	4.5	4.5
Q	1,520	0.122	3.2	2.6	2.9
E	3,770	0.16	8.0	6.4	4.8
С	16,000	0.03	6.9	5.5	1.9
D	12,700	0.074	2.6	7.3	4.1
<u></u>	54,955		·		
Totals -		0.12 oz/ton Au.	5.6 oz/ton Ag.	6.4% Pb	4.4% Zn
Sub-Total	- West Suns	et Section : (Blo	cks A-l - E.	inclusive)	
In Place	26,255 T	@ 0.196 oz/ton Au	; 6.2 oz/ton Ag.	6.5% Pb	6.1% Zn
Broken	1,500 T	@ Same Grade			
Sub-Total	*27,755 Т	@ 0.196 oz/ton Au	; 6.2 oz/ton Ag.	6.5% Pb	6.1% Zn.
<u>Class-A In</u>	ferred Ore				
I	2,760	0.22	5.8	6.9	7.0
J	2,640	0.3	4.5	4.5	4.5
L	2,460	0.125	6.1	6.2	5.1
F	16,000	0.03	6.9	5.5	1.9
	23,860				
Totals -	23,860 T	0.091 oz/ton Au	. 6.4 oz/ton Ag.	5.6% Pb	3.1% Zn
Sub-Total	- West Suns	et Section: (Bloc	ks I.J.L.)		
	* 7,860 T	@ 0.217 oz/ton Au	; 5.45 oz/to Ag.	on 5.9% Pb	5.6% Zn
Total Indi	cated + Cla	ss-A Inferred Ore		Section:	
•		0.201 oz/ton Au			6.0% Zn

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PRODUCTION ECONOMICS

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Basis: 27,775 tons of West Sunset 'Indicated' ore of weightedaverage grade equal to:

Au, 0.196 oz/ton; Ag, 6.2 oz/ton; Pb, 6.5%; Zn,6.1% & Cd.

On the basis of the anticipated mill recoveries, based on the 1969-70 metallurgical experience, it is expected that 100 tons of the above grade of ore will produce the following results:

100 Tons of Ore Contain	Mill Recovery	Total Metal Recovered in Concentrates	Metal Recovered in Pb Concentrates	Metal Recovered in Zn Concentrates
Au, 19.6 oz.	888	17.25 oz.	14.3 oz.	2.9 oz.
Ag, 620 oz.	92 %	570 oz.	460 oz.	110 oz.
Pb, 6.5 tons	95%	6.2 tons	6.0 tons	0.2 tons
Zn, 6.1 tons	90%	5.5 tons	0.29 tons	5.21 tons
Cd, 0.12 tons	90%	0.11 tons	0.004 tons	0.106 tons

After metallurgical-balancing, the writer estimates the following concentrate grades: Pb Concentrate - Au, 1.50 oz/ton; Ag, 48.1 oz/ton; Pb, 64%, Zn, 3.0% Zn Concentrate - Au, 0.31 oz/ton; Ag, 11.5 oz/ton; Pb, 2%; Zn, 5.4%; Cd, 1.1% Further, by the ratio $\frac{6.0}{0.64}$, 100 tons of ore yield 9.37 tons of Pb concentrate, and by the ratio $\frac{5.21}{0.24}$, 100 tons of ore yield 9.65 tons of Zn concentrate. The above gives a ratio of concentration $=\frac{100}{19.02} = 5.26$

Estimate - Net Mine or Millhead Value per Ton of Ore

Based on metal prices and the Cominco Open Schedule for lead & zinc concentrates - 3rd week of July, 1975, and allowing for mill losses:

Net Smelter Valu	e	Mill <u>Recovery</u>		Net Mine or Millhead Value
Au, 26.24/ton	x	888	-	\$ 23.09/ton
Ag, 26.16/ton	x	92%	-	24.07/ton
Pb, 11.10/ton	x	95%		10.55/ton
Zn, 15.85/ton	x	90%		14.26/ton
Cd, 3.05/ton	x	90%	-	2.75/ton
		Total	-	\$ 74.72/ton

Estimated Operating Costs - Mine & Mill

Based on 2500 tons of ore mined & milled per month or, at an average 21 mine-days per month, approximately 120 tons per mine-day of 2 shifts.

Mine Wages,	Salari	es, Suppli	es & Service	es \$	24.18/ton
Travel Allo	wance o	r Mine Cam	ą	1.50/"	
Buildings &	Road M	laint. & Cl	earing	0.50/"	
Mine/Mill o &Supplies		Engineeri	ng Sals.	1.00/"	
Oreloading	& Hauli	ng (good r	oad)	4.00/"	7.00/ton
Milling, To	ll Char	ge for 100	t.p.d.		8.00/ton
Miscellaneo	us & Ge	neral Over	head	<u></u>	0.54/ton
	Tota	l Mine & M	i11	\$	39.72/ton
Indicated G	ross Op	erating Pr	ofit		35.00/ton
11 s	и	11	" , 5,000 t	ons = \$1	75,000
"	0	**	" ,10,000 t	ons = \$3	50,000

Conclusions

It is apparent that an operation of 2500 tons per month could generate substantial gross operating profits. A reduction from the above operating rate would undoubtedly result in an

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inversely-proportionate increase in unit operating costs, but the contemplated interim mining rate should be such that the gross operating profit of \$35 per ton is not likely to be completely eroded.

If mining operations at the proposed interim rate are reasonably efficient, the contemplated processing of 5,000 to 10,000 tons of ore should be adequate for the liquidation of debt obligations of some \$100,000 - \$200,000, after provision for Federal taxes and Provincial taxes plus royalties. It may also provide for the recommended follow-up exploration and development.

CURRENT RECOMMENDATIONS

Stage II - continued (as of July 26, 1971 report)

- 1. Complete mine plant repairs & rehabilitation.
- Carry out exploratory diamond-drilling of indicate ore extensions within the West Sunset section of the mine, including preparatory work.
- 3. Provide for additional interim stope development.

ESTIMATED COSTS

Stage II - continued

1.	Estimate, to remaining items	\$	10,000
2.	(a) Diamond drill crosscuts & stations,		
	100' @ \$75/ft.		7,500
	(b) Diamond-drilling, 1000' @ \$7.50/ft. gross		7,500
3.	Estimate 200' @ \$50/ft		10,000
4.	Allowance for contingencies @ 15%, approx.		5,000
	TOTAL	\$	40,000
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Respectfully submitted,

W. M. Sharp, P. Eng.

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CERTIFICATE

I, WILLIAM M. SHARP, with business and residential addresses in North Vancouver, British Columbia, DO HEREBY CERTIFY THAT:

- 1. I am a graduate of the University of British Columbia with a M.A.Sc (1950) degree in Geological Engineering.
- 2. I am a registered Professional Engineer in the Province of British Columbia -- Reg. No. 2164.
- 3. I have practised my profession for twenty-five years, which includes eleven years as a geological consultant.
- I have personally examined, mapped, and sampled the principal surface and underground vein exposures on the Scranton Au-Ag-Pb-Zn property during several visits to the property including the most recent, which was made during the period June 19 -25, 1975.
- 5. My formal report on the Scranton Au-Ag-Pb-Zn property is based on my field examination data, supplemented by general background information contained in various Provincial and Federal government reports.
- 6. I have no direct or indirect interest in properties which are held, or may be held by Silver Star Mines Ltd. (N.P.L.) nor do I own or intend to acquire any equity or securities in this connection.

M. Sharp, P. Eng.

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North Vancouver, British Columbia, September 2, 1975.

