ASSESSMENT REPORT

for the

GEM GROUP

(GEM 1 and GEM 2 Mineral Claims)

Fort Steele M.D.

N.T.S. 82G/5W

Lat.: 49° 21' 15" N

Long.: 115° 59' 30" W

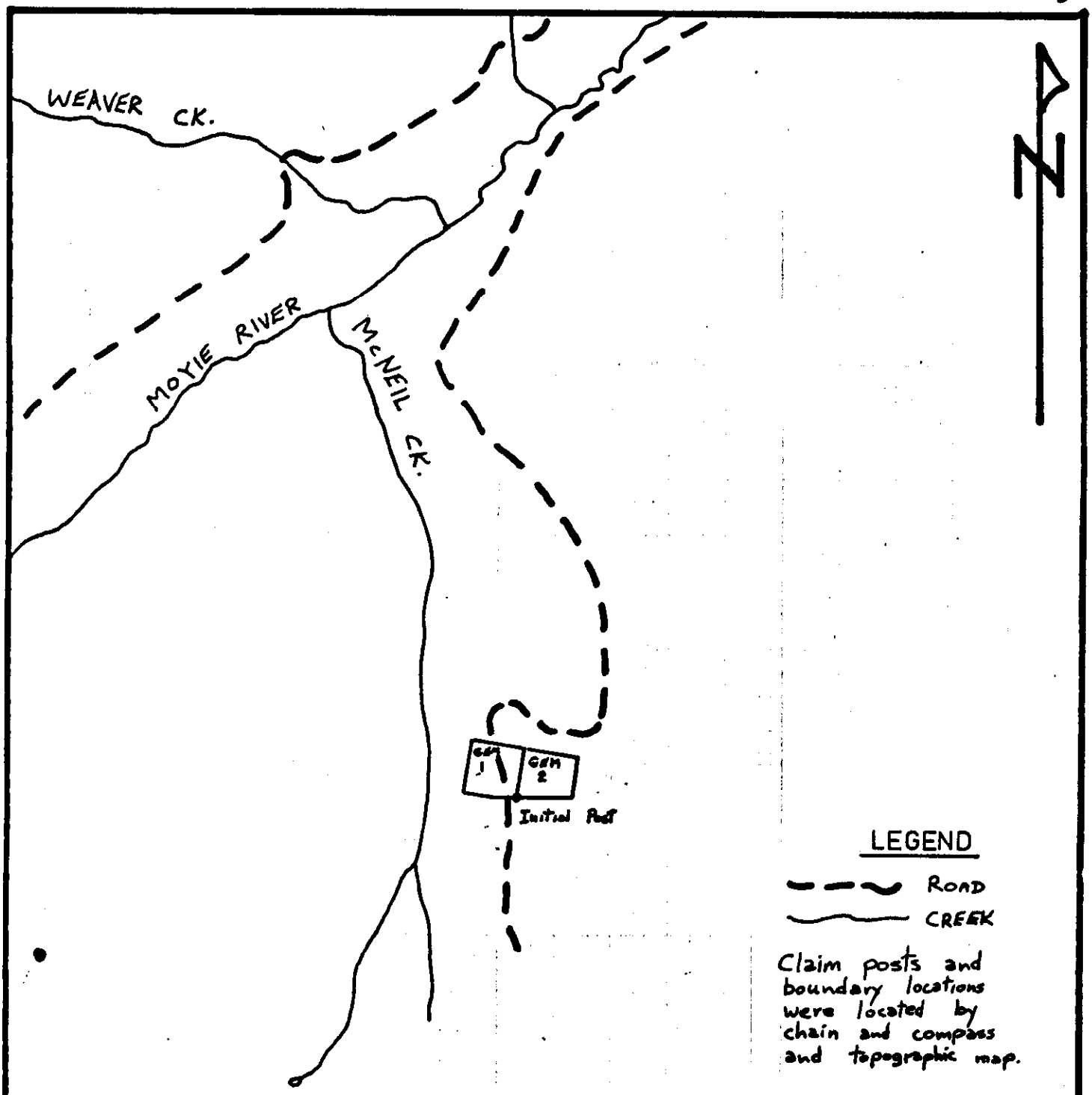
OWNER: Kathleen Ann Frost

OPERATOR: St. Eugene Mining Corporation Ltd.

AUTHOR: John R. Wilson

DATE SUBMITTED: October 30,.1979

TABLE OF CONTENTS



LEGEND

ROAD

CREEK

Claim posts and boundary locations were located by chain and compass and topographic map.

SCALE
1:50 000

1000 0 1000 2000 3000 4000 metres

INDEX MAP	
GEM CLAIM GROUP	
McNEIL CREEK, B.C.	
OCT. 1979	P.N.077-01
N.T.S.: 82 G/5W	
DRAWN BY: J.W.	

INTRODUCTION

The Gem group is located approximately 13.5 kilometres northwest of the town of Moyie, B. C. at longitude 115° 59' 30" W, latitude 49° 21' 15" N.

The claim is on the west facing slope of McNeil Creek valley. Topographic elevations range from approximately 1600 metres to 1930 metres.

Access to the property is by logging road.

The current owner is Kathleen Ann Frost. St. Eugene Mining Corporation Ltd. completed the work described in this report.

WORK SUMMARY

- a total of 23 soil samples were collected and analysed for Cu, Pb, Zn, Ag, and W.
- a total of 14 soil samples were collected and analysed for Pb, Zn and Ag.
- one outcrop was chip sampled over 50 cm. and was analysed for Cu, Pb, Zn, Ag, Au and W (rock geochemistry) and was later assayed for Pb.

DETAILED DATA

Three nearly parallel lines of soil samples were taken: one immediately uphill of the logging road passing through the claims and one on either side of the road, between 120 and 150 metres distant. Samples along the road were taken at 20 metre intervals and all others were at 60 metre spacing. Each sample came from the B-horizon at depths of 6 to 18 centimetres but usually at about 15 centimetres. Grub-hoes were used to recover the soils which were placed in paper envelopes and sent to Bondar-Clegg and Co. Ltd. of North Vancouver, B. C. for sample preparation and analyses. The -80 mesh fraction was analysed by normal geochemical techniques (Cu, Pb, Zn and Ag. was extracted by hot Aqua Regia and analysed by Atomic Absorption; W determinations were made by basic fusion followed by colourimetric estimates.) A rock chip sample from one site (quartz vein) was analysed by Bondar-Clegg and Co. Ltd. using normal geochemical procedures as outlined

..... /5

above (for Cu, Pb, Zn, Ag, and W) and for Au (fire assay and hot Aqua Regia followed by Atomic Absorption.) The pulp from this chip sample was later assayed for Pb by normal assay methods.

INTERPRETATION OF DATA

The Gem claim group is underlain by nearly flat lying Aldrige Formation greywackes and argillites. Quartz veins to 80 centimetres in width outcrop occasionally throughout the region. They strike east to southeast, are steeply dipping and are often sheared. Different quartz veins are seen carrying minor galena, pyrophyllite, scheelite and pyrite. Few outcrops occur here; the above observations were made along the road cut.

Three nearly parallel lines of soil samples were taken in a north-south direction. The lines are 400 to 450 metres in length. The eastern line followed the crest of a gentle spur plunging northly and was the highest in elevation. Only background values (in Pb, Zn and Ag) came from here. The center line (140 to 150 metres west, and downslope of the previous line) consisted of samples taken along the uphill edge of the logging road. The road here does not vary greatly in elevation along its length. Cu and W tests on these samples produced only background values. However, Pb, Zn and Ag are usually anomalous throughout. Each of these three elements have their strongest values at the northern edge of the claim group (Ag to 1.6 ppm, Zn to 460 ppm and Pb to 680 ppm.) The three northernmost soil samples (considered to represent over 60 metres of sampling) are the strongest values in a nearly totally anomalous soil line.

The westernmost (and topographically lowest) soil line is 120 to 140 metres west of the center line. These samples are also at a nearly constant elevation. The best Pb, Zn and Ag values of the claim group occur on this line. A single very anomalous value (3800 ppm Pb, 420 ppm Zn and 2.3 ppm Ag) lies downslope of the best values on the center line (at the north end of the claims.) At the south end of the western line two adjacent very high Pb results (1700 and 4150 ppm) were found with anomalous Zn similar to those immediately upslope (103 and 113 ppm) and higher Ag (1.1 and 2.4 ppm) than is found nearby. Elsewhere on the western line values are background or new background.

The distribution of soil geochemical results thus indicates a rapid vertical (or easterly) change through the statigraphic pile. At the lowest elevation very high Pb and anomalous Zn and Ag values are distributed unevenly. The next higher line is anomalous in Pb, Zn and Ag over most of its length although Ag highs are eratically distributed. Unlike results from the western line, Pb here is not extremely high,

..... /6

but is still strongly anomalous. The eastern (upermost) soil samples are all low in value.

A chip sample across a 50 centimetre wide sheared quartz vein near the north end of the center soil line produced geochemical values of 1710 ppm Cu, 3550 ppm Zn, 18.0 ppm Ag, 75 ppb Au, and 155 ppm W. It assayed 12.6% Pb. The rock was strongly oxidized and no sulphides were visible.

The limited amount of geochemical data and little outcrop makes interpretation difficult but several suggestions can be made:

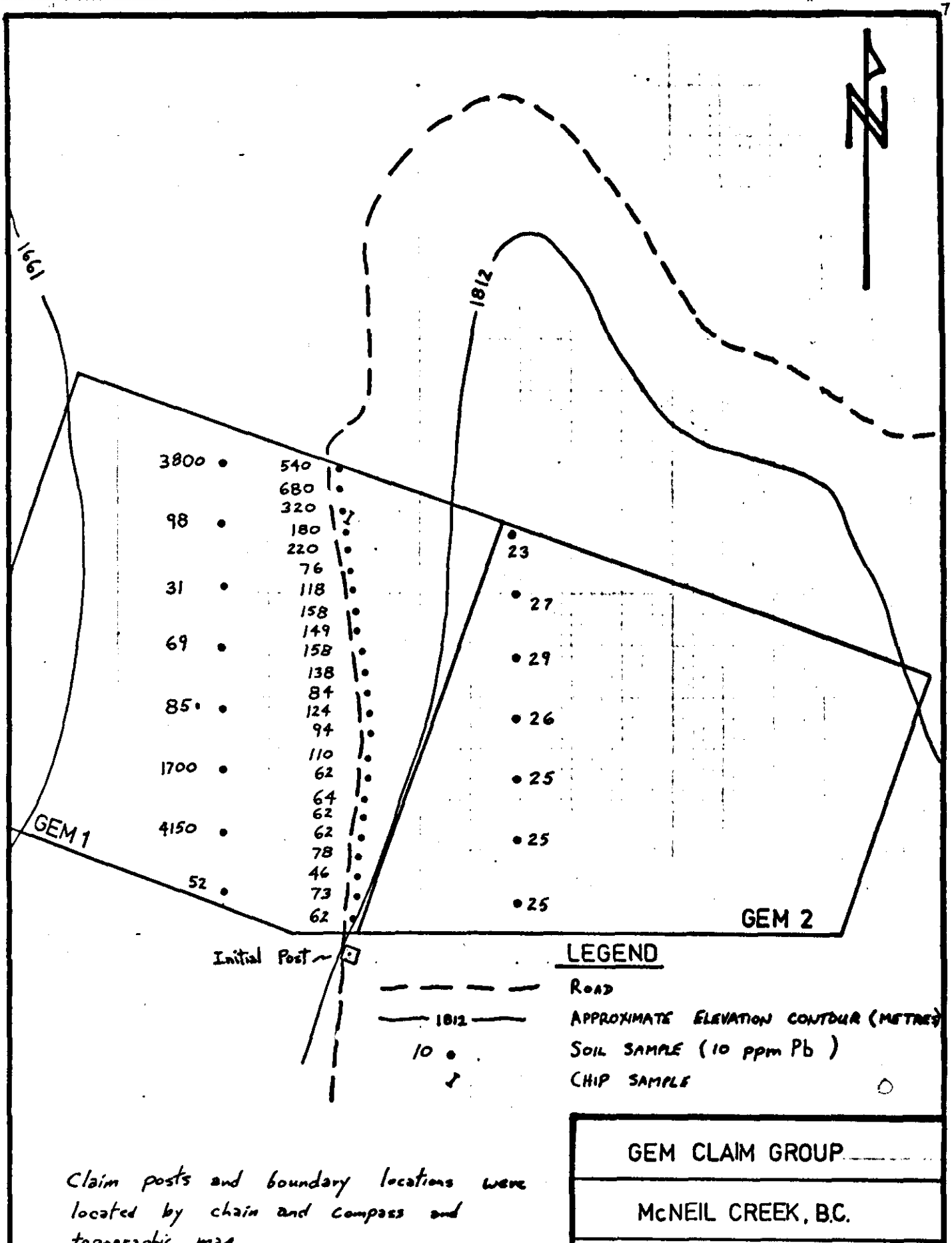
a) A vein system at the north end of the grid may have produced the strong anomalies on the west and central lines. The small vien that was sampled lies within the anomalous area and strikes roughly easterly.

b) All, or only some, of the anomalies may have come from random veins. Another possibility is that a stratiform Pb-Zn-Ag zone contributed to the soils geochemistry.

From this point of view it might be considered that the metallic components of observed veins originated from such a sulphide bearing horizon.

John R Wilson

..... /7

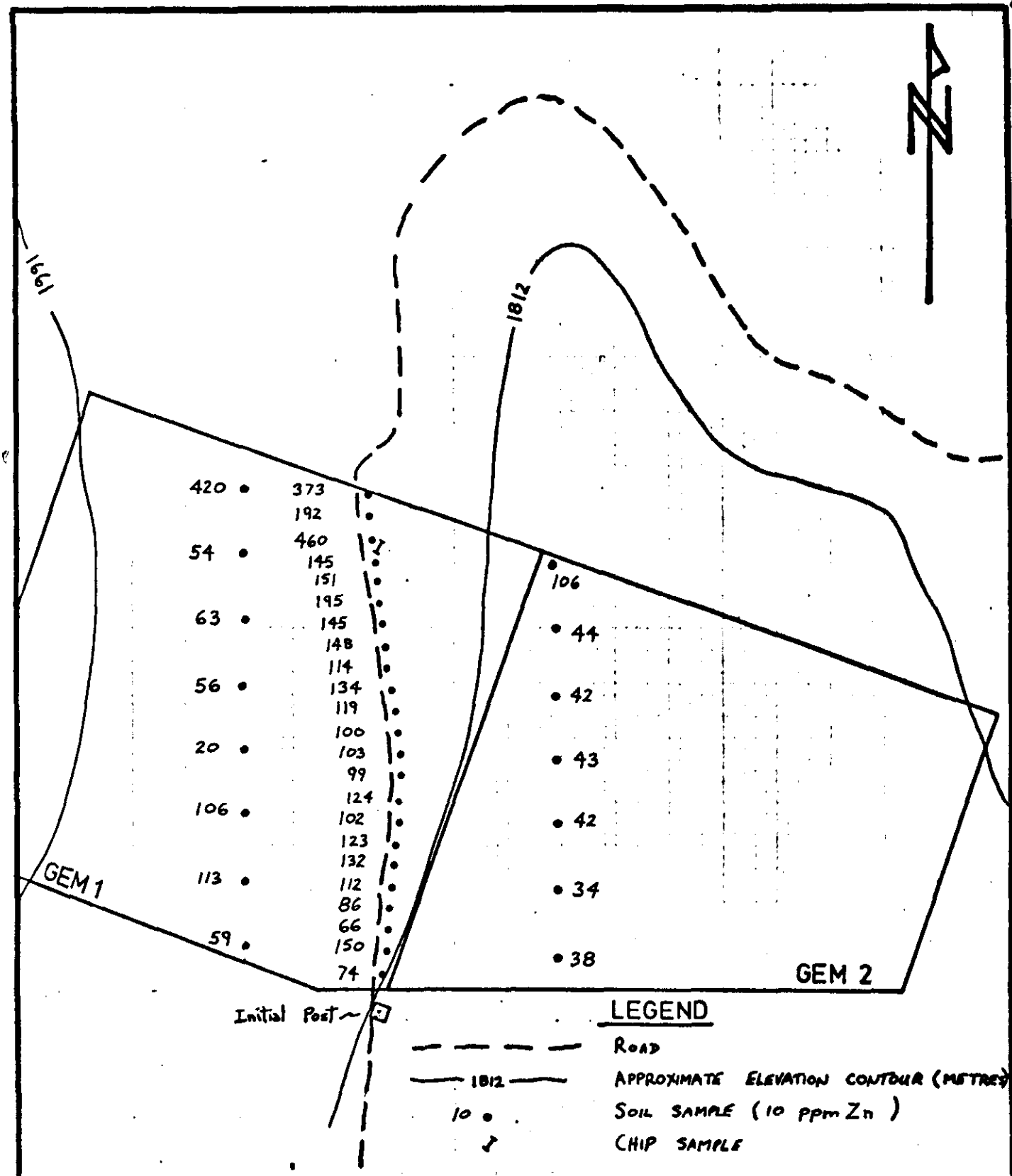


Claim posts and boundary locations were located by chain and compass and topographic map.

SCALE (metres)

100 0 100 200 300

GEM CLAIM GROUP		
McNEIL CREEK, B.C.		
GEOCHEMISTRY Pb		
OCT. 1979	P.N077-01	FIG. NO.: 1
N.T.S.: 82 G/5W		
DRAWN BY: J.W.		



Claim posts and boundary locations were located by chain and compass and topographic map.

SCALE (metres)

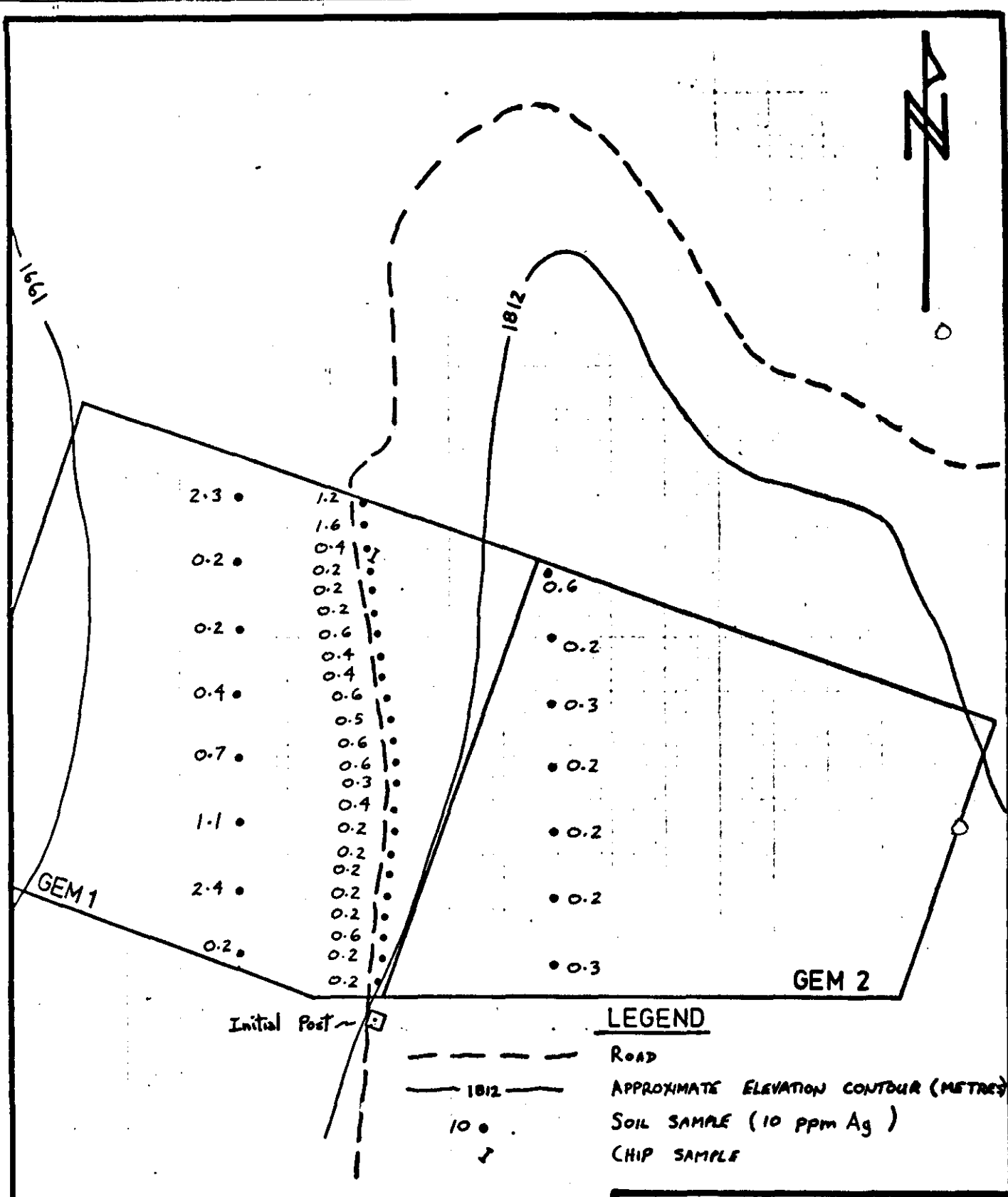
100 0 100 200 300

GEM CLAIM GROUP

McNEIL CREEK, B.C.

GEOCHEMISTRY Zn

OCT. 1979	P.N.077-01	FIG. NO.: 2
N.T.S.: 82 G/5W		
DRAWN BY: J.W.		

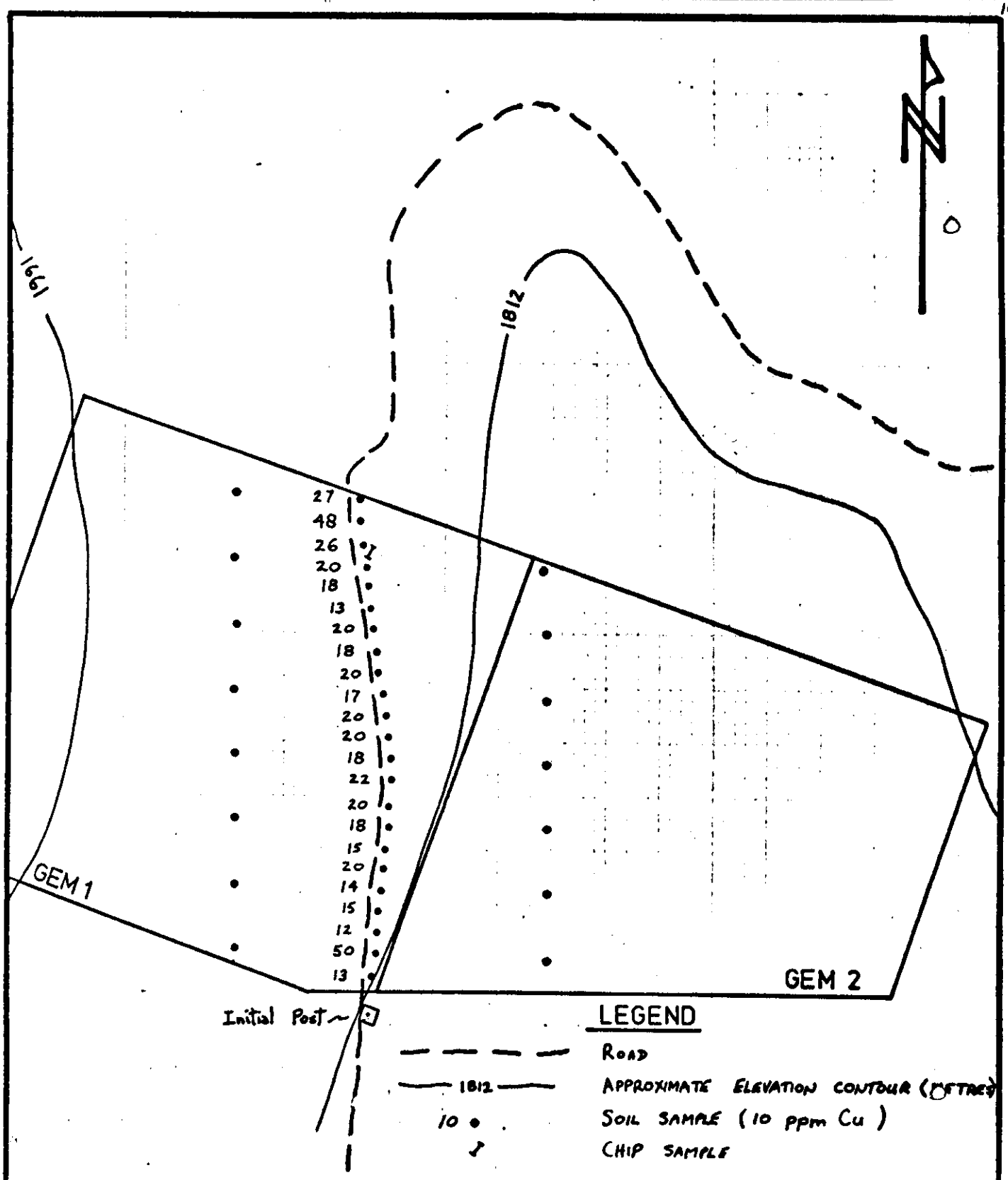


Claim posts and boundary locations were located by chain and compass and topographic map.

SCALE (metres)

100 0 100 200 300

GEM CLAIM GROUP		
McNEIL CREEK, B.C.		
GEOCHEMISTRY Ag		
OCT. 1979	P.N.077-01	FIG. NO.: 3
N.T.S.: 82 G/5W		
DRAWN BY: J.W.		

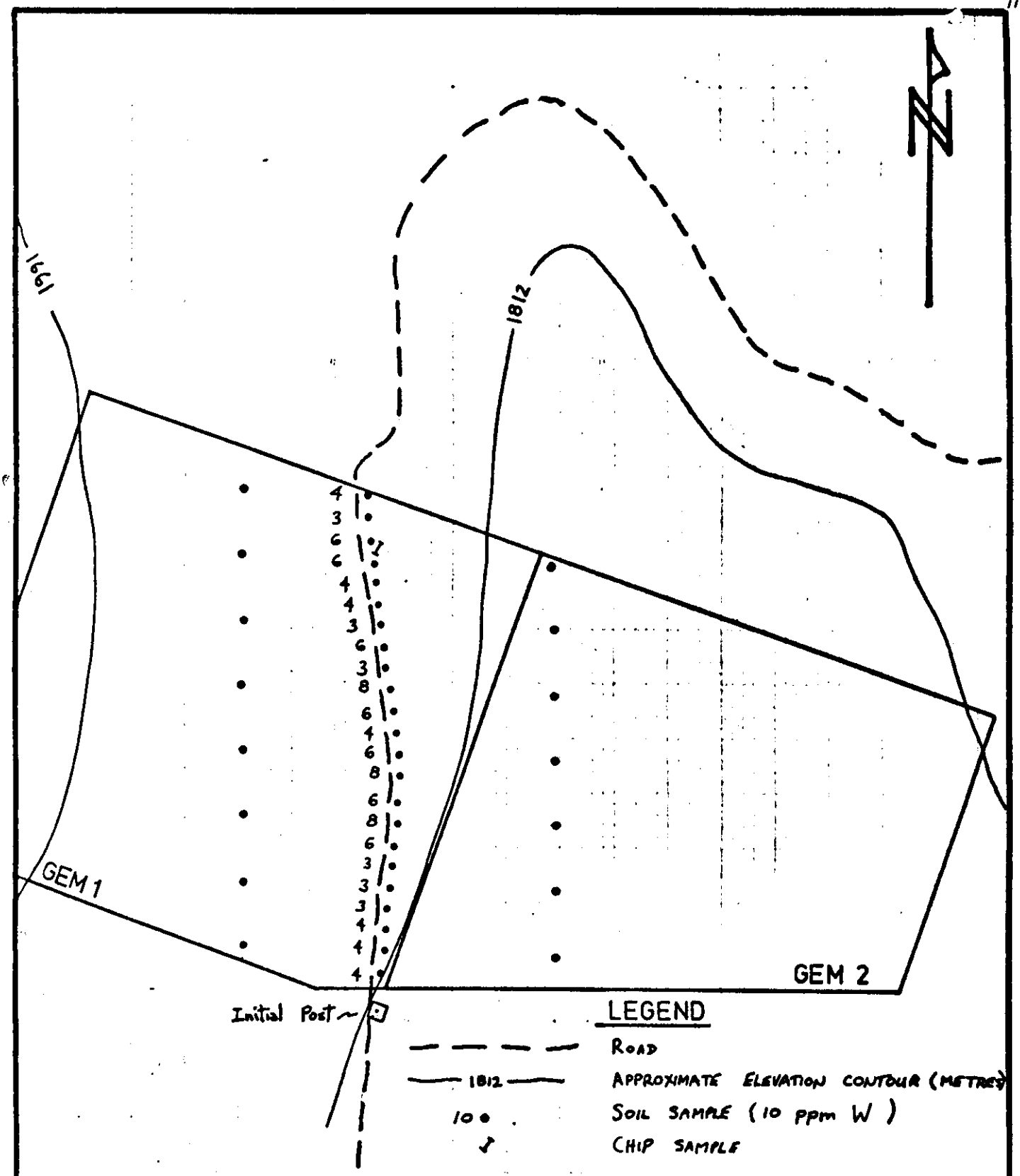


Claim posts and boundary locations were located by chain and compass and topographic map.

SCALE (metres)

100 0 100 200 300

GEM CLAIM GROUP		
McNEIL CREEK, B.C.		
GEOCHEMISTRY Cu		
OCT. 1979	P.N.077-01	FIG. NO.: 4
N.T.S.: 82 G/5W		
DRAWN BY: J.W.		



LEGEND

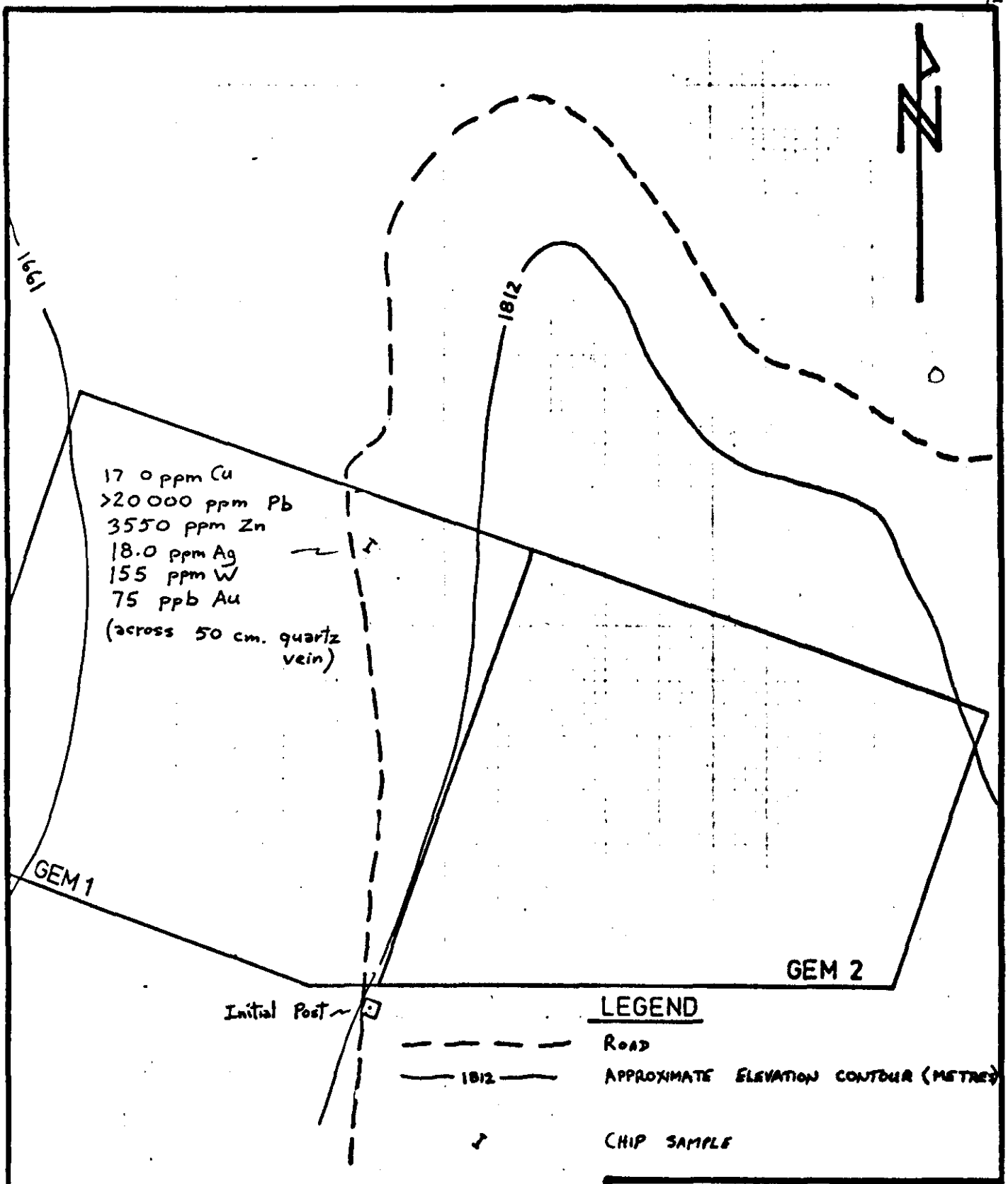
- ROAD
- 1812 — APPROXIMATE ELEVATION CONTOUR (METRES)
- 10 • SOIL SAMPLE (10 ppm W)
- CHIP SAMPLE

Claim posts and boundary locations were located by chain and compass and topographic map.

SCALE (metres)

100 0 100 200 300

GEM CLAIM GROUP	
McNEIL CREEK, B.C.	
GEOCHEMISTRY W	
OCT. 1979 | P.N.077-01	FIG. NO.: 5
N.T.S.: 82 G/5W	
DRAWN BY: J.W.	

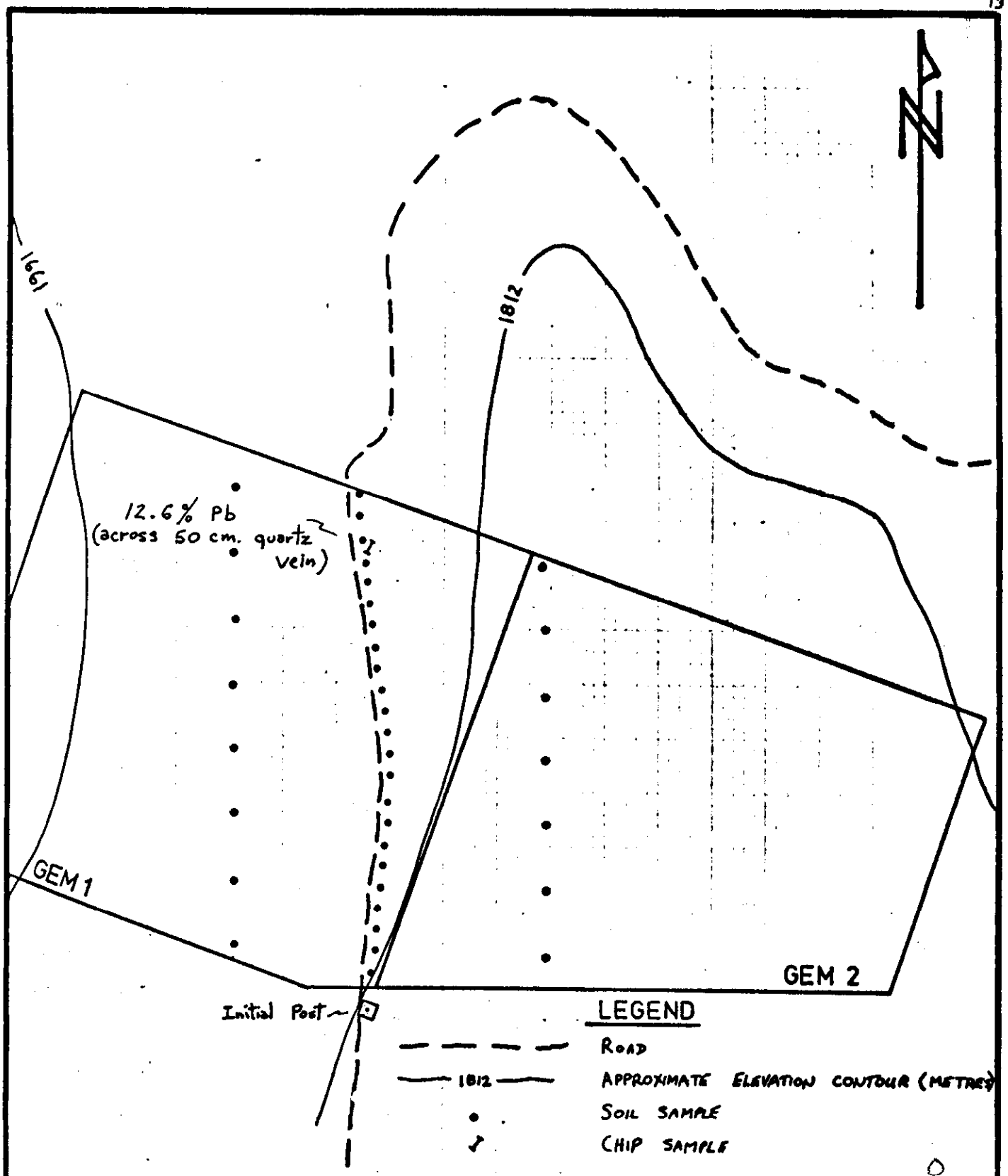


Claim posts and boundary locations were located by chain and compass and topographic map.

SCALE (metres)

100 0 100 200 300

GEM CLAIM GROUP	
McNEIL CREEK, B.C.	
GEOCHEMISTRY - Rock	
OCT. 1979 | P.N077-01	FIG. NO.: 6
N.T.S.: 82 G/5W	
DRAWN BY: J.W.	



Claim posts and boundary locations were located by chain and compass and topographic map.

SCALE (metres)

100 0 100 200 300

GEM CLAIM GROUP		
McNEIL CREEK, B.C.		
GEOCHEMISTRY - Assay		
OCT. 1979	P.N.077-01	FIG. NO.: 7
N.T.S.: 82 G/5W		
DRAWN BY: J.W.		

STATEMENT OF COSTS

One man, one day (26/07/79) @ $40/day wages	=	$ 40.00
One man, one day (26/09/79) @ $40/day wages	=	$ 40.00
Two man-days (see above) @ $15/day Food and accommodation.	=	$ 30.00
Two days (see above) @ $20/day truck rental	=	$ 40.00
23 soil samples analysed for: Cu @ $1.50/sample Pb @ .65/sample Zn @ .65/sample Ag @ .65/sample W @ 3.50/sample	=	$159.85
15 soil samples analysed for: Pb @ $ .80/sample Zn @ .65/sample Ag @ .80/sample	=	$ 31.50
1 rock sample analysed for: Cu @ $1.50/sample Pb @ .65/sample Zn @ .65/sample Ag @ .65/sample Au @ 3.75/sample W @ 3.50/sample	=	$ 10.70
1 rock sample assayed for: Pb @ $5.50/sample	=	$ 5.50
37 soils samples prepared for analysis: @ $ .45/sample	=	$ 16.65
1 rock sample prepared for analysis: @ $1.75/sample	=	$ 1.75
Preparation of Assessment Report (writing, drafting, typing, printing)	=	$ 83.00
TOTAL COST	=	$458.95

..... /15

AUTHOR'S QUALIFICATIONS

John Wilson graduated from the University of B. C. in 1972 with a BSc. (honours geology). He has worked for the Falconbridge Nickel Mines group of companies as an exploration field geologist and project geologist since graduation. He was supervised on the project by Leslie A. Tihor, project geologist.