

Table VII. In most cases the sulphide zones could not be extrapolated from hole to hole with any confidence.

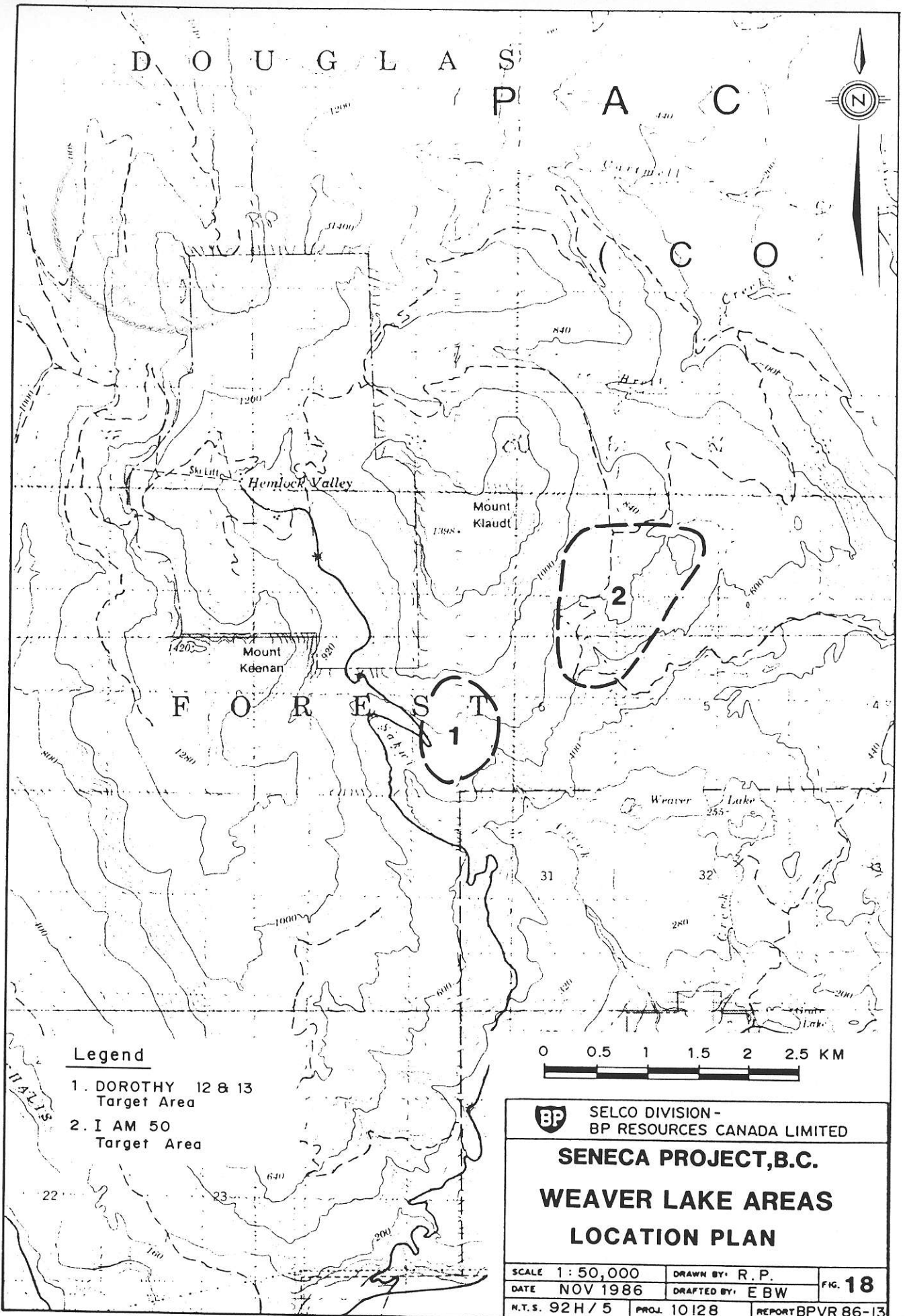
Overall, there does not appear to be any correlation or zonation within the 'Upper Vent' Zone. A lack of correlation between assayed elements is also indicated. Individual assays of up to 1.34% Cu, 0.38% Pb, 6.51% Zn, 20.0 g/t Ag and 0.31 g/t Au were obtained from separate feldspar porphyry breccia core samples. Generally, only background values of lead and gold were reported from all the sampled drill holes except for the sulphide intersection in drill hole 86-14, see Figure 14 and Appendix III.

3. Weaver Lake Areas

During the course of the field season, two areas on the north-east side of the Seneca property, see Figure 18, were investigated for potential massive sulphide and precious metal mineralization.

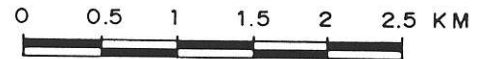
a) Dorothy 12 and 13 Claims

This area, which has been referred to as the "Weaver grid" by previous workers, contains several areas of coincident soil (Pb,Cu,Zn) and I.P. anomalies, as outlined by Watson, 1983 (see Figures 19 and 20). Paul Cartwright, the geophysicist who conducted the 1982 I.P. survey, felt that the anomaly #2 results suggested "Seneca type massive sulphides may be present" and that the best interpretation of it's source is a



Legend

- 1. DOROTHY 12 & 13
Target Area
- 2. I AM 50
Target Area



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SENECA PROJECT, B.C.
WEAVER LAKE AREAS
LOCATION PLAN

SCALE 1: 50,000	DRAWN BY: R.P.	FIG. 18
DATE NOV 1986	DRAFTED BY: E.B.W.	
N.T.S. 92H/5	PROJ. 10128	REPORT BPVR 86-13

"sheet-like, tabular body, lying close to horizontally beneath the surface, at a depth of less than 100 feet." Previous workers also believed that the veins and disseminations of $\text{Py}+\text{ZnS}+\text{CPy}+\text{PbS}$ hosted by "rhyolitic tuff breccias," within and around anomaly #2, could represent "root zone-type" mineralization. They proposed that this mineralization is similar to the Seneca deposit's "footwall stockwork" and that a potential massive sulphide host would lie to the south of anomaly #2.

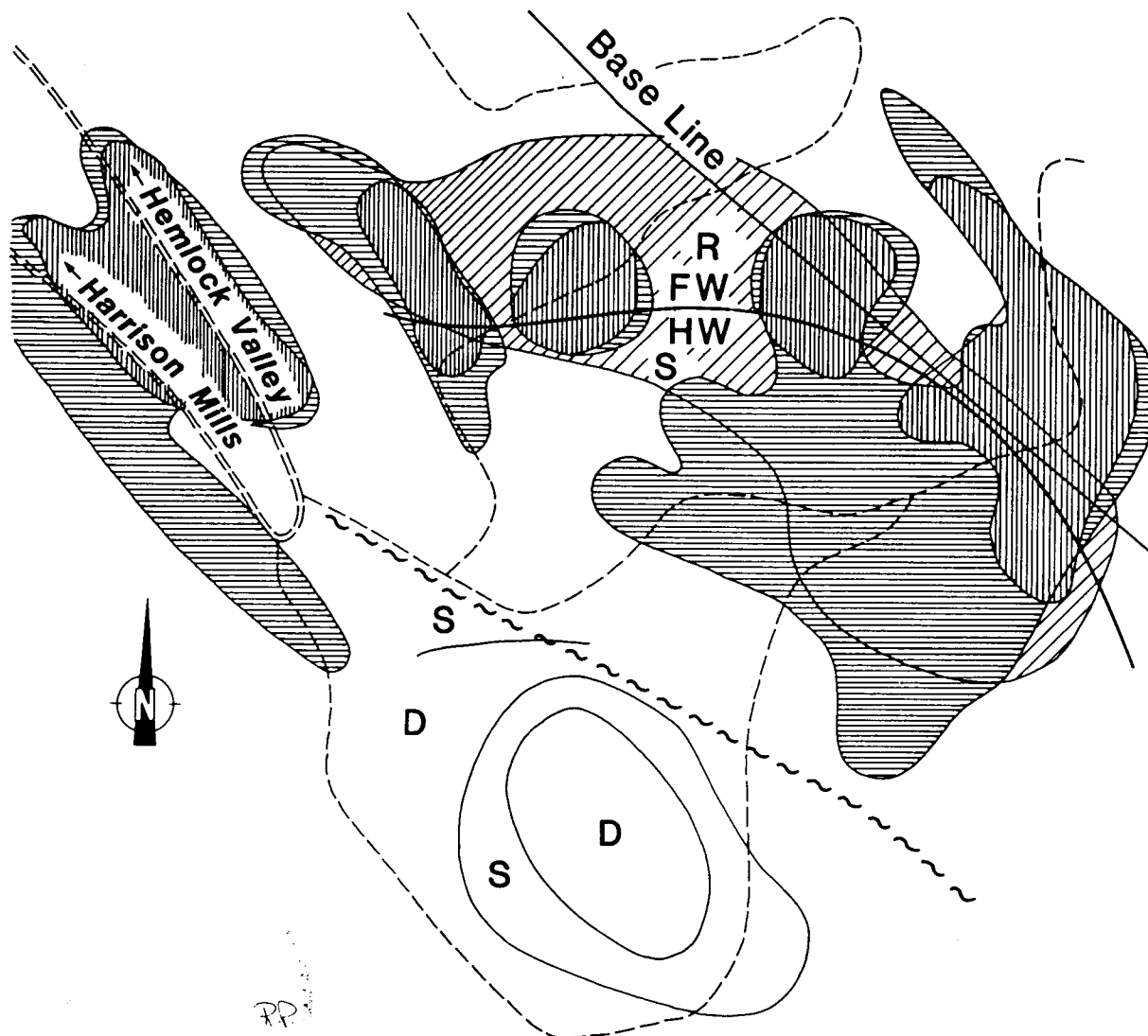
Selco personnel spent 5 man-days sampling and mapping some of the outlined anomalies and the proposed 'Seneca-type' massive sulphide host, see Plan 42.

Investigation of the coincident soil and I.P. anomalies (#1 and #2) revealed that they are reflecting a partially mineralized hydrothermal system which shows a moderate to strong spatial relationship to a Feldspar Porphyry unit and locally, to a sheared and silicified, pillowed felsic flow. These units display widespread alteration consisting of pervasive to localized silicification and broad areas of pervasive argillic alteration, bleaching and associated fracture brecciation. The mineralization consists of widespread and local, minor concentrations of disseminated

and fracture filling $Py+ZnS+CPy+PbS$ and minor shear-related magnetite. It is felt that this mineralization and its host bear no similarity to the Seneca footwall but appears somewhat similar to the 'Vent' Zone, although it is more silicified and less argillically altered. The mineralization appears to be epigenetic and associated with the major, north-west trending regional faulting and its associated splays.

The stratigraphy, which was proposed as a potential massive sulphide host, consists of shallow dipping andesitic to basaltic flow breccias with local massive flows and felsic, sandy textured crystal to crystal lithic volcanoclastics. Local zeolitic alteration, silicification, disseminated pyrite and minor quartz veining was observed. No promising, potential Seneca-type massive sulphide host lithologies were observed in this section.

The observed stratigraphy to the south-east of anomaly #2 consists of a Feldspar Porphyry unit which displays local zeolitic alteration, silica flooding, hairline quartz veinlets and minor disseminated pyrite with accompanying bleaching and brecciation which appear to be associated with the nearby, major regional fault (Sakwi Creek).



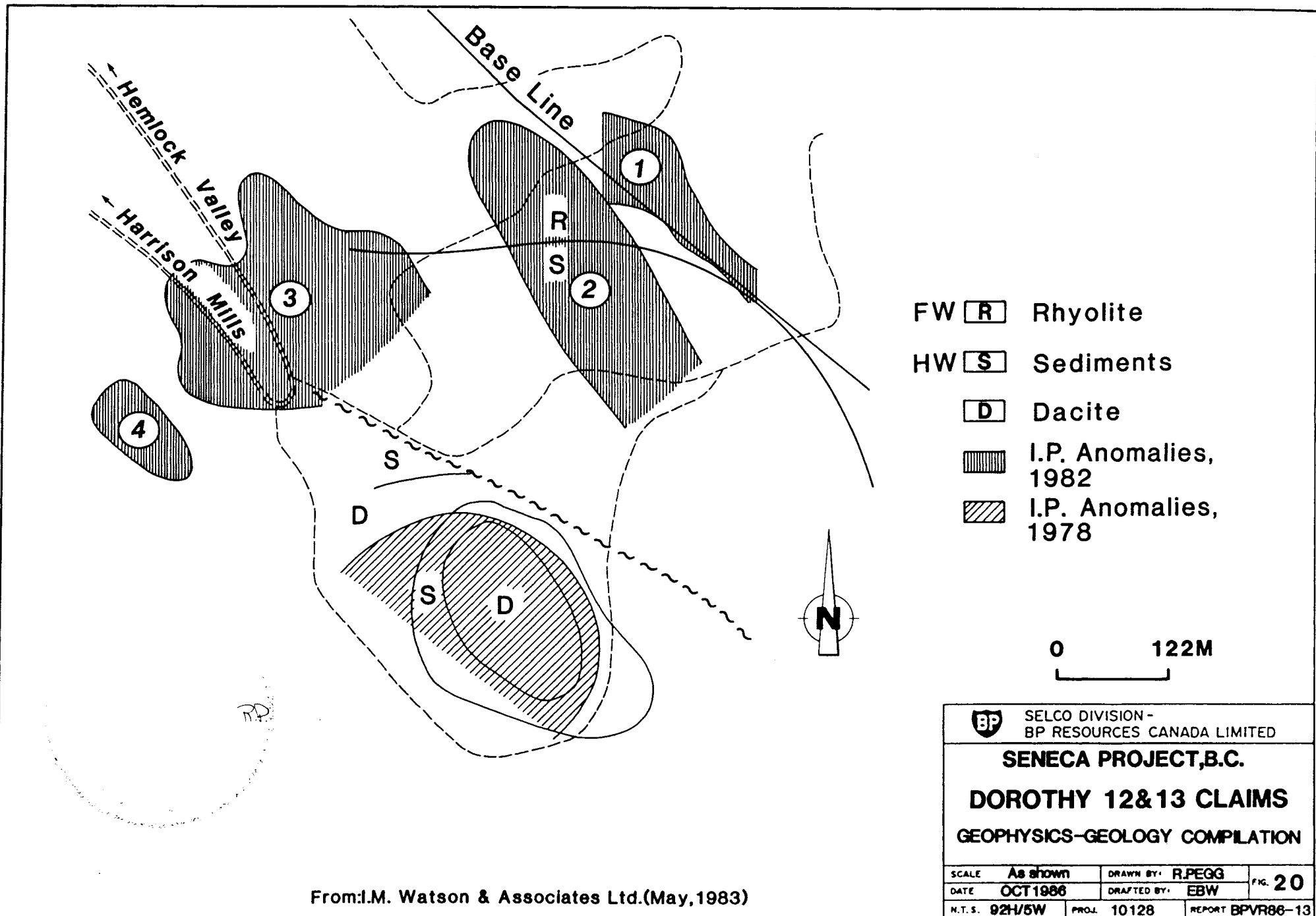
- FW R Rhyolite
- HW S Sediments
- D Dacite
- Cu > 50ppm
- Pb > 50ppm
- Zn > 200ppm



From: I.M.Watson & Associates Ltd. (May , 1983)

SELCO DIVISION - BP RESOURCES CANADA LIMITED			
SENECA PROJECT, B.C.			
DOROTHY 12 & 13 CLAIMS			
SOIL GEOCHEMISTRY - GEOLOGY COMPILATION			
SCALE	As shown	DRAWN BY	R.PEGG
DATE	OCT 1986	DRAFTED BY	EBW
N.T.S.	92H/5W	PROJ.	10128
		REPORT	BPVR86-13

FIG. 19



- FW **R** Rhyolite
- HW **S** Sediments
- D** Dacite
- I.P. Anomalies, 1982
- I.P. Anomalies, 1978

SELCO DIVISION - BP RESOURCES CANADA LIMITED			
SENECA PROJECT, B.C.			
DOROTHY 12 & 13 CLAIMS			
GEOPHYSICS - GEOLOGY COMPILATION			
SCALE	As shown	DRAWN BY:	R. PEGG
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From: I.M. Watson & Associates Ltd. (May, 1983)

Results from "high graded" rock samples, see Appendices IV and V, collected from this area contain only elevated levels of Cu, Pb, Zn, Ag, As, Au and Hg.

No further work is recommended in this area at this time.

b) I AM 50 Claim

This area has been investigated in the past by several operators but no definitive target was ever identified. The work included mapping, soil and silt sampling by Bethlehem Copper (1970), linecutting, magnetometer surveying, soil sampling and drilling by Aaron Mining Ltd. (1973 and 1974) and mapping, soil sampling and EM surveying by Chevron Standard Limited (1978 and 1979). The previous operators have described a highly faulted section of intermediate to felsic volcanics, near-surface intrusives and lesser sediments within the claim area. Disseminated pyrite, up to 10%, numerous narrow (<3 cm) veins of quartz+Py+ZnS+CPy+barite and extensive zones of silicification have been reported within the dacitic to rhyodacitic units.

During the course of the field season, Selco personnel completed two visits (Sept. 17-18 and Nov. 4-7) to this area which is separated from the Dorothy 12 and 13 targets by Sakwi Creek, a major north-west trending fault.

A. Findlay and W. Piotrowski first traversed the central and northern portions of the claim and found that coarse intermediate to felsic volcanoclastics are the predominant sulphide host. Findlay noted the presence of thin bedded sediments in the north-west portion of the claim, indicating at least local subaqueous deposition. He also noted abundant, irregular, discontinuous, drusy quartz veinlets (stockworks), quartz vein sheetings and a few thicker (some over one metre) quartz veins. The quartz veinlets typically contain minor pyrite, some with accompanying minor, finely crystalline black sphalerite and occasional chalcopyrite. The thicker veins usually contain little or no sulphides. Findlay believes that a circular topographic feature (sample #701056, see Plan 43), measuring approximately 150 metres in diameter, in the north-central portion of the claim appears to coincide with the centre of the quartz veined area. Thirteen composite grab samples were collected, mostly from quartz vein material unusually rich in sulphides. Values of Ag, As, Sb and Bi were low, while several samples contained elevated levels of Hg., but showed no apparent correlation with gold. Three of the four samples which contained more than 0.1% Zn had no significant gold values. Six samples contained anomalous gold (>15 ppb), but these showed no obvious common features. The only sample of interest

(#701062) contained over 1 g/t Au and consisted of a highly silicified volcanic with fine-grained, disseminated and fracture filling pyrite, jarosite staining and minor quartz veinlets.

W. Piotrowski and the writer later traversed and sampled outcrops in the area of sample #701062. A total of 52 large chip samples (#701073-#701124) were collected and geochemically analyzed for gold. Outcrops consist of intermediate to acid composition volcanics which are believed to be highly altered feldspar porphyries. This section contains a number of episodes of locally intense, disorientated, discontinuous quartz veinlet stockworks, silica sheetings and white quartz lenses and patches with sericite-saussurite alteration envelopes. Mineralization consists of widespread, erratic, very fine-grained to coarse-grained pyrite disseminations and fracture fillings, local, intense jarosite staining and minor shear-related blebs of quartz+ZnS+CPy in silicified lenses and patches. Lenses of red jasper, up to 17 x 6 cm., were also noted.

Twenty samples contained gold values over 15 ppb and six of these had values over 100 ppb. Five of these six samples were from a detailed sample section (#701073 - #701097) that

appears to represent the source of sample #701062, which is believed to be a talus sample (see Plan 43). The sampled section appears to be part of a discontinuous, silicified, pyritic, jarosite stained and south-east trending fault system which contains abundant quartz veinlets and minor, erratic ZnS, CPy and red jasper. The sampling appears to represent the north-west edge of the fault which continues on to the south-east into talus and overburden. The sample results here and from the nearby exposures illustrate the erratic nature of the gold. One outcrop to the north-east of the detailed section appeared to be fairly uniform in character but the sample on the west side of the outcrop (#701117) contained 195 ppb Au over a sample length of 10.60 metres and the sample on the east side (#701116) contained only 44 ppb Au over a sampled length of 10.00 metres. There does not appear to be any correlation of gold content to either sulphide content or intensity of silicification/quartz veining, but this should be studied further.

The sample results from this preliminary survey appear to indicate that gold is present, but erratic, within the epithermal system found within the I AM 50 claim. It also appears that previous operators have not addressed the gold potential of this area. Further prospecting and sampling

within and around the claim area is required to properly evaluate the possibility of economic gold concentrations within the system.

CONCLUSIONS AND RECOMMENDATIONS

The 'Vent' area's volcanic stratigraphy has been complexly disrupted by widespread faulting, a large influx of porphyry intrusions and locally intense brecciation and hydrothermal alteration. It appears that this stratigraphy is roughly correlative with the lower hangingwall section of the Seneca deposit and that the coarser pyroclastics in this area imply a more vent proximal environment.

The drill tested I.P. anomalies appear to reflect brecciated, silicified and pyritic stratigraphy, which only locally contains coincident base metal mineralization. The significant mineralization, which consists of sphalerite and lesser chalcopyrite, appears to be restricted to the area of the 'Upper Vent' showing where several erratic and discontinuous zones of epigenetic sulphides are found. This epigenetic mineralization carries only erratic and local, geochemically anomalous precious metal values.

The drilling of deep holes in the 'Vent' area, in order to pass through the correlated hangingwall stratigraphy into possible

Seneca deposit-type mineralization, constitutes "blind" drilling. The 'Vent' mineralization appears to epigenetic and shows no clear relationship to the underlying volcanics. Faulting and porphyry intrusions would further complicate this stratigraphic drilling. The drilling of the swampy area between drill holes 86-20 and 86-13 in an effort to extend the known mineralization along strike, would also be expensive and questionable. There does not appear to be any sound geologic reason to expect any dramatic increase in the grades obtained from the drill holes to the west and the drilling upslope indicates that this mineralization will not carry on along strike, to the east. No further work can be recommended in this area, at this time.

If the westerly dip orientation of the marker horizons in the 'Vent' area is persistent, stratigraphic mapping and prospecting to the east of drill holes 79-16 and 79-17 may prove beneficial in locating the potential ore zone. This area, known previously as the "Ridge target" has been worked fairly extensively by Chevron between 1977 and 1982, so one must question the chances of success.

A further look at the Seneca-Trough area core should be undertaken in order to select unsampled silicified sections that may contain gold values. Several significant gold intersections

have been reported in the Seneca deposit drilling and a study of their distribution may also prove useful.

The coincident geochemical and geophysical anomalies at the Dorothy 12 and 13 target appear to reflect epigenetic mineralization. No further work is recommended in this area, at this time.

Additional mapping and sampling of the silicified volcanics within the I AM 50 claim should be considered, as 1986 rock sample results indicate that anomalous, but erratic gold is present, locally in the hydrothermal system.

Respectfully submitted

A handwritten signature in cursive script, appearing to read "Rex Pegg", is written over a horizontal line.

Rex Pegg, P.Eng

Small handwritten initials "RP" in cursive script.