

1.0 SUMMARY

The Pacific Eastern claim group consists of 59 crown granted mineral claims and 27 crown granted fractional mineral claims under option to Normine Resources Ltd. from Urbanwest Development Corp. of Vancouver, B.C.

The Pacific Eastern property is located 160 kilometres north of Vancouver approximately 5.45 kilometres southeast of the townsite of Bralorne. Access is by pavement and good gravel roads 112 kilometres northwest from Lillooet and 5.45 kilometers of rough gravel road to the west end of the claims. The claims extend southwesterly up Cadwallader Creek and cover the south slope of the creek for 8 kilometres from Extension to Chism Creek. The claims are located in the Lillooet Mining Divison at Latitude 50° 45' North and Longitude 122° 45' West. (See Figure 1 and 2.)

The elevation of the claim group is from 1,200 to 1,500 metres and topographically is an area of steep relief with tree covered slopes with various creeks draining south into Cadwallader Creek. The main area of interest on the Pioneer Extension showing lies along the valley bottom and is covered with up to 75 metres of glacial till which has made surface exploration difficult.

The Pacific Eastern property adjoins the Pioneer Mine immediately to the east. The main workings are located on the Pioneer Extension No. 1-2 mineral claims approximately 1,000 metres east of the Pioneer No. 1 and No. 2 shafts.

The Bralorne-Pioneer Mines vein system was the largest gold producer in British Columbia and ranks 9th in Canadian gold production. Production from the Bralorne-Pioneer Mines in the period 1900-1971 was 4.15 million ounces gold and .95 million ounces silver from 7.9 million tons of ore averaging .53 oz/ton gold recovered (after dilution and milling). The Bralorne mine closed in 1971 due to declining reserves, escalating costs and a pegged price of gold at \$35/ounce. E and B Exploration (now Mascot Gold) optioned the property in 1979 and have delineated 930,000 tons of 0.25 oz/ton gold in all tonnage categories. Their reserves are primarily in old working areas and a new 150,000 ton body of .45 oz/ton gold in the upper levels of the 51 B Footwall vein. In addition Levon-Veronex Resources on the Congress and BRX properties (on the north end of the Bralorne structure) has announced indicated reserves of 670,000 tons of .25 oz/ton gold (160,000 ounces gold.)

Mineralization consists of free gold and 1-3% pyrite-arsenopyrite in sheared quartz veins 3-20 feet wide averaging 4-6 feet. Principal production came from four large veins, the 77, 51, 27 and Main Vein from ore shoots with strike lengths of 1,000-1,500 metres and dip lengths of 1,500-2,000 metres. The great persistence of these veins to depth is due to the close association with the Cadwallader fault a deep seated crustal structure. The veins strike tangentially to the Cadwallader fault within a lens shaped body of

greenstone, diorite, soda granite, and greenstone which sustain brittle fractures. Extensive quartz-carbonate-biotite alteration envelopes surround the veins indicating a large hydrothermal system which has further enhanced the brittle nature of the host rocks. The ribbon texture of the veins indicates many periods of open space filling which took place over an extended time period accompanied by recurrent small movements along the vein shears.

During 1935-1937 (Pacific Eastern Gold Mines Ltd.) and 1944-1947 (Quebec Cartier Mining Company) completed underground mining work and explored the Pioneer greenstone anticline from the 520 cross cut outward along the 1959 drift for approximately 800 metres. The most significant vein discovered was located near the 520 crosscut. It was explored on via the 690 west drift, the west drift and a connecting winze, See Figure A. Significant assays of greater than .2 oz/ton were realized over extended sections and a grade of greater than .5 oz/ton was taken on the 690 west drift. Diamond drilling in 1985 (P85-02) to test the vein at depth intersected two veins. One 1.0 to 1.5 metres wide with a wide carbonate altered envelope. The veins contained disseminated pyrite-pyrrhotite, and rare arsenopyrite and trace to 0.08 oz/ton gold. P85-03 drilled 250 metres to the east of P85-02, intersected 2 quartz stringer zones containing disseminated sphalerite, chalcopyrite, pyrite and galena with trace gold.

The revised (1986) geology of the Pacific Eastern property is shown in plan maps Figures 5 and 8 and in cross sections Figures 9 and 10. Two deep diamond drill holes P86-04 and P86-05 were drilled by Normine Resources Ltd during 1986. DDH P86-04 was targeted to test the favourable geological environment of the North Pioneer Greenstone anticline adjacent to Bralorne Intrusives and the Cadwallader fault below the western end of the 1595 drift and DDH 1945 No. 13. Two significant auriferous veins were intersected in DDH No. 13; one vein 1.0 metres wide with 0.1 oz/ton and a second one 1.5 metres wide with "free gold" - no assays. DDH P86-05 was targeted to test the Pioneer greenstone formation 550 metres east of the end of the 1595 drift. With this significant step out, a "new mineralized regime" was sought eastward along the favourable greenstone/diorite host rocks.

No significant quartz veining was intersected in P86-04. The geological section was down dropped significantly with the Pioneer greenstone being intersected 150 metres deeper than expected. An "Empire type" fault was postulated to account for the downward displacement and an apparent 70 metre right lateral strike slip movement.

P86-05 intersected "significant looking" ribbon banded quartz veins within a large mass of diorite/quartz diorite as well as zones of strong ankerite-calcite alteration with smeared sulphides on fracture plans; all of which contained only background to weakly anomalous arsenic and very weak anomalous to background gold values.

1.1 CONCLUSIONS

1. The following criteria appear to be significant factors in the formation of Bralorne/Pioneer type Gold Quartz Vein Deposits:

- a) Close proximity to the Cadwallader fault. The presence of ultramafic rocks suggest a deep plumbing system capable of tapping gold sources related to upper mantle degassing or lower crustal granulitization (Colvine et al, 1984).
- b) Host Rocks. Bralorne Intrusives, diorite, quartz diorite, soda granite and Pioneer greenstone. These rocks are competent enough to sustain brittle fracture therefore conducive to vein development.
- c) Presence of Albite Dyking. Albite dykes appear to be precursor to gold quartz veins striking and dipping similar to Au-veins at Bralorne and Pioneer. Although the Au mineralization could be of upper mantle or lower crustal in origin a geothermal heat pump is necessary to distribute the Au bearing hydrothermal solution. A deep seated intrusive related to the albite dykes is envisaged as that heat pump. The diorite/soda granite appears to be "old" geologically (245 my, K-AY) to have been possible mineralizers. (C. Leitch personnel communication).
- d) Hydrothermal alteration in particular carbonization of wall rock appears to be closely associated with productive veins at Bralorne and Pioneer mines.

2. The 1986 diamond drill program (DDH P86-04 and DDH 86-05) confirmed that the favourable geological environment of Bralorne Intrusives and Pioneer greenstones with banded quartz veins enveloped by carbonate alteration extends eastward from known underground workings, however, only trace amounts of gold were encountered in the veins.

DDH 86-04 failed to intersect significant quartz veining, although it intersected two zones of strong carbonate alteration within fault/shear zones. A "Empire type" fault was postulated to account for the down drop in the section by 150 metres and approximately 70 metres of right lateral strike slip movement.

DDH 86-05 intersected a thick section (218 metres) of diorite/quartz diorite similar to the Bralorne mine area which has intruded the Pioneer greenstone anticline and is cut by several encouraging Bralorne type ribbon banded quartz veins; the veins, however, contained only weak arsenic and gold geochemical values.

3. Two target areas have been defined by the 1985-1986 diamond drill programs.

Target 1

Hole P86-05 intersected an unexpected thick section (218 metres) of diorite/quartz diorite which has intruded the Pioneer greenstone anticline. The diorite from 384 - 602 metres is extensively veined with many quartz veins with carbonate halos and disseminated pyrite. Although only weak gold is present, the intensity of alteration and similarity of the banded veins to the Bralorne veins indicate that this area may be on the fringe of another gold mineralizing structure with a possible gold source to the east.

The results of a limited soil geochemical survey located east of P86-05 show a weak arsenic-antimony anomaly located at L115+ 00E; 97+00E (90 ppm As and 1.6 ppm Sb). This weak anomaly lies above the point recently drilled by P86-05, but because the sampled media was glacial till, anomalous values are related to transported material, which is possibly further to the east.

Target 2

As drilling has progressed eastward from the Pioneer Mine and the 520 crosscut the late hydrothermal "gold mineralizing" event that produced the high grade Main and 27 veins appears to weaken eastward with 86-04 failing to intersect significant alteration or veining.

The western portion of the Pacific Eastern property appears to be still within the Pioneer gold mineralized regime as significant gold values are contained within a vein located just east of the 520 cross cut. The vein was explored via underground work on the 690 west drift, west drift and connecting winze with some significant results of greater than .2 oz/ton over 15 metres on the west drift and a grade of greater than 5.0 oz/ton on the 690 west drift, see Figure A.

P-85-02 was drilled underneath the above auriferous vein and intersected, at depth, two quartz veins 1.0-1.5 metres thick with an 80 metre wide carbonate alteration envelope. The veins are mainly massive quartz with quartz stringers and contain minor disseminated pyrite-pyrrhotite, trace arsenopyrite and assayed trace to 0.08 oz/ton gold. It is possible that P85-02 pierced a "mineralized low" with more highly mineralized surrounding material. To appreciate the fact that mineralized lows do exist within a productive vein and that more than one drill hole is required to evaluate an area of suspected potential, refer to Figure B Longitudinal Section of Main Vein showing stoped areas.

The target would seem to be within the area of P85-02. Further drilling is needed to test this zone.

1.2 RECOMMENDATIONS

1. Diamond drilling is recommended to the east of DDH 85-05 which intersected a thick section of favourable diorite/quartz diorite host rock with banded quartz veins. Before drilling, the grid should be established over the area and geological, soil geochemical and VLF and magnetometer surveys should be conducted to better target the holes.
2. Further diamond drilling in the area between the Pioneer claim boundary and the 520 crosscut and below the 690 west drift (where assays of greater than 0.2 oz/ton are noted and also a grab of greater than 5 oz/ton) is justified in light of a perusal of Figure B, where many mineralized lows are found within a productive vein.) More specifically two holes are recommended 100-150 metres on each side of P85-02. See Figure 8 for hole locations.