

GEOCHEMICAL SURVEY REPORT

ON THE TENAS CREEK PROPERTY

("HORSES ASS" CLAIMS 1-4)

LATITUDE 50° 30' N
LONGITUDE 122° 45' W

NTS 92J 7, 10W
& NTS 92J 7, 10E

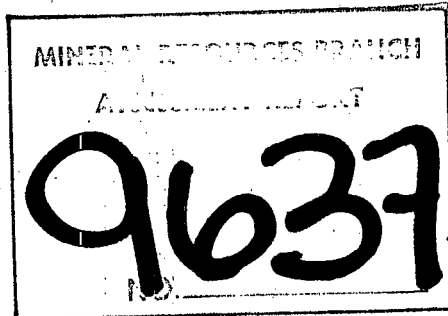
LILLOOET MINING DISTRICT

BY: W. A. Howell
J.M.T. Services Corp.
8827 Hudson Street
Vancouver, B.C.

FOR: JMT Services Corp.
8827 Hudson Street
Vancouver, B.C.

OWNER OF RECORD: K. W. Livingstone

Oct 23 1981



SUMMARY

Four claims (40 units) were staked in May of 1980 to cover a region of anomalous zinc geochemistry in volcanic rocks and sediments of the Upper Triassic Pioneer Formation which is intruded on the western portion of the claims by granodiorite.

Approximately 350 samples have been collected during the 1980-81 exploration programme including approximately 200 samples collected from a newly established grid area.

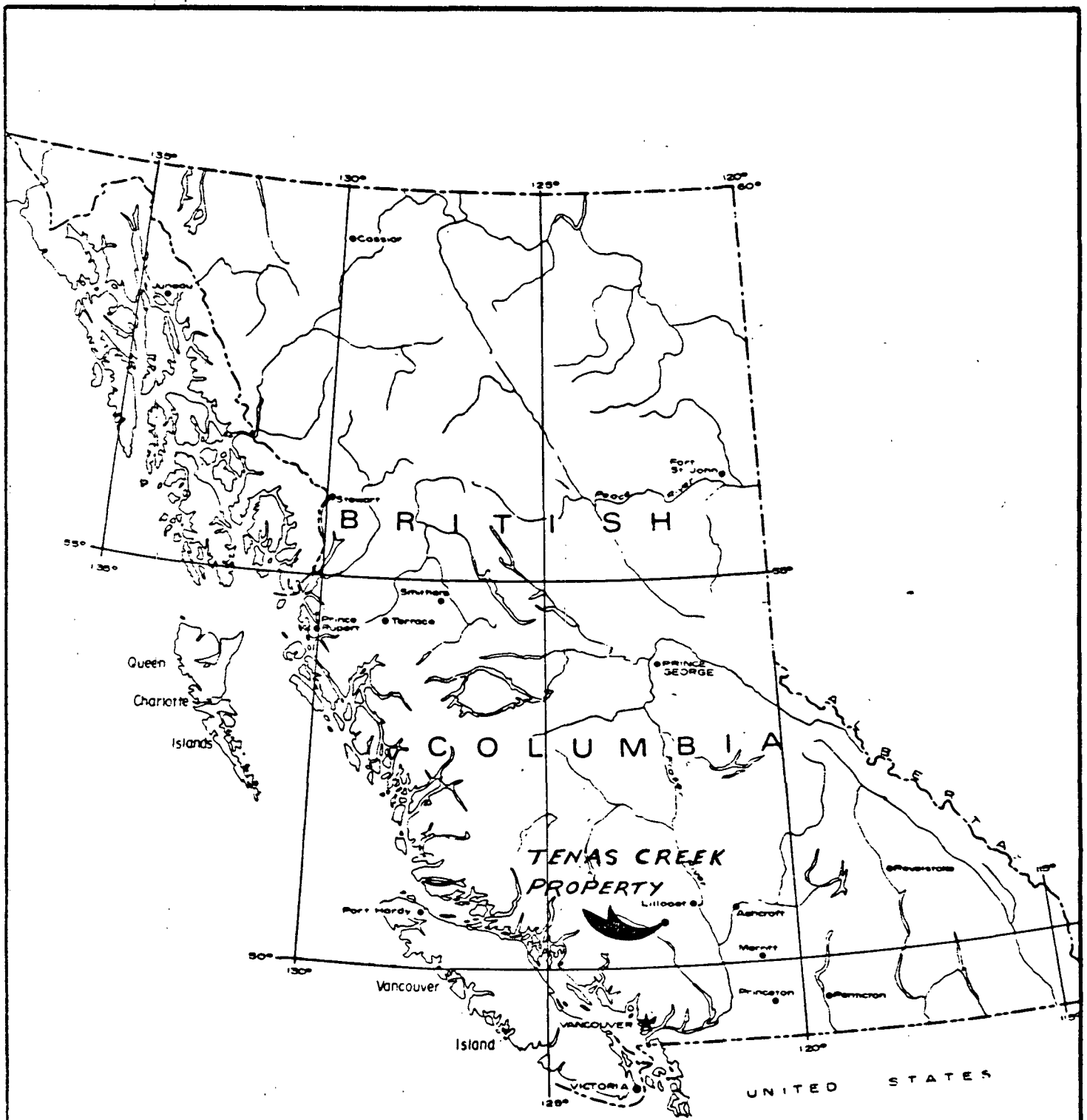
The samples were all analysed for copper, zinc and silver with several samples also analysed for silver, gold, lead, and molybdenum.

The erratic distribution of anomalous samples is attributed to masking of bedrock by glacial tills and gravels.

Geophysical prospecting methods combined with detailed mapping of the section exposed in Tenas Creek and its canyon should be considered for the next phase of exploration.

LIST OF ILLUSTRATIONS

FIGURE 1	PROPERTY LOCATION MAP	
FIGURE 2	CLAIM MAP	
FIGURE 3	RECONNAISSANCE Cu Geochemistry	In Pocket
FIGURE 4	RECONNAISSANCE Zn Geochemistry	In Pocket
FIGURE 5	RECONNAISSANCE Pb Geochemistry	In Pocket
FIGURE 6	RECONNAISSANCE Mo & Ag Geochemistry	In Pocket
FIGURE 7	GEOCHEMICAL VALUES FOR - Copper	In Pocket
FIGURE 8	- Zinc	In Pocket
FIGURE 9	- Silver	In Pocket

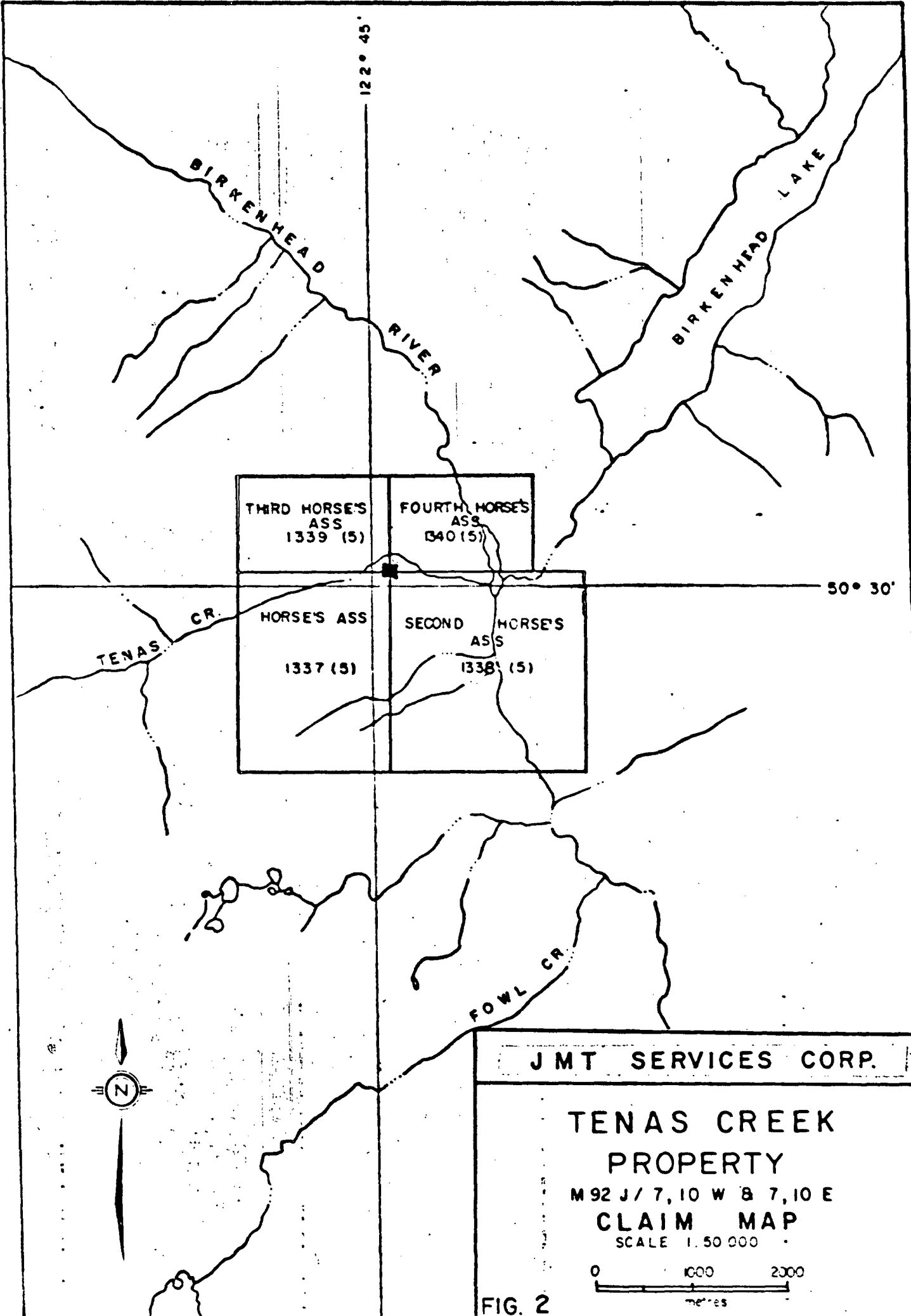


JMT SERVICES CORP.

Fig 1

PROPERTY LOCATION MAP

Mile 136		SCALE		136 Mile	
Prepared by:	Date:	NTS MAP AREA		DRAWING No.	
Drawn by:	Revised:				



THIRD HORSE'S ASS 1339 (5)	FOURTH HORSE'S ASS 1340 (5)
HORSE'S ASS 1337 (5)	SECOND HORSE'S ASS 1338 (5)

JMT SERVICES CORP.

TENAS CREEK
 PROPERTY
 M 92 J / 7, 10 W 8 7, 10 E
 CLAIM MAP
 SCALE 1:50 000

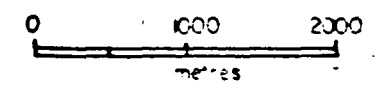


FIG. 2

INTRODUCTION

The claim area was first investigated by JMT geologists in 1977, as a consequence of regional exploration for massive sulphides in the area. Reconnaissance soil and silt samples and prospecting indicated an area of interest around Tenas Creek. In the spring of 1980, the claims were staked to cover an area of massive sulphide potential.

LOCATION AND ACCESS

The property straddles Tenas Creek and the Birkenhead River near the junction of the two streams on NTS map sheets 92J/7E, 7W, 10E, and 10W. Access is by road from Gramson's Siding on the main Pemberton-D'Arcy road.

CLAIMS

<u>NAME</u>	<u>RECORD NO.</u>	<u>DATE</u>
HORSES ASS	1337	May 13 1980
SECOND HORSES ASS	1338	"
THIRD HORSES ASS	1339	"
FOURTH HORSES ASS	1340	"

The claims are recorded in the Lillooet Mining Division. The owner of the record is Mr. K. Wayne Livingstone, c/o 8827 Hudson Street, Vancouver, B.C.

PREVIOUS WORK

While prospecting and sampling the property, evidence of previous work has been observed. The rotted remains of two old cabins believed to be prospectors cabins have been located.

A grid has been previously established over a portion of the property, this grid appears to be about eight to ten years old.

Evidence of blasting can be found adjacent to Lower Tenas Creek where a pit has been blown in bedrock exposures containing minor sphalerite and chalcopyrite in a chloritic epidote rich rock resembling

skarn type mineralization.

A programme of trenching was completed in 1969 on ground held as Birk 1-10 claims straddling the Birkenhead River south of the Horses' Ass Claims.

Other claims, the NOR claims, held in conjunction with the Birk 1-10 claims covered common ground with the Horses' Ass Claims. A brief discussion of these claims and trenches is contained in Assessment Report #2430 by J. Foster Engineering and Management Services Ltd. of Edmonton, Alberta for Norse Exploration Ltd., dated 1969.

Within the local region, the area has been prospected since the turn of the century (Cairnes, 1924), showings on the Tenquille Creek-Wolverine Creek divide were found in 1916 and have received sporadic work since then.

TOPOGRAPHY AND VEGETATION

Topographic relief on the property ranges from el. 2,000 feet (600m) along the Birkenhead River to 5,500 feet (1,700 m) on the southwestern boundary of the claims.

The claims are roughly bisected north-south by the Birkenhead River and east-west by Tenas Creek.

Slopes range from gently rolling in Birkenhead Valley to steeply wooded on the higher slopes. Tenas Creek has locally formed a precipitous canyon with several waterfalls between 2m and 20m in height.

Vegetation is generally quite 'open' with jackpine, and little underbrush on the lower to intermediate slopes where drainage is good and the underlying soil is, for the most part, gravelly tills. A few wetter areas support well developed stands of cedar and fir. Local areas, particularly the higher, steeper slopes in the southwestern portion of the claims bear the scars of old avalanches. These areas are predominantly covered with alder, willow, and birch, a variety of shrubs and along the water courses devil's club is not uncommon.

Timbered logging has taken place on the east side of the Birkenhead River within the claims and active logging is taking place (1981) north and north-west of the property.

GEOLOGY

REGIONAL GEOLOGY

A pendant of Triassic aged rock extends roughly from the B.C. Railway north and west of Pemberton to approximately Tenquille Lake, the pendant is composed of tuffs, argillites, limestones agglomerates and their medium grade metamorphic equivalents.

The pendant is contained within plutonic rocks of the coast crystalline complex, with diorite to granodiorite most common and lesser amounts of quartz monzonite to granite recognized. (Roddick and Hutchison, 1973). Local skarns may be developed close to the intrusive contacts.

The regional geology has been compiled and remapped on the Pemberton Map Sheet by G. Woodsworth of the Geological Survey of Canada.

GENERALIZED PROPERTY GEOLOGY

The claims are underlain by andesitic volcanic breccias, rhyolite, argillite and minor limestone of the Upper Triassic Pioneer Formation. These have been intruded on the west part of the claims by granodiorite. Gossanous bedrock exposed in Tenass Creek is predominantly pyritic and argillic/propylitic altered andesite with minor rhyolite.

Detailed mapping of the property has not yet been completed. Outcropping bedrock is scarce over the lower to intermediate valley slopes, and sparse at best over the upper slopes. The lower areas appear to be mantled with a gravelly till believed to be up to a few tens of feet thick, as suggested by drainage incision patterns and thicknesses observed along Tenas Creek.

The lower portion of Tenas Creek and the area around its confluence with the Birkenhead River appears to be a locally substantial boulder-gravel outwash fan, with the present Tenas Creek having cut into its own alluvium.

GEOCHEMISTRY

A programme was established to further define a zone of anomalous zinc in soils indicated by regional reconnaissance geochemical sampling.

Geochemical soil and silt samples were collected using a grid for control.

The grid was established using chain and compass methods. Lines were spaced every 100 metres along a base line and samples were collected every 50 metres along each line. In this manner, approximately 200 samples were collected. In addition, approximately 154 samples of a reconnaissance nature were collected on a more random basis with control established by chain and compass, pace and compass, topographic maps and altimeter, by air photosts or a combination of methods.

Soil sample holes were excavated to a depth of 10-25 cm using a hand pick or grub-hoe. A suitable sized sample was collected from the "B" horizon soil or the best approximation of it, using a stainless steel spoon or scoop. The sample was placed in a standard gusseted kraft sample bag in preparation for shipment to the assay lab.

Silt samples were collected from active silt, in appropriate drainages, using a stainless steel spoon or scoop and placed in a standard gusseted kraft paper bag.

Rock chips samples were also placed in gusseted kraft paper bags in preparation for shipment for analysis.

Analyses were prepared by Vangeochem Labs Ltd., 1521 Pemberton Avenue, North Vancouver, B.C. V7P 2S3.

The property reconnaissance samples (H.A. series) were analysed for molybdenum, lead and gold in addition to copper, zinc and silver.

Soil and silt samples were dried and sieved and the -80 mesh fraction, or a portion of it was used in the analysis.

Rock samples were crushed, split and pulverized to approximately -100 mesh. The analysis was carried out as for the soils and silts.

All elements except gold were analysed using a perchloric-nitric acid extraction and standard atomic absorption detection techniques.

Gold was detected and analysed using an aqua-regia digestion followed by a solvent extraction and detection by atomic absorption techniques. The gold analysis on samples HA 23, 25, 27, 29, 41, 56, and 57 were performed on the -25 mesh portion of the sample in order to insure an adequate amount of sample

The values reported for silver have had a background correction applied to them.

COPPER

Copper values in rock chips varied from 4 ppm to 700 ppm. Copper values in soils and silts ranged from 4 ppm to 326 ppm. Approximately 90% of copper values are less than 40 ppm. Approximately 95% of copper values are less than 50 ppm.

ZINC

Zinc values in rock chips varied from 5 ppm to greater than 10,000 ppm. Zinc values in soils and silts ranged from 15 ppm to 1820 ppm 95% of zinc values are less than 600 ppm.

SILVER

Silver values in rock chips varied from none detected to .6 ppm. Silver values in soils and silts varied between none detected to 1.3 ppm. These values are of a sufficiently low order of magnitude to warrant the conclusion that silver is not significantly present.

No anomalous samples were detected for any other element.

The existence of a significant (few to several meters or few tens of meters) mantle of boulder/gravel till is felt to mask most of the north eastern portion of the grid. Geochemical interpretation of results is made much more difficult as a result of the presence of the till.

Perusal of the geochemical plots will show that the zinc anomalous values have responded in a most erratic manner. It can be observed that most of the anomalous values and almost all of the higher

values are down hill and below the upper limit of significant till thickness. Within this region the presence of low values cannot be taken as indicative of low bedrock metal content. However, high values may represent groundwater and ionic transport to surface of bedrock metal content. High values may, of course, also represent erratic till material, but from an exploration point of view the former case must be considered.

The presence of 2 rock chip samples yielding values of greater 10,000 ppm Zn from outcrop and float near Tenas Creek northeast of the grid area illustrate the local nature of zinc mineralization within the area.

A clustering of anomalous zinc values is noted near the north central portion of the grid, approaching Tenas Creek. This cluster may be of significance in that the slopes into Tenas Creek may have a thinner mantle of the till. Rock exposures along Tenas Creek are locally very gossanous and 1 rock sample yielded a value of 9600 ppm Zn.

Anomalous copper values are even more sporadic and erratic than the zinc values.

Two values of 100 ppm and 75 ppm are from the extreme southeast portion of the grid area.

A value of 700 ppm was recorded associated with a zinc value of greater 10,000 ppm collected from outcrop in the vicinity of an old blast pit near lower Tenas Creek.

During the course of the time on the property streams and rivers were in near flood conditions which eliminated much rock exposures along Tenas Creek in particular, and prevented access to the exposures in Tenas Creek canyon. At times of lower water and less runoff, very good rock exposures would be available over much of the length of Tenas Creek across the property.

These exposures probably afford the best geological cross section it will be possible to view of the local rocks. Mapping and sampling of Tenas Creek exposures in detail should be a priority for future work.

CONCLUSIONS AND RECOMMENDATIONS

Zinc and to a lesser degree, copper values are obtained in soils over felsic to intermediate volcanic rocks and sediments on the "Horses' Ass" mineral Claims. The geochemical response is complicated by the presence of gravel and boulder tills and is not considered sufficient in itself for adequate definition of target areas.

A future programme of geophysical prospecting and detailed mapping of the section and structure exposed in Tenas Creek should be considered.

Mineralized exposures near old workings adjacent to lower Tenas Creek should be examined and the potential for tracing extent with geophysical methods considered. Detailed mapping of rock exposures along Tenas Creek should be completed at a time of low water so as to afford maximum accessibility within the canyon areas.

STATEMENT OF COSTSWAGES

W. A. Howell	May 7-10/81	4 days @ \$200.	\$800.00
T. Oliver	May 7-10/81	4 days @ \$150	600.00
M. Hagemoen	May 7-10/81	4 days @ \$100	400.00
K. W. Livingstone	May 9-10/81	2 days @ \$200.	400.00
G. L. Lauzon	May 9-10/81	2 days @ \$100	200.00
G. Siverte	Oct 15-18/80	4 days @ \$100	400.00
C. Howe	Oct 15-19/80	5 days @ \$75	<u>375.00</u>
			3175.00

Accommodations	Oct. 15-18/80	187.26
Camp	May 7-10	100.00
Meals - 17 man days @ \$20.00		340.00

Truck rental (4 w.d.)	4 days @ \$50 (May 7-10/81)	200.00
" "	2 days @ \$50 (May 9-10/81)	100.00
Transportation (4 w.d.)	4 days @ \$50. (Oct 15-18/80)	200.00

Assays	1083.50
"	803.40

Fuel - 3 vehicles x 300 miles @ \$0.10/mile	90.00
---	-------

Report	<u>750.00</u>
--------	---------------

3854.16

7029.16

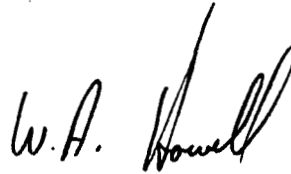
P.A.C. withdrawal 970.24

\$8000.00

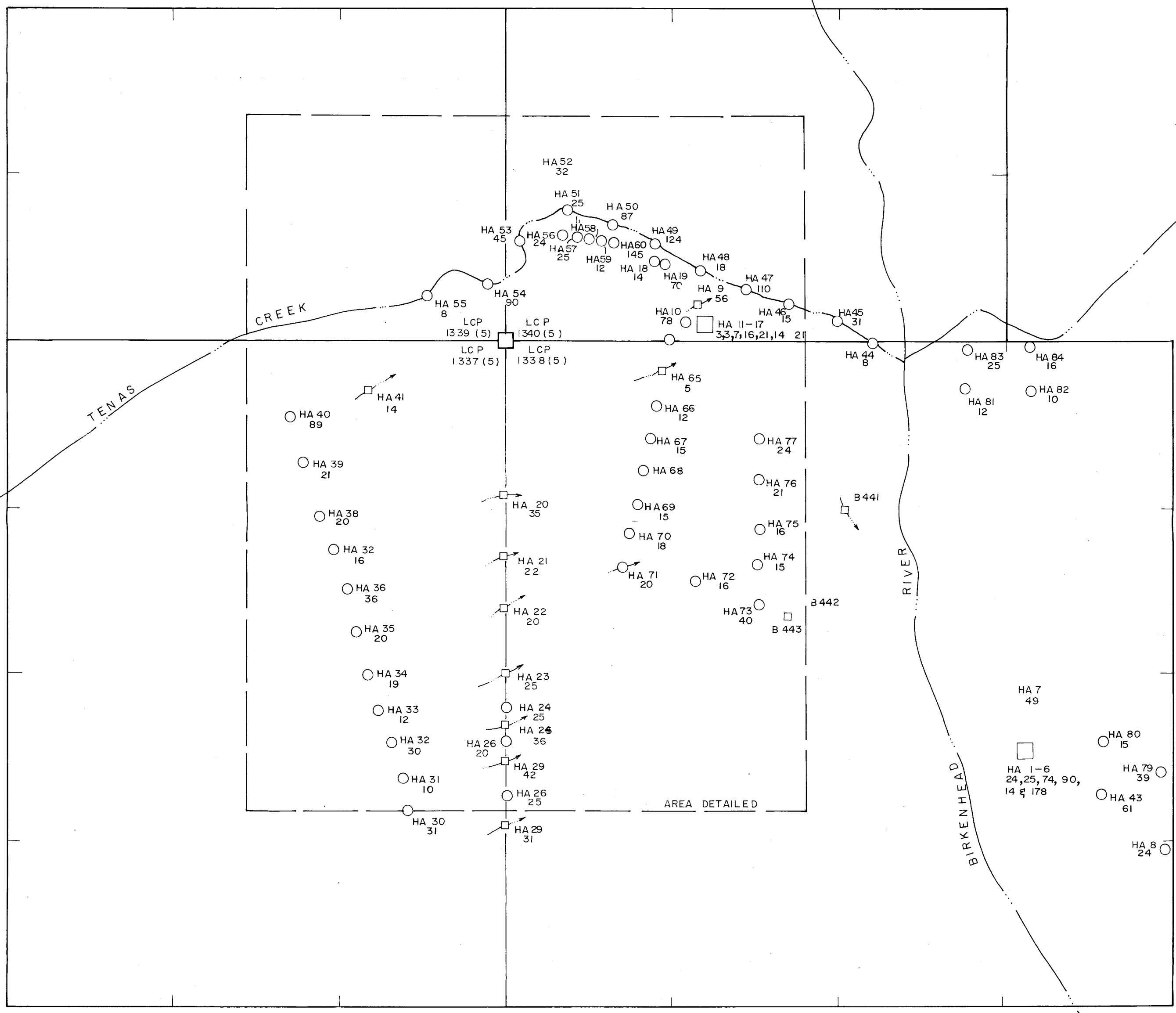
STATEMENT OF QUALIFICATIONS

I, WILLIAM A. HOWELL, do hereby certify that:

1. I am a professional geologist working in British Columbia and residing at 10611 Ainsworth Crescent, Richmond, B.C. V7A 3V5
2. I am a graduate of the University of British Columbia, Bachelor of Science (Geology) 1971
3. I have been employed in the mineral exploration industry since 1967 and have practiced my profession as a geologist since 1971.
4. I am a member of the Geological Association of Canada.
5. This report is based on my personal knowledge of the district and the mapping and sampling done on the property.

A handwritten signature in black ink, appearing to read 'W.A. Howell'. The signature is written in a cursive style with a large, sweeping initial 'W'.

William A. Howell



□ HA 21 Silt sample location
 ○ HA 36 Soil sample location

MINERAL EXAMINATION
 ANALYSIS REPORT
9637

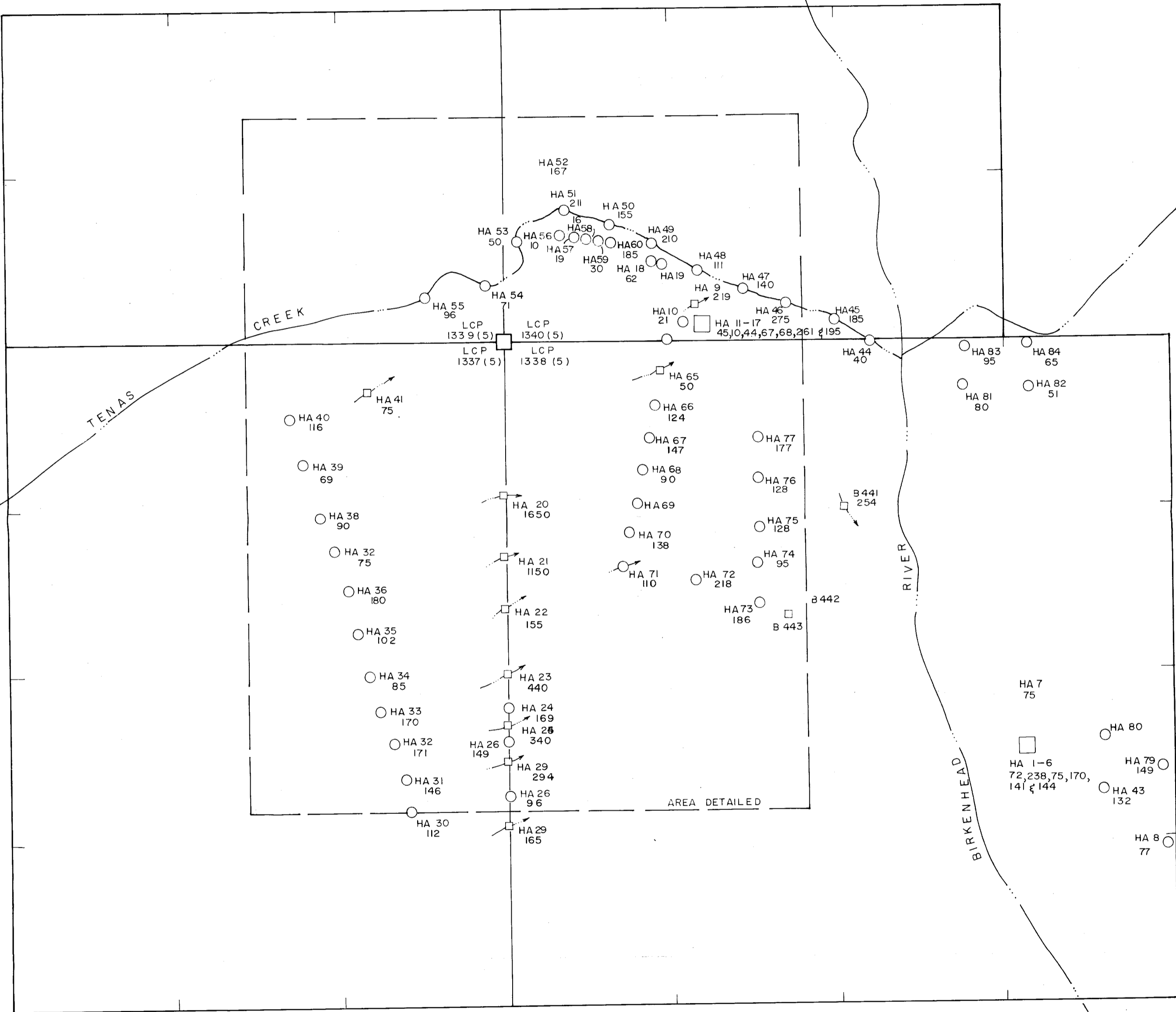
JMT SERVICES CORP.

TENAS CREEK PROPERTY
 HORSES ASS CLAIMS
 LILLOOET MINING DIVISION NTS 92 J / 7, 10

Cu. GEOCHEMISTRY
 p.p.m.

SCALE 1:10,000
 0 100 200 300 400
 METERS

FIG. 3



□ HA 21 Silt sample location
 ○ HA 36 Soil sample location

9637

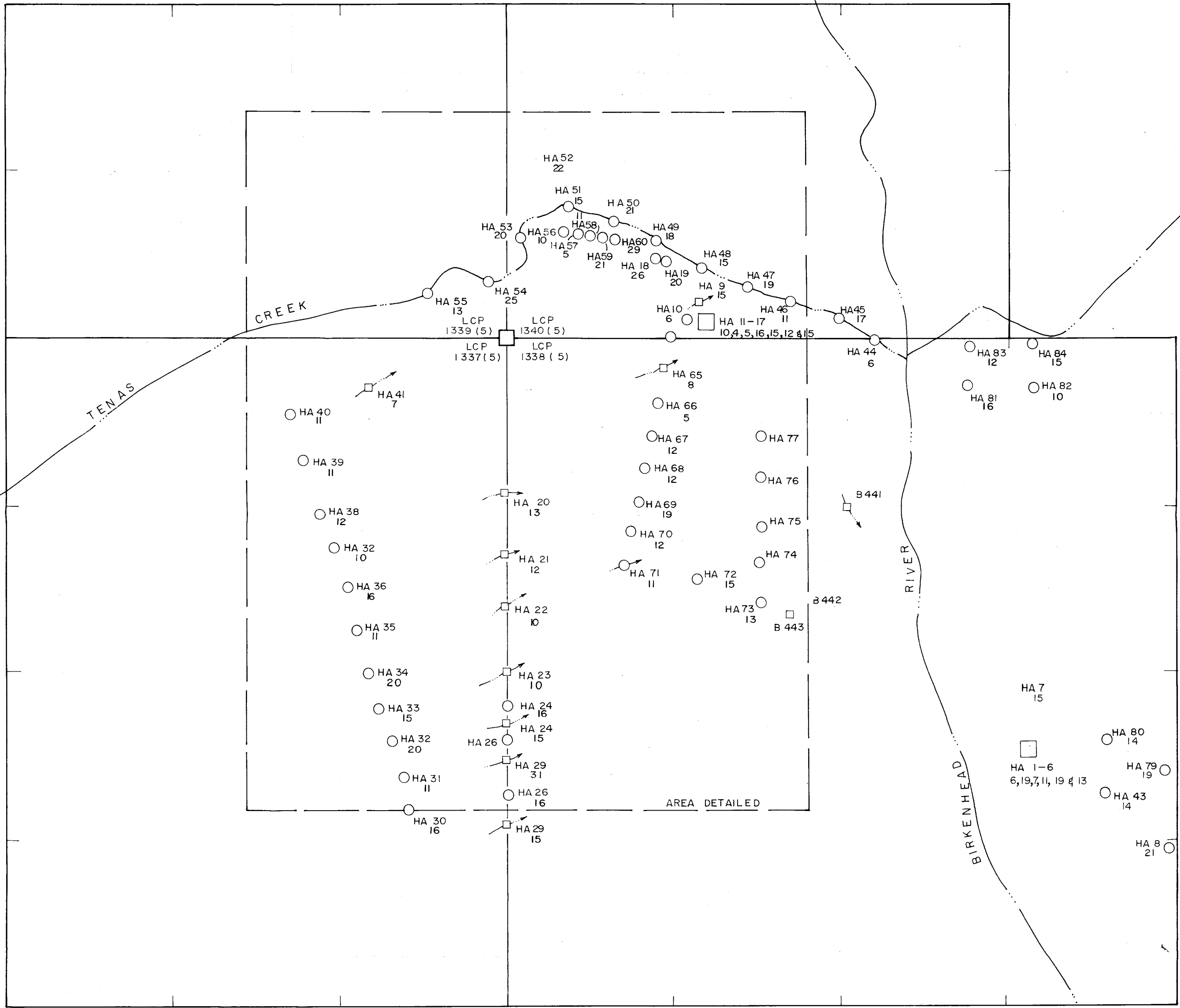
JMT SERVICES CORP.



TENAS CREEK PROPERTY
 HORSES ASS CLAIMS
 LILLOOET MINING DIVISION NTS 92 J / 7, 10

Zn. GEOCHEMISTRY
 p.p.m.

SCALE 1:10,000
 0 100 200 300 400
 METERS

FIG. 4



 HA 21 Silt sample location
 HA 36 Soil sample location

JMT SERVICES CORP.
 TENAS CREEK PROPERTY
 HORSES ASS CLAIMS
 LILLOGET MINING DIVISION NTS 92 J / 7, 10
 Pb. GEOCHEMISTRY
 p.p.m.

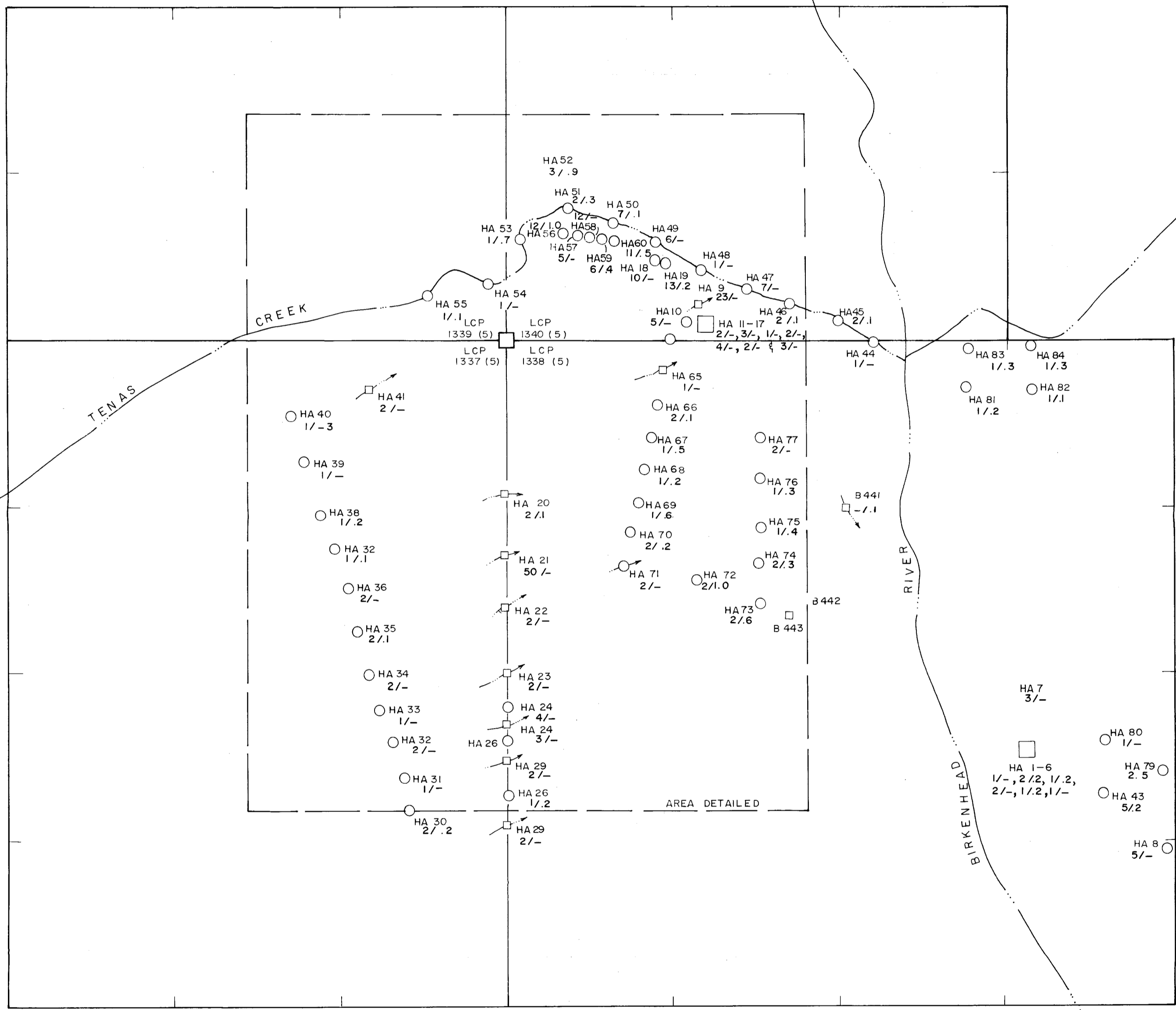
SCALE 1:10,000
 0 100 200 300 400
 METERS

FIG. 5

JMT SERVICES CORP.
 TENAS CREEK PROPERTY
 HORSES ASS CLAIMS
 LILLOGET MINING DIVISION NTS 92 J / 7, 10
 Pb. GEOCHEMISTRY
 p.p.m.

SCALE 1:10,000
 0 100 200 300 400
 METERS

FIG. 5



□ HA 21 Silt sample location
 ○ HA 36 Soil sample location

MINERAL RESOURCES DIVISION
 ASSESSMENT REPORT
9637

JMT SERVICES CORP.

TENAS CREEK PROPERTY
HORSES ASS CLAIMS

LILLOOET MINING DIVISION NTS 92 J / 7, 10

Mo. & Ag. GEOCHEMISTRY
p.p.m.

SCALE 1:10,000
0 100 200 300 400
METERS

FIG. 6

TENAS CREEK PROPERTY
HORSES ASS CLAIMS
LILLOOET MINING DIVISION NTS 92 J / 7, 10

GEOCHEMICAL VALUES FOR — COPPER

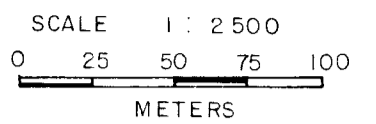
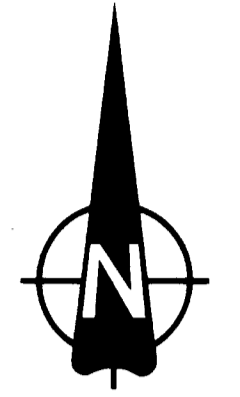


FIG. 7

MINERAL RESOURCES DIVISION
ASSESSMENT REPORT
9637



LEGEND

- Soil sample site
- Silt sample site
- △ Rock sample site
- T12 Geological contact — defined, assumed
- F Float
- Rock outcropping
- Blast pit or trench
- Bedding
- Claim post
- Claim boundary
- p rhyolite
- D dacite
- A andesite
- I lapilli
- t tuff
- b breccia
- x crystal or crystalline
- c cherty
- qv quartz vein or stringer

- 25 —————
- 50 - - - - -
- > 50 - - - - -

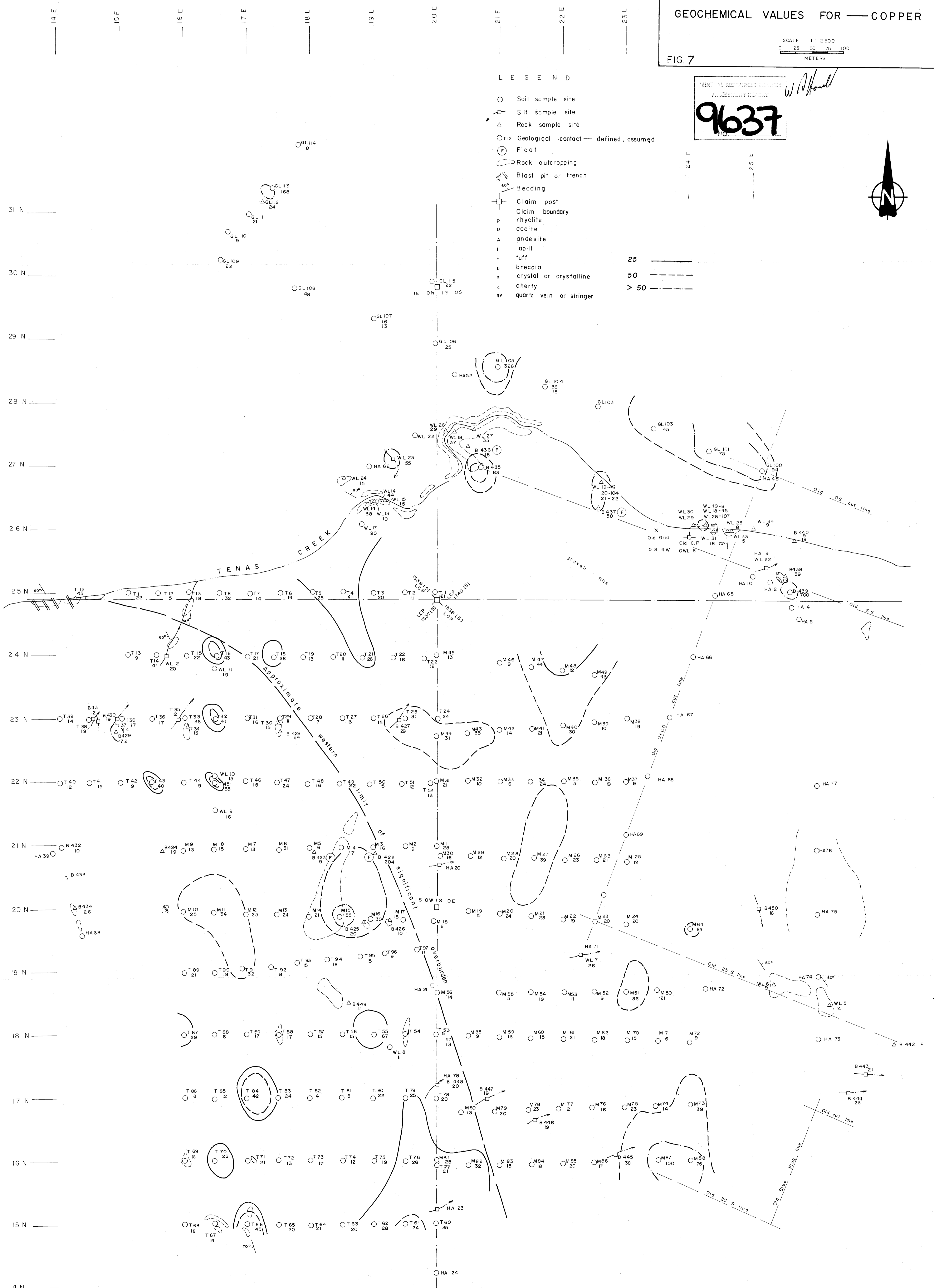
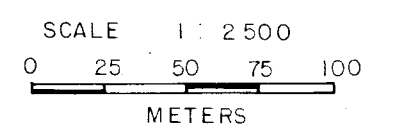


FIG. 8

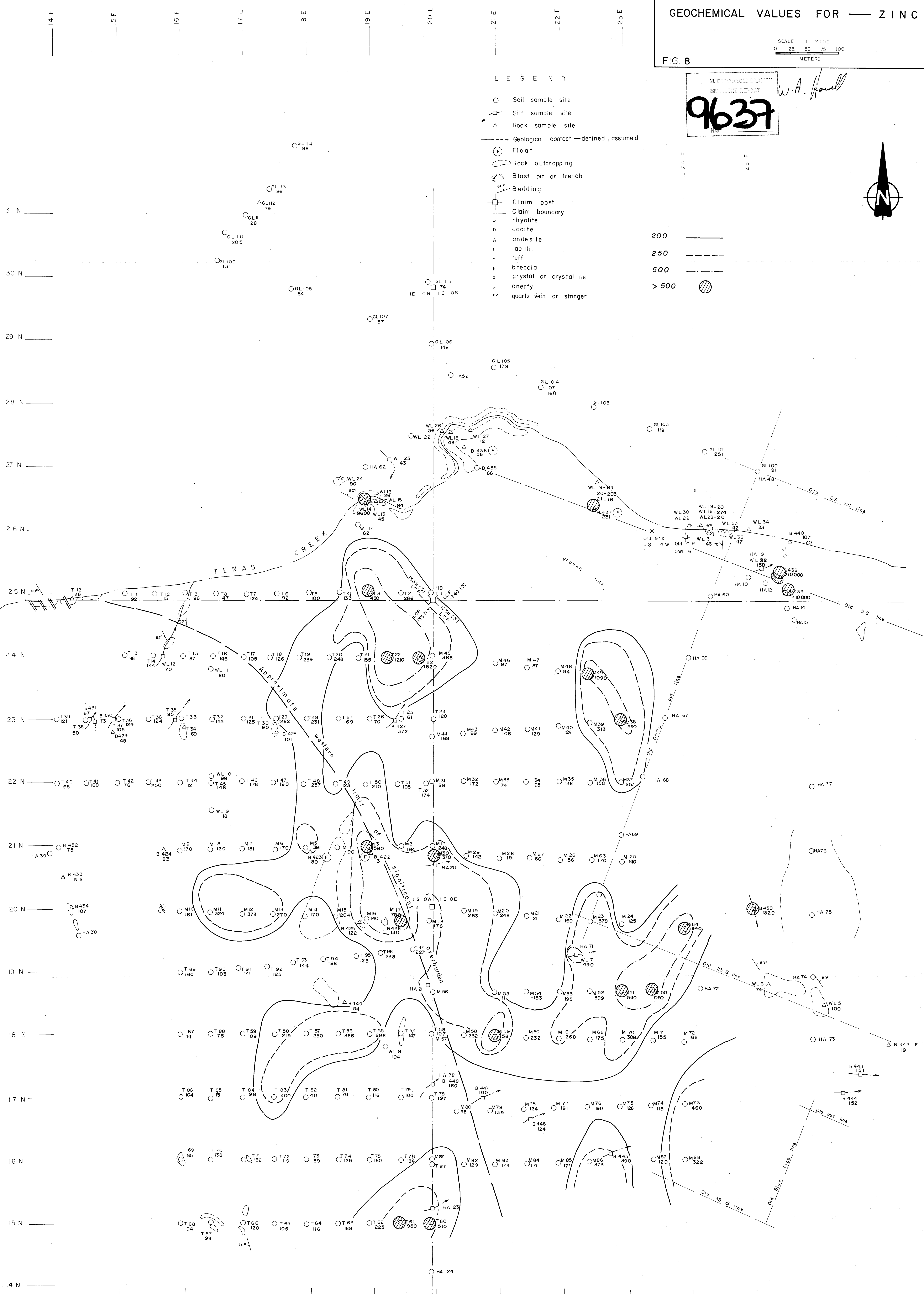
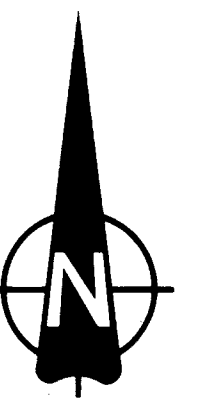
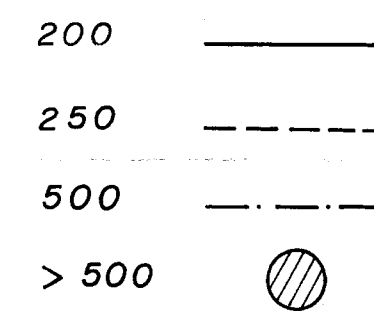


9637

W.A. Powell

LEGEND

- Soil sample site
- Silt sample site
- △ Rock sample site
- Geological contact — defined, assumed
- Float
- Rock outcropping
- Blast pit or trench
- Bedding
- Claim post
- Claim boundary
- r rhyolite
- d dacite
- A andesite
- l lapilli
- t tuff
- b breccia
- x crystal or crystalline
- c cherty
- qv quartz vein or stringer



TENAS CREEK PROPERTY

HORSES ASS CLAIMS

LILLOOET MINING DIVISION NTS 92 J / 7, 10

GEOCHEMICAL VALUES FOR — SILVER

FIG. 9

SCALE 1 : 2500
0 25 50 75 100
METERS

MINING REGISTRATION REPORT
9637

W.P. Howell

LEGEND

- Soil sample site
- Silt sample site
- △ Rock sample site
- Geological contact defined, assumed
- ⊕ Float
- ⊖ Rock outcropping
- ⊙ Blast pit or trench
- ⊙ Bedding
- ⊙ Claim post
- ⊙ Claim boundary
- P rhyolite
- D dacite
- A andesite
- t lapilli
- r tuff
- b breccia
- x crystal or crystalline
- c cherty
- qv quartz vein or stringer

