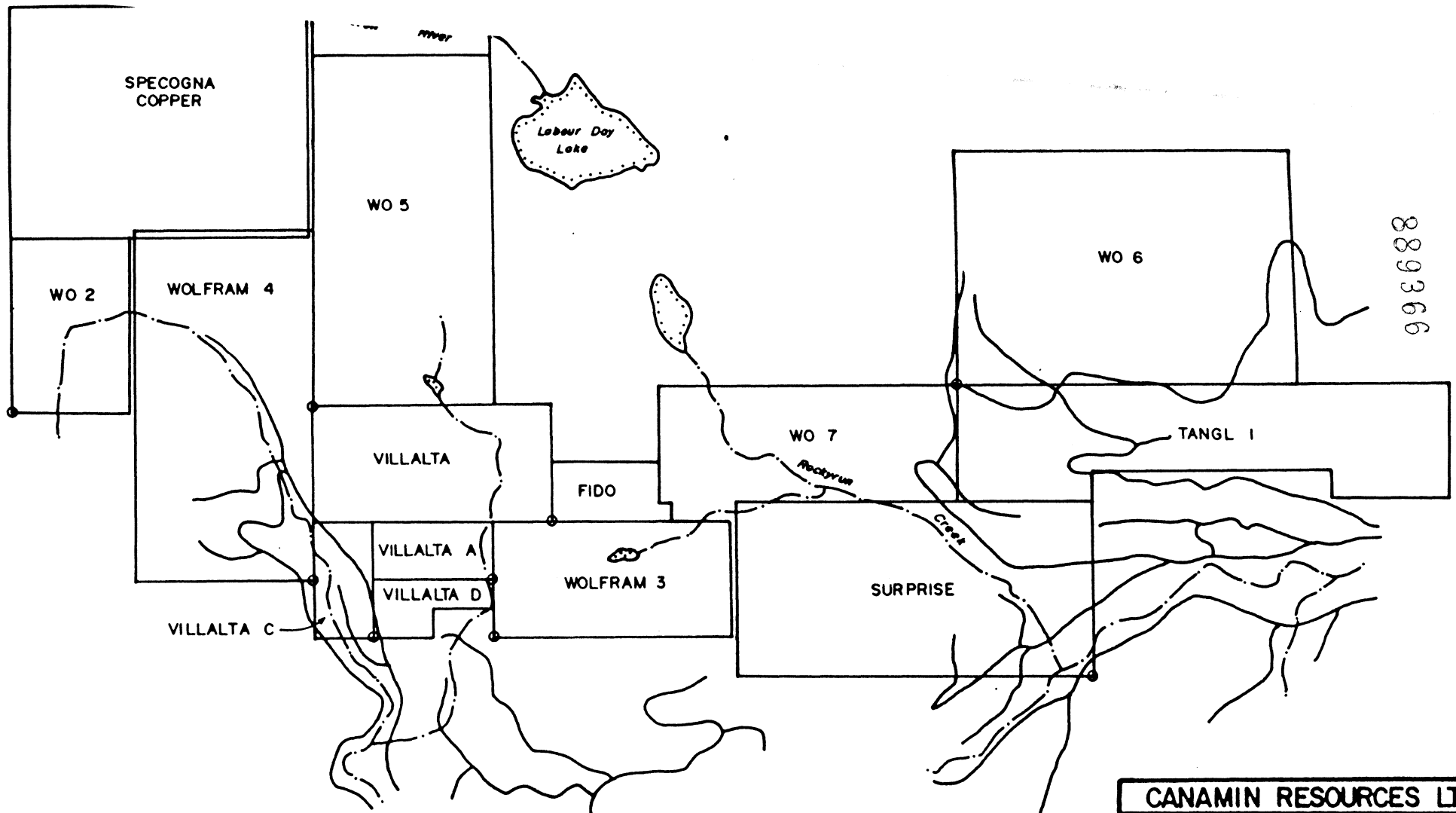


#16719
 FRAME '87



889366

VILLALTA

- LEGEND
- STREAM
 - ROAD
 - CLAIM BOUNDARY
 - ◆ LCP

CANAMIN RESOURCES LTD.	
VILLALTA PROJECT	
CLAIM MAP	
GEOLOGIST: S. POULIN, L.M.S.E.	BASED ON: SURVEY 1987
SCALE:	
DRAWN BY: CR	DATE: JUNE 1987
FIGURE: 2	

1. Background

The Villalta prospect was staked by E. Specogna in 1976. It was optioned to Asarco in 1982 and subsequently to Falconbridge in 1984. Much of the geological, geochemical and geophysical data relative to the prospect was acquired during this period. Drill testing was also completed as follows:

1979	E. Specogna.	1 Winkie hole.	
1980	Canamin Resources.	6 NQ holes.	398.4 metres.
1981	Canamin Resources.	15 NQ holes.	2,008.2 metres.
1984*	Falconbridge.	4 NQ-BQ holes.	666.1 metres.
1986	Canamin Resources.	<u>9 Winkie holes.</u>	<u>51.3 metres.</u>
		<u>35</u>	<u>3,124.0 metres.</u>

* Three drill holes were completed in other areas of claims.

The results of preliminary test metallurgical work carried out between 1984 and 1986 are as follows.

- a) 78% of gold could be recovered from ½ inch sized material; and 65% recovered from 1 inch sized material by cyanide leaching.
- b) Gravity concentration yielded poor results. (Bacon Donaldson).
- c) There is a free gold component to some of the hematitic mineralization, and refractory sulphide made for locally poor recovery. (Coastech).
- d) Best gold recovery in the 80% range was obtained by conventional milling-cyanidation. (Lakefield Research).

At the exposed south end of the hematite zone, drilling suggested a poorly defined reserve in the order of 30,000 to 35,000 short tons grading 0.126 opt gold in a near surface zone averaging 7.3 metres in thickness. (Carter, 1986). Better definition of the reserve and further metallurgical testing on bulk samples was recommended.

Geology.

The Villalta prospect occurs near a small exposure of Buttle Lake limestone close to a contact with volcanic and related sedimentary rocks of the Paleozoic Sicker Myra formation. The limestone is crinoidal and is marked by numerous sink holes. The presence of thin andesitic and tuffaceous horizons above the limestone similar to the underlying Myra rocks suggests contemporaneous deposition of carbonate and volcanic units.

Attention to the area was drawn to a hematite 'Iron formation' lying above the limestone and close to an unconformity with the overlying Cretaceous Nanaimo sedimentary group. The hematite layer is thought to have originated in or adjacent to a mafic volcanic centre. Only a small area at its south end is exposed, however its trace through drilling and geochemistry appears to be generally north-northeast. (Figure 2).

Mineralization

Two types of mineralization have been encountered and partly investigated:

- a) Massive fine to coarse grained pyrite with pyrrhotite and lesser sphalerite, chalcopyrite and galena is evident in steeply dipping discontinuous veins, and as crudely banded conformable lenses in the limestone near the iron formation. These occurrences locally carry important amounts of gold, silver, copper and zinc and tungsten, however they have not attracted detailed exploration.
- b) Because of the contained gold and potential size, the Iron formation has received much of the past attention. Belik reports the formation includes a variety of lithological types that form a gradational series from carbonate-rich facies at the base, to a basic to ultrabasic tuff facies at the top. Massive hematite occurs near the middle of the unit interlaminated with basic and calcareous basic tuff. In some areas the gold appears evenly distributed, in other areas better grades occur near the base and may relate to drilling angles relative to the formation. Some of the gold is indicated to be in native form.

Banding in the iron formation in drill holes 80 V2, V3, and V6 over a strike length of about 160 metres is in the order of $\pm 30^\circ$ to core axis. These holes appear to mark an eastern limit to the hematitic horizon, and areas of alteration, brecciation and shear and fault zones noted in drill holes further to the east may be part of a vent system at or close to the volcanic centre.

If the Iron formation was laid down on a paleoslope close to a volcanic centre; the nature of the surface (karsted limestone), and subsequent deformation would be significant features relative to its present distribution. In view of the apparent dip of the unit, the trace at depth may hold further potential that should be investigated.

7. 1987 Work Program.

In the 1987 program, forty-one short holes varying from 6.40 to 29.26 metres were completed over the south end of the hematite horizon. A longyear S-38 machine was used and HQ core recovered. Total drilling aggregated 648.60m (2127 feet) of which 581.45m were HQ core size and 67.15m were NQ.

Six holes varying from 54 metres to 96.6 metres were completed in the area further to the north. Total drilling aggregated 393.8 metres (1,292 feet), and NQ core was recovered.

The core from zones of interest were either sawed or split with conventional splitter for assay. A total of 445 core samples were sent for assay. All core samples were analysed for gold and silver by fire assay methods and also for 30 elements by the Induced Coupled Plasma (ICP) method. Some were checked for free gold by fire assay. All work was conducted by Acme Analytical Laboratories of Vancouver, B.C. A summary of the assay results is given in Appendix A, while the assay certificates are enclosed in Appendix B. The core was logged, and is stored in a core rack that was constructed in the area adjacent to the drilled area.

. Program Results.

The hematite layer is associated with a green tuff-breccia above the Buttle Lake Limestone. The breccia commonly contains clasts of silicified limestone. In places this unit separates the hematite from the overlying Nanaimo Group conglomerate. In one area, the hematite has been eroded and is in direct contact with the conglomerate.

The hematite varies from black specular to earthy red in masses up to a few metres thick, or as breccia clasts up to 30 cm. in diameter in the surrounding tuff. The near surface material is commonly pitted, weathered and limonitic.

The southern exposure is marked by a strong northwest trend however the drill indicated trend along strike is about 030°.

The drilling program has shown a marked change in the geology of the southern exposure from that to the north. In the vicinity of drill hole 87-V-41 and 42, the limestone has been altered to a white marble, and a number of stringer type alteration and fracture zones, locally with hematite and scattered concentrations of pyritic sulphide, are evident.

At the southern exposure, both crinoidal and fine-grained limestone, and lesser amounts of dark grey rock (argillite?) have been silicified, subsequently brecciated, and incorporated into highly altered siliceous breccias that underlie the hematite. A number of dark green andesitic? dykes with silicified limestone clasts, and a small intercept of altered feldspar porphyry are also evident.

A large cut near drill hole 87-V-5 shows a distinct vertical 315° trend to limestone, chert, and the green dyke breccias beneath the relatively flat lying hematite layer at surface. Sink holes approximately 75 metres to the southeast along trend show silicified limestone clasts and dark grey chert clasts in a greenish tuff?.

Because of the proximity to the Tertiary intrusions, it seems possible that the siliceous breccias are related to the intrusions, and their development along a northwest trend coincidentally may have changed the attitude of the existing hematite zone.

All assays received to date are recorded in the logs accompanying appendices to this report. An economic evaluation is not attempted as part of this report.