COPY OF REPORT ON

" SOCIETY GIRL "
MINE

BY L. K. ARMSTRONG M. E.

720 Peyton St.
Spokane, Wn.

82-G-5

(COPY)

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SOCIETY GIRL MINE
East Kootenay, B.C.

Location.

The Society Girl Mine is located in the East Kootenay Division of British Columbia, is about two miles South of the town of Moyie on the East shore of Lower Moyie Lake, through which passes the Crow's Nest branch of the Canadian Pacific Railway. The mine is at an elevation of about 5000 ft. and some 2000 ft. above the lake. It is connected with the railroad at Moyie by a Government wagon road, of easy grade and all down grade toward the lake.

Property.

Originally the property consisted of seven claims, but there are now only two claims in the group, namely; The Society Girl and Black Pine, the area of which is about 94 acres with approximately 3000 ft. on the strike of the vein system. The two principal veins traverse the property.

Timber and Water.

The surface is fairly covered with forest, a portion of which is in merchantable sizes, in addition to which there is a supply which will last some years on adjacent ground. There is sufficiency of water for domestic and steam purposes on the premises. A stream rising on the property is joined by another at a distance of some 3000 ft. where ample water can be controlled for future milling operations and domestic uses. The site is a good one on which to build a permanent camp and a mill.

ansportation.

A shorter and better route to the railway lies along the stream upon which the permanent camp will be built, as this discharges it's water into the Moyie River just below the lake

near Aldridge Station. A spur of the railroad may be run up the stream for a distance to connect with a wagon road or tramway from the lake. The present route is satisfactory for present purposes and is about 3.5 miles in length. The railroad can deliver ore to the smelter at Trail or across the border to American Smelters and refineries.

Geology

Canadian geologists have classified the geology of the region and have correlated it with the nomenclature adopted by the U.S.G.S. The following table indicated the relation.

Purcell Range, B.C. Daly-Memoir 38. Canadian Geological Survey	Coeur D'Alene Dist. Calkins-Prof. Paper 62. U.S. Geological Survey	Cabinet Range, Mont. Calkins-Bulletin 384,- U.S.G. Survey.
Creston 5,000 ft.	St. Regis 1,000 ft. Revett, 1,000 ft. Burke, 2,000 ft.	Ravalli, 8,000 ft.
Aldridge, 8,000 ft.	Prichard 8,000 ft.	Prichard 8,000 ft.

Geology, (Cont'd.)

The Aldridge is made up of dark grey argillaceous Quartzites which weather to a rusty gray.

The Creston is made up of greyish colored Quartzite, weathering grey. The mine lies within the Aldridge area, the surface appearing to be near the top of the formation which to the Eastward a short distance passes under the Creston. The Aldridge is considered the oldest Purcell series, with Creston, Kitchener, Siyeh, Purcell sills and lavas, and the Gateway formations, in their order upward, consituting the remainder of the series. All are Pre-Cambrian.

Memoir 76 -- Canadian Geological Survey, Dr. S.J. Schofield says of the ore deposits of this section: "All the ore deposits in the Moyie area are connected with two main parallel fissures striking a little North of West and dipping on an average 70 degrees to the south. They cross the axis of the anticline composed of the Aldridge formation. These two fissures occur on both the east and west sides of the lake and it is probable that they occur in the rock formation under the lake. The walls bounding the fissures show very little evidence of relative displacement, the greatest movement observed being 18 ins; however, in such a homogeneous series of Quartzites the detection of such a movement might be impossible." The development of the St. Eugene Mine appears to conclusively indicate that much of the mineralization lies in the cross fissures between the two parallel east-west veins which connect with both at nearly right angles. Again citing Schofield; "the ore-bodies are replacement deposits in the heavy-bedded purer quartzites and are restricted to the fractured area between the two main fissures. Where the fissures cross the more argillaceous Quartzites, the veins are narrow and usually filled with quartz, containing small quantities of sulphides." Speaking of the "Society Girl" claims, Dr. Schofield says; "They adjoin the eastern boundary of the St. Eugene Consolidated. The formation in which the deposits occur, is the oldest sub-division of the Purcell series called the Aldridge formation, which here strikes north and south with a dip 25 degrees to the east and forms the eastern limb of the anticline. The vein is narrow where it traverses the thin-bedded argillaceous quartzites and widens out in the heavier bedded Quartzites."

"The upper workings exposes an oxidized ore-body consisting of cerussites and pyromorphite, both massive, and in beautiful crystals."

"The cerussite is often imbedded in dense masses of limonite. The oxidized ore zone is a rare occurrence in East Kootenay. The unoxidized or primary ore, consisting of galena and zinc-blende with little or not gangue exposed in the lower tunnel, which penetrates the ore-body 250 ft. below the surface." At present the ore is hand-sorted and then sent to the Smelter at Trail for treatment, For the year 1911 up to the end of September the total output of the mine amounted to about 400 tons. The galena carries 1 oz. silver to 4% of lead, while the oxidized ores carry 1 oz. of silver $5\frac{1}{2}$% of lead.

Shipments.

I have (no) accurate knowledge of the total tonnage shipped from this mine, but have been assured that there were twenty-five carloads or more. Such records as I have been able to obtain I have copied and include at the end of this report.

Development

The development consists of two principal tunnels, both crosscuts run to intersect the veins, drifts along the south vein on both levels, and an upraise connecting the tunnels, with a short drift on the north vein on the No. 2 tunnel. The upper or No. 1 tunnel is about 380 ft. below No. 1 (Note: Schofield says 250 ft. below the surface) and 450 ft. below the outcrop, I am informed. The drift along the upper level is about 300 ft. long and on the lower level the drift is 1,000 ft. long with about 2,000 ft. of virgin ground easterly yet to be explored. This is all on the south vein from which all shipments were made as well. Some twenty five cars of ore have been shipped from the property and there is considerable milling grade tonnage on the dumps with around ten tons of high-grade. While there is no blocked ore remaining in the mine, there is ore of all grades along both levels at different points and the connecting shaft will render considerable tonnage while it is being enlarged and straightened. There are several points on both levels where development could be profitably carried on and I am confident a considerable tonnage of both high and low grade ore can be won.

Enrichment Zone

For the purpose of determining the character and quality of the ore at several points, rather than attempting to undertake block sampling. (owing to the conditions in which the ore was left,) I first went into No. 1 level, thence up the raise and it's laterals, securing typical samples, numbered as follows: No. 1 (73) hard carbonate, No. 2, (74) soft carbonate. No. 3 (72) mixed carbonate. No. 4 (75) hard carbonate. Where these samples were taken, about 15 ft. on the dip, above No. 1 level, the excavated portion of the ore body was about 12' x 20' x 4' but there was abundant evidence that the extremities of the ore body had not been reached in any direction. Along the strike of the vein easterly there was a good example of the vein narrowing down in the thin-bodies argillite where the face was exposed with but 12" to 18" hard carbonate. Upward, the ore shoot has been excavated to the surface with ore showing at nearly all points, of medium, low grade. Westerly the showing continued into the face of the drive and on the footwall side there was more or less ore.

Cross Fissures

Just here, also, there is a strong appearance of the cross fissure which, maybe, aided in the enrichment as it disappears into the north side. It affords an excellent place to start a drive toward the north vein some 200 ft. away. If the behavior is similar to conditions in St. Eugene ground westerly, ore will be found along the course of the drive.

Ore Shipments

At this point, from the floor of the tunnel to the surface which is approximately 70 ft., I have been reliably informed that there were 17 cars of ore excavated and shipped in addition to the low grade ore remaining on the dumps. Whatever low grade tonnage may have been taken out was not stated. There are striking evidences that the dimensions of this ore body have never been determined. Examination of the dump disclosed a considerable quantity of ore, some of which can be hand sorted and shipped, the remainder to wait some form of local treatment.

No. 2. Tunnel

The lower tunnel, called No. 2, or main adit, is about 380 ft. below No. 1 vertically and so, 450 ft. below the outcrop. It is a crosscut driven northerly, cutting in succession the south and north veins, the first about 1100 ft. from the portal and the latter 200 ft. beyond. On the south vein a drift has been run westerly about 650 ft. and easterly nearly 400 ft. About 200 ft. westerly from the intersection of tunnel and south vein, an upraise has been extended to No. 1, level through ore for the most part, at the bottom of which there is a stope about 150 ft. along the tunnel by 50 ft. high, the shipping ore received therefrom being some of the 25 carloads reported previously, the low grade remaining on the dump.
The ore continues downward below the floor of the tunnel, being of unknown dimensions, About 250 ft. further westward a small stope has been excavated from which some ore has has been removed but no reasonable search was made to determine the area of enrichment. The westerly face of the drift is near the property line. The ore shoot at the upraised is of unknown dimensions from surface to floor of No. 2 tunnel, although in places it has been more or less determined. Gophering has been employed, indicating leasers whose only ambition was to remove the high grade ore with the least amount of dead work. Easterly along the drift from the crosscut intersection there are two ore showings, one being about 100 ft. easterly and the other some 350 ft. distant; both appearing to have their largest diameter downward; in fact, they seem to extend to no great distance upward but are strong in the floor. The vein extends eastward some 2,000 ft. beyond the face of the drift before reaching the east property line; therefore, may be prospected for that distance to excellent advantage. To determine the character and value of the ore which has been removed from a shallow winze sunk in the most easterly ore shoot, I took a sample from a ton sack lot prepared for shipment, which is No. 5 (79) in the table of analyses below, the value being represented in the sulphides.

North Vein

But little work has been done on the North vein on this level. To the west a drift has been run about 25 ft. and a small stope started from which it is reported some ten tons of ore (zinc) was extracted, being left on the dump. To the east the drift was run nearly fifty feet along the course of the vein, constituting all the work done on the vein.

Analyses

From samples taken as indicated above, the following analyses were made.

Number	Character	Ag. ox.	Cu%	PB %	F%	Ins.%	S%	Zn%
1. (73)	Hard. Carb.	12.0	Nil	51.2	0.0	32.2	0.0	0.5
2. (74)	Soft. Carb.	13.2	2.4	9.0	0.0	55.7	0.0	nil
3. (72)	Mixd. Carb.	1.2	Nil	4.4	2.4	69.2	0.1	Tr.
4. (75)	Hard. Carb.	6.4	Nil	38.7	5.9	37.4	0.0	Tr.
5. (79)	Sulphide	5.6	Nil	31.5	3.2	52.1	5.1	Tr.

While these samples represent types only and not tonnages, when supported by the evidences in the mine, of extensions of ore beyond the mines areas at many points, it appears that but a small capital outlay will be required to put the property into production again. If the ore bodies are at all similar to those in the St. Eugene, it is certain to prove a profitable proposition. (operation).

Improvements and Equipment

There are several buildings on the ground that can be put into habitable condition at low cost, and with but little additional expenditure for equipment and supplies the mine can be started. The first work to be done should be the upraise, which should be enlarged and straightened, the waste and ore being dropped down to No. 2 level and trammed to the surface. It will not even be necessary to lay track for the present, as a light

track reaches nearly all parts of the mine on the lower level, and there is a car which will answer temporary requirements while definite facts respecting the ore reserves are established and the mine is being put into better condition for carrying on, after which the permanent layout can be determined upon.

Prospecting

In connection with the enlargement and straightening of the shaft, some prospecting will be advisable at intervals, to determine the nature and lateral extend of the ore body between the surface and the 450 ft. or No. 2 level. Prospecting of this and other ore bodies on the downward extensions will require machinery when pumping is demanded, so that, with some additional expense, drills, power, and hoisting and pumping machinery will be required. Later, the track should be relaid with heavier steel in portions of the mine where track is required and the light rail can be employed in the new workings. On the No. 1 level it would be advisable to drift on the south vein and to drive northerly on the cross vein near the upraise. Drifting eastward, prospecting at the point where the cross vein may be found, and sinking on the ore showing so long as the water will permit, should constitute the first work on the No. 2 level. All these points are now in one except the east face of the south vein on No. 2 level. On the north vein it would be advisable to drift both ways on the vein in orderly sequence or as soon as the revenue from the ore permitted.

At the proper time and place a third tunnel can be run from the south to cut the veins at some distance below No. 2 level. The portal of this tunnel would be in the vicinity of a suitable millsite where two streams join, which may be impounded to supply sufficient water for all purposes. The permanent camp may also be located here, and timber is to be found on the adjacent ground. As previously stated also, the distance to the railroad would be reduced by certain spur connections with a wagon road from this point. There is promise of future electric power connections. On additional pages I am quoting from assays and carload shipments made during the course of operations. I am also quoting from the Annual reports of the Minister of Mines for British Columbia of several different years.

Attached are blueprints in approximately or exact scale, as indicated, and showing the relation of the Society Girl and Black Pine claims, to other claims of this area.

Signed by,
L.K. Armstrong, Mining Engineer.

Dated at Spokane, Wash.
November 30, 1923.

RETURNS ON SHIPMENTS AND ASSAY COPIES
HALL MINING & SMELTING CO.

Car No.	Date	Nt. Wgt.	Ph.%	Ag. Oz.	Zn.%	Ca.%	Ins.%	FE%	S%	H2O%
1-33152	10/12/0	35911 #	58.5	11.0						3.3
2-58656	2/8/1	64201 #	60.1	12.0						4.0
3-33216	2/12/1	45391 #	59.0	15.4						3.5

CONSOLIDATED MINING & SMELTING CO.

4-132932	12/22/10	96969 #	34.2	6.8	Tr.	0.4	48.0	1.7	0.4	3.7
5- 92016	2/16/11	72066 #	48.4	13.9	11.4	0.4	24.0	2.3	12.9	3.5
6- 91310	3/6 /11	52605 #	57.9	16.5	8.3	0.8	22.0	2.0	13.0	1.6
7- 37278	6/5 /11	51433 #	49.0	12.8	8.0	0.6	25.8	2.1	6.7	0.9
8-134836	6/3 /11	45949 #	51.2	14.7	6.6	-	-	-	9.3	0.5
9- 41474	8/13/11	53456 #	52.4	14.9	10.7	0.7	17.2	2.4	17.2	1.3
10-	9/ 8/11	47773 #	43.0	13.1	5.0	-	-	-	6.5	1.5
11-134706	8/19/12	52701 #	28.8	6.5	-	-	-	-	-	0.9
12-140752	8/30/12	54257 #	29.3	9.3	1.0	-	53.6	2.0	1.5	0.3

NET SMELTER RETURNS ON LOTS

No. 1 Hall	$272.05	No. 2 Hall	$349.58	No. 3 Hall	$300.08
No. 4 CM&S Co.	252.28	No. 5 CM&S	347.98	No. 6 CM&S	374.31
No. 7 "	313.52	No. 8 "	341.62	No. 9 "	353.68
No.10 "	306.43	No.11 "	260.32	No.12 "	404.64

CY CONS. MINING & SMELTING CO. June 6, 1919

Character	PB	Ag. oz.	Cu%
No. 1 Crystallized	48.8	2.5	0.2
No. 2 Cargonate	21.9	7.0	0.5
No. 3 Phosphate	66.2	3.8	2.3
No. 4 Gelena	83.7	29.0	-
No. 5 Conglomerate	54.5	12.2	-

June 12, 1919 Hand Samples

Number	PB%	Ag. oz per ton	Cu.%
1	24.8	28.7	nil
2	27.0	12.5	nil
3	31.3	10.1	nil
4	28.9	6.2	nil
5	34.9	14.0	nil
6	36.0	4.2	nil
7	25.6	4.5	nil
8	8.9	25.9	5.1
9	31.5	10.3	4.0
10	3.7	14.6	8.6

CONSOLIDATED MINING & SMELTING CO. ANALYSES

Mark	Date	PB%	Ag. oz.	Cu.%	Zn.%	S.%	H20
41474	8.13.11	52.4	14.9	-	10.7	14.0	1.3
38764	9. 8.11	43.0	13.1	-	5.0	6.5	1.5
Lot 1	1. 8.11	66.9	17.7				
Dry	5. 6.11	50.8	14.9		8.2		
31310	3.6.11	52.9	16.5		8.3		1.6
134836	8. 3.11	51.2	14.75		6.6	9.3	0.5

Samples taken from hanging wall in winze, no name, no date.

No.	Identification	PB%	Ag. oz.	Cu%
1.	Hanging in winze	61.0	13.8	2.5
2.	J.F.F(arrell).	32.7	9.4	Nil
3	Near water line	58.8	67.0	7.2

From sacked carbonates. Upper tunnell, samples by A.G. Langley, Dist. Res. M.E. Revelstoke, B.C.

Grab sample Pb% 53.2 Ag.oz. per ton - 10.3 Zn% 0.8

From Annual Reports of Minister of Mines, British Columbia

1899. 225 ft. of tunnel and shaft.
1900. First shipment indicated. Work continued.
1901. Crosscut tunnel 250 ft. shaft 50 ft.
1902. Lowlead price, little done.
1903. No ore shipped.
1908. Work progressing steadily. (
1909. ..... The Society Girl group consists of seven Crown granted mineral claims situated a couple of miles to the southeast of Moyie, just over the summit of the first range of hills that lie to the east of Moyie Lake, and at an altitude offrom approximately 5000 to 5200 ft. at the upper workings, or 2000 ft. above the lake. The property is owned and operated by the Society Girl Mining Co., a company composed of working miners and prospectors, of which Charles Farrell is the moving spirit. The Company in August 1909 was employing 11 men, who were being paid chiefly in stock of the Company, so that the enterprise has assumed practically the form of a miner's co-operative partnership. The property is reached by a wagon road from Moyie by following up the St. Eugene mine road to the south along the western slope of the hill for a mile. The company is without funds to attempt any extensive development but has done a great deal of work such as can be accomplished by prospectors by their own exertions. The workings are largely superficial, consisting chiefly of open cuts and prospect shafts of no great depths, in many of which promising ore was found. A tunnel has been run in 250 ft. above which an amount of stoping has been done to a height of 50 ft. when the surface was reached. From these workings it is reported by the foremen about 700 tons of ore have been extracted. Some 400 ft. lower than the upper tunnel at that time, struck ore, nor was ore expected until the tunnel had been driven 850 ft. at which distance it was hoped that the ore body from the upper tunnel would be encountered; it was expected that this work would be completed by the fall. The country along the summit of this range of hills is much broken, thus affecting the vein on this property, which is somewhat irregular in the upper workings; it is hoped as the workings get lower down the hill, that the strata will be found more undisturbed, as was the case in the St. Eugene. The ore is essentially galena, carrying about 1/2 oz. silver to the percent of lead, occuring in a Quartz gangue, associated with which some zinc is present. In these surface workings the galena has been much oxidized and affected by surface influences, so that the ore as mined is chiefly lead carbonates with some galena. In the workings a variety of secondary minerals were noted, some very pretty crystals of pyromorphite being seen with occasionally 70 ounces silver values. The property is at present a promising prospect, and the result of work in the lower tunnel will largely determine it becomes a mine.
1910. Worked continually.
1911. Steadily going ahead, shipping small quantity of ore -- not a regular shipper.
1917. Work was carried on at this property during the year, a few men being employed. The showings are said to be very encouraging and further shipments will probably be made in the near future. The property is situated near Moyie close to the St. Eugene mine. It is an old working which has been steadily operated for a number of years and from which a considerable quantity of ore has been shipped in the past.
1920. Reported a nice shoot of silverlead ore struck.

PROPERTY:

The holdings of the Company are located at Moyie, B.C., within three miles of the Canadian Pacific Railway and close to smelting facilities at Trail, B.C. and Idaho. The property adjoins the eastern boundary of the St. Eugene Consolidated Mining Co., which, according to a Dominion government report, (Memoir 76) produced 5,365,232 ounces of silver and 229,305,720 pounds of lead. The Company is in a direct line with the St. Eugene workings with approximately 3,000 feet on the strike of the vein system. The two principle veins traverse the property.

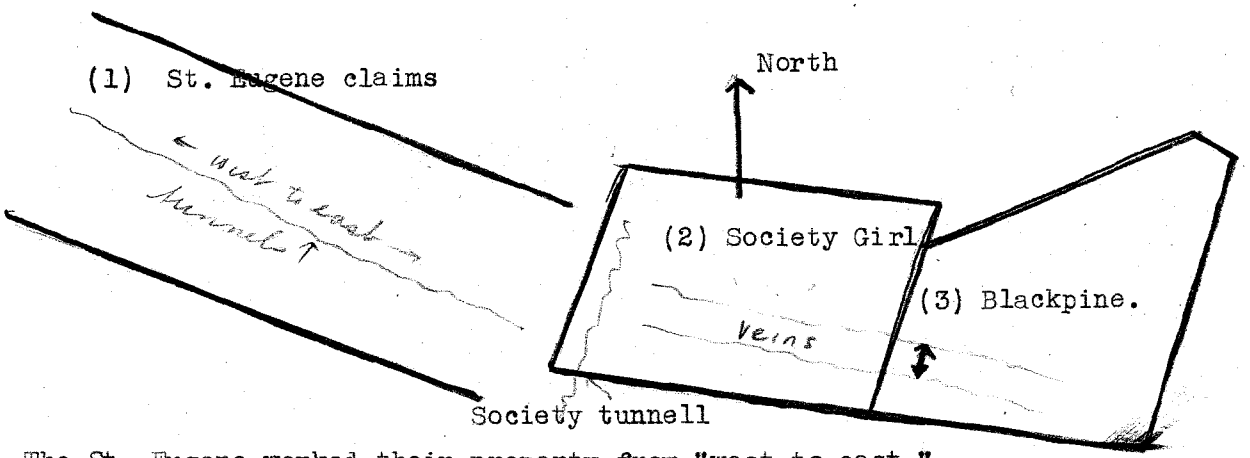
GEOLOGY:

The silver-lead deposits in the field occur in the Aldridge formation. Some distance to the north, the world-famous Sullivan mine at Kimberley, B.C., which is operated by the Consolidated Mining and Smelting Co., derive their tremendous output from this same formation.

DEVELOPMENT:

The development consists of two principle tunnels, (both cross-cutting to intersect the veins); drifts along the south vein on both levels, and an uprise connecting the tunnels. There is ore of all grades along both levels.

One of the interesting features of this property is that most of the work done has been of an exploratory nature and that the ore that was taken from the mine was merely that encountered while "intersecting the veins," that is going across the property and were then going to work the veins from this position. At that early stage of the mining game, it proved very expensive and their undoing. It must be remembered that this mine is also two thousand feet below the lake to the top of the mountain. This means that the Society Girl can possibly be made to yield not only across the property but also three thousand feet downwards.



1 -- The St. Eugene worked their property from "west to east."

2 - The tunnel of the Society Girl runs from "south to north", intersecting the veins and actually, from information I have gathered, the veins really haven't been worked from "west to east."

RIDGEWAY R. WILSON & ASSOCIATES
MINING ENGINEERS

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BY L. K. ARMSTRONG M.E.

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Location

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build a permanent camp and a mill.

Transportation

A shorter and better route to the railway lies along the stream upon which the permanent camp will be built, as this discharges its water into the Moyie River just below the lake near Aldridge Station. A spur of the railroad may be run up the stream for a distance to connect with a wagon road or tramway from the lake. The present route is satisfactory for present purposes and is about 3.5 miles in length. The railroad can deliver ore to the smelter at Trail or across the border to American Smelters and refineries.

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I have (no) accurate knowledge of the total tonnage shipped from this mine, but have been assured that there were twenty-five carloads or more. Such records as I have been able to obtain I have copied and include at the end of this report.

Development

The development consists of two principal tunnels, both crosscuts run to intersect the veins, drifts along the south vein on both levels, and an upraise connecting the tunnels, with a short drift on the north vein on the No. 2 tunnel. The upper or No. 1 tunnel is about 380 ft. below No. 1 (Note: Schofield says 250 ft. below the surface) and 450 ft. below the outcrop, I am informed. The drift along the upper level is about 300 ft. long and on the lower level the drift is 1,000 ft. long with about 2,000 ft. of virgin ground easterly yet to be explored. This is all on the south vein from which all shipments were made as well. Some twenty-five cars of ore have been shipped from the property and there is considerable milling grade tonnage on the dumps with around ten tons of high grade. While there is no blocked ore remaining in the mine, there is ore of all grades along both levels at different points and the connecting shaft will render considerable tonnage while it is being enlarged and straightened. There are several points on both levels where development could be profitably carried on and I am confident a considerable tonnage of both high and low grade ore can be won.

Enrichment Zone

For the purpose of determining the character and quality of the ore at several points, rather than attempting to undertake block

sampling, (owing to the conditions in which the mine was left,) I first went into No. 1 level, thence up the raise and its laterals, securing typical samples, numbered as follows: No. 1 (73) hard carbonate, No. 2, (74) soft carbonate. No. 3 (72) mixed carbonate. No. 4 (75) hard carbonate. Where these samples were taken, about 15 ft. on the dip, above No. 1 level, the excavated portion of the ore body was about 12' x 20' x 4' but there was abundant evidence that the extremities of the ore body had not been reached in any direction. Along the strike of the vein easterly there was a good example of the vein narrowing down in the thin-bodies argillite where the face was exposed with but 12" to 18" hard carbonate. Upward, the ore shoot has been excavated to the surface with ore showing at nearly all points, of medium, low grade. Westerly the showing continued into the face of the drive and on the footwall side there was more or less ore.

Cross Fissures

Just here, also, there is a strong appearance of the cross fissure which, maybe, aided in the enrichment as it disappears into the north side. It affords an excellent place to start a drive toward the north vein some 200 ft. away. If the behavior is similar to conditions in St. Eugene ground westerly, ore will be found along the course of the drive.

Ore Shipments

At this point, from the floor of the tunnel to the surface which is approximately 70 ft., I have been reliably informed that there were 17 cars of ore excavated and shipped in addition to the low grade ore remaining on the dumps. Whatever low grade tonnage may have been taken out was not stated. There are striking evidences that the dimensions of this ore body have never been determined. Examination of the dump disclosed a considerable quantity of ore, some of which can be hand sorted and shipped, the remainder to wait some form of local treatment.

No. 2 Tunnel

The lower tunnel, called No. 2, or main adit, is about 380 ft. below No. 1 vertically and so, 450 ft. below the outcrop. It is a cross cut driven northerly, cutting in succession the south and north veins, the first about 1100 ft. from the portal and the latter 200 ft. beyond. On the south vein a drift has been run westerly about 650 ft. and easterly nearly 400 ft. About 200 ft. westerly from the intersection of tunnel and south vein, an upraise has been extended to No. 1, level through ore for the most part, at the bottom of which there is a stope about 150 ft. along the tunnel by 50 ft. high, the shipping ore received therefrom being some of the 25 carloads reported previously, the low grade remaining on the dump.
The ore continues downward below the floor of the tunnel, being of unknown dimensions. About 250 ft. further westward a small stope has been excavated from which some ore has been removed but no reasonable search was made to determine the area of enrichment. The westerly face of the drift is near the property line. The ore shoot at the

upraised is of unknown dimensions from surface to floor of No. 2 tunnel although in places it has been more or less determined. Gophering has been employed, indicating leasers whose only ambition was to remove the high grade ore with the least amount of dead work. Easterly along the drift from the crosscut intersection there are two ore showings, one being about 100 ft. easterly and the other some 350 ft. distant; both appearing to have their largest diameter downward; in fact, they seem to extend to no great distance upward but are strong in the floor. The vein extends eastward some 2,000 ft. beyond the face of the drift before reaching the east property line; therefore, may be prospected for that distance to excellent advantage. To determine the character and value of the ore which has been removed from a shallow winze sunk in the most easterly ore shoot, I took a sample from a ton sack lot prepared for shipment, which is No. 5 (79) in the table of analyses below, the value being represented in the sulphides.

North Vein

But little work has been done on the North vein on this level. To the west a drift has been run about 25 ft. and a small stope started from which it is reported some ten tons of ore (zinc) was extracted, being left on the dump. To the east the drift was run nearly fifty feet along the course of the vein, constituting all the work done on the vein.

Analyses

From samples taken as indicated above, the following analyses was made.

No.	Character	Ag.ox.	Cu%	PB%	F%	Ins.%	S%	Zn%
1.(73)	Hard Carb.	12.0	Nil	51.2	0.0	32.2	0.0	0.5
2.(74)	Soft Carb.	13.2	2.4	9.0	0.0	55.7	0.0	nil
3.(72)	Mixd Carb.	1.2	Nil	4.4	2.4	69.2	0.1	Tr.
4.(75)	Hard Carb.	6.4	Nil	38.7	5.9	37.4	0.0	Tr.
5.(79)	Sulphide	5.6	Nil	31.5	3.2	52.1	5.1	Tr.

While these samples represent types only and not tonnages, when supported by the evidences in the mine, of extensions of ore beyond the mines areas at many points, it appears that but a small capital outlay will be required to put the property into production again. If the ore bodies are at all similar to those in the St. Eugene, it is certain to prove a profitable proposition. (operation).

Improvements and Equipment

There are several buildings on the ground that can be put into habitable condition at low cost, and with but little additional expenditure for equipment and supplies the mine can be started. The first work to be done should be the upraise, which should be enlarged and straightened, the waste and ore being dropped down to No. 2 level and trammed to the surface. It will not even be necessary to lay track for the present, as a light track reaches nearly all parts of

the mine on the lower level, and there is a car which will answer temporary requirements while definite facts respecting the ore reserves are established and the mine is being put into better condition for carrying on, after which the permanent layout can be determined upon.

Prospecting

In connection with the enlargement and straightening of the shaft, some prospecting will be advisable at intervals, to determine the nature and lateral extend of the ore body between the surface and the 450 ft. or No. 2 level. Prospecting of this and other ore bodies on the downward extensions will require machinery when pumping is demanded, so that, with some additional expense, drills, power, and hoisting and pumping machinery will be required. Later, the track should be relaid with heavier steel in portions of the mine where track is required and the light rail can be employed in the new workings. On the No. 1 level it would be advisable to drift on the south vein and to drive northerly on the cross vein near the upraise. Drifting eastward, prospecting at the point where the cross vein may be found, and sinking on the ore showing so long as the water will permit, should constitute the first work on the No. 2 level. All these points are now in one except the east face of the south vein on No. 2 level. On the north vein it would be advisable to drift both ways on the vein in orderly sequence or as soon as the revenue from the ore permitted.
At the proper time and place a third tunnel can be run from the south to cut the veins at some distance below No. 2 level. The portal of this tunnel would be in the vicinity of a suitable millsite where two streams join, which may be impounded to supply sufficient water for all purposes. The permanent camp may also be located here, and timber is to be found on the adjacent ground. As previously stated also, the distance to the railroad would be reduced by certain spur connections with a wagon road from this point. There is promise of future electric power connections. On additional pages I am quoting from assays and carload shipments made during the course of operations. I am also quoting from the Annual reports of the Minister of Mines for British Columbia of several different years.
Attached are blueprints in approximately or exact scale, as indicated, and showing the relation of the Society Girl and Black Pine claims, to other claims of this area.

Signed by,
L.K. Armstrong, Mining Engineer.

Dated at Spokane, Wash.
November 30, 1923.

RETURNS ON SHIPMENTS AND ASSAY COMIES
HALL MINING & SMELTING CO.

Car No.	Date	Nt.Wgt.	Ph.%	Ag.Oz.	Zn.%	Ca.%	Ins%	FE%	S%	H2O%
1-33152	10/12/0	35911 #	58.5	11.0						3.3
2-58656	2/8/1	64201 #	60.1	12.0						4.0
3-33216	2/12/1	45391 #	59.0	15.4						3.5

CONSOLIDATED MINING & SMELTING CO.

Car No.	Date	Nt.Wgt.	Ph.%	Ag.Oz.	Zn%	Ca.%	Ins%	FE%	S%	H20%
4-132932	12/22/10	96969#	34.2	6.8	Tr.	0.4	48.0	1.7	0.4	3.7
5- 92016	2/16/11	72066#	48.4	13.9	11.4	0.4	24.0	2.3	12.9	3.5
6- 91310	3/6/11	52605#	57.9	16.5	8.3	0.8	22.0	2.0	13.0	1.6
7- 37278	6/5/11	51433#	49.0	12.8	8.0	0.6	25.8	2.1	6.7	0.9
8-134836	6/3/11	45949#	51.2	14.7	6.6	-	-	-	9.3	0.5
9- 41474	8/13/11	53456#	52.4	14.9	10.7	0.7	17.2	2.4	17.2	1.3
10-	9/8/11	47773#	43.0	13.1	5.0	-	-	-	6.5	1.5
11-134706	8/19/12	52701#	28.8	6.5	-	-	-	-	-	0.9
12-140752	8/30/12	54257#	29.3	9.3	1.0	-	53.6	2.0	1.5	0.3

NET SMELTER RETURNS ON LOTS

No.1 Hall $272.05	No. 2 Hall $349.58	No. 3 Hall $300.08
No.4 CM&S Co. 252.28	No. 5 CM&S 347.98	No. 6 CM&S 374.31
No.7 " 313.52	No. 8 " 341.62	No. 9 " 353.68
No.10 " 306.43	No.11 " 260.32	No.12 " 404.64

CY. CONS. MINING & SMELTING CO. June 6, 1919

Character	PB	Ag. oz.	Cu%
No. 1 Crystallized	48.8	2.5	0.2
No. 2 Cargonate	21.9	7.0	0.5
No. 3 Phosphate	66.2	3.8	2.3
No. 4 Galena	83.7	29.0	-
No. 5 Conglomerate	54.5	12.2	-

June 12, 1919 Hand samples

Number	PB%	Ag. oz. per ton	Cu.%
1	24.8	28.7	nil
2	27.0	12.5	nil
3	31.3	10.1	nil
4	28.9	6.2	nil
5	34.9	14.0	nil
6	36.0	4.2	nil
7	25.6	4.5	nil
8	8.9	25.9	5.1
9	31.5	10.3	4.0
10	3.7	14.6	8.6

CONSOLIDATED MINING & SMELTING CO. ANALYSES

Mark	Date	PB%	Ag.oz.	Cu.%	Zn.%	S.%	H2O
41474	8.13.11	52.4	14.9	-	10.7	14.0	1.3
38764	9. 8.11	43.0	13.1	-	5.0	6.5	1.5
Lot 1	1. 8.11	66.9	17.7				
Dry	5. 6.11	50.8	14.9		8.2		
31310	3. 6.11	52.9	16.5		8.3		1.6
134836	8. 3.11	51.2	14.75		6.6	9.3	0.5

Samples taken from hanging wall in winze, no name, no date.

No.	Identification	PB%	ag. oz.	Cu%
1.	Hanging in winze	61.0	13.8	2.5
2.	J.F. (Farrell).	32.7	9.4	Nil
3.	Near water line	58.8	67.0	7.2

From sacked carbonates. Upper tunnel, samples by A.G. Langley, Dist. Res. M.E. Revelstoke, B. C.

Grab sample PB% 53.2 Ag.oz. per ton - 10.3 Zn% 0.8

From Annual Reports of Minister of Mines, British Columbia.

1899. 225 ft. of tunnel and shaft.
1900. First shipment indicated. Work continued.
1901. Crosscut tunnel 250 ft. shaft 50 ft.
1902. Lowlead price, little done.
1903. No ore shipped.
1908. Work progressing steadily.
1909. The Society Girl group consists of seven Crown granted mineral claims situated a couple of miles to the southeast of Moyie, just over the summit of the first range of hills that lie to the east of Moyie Lake, and at an altitude of from approximately 5000 to 5200 ft. at the upper workings, or 2000 ft. above the lake. The property is owned and operated by the Society Girl Mining Co., a company composed of working miners and prospectors, of which Charles Farrell is the moving spirit. The Company in August 1909 was employing 11 men, who were being paid chiefly in stock of the Company, so that the enterprise has assumed practically the form of a miner's co-operative partnership. The property is reached by a wagon road from Moyie by following up the St. Eugene mine road to the south along the western slope of the hill for a mile. The company is without funds to attempt any extensive development but has done a great deal of work such as can be accomplished by prospectors by their own exertions. The workings are largely superficial, consisting chiefly of open cuts and prospect shafts of no great depths, in many of which promising ore was found. A tunnel has been run in 250 ft. above which an amount of stoping has been done to a height of 50 ft. when the surface was reached. From these workings it is reported by the foremen about 700 tons of ore have been extracted. Some 400 ft. lower than the upper tunnel at that time, struck ore, nor was ore expected until the tunnel had been driven 850 ft. at which distance it was hoped that the ore body from the upper tunnel would be encountered; it was expected that this work would be completed by the fall. The country along the summit of this range of hills is much broken, thus affecting the vein on this property, which is somewhat irregular in the upper workings; it is hoped as the workings get lower down the hill, that the strata will be found more undisturbed, as was the case in the St. Eugene. The ore is essentially galena, carrying about ½ oz. silver to the percent of lead, occuring in a Quartz gangue, associated with which some zinc is present. In these surface workings the galena has been much oxidized and affected by surface influences, so that the ore as mined is chiefly lead carbonates with some galena. In the workings a variety of secondary minerals were noted, some very pretty crystals of pyromorphite being seen with occasionally 70 ounces silver values. The property is at present a promising prospect, and the result of work in the lower tunnel will largely determine it becomes a mine.
1910. Worked continually.
1911. Steadily going ahead, shipping small quantity of ore--not a regular shipper.
1917. Work was carried on at this property during the year, a few men being employed. The showings are said to be very encouraging and further shipments will probably be made in the near future. The property is situated near Moyie close to the St.Eugene Mine. It is an old working which has been steadily operated for a number of years and from which a considerable quantity of ore has been shipped in the past.
1920. Reported a nice shoot of silverlead ore struck.

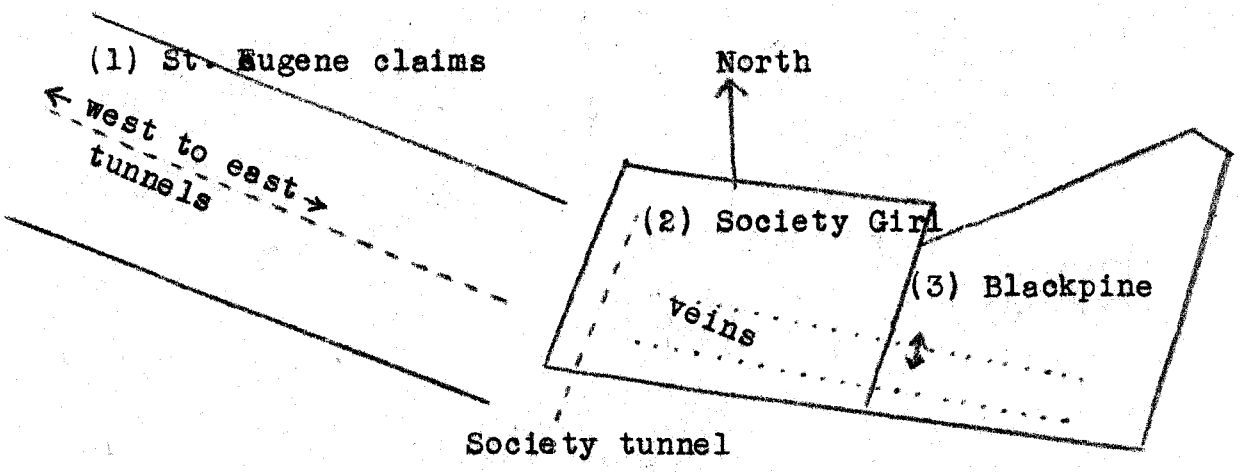
RIDGEWAY R. WILSON & ASSOCIATES
MINING ENGINEERS

PROPERTY The holdings of the Company are located at Moyie, B.C., within three miles of the C.P.R. and close to smelting facilities at Trail, B.C. and Idaho. The property adjoins the eastern boundary of the St. Eugene Consolidated Mining Co., which, according to a Dominion government report, (Memoir 76) produced 5,365,232 ounces of silver and 229,305,720 pounds of lead. The Company is in a direct line with the St. Eugene workings with approximately 3000 ft. on the strike of the vein system. The two principle veins traverse the property.

GEOLOGY The silver-lead deposits in the field occur in the Aldridge formation. Some distance to the north, the world-famous Sullivan mine at Kimberley, B.C., which is operated by the Consolidated Mining and Smelting Co., derive their tremendous output from this same formation.

DEVELOPMENT The development consists of two principle tunnels,(both cross-cutting to intersect the veins); drifts along the south vein on both levels, and an uprise connecting the tunnels. There is ore of all grades along both levels.

One of the interesting features of this property is that most of the work done has been of an exploratory nature and that the ore that was taken from the mine was merely that encountered while "intersecting the veins," that is going across the property and were then going to work the veins from this position. At that early stage of the mining game, it proved very expensive and their undoing. It must be remembered that this mine is also two thousand feet below the lake to the top of the mountain. This means that the Society Girl can possibly be made to yield not only across the property but also three thousand feet downwards.



1 -- The St. Eugene worked their property from "west to east."

2 -- The tunnel of the Society Girl runs from "south to north", intersecting the veins and actually, from information I have gathered, the veins haven't been worked from "west to east."