

QUALIFYING REPORT

ON

PURE SILVER MINES LIMITED

LOGJAM CREEK PROPERTY, YUKON

BY

A. C. A. HOWE & ASSOCIATES LTD.

Toronto, Ontario
Report No. 14

SEPTEMBER 30, 1966

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| DATED SEPTEMBER 16, 1966 | |

SUMMARY

The gold-silver property of Pure Silver Mines Limited is located in the Yukon about 10 miles north of mile 757 on the Alaska Highway. A tote road about 16 miles long connects the property to the highway. The total distance by road from the property to the rail terminus at Whitehorse, which connects to the deep water port at Skagway is about 180 miles.

The property consists of 19 claims totalling about 950 acres. Various companies over the years have spent approximately \$500,000.00 developing the property. There is a complete mining plant installed, an engineering office, housing and other facilities for 15 men. The value of the plant is estimated to be \$100,000.00.

Eight sub-parallel, quartz-carbonate veins containing gold, silver, lead and zinc with minor amounts of cadmium and bismuth are exposed on a steep mountain face. Approximately 2,000 feet of vein, containing the above minerals are exposed in veins 4, 5, 6, and 8. The remaining 4 veins are largely covered by talus.

In order to test the continuity of the veins at depth a crosscut was driven into the mountain approximately 800 feet below the crest of the vein outcrops. The No. 6 vein was cut by this cross-cut and drifted on for 86 feet. The vein is well defined and well mineralized over the length of the drift. The walls are solid and dilution will not be a problem. The east end of the drift averages 18.3 oz. silver, 0.183 oz. gold, 3.29% zinc, and 2.47% lead per ton over an average width of 2.9 feet and for a length of 40 feet. At the west end, the face assay gave 15.5 oz. silver, .06 oz. gold, 1.4% lead, 1.5% zinc. The assay results from the Whitehorse assay office are used in this report. Check assays by Technical Service Laboratories in Toronto gave slightly higher values on the average.

It is recommended that the No. 4, 6, and 7 veins be explored and developed by 1,400 ft. of drifting. These veins and nearby sub-parallel veins should be explored by 7,000 ft. of diamond drilling from the drifts. In addition, metallurgical testing of bulk samples should be carried out. The total cost of the above program is estimated as \$150,000.00

INTRODUCTION

A total of 3 days from August 23 to August 25, 1966, was spent on the property by R. J. Cathro, an independent consulting engineer from Whitehorse, Yukon. During this time, Cathro sampled the No. 6 vein in detail. I visited the property in July, 1965, and have examined Cathro's report as well as other reports and information on the property.

LOCATION AND ACCESS

The property is located at latitude $60^{\circ} 02'$ N and longitude $131^{\circ} 36'$ W. It is just two miles north of the B. C.-Yukon border and about 10 miles north of mile 757 on the Alaska Highway. At present, the property is reached by 4-wheel drive vehicle along a 16 mile bulldozed track from the highway.

TOPOGRAPHY

The property lies on the west flank of the Cassiar Mountains, which extend from British Columbia into the Yukon. The veins on the property are exposed on the north-east slope of a ridge, the crest of which rises to over 6,000 feet above sea level. The north slope of the ridge averages about 50° for a vertical distance of about 800 feet. This steep slope is almost entirely free of overburden, but because it is so steep, geological mapping and sampling of the veins in the face is difficult. The steep slope from the crest of the ridge gives way to a more gentle slope into the floor of the valley, which is at an elevation of about 4,500 feet. Total relief from the valley floor to the crest of the ridge is therefore,

about 1,500 feet. These topographic features will work to advantage should the veins be mined, as the ore can be extracted by gravity to a main haulage level driven from the floor of the valley.

The south slope of the ridge is less steep and is covered with talus over a good deal of its face.

PROPERTY

The property consists of 19 claims (Mac 1 to 19 inclusive), totalling approximately 950 acres.

HISTORY AND DEVELOPMENT

The property was discovered in 1944 by W. McKinnon and R. Puls for the Hudson Bay Mining and Smelting Company. In 1945, Hudson Bay drilled 8 holes totalling about 4,000 feet from the base of the steep part of the ridge. Only two of the holes were able to extend far enough into the mountain to reach the ore zone. These holes cut the downward extension of the Nos. 4 and 5 veins about 100 feet below the present workings which are on the 5,100' level. In 1962, Kootenay Base Metals did some surface trenching on the talus-covered south westerly slope. The company managed to pick up vein material in some of their trenches which indicated that the veins may be much longer than is indicated by exposures on the north face. In 1965, Macassa Gold Mines Limited drove an adit 675 feet into the mountain at an elevation of 5,100 feet about 800 feet below the crest of the ridge. From the end of the adit, Macassa drilled 6 holes totalling 2,600 feet. Core recovery in the vein zones was often poor and the holes were not

drilled far enough to test veins 1, 2, 3, 4, and 8. In 1966, a private company, Nilset Explorations Limited, was formed to finance the driving of a cross-cut to the No. 6 vein from the end of the Macassa adit. To date, Nilset has completed 300 feet of underground work which includes 86 feet of drifting on the No. 6 vein.

It is estimated from company records that since discovery approximately \$500,000.00 has been spent by various companies on the development of this property. Nilset has spent upwards of \$60,000.00

MINE SITE

There is ample open and flat ground in the valley at the base of the ridge containing the veins to establish a mining camp and mill. If sufficient ore is proven, the mine would be operated for a number of years from adits. The portal of the lowest possible adit would be about 1,300 feet below vein outcrop on the crest of the ridge. A mill and other facilities could be built near the portal of this adit.

WATER

There is adequate water within a mile of the proposed mine site to supply any mining operation that might be envisioned for the property.

TAILINGS DISPOSAL

There is adequate area in the valley in which to dispose of mill tailings.

WEATHER

The weather is typical of the southern Yukon region. The property is not in the snow belt and snow accumulations are usually less than 6 feet per year.

GEOLOGY

The area in the vicinity of the property is underlain by argillites, quartzites and limestones of Devonian age. These rocks have been cut by an intrusive complex that ranges in composition from dunite to granodiorite. This complex of intrusives lies near the western border of the Cassiar granodiorite batholith and probably represents border phases or offshoots from the batholith.

The property itself is underlain by Devonian sediments that have been cut by a diorite dike which is about 1,000 feet thick. The dike has chilled contacts and in places it has baked the country rocks to hornfels. As a result it is often difficult to locate the contact between intrusive and sediment. The dike strikes roughly NW - SW, and has a steep dip to the SW. The diorite has been cut by a series of cross fractures or fault zones. Some of these structures, particularly within the diorite, are mineralized with quartz and quartz-carbonate veins containing gold, silver, lead and zinc with minor amounts of cadmium and bismuth. The ore minerals include galena, sphalerite, freibergite, native gold, chalcopyrite, pyrite and arsenopyrite.

ASSAY RESULTS AND GRADES

Eight veins are exposed on the steep north face of the ridge. The best vein development is within the diorite dike and the veins can be seen to peter out in the sediments going north. A total of about 2,000 feet of vein, containing values in silver, gold, lead, and zinc, are exposed in the cliff face in veins 4, 5, 6, and 8. The remaining 4 veins in this face are largely covered by talus. It should be added that the favourable diorite on the south slope of the ridge is covered by talus. Trenching in this area found typical vein sulphides (in place) on the strike extension of the No. 6 and No. 7 veins.

Because of the steepness of the cliff face and because of leaching of the veins on the surface, it is most difficult to get reliable samples from the exposed veins.

In order to test the downward continuity of the veins, a cross-cut was driven to intersect the No. 6 vein on the 5,100' level, which is a vertical distance of 800 feet below the crest of the ridge. The no. 6 vein has been drifted on for a distance of 86 feet.

The vein is well defined and well mineralized over the length of the drift. The east section of the drift grades 18.3 oz. silver, 0.183 oz. gold, 2.47% lead and 3.29% zinc, over a 2.9 foot width for a distance of 40 feet. A drill hole about 75 feet ahead of this section of the drift gave 8 feet of ground core in the vein zone.

The vein at the west end of the drift assayed 0.06 oz. gold, 15.5 oz. silver, 1.4% lead, 1.5% zinc, 0.04% copper over a width of 1.3 ft. The west face is about 45 feet from a drill hole that gave 0.36 oz. gold, 27.4 oz. silver, 3.5% lead and 2.4% zinc, over 1.5 feet

(with 1.1 feet of missing core in the ore zone not included).

Between the east and west sections a 38 ft. length of vein averages 4.23 oz. silver. The main economic material are gold, silver, lead, and zinc. Spectrographic analyses of the sphalerite shows that it contains 2-3% cadmium.

EQUIPMENT AND PLANT

A trailer camp has been established in the valley, consisting of a bunkhouse, kitchen and dining room, and office and staff house. This camp is large enough to house and supply about a 15 man crew. There are also wood frame buildings for store room, change house, compressor house, and core shack.

The property is fully equipped for a small mining operation, consisting of two portable compressors, (600 cu. ft.), drills, cars, trammer, two mucking machines, air fan, rail and pipes.

Also, a 22 H.P. electric generator, a bulldozer, jeep and assorted snow vehicles.

The estimated replacement value of the equipment and plant is \$100,000.00

CONCLUSIONS AND RECOMMENDATIONS

The work done on the property of Nilset Mines Limited has indicated the possibility of gold-silver ore shoots in the No. 6 vein. This vein should be explored by drifting to its limits. Drifting should also be done on the No. 4 and No. 7 veins. These drifts could then be used as a

base for the diamond drilling of adjacent, sub-parallel veins nearby. It is recommended that the following work be done to develop the No. 6 vein and to explore the tonnage potential of adjacent veins:

| | |
|---------------------------------------|---------------------|
| 1,400 feet of drifting | \$ 84,000.00 |
| 7,000 feet of underground drilling | 56,000.00 |
| Metallurgical testing | <u>10,000.00</u> |
| TOTAL | <u>\$150,000.00</u> |

Further recommendations for work will have to await the completion of the proposed development program. Surface drilling has shown that mineralization similar to that quoted above, occurs in the veins down to 250 feet below the adit level (5,100 feet above sea level). Therefore, once a body of ore is proven above the present adit level, consideration should be given to a further depth testing of the veins by driving a second adit into the ore zone from the floor of the valley which is about 500 feet below the present adit, and 1,300 feet below the crest of the vein outcrop.

Respectfully submitted,

A. C. A. HOWE & ASSOCIATES LTD.,



A.C.A. Howe, P. Eng.

CERTIFICATE

I, A. C.A. Howe, of the City of Toronto, in the County of York, Province of Ontario, hereby certify that:

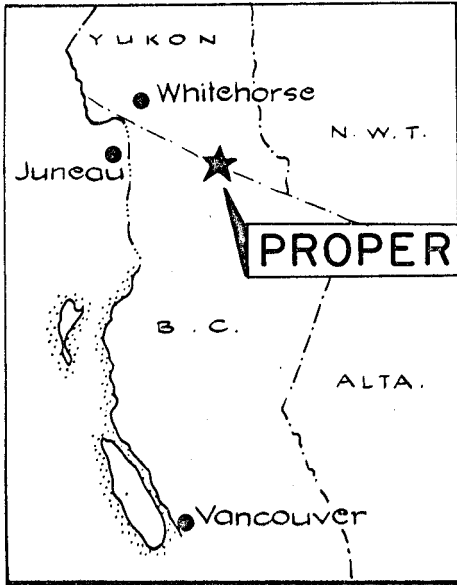
1. I am a Mining Engineer with offices at 826-159 Bay Street, Toronto, Ontario.
2. I am a graduate of London University, England, B. Sc. in 1949.
3. I am a member of the Association of Professional Engineers of Ontario.
4. I have no interest, direct or indirect, in either the property or securities of Pure Silver Mines Limited, nor do I expect to receive any such interest.
5. This report is based on an examination of company records, maps and sections, also on a visit to the property for several days in July, 1965.

DATED at Toronto, Ontario this 30th day of September, 1966.



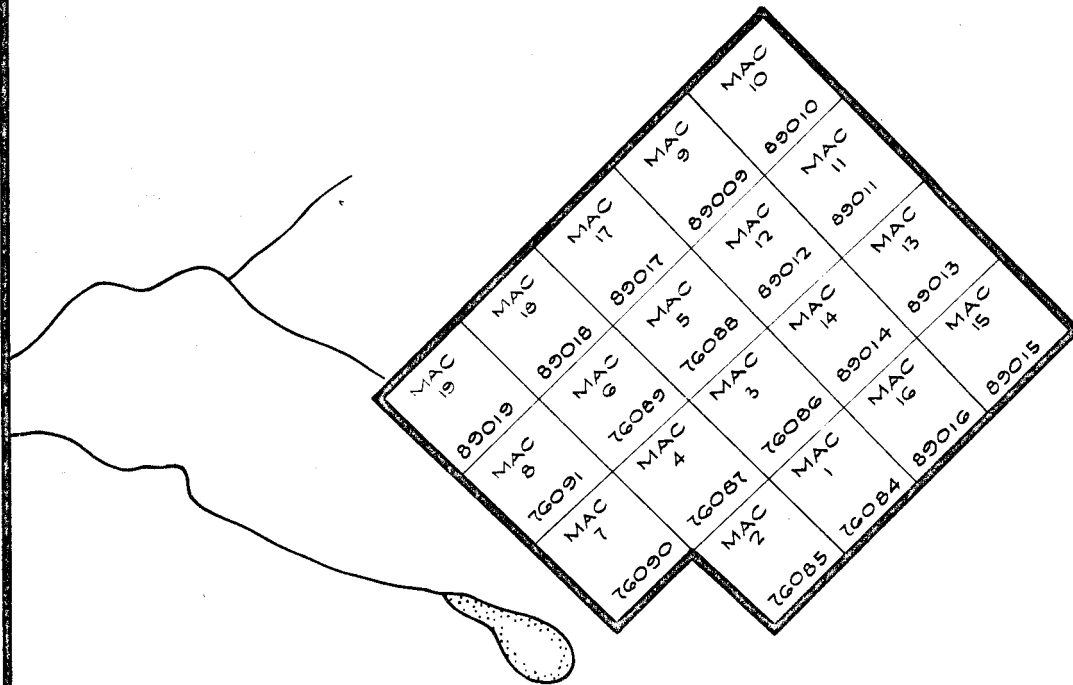
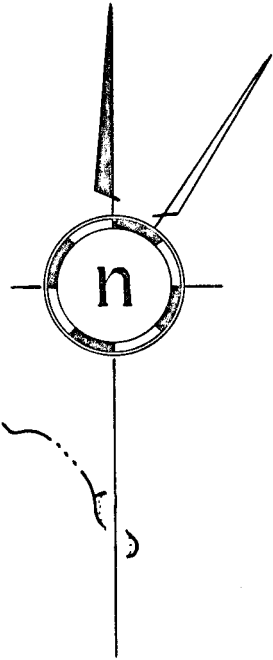
A. C. A. Howe, P. Eng.

KEY MAP



Scale: 1" = 410 mi.

131° 35' 00"



Claims location map

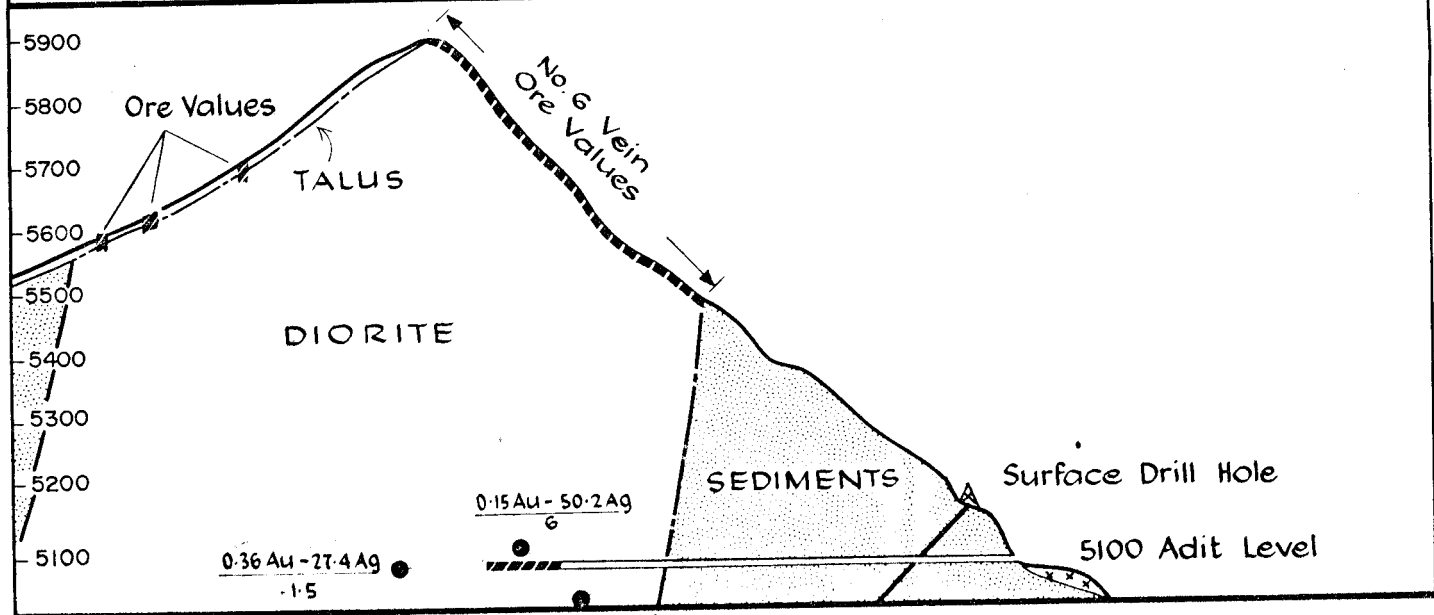
60°00'00"

PURE SILVER MINES LTD.

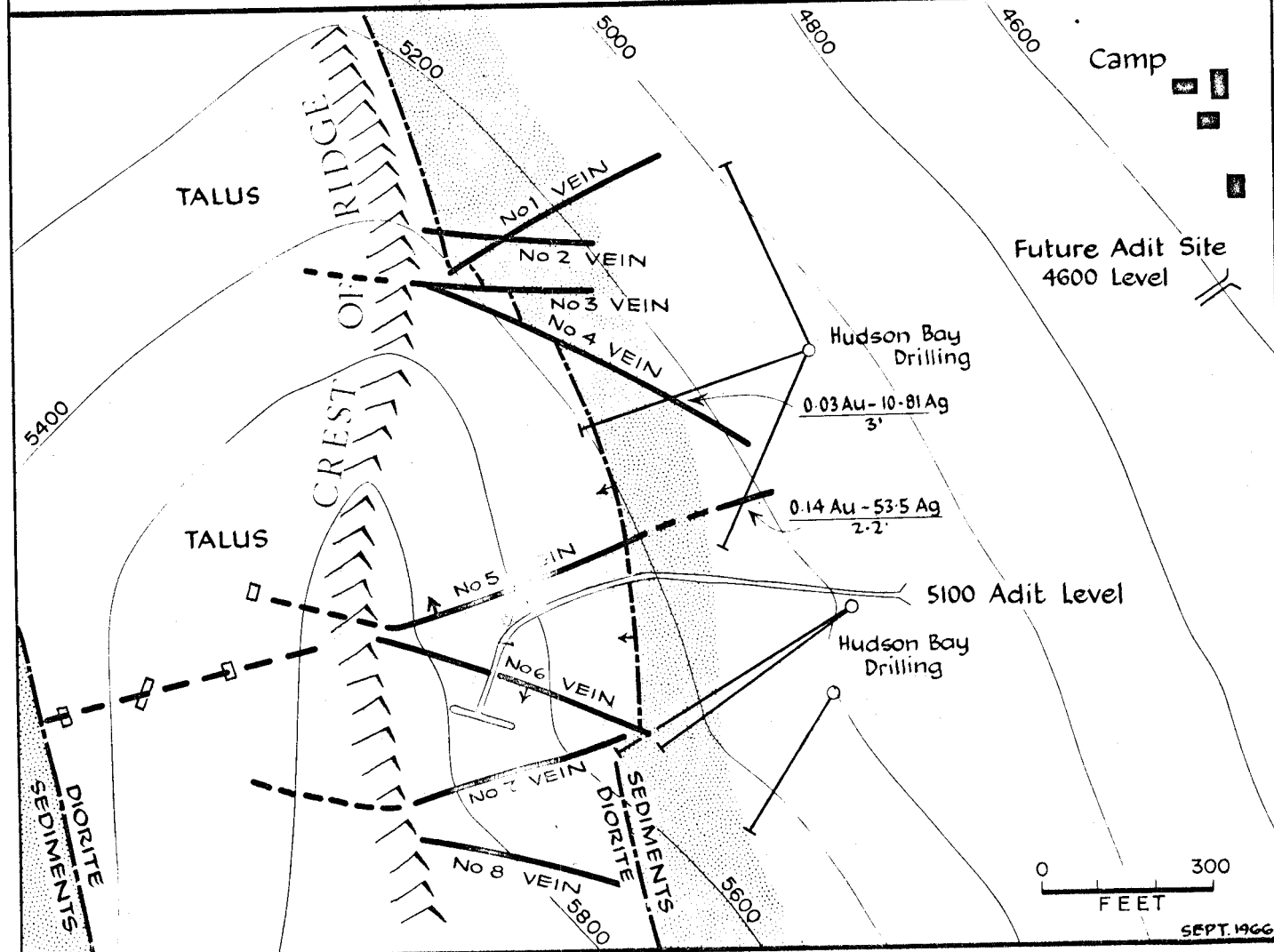
LOGJAM CLAIMS, DORSET LAKE, YUKON TER.

SCALE: 1 IN. = 1/2 MI.

VERTICAL PROJECTION No.6 VEIN

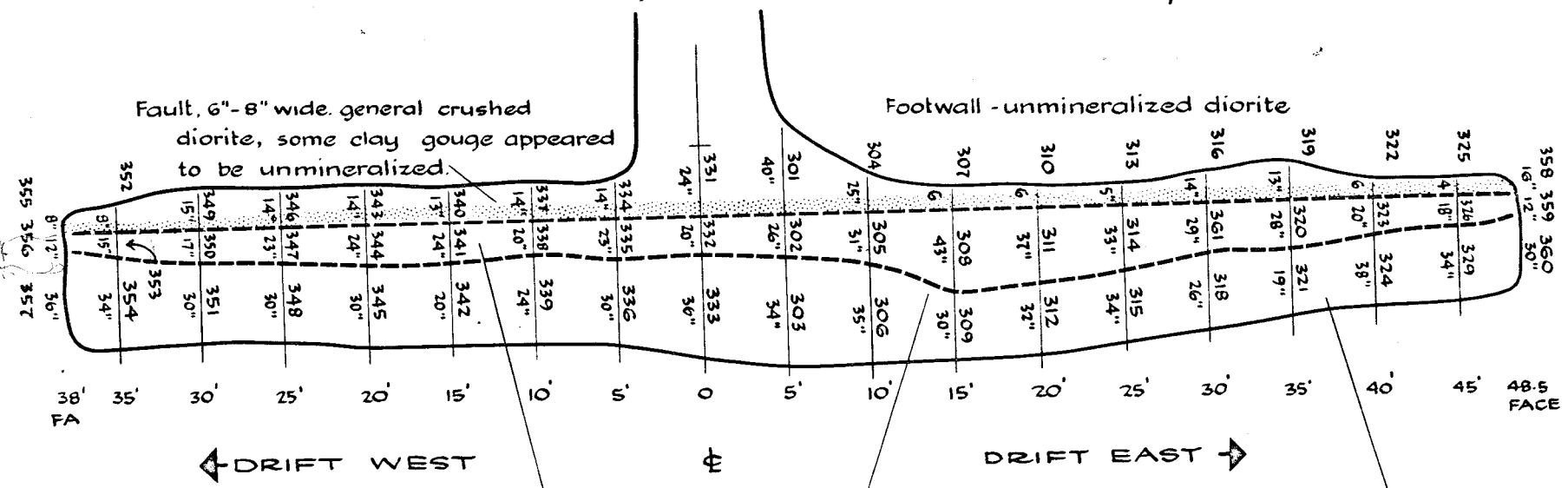


SKETCH SHOWING MAIN VEINS



PURE SILVER MINES LIMITED

12



Fault, 6"-8" wide, general crushed diorite, some clay gouge appeared to be unmineralized.

Footwall - unmineralized diorite

"Vein" actually a strongly silicified sulphide replacement zone in diorite, dipping 80° south.

Arbitrary contact based on percent visible sulphides

Hanging wall - scattered pyrrhotite galena and sphalerite in silicified diorite

Plan showing location of assays

PURE SILVER MINES LTD.

LOGJAM No 6 VEIN

GRADE CALCULATIONS NO. 6 VEIN--EAST DRIFT

| GOLD | | | |
|------|-------|---------|-------------|
| No. | Width | Oz./Ton | Wx(Oz./Ton) |
| 305 | 31" | .14 | 4.34 |
| 308 | 43" | .32 | 13.76 |
| 311 | 37" | .18 | 6.66 |
| 314 | 33" | .08 | 2.64 |
| 361 | 29" | .14 | 4.06 |
| 320 | 23" | .08 | 1.84 |
| 323 | 20" | .26 | 5.20 |
| 326 | 18" | .24 | 4.32 |
| | 234" | | 42.82 |

$$\frac{42.82}{234} = 0.183$$

| SILVER | | | |
|--------|-------|---------|-------------|
| No. | Width | Oz./Ton | Wx(Oz./Ton) |
| 305 | 31" | 20.90 | 647.9 |
| 308 | 43" | 3.20 | 137.6 |
| 311 | 37" | 6.10 | 225.7 |
| 314 | 33" | 25.00 | 825.0 |
| 361 | 29" | 36.50 | 1058.5 |
| 320 | 23" | 37.70 | 867.1 |
| 323 | 20" | 11.80 | 236.0 |
| 326 | 18" | 16.80 | 302.4 |
| | 234" | | 4300.2 |

$$\frac{4300.2}{234} = 18.3$$

GRADE CALCULATIONS NO. 6 VEIN--EAST DRIFT

Lead

| No. | Width | % | Wx % |
|-----|-------|-----|-------|
| 305 | 31" | 4.8 | 148.8 |
| 308 | 43" | 1.3 | 55.9 |
| 311 | 37" | 2.0 | 74.0 |
| 314 | 33" | 3.8 | 125.4 |
| 361 | 29" | 2.4 | 69.6 |
| 320 | 23" | 1.6 | 36.8 |
| 323 | 20" | 2.0 | 40.0 |
| 326 | 18" | 2.7 | 48.6 |
| | 234" | | 579.1 |

$$\frac{579.1}{234} = 2.47$$

Zinc

| No. | Width | % | Wx. % |
|-----|-------|-----|-------|
| 305 | 31" | 8.1 | 251.1 |
| 308 | 43" | 2.7 | 116.1 |
| 311 | 37" | 2.0 | 74.0 |
| 314 | 33" | 5.6 | 184.8 |
| 361 | 29" | 1.6 | 46.4 |
| 320 | 23" | 1.0 | 23.0 |
| 323 | 20" | 2.0 | 40.0 |
| 326 | 18" | 2.0 | 36.0 |
| | 234" | | 771.4 |

$$\frac{771.4}{234} = 3.29$$

GRADE CALCULATIONS NO. 6 VEIN--EAST DRIFT

COPPER

| No. | Width | % | Wx. % |
|------|-------|----------|-------|
| 305 | 31" | .03 | .93 |
| 308 | 43" | .00(tr.) | .00 |
| 311 | 37" | .01 | .37 |
| 314 | 33" | .03 | .99 |
| 361 | 29" | .01 | .29 |
| 320 | 23" | .01 | .23 |
| 323 | 20" | .00(tr.) | .00 |
| 326 | 18" | .01 | .18 |
| 234" | | | 2.99 |

$$\frac{2.99}{234} = 0.013$$

GRADE CALCULATIONS NO. 6 VEIN--WEST DRIFT

GOLD

| No. | Width | Oz./Ton | Wx(Oz./Ton) |
|------------------------------|-------|---------|-------------|
| 350 | 17" | .04 | 0.68 |
| 353 | 15" | .01 | 0.15 |
| 356 | 14" | .06 | 0.84 |
| | 46" | | 1.67 |
| Average width 15.3" or 1.23' | | | |

$$\frac{1.67}{46} = .036$$

SILVER

| No. | Width | Oz./Ton | Wx(Oz./Ton) |
|------------------------------|-------|---------|-------------|
| 350 | 17" | 7.86 | 133.62 |
| 353 | 15" | 4.79 | 71.85 |
| 356 | 14" | 15.50 | 217.00 |
| | 46" | | 422.47 |
| Average Width 15.3" or 1.23' | | | |

$$\frac{422.47}{46} = 9.14$$

LEAD

| No. | Width | % | Wx % |
|------------------------------|-------|------|------|
| 350 | 17" | 7.86 | 32.3 |
| 353 | 15" | 4.79 | 16.5 |
| 356 | 14" | 1.40 | 19.6 |
| | 46" | | 68.6 |
| Average width 15.3" or 1.23' | | | |

$$\frac{68.6}{46} = 1.48$$

GRADE CALCULATIONS NO. 6 VEIN--WEST DRIFT

ZINC

| No. | Width | % | Wx % |
|------------------------------|-------|------|------|
| 350 | 17" | 1.90 | 20.4 |
| 353 | 15" | 1.10 | 18.0 |
| 356 | 14" | 1.50 | 21.0 |
| | 46" | | 59.4 |
| Average Width 15.3" or 1.23' | | | |

$$\frac{59.4}{46} = 1.29$$

COPPER

| No. | Width | % | Wx % |
|------------------------------|-------|------|------|
| 350 | 17" | 0.01 | 0.17 |
| 353 | 15" | 0.01 | 0.15 |
| 356 | 14" | 0.04 | 0.56 |
| | 46" | | 0.88 |
| Average Width 15.3" or 1.28' | | | |

$$\frac{0.88}{46} = .02$$

(exactly .0191)

GRADE CALCULATIONS NO. 6 VEIN--CENTRAL SECTION OF DRIFT

| No. | Width | Ag. oz./Ton | Wx(oz./Ton) |
|------------------------------|-------|-------------|-------------|
| 302 | 26" | 5.08 | 132.08 |
| 332 | 20" | 2.94 | 58.80 |
| 335 | 23" | 2.36 | 54.28 |
| 338 | 20" | 6.50 | 130.00 |
| 341 | 28" | 2.00 | 56.00 |
| 344 | 24" | 9.20 | 220.80 |
| 347 | 23" | 2.02 | 46.46 |
| | 164" | | 698.42 |
| Average width 23.4" or 1.95' | | | |

$$\frac{698.42}{164} = 4.23$$

A P P E N D I X

DATE Sept. 6, 1906
 FILE NO. 3232-5)

ASSAY CERTIFICATE

WHITEHORSE ASSAY OFFICE

P.O. BOX 346, WHITEHORSE, YUKON

RECEIVED FROM Archer & Co. Ltd.

| SAMPLE NO. | GOLD | | SILVER | Lead | Zinc | Copper | | |
|------------|-------------|--|-------------|------|------|--------|--|--|
| | OZ. PER TON | | OZ. PER TON | | | | | |
| 291 | Tr | | .20 | | | | | |
| 292 | .03 | | 5.03 | 1.4 | 1.6 | .01 | | |
| 293 | Tr | | .43 | | | | | |
| 294 | Tr | | .44 | | | | | |
| 295 | Tr | | .41 | | | | | |
| 296 | .14 | | 20.0 | | | | | |
| 298 | Tr | | .52 | | | | | |
| 297 | .005 | | .46 | | | | | |
| 298 | .02 | | 3.20 | 1.3 | 2.7 | Tr | | |
| 299 | Tr | | .03 | | | | | |
| 310 | Tr | | .53 | | | | | |
| 311 | .18 | | 6.10 | 2.0 | 2.0 | .01 | | |
| 312 | Tr | | .52 | | | | | |
| 313 | .24 | | 107.0 | | | | | |
| 314 | .03 | | 25.0 | | | | | |
| 315 | .005 | | 2.03 | | | | | |
| 316 | .005 | | 1.03 | | | | | |
| 318 | .01 | | 7.03 | | | | | |
| 319 | .005 | | 1.00 | | | | | |
| 320 | .03 | | 57.7 | 1.6 | 1.0 | .01 | | |
| 321 | Tr | | .72 | | | | | |
| 322 | .01 | | 7.07 | | | | | |
| 323 | .26 | | 11.00 | 2.0 | 2.0 | Tr | | |
| 324 | Tr | | .54 | | | | | |
| 325 | .12 | | 17.04 | | | | | |
| 326 | .24 | | 16.8 | 2.7 | 2.0 | .01 | | |
| 327 | Tr | | 1.22 | | | | | |
| 328 | .005 | | .68 | | | | | |
| 329 | .005 | | 2.94 | 1.2 | 1.0 | .01 | | |
| 330 | Tr | | .98 | | | | | |
| 331 | .005 | | .56 | | | | | |
| 332 | .26 | | 2.26 | 1.2 | 1.2 | .04 | | |
| 333 | Tr | | .74 | | | | | |
| 337 | Tr | | .54 | | | | | |
| 338 | .10 | | 6.50 | 2.2 | 1.2 | .04 | | |
| 339 | .005 | | .24 | | | | | |
| 340 | .01 | | 5.47 | | | | | |
| 341 | .03 | | 2.00 | .6 | 1.6 | .01 | | |
| 342 | .005 | | 1.76 | | | | | |
| 345 | Tr | | 1.42 | | | | | |
| 344 | .16 | | 9.20 | 2.4 | 3.3 | .01 | | |
| 345 | Tr | | .40 | | | | | |
| 346 | Tr | | .33 | | | | | |
| 347 | .005 | | 2.02 | .1 | Tr | Tr | | |
| 348 | .01 | | .51 | | | | | |
| 349 | .01 | | 1.07 | | | | | |
| 350 | .01 | | 7.86 | 1.0 | 1.2 | .01 | | |

ASSAYER

Geo. Spalding

DATE Sept. 6, 1905
FILE NO. 8232-57

ASSAY CERTIFICATE

WHITEHORSE ASSAY OFFICE

P.O. BOX 346. WHITEHORSE. YUKON

RECEIVED FROM Atkinson & Cahoon

| SAMPLE NO. | GOLD OZ. PER TON | SILVER OZ. PER TON | Lead | Zinc | Copper | | | |
|------------|---------------------|-----------------------|------|------|--------|--|--|--|
| 381 | .005 | .40 | | | | | | |
| 382 | .10 | 11.9 | | | | | | |
| 383 | .01 | 4.79 | 1.1 | 1.2 | .01 | | | |
| 384 | Tr | .43 | | | | | | |
| 385 | .02 | 9.90 | | | | | | |
| 386 | .03 | 15.5 | 1.4 | 1.5 | .01 | | | |
| 387 | .02 | 2.00 | | | | | | |
| 388 | Tr | 1.50 | | | | | | |
| 389 | .02 | 7.10 | 1.5 | 2.6 | .01 | | | |
| 390 | Tr | .33 | | | | | | |
| 391 | .14 | 30.5 | 2.4 | 1.6 | .01 | | | |

ASSAYER Geo. Spalding

TECHNICAL SERVICE LABORATORIES

DIVISION OF BURGNER TECHNICAL ENTERPRISES LIMITED

355 KING ST. W., TORONTO 22, ONT., CANADA

TELEPHONE: 362-4243 - AREA 410

Representing ...

JARRELL-ASH COMPANY
HILGER & WATTS LIMITED
SADLER RESEARCH
ULTRA CARBON CORPORATION
METALS RESEARCH LIMITED

CERTIFICATE OF ANALYSIS

SAMPLE(S) FROM University of Toronto,
Department of Geology,
Toronto 5, Ontario.

REPORT NO.

7-01216

SAMPLE(S) OF Atlas: Dr. W.M. Green
GRANITE ROSE

by: P. R. Gwynne
Dowdell & Co. Ltd.,

| Sample No. | Zinc (%) | Lead (%) | Cadmium (%) | Silver (%) |
|------------|----------|----------|-------------|------------|
| 202 | 1.6 1.50 | 1.4 2.30 | .08 .15 | 5.1 10.70 |
| 205 | 2.1 0.35 | 4.8 4.65 | .14 .15 | 20.9 10.72 |
| 206 | 2.7 2.50 | 1.3 2.07 | .32 .35 | 3.2 2.22 |
| 211 | 2.0 1.59 | 2.0 2.95 | .18 .22 | 6.1 6.25 |
| 214 | 5.6 5.35 | 3.8 3.25 | .08 .10 | 25.0 25.55 |
| 220 | 1.0 .60 | 1.6 1.25 | .08 .15 | 37.7 28.65 |
| 223 | 2.0 2.45 | 2.0 1.50 | .26 .25 | 11.8 8.35 |
| 226 | 2.0 1.70 | 2.0 2.20 | - .25 | 16.8 20.05 |
| 232 | 1.0 .50 | 1.2 .95 | TR. .02 | 2.9 2.95 |
| 235 | 1.2 .90 | 1.2 .80 | .26 .05 | 2.4 2.75 |
| 236 | 1.2 .70 | 2.2 2.67 | .10 .05 | 6.5 6.95 |
| 241 | 1.6 2.55 | 0.6 .67 | 0.06 .05 | 2.0 2.42 |
| 244 | 3.3 2.45 | 2.4 2.60 | .16 .15 | 9.2 3.02 |
| 247 | TR. .60 | 0.1 .21 | TR. .02 | 2.0 1.92 |
| 250 | 1.2 1.50 | 1.9 1.27 | 0.04 .05 | 7.9 7.55 |
| 253 | 1.2 1.60 | 1.1 0.70 | 0.01 .05 | 4.8 6.65 |
| 256 | 1.5 2.10 | - 1.15 | 0.06 .05 | 18.5 16.20 |
| 259 | 2.6 4.30 | 1.3 2.05 | .02 .05 | 7.1 6.45 |

Pulps and rejects are stored for 6 months, then discarded.

DATE September 11, 1966

SIGNED C.S. JOYCE

C.S. JOYCE, B.Sc., Manager of Laboratories

VANCOUVER - TSL LABORATORIES LTD., 325 HIGVE ST., VANCOUVER 1, B.C.



DATE Sept. 12, 1966
 FILE NO. 325-57 Returns

ASSAY CERTIFICATE

WHITEHORSE ASSAY OFFICE
 P.O. BOX 346. WHITEHORSE. YUKON

RECEIVED FROM Archer & Saturno

| SAMPLE NO. | GOLD OZ. PER TON | SILVER OZ PER TON | Lead | Zinc | Copper | | | |
|------------|---------------------|----------------------|------|------|--------|--|--|--|
| 305 | .14 | 20.9 | 4.8 | 8.1 | .03 | | | |
| 314 | .08 | 25.00 | 3.8 | 5.6 | .03 | | | |
| 313 | .24 | 107.9 | 2.4 | 2.4 | Tr | | | |
| 326 | .12 | 17.04 | 2.1 | 1.2 | .04 | | | |

ASSAYER Geo. Spalding

DATE Sept. 12, 1966
 FILE NO. 325-57 Returns

ASSAY CERTIFICATE

WHITEHORSE ASSAY OFFICE
 P.O. BOX 346. WHITEHORSE. YUKON

RECEIVED FROM Archer & Saturno

| SAMPLE NO. | GOLD OZ. PER TON | SILVER OZ PER TON | Lead | Zinc | Copper | | | |
|------------|---------------------|----------------------|------|------|--------|--|--|--|
| 305 | .14 | 20.9 | 4.8 | 8.1 | .03 | | | |
| 314 | .08 | 25.00 | 3.8 | 5.6 | .03 | | | |
| 313 | .24 | 107.9 | 2.4 | 2.4 | Tr | | | |
| 326 | .12 | 17.04 | 2.1 | 1.2 | .04 | | | |

ASSAYER Geo. Spalding

ARCHER, CATHRO & ASSOCIATES LTD.

CONSULTING GEOLOGICAL ENGINEERS

P.O. Box 1051

WHITEHORSE

LOGJAM CREEK PROPERTY
NILSET EXPLORATION LTD.
YUKON.

UNDERGROUND SAMPLING AND
CAMP EVALUATION.

Sept. 16, 1966

During the period Aug. 23-25, 1966 a visit was made to the property for the purposes of sampling a recently drifted portion of No. 6 vein at the 5100 adit level, and of evaluating the camp and mining plant installed on the property.

GEOLOGY

The geological setting has been well described elsewhere and is not discussed here. This was the first occasion in which a detailed examination and sampling could be made of a portion of one of the veins on this property. The veins are exposed in the cliff face but are partially obscured by talus and weathering products and the topography is too precipitous to allow a thorough examination. No. 6 vein, where seen underground, is not a simple fracture-filling but is, rather, a sheared and gouge-filled fault varying from 4 to 12 inches in width. No metallic minerals were seen in the fault material. The fault dips 85 degrees southeast but locally flattens to 65 degrees. The walls of the fault were well defined.

The north wall (footwall) consists of hard, unmineralized and unaltered dark green diorite. The south wall (hanging wall) of the fault consists of a strongly silicified replacement zone from 12" to 43" in width which passes gradationally into a zone of disseminated sulfides, mainly pyrrhotite, in slightly silicified medium green diorite.

The contact between the sulfide zone and hangingwall is marked only by a visually obvious change in sulfide content and gradual increase in granitic texture. Sulfide mineralization consists primarily of arsenopyrite, pyrrhotite and pyrite with lesser amounts of galena and sphalerite.

SAMPLING

Channel sampling was conducted on 86 feet of drift back at five foot intervals and on the faces of both headings. The drift was first washed and the channel sample locations were then marked with spray paint. All measurements were from the centerline of the crosscut and each channel was sampled from north (footwall) to south (hangingwall). Because of the hard and dense nature of the mineralization, conventional hammer and moil sampling could be used only for sampling the fault material. Channels were cut in the mineralized sulfide zone and slightly mineralized hanging-wall zone using a stoper rockdrill. Fragments and cuttings were collected in a cardboard box just below the drill bit.

ASSAYING

The samples were sent to Whitehorse Assay Office for assay. Those samples from the mineralized zone were analysed for gold, silver, lead, zinc and copper, while footwall (fault) and hangingwall samples were assayed for gold and silver. Two samples from the fault zone, 313 and 325, returned significant values in gold and silver and were subsequently assayed for

the three base metals. Rejects of samples from the mineralized zone were sent to Toronto via air express on September 14.

CAMP EVALUATION

An excellent modern camp is installed on the property.

Only the major items are listed below:

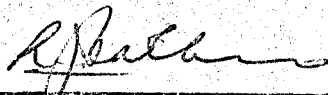
| | <u>Condition</u> |
|--|--------------------|
| 2- IR "Gyro-flow" 600 cfm compressors | good |
| 1- Lister 22 hp, 1800 rpm light plant | good |
| 1- Briggs & Stratton 5 hp water pump | good |
| 1- 10'x30' Atco wash & kitchen trailer | excellent |
| 1- 10'x30' Atco office & staff house trailer | excellent |
| 1- 10'x40' Atco 18-bed bunkhouse trailer | excellent |
| 1- 8'x10' wood frame dry. | fair |
| 1- 10'x22' wood frame storeroom & core shack | fair |
| 1- 12'x25' wood frame compressor house & machine shop. | fair |
| 1- 1964 ford 4-wheel drive pickup truck. | good |
| 1- 14,000 gallon fuel storage tank. | good |
| 1- ^{Elmco} Emco air trammer. | good |
| 2- ^{Elmco} Emco 12B mucking machines. | 1- good 1- poor |
| 4- 1 ton Hudson cars | fair |
| 4000 ft.- 3" aluminum air line with victaulic coupling. | good |
| 1- 10" air fan | fair |
| 1500 ft.- 20 lb. rail. | good |
| 500 ft.- 10" plastic vent tube. | good |

Mr. I.C. Kitchen of Timberline Development Services Ltd., Teslin, who has been closely associated with road building, freighting and installation of equipment on the property, has supplied me with the following estimates:

| | |
|--|-------------|
| Cost of summer road- 16.5 miles | \$49,000.00 |
| Cost of winter road | 15,000.00 |
| Purchase price of mine equipment and light plant from Tintina Silver Mines (Conwest Exploration) | 55,000.00 |
| Purchase price of Atco trailers, (new 1965), water pump and frame warehouse. | 24,000.00 |
| Cost of freighting trailer & equipment to property from Alaska Highway. | 9,000.00 |

I have not seen supporting invoices for these estimates but from my inspection of the camp and mining plant, I feel the figures are quite realistic. A replacement cost for the camp, as is and where is, would probably be in the order of \$1,000,000.00.

Respectfully submitted,
ARCHER, CATHRO & ASSOCIATES LTD.



R.J. Cathro