

KENNCO EXPLORATIONS, (WESTERN) LIMITED  
(Owner & Operator)

SILT, SOIL, & ROCK GEOCHEMICAL INVESTIGATIONS

WHITEMAN No. 1 GROUP

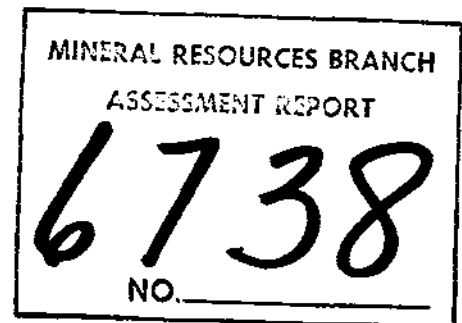
Whiteman 1 Mineral Claim ( 6 units)  
Whiteman 2 Mineral Claim (18 units)

Situated Ten Kilometres West of Okanagan Lake

82 L 4/E

Latitude 50°13'N; Longitude 119°38'W

Vernon Mining Division  
British Columbia



By

R. W. Stevenson, P.Eng.

Field Work done between June 8 and September 12, 1977

May 18, 1978

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Plate #10	Lead, Silver, Gold in Silt	"	"

Note: In numbering the plates, No. 7 was not used.

## INTRODUCTION

### Location and Access

The Whiteman property is situated just south of Whiteman Creek, six miles west of Okanagan Lake, at Latitude 50°13'N, Longitude 119°38'W. The terrain is moderately rugged, with elevations ranging from 3,000 feet to 4,500 feet above sea level. It is in the Vernon Mining Division. The applicable topographic map is Shorts Creek; 1:50,000 Scale; 82 L/4E.

Access to the property from Highway 97 (which is on the west side of Okanagan Lake) is by logging road over a distance of ten miles. Mobility within the claim group is hampered by steep slopes and dense underbrush.

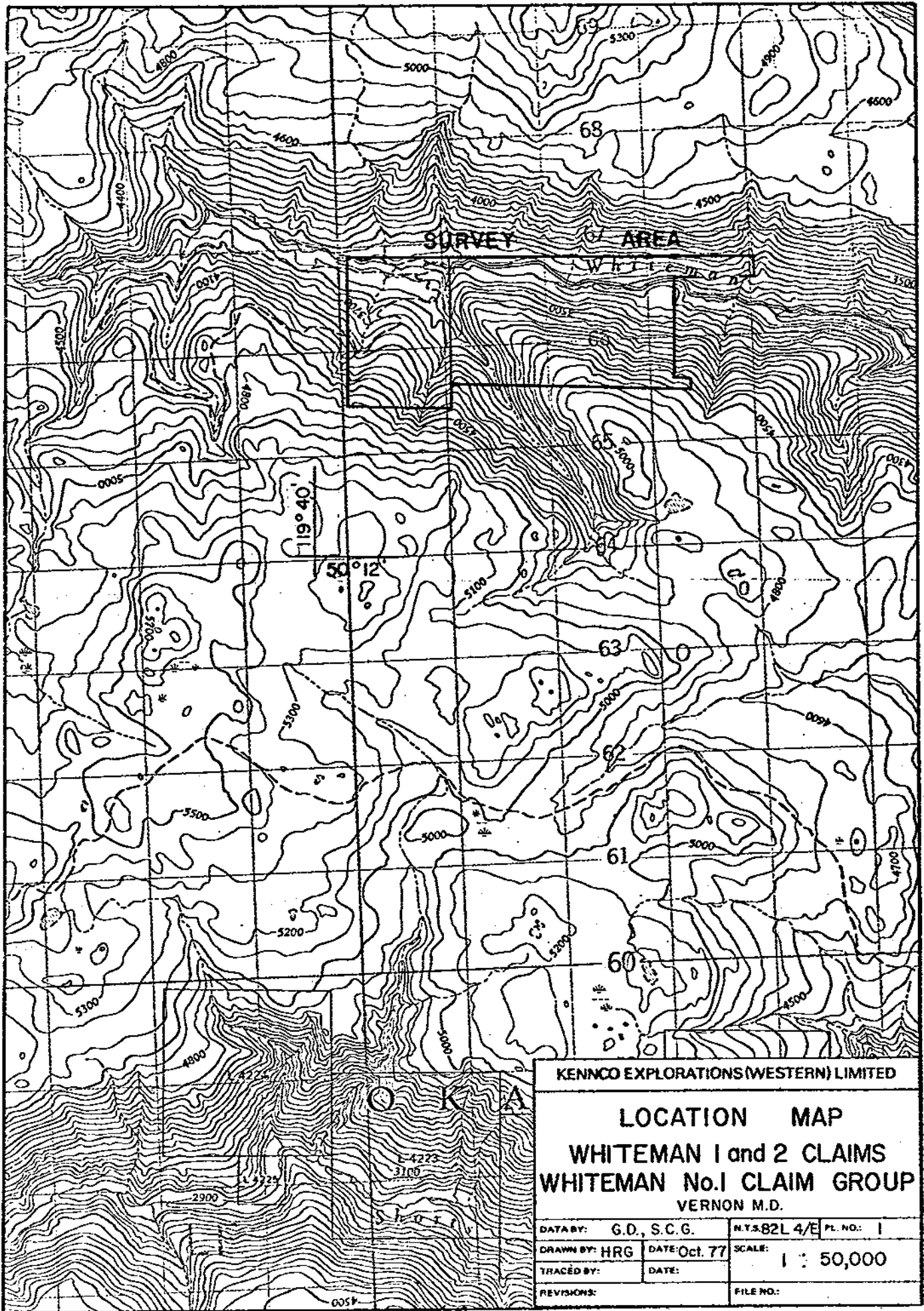
### Property Definition

Geochemically anomalous concentrations of molybdenum in stream sediments have been known to Kennco and others for several years. In 1977, Kennco re-evaluated the nature of the alteration in the porphyritic granite stock, staked covering claims, and commenced a search for indications of molybdenite potential that might justify more costly work such as diamond drilling. The property is still at this stage of defining drill targets. The current owner and operator of the property is Kennco Explorations, (Western) Limited, 730 One Bentall Centre, Vancouver, B.C.

### Geochemical Work Done

Work on the property that is described in this report consisted of three stages of geochemical investigation: initial silt sampling to outline the most promising metal-anomalous areas; soil sampling over the intensely altered area; and some rock sampling to examine various metal levels in altered and unaltered porphyritic granite. The number of samples taken is summarized as follows:

24 silt samples  
368 soil samples  
23 rock-chip samples



KENCOR EXPLORATIONS (WESTERN) LIMITED

### LOCATION MAP

**WHITEMAN No. 1 CLAIM GROUP**  
VERNON M.D.

DATA BY: G.D., S.C.G.	N.T.S. 82L 4/E PL. NO.: 1
DRAWN BY: HRG	DATE: Oct 77
TRACED BY:	DATE:
REVISIONS:	SCALE: 1 : 50,000
	FILE NO.:

*R. W. Peterson*

Claims Worked

The work was done on the following claims:

Whiteman No. 1	Record No. 329
Whiteman No. 2	Record No. 339

Personnel

The work was done under the general supervision of the author, R. W. Stevenson, P.Eng. The rock-chip sampling and some of the silt sampling were done by S.C. Gower, who is a graduate of the University of British Columbia with a Bachelor of Science degree in geology, and who had been on Kennco's permanent staff for seven years. Line control and soil sampling, and some silt sampling were done by: G.T. Davies, an experienced prospector who had been on Kennco's permanent staff for fifteen years; G.C. Kane, an apprentice prospector who was in his second season on Kennco's temporary staff; and R.F. Ackeral and L.S. Copeland who were new temporary employees. All personnel were either well experienced in geochemical sampling, or were carefully trained on-site. The actual days worked by the various personnel are shown in the Itemized Cost Statement.

GEOCHEMICAL SURVEYS - TECHNICAL DATA

Sample Site Control

Sediment Survey

Sample sites were plotted in the field, on a topographic map having a scale of 1:50,000. The sampling traverse was started from a point which could be identified easily on the topographic map. Sample site locations were plotted by pace and compass until another easily identifiable checkpoint was reached. A drainage base map with a scale of 1:12,000 was compiled for use in plotting the sample results for office interpretation.

Soil Survey

A control grid was established by chain and compass survey. The Base Line was cut out and blazed; whereas stations on crosslines were only marked with surveyor's flagging to lessen the environmental impact. Stations were marked at 30.5-metre intervals. A base map with scale of 1:4,800 was prepared for plotting the sample results.

Rock Survey

Sample sites were plotted in the field, on a topographic map having a scale of 1:50,000. Sample site locations were established by pace and compass from points which could be identified easily on the topographic map. The sample lines, along which chip samples were taken, were laid out by chain and compass. Sample sites were marked with surveyor's flagging. A base map with scale of 1:4,800 was used to plot the sample results.

Sample Collection

Sediment Survey

In general, the samples were taken at 150 to 450 metre intervals on the main streams, depending on where suitable silt could be found. More detail was added by sampling some side streams and seepages.

Samples were taken from "active" material; that is, under flowing water, either in streams or seepages. The samples were taken with a small shovel. Fine-grained silt was selected. Care was taken to avoid high organic material, and well washed clay.

The sample site and number were then plotted on the field map. A note was made of the sample number; the width, depth, and speed of flow of the stream; the type of sediment sampled; and any peculiarities of the drainage, such as a seepage site, or a site downstream from a pond or swamp.

### Soil Survey

The samples were taken at 30.5 metre intervals along the grid lines. They were taken from the top of the "B" (rusty) horizon, generally at a depth of 10 to 25 centimetres.

The samples were collected by digging a small hole with a spade. By this means it was possible to examine the soil horizon development. A note was made of the grid line location, the sample number, the depth of sample, the horizon sampled, the direction of drainage, and the type of vegetation.

### Rock Survey

Rock ships were taken at 30 centimetre intervals using a geological hammer. Sample weight was somewhat in excess of 0.5 kilogram. Rock types are listed below.

Rock Sample No.	Rock Type
45877	Porphyritic granite - intense qtz-sericite-pyrite alteration
45878	" - weakly altered
45881	" - "
45882	" - "
45883	" - "
45884	" - "
45885	Cache Creek andesite- silicified
47359	Porphyritic granite - weakly altered
47360	" - "
48486	" - "
48495	" - intense qtz-sericite-pyrite alteration
48525	" - "
48526	" - "
48527	" - "
48528	" - "
48529	" - "
48530	" - "
48531	" - "
48532	" - "
48533	" - "
48534	" - "
48535	" - "
48536	" - unaltered

### Packaging

The silt and soil samples were placed in 3" x 4 1/2" brown paper envelopes on which the sample numbers had been marked. These were closed with a triangular triple fold. (The bags are not anomalous in trace metals).

The rock samples were placed in double plastic sample bags, with the sample number marked in felt pen on both bags.

### Analysis

The samples were shipped to Min-En Laboratories, in North Vancouver for analysis. The silt and soil samples were dried, and sieved. The -80 mesh fraction was used for analysis. Rock samples were crushed and pulverized. A one-gram sample was used for all analyses except gold. For gold, a five-gram sample was used for silt and soil analyses, and a ten-gram sample was used for rock analyses.

Extraction of Mo, Cu, Pb, Zn, Ag from a weighed sample is achieved by digestion with concentrated nitric acid and 70% perchloric acid. Determination of element content is made by aspiration in a Techtron AA5 Atomic Absorption Spectrophotometer.

For gold, a weighed sample is fluxed and burned, digested in aqua regia, filtered, and the gold removed by solvent-solvent extraction in an organic solvent, MIBK (methyl-isobutyl-keytone). This is aspirated in the Techtron AA5.

For fluorine, the sample is flux digested, buffered, and the fluorine content determined by use of a specific ion meter.



### INTERPRETATION

The purpose of the silt survey was to explore the potential of the property as a guide to further exploration work. The configuration of streams made this a practicable goal.

The soil survey covers an area that is generally deficient in outcrop. The depth of overburden varies from a few feet to probably a few tens of feet over most of the area sampled. The soil horizon development is suitable for soil geochemistry. The somewhat steep topography raises the possibility of unwanted lateral displacement of anomalies. In general, it is reasonable to believe that soil sampling is an effective technique in most of the area surveyed.

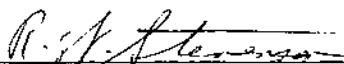
The fairly continuous outcrop in a few areas gives an opportunity for effective use of rock geochemistry to compare trace element values.

Anomaly levels are shown on each relevant map. Weakly anomalous levels are at or above 10 ppm molybdenum, 100 ppm copper, 60 ppm lead, 200 ppm zinc, 2 ppm silver, 35 ppb gold, and 600 ppm fluorine. Strongly anomalous levels are at or above 20 ppm molybdenum, 200 ppm copper, 100 ppm lead, 400 ppm zinc, 4 ppm silver, 100 ppb gold, and 1,000 ppm fluorine.

Fluorine is strongly anomalous in the central part of the property. Molybdenum is somewhat erratically anomalous in the same area. Other elements are essentially not anomalous.

### CONCLUSIONS

The distribution of anomalous fluorine and molybdenum relative to the intensely altered granite porphyry intrusive suggests some potential for molybdenite mineralization at depth.

  
\_\_\_\_\_  
R. W. Stevenson, P. Eng.

ITEMIZED COST STATEMENT

Geochemical Analysis

24 silt samples; Mo,Cu,Zn,Pb,Ag,Au @ \$8.00 ea.	\$ 192.00
368 soil samples; Mo,F,Cu,Ag @ \$6.70 ea.	2,465.60
23 rock samples; Mo,F,Cu,Ag @ \$7.80 ea.	179.40

Personnel

R.F. Ackeral - June 8; July 7-15; 1977	
Marking lines & sampling: 10 days @ \$40	400.00
L.S. Copeland - Aug. 31; Sept 1-3, 6-10, 12; 1977	
Marking lines & sampling: 10 days @ \$40	400.00
G.C. Kaine - June 8; July 7-15; Aug 31; Sept 1-3,6-10, 12; 1977	
Marking lines & sampling: 20 days @ \$40	800.00
G.T. Davies - June 8-10; July 7-15; Aug 31; Sept 1-3, 6-10, 12; 1977	
Marking lines & sampling: 22 days @ \$60	1,320.00
S.C. Gower - June 8-10; July 12-14; 1977	
Sampling: 6 days @ \$80	480.00
H.R. Goddard - Oct 24-27; 1977	
Drafting: 4 days @ \$75	300.00
R.W. Stevenson - May 17; 1978	
Report: 1 day @ \$130	130.00
F.L. Haworth - May 18, 1978	
Typing: 1 day @ \$55	55.00

Board & Accommodation

68 mandays on field work dates shown above @ \$12/manday	816.00
Room June 8-10; July 12-14; 6 days @ \$24/day	144.00

Transportation

Truck Rental: Kennco truck including gas @ \$30/day	
June 8-10, July 7-15: 12 days	360.00
: Truck from Bowmac Truck Rentals	
Rental Aug 30-Sept 13	378.00
Gasoline	57.00

Miscellaneous


Sample shipment - express	15.00
Sample bags	41.00
Printing	6.00

Total \$8,539.00

*R. W. Stevenson*

AUTHOR'S QUALIFICATIONS

I, Robert W. Stevenson of Vancouver, Province of British Columbia, do certify that I graduated in Mining Geology from the University of Toronto in 1952 with the Degree of Bachelor of Applied Science, and have practiced the profession of geology since that time. I have been registered as a Professional Engineer (Geological) in the Province of British Columbia since 1959. I have been a Member of The Association of Exploration Geochemists since its inception in 1970.

  
\_\_\_\_\_  
R. W. Stevenson, B.A.Sc., P.Eng.



ANALYTICAL METHODS

1 gram -60 mesh samples used

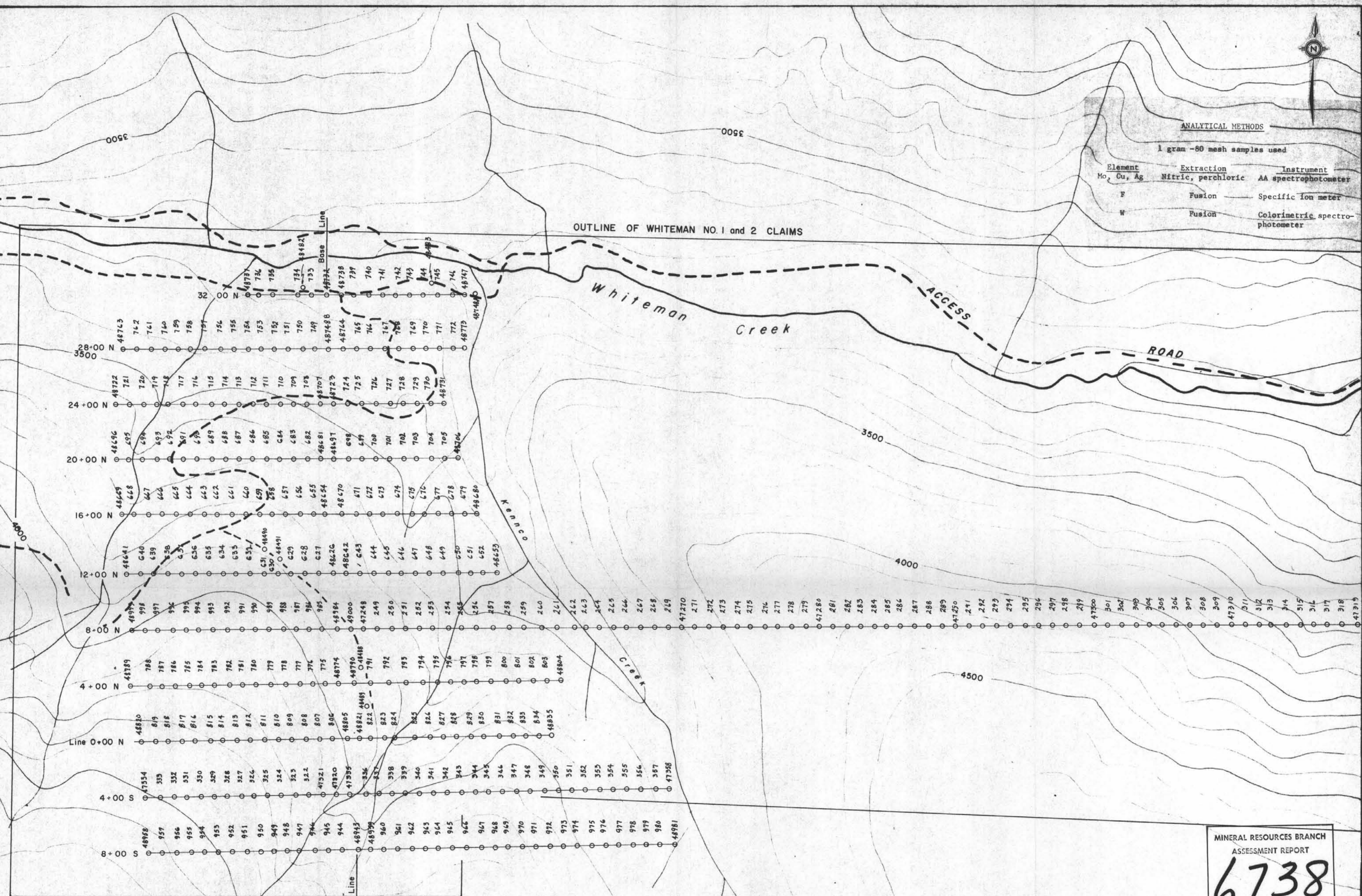
Element	Extraction	Instrument
Mo, Cu, Ag	Nitric, perchloric	AA spectrophotometer
F	Fusion	Specific ion meter
W	Fusion	Colorimetric spectrophotometer

OUTLINE OF WHITEMAN NO. 1 and 2 CLAIMS

Whiteman Creek

ACCESS

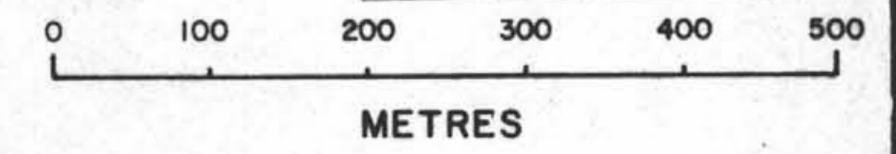
ROAD



MINERAL RESOURCES BRANCH

ASSESSMENT REPORT

6738  
NO.



GEOCHEMICAL SURVEY

KENNCO EXPLORATIONS (WESTERN) LIMITED

WHITEMAN CREEK MOLYBDENUM PROSPECT

SOIL SAMPLE GRID

SAMPLE NUMBERS

VERNON M.D.

DATA BY: S.C.G., G.D. N.T.S. 82L 4/E PL. NO. 2

DRAWN BY: HRG DATE: Oct. 77 SCALE: 1" = 400'

TRACED BY: DATE: 1: 4 800

REVISIONS:

To accompany geochemical report by R.W. Stevenson, P.Eng., on the Whiteman No. 1 Group, six miles west of Okanagan Lake at 50°13'N, 119°38'W, in the Vernon Mining Division, dated May 18, 1978.

*R.W. Stevenson*



ANALYTICAL METHODS

1 gram -80 mesh samples used

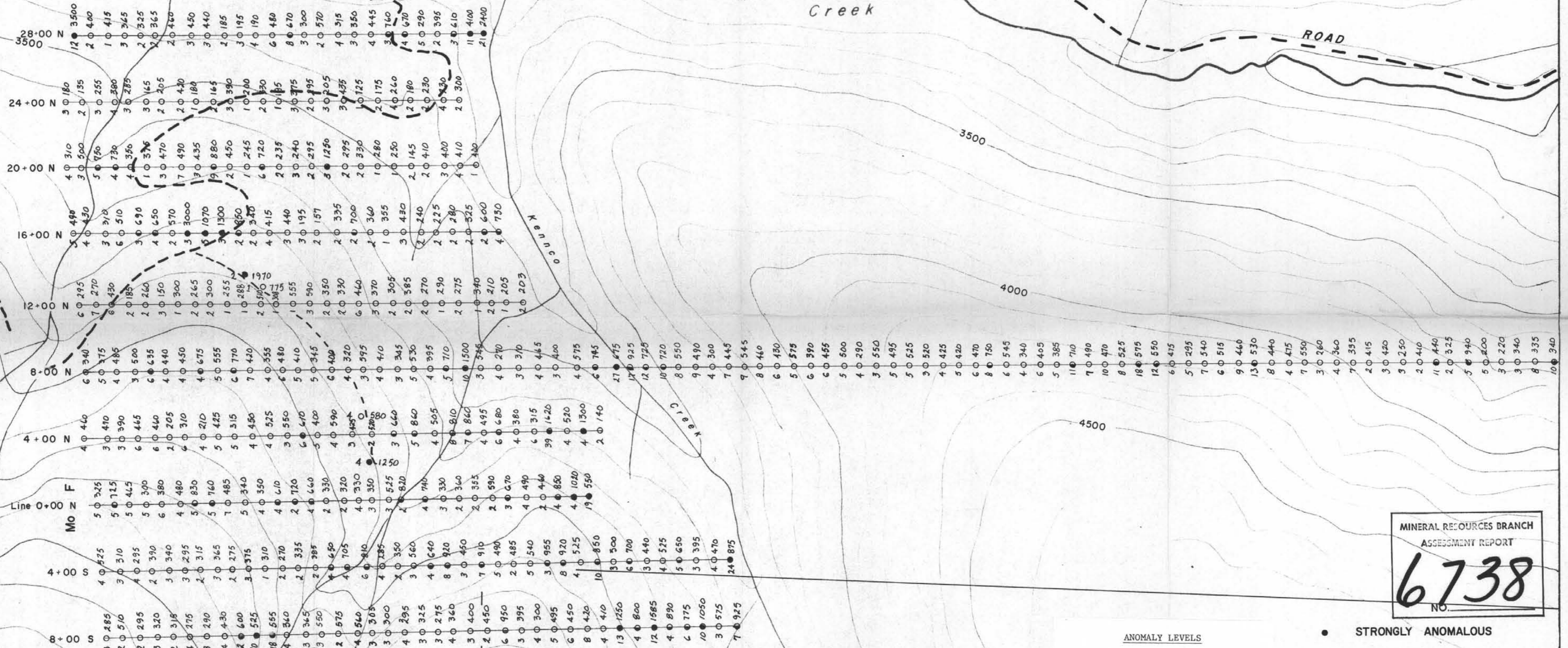
Element	Extraction	Instrument
Mo, Cu, Ag	Nitric, perchloric	AA spectrophotometer
F	Fusion	Specific Ion meter
W	Fusion	Colorimetric spectrophotometer

OUTLINE OF WHITEMAN NO. 1 and 2 CLAIMS

Whiteman Creek

ACCESS

ROAD

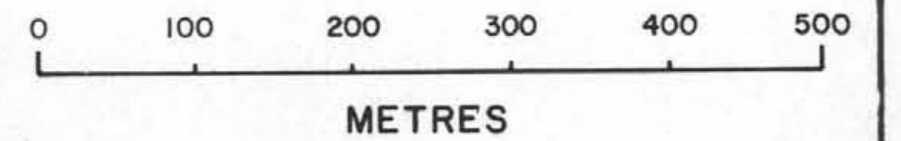


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ASSESSMENT REPORT  
**6738**  
NO.

ANOMALY LEVELS

	Weak	Strong
ppm Mo	10	20
ppm F	600	1000

- STRONGLY ANOMALOUS
- ◐ WEAKLY ANOMALOUS
- BACKGROUND



GEOCHEMICAL SURVEY

KENCO EXPLORATIONS (WESTERN) LIMITED

WHITEMAN CREEK MOLYBDENUM PROSPECT  
SOIL SAMPLE GRID  
MOLYBDENUM and FLUORINE in PPM

VERNON M.D.

DATA BY: S.C.G., G.D.	N.T.S. 82L 4/E	PL. NO.: 3
DRAWN BY: HRG	DATE: Oct. 77	SCALE:
TRACED BY:	DATE:	1" = 400'
REVISIONS:		1: 4800

To accompany geochemical report by R.W. Stevenson, P.Eng., on the Whiteman No. 1 Group, six miles west of Okanagan Lake at 50°13'N, 119°38'W, in the Vernon Mining Division, dated May 18, 1978.

*R.W. Stevenson*



ANALYTICAL METHODS

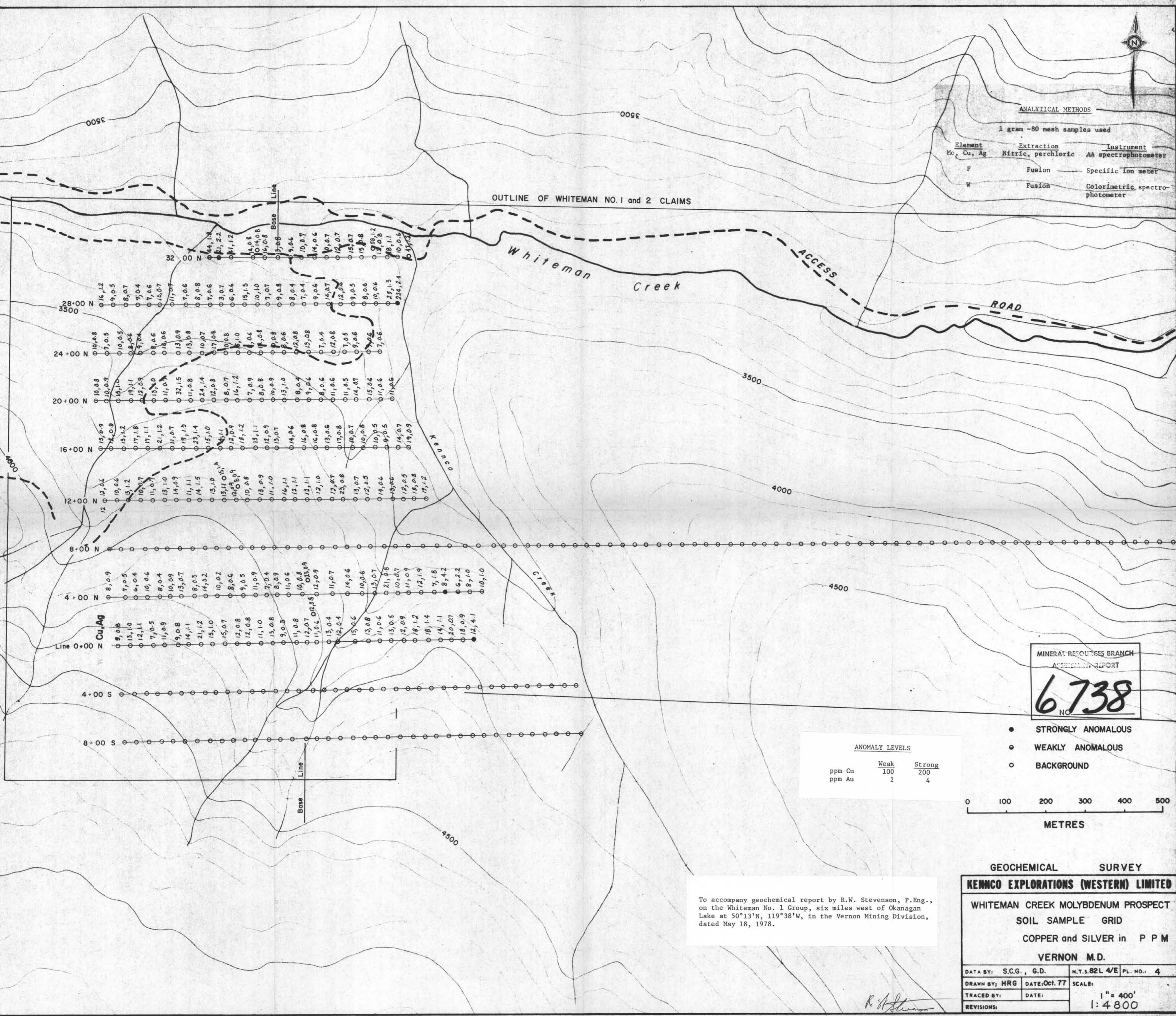
1 gram -80 mesh samples used

Element	Extraction	Instrument
Mo, Cu, Ag	Nitric, perchloric	AA spectrophotometer
F	Fusion	Specific ion meter
W	Fusion	Colorimetric spectrophotometer

OUTLINE OF WHITEMAN NO. 1 and 2 CLAIMS

Whiteman Creek

ACCESS ROAD

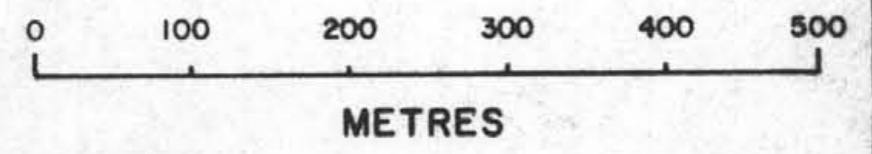


MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**6738**  
NO.

- STRONGLY ANOMALOUS
- WEAKLY ANOMALOUS
- BACKGROUND

ANOMALY LEVELS

	Weak	Strong
ppm Cu	100	200
ppm Au	2	4



To accompany geochemical report by R.W. Stevenson, P.Eng., on the Whiteman No. 1 Group, six miles west of Okanagan Lake at 50°13'N, 119°38'W, in the Vernon Mining Division, dated May 18, 1978.

GEOCHEMICAL SURVEY

**KENNCO EXPLORATIONS (WESTERN) LIMITED**

WHITEMAN CREEK MOLYBDENUM PROSPECT

SOIL SAMPLE GRID

COPPER and SILVER in P P M

VERNON M.D.

DATA BY: S.C.G., G.D.	N.T.S. 82L 4/E	PL. NO. 1 4
DRAWN BY: HRG	DATE: Oct. 77	SCALE:
TRACED BY:	DATE:	1" = 400'
REVISIONS:		1:4800

*R. Stevenson*



ANALYTICAL METHODS

1 gram -80 mesh samples used

Element	Extraction	Instrument
Mo, Cu, Ag	Nitric, perchloric	AA spectrophotometer
F	Fusion	Specific ion meter
W	Fusion	Colorimetric spectrophotometer

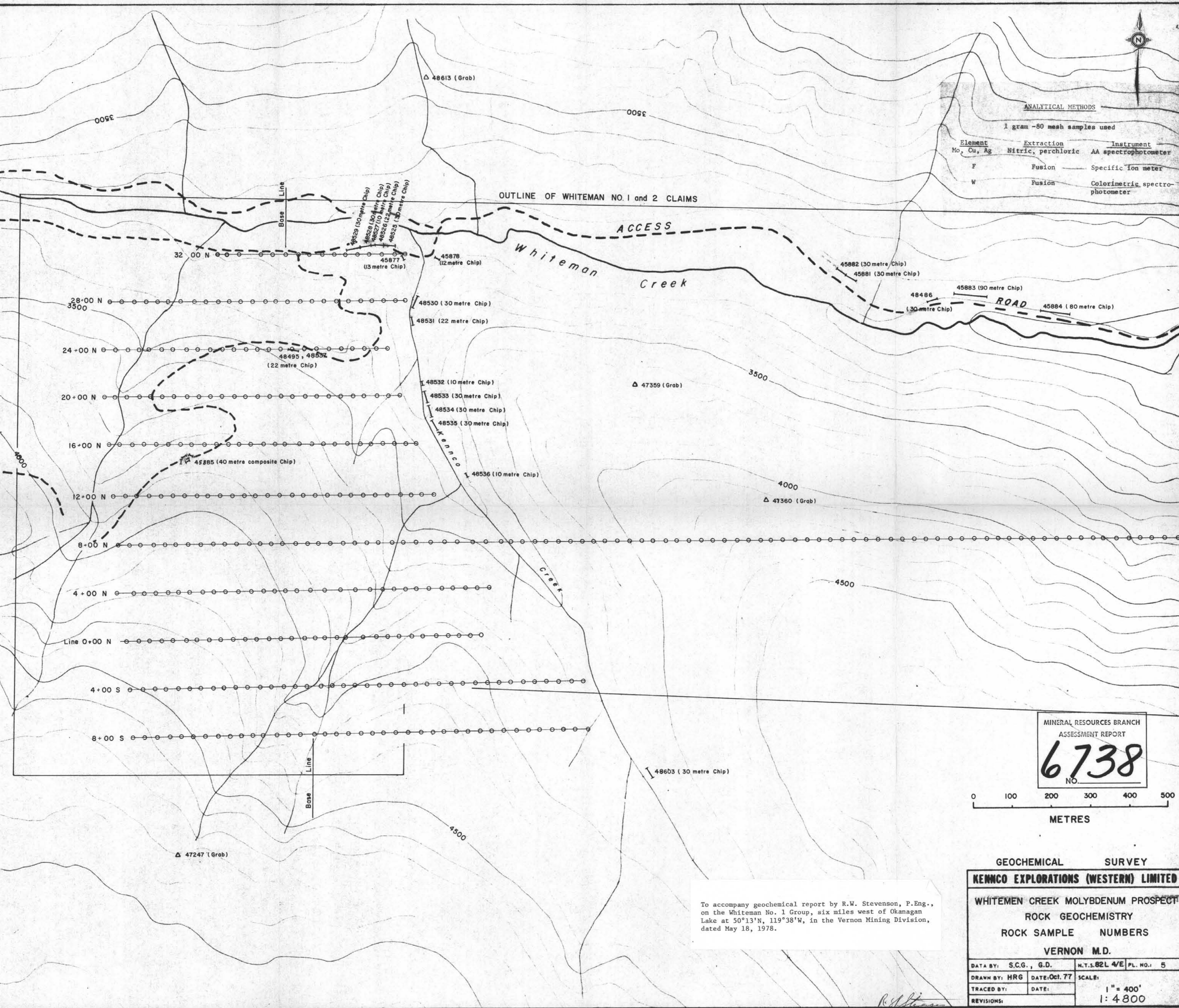
OUTLINE OF WHITEMAN NO. 1 and 2 CLAIMS

ACCESS

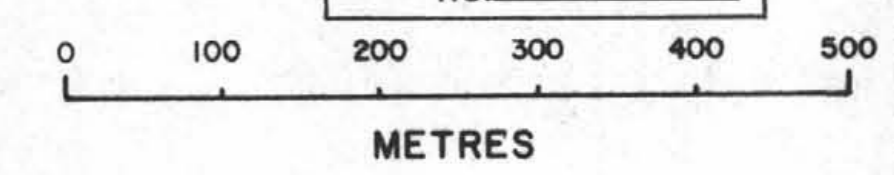
Whiteman Creek

ROAD

Kenneco Creek



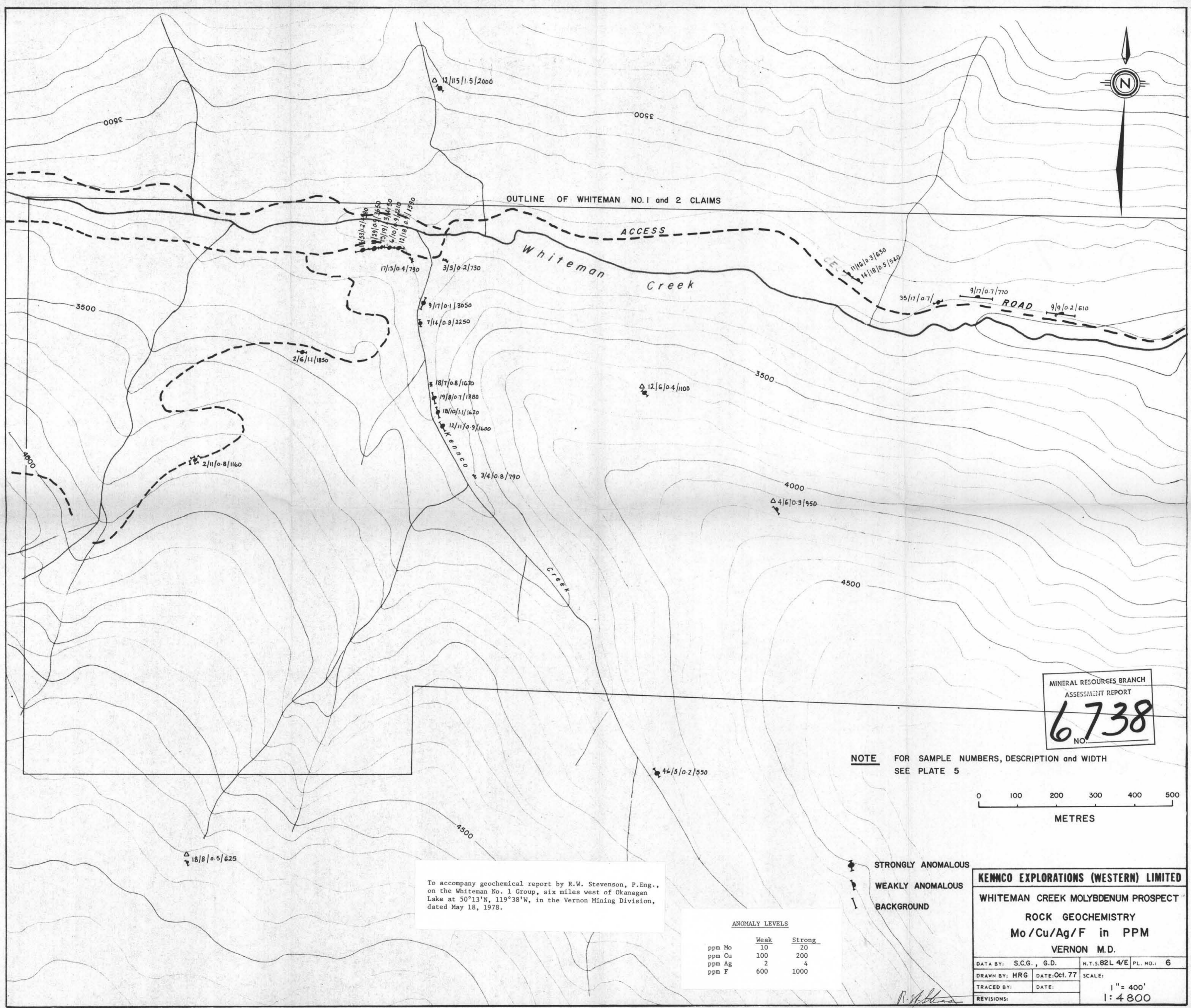
MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**6738**  
NO.



GEOCHEMICAL SURVEY	
KENNCO EXPLORATIONS (WESTERN) LIMITED	
WHITEMAN CREEK MOLYBDENUM PROSPECT	
ROCK GEOCHEMISTRY	
ROCK SAMPLE NUMBERS	
VERNON M.D.	
DATA BY: S.C.G., G.D.	N.T.S. 82L 4/E PL. NO. 5
DRAWN BY: HRG	DATE: Oct. 77
TRACED BY:	DATE:
REVISIONS:	1" = 400' 1:4800

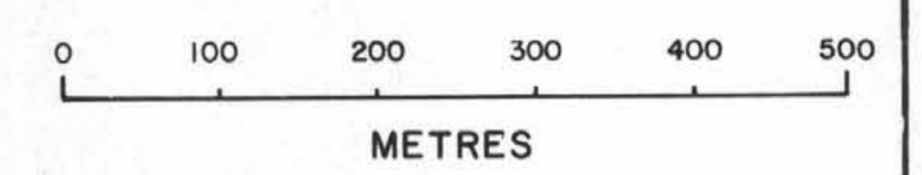
To accompany geochemical report by R.W. Stevenson, P.Eng., on the Whiteman No. 1 Group, six miles west of Okanagan Lake at 50°13'N, 119°38'W, in the Vernon Mining Division, dated May 18, 1978.

*R. W. Stevenson*



MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**6738**  
NO.

**NOTE** FOR SAMPLE NUMBERS, DESCRIPTION and WIDTH  
SEE PLATE 5



To accompany geochemical report by R.W. Stevenson, P.Eng.,  
on the Whiteman No. 1 Group, six miles west of Okanagan  
Lake at 50°13'N, 119°38'W, in the Vernon Mining Division,  
dated May 18, 1978.

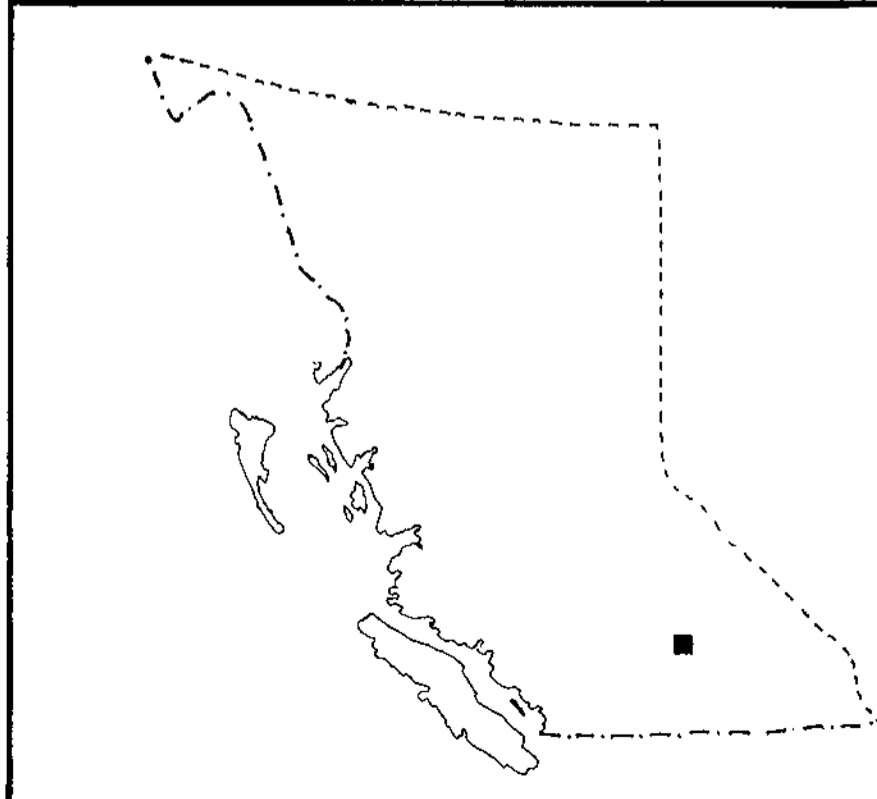
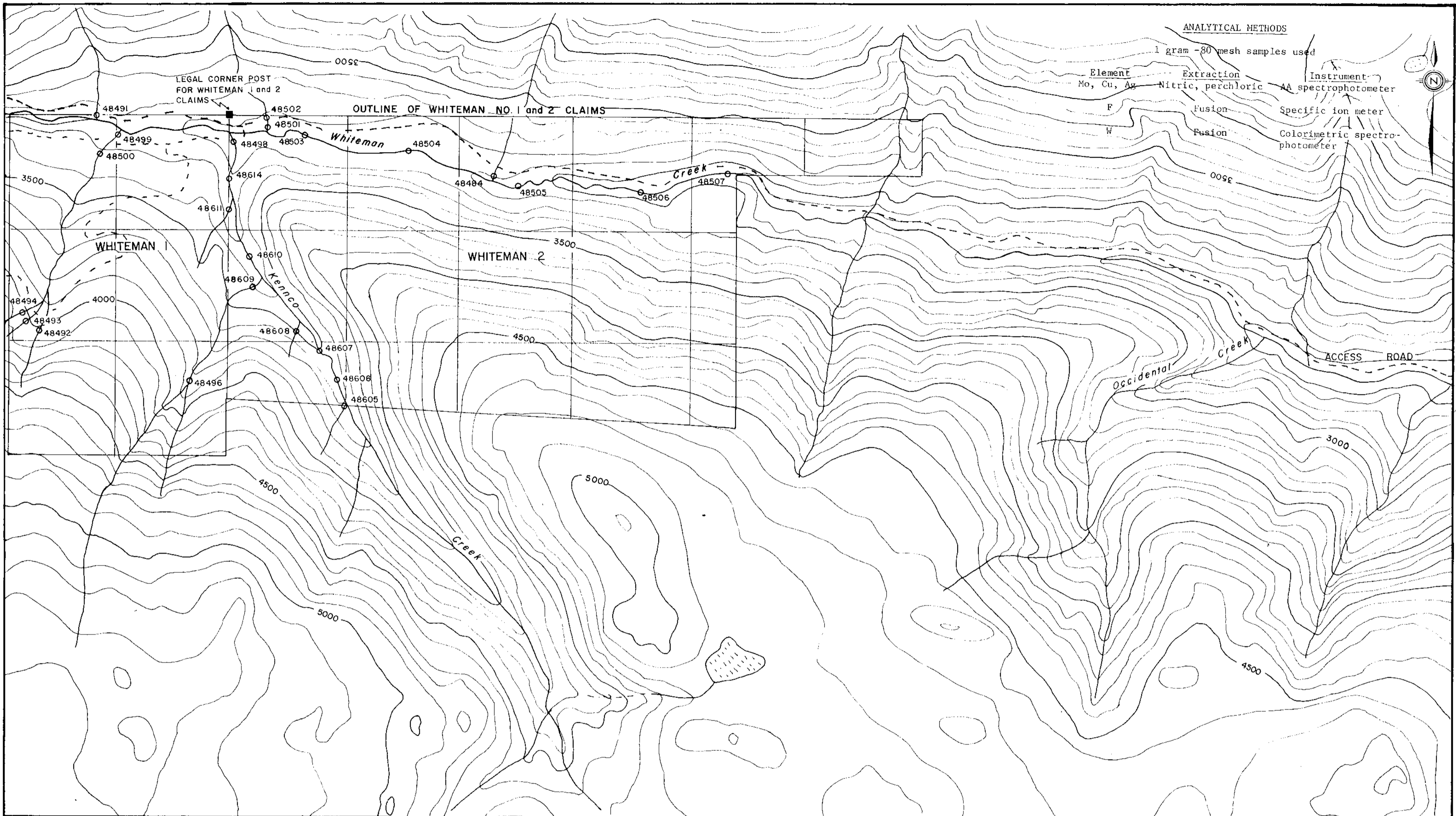
ANOMALY LEVELS		
	Weak	Strong
ppm Mo	10	20
ppm Cu	100	200
ppm Ag	2	4
ppm F	600	1000

- STRONGLY ANOMALOUS
- WEAKLY ANOMALOUS
- BACKGROUND

**KENNCO EXPLORATIONS (WESTERN) LIMITED**  
**WHITEMAN CREEK MOLYBDENUM PROSPECT**  
**ROCK GEOCHEMISTRY**  
**Mo/Cu/Ag/F in PPM**  
**VERNON M.D.**

DATA BY: S.C.G., G.D.	N.T.S.82L 4/E	PL. NO.: 6
DRAWN BY: HRG	DATE: Oct. 77	SCALE:
TRACED BY:	DATE:	1" = 400'
REVISIONS:		1:4800





The Legal Claim Post site was established by use of the topographic map at 1:50,000 scale.

To accompany geochemical report by R.W. Stevenson, P.Eng., on the Whiteman No. 1 Group, six miles west of Okanagan Lake at 50°13'N, 119°38'W, in the Vernon Mining Division, dated May 18, 1978.

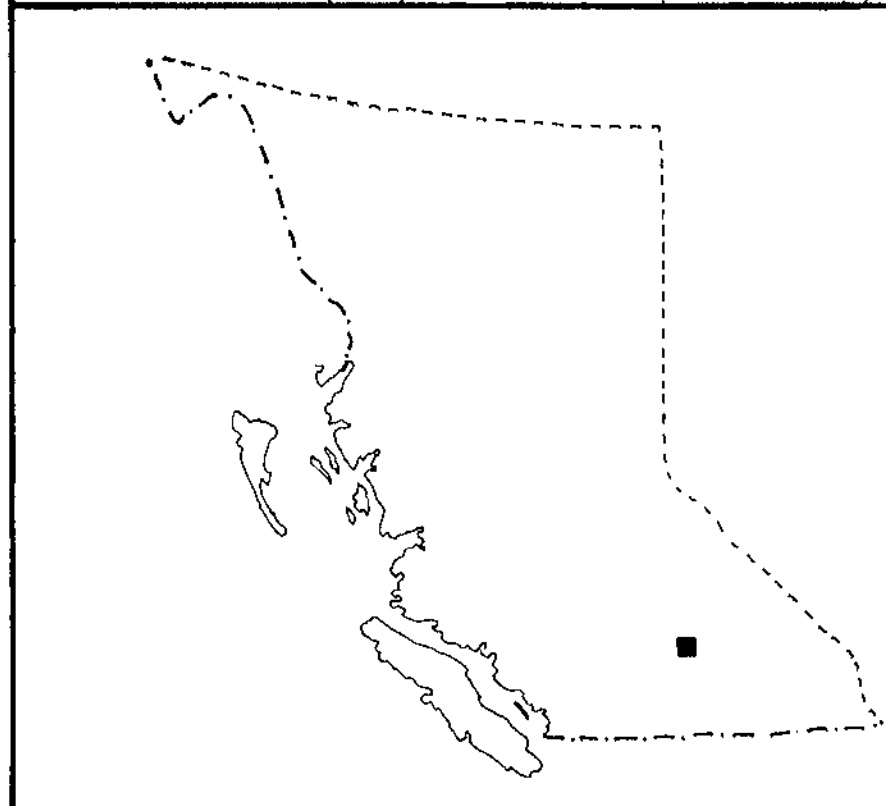
MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**6738**  
NO.

1000 METRES

**KENCO EXPLORATIONS (WESTERN) LIMITED**  
WHITEMAN CREEK MOLYBDENUM PROSPECT  
STREAM SEDIMENT GEOCHEMISTRY  
SAMPLE NUMBERS and CLAIMS MAP  
VERNON M.D.

DATA BY: G.D., S.C.G.	N.T.S. B2L 4/E PL. NO.: 8
DRAWN BY: HRG	DATE: Oct. 77
TRACED BY:	DATE:
REVISIONS:	1" = 1000' 1:12 000

*R.S. Stevenson*



To accompany geochemical report by R.W. Stevenson, P.Eng., on the Whiteman No. 1 Group, six miles west of Okanagan Lake at 50°13'N, 119°38'W, in the Vernon Mining Division, dated May 18, 1978.

**SAMPLE SITE**

o 3 / 23 / 231  
Mo / Cu / Zn PPM

**ANOMALY LEVELS**

	Weak	Strong
ppm Mo	10	20
ppm Cu	100	200
ppm Zn	200	400

1000 METRES

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT

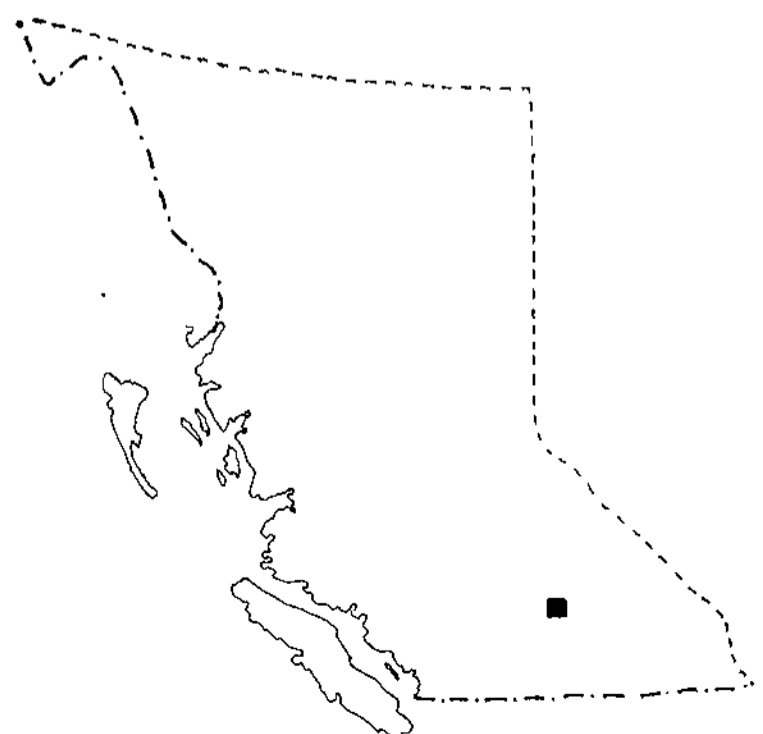
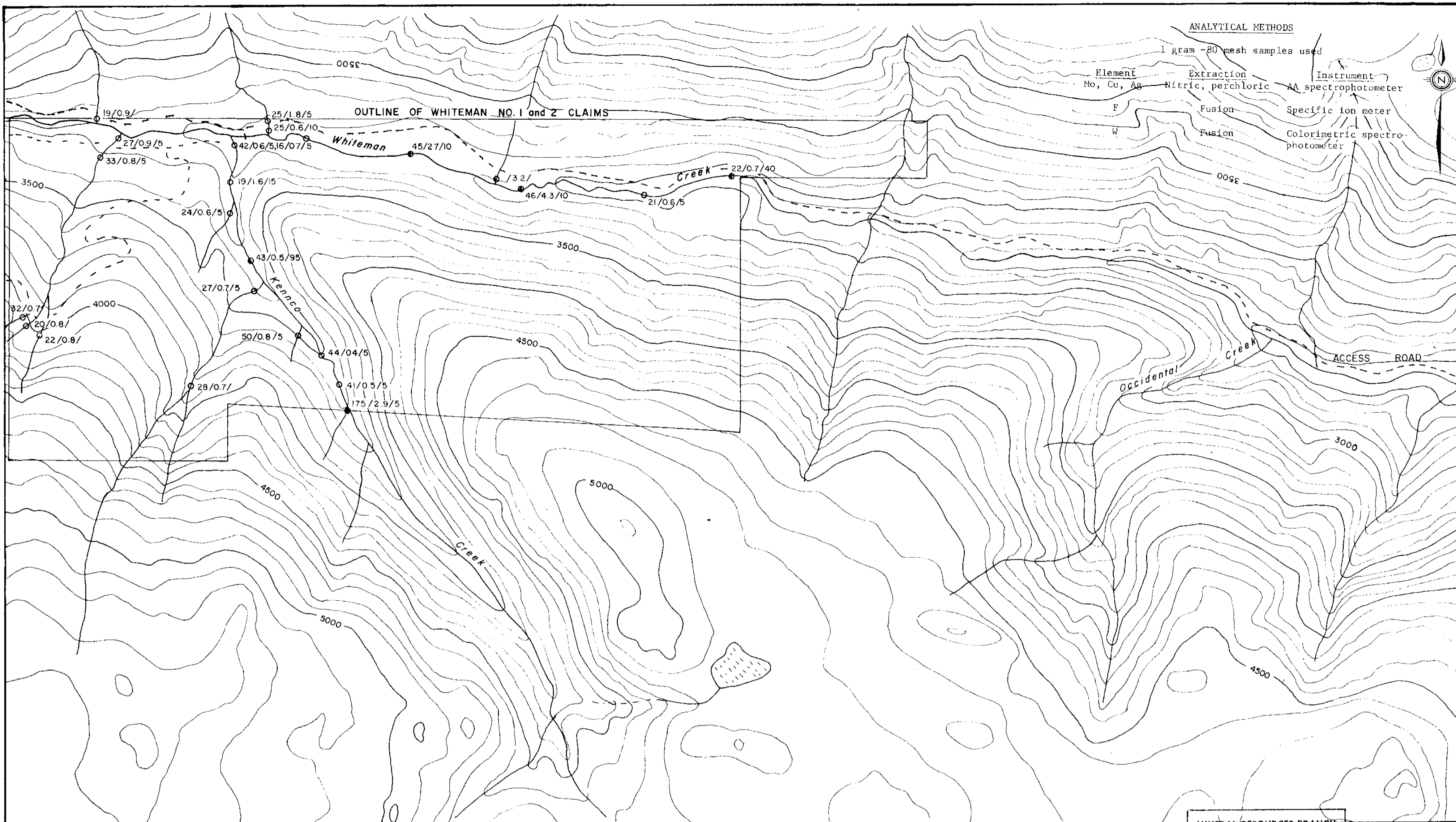
**6738**  
NO.

**KENCO EXPLORATIONS (WESTERN) LIMITED**

WHITEMAN CREEK MOLYBDENUM PROSPECT  
STREAM SEDIMENT GEOCHEMISTRY  
MOLYBDENUM / COPPER / ZINC RESULTS  
VERNON M.D.

DATA BY: G.D., S.C.G.	N.T.S. 82L 4/E	PL. NO.: 9
DRAWN BY: HRG	DATE: Oct. 77	SCALE: 1" = 1000'
TRACED BY:	DATE:	1:12 000
REVISIONS:		

*R. Stevenson*



To accompany geochemical report by R.W. Stevenson, P.Eng., on the Whiteman No. 1 Group, six miles west of Okanagan Lake at 50°13'N, 119°38'W, in the Vernon Mining Division, dated May 18, 1978.

**SAMPLE SITE**

○ 23 /0.7 / 5  
 Pb/Ag / Au  
 PPM / PPB

**ANOMALY LEVELS**

	Weak	Strong
ppm Pb	60	100
ppm Ag	2	4
ppb Au	35	100

1000 METRES

MINERAL RESOURCES BRANCH  
 ASSESSMENT REPORT  
**6738**  
 NO.

**KENCO EXPLORATIONS (WESTERN) LIMITED**

**WHITEMAN CREEK MOLYBDENUM PROSPECT**

**STREAM SEDIMENT GEOCHEMISTRY**

**LEAD / SILVER / GOLD RESULTS**

**VERNON M.D.**

DATA BY: G.D., S.C.G.	N.T.S. 82L 4/E PL. NO.: 10
DRAWN BY: HRG	DATE: Oct. 77
TRACED BY:	DATE:
REVISIONS:	1" = 1000' 1:12 000