MINNOVA

MEMORANDUM

DATE:

September 15, 1989

Å TO:

I. Pirie

COPIES Á COPIES TO: A. Davidson

DE FROM: C. Burge

SWET SUBJECT: Wren Property Exam, Pemberton

NTS 92 J/6E,7W

Introduction

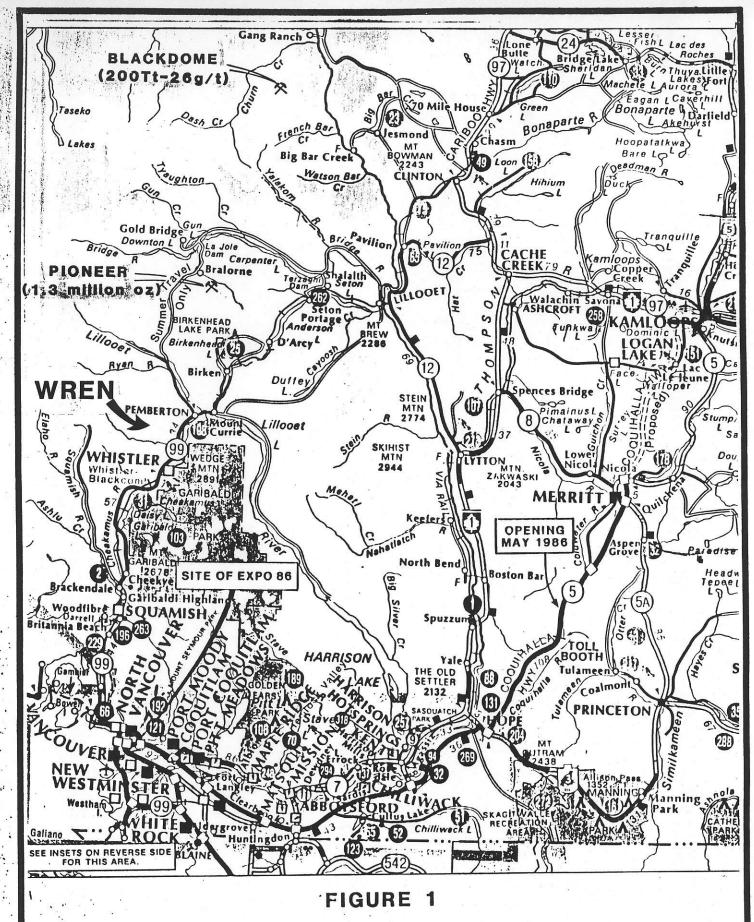
The Wren group consists two modified grid claims and 3 two post claims and is well located in the Rutherford Creek drainage just southwest of Pemberton. The property is held by Castle Minerals (682-5637) of Vancouver who drilled 5 holes totaling 230 meters as follow up to a very successful soil program. The soils provided numerous elevated gold values over an area of 1 km square. No geological mapping or trenching was done before drilling and the geochem (assayed for Au and Ag only) combined with a limited VLF survey provided drill targets. Spectacular coarse volcanic breccias can be seen on the property as well as a wide zone of altered pyritic intermediate crystal tuffs.

The current target on the Wren group is shear hosted gold presumably of the Northair type located 18 km to the SW. Northair produced 500Tt of .46 opt Au and 7% combined Pb-Zn. The presence of coarse fragmentals, argillites and cherts suggest that potential for volcanogenic massive sulphides is good however no VMS deposits have been discovered to date in the pendant.

A brief examination of the 5 Castle Minerals drill core revealed three holes were cored in granite. A number of very narrow quartz veins (less than 10 cm.) were intersected and found to be anomalous in gold. The granite is remarkably fresh and no evidence of major shearing was observed.

Location, Access and Physiography

The claims are reached by travelling 12 km west of Hwy 99 on the Rutherford Creek main haulage road. The road leaves the pavement 20 km north of Whistler and 7 km south of Pemberton. The Wren claim, the current work area, has recently been logged and although it is on a steep north facing slope logging switch-back roads are frequent. Above existing logging roads the slope eases and road building in the area around DDH#5 would not present a problem. Work in the coarse fragmental rocks would, however, be hindered by imposing bluffs.



LOCATION MAP

MINNOVA

SEPT.1989

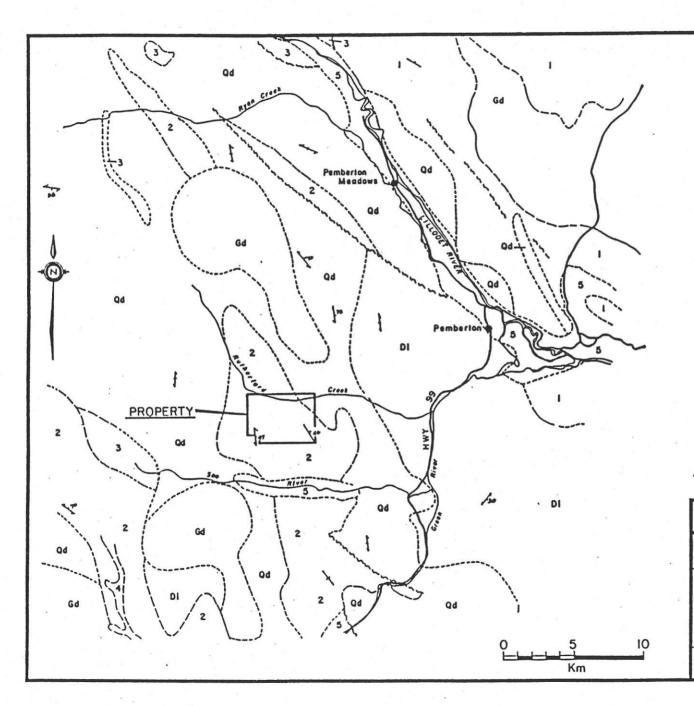
Geology and Mineralization

The Wren is underlain by by volcanic and sedimentary pendant rocks possibly correlative with the Gambier group (Woodsworth 1977). These rocks have been intruded by Coast plutonic complex igneous rocks. The pendant is separate from the Callaghan pendant which hosts the Northair deposit. The Wren package is the north extension of rocks outcropping in Whistler village. A well pronounced lineament trends onto the property from the NW and can be seen in Figure 2 as the NW extension of the Rutherford Creek.

The western side of the Wren claim is underlain by spectacular volcanic breccias which contain block size intermediate fragments set in a mafic, pyroxene porphyritic, This unit forms imposing bluffs and contains matrix. sulphide bleeds in increasing amounts toward its eastern margin. The breccias are relatively fresh and are for the most part weakly deformed. An extensive area underlain by an altered pyritic intermediate unit occurs to the east of the breccias. This unit has been strongly deformed showing a penetrative cleavage indicative of a zone of high strain. A showing of a highly pyritic rock occurs rear the contact with the breccias (4635). Unfortunately no trenching has been done on this zone and a lack of bedding indicators make relationships difficult. This showing was presumably the drill target for DDH#5 but unfortunately the hole was abandoned short of target due to technical problems.

A quartz porphyritic-muscovite-orthoclase(?) granite intrusive outcrops in the eastern portion of the Wren and drill core show it to be unaltered and undeformed. This unit is of unknown age and underlies a considerable portion of the claim block. The granite hosts a number of very narrow quartz veins were intersected in drill core and were anomalous in gold.

The rock/soil outcrops along the lower road near DDH#1 consist of a well developed ferracrete that does not exist higher on the hillside.



LEGEND:

STRATIFIED AND HIGH-LEVEL PLUTONIC ROCKS

PLEISTOCENE AND RECENT

5 UNCONSOLIDATED ALLUMAL, FLUMAL, AND GLACIAL DEPOSITS

PLICODNE TO RECENT

4 GARBALDI GROUP: OLIVINE BASALT FLOWS OF PLEISTOCENE ACE

MICCENE (1) AND OLDER (1)

3 ANDESTIC TO BASALTIC FLOWS AND BRECCIA, MINOR DACITE: BASALT FLOWS WITH INTERBEDDED CONCLONERATE AND SILTSTONE

LOWER CRETACEOUS

2 GAMBIER GROUP: ANDESTIC TO BACITIC TUFF, BRECCIA, ACCIONERATE: ANDESTIE, ARCILLITE, CONGLOMERATE, LESSER MARBLE, GREENSTONE, AND PHYLLITE.

UPPER TRIASSIC

CADWALLADER GROUP (UNDIVIDED; INCLUDES HURLEY, PIONEER AND HOEL STRATA, MAY INCLIDE CLDER AND YOUNGER ROCKS);
ANDESTIC BRECCIA, TUFF, AND FLOWS, GREENSTONE; LESSER
SLATE, ARGULITE, PHYLLITE, CONGLOMERATE, LIMESTONE, RHYOLITIC BRECCIA AND FLOWS

PLUTONIC ROCKS (MOSTLY OF UNKNOWN ACE)

Gd CRAHODIORITE

Qd QUARTZ DIOPITE

DIORITE: DIORITIC COMPLEXES CONTAINING DIORITE, QUARTZ DIORITE, AMPHIBOLITE, CREENSTONE, AND DYKE SWARMS

SYMBOLS

- GEOLOGICAL BOUNDARY (DEFINED, APPROXIMATE, ASSUMED)

BEDONG (HORIZONTAL, INCLINED, VERTICAL)

FOLIATION, SCHISTOSITY (STRIKE AND DIP)

--- FALLY (DEPINED, APPROXIMATE, ASSUMED)

CASTLE MINERALS INC.

WREN GROUP

LILLOOET MINING DIVISION, B.C.

REGIONAL GEOLOGY

GEOLOGY MODIFIED FROM G.J.WOODSWORTH (1977)

DATE: NOVEMBER, 1987 BY:

FIGURE No.

Conclusions

1. Good gold numbers in soils

2. Previous work inadequate, Drill holes were collared directly over creeks and draws likely to contain shears. DDH#5 was too short to sufficiently test the pyrite showing.

3. No geological map has been made

3. Easy access lends, itself to trenching and drill set-ups

4. Targets: VMS, Shear hosted Au., porphyry style.

At present no source is known for the widespread gold geochemical anomalies. The erratic nature and distribution of the anomalies is difficult to explain but a single source is unlikely. If the narrow quartz veins in the granite are the source for the anomalies it is difficult to see how mineable widths and tonnage could be obtained.

Recommendations

1. review existing data.

2. investigate work by previous owners through assessment reports.

3. duplicate some of the soil samples to verify Castle results.

4. watch pendant for future developments.

Wren Property: 10 km. SW of Pemberton in the Rutherford Creek drainage

Lithogeochemical samples

```
4635
      Sulphide mud (?), 75 m west of DDH #5
4636
      Intermediate volcanic, 50 m west of DDH #5 (in creek)
4637
      Intermediate volcanic, 100 m east of DDH #5
4638
      Intermediate volcanic, 200 m east of DDH #5
4639
      Intermediate volcanic and ferracrete at DDH #1
4640
      Fault gouge, contains peculiar blue mineral.
4641
      Intermediate volcanic, 100 m east of DDH #1
4642
      Intrusive, quartz phyric, pinkish granite.
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SAMPLE, AL203, BAT, CAO, FE203,
                                 K20,
                                       MGO, MNO2, NA2O, P2O5, SIO2, TIO2,
                                                                          S.
                      %,
                                   %,
                                                         %.,
SAMPLE
         7.
                 %,
                             % ,
                                         χ,
                                              %,
                                                   χ,
                                                                %,
                                                                     % ,
                                                                          %.,
                                                                                 7.
4635, 10.51, .060, .01, 7.13,
                                 .79,
                                       .07, .01,1.20, .04, 72.21, .44,6.10,
 4636, 18.40, .105, .01, 4.87, 3.93, 2.10, .04, .61, .07, 63.17, .56,3.20,
                                                                             97.05
4637, 16.78, .065, .89, 6.73, 1.40, 1.77, .10,4.20, .08, 62.21, .52,3.45,
.4638, 22.15, .095, .27, 7.68, 5.04,
                                      .86, .03,1.04, .07, 54.76, .71,4.60,
14639, 18.67, .055, .01, 6.47, 2.72, 2.99, .08, .53, .06, 62.68, .49, .06,
4640, 21.83, .050, .01,
                         .54, .04,
                                      .05, .01, .03, .03, 74.81, .56, .03,
4641, 16.67, .075, .01, 6.49, 2.76, 3.14, .15, .50, .09, 64.88, .42, .54, 95.72
 4642, 16.43, .070, 2.19, 2.40, 1.75,
                                      .71, .10,4.54, .08, 68.72, .22, .04, 97.26
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SAMPLE
          AG
                  AS
                         BA
                                 CU
                                        PB
                                                SB
                                                       ZN
                                                             AU
         ppm
                 ppm
                        ppm
                                ppm
                                       ppm
                                               ppm
                                                      ppm
                                                            ppb
4635,
                                                       76,
         4.5,
                 134,
                         56,
                                612,
                                        82,
                                               175,
                                                               5
                         74.
                                 25,
                                        37,
                                                       39.
4636.
          .6.
                    6.
                                                 1.
                         59,
                                        26,
                                                       74,
                                                               5
4637,
                  24,
                                 34.
                                                 З.
         1.2,
                                 56,
                   10,
                                                 1,
4638,
         1.1,
                         45,
                                        15,
                                                       32,
                                                              10
4639.
          .5,
                    2,
                         69,
                                 90.
                                        28,
                                                 1.
                                                      148.
                                                              50
4640,
          .2,
                    4,
                        466,
                                  7,
                                         Э,
                                                              15
                                                 1,
                                                        4,
          .2,
                         51,
                                                 1,
4641,
                                 32,
                                        33,
                                                      112,
                                                               5
                    1,
                                  7.
                                                       37,
                                                               5
                                                  1,
4642.
           .2,
                    1.
                        152,
                                         6,
```

Soil Samples

```
4643 very rusty material at DDH #1
4644 Ferracrete at DDH #1
4645 Ferracrete 100 m east of DDH #1
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```
SAMPLE AG
             AS
                   BA
                          CU
                                PB, SB,
                                          ZN.
        bbw bbw
                   ppm
                         ppm
                                bbw bbw
                                          ppm ppb
             1,
4643,
        .8,
                   32,
                         341,
                                10,
                                      1,
                                          97,
                                                25
                                      1,
4644, 1.1, 55,
                   92,
                        805,
                                         124, 140
                                22,
4645.
       .9, 16, 155,
                        225,
                                43,
                                      1.
                                          64.
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