REVISED REPORT ON /8

RECO SILVER MINES LTD.

SANDON, B. C.

SLOCAN MINING DISTRICT

W. S. ELLIS, MINING ENGINEER September 23, 1968.

To the President and Board of Directors, Reco Silver Mines Ltd., 201 - 535 Howe Street, Vancouver 1, British Columbia.

#### Gentlemen:

Herewith is a revised report on your property at Sandon, B. C. The original report by W. S. Read and W. S. Ellis dated July, 1964, recommended the acquisition of this property. Interim reports dated April, 1965 and November, 1965, give details on the preliminary work accomplished. A summary report dated September, 1966, was a consolidation of earlier reports.

Since that time there has been a substantial rise in the price of Silver, the adjoining nine claims known as the Bluebird Group has been acquired by your Company and the considerable work performed during the past three months has added considerably to the known potential of your property.

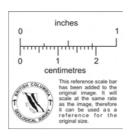
This report is up to date and a summary of information included in previous reports.

Respectfully submitted

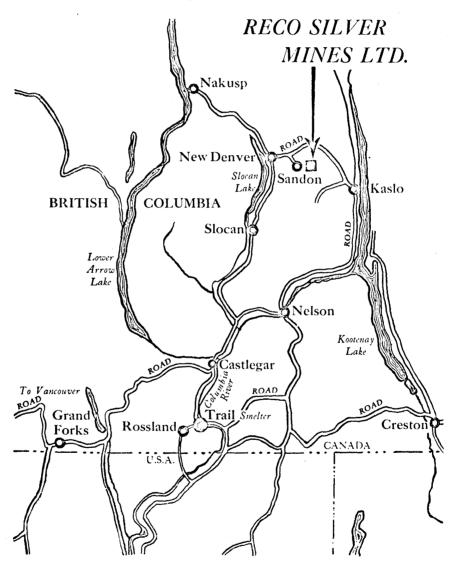
W. S. Ellis,

Professional Mining Engineer

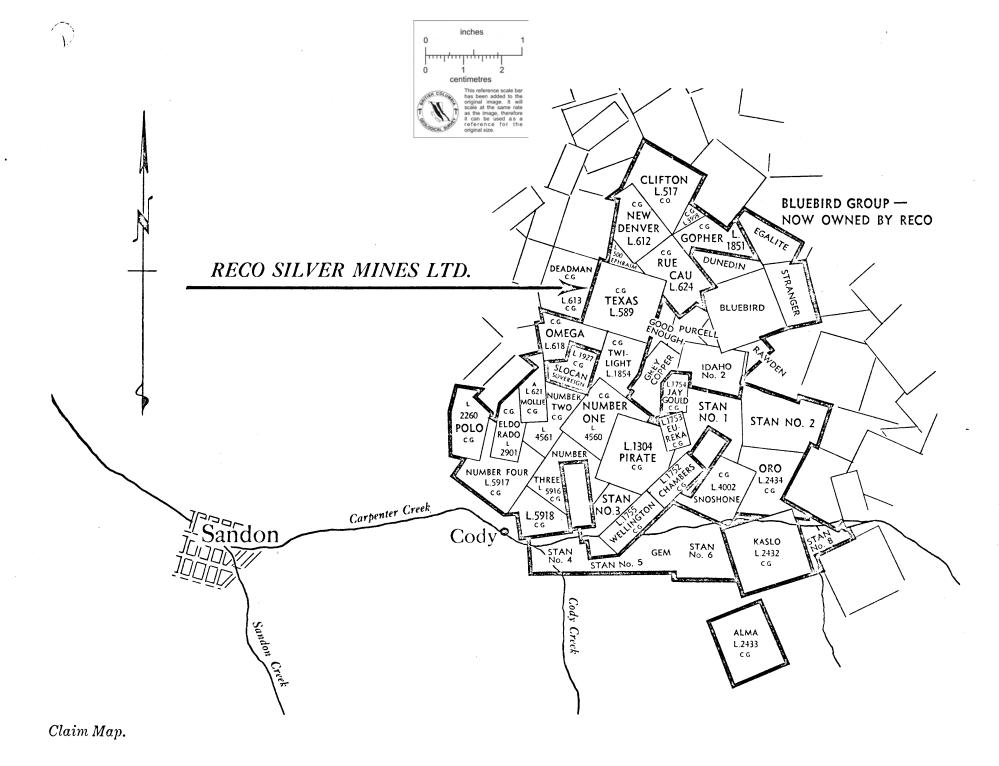
WSE:bf



# Key Map



 $Geographical\ Location\ Map.$ 



# TABLE OF CONTENTS

	Page
Introduction	1
Recommendation	2
Property	2
Access	3
Production	4
Geology	.5
Structural Ore Controls	7
Development	11
Exploration by Reco Silver	20
Summary and Recommendations	22
Conclusion	24
Certificate of Qualification	
Bibliography	

REVISED REPORT ON

RECO SILVER MINES LTD.

SANDON, B. C.

SLOCAN MINING DISTRICT

W. S. ELLIS MINING ENGINEER

#### INTRODUCTION

The Slocan District located in South Central British Columbia has a production record of Silver-Lead-Zinc ores for a period of about 76 years. During that time mining activity has been featured by fluctuations controlled by the price of Silver in the early days but latterly Lead and Zinc adds considerably to the value of the product of its mines.

From 1892 to the end of 1964 total recorded production from the Slocan is 73,305,455 ounces of Silver; 959,551,244 pounds of Lead and 767,693,797 pounds of Zinc. At present prices of Silver at \$2.35 per ounce; Lead at 13 cents per pound and Zinc at 13.5 cents per pound, gross value of this production would be about \$400,648,000.

During this long period many ore-bodies have been mined and exploration for new ore-bodies has been considerable.

One of the better of the remaining exploration chances is

on the Reco Group of Mineral Claims north-east of Sandon.

This ground remains largely unexplored with the exception of the mining of the two high grade ore-bodies by hand steel methods in the 1890's and early 1900's, and a limited amount of work by an inadequately financed syndicate in 1957.

The claims comprising the Reco Group were staked during the initial rush in 1892 and the key claims purchased by the Reco Mining and Milling Co. An option was acquired on the property in 1964 by the Reco Silver Mines Ltd.

In 1968 the 9 mineral claims which were the property of the Slocan Bluebird Mines Ltd. were obtained under long term lease.

#### RECOMMENDATIONS

This combined property has a profitable production record, known ore occurrences and excellent exploratory chances. Its further exploration is fully recommended.

#### PROPERTY

The property consists of the following twenty-six Crown granted claims: Clifton #517; Grandview #3998; New Denver #612; Ruecau #624; Gopher #1851; Ephraim Fr #600; Texas #589; Omega #618; Twilight #1854; Mollie #808; Eldorado #2901; Polo #2260; Number One #4560; Number Two #4561; Number Three #5916; Number Four #5917; Number Five Fr #5918; Pirate #1304; Jay Gould #1754; Eureka #1753;

Chambers #1752; Wellington #1755; Shoshone #4002; Oro #2434;
Kaslo #2432; Alma No. 2 #2433; the Stan #1; Stan #2; Stan #3;
Stan #4; Stan #5; Stan #6; Stan #7; Stan #8; and Wedge and Eva Fraction held by location.

The Bluebird Claims held under long term Government lease are: the Egalite #3103; Bluebird #540; Dunedin #1853; Purcell #849; Rawdon #855; Grey Copper #580; Goodenough #581; Idaho No. 2 #1013; and the Stranger #512.

Your property therefore consists of forty-five claims held by Crown grant, location and lease.

Except for the Alma #2, these claims are contiguous and lie on the south slope of Reco Mountain, adjacent to and north-east of Cody in the Slocan Mining Division, West Kootenay, British Columbia. Elevations are from about 4,000 to 8,000 feet above sea level, with Sandon having an elevation of 3,500 feet. Latitude is North 50 degrees and Longitude is West 117 degrees 20 minutes.

# **ACCESS**

A truck road has been constructed to an elevation of 7,000 feet on the property, connecting with a road at Cody, one mile to Sandon. Sandon is about 9 miles by good gravel road to New Denver which is about 85 miles from the Trail smelter of the Consolidated Mining and Smelting Company.

The access to the area is good. Power, water and timber are all available in the immediate area.

#### PRODUCTION

Shipments have been made from four veins on the Reco Group as follows to the year 1922:

Net

as lollows to th	ie year .	1922:		Nec	
		Silver	Lead	Smelter	Producing
Lode	Tons	Ounces	Pounds	Returns	Years
No.1 (Texas)	12	2,069	13,273	1,438	1911,12,18
No.2 (Reco)	3,928	390,257	3,591,509	271,575	1894 - 1896
					1904 - 1918
No.3 (Reco-	3,866	875,374	3,285,618	556,572	1895 - 1904,
Goodenough)					1913 - 1919
No.4 (No.1 Mine)	472	31,110	497,207	40,388	1911 - 1912
					1916 - 1922

8,278 1,298,810 7,387,607 869,973

At \$2.35 per ounce for Silver and 13 cents per pound for Lead the gross value of these shipments would be about \$4,012,600 or about \$484 per ton. This ore was sorted and shipped to the smelter as "crude Lead" so that no payment was made for Zinc content. The gross value per ton including Zinc at 13.5 cents per pound would be about \$560 per ton.

The early operation of this property was very profitable. In 1906, Mr. Alfred C. Garde of the Zinc Commission reported that the Reco had distributed \$300,000 from smelter returns of \$615,000 to the end of 1905.

Production figures from the Bluebird Group are incomplete.

Up to about 1906 Cairnes (2) reports net smelter returns of

\$166,704 from shipments totalling 1,369 tons.

#### **GEOLOGY**

The first comprehensive geological work was done by

Dr. C. E. Cairnes from 1925 to 1928. His reports (1) and

(2) are the basic reference work on the Slocan area.

Dr. M. S. Hedley of the British Columbia Department of Mines did detailed work in the Sandon area during the period 1946 to 1950. His excellent report (3) is the authority on geological structure and on structural ore controls. Similar conditions are present in the adjoining Reco Mountain and Sandon areas.

During the summer of 1965, Mr. S. S. Tan (5) did detailed geology on the Reco Silver Group. His intimate knowledge of rock types has resulted in an excellent detailed picture of the geology of the Reco property and should assist in assessing favourable locations for ore-bodies.

The property is underlain by argillaceous and quartzitic sedimentary rocks of the Slocan Series, considered to be Triassic in age. These sediments are intruded by two large Cretaceous granitic sills and numerous aplitic granite, quartz-feldspar porphyry and lamprophyre dykes. The sediments strike north-west and are folded isoclinally. The acid intrusives strike approximately parallel to the bedding but locally may crosscut them.

The upper granite sill, just south of Reco Mountain peak, is 350 feet wide and the lower sill varies from 400 feet to 850 feet in width. Numerous light colored acidic sills, varying from 1 foot to 10 feet wide and striking parallel to the bedding of the sediments are distributed between the sill zones. The lamprophyre dykes cut the sediments at an angle.

The sediments are composed of slates, argillites, quartzites, argillaceous quartzites and their various admixtures. Where these sediments are in contact with the acid intrusives they are thermally metamorphosed.

One fault system approximately parallels the formational strike and another system is transverse. Vein faults are included in the latter and these may be displaced laterally, in one instance for about 100 feet, by those with the formational strike.

Lodes are crosscutting faults that in transversing the various formational bands in places provided favourable openings and conditions for the deposition of ore-bodies. The relation of bedded structure to the lode, temperature, pressure and timing are some of the controlling conditions. A steepening of the dip is often favourable. Dr. Hedley in his Bulletin #29 (3) discusses these various controls very thoroughly.

In the Reco and adjoining properties, ore deposits are generally of the fissure type and vary from a few inches to 15 feet in width.

#### STRUCTURAL ORE CONTROLS

As shown by Dr. Cairnes (2) and confirmed in detail by Mr. Tan (5), the property is underlain by folded sediments of the Slocan series intruded by several large granitic sills and numerous small aplitic granite and quartz feldspar porphyry sills which on the present surface, strike about parallel with the axes of the folded sediments in a north-westerly direction. Transversing these formational units are vein faults or lodes in a north-easterly direction. The faults were initiated during the closing stages of the period of folding, and it is presumed that they served as avenues for the ultimate relief of essentially the same stresses as those that produce the folding. The larger faults formed as complex zones of dislocation along which the direction and amount of movement varied as the faults passed through complexly folded strata. The faults did not slice clearly across the structure, but swung "into" it in places. The total amount of movement along the course of a single major fault was not everywhere restricted to the fault zone itself but probably followed bedding in places where fault and bedding were more or less parallel. Some movement is considered to have passed from crosscutting to targential faults, or vice versa.

Hedley considered these concepts essential to a proper understanding of the behavior of the lodes, an understanding that is vitally important in problems of mine exploration and development.

Mineral deposition was dependent upon conditions within the lode being at the time favourable, and these favourable conditions were in many cases a function of the appropriate relation between lode and bedded structure, and not a function of rock type alone.

Cross-fractures are believed to have an important bearing on the formation of ore-bodies. Ore is not as a rule deposited in or associated with strong gouge; and ore-bodies other than fissure-vein type occur in zones of shattering rather than of shear. In the larger lodes, ore-bodies do not as a rule form in the main plane of movement but in or associated with minor or accessory planes.

The following conditions are considered by Hedley to be marked by clean-cut fractures rather than by gouge and thus better for ore depositions:

- 1. Intersection zones of fissures, whether that involves two lodes, connecting links between lodes, ore crossover links between branches of a single lode. In such situations a wedge of ground may shatter or a set of subsidiary fractures may form in or along the margin of the dominant fissure.
- 2. Where a bedded lode jumps across the bedding.
- of competency that rock may be cleanly shattered whereas other bands of lower competency may be reduced to gouge. On the other hand, if the rock is excessively hard a complex lode may, in crossing it, be reduced to a single gouge-filled fissure. The optimum competency depends largely on the strength of the lode or of any particular plane of it.
- 4. Where a lode crosses harder rocks in a pronounced roll.
- 5. Where a lode crosses bedding at a large, rather than a small, angle and, more than that, the direction of movement on the lode is across rather than with the bedding.

By extension, this proposition applies to subsidiary fractures within a complex lode or adjacent to a main plane of movement and may apply specifically to the angular relation between tension cracks and bedding.

6. Where there is a component of tension in the lode movement, with the result that a zone of relatively low pressure occurs.

There appears to be nothing to preclude the recurrence of favourable structure conditions at greater depth in the Sandon area and in most of the sedimentary rocks of the Slocan. There is a tendency for galena to be deposited in greater relative abundance in the more open fractures, or in zones in which the confining pressure was relatively low, from solutions which supposedly carried an adequate amount of both galena and sphalerite. In several important ore-bodies almost massive galena is reported to have occurred in masses of major size in or near the central part of the ore-body. Of the many factors affecting deposition of galena and sphalerite from solution, that of pressure was probably of great importance, namely effective pressure of the particular environment and not the theoretical confining pressure which is a function of depth alone.

Many ore-bodies so far discovered in the adjoining properties to the west of the Reco holdings appear to be on the west flank of the lower granite sill zone (Geological Map). The majority of these properties are not open for examination but it is known that the southern group of these deposits occurred in sedimentaries liberally intruded with narrow acidic sills.

The eastern group of known ore-bodies appear to be even more regularly located. The two Reco deposits from all available data appear to be in identical positions in a formation of sedimentaries stiffened by numerous narrow acidic sills. At 1600 to 1900 feet to the north-west the Surprise deposit occurred under similar conditions. The Surprise Mine produced nearly 50,000 tons of ore averaging 38 ounces of Silver, 13 per cent Lead and 8 per cent Zinc (2) which at today's \$2.35 Silver, 13 cents Lead and 13.5 cents Zinc would have a gross value of \$144 per ton. It is described by Dr. Cairnes (2) as occurring in a width of 700 feet of quartz porphyry associated with, and in part almost indistinguishable from, bands of light coloured massive quartzite. Geologic maps of Dr. Cairnes, Mr. Tan and old company maps of an adjoining property, all show the same formation extending from the Reco ore-bodies to the Surprise. This intervening ground is partly unexplored.

Lodes that have been explored in length have disclosed ore-bodies both west and east. The same lode had the Last Chance in the west and the Surprise in the east. The No. 2 Lode had the Slocan Sovereign in the west and the Reco No. 2 in the east. The No. 3 Lode had the No. 1 Mine and the Reco-Goodenough. Several lodes between the Last Chance and the Slocan Sovereign produced ore-bodies in the west. Their counterparts are partly unexplored to the east in Reco Silver ground between Reco No. 2 and the Surprise Mine.

The same argument holds for the reasonable chance that the several lodes that made ore in the Bluebird ground, might make ore at favourable locations to the south-west in the Pirate Claim area of the Reco.

The majority of ore-bodies discovered to date have outcropped on surface. However, favourable conditions within the
lode such as a relation between the lode and bedded structure
can re-occur at further depth. Also a favourable condition such
as the steepening of a lode can and often does, re-occur below
a flattening. The Surprise Mine had pay ore from about 7700 feet
elevation down to about 6800 feet. The Noble Five vein was mined
from about 6100 feet to 6700 feet and that vein or a closely
related structure again made ore at about 5100 feet elevation.
The Reco No. 2 Mine and the Reco-Goodenough Mine were not
explored below their ore-bodies.

#### DEVELOPMENT

All except the high elevations on the property is covered with overburden. In the early days prospectors and developers had only ground sluicing and hand tools to use in their search for ore outcroppings. At that time surface exploration on some of the shallower covered Reco ground disclosed three veins, two of which responded to produce ore-bodies. Modern equipment will be available to explore the remaining untested areas.

### NO. 1 VEIN (TEXAS)

Located on the westerly side of the Texas Claim at an elevation of 6000 feet. Some 700 feet of drifting and cross-cutting was done on three levels with only about 100 feet on the vein. This work was done on the immediate south side of the Blizzard Fault. This major fault has only recently been recognized and solved. There is a reasonable chance that this vein might extend to the more favourable zone to the north-east.

### NO. 2 VEIN (LARGE OR RECO)

This lode is known to extend from the Slocan Sovereign

Mine (an adjoining property) to the Reco No. 2 Mine, a total

distance of about 4000 feet. The Reco No. 2 Mine was developed

by the Nos. 1, 3 and 5 levels. The lode in this instance

transverses a unit shown by Mr. Tan as granite but in a section

consisting of about 50 per cent of argillites and 50 per cent

acid intrusive sills averaging several feet wide which conform

with the bedding. None of the adits are accessible but the

Mine can be partially examined through a ventilation hole at

the outcrop. The bedding dip in the section examined was steeply

to the north-east. The striae indicated that the vein movement

was normal to the vein strike.

Another interesting feature of this examined area was that the stope walls were still intact after more than half a century lapse since it was mined.

Cairnes (2) describes the vein as being a strong mineralized fissure zone averaging about 2-1/2 feet in thickness with sulphides up to 18 inches and apparently running into trouble when it entered a crushed zone at about 700 feet in the No. 3 Tunnel.

Shipments totalling 3,928 tons of hand sorted ore were made from this vein containing almost 100 ounces of Silver to the ton and averaging about 45 per cent Lead. It is reported that the sorted sulphides were an average total of about 12 inches of the vein. This hand sorted ore at to-day's prices would gross about \$349 per ton and total about \$1,370,000 production.

Considerable exploration was done to the south-west from this mine. Results were poor. Work was mainly in the Nos. 11 and 15 tunnels whose portals were re-opened for examination. The No. 11 Adit is at an elevation of 6348 feet or 322 feet below No. 5 Adit. About 900 feet of drifting was done with the strike of the vein averaging about North 70 degrees East which is about 20 degrees more easterly than that disclosed in the ore-bearing Section in the Mine above. Sediments were encountered in the first 300 feet and a lens of ore was disclosed at 440 feet which was about 50 feet long and up to 18 inches wide assaying about 150 ounces Silver to the ton.

The No. 15 Tunnel was driven at an elevation of 6135 feet.

A total of 1200 feet of drifting and cross-cutting was done but much of this was useless work. The drift followed the vein

for the first 500 feet, the initial 350 feet in the lower sill zone and the following 150 feet in argillite. In the total distance the vein was gouge filled and barren of mineralization. At about 500 feet the vein was offset by what is now recognized as the Blizzard Fault. Due to a failure in solving the offset, the far end of the lateral was reached before entering the vein zone. Two raises were driven above this level in the far end but could not be examined on account of bad air. They should be quite informative as they explore the ground under the ore lens disclosed in No. 11 Tunnel.

In general the No. 2 Vein area explored by the Nos. 11 and 15 levels failed to respond to exploration. Further geological study is indicated.

#### NO. 3 VEIN (RECO-GOODENOUGH) MINE AND NO. 1 MINE

This lode crosses the Ruecau, Goodenough, Texas, Twilight and Number One Mineral Claims, all of which are controlled by Reco Silver Mines Ltd. The No. 3 Vein is parallel to and about 800 feet south-east from the No. 2 Vein. Its lateral extent is also at least 4000 feet. It is significant that its No. 1 Mine ore-body occurs opposite to the No. 2 Vein Slocan Sovereign ore-body and more particularly that the Reco-Goodenough ore-body is opposite or to the south-east of the No. 2 Reco ore-body.

#### RECO-GOODENOUGH MINE

This ore-body was about 90 per cent in ground belonging to

the old Reco company and 10 per cent in the Goodenough claim, which is now part of the Reco holdings. Reco production was 3866 tons of sorted ore containing an average of 226 ounces of Silver to the ton and averaging 42 per cent Lead. At today's prices of \$2.35 per ounce Silver and 13 cents per pound for Lead the gross values of Silver and Lead produced would be \$2,484,000 or \$643 per ton. This was probably the richest Silver-bearing Lead ore found in quantity in the Slocan.

The vertical range of the workings are from about 6200 to 6800 feet elevation and are explored by four Adits, Nos. 2, 4, 6 and 8. All of these portals have been caved for years until a week ago when an entry was gained into No. 8 Portal. The writer was able to make a brief inspection of No. 8 and No. 7, which is an intermediate about one hundred feet above No. 8. On No. 7 stoping was continuous from the main raise easterly for 160 feet to where the vein was displaced by vertical faulting. A cross-cut easterly disclosed a vein of medium strength about 150 feet in length, which had been displaced about 100 feet to the south, assuming it to be the same vein. A small amount of stoping had been done. A winze had been sunk but could not be inspected as it was filled with water. The vein as it enters this winze is 6 inches wide. A piece of galena 3 inches wide was dug out as a sample.

The section of vein described above was not explored by the No. 8 Level. A further advance of 200 to 300 feet is necessary

which will mean entering the Purcell Mineral Claim which was not owned by the old Reco Company.

Before drifting can be commenced the No. 8 Level must be rehabilitated. Sloughs must be cleaned up, some minor timbering must be done and about 900 feet of new track laid. Proper geological mapping should be done. Cross faulting is present and a vein disclosed adjacent to the main raise is not necessarily the same as that mined on the No. 7 Level.

#### PURCELL MINERAL CLAIM

This claim, which is one of the Bluebird Group recently acquired by Reco Silver Mines Ltd. might prove to be very valuable. In addition to the chance that it contains the downward extension of the Reco-Goodenough, a drift has been driven on a vein about 700 feet to the south-east of the Reco-Goodenough vein and apparently under similar geological conditions to that high-grade mine. This drift is about 170 feet in length with the last 40 feet on the vein (according to old maps). The overburden does not appear to be deep. Trenching for the outcrop of this vein to the north-east should receive a high priority.

#### NUMBER ONE MINE

This Mine takes its name from the Mineral Claim on which its portals are located. A lack of knowledge of its relation to other deposits caused it to be known as the No. 4 Vein. A complete survey and surface exploration shows it to be on the

No. 3 Vein or Lode.

The old workings on this deposit consist of four adits over a vertical range of about 400 feet, the lowest or No. 4

Level being about 5200 feet elevation. Part of the upper workings are in Slocan Sovereign ground. Old Reco production between the Nos. 2 and 3 Levels was about 470 tons of sorted ore containing about 66 ounces of Silver per ton and averaging about 53 per cent Lead, the gross value of the Silver and Lead being \$293 per ton at present prices.

In 1957 the Silver Mountain Syndicate did further work on this vein. Bulldozing on the hillside disclosed clean galena in place about 300 feet east of the No. 4 Portal. The "A" adit was driven at about the same elevation as No. 4 to investigate this showing. About 300 feet of drifting showed this vein to angle into the main vein as disclosed on the levels above.

The Syndicate then drove No. 16 Level about 80 feet vertically below No. 3 Level to mine the downward extension of ore occurring on No. 3, but stopped about 300 feet short of their target due to a shortage of funds. Ore had not been located on the No. 4 Level which is about 180 feet vertically below No. 3.

In 1965 the No. 2 Tunnel portal was retimbered. Examination and sampling disclosed that at today's metal prices the last 210 feet of drifting showed interesting values. Eight preliminary samples were cut from the face back to 238 feet. Results were as follows:

SAMPLE No.	LOCATION	WIDTH	OZ. SILVER	LEAD %	ZINC %	GROSS VALUE
***			4			
6625	Face	0.8 feet	4.15	1.12	30.83	\$95.71
6631	35 Feet from face	1.0	3.10	1.50	6.23	27.92
14671	65 Feet from face	0.9	4.75	6.18	4.25	38.62
6632	95 Feet <b>f</b> rom face	1.2	14.95	10.20	6.35	78.79
14672	130 Feet from face	1.1	1.40	1.45	4.30	18.67
<b>6</b> 633	165 Feet from face	1.5	27.45	15.50	1.70	109.40
6634	210 Feet from face	1.9	17.75	14.48	5.50	84.26
14673	238 Feet from face	1.3	5.35	5.15	TR	25.96

Silver at \$2.35 per ounce, Lead at 13.0 cents and Zinc at 13.5 cents per pound.

The geometric average of the above samples, from the face to 210 feet is \$54.65 gross value over an average width of 1.2 feet. Over a 4.0 foot stoping width the gross value would be \$16.39 per ton. Proper appraisal requires sampling at closer intervals but values obtained, especially at the face, indicate that this level should be advanced to the north-east.

The face of the No. 16 Tunnel shows a 1.0 foot vein width at the bottom that assayed 10.05 ounces Silver, 7.90 per cent Lead and 9.57 per cent Zinc. At a point 24 feet back from the face, two samples were cut. One at 3 feet elevation over a 2.5 foot width assayed 2.05 ounces Silver, 0.08 per cent Lead and 17.25 per cent Zinc. The second at 6.0 feet elevation showed 5.55 ounces Silver, 3.63 per cent Lead and 12.5 per cent Zinc. This face is 140 feet from being vertically under the ore on the No. 3 Level.

#### CHAMBERS M.C.

In the south-eastern section of the property, work was done

on an interesting zone that could include several veins. This zone has a known length of about 1000 feet, the south-western two-thirds of this length being in argillaceous sediments and the north-eastern third being in the south-western section of the lower granite sill zone.

The limited amount of underground work is in the argillites and generally inaccessible. At elevation 4970 feet a creek has disclosed an excellent Silver-Lead outcrop. Occurring in the granite it has a strike of north 55 degrees east and dips about 65 degrees to the south-east. The outcrop was uncovered for 51 feet and channel sampled at 6 foot intervals. Results were as follows:

SAMPLE NO.	DISTANCE	TRUE WIDTH	OZ. SILVER	LEAD %	ZINC %	GROSS VALUE
14664	Zero in Creek	1.8'	16.30	36.25	9.50	\$168.20
14665	0 + 6	2.0	24.85	32.70	11.35	173.53
14666	0 + 12	0.9	2.95	6.00	1.27	25.90
14667	0 + 18	1.9	3.70	2.67	TR	15.58
14668	0 + 24	1.8	9.35	18.50	3.50	69.22
14669	0 + 30	1.5	14.85	33.10	10.25	148.36
14670	0 + 36	0.9	3.80	11.87	TR	39.70

This showing is encouraging and should be further explored.

A quantity of Lead and Zinc float was found in Carpenter Creek directly below the Chambers veins. Through the years shipments of several 40-ton carloads have been made to the smelter from this source. It is logical to suppose that this float originated from the Chambers veins.

#### EXPLORATION BY RECO SILVER

To get proper control a topographic plan covering the total property area was prepared from aerial photos by Hunting Survey Corporation. This was located in relation to the major adjoining property by transit survey to establish a common mining co-ordinate grid. During the summer of 1965 a detailed geologic map was prepared by Mr. S. S. Tan of the surface and accessible underground workings.

During the fall of 1964 a preliminary geochemical survey was conducted over the general area of the No. 2 Reco and Reco-Goodenough Mines and the area to the north-west. Samples were taken at 100 feet intervals along a grid of surveyed lines 200 feet apart. The direction of these surveyed lines is North 65 degrees West. Vein direction is about North 60 degrees East. Samples were taken from the soil above known ore veins as well as in unknown territory. The 250 samples were tested with a mercury detector instrument.

Testing with a mercury machine is a proven procedure to calibrate faint emanations of mercury given off from a sample. Very often Silver-bearing ores have this mercury association. Results were such that anomalies were distinctly outlined above the Nos. 2 and 3 Reco ore-bodies. Anomalies were also shown in areas of overburden. One of these indicated areas is the projection of a vein outcrop from about 1600 feet to the south-west.

Geo-chemical sampling was continued during the summer of 1965. Results were inferior to those obtained during 1964. However an anomaly was indicated about 600 feet to the north-west of that shown the previous summer.

During 1968 an access tractor road was constructed from the bottom of the No. 3 Reco dump to the New Denver Claim to test the anomalies indicated by geo-chemical sampling. Considerable stripping was done by bulldozer at the location of the anomaly which was believed to be the extension of the Texas No. 1 Vein. There has been no results to date, overburden reaching a depth of 35 feet deep in the slide.

At this point a vein structure was disclosed but filled with a pre-mineral vein dyke with no galena or sphalerite. This structure has been trenched at intervals for a total of 250 feet in length. It is probably the extension of the Deadman Vein to the south-west. Surface diamond drilling to cut this structure at a further depth next spring is recommended.

Prospecting was done on the <u>Kaslo Claim</u>. Ore float was discovered in Carpenter Creek adjacent to a concealed drift driven immediately adjacent to the float. The portal was opened for examination disclosing a vein up to a foot wide and carrying some galena. The walls were mainly in porphyry and this material partly filled the vein. The strike is about South 15 degrees West and about vertical. This course held for about 50 feet and then swung to the left with a steep dip to the west and gradually

narrowed to about one inch. No stoping was done above the drift but any galena found would be sorted and probably shipped. A sample assayed 55.98% Lead and contained 25.1 ounces Silver to the ton. The work was probably done between 1894 and 1896.

To the south of the drift the ground rises quite steeply.

This was prospected with no results. Bulldozing on the road some distance to the north showed no signs of a vein. Further investigation is justified.

#### SUMMARY AND RECOMMENDATIONS

Ore Showings that justify underground work exist in three locations:

- (1) THE NO. 1 MINE, (2) RECO-GOODENOUGH MINE and (3) THE CHAMBERS CLAIM
  - (1) NO. 1 MINE: A 300 foot program of drifting is recommended on the No. 16 Level to test the downward extension of ore in the sill of the No. 3 Level, which is 80 feet above.
  - (2) RECO-GOODENOUGH MINE: It is recommended that No. 8

    Level be rehabilitated and geologically mapped. A

    vein of medium strength exists on No. 7 Level which

    has not been explored by No. 8 Level. It is indicated

    that 250 feet of diagonal cross-cut be driven to intersect

    this faulted vein. The former operators would have had

    to enter the Purcell Claim to do this work. This claim

    is now part of the holdings of your Company.

(3) THE CHAMBERS CLAIM: Exploration at shallow depth is justified on a vein that outcrops on this claim. It has been stripped for 51 feet and continues to show strength at its open end. A drive of 150 feet from the old "Pipeline Cross-cut" should intersect the vein at about 80 feet vertical depth. This work is recommended.

Surface diamond drilling is recommended at two locations:

(1) The Deadman Vein Extension and (2) The Kaslo Discovery Vein.

#### THE DEADMAN VEIN EXTENSION

This vein structure is dyke-filled on the surface. It is recommended that it be intersected by two diamond drill holes at about 200 feet below the surface. This work must be done during June when drilling water is available.

#### THE KASLO DISCOVERY VEIN

It is recommended that at least three short holes be diamond drilled under this interesting discovery. This work can be done at any time as the set-up would be at the edge of Carpenter Creek.

#### THE PURCELL CLAIM

This claim might prove to be a valuable addition to the Reco holdings. Any Reco-Goodenough extension to depth will enter this ground. In addition there is a vein about 600 feet distant from and parallel to the Reco-Goodenough. It is indicated that

it occurs under the same geological conditions as its highgrade neighbour. The exploration of this vein should be given
a high priority. Stripping to the north-east in search of and
later following its outcrop should be the first step.

#### NEW DENVER CLAIM

If diamond drilling proves satisfactory in exploration of the Deadman Vein Extension, it might be applicable in the search for the Texas No. 1 Vein Extension. Prospecting to the northwest of the Deadman Vein Extension should be continued in search for parallel veins.

Consideration should continue to be given to a suitable geo-physical examination. A suitable method should prove very useful.

#### CONCLUSION

Ore showings and chances on this property justify a continuance of expenditure on exploration which is fully recommended. Two ore disclosures exist which are worthy of development. In addition, while an extension of the No. 8 Reco-Goodenough under an ore showing on the #7 Level is indicated, additional information is being assembled before a recommendation is made. Various exploration chances on the Bluebird Group are being considered.

The property is a past producer of high grade ore and is located in a mining district which as a whole has a gross

production record of about \$400,648,000 in Silver, Lead and Zinc at to-day's metal prices. Presently a road extends from its center to a smelter less than 100 miles distant.

Also one has to consider that the price of Silver has appreciated considerably during the past year.

Respectfully submitted,

W. S. Ellis,

Registered Professional Engineer

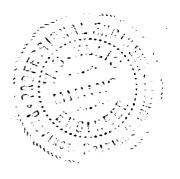
201 - 535 Howe Street, Vancouver 1, B. C. September 23, 1968.

### CERTIFICATE OF QUALIFICATION

- I, WILLIAM SEDLEY ELLIS, of 3707 West 36th Avenue, Vancouver, British Columbia, do hereby Certify:
- 1. That I am a practicing Mining Engineer and my home address is 3707 West 36th Avenue, in the City of Vancouver, British Columbia.
- 2. That I am a graduate in Mining Engineering from Nova Scotia Technical College, Halifax, Nova Scotia, and have practiced my profession as such for the past forty years.
- 3. That I am a Member in good standing of the Association of Professional Engineers in the Province of British Columbia.
- 4. That I have no direct or indirect interest in the Mineral Claims, the subject of this Report nor in the securities offered by the Reco Silver Mines Ltd. (N.P.L.) nor do I expect to receive any such interest.
- 5. That the Report on the Property known as the Reco Group of Mineral Claims is based on personal examination of the property, having been Engineer in charge of work done on the Property from June, 1964 to October, 1968.

W. S. Ellis Registered Professional Engineer

Dated at Vancouver, British Columbia, this 23rd day of September, 1968.



## **BIBLIOGRAPHY**

- (1) Cairnes, Dr. C. E., Geological Survey of Canada, Memoir 173, 1934
- (2) Cairnes, Dr. C. E., Geological Survey of Canada, Memoir 184, 1935
- (3) Hedley, Dr. M. S., Geology and Ore Deposits, Slocan, B. C.

  Department of Mines

  Bulletin 29
- (4) Report of the 1906 Zinc Commission
- (5) Tan, S. S., Geological Report for Reco Silver Mines Ltd. 1965

October 10, 1968.

To the President and Board of Directors, Reco Silver Mines Ltd.,

#### Gentlemen:

Since the writing of the Revised Report of September 23, 1968, on your Reco property some very interesting Assay results have been received.

As shown on page 19 of the above Report, the first 36 feet of the surface showing on a vein disclosed on the Chambers claim, while having encouraging values, had a silver-lead ratio of 1 to 2. This disclosure was cleaned out and an additional 15 feet was uncovered. Four samples were cut on this extension with the following results:

		<b>O</b> unces	Per Cent	Per Cent	Gross Value Silver \$2.35, Lead 13¢
Dist.	Width	Silver	Lead	Zinc	Zinc 13.5¢
41 feet	1.25'	28.82	26.82	2.30	\$143.71
46 "	2.80'	2.50	<b>.</b> 93	.85	10.50
51 "	2.75'	38.58	21.33	1.34	<b>149.</b> 55
<b>5</b> 2 "	1.75'	59.16	. <b>29.</b> 88	6.64	<b>2</b> 34 <b>.</b> 45

It will be noted that as the vein is uncovered to the northeast that the Silver-Lead ratio has improved from 1 to 2 to a very encouraging 2 to 1.

In the above mentioned September 23, 1968, Revised Report on page 22- under Reco-Goodenough Mine and page 24- under Conclusion a vein disclosed on the southeast end of the No. 7 Level is described. A sample containing Lead and Zinc was taken from this vein to determine Silver value. The Assay showed this sample to contain 122.1 ounces Silver to the ton, 10.90 per cent Lead and 19.42 per cent Zinc. The production record of this high-grade mine shows the Silver to average 226 ounces to the ton and averaging 42 per cent Lead with the Zinc content unknown as at that time Zinc was penalized. It is very gratifying to learn that the assay results of the sample indicates that this vein unexplored on No. 8 Level, has the same high grade ratio of Silver to Lead as existed in the vein as a whole. This is an important part of the "additional information" being assembled before an unqualified recommendation is made for the extension of the No. 8 Reco-Goodenough.

Yours very truly,

W. S. Ellis, Professional Mining Engineer

WSE:bf

~	



CTA,
14

PHONE: (604) 876-4111
TELEX: 04-50353
CABLE ADDRESS:
ELDRICO

Mainter Canas fan Frasing Millerich M

Reco Silver Mines Ltd.,

201 - 535 Howe Street

Vancouver. B.C.

# Certificate of Assay

# GEAST ELDRIDGE

#### PROFESSIONAL SERVICES DIVISION

WARNOCK HERSEY INTERNATIONAL LIMITED

125 EAST 4TH AVE. VANCOUVER 10, B.C., CANADA

DATE October 9, 1968

FILE NO. A. 3-R. 2-68-2194

	GO	LD	SILVER	Lead (Pb)	Zinc (Zn)				
MARKED	OUNCES PER TON	VALUE PER TON	OUNCES PER TON	PER CENT.	PER CENT.	PER CENT.	PER CENT.	PER CENT.	PER CENT
5 ) Reco-Goodenough 6 ) " Vein dyke #8	Level - 1	\$ 8" wide -	122.1 2.3	10.90	19.42	- 3" Heavy	minerals in S.E. En	6" vein top d #7 Level	winze
			C 2:35	35-7- GROSS PER TON 13-13/4				·	
			·						
•				,					

Gold calculated at \$ ..... per ounce

/jp

Note. Rejects retained one week.

Pulps retained one month.
Pulps and rejects may be stored for a maximum of one year by special arrangement.

Unless it is specifically stated otherwise, gold and silver rollies reported on these sheets have not been stated to compensate for losses and gains in the fire assay process.

J. Pares

Provincial Assayer

# MINES LTD (N.P.L.) 201-535 HOWE STREET, VANCOUVER 1. B.C. TELEPHONE 684-4203

October 24, 1968.

To the President and Board of Directors, Reco Silver Mines Ltd.,

#### Gentlemen:

Included are cost estimates for implementing recommendations in my Report on Reco Silver Mines dated September 23, 1968. After preparations are made, a drifting program should be commenced in the No. 16 Tunnel, No. 1 Mine, which would be extended about 300 ft. under the No. 3 Tunnel. This program could get under way within 30 days. About May, 1969, surface work could be started including extension of a road to the site of a crosscut under the surface outcrop on the Chambers, an access road on the Kaslo Claim to the Discovery Tunnel where diamond drilling is planned and an access to the site of surface trenching on the Purcell Vein outcrop. A geo-physical program could get under way in June.

It is recommended that this program should consist of the following:

# CAPITAL EXPENDITURES

4-Wheel drive truck for transporting workmen Used Eimco Mucking Machine 600 foot Portable Compressor		\$5,000. 4,000. 8,000.	\$17,000.
UNDERGROUND			
No. 1 Mine, Preparations - Buildings & Surface Waterline Equipment - Mine cars, Track, Airline Water Line, Machines & Steel 300' Drifting @ \$75 Caterpillar plowing & Servicing Supervision, Board, Transportation sub-total	\$4,000. 5,000. 23,000.	32,000. 2,000. 3,000.	37,000. \$54,000.
			•

	Sub-total	\$54,000.
1st PHASE SUMMER PROGRAM Chambers Access Road - 800' partly rock Buildings 200' Cross Cut & Drift	\$3,000. 2,000. 15,000.	20,000.
Kaslo Claim Access Road 2,000' Bridge Work at Creek 300' Diamond Drilling	1,000. 1,000. 3,000.	5,000.
Purcell Claim Access Road 700' Trenching	1,000. 2,000.	3,000.
New Denver Claim 500' Diamond Drilling		5,000.
Reco-Goodenough #8 Tunnel Rehabilitation & Examination #8 and #7 Levels		4,000.
Geophysical Examination plus Geologic Assaying Field Office Field Supervision & Engineering Room & Board plus Transportation Accounting, Purchasing, Legal Fees Telephone and Management	cal	10,000. 1,000. 1,000. 5,000. 3,000.
		\$117,000.

Above estimates for 1st Phase are for a period of three months commencing May 1, 1969, and is the first phase of a following program, depending on results of the initial work.

Underground work at the No. 1 Mine and on the Chambers Claim is to test downward extensions of ore showings described in my Report dated September 23, 1968.

The examination of the lower levels of the Reco-Goodenough Mine is to make further checks as to the advisability of advancing the No. 8 level under the No. 7 Level. This is indicated in the Report and can be provided for in the second phase of the program of \$90,000.

The diamond drilling on the New Denver Claim is to test the downward extension of the Deadman Vein and drilling on the Kaslo Claim the extension of the Discovery Vein. The Purcell Vein is highly regarded and initial work is to test this vein in a more favorable geological location. The follow-up of these initial expenditures will be according to their merits.

Amount of Expenditures under "Geophysical Examination" will be on the basis of results. Test lines will be run initially across outcrops of known veins to determine the most appropriate method or methods.

It is more economical to have employees live in New Denver and Silverton rather than operating a boarding house at the property. Transportation has to be provided for these men from New Denver to their working places.

The recent acquisition of the Bluebird and Cody-Reco Groups allow for much more freedom in exploration of the Reco Silver, with some of the ore indications actually on the acquired ground. All expenditures including a second phase amount of \$90,000. are fully recommended.

Respectfully submitted,

W. S. Ellis,

Professional Mining Engineer.

WSE:bf