WILLIAM M. SHARP, P. ENG.
CONSULTING GEOLOGICAL ENGINEER

TEL: BUS. 682-4144
RES.: 987-9520

STE. 808, 900 WEST HASTINGS ST.
VANCOUVER 1, B. C.

August 28th, 1967

801459

President and Directors,
Silmonac Mines Limited (N.P.L.),
Suite 808 - 602 West Hastings Street,
Vancouver 2, B.C.

Attention: Messrs. A.C. Ritchie, P.Eng.
J.C. Black

Dear Sirs:

**INTERIM REPORT, SILMONAC EXPLORATION PROJECT
NEW DENVER, B.C.**

PRELIMINARY

The following derives from the writer's August 16-18, 1967 inspection of current exploration at this project, and from concurrent discussions with Messrs. J.C. Black and W. Laszczyszyn.

The writer's examination consisted of inspections of the current surface drilling project, a reconnaissance of the Evening-Jennie Ridge exposures and recent trenching, inspection of the Dorothy and Minnie Ha Ha trenching, and of current and possible fill-in drill stations on the 3996 level, west of the North cross-cut.

The accompanying 100-scale COMPOSITE PLAN, SURFACE-UNDERGROUND EXPLORATION, dated August 28, 1967 supplements the following text.

5363.4
600
4703.4

GENERAL FEATURES OF LODE

(a) Jennie Ridge: The lode, from observations made west of the ridge crest, generally dips much more flatly than was originally inferred from the Kelowna Exploration mapping; this substantiates the more southerly-arcing trace shown on the current map. Also, the currently-inferred trace intersects the long east-slope trench within a thick fan of talus, which is probably too deep and loose to justify further attempts to expose bedrock at this elevation.

(b) Mascot-Tributary Creek: The considerable amount of trenching and stripping accomplished has exposed a wide, stranded, lode structure. Within this there is a pronounced tendency for steeper footwall strands to diverge, on a more westerly course, from the flat hanging-wall strand. The significance of this lies in the fact that a steeper footwall strand may be present to short-circuit the Mascot-Jennie Ridge gap. It is also quite possible, as based on current cross-sectional data, that this structure, or structures, have escaped detection by all drilling to date; hence additional exploration, carried further into the footwall region of the lode, is necessary.

SURFACE DIAMOND DRILLING

The first two holes had been completed from No. 1 set-up. The third hole, if drilling on schedule, will also have been completed.

The bedding panel drilled appears to consist of a generally firm assemblage of limey, to quartzitic, to cherty argillites, with minor sections of intrusive porphyry. A development of cherty-silicates ("skarn") within beds closely adjacent to the lode is apparent. Bedding and lode attitudes noted in D.D.H. SS-1, excluding local discordancies, indicate that these are closely conformable. The lode section penetrated appears relatively "tight", or to have developed under a generally compressive environment; there is little evidence of brecciation and open-space filling by ore or gangue minerals. Quartz and/or siderite impregnate, rather than fill the structure, and the fine-grained sulphide aggregates appear to have developed under conditions of compression and shearing. In order that a significant fraction of the Mascot-Dorothy lode interval will be adequately tested and defined, additional drilling from other set-ups - within the existing limitations of topography and drilling range - should be anticipated. Also, this should be supplemented by trenching and geochemical investigations, where these are applicable and/or feasible. Lode intersections are summarized:

D.D.H. SS-1:

500.5' - 501.0' @ 7.8 oz/ton Ag; 1.2% Pb; 2.2% Zn.

note: $\frac{\text{Ag, oz.}}{\text{Pb, \%}}$ ratio of 6.5: 1.

D.D.H. SS 2:

539.5 - 540.0, dense, fine-grained galena and sphalerite.
540.0 - 541.0, very tight slips in broken, silic. argillite; minor galena and sphalerite in quartz-siderite veinlets.
541.0 - 541.7, slightly fractured cherty argillite, with veinlets of pyrrhotite/galena and sphalerite - total 10% sulphides.
541.7 - 542.7, slightly broken argillites with tight "slips" only.

Assays of the above preliminary logs are pending.

UNDERGROUND DRILL EXPLORATION

Five holes have been drilled from the west end of the 3996 level to locate and sample the lode. The first, S-46, drilled NNW, and inclined slightly downward, was drilled to test the first assumption that the lode may have faulted, or swung northerly into the "footwall" of the heading from its last known position over the flat porphyry body. Some 450 feet of hole failed to locate any discernible lode structure. However, section A-A presently indicates that a possible steeper, or "short-circuiting" footwall strand of the Mascot lode could lie considerably beyond the end of the hole - if such strand had actually penetrated to this depth through the flatly-dipping complex of shears and porphyries. Subsequent Tro-Pari determinations revealed a considerable amount of deflection, which, in itself, would have made a further extension of the hole impracticable.

Holes S-47 and S-48 both intersected the lode at some 650 feet in the hanging wall of the drill station. Subsequent Tro-Pari determinations indicated severe deflections on both holes, whereby their respective lode intersections

occurred within about 50 feet of each other. The next hole, S-49, directed to make a more easterly intersection, was abandoned by reason of excessive deflection occurring within the initial part of the hole. The last hole of this series, S-50, also deflected considerably, but intersected the lode at about 400 feet east of the S-48 intersection, and 50 feet higher in elevation.

On the basis of the above intersection data, the writer infers a S 68° W strike and 20° southerly dip at the 4645 (S-47) horizon; this corresponds rather closely in strike with the indicated westerly surface trend of the lode between the Mascot portal and Tributary Creek. However, by reason of the inherent unreliability of the intersection data accruing from the lengthy underground holes, the above inference of the lode trend is very approximate. This should be more closely defineable via the downward-inclined, larger diameter surface holes.

The pronounced clock-wise (plan view) deflection, and steepening of all of the above hanging-wall holes is best explained via the inference of a progressive warping of the bedding section upward through this panel from the 3996 to the lode horizon. Obviously, more definitive results from further underground drill-exploration of the current, and westerly extensions of the hangingwall lode structure at this general horizon will be best obtained via more, and shorter holes from less distant drill stations. These can be achieved only by advancing the heading sufficiently to significantly reduce the present tunnel-lode separation.

Lode intersections obtained by the above series of holes are summarized:

Hole No.	Core Interval	Core Length, ft.	Silver oz/t.	Lead %	Zinc %
S-47	657.3-658.7	1.4	4.4	2.4	8.5
	658.7-662.0	3.3	0.4	0.6	0.4
	674.2-675.1	0.9	0.7	0.5	3.0
	675.1-675.8	0.7	30.7	13.7	14.4
(avg.	674.2-675.8	1.6	13.55	6.3	8.0)
S-48	420.6-421.2	0.6	0.4	-	0.75
	662.8-665.3	2.5	3.7	0.67	3.92
S-50	700.0-700.8	0.8	6.6	1.8	1.2

The principal intersections above show an average Silver, oz. / Lead, % ratio of about 4 to 1.

Evidently the local mineralization, as tested by both surface and underground drill-hole and tunnel exploration, would constitute an exceptionally high-silver ore over mineable widths and grades.

OTHER EXPLORATION

(A) Margaret Lode:

This structure is not shown on the Kelowna maps; however, the field geologist proposes to locate it - by surveying - for the current geological compilation. In view of the attractive remnants of sorted ore at the portal site, it was agreed that a future attempt should be made to open the adit (or cross-trench the lode) for inspection and sampling of the structure. Also, in view of its general proximity to the main target, it could constitute a worthwhile secondary exploration target. In this connection Walter L. advises that the projected dip of the easterly-extended structure lies only some 500-600 feet in the hanging wall of the 3996 west heading.

(B) Minnie Ha Ha Lode:

The 1966 bulldozer cuts adjacent to East Fork Tributary Creek were inspected; these, and the related geological detail are shown on the current 100-scale sheets. In view of the apparent strength of the exposed lode, and the high-grade galena mineralization exposed by the most southerly "on-structure" cut, the writer concurs that further exploration is warranted.

The writer's preliminary interpretation of the structure is that it comprises a through-going S.W. or S.S.W.-trending lode shear with subordinate N. and N.W.-trending tension-breaks - locally containing the characteristically short former ore shoots.

The inferred southerly, to southwesterly trend of the lode is through a favourable, notably wide westerly-dipping panel of mixed argillites and quartzites. This inferred extension of the lode may be initially tested by cross-sectional surface drilling from the inner part of the designated 1966 cross-trench.

(C) Dorothy Lode Exploration:

A brief inspection of the 1966 trench exposures showed two rather weak, intermittently mineralized lode strands within the local, highly contorted soft, plastic argillite section. The field geologists mapping of the accessible tunnel exposures reveals an essentially similar complex lode structure with minor, erratic mineralization. Hence, the writer does not personally believe that further exploration is warranted at this stage of the general program.

SUMMARY — out of date

The results thus far accruing from the current program of surface and underground drilling and surface trenching are both encouraging and discouraging. On the positive side, there is the evident persistence of at least minor widths of good Ag-Pb mineralization over a considerable dip-length of the lode. The discouraging aspects of the results to date are primarily the non-correspondence of wide, well-developed lode structures with significant occurrences of ore minerals. However, the writer believes that mineable widths of ore should occur within the Mascot-Jennie lode interval where favourable combinations of lode and bedding structures occur. He also feels that the results to date justify an energetic extension of both the surface and underground parts of the combined program. In this regard, the writer considers that exploration of this extended target area is only at a preliminary stage of progress.

where lode traverses evident F.W. bedding-warps

RECOMMENDATIONS

1. Surface Exploration:

1. (a) Explore lode on Jennie ridge via a new trench above the existing long trench; carry this as far to north (map) as feasible to check on the possible occurrence of a steeper footwall branch, or branches. On completion of trenching excavate drill set-up No. 3 per requirements noted in item (2).

(b) Conduct soil-sampling at indicated 50 and 100-foot intervals in conjunction with 1 (a); the writer suggests both upper C-zone sampling for Hg determination and near-bedrock sampling for Zn, and possibly Ag - detection by field "H.M." and laboratory procedures.

aug 30 ph/J.C.B. By phone 5.5-3 - got 9" (6th time) heavy sulfides-again under dyke - so concur w. J.C.B. suggn to drill one addtl hole S.E. from No. 1 S.U. - This will also test up-dip of -7- 547-548 intercepts.

2. (a) Drill two, or more, holes to the lode from a new (No. 2) set-up (map) southwest of the No. 1 set-up and road, as proposed during the recent visit. The writer suggests that these be directed to test the lode down-dip of, and to the west of No. 2 set-up.

(b) Pending results obtained from the new higher-level trench (item 1a), establish No. 3 set-up (map) to test the lode downdip, and to the west, respectively, of the ridge outcrops. These holes are tentatively planned: A, N.N.W., -60°, 300' - 400'; and B, W.S.W., -45°, 500' - 600'. S80°W.

see plan re inferred lode warp

(c) If feasible, prepare No. 4 set-up (map) to the N.E. of No. 1 set-up. From this, drill at least one hole at -45° to test the lode significantly down-dip, and to the west of the Mascot tunnels.

(d) To test the flat lode at relatively shallow depth and, at the same time explore for a possible steeper footwall split, drill one -60° hole to an approximate 400-foot depth from the proposed No. 5 set-up (map), or nearest practicable site. Note that holes S-46 and SS-1 could be extended to search for a possible steep footwall split, or splits, but the writer believes an initial test from No. 5 set-up would be more systematic and economical.

(e) Investigate a possible southerly, to south-westerly extension of the Minnie Ha Ha lode by two short drill holes, as noted previously in this report.

II. Underground Exploration:

1. Continue the 3996 advance (plan) a minimum of 500 feet, to complete the total advance recommended in the writer's April, 1966 report. The writer suggests that the selection of the final advance bearing be made on the basis of the current and scheduled drill-hole data.

2. Complete the proposed fill-in holes

(a) +60° hole, collared 115' west of S-21.

(b) +60° hole, collared @ S34-37 station.

(c) Others, as indicated by results of surface and underground drilling.

3. Excavate a new drill station on completion of 3996 drive (item II-1), and drill to explore the lode from this new position.

Respectfully submitted,

W.M. Sharp, P.Eng.

WMS/jm

Encl.

c.c. Mr. J. C. Black, Silmonac Mines Ltd.
New Denver, B.C.

c.c. WMS file.