

REPORT ON THE ANNA MINE  
SLOCAN M.D.  
FOR  
SILVER BENN MINES LTD. (N.P.L.)  
by  
M.K. Lorimer, P.Eng.  
8 April, 1969  
L. J. Manning & Associates Ltd.

82F/14W  
82F/NW-154

The President and Directors,  
Silver Benn Mines Ltd. (N.P.L.),  
Box 74,  
Slocan, B.C.

Dear Sirs:

The following report on the Anna Group is based on a visit  
to the property on 27 November, 1967, and on a study of  
the reports listed in the Bibliography.

**SUMMARY:**

The Anna group of eight claims is located six miles by road northeast of Slocan.

The mine produced high grade silver ore in the past and the geology if favourable for the location of ore shoots to the east and at depth.

It is recommended that short test holes be drilled underground and that a Turam electromagnetic survey be made of the property at a total cost of about \$10,400. If warranted, this work should be followed by further diamond drilling, underground work or both, for which an allowance of \$25,000 should be made.

**LOCATION:**

The Anna property is located four miles northeast of Slocan on the southern slope of Ottawa Hill. The southern boundary is near Springer Creek with the claims running northerly towards the summit of the hill. The elevation ranges from 4,500 to 6,000 feet. Map 1.

The geographic location is 49°47'N., 117°24'W. The area is covered by Sheet 82 F 14W of the National Topographic System.

The property lies immediately to the east of the Ottawa Silver Mine which has been an intermittent producer of high grade ore since 1904.

Access is by road from Slocan, a total distance of six miles. Most of the route is a good gravel-and-dirt road.

**TITLE:**

The property consists of the following claims:

<u>Claim</u>	<u>Kind</u>	<u>Lot or Record No.</u>	<u>Expiry Date</u>
Milda H.	Crown Grant	14466	
Hamilton Fr.	Crown Grant	14467	
Anna	Crown Grant	14468	
Milda H. Fr.	Crown Grant	14514	
Sally	Located	5199	4 July, 1969
Charles	Located	5200	4 July, 1969
Henry	Located	5201	4 July, 1969
May Fr.	Located	5317	24 August, 1969

Only one fifth of the Hamilton Fraction belongs to the property, the western four-fifths having been sold to Ottawa Silver Mines Ltd. The boundary appears to run close to the No. 3 level of the Anna Mines. Before any

**PROPERTY FILE**  
82FNW154-05

more underground work is done in this area, a survey should be made to determine the exact location of the boundary with relation to the underground workings.

Titles to all the claims are held by Silver Benn Mines Ltd. (N.P.L.).

#### TOPOGRAPHY:

The area has an average slope of 31 degrees to the south and is thickly wooded. Little Tim Creek traverses the property from north to south. Most of the underlying rocks are obscured by overburden.

#### CLIMATE:

Precipitation is moderate with a fairly heavy snowfall in the winter. The summer temperatures are pleasant and winter temperatures are moderate although there may be short periods of severe cold.

#### HISTORY:

The property was first worked at least as early as 1904 and was intermittently worked until about 1931, mostly by individuals.

The first recorded shipment was made in 1912. Total production to the end of 1924 is reported to be 126 tons averaging 209 ounces of silver per ton. The size of the underground stopes would indicate that considerably more ore was removed than the records show.

#### DEVELOPMENT:

The original work was done on three levels with most of the production apparently coming from the lowest, or No. 3, level. Map 2.

In recent years a new level has been driven on the east vein and 124 feet below No. 3. One raise has been driven to a connection with No. 3 level and a second raise has almost reached the level. Access to No. 3 level may be made through the completed raise and it is reported that No. 2 level may be reached through old workings from No. 3.

No. 4 level is in good condition with useable track, ventilation piping, and air and water lines.

#### GEOLOGY:

The property is underlain by porphyritic granites of the Nelson Batholith.

The mine was developed along two prominent shear zones which strike N. 10°E., and dip about 35 degrees to the east. Recent work on No. 4 level and above shows that the dip increases to about 44 degrees between Nos. 3 and 4 levels.

The two shear zones, known as the East and West veins, are similar in most respects. The East, or hanging wall, vein in the old workings ranged up to 50 feet in width; the West, or footwall, vein is about 15 feet wide. Within these veins the mineralization occurs in shoots which strike at about N.45 degrees E. and cross from foot to hanging-wall. No definite rake has been established. The former production was from stopes in the West vein.

The ore minerals are native silver, tetrahedrite, argentite and stephanite. In places these minerals reach very high values. Pyrite is a common accessory and unimportant quantities of galena, sphalerite and chalcopyrite are visible. The gangue is chiefly altered country rock with quartz and barite.

Both in structure and mineralization the Anna bears a striking resemblance to the Ottawa which lies a few hundred feet to the west. This resemblance is so strong that it suggests that the Anna is an uplifted continuation of the Ottawa. However, this hypothesis would require a vertical fault displacement of 800 feet and there is no evidence of movement of this magnitude. Map 2. It must, therefore, be assumed that the two structures are separate entities, at least at the surface. Underground evidence indicates that they are converging down dip and it is possible that they meet at depth and near the eastern boundary of the Anna Group. Most of the Anna may therefore be underlain by two mineralized shear zones.

#### SAMPLING:

Eight samples taken by A.G. Langley, Resident Mining Engineer, in 1927 averaged 0.05 ounces of gold and 107.3 ounces of silver per ton over an average width of 2.8 feet. These samples were all taken from the West, or footwall, vein.

On the writer's visit, five samples were taken as follows:

No.	Place	Vein	Width (ft.)	Silver (oz/ton)
639	Old stope, 3 level	West	1.0	201.8
640	Drift, 3 level	East	2.0	0.4

<u>No.</u>	<u>Place</u>	<u>Vein</u>	<u>Width (ft.)</u>	<u>Silver (oz/ton)</u>
641	Top of raise, 3 level	East	2.0	0.2
642	H.W. vein, 4 level	East	3.0	0.5
643	Drift face, 4 level	East	1.5	Trace

These results and the evidence in the old workings indicate that the best values are to be found in the west vein.

**CONCLUSIONS:**

The property produced high-grade silver ore in the past and appears to be geologically favourable for the production of high grade ore in the future.

The 4 level adit seems to be too far east to intersect downward extensions of the 3 level ore shoots.

There are two main areas for investigation: the Anna shear and the probable extension of the Ottawa shear.

Past production and incomplete sampling suggest that the west vein is more favourable than the east vein.

Underground work should be suspended until target areas have been located.

Initial target areas may be located by drilling test holes westward from the 4 level adit and by conducting a geophysical survey on the surface.

Target areas can later be investigated by diamond drilling, underground work, or both.

**RECOMMENDATIONS:**

It is recommended that the initial exploration of this property be carried out in two phases, the second phase to be entirely dependent on the results of the first.

**Phase I:**

In this phase it is recommended that test holes be drilled underground and that a Turam electromagnetic survey be made on the surface.

**A. Test Holes:**

Percussion holes should be drilled westward at intervals of 25 feet from the 4 level adit commencing at a point about 300 feet from the portal and extending to the end of the adit. These holes should be long enough to penetrate the west vein, an estimated maximum distance of 50 feet.

The costs are estimated as follows:

800 feet of drilling @ \$5.00	\$ 4,000.00
Assaying	100.00
Supervision, core-logging and sampling	900.00
Total	\$ 5,000.00

**B. Geophysical Survey:**

A Turam electromagnetic survey should be made of the entire property on lines 400 feet apart.

The costs of such a survey are estimated as follows:

Line Cutting: 7.8 miles @ \$150	\$ 1,170.00
E.M. Equipment & operator 7.8 miles at \$300	2,340.00
Labour: 2 men, 5 days @ \$25	250.00
Room and Board: 3 men, 5 days -- \$15	225.00
Transportation: 5 days @ \$15	\$ 75.00
60 miles @ \$0.15	9.00
Total	84.00
Mobilization and demobilization:	
Fares	170.00
Wages	150.00
Total	320.00
Engineering and Supervision	1,000.00
Total	\$ 5,389.00
Total Phase I	\$10,389.00

**Phase II:**

Since this phase will depend on the results of Phase I, neither the programme nor the costs are definite at this time. However, provided target areas are located it may be assumed that diamond drilling and underground work will be required. The probable minimum cost will be \$25,000.

**BIBLIOGRAPHY:**

British Columbia Department of Mines: Annual Reports, 1916-1931

- Cairnes, C.E.: "Descriptions of Properties, Slocan Mining Camp, British Columbia", Canada Department of Mines, Memoir 184, 1935.
- Tyler, W.W.: "Report on Kirsch Silver Mines Ltd.", Private Report, 1966.
- Montgomery, W.B.: "Report on Ottawa Silver Mines Ltd., Private Report, 1964

**L. J. MANNING & ASSOCIATES LTD.**

**"M. K. LORIMER"**

**M. K. Lorimer, P. Eng.**

**"L. J. MANNING"**

Date: 5 Dec 67

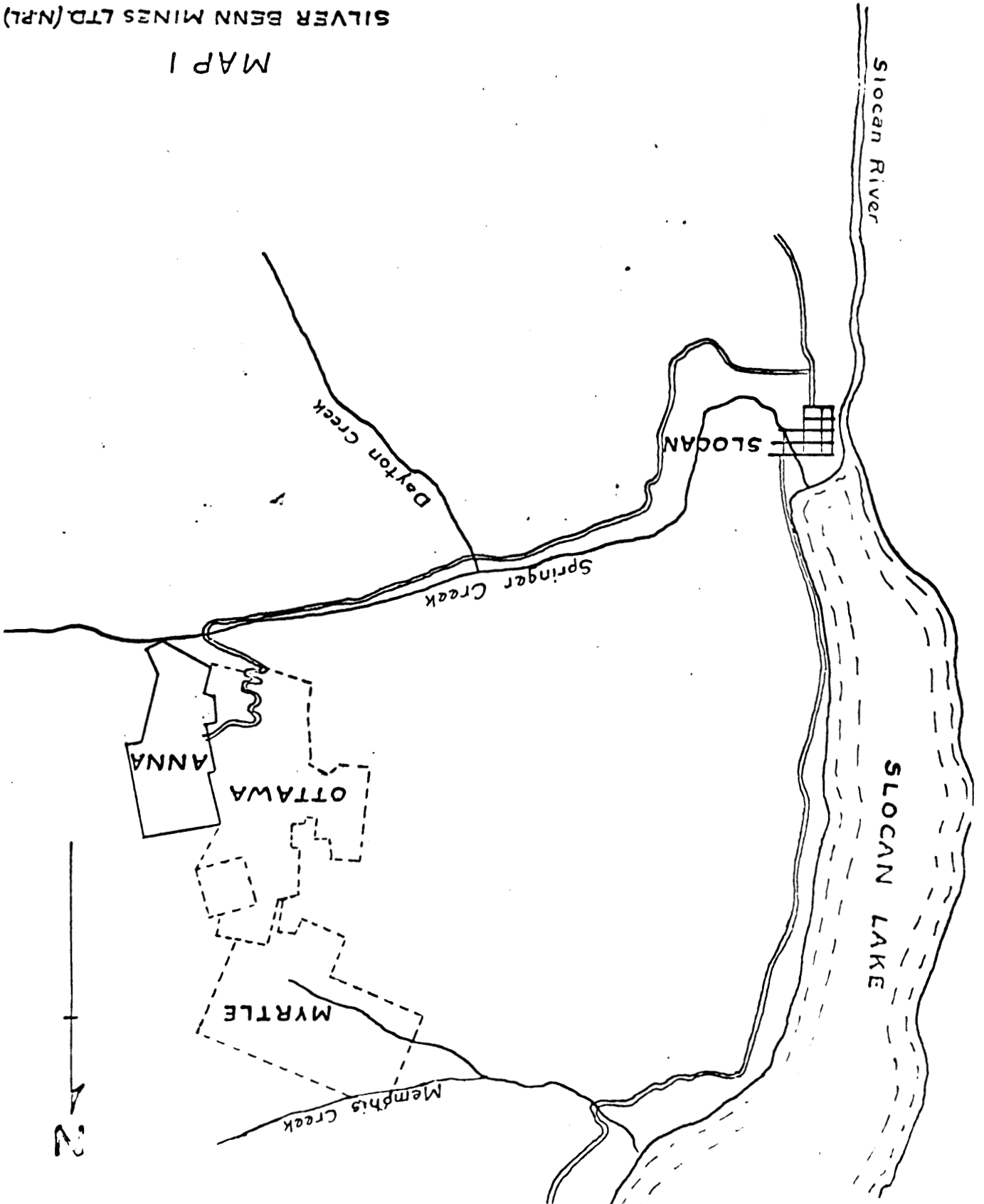
Drawn: M.K. Lorimer

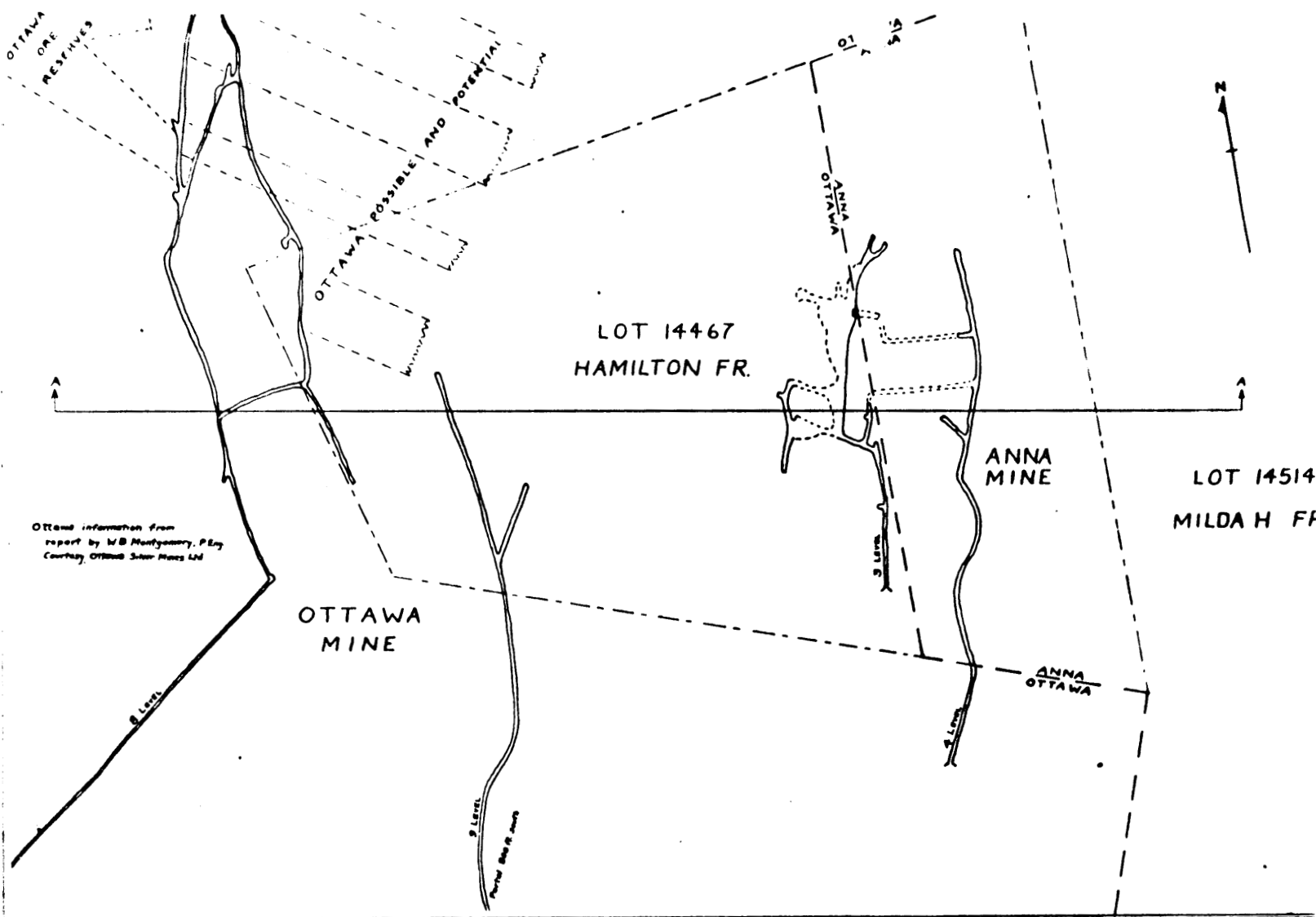
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# LOCATION MAP

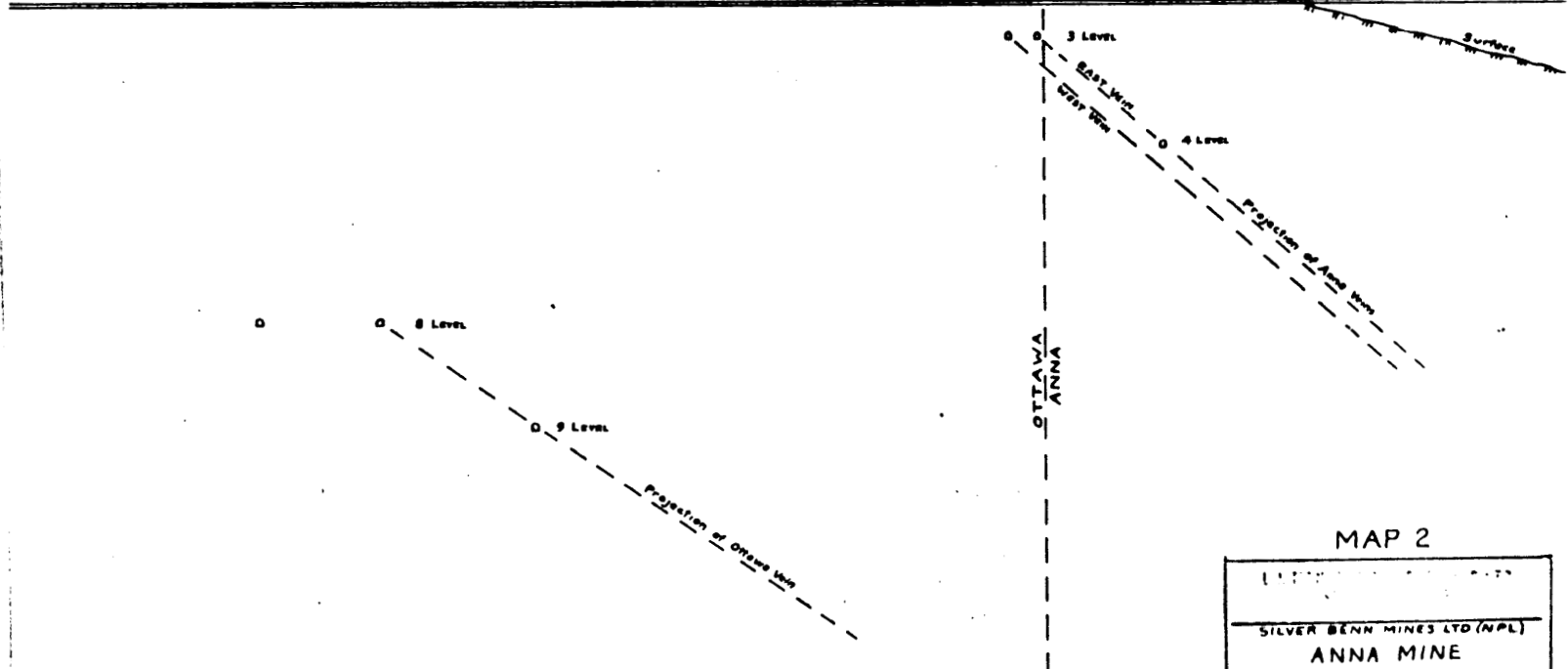
SILVER BENN MINES LTD. (NPL)  
ANNA MINE

MAP 1





Ottawa information from report by W.B. Montgomery, P.Eng. Courtesy Ottawa Silver Mines Ltd.



VERTICAL SECTION A-A

MAP 2

SILVER BELL MINES LTD (NPL)	
ANNA MINE	
8 Dec 67	Scale 1"=100'
AS LAYOUT	BY

## ANNA GROUP

The Anna Group is located four miles northeast of Slocan on the southern slope of Ottawa Hill and is connected to Slocan, B.C. by a six-mile road, which for the most part is a good gravel and dirt road. The property lies immediately to the east of the Ottawa Silver Mine, which has been an intermittent producer of high grade silver ore since 1904. The Company is the recorded owner of an undivided 1/5th interest in the Hamilton Fraction Crown Grant mineral claim and further holds an option to purchase the Milda H, Anna and Milda H. Fraction Crown Grant mineral claims. Further, the Company is the recorded owner of the Sally, Charles, Henry and May Fraction mineral claims. This group of claims constitutes the Anna group and they are held by the Company subject to the provisions of the Mineral Act and the Land Registry Act of the Province of British Columbia. The said properties were acquired from Kirsch Silver Mines Ltd. (NPL) a company incorporated under the laws of the Province of British Columbia. The consideration paid to it was nominal.

Pursuant to agreements dated the 11th day of August, 1960, and the 19th day of July, 1961 under which Kirsch Silver Mines Ltd. (N.P.L.) purchased the said properties, the final payment of \$8,000.00 payable to the Vendors of the said properties was paid in July, 1969; the \$8,000.00 was advanced to the Company by way of Shareholders loan.

So far as the signatories hereto are aware, no other person or company has received a greater than 5% interest in the consideration received by the Vendor of the said properties.

In the past Anna group produced high grade silver ore. Work on the property commenced in approximately 1904 and continued intermittently until 1931. The first recorded shipment was made in 1912 and total production to the end of 1924 is reported to be 126 tons, averaging 209 ounces of silver per ton. However, the size of the underground stopes would indicate that considerably more ore was removed from the property than the available records show.

Initially, work was done on three levels with most of the production coming from the lowest level or number three level. In recent years, a new level has been driven on the east vein and 124 feet below level number three. One raise has been driven to a connection with number three level and a second raise has almost reached the level. Access to number three level may be made through the completed raise and it is reported that number two level may be reached through old workings from number three level. Number four level is in good condition with useable track, ventilation piping, air and water lines.

For a brief description of the mineral deposits on the Anna Property see the report of L. J. Manning and Associates Ltd. which is attached hereto and forms part of this prospectus.

The Company has not, to the present time, carried out any program of exploration or development on the Anna group.