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TO: J. E. Stephens
Pacific Coast Mines, Inc.

FROM: Knox, Kaufman, Inc.

RE: PCMI(BC) Project - Report on Stewart Property 1985 Work

References:

PCMI(BC) Project Monthly Reports for January - October 1985
The following Maps and sections; Shell 1:10000 geologic map, BP-Selco
1:10000 geologic map, KK 1:40000 Index map, KK 1:5000 Rest Creek map,
KK 1:5000 Arrow Tungsten-Breccia Summit map, KK 1:2000 Arrow Tungsten
Area map, KK 1:1000 Breccia Summit map, KK 1:1000 North of Breccia
Summit map, KK 1:1000 West Moly Area map, KK 1:1000 Free Silver Area
sample map, KK 1:500 X Sections of Shell drill holes in Arrow tungsten
Area, KK (1982) 1:10000 Arlington-Keystone geology and geochemical maps.

PART I

I. SUMMARY

General Information

The Stewart prospect, which encompasses an area roughly 4.5 by 5 miles underlain by Hall formation sediments and Rosslund formation volcanics cut by later felsic plutons, was acquired during 1985 primarily to conduct precious metals sampling over a number of mineralized areas previously identified by past exploration. Two of the localities investigated deserve additional exploration, the Gold-Hill - Rest Creek Area and the Arrow tungsten Area.

Gold-Hill - Rest Creek Area

At the Gold Hill - Rest Creek Area reconnaissance soils sampling was undertaken to determine whether extensive soils Zn anomalies previously discovered by Quintana might have associated precious metals. A number of areas anomalous in gold were detected, and further exploration is justified. The principal target here would be for a stratabound or replacement manto type high grade gold deposit similar to the Arlington mine located 1 KM. south of Gold Hill. At the Arlington mine 29,000 tons averaging +1.8 opt Au and + 2 opt Ag were milled, and a total resource of about 252,000 tons averaging .35 opt Au has been identified within a gently dipping stratabound zone or manto localized in high Zn bearing Argillites.

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This mineralized zone was likely more extensive than its present limits, but was probably cut off by erosion on three sides. The same section of rocks that underlies the Arlington appears to underlie the Gold-Hill - Rest Creek Area, so there is some hope that our anomalies might be indicative of deposits similar to the Arlington.

The first step in further exploration would be to extend our soils surveying and to do more detail within and around anomalies. This would be followed, if justified, by backhoe trenching and/or drilling.

Arrow Tungsten - Breccia Summit Area

Past operators mainly in the Arrow Tungsten Area have explored for high grade tungsten and bulk tonnage Mo-W possibilities. Shell Minerals during the early 1980's delineated +200,000 tons grading .37% MoS₂ including one 26 metre intercept of .764% MoS₂ in a brecciated hornfels along a quartz monzonite porphyry contact. Assaying of Shell's cores for precious metals (Shell had not done so) indicates that the mineralized contact zone does contain sporadic Au and/or Ag. (up to 3.84 ppm Au over 7 metres and 21.6 ppm Ag over 8 metres).

Our geological reconnaissance indicates that the zone of altered sediments/volcanics (hornfels-skarn) which hosts the Shell contact mineralized zone extends for an area of +700 metres by +800 metres to the north and to the west south west of the exposed intrusive contact suggesting that the intrusive contact probably has a gentle dip and that the altered area is underlain by intrusive at shallow to moderate depths. Also, our rock and soil sampling over the altered zone has detected some areas anomalous in Mo and/or W and/or Au-Ag which suggest possible subjacent contact mineralization. Though the situation here does not fit any particular model (perhaps there are some analogies to Mt. Emmons, Colorado), it appears that there is a reasonable chance to find a deposit or deposits containing millions of tons of high grade Mo/W ore with possible associated Au-Ag.

More extensive and detailed sampling is required which would be followed by rotary drilling through the contact zone.

Land Status and Holding Obligations

Commitments to hold the Stewart property through 1986 (all in Cdn funds) are a \$10,000 land payment due January 1, and work totalling \$45,000. However, Ryan having exceeded its 1985 work obligation will require only about \$20,000 to meet the 1986 work requirement. Further, if Ryan wished to relinquish the claims during 1986 it need not fulfill the work commitment.

Beyond 1986, commitments include escalating payments totalling \$315,000 ending January 1, 1995, escalating work obligations totalling \$300,000 ending December 31, 1989, and a 4% NSR out of production to an end point of \$2,500,000 (all previous payments to be deducted).

Recommendations

Follow-up geochemical work (extensions of our grids and fill in detail) is recommended, and could be undertaken within the framework of the 1986 work requirement (approximately \$20,000 Cdn). In addition, trenching and rotary drilling will probably eventually be justified which would cost at least an additional \$30,000 Cdn.

II. LAND STATUS AND HOLDING OBLIGATIONS

The Stewart Claim group which includes 186 claim units along with 3 internal reverted crown grants contains an area roughly 4.5 x 5 miles square. Prior work recorded by Shell and Selco keeps the claims in good standing for several years, the earliest expiry date being November 29, 1989.

The basic terms of the option agreement (all expressed in Cdn funds) between Ryan and the Dennys, owners of the claims, are escalating but reasonable payments which will total \$330,000 over a 10 year period ending January 1, 1995, and work commitments totalling \$350,000 over a 5 year period ending December 31, 1989. Further obligations consist of a 4% NSR payable out of production to an end point of \$2,500,000 (including previous payments). Commitments to hold the ground from January 1, 1986 to December 31, 1986 are a \$10,000 payment due January 1, 1986 and a work obligation of \$45,000. However, in regard to the work obligation, Ryan has exceeded its 1985 commitment by approximately \$25,000 which when deducted from the 1986 obligation reduces it to about \$20,000 (Cdn). Further, it is necessary to completely fulfill this work obligation only if Ryan desires to keep the claims beyond 1986.

III. PURPOSE AND SCOPE OF 1985 PROGRAM

The Stewart property was acquired for the following reasons. First, it is a very large parcel of ground available under reasonable terms covering an extensive north-south belt of favorable Hall Formation sediments and Rossland Formation Volcanics which are cut by Nelson, Coryell, and later intermediate to felsic intrusives. Second, past work by other parties, among them, Quintana, Shell, and Selco had turned up some areas of interest for Mo-W and Zn-Pb, but neither Quintana nor Shell had done any assaying for Au-Ag, and Selco had done only cursory precious metals testing. Third, past reconnaissance by KK had encountered gold showings at Gold Hill situated in the southwestern portion of the property, and sampling during 1979 had detected some anomalous gold around the Arrow Tungsten Area situated in the central part of the claim group.

The purpose of the 1985 program was to conduct sampling mainly for precious metals over previously identified mineralized areas which had not been well sampled for gold-silver. Our work was limited by time and budget constraints, so it is at best cursory, but two definite areas of further interest have been identified. Total cost of the work to date is estimated at +\$27,940 (Cdn) direct (+20,955 U.S.A.). If 10% overhead is considered, the total amount chargeable against Ryan's work commitments can be estimated at +\$30,734 (Cdn). Descriptions of the areas covered are given in the following Part II of the report.

PART II

I. GOLD-HILL - REST CREEK AREA

Geology

Outcrops in this area are generally limited to the upper slopes of Gold Hill and the upper reaches of the main branch of Rest Creek. Most of the country is covered by glacial and residual soils varying from a few feet to probably +20 feet in thickness. The area initially attracted our attention because of its proximity to the Arlington mine (situated 1KM to the south), and by the presence of a few minor gold showings on the upper slopes of Gold Hill. Also, Quintana had detected extensive, high Zn soils anomalies on parts of Gold Hill and on the mountain to the east of it, but did not assay for Au-Ag.

From the few outcrops exposed and by projection, it appears that the Gold-Hill - Rest Creek Area is underlain by the same formations that host the Arlington mine ore zone (refer to KK November 12, 1985 report entitled PCMI (BC) Arlington

Project). Though the Arlington was not a large mine, its average grade (+1.8 opt Au and +2 opt Ag) was impressive, and it appears that the ore body was likely part of a more extensive stratabound or manto zone which was removed by erosion on three sides of the mountain top from within which it has been mined. A mineralized zone similar to the Arlington would, particularly if it were larger than the Arlington, be an attractive target, and our 1985 work in the Gold-Hill - Rest Creek Area does give some evidence for such possibilities.

The rocks exposed on Gold Hill and along the upper reaches of Rest Creek are chiefly gray-black Argillites of the Hall Formation. On Gold Hill there are a number of roughly north-south striking rhyolite bands which have been mapped by Shell and Selco as post Coryell late Tertiary dikes. Most of these rhyolite bodies probably are dikes, but in one area banding is evident suggesting a Tuffaceous bed. The gold showings on Gold Hill are limited to a narrow NNE striking vein (see KK 1:5000 map at Line SLB, 100 M.W.) and erratic fracture zone mineralization in rhyolite at approximately Line SLB 400 M.W. Also of interest, though not assaying anomalous gold where sampled, is a rubbly rhyolite breccia seen at line SLE 200W suggestive of a pebble dike.

Geochemical Sampling

Reconnaissance soils geochemical surveys have detected anomalous Au within portions of the extensive Quintana Zn anomalies. Though the gold values are not high compared to some areas where we have worked, such as the Star prospect SW of Nelson, the background in the Rest Creek region is essentially Nil, and our values both in Au and Zn are comparable to those seen over the Arlington mine itself. Accordingly, these anomalies deserve further attention.

On Gold Hill small anomalies are evident on line SLB 100W near the known gold bearing vein, and at line SLE 150W and SLE 300S near the rubbly rhyolite. The largest anomaly is on line SLE from 400 to 600W where there is no outcrop except for one dump at about 575W which is comprised of non anomalous pyritic phyllite. This broad anomaly on line SLE falls on projection with the erratic gold mineralization found in rhyolite to the north (where there is no anomaly), and is open to the south where there is no bedrock.

In the Rest Creek Area Au anomalies accompanied by high Zn were found on Line SLG at 300-350N, and on SLH at 200-250N and 0-50N. Scattered Au-Zn anomalies were detected on line SLH at 550N and 700N, and on line SID at 1200E. These anomalies except for line SLH 0-50N are all over areas of no outcrop with unknown soil thicknesses. In the area of SLH 0-50N there are Argillites exposed here and there which are similar to the rocks seen at the Arlington mine.

Further work is justified to explore the anomalies at Gold Hill and Rest Creek. The initial step should be fill in and extension sampling to better delineate the anomalous areas and determine if there are additional ones. This would be followed, if warranted, by backhoe trenching and/or percussion drilling.

II. ARROW TUNGSTEN - BRECCIA SUMMIT AREA

Geology and Past Work

This area has been the focus of most of the past exploration work on the Stewart property. During the early 1950's the Arrow Tungsten prospect was tested by trenching with some angle drilling for its tungsten potential, and during the

late 1970's and early 80's the area was drilled by Shell and Selco to explore for Molybdenum. The widespread Tungsten - molybdenum mineralization appears to be related mainly to the contact zone of a quartz monzonite porphyry stock with Hall Formation sedimentary and volcanic rocks. At the Breccia Summit an oblong, in places roughly circular shaped body of breccia (referred to by Selco as Phase I breccia) +600M x 500M in dimension comprised of fragments of volcanics, sediments, and quartz monzonite in an andesitic matrix contains sporadic anomalous Mo and/or W, but this breccia appears to be cut by quartz monzonite porphyry with which the mineralization may be associated. This breccia, which probably occupies an old vent, though it is sporadically weakly silicified and mineralized (mainly with pyrite-pyrrotite), does not contain the high degree of silicification and multi intrusions suggestive of a deep Mo target. Rather, it appears more likely to be a deep remnant.

Past work on the Arrow Tungsten has shown sporadic 1% to 2% W_3O_8 related to narrow and discontinuous skarn zones, but no drill results are available. Drilling by Shell discovered a small high grade MoS_2 body with associated W_3O_8 contained mainly in an elongate breccia zone situated along the contact between quartz monzonite porphyry and Hall sediments. This breccia (referred to as "Phase II breccia" by Selco) forms a WSW trending body or bodies known to extend for at least 540 metres with a maximum width of 45 metres. It is comprised chiefly of hornfels fragments with some quartz monzonite porphyry fragments in a siliceous matrix. The high grade MoS_2 body, which lies on strike projection of the Arrow Tungsten zone though it appears to trend perpendicular to it, is estimated by Shell to contain +200,000 tons grading .37% MoS_2 including one 26 metre intercept which averages .764% MoS_2 . Selco drilled several holes in the quartz monzonite porphyry south of the Shell holes evidently based on a whole rock geochemical study which indicated a target at depth; nothing of significance was found. In addition, Selco carried out an aerial input survey and followed it up with geochemical soils surveys prior to relinquishing its option in 1984.

KK Sampling Program

KK's 1985 work in this area mainly involved sampling over the hornfels-skarn zone pervasively mineralized by pyrite-pyrrotite, which extends for at least 700 metres north of and 800 metres SW of the mineralized zone drilled by Shell. In addition, we assayed sections of the Shell cores for Au-Ag, which had not been done previously. Our surface sampling indicates that the hornfels-skarn zone is generally anomalous in Mo and/or W with occasional anomalous gold, and our core assaying did return some sporadic significant gold-silver values within and around the Shell moly discovery (the best being 3.84 ppm Au from 75-82 metres in hole 81-9, and in hole 81-3 .25 ppm Au and 17.5 ppm Ag from 18-26 metres, .11 ppm Au and 21.6 ppm Ag from 34-42 metres, and .30 ppm Au from 42-49 metres. It should be noted that these core samples are composite grabs of whatever was available, and can not be considered 100% accurate.

Interpretation

Though Shell's best intercepts were mainly in hornfels-skarn at the exposed intrusive contact, neither Shell nor Selco paid any attention to the very extensive continuance of this hornfels-skarn zone to the north and SW which appears just as strongly altered hundreds of metres away from the contact as it does at the contact.

This phenomenon suggests that the intrusive contact rather than being steeply inclined is more likely gentle, and that the intrusive probably underlies much of the altered area at shallow to moderate depths. If this is the case, there should be very extensive favorable prospecting ground along this contact. Beyond mere conjecture, there is some evidence for the possibility of significant mineralization at depth away from the high grade zone; Shell hole 81-8 which is located approximately 540 metres WSW from its main drilled area cut 30 metres of .20% MoS₂ in hornfels and breccia at the bottom of the hole still short of the intrusive contact. Also, rock sampling in the vicinity of the Arrow Tungsten adit indicates a 65 metre wide zone (across strike) which contains highly anomalous Mo and/or W, and areas of anomalous W and/or Mo and/or Au are apparent in our contour soils survey of the north trending ridge immediately west of the Arrow Tungsten area.

From the popular view point of models, the target in the Arrow Tungsten Area does not quite fit anything known, though it might be in some ways resemble the occurrence under Mt. Emmons, Colorado. Essentially what we have here is a very extensive target area under which high grade Mo-W mineralization with possible associated Au-Ag might be expected to occur along portions of the postulated subjacent contact, particularly where favorable sedimentary formations and/or fault zones might be involved.

The target potential is not likely hundreds of millions of tons of low grade ore, but rather the possibility of deposits in the order of millions of tons of high grade. It is possible that such postulated deposits might occur at sufficiently shallow depth to allow open pit extraction methods. Specifically, with our current data, three targets are apparent. The most obvious is around the high grade zone cut by Shell's holes. It would be interesting to drill vertical holes or steeply N inclined holes to determine whether there might be an extension of the high grade zone where the intrusive contact is postulated to dip under the altered sediments at shallow depth. A similar target might exist under the strong Mo/W anomaly over the Arrow Tungsten workings, which might in fact be an extension of the Shell showing, and another similar target might occur under the north trending ridge north of the Breccia Summit and west of the Arrow Tungsten Area where we have detected soils geochemical anomalies.

The main problem in exploring the Arrow Tungsten Area is that the altered sediments/volcanics are generally steeply dipping making targets at depth more elusive to drilling from surface than if they were gently inclined. However, the target areas appear to be sufficiently extensive to overcome this difficulty.

Suggested Further Work

The first step would be to extend and to further detail our surface soil and rock sampling. In order to prospect for new targets and better delineate the ones we have found. The next step would be to drill these targets by rotary or reverse circulation equipment which would provide us with a relatively inexpensive way of testing the postulated contact zone.

III. FREE SILVER AREA

The Free Silver is a geologically complex area underlain by a section of andesitic and rhyolitic Rossland Volcanics including minor Argillites which is sandwiched between two granitic plutons (refer to Shell and Selco 1:10,000 scale

maps and KK 1:1000 scale map). Extensive disseminated pyrite-pyrrhotite zones occur in the NW part of the area, and frequent sulfide bearing fracture zones are found in many other localities. Our interest here was prompted by very high lead values detected in an old soils survey which was conducted mainly to prospect for Mo (which turned out to be generally quite low). Our work consisted of mapping and sampling for Au-Ag; again, no precious metals assaying had been previously done.

We were able to duplicate the high Pb anomaly previously detected and found that there is associated anomalous Au-Ag. Also, our rock sampling from some of the high grade workings did detect some impressive precious metals assays (up to .06 opt Au in sample MK-85-4 and 15 opt Ag in MK-85-134).

The widespread Pb anomaly with associated precious metals is caused by frequent fracture controlled showings which contain pyrite, galena, and, in places, sphalerite found in rhyolite, argillite, and granitic rocks. The frequency of these mineralized fractures appears to be greatest in the area between our lines 120S to 120N and west from our base line causing the very high soils lead values seen here. One might describe this area as a possible fracture controlled bulk tonnage lead body with associated zinc and weak Au-Ag. However, the soils here are mainly residual rubble, and are likely quite representative of the underlying rock. Unfortunately, the oxidation in this area appears limited and probably extends only a few feet below the surface, precluding the possibility of secondary silver enrichment at depth. Accordingly, the only hope for this prospect appears to be a primary increase in grade with depth, and there is no evidence to support this idea. No further work will be proposed in this area.

IV. WEST MOLY AREA

Weak MoS₂ showings occurring in and around the contacts of a small quartz monzonite body situated 2 K.M. west of the Breccia Summit were trenched and drilled by Shell with negative results. We conducted rock sampling to determine if there are any precious metals associated with the sulfides; there are not. The contact metasomatism around this intrusive is sporadic and local, suggesting steep contacts.

Soils sampling across a magnetic low feature occurring a short distance E of the W. Moly Area was also negative.

No further work will be suggested in the West Moly Area.

PART III

CONCLUSIONS AND RECOMMENDATIONS

It is concluded that the Stewart property deserves further exploration on the above described targets in the Gold Hill - Rest Creek and Arrow Tungsten Areas.

A useful program mainly of expansion and fill in geochemical sampling could be undertaken within the framework of the 1986 work requirement (approximately \$20,000 Cdn), and possibly, some trenching could be fit into this budget. This program is recommended. However, a rotary drilling program which would likely cost at least an additional \$30,000 (Cdn) would eventually be required to more definitively test the property.

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