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REPORT ON
TRENCHING, MAPPING AND SAMPLING
ON THE
SWIFT AND GUS CLAIMS
NTS 82F/3W

by

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FALCONER *W.L.*

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SUMMARY

This report describes a backhoe trenching, mapping and sampling program completed on the Swift, Gus and Ace in the Hole claims by Falconbridge Limited in 1987. The claims are located approximately 10 km southwest of Salmo, B.C. in the Nelson Mining District NTS 82F/3W. Previous work identified pyrite, chalcopyrite, sphalerite, galena, and gold and silver values in association with quartz veining in altered mafic volcanoclastics of the Elise Formation, a part of the Rossland Group. I.P., VLF and Magnetometer surveys and soil samples collected along cut lines, had indicated various geophysical and geochemical anomalies.

Thirty one trenches totalling 1730 m were excavated, mapped and sampled between May 25 and June 20, 1987. Two areas, a total of 0.5 km², were mapped in detail (1:1000). 435 rock samples were collected from trenches and analysed for Au and Ag, 17 element whole rock and Cu, Zn and Pb.

The objectives of the work program were to test coincident geophysical and geochemical anomalies and to gain an understanding of the relationship between alteration and mineralization.

The trench mapping and sampling results are shown on 1:200 to 1:100 scale maps. A correlation between high gold values in trenches, and geochemical anomalies is apparent. Two areas of higher gold values warrant further exploration.

CONCLUSIONS

Alteration of mafic volcanoclastics (ash, crystal, and lapilli tuffs) is subdivided into three groups:

1. limonitization (erratic alteration caused by surficial effects),
2. propylitization (weak regional pervasive) and,
3. a combination of silicification, quartz (-carbonate) veining, carbonatization and argillic alteration with minor hematization and sericitization.

Mapping showed type 3 as being mainly confined to irregular zones in an area northeast of Lines 18N and 10W.

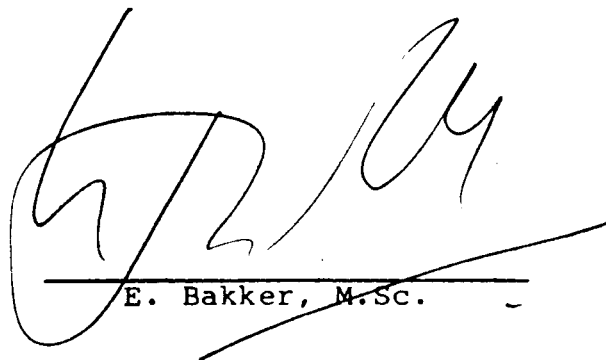
Trenching of coincident major geophysical and geochemical anomalies showed a correlation between the highest gold values and geochemical anomalies. Gold values over 1000 ppb occur in variably altered rocks, but the highest values are associated with quartz or quartz-carbonate veins. These veins are scarce and usually only a few cm thick. Significant values are given on p. 17.

1987 fill-in soil geochemistry correlates with trends established in the 1980 program.

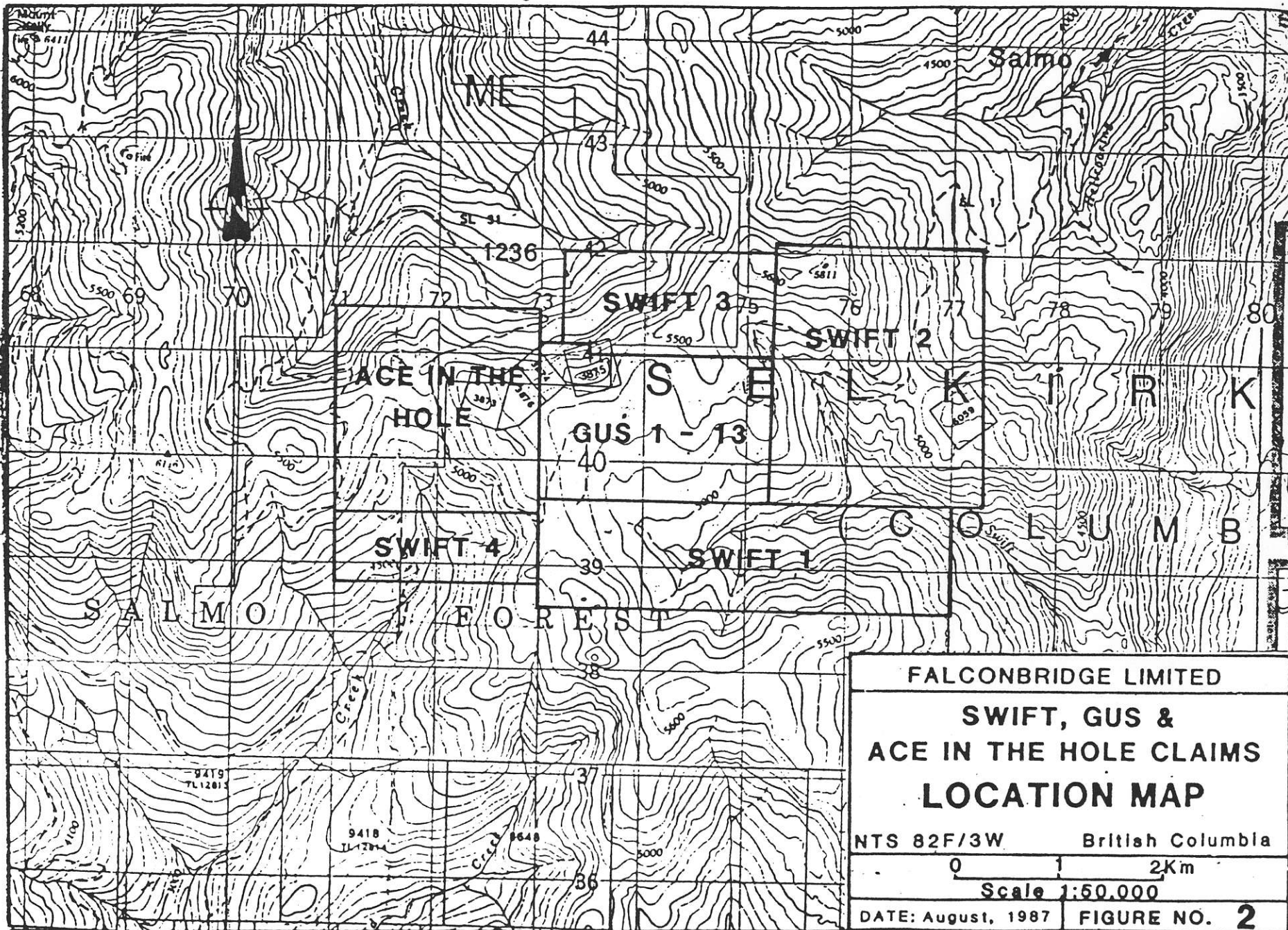
RECOMMENDATIONS

Additional work is required to evaluate the gold potential in two locations on the property, and should consist of the following:

1. Resampling and detailed inspection of part of trenches 21 and 19.
2. Diamond drilling of the mineralized areas at trenches 21 and 19.



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Au was done by standard fire assay and of a 0.25 g sample for Cu, Zn, Pb and Ag by acid extraction. Both analyses were finished by DCP.

Results

Of the 394 samples analysed for gold, 77 (20%) have values over 100 ppb, 35 over 500 ppb and 16 over 1000 ppb. Values over 1000 ppb are localized in five trenches.

Trench No.	ppb Au	Interval	Comments
2	1270	0.10m	Adj. 2.0 m of 220 ppb
4	1270	2.0 m	
4	1050	2.0 m	
6	427(avg)	6.0 m	Incl. 4 cm qtz vn 6420 ppb
19	535(avg)	12.0 m	Incl. 2.0 m of 2020 ppb
19	865(avg)	14.0 m	Incl. 2.0 m of 2160 ppb
19	760(avg)	16.0 m	Incl. 2.0 m of 1650 ppb
21	100(ppm)	2.0 m	Adj. 2.0 m of 1010 ppb
21	8500	2.0 m	Adj. 2.0 m of 960 ppb
23	1430(ppm)	6.0 m	Incl. 2.0 m of 2850 ppb
30	1750	2.0 m	Adj. grab 1650 ppb

A 2.0 m section in trench 21 above assayed 100.4 ppm Au (2.92 oz/ton). A quartz vein up to 0.4 m wide contains chalcopyrite, galena, pyrite and possibly sphalerite. Total sulphide content is estimated to be 10%. Several long sections in trench 19 returned significant gold values indicating highly anomalous gold content in altered mafic pyroclastics.

High silver values occasionally correspond with high gold values (5.2 ppm Ag and 6410 ppb Au in trench 6, 18.0 ppm Ag and 100.1 ppm Au in trench 21). Higher values which do not correspond to high gold values occur in trench 9, where an 8 m section averages 4.2 ppm

Ag (gold is 86 ppb) and a 2 m section has 3.6 ppm Ag (gold is 110 ppb). A grab sample with boxwork quartz veins near trench 23 returned 17.0 ppm Ag (440 ppb Au). Mineralized samples analysed for base metals have silver values from <0.5 to 18 ppm, Au values, however, are consistently low.

Six samples of base metal mineralization that were analysed for Cu, Zn, Pb, Ag, Au returned up to 3.3% Cu, 0.45 % Zn, 0.17% Pb, 18.0 ppm Ag and 95 ppb Au.

Discussion

High gold values were encountered in five trenches underlain by mafic volcanoclastics. The best values appear to be associated with quartz or quartz-carbonate veins/veinlets, or areas of silicification, argillic alteration or limonite development.

No significant gold values were noted between Line 2E and Line 6E, north of BL 18N, an area which contains several zones of pervasive carbonatization (ferroan dolomite) and weak, but widespread quartz veining.

The best gold values, located in trench 19 and 21, correspond to gold soil anomalies. Trenching of other significant gold soil anomalies e.g. trench 7, 8, 20 did not encounter good gold values in bedrock. Trenching of weak gold and/or geophysical anomalies likewise failed to locate interesting gold mineralization.

From results obtained to date, it is apparent that significant gold content is associated with quartz or quartz/carbonate veining, although moderate values were found in altered volcanoclastics lacking veins.