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PROGRESS REPORT  
on the  
BOULDER CREEK PROSPECT  
Omineca Mining Division

on behalf of  
NORTHERN TUNGSTEN MINES LIMITED

by

J.H. Montgomery, Ph.D., P.Eng.

December 15, 1972.

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## SUMMARY AND CONCLUSIONS

Northern Tungsten Mines, Limited, of Prince George, B.C., holds title to 61 full-sized and 11 fractional mineral claims located on Boulder Creek in the Omineca Mining Division of British Columbia.

Exploratory work during the past season consisted of a geochemical soil survey, bulldozer trenching and a partial claim survey. The work has resulted in the discovery of several high-grade lead-zinc-silver showings associated with a major structure, the Manson Fault, and extensive carbonate hydrothermal alteration. Additional claims were staked to protect the showings.

It is recommended that a continuation and expansion of the exploration program outlined in my original report should be undertaken.

PROGRESS REPORT  
on the  
BOULDER CREEK PROSPECT  
OMINECA MINING DIVISION  
BRITISH COLUMBIA

INTRODUCTION

This report contains a summary of all the work done on the Boulder Creek Prospect by Montgomery, Wolfe and Associates, Limited on behalf of Northern Tungsten Mines, Limited, during the 1972 season.

The work to date has resulted in the discovery of a number of high-grade lead-silver-zinc showings which warrant a substantial amount of further exploration and development.

LOCATION AND ACCESS

The property is located on Boulder Creek, an easterly-flowing tributary of Manson Lakes, about six miles southeast of the town of Manson Creek, British Columbia. A location map is shown in Figure 1. (N.T.S. Ref. 93N; Lat. 55° 36' N, Long. 124° 22' W).

Manson Lakes may be reached by a good gravel road from Fort St. James, B.C., a distance of about 105 miles. From that point, a boat or barge is required to cross South Manson Lake where a well-equipped camp is established. A number of cat roads, including recently built roads, make most parts of the property easily accessible.

Some additional road work will be necessary to facilitate the next phases of the work program. As well, the possibility of a bridge across Manson Lakes Narrows should be considered.



FIG. 1

PROPERTY LOCATION MAP

## CLAIM INFORMATION

The property presently consists of 61 full-sized and 11 fractional mineral claims located in the Omineca Mining Division of British Columbia. Figure 2 is an idealized outline of the claim block. A portion of the claim area has been surveyed by chain and tripod-mounted compass. This portion is shown in Figure 3. Additional claims and fractions were staked to protect the area of interest.

Assessment work was applied to most of the claims. Up-to-date claim information is listed in the following table:

<u>CLAIM</u>	<u>RECORD NUMBER</u>	<u>EXPIRY DATE</u>
	<u>BOULDER GROUP (27)</u>	
Reynolds 1-2 (2)	96573-96574	Dec. 29, 1974.
Spaner 1-8 (8)	96575-96582	Dec. 29, 1974.
Stroh 1-9 (9)	96583-96592	Dec. 29, 1974.
Leslie 1-8 (8)	96894-96901	Nov. 9, 1974.
	<u>TUNGSTEN GROUP (21)</u>	
Wright 1-8 (8)	105706-105713	Oct. 26, 1976.
Doyle 1-7 (7)	103724-103730	Aug. 30, 1977.
Pattenden 1-6 (6)	106249-106254	Oct. 6, 1976.
	<u>NEW STAKING (1972) (24)</u>	
Reynolds 3-4 (2)		
Reynolds Fr. 1-2 (2)		
Leslie Fr. 1-4 (4)		
Doyle Fr. 1 (1)		
Stroh Fr. 1-4 (4)		
Jo 1-10 (10)		
Jo 13 (1)		

NORTHERN  
TUNGSTEN  
CLAIMS

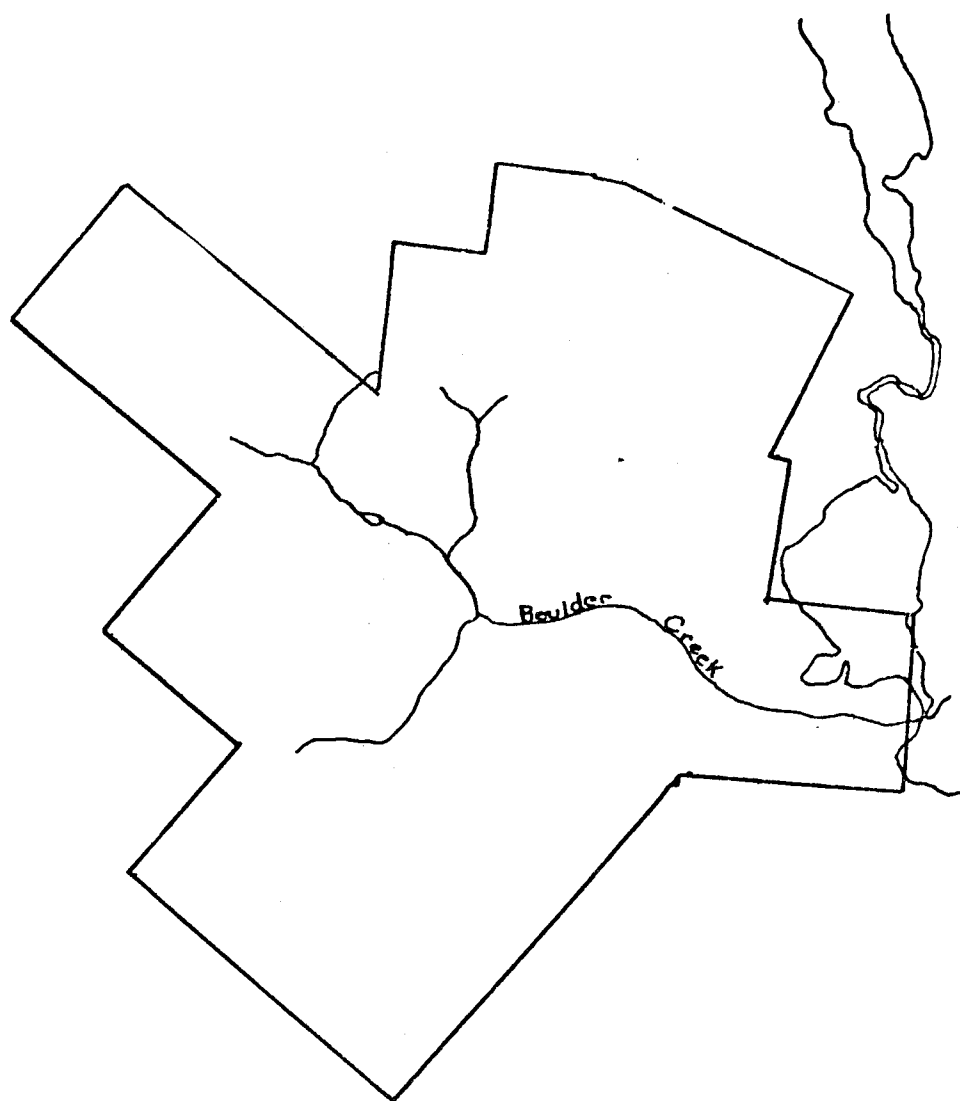


FIG. 2

CLAIM MAP

Some additional work has also been filed for which certificates of work are not yet available.

#### PROGRESS OF WORK TO DATE

##### a) Base Map

A topographic base map has been prepared utilizing existing aerial photography and control. The map covers most of the claim area and has a scale of one inch to 400 feet and a 25 foot contour interval.

The base map will be used for control and correlation of geochemical and geophysical surveys, geological mapping and diamond drilling.

##### b) Geochemical Survey

A geochemical soil survey was conducted over about 30 of the claims. East-west lines were chained out at intervals of 400 feet along a north-south trending baseline. In all, about 30 line miles of grid were established.

A total of 343 soil samples were collected. Most of these were analyzed by Min-En Laboratories of Vancouver, B.C. for lead, zinc, silver and copper.

The survey resulted in the detection of a large lead anomaly. See Figure 3. Statistical analysis of lead values indicated a threshold value of 90 p.p.m. An area of approximately 4000 feet by 3000 feet contains anomalous lead values ranging from 90 to 1100 p.p.m. lead. Anomalous zinc values up to 2000 p.p.m. and scattered highs in copper and silver were also found within the boundaries of the lead anomaly. A number of smaller lead anomalies were also detailed within the claim area. Some of these, which indicate a linear continuity may be associated with structurally-controlled mineralization.



### c) Trenching and Road-Building

Access roads were constructed by cat to the area of the lead anomaly, in all about  $3\frac{1}{2}$  miles of road. Trenching in several parts of the lead anomalous zone revealed the presence of high-grade lead-zinc-silver mineralization. The mineralization is of considerable extent but, because of early snowfall, it was not possible to map the showings and determine their actual size and grade.

A small amount of trenching was also done on a scheelite showing on the claim-area. A grab sample assayed 0.1%  $WO_3$ .

### d) Claim Survey

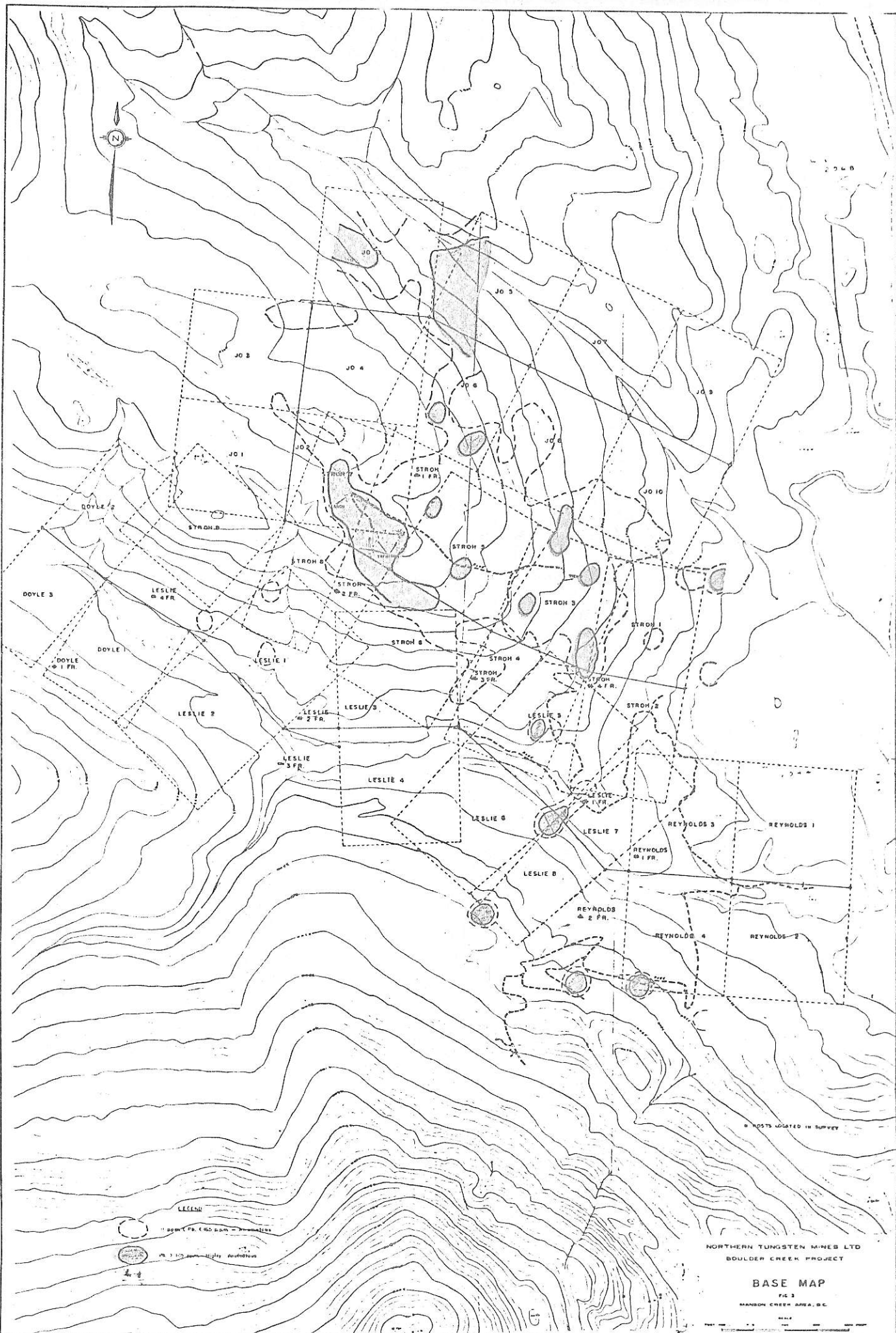
A chain and compass survey of the main area of interest was completed during the past season. This resulted in the staking of 13 new full-sized and 11 fractional claims to provide better protection of the lead anomalous area. The results of the survey are shown in Figure 3. Roads and trenches are also plotted on this map.

### e) Geology

Geological mapping of the claim area has not yet been done. This will be one of the prime objectives during the 1973 season.

The following few remarks regarding the geology of the area are based on observations of trench exposures and on J.E. Armstrong's regional mapping (G.S.C. Memoir 252, 1949)

The claim area lies adjacent to the Manson Fault, a major north-westerly-trending structure which is, in many places, associated with extensive carbonate alteration and lead-zinc mineralization. Such seems to be the case at Boulder Creek. Mineralization exposed in trenches consists of galena, sphalerite, pyrite and minor chalcopyrite commonly with a distinct banded structure. Most of the gangue mineral is quartz in the form of stringers and veins. The wallrock is typical



LEGEND  
 1/4" = 100' (1:40,000) - Contours  
 1/4" = 100' (1:40,000) - Spot Elevation

• POINTS LOCATED IN SURVEY

NORTHERN TUNGSTEN MINES LTD  
 BOULDER CREEK PROJECT

BASE MAP  
 FIG. 3  
 BOULDER CREEK AREA, B.C.

of that described by Armstrong as carbonate rocks. The original rock minerals, except for quartz, have been completely replaced by a buff-coloured mixture of ankeritic carbonate, chlorite, mariposite and pyrite as a result of hydrothermal alteration.

Several samples of high-grade material and one of wallrock were taken for assay. The results are as follows:

<u>Sample</u>	<u>Type</u>	<u>Pb</u>	<u>Zn</u>	<u>Au</u>	<u>Ag</u>	<u>Cd</u>	<u>Bi</u>
High Grade	Grab	56.7	2.70	.005	7.10	.06	Tr
High Grade	Grab	77.5	0.03	.085	17.40	.03	Tr
High Grade	Grab	63.7	----	.01	15.4	----	----
Carbonate Rock	Specimen	----	----	.01	0.6	----	----

At current metal prices, the above samples represent values between \$200 to \$300 per ton.

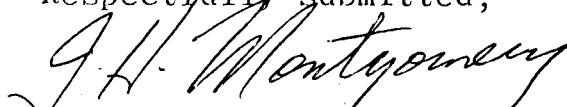
The above samples were assayed by Min-En Laboratories Ltd. of North Vancouver, B.C.

#### RECOMMENDATIONS

In view of the extremely encouraging results to date, I believe that a continuation and expansion of the exploration program outlined in my original report dated November 1, 1971 should be undertaken.

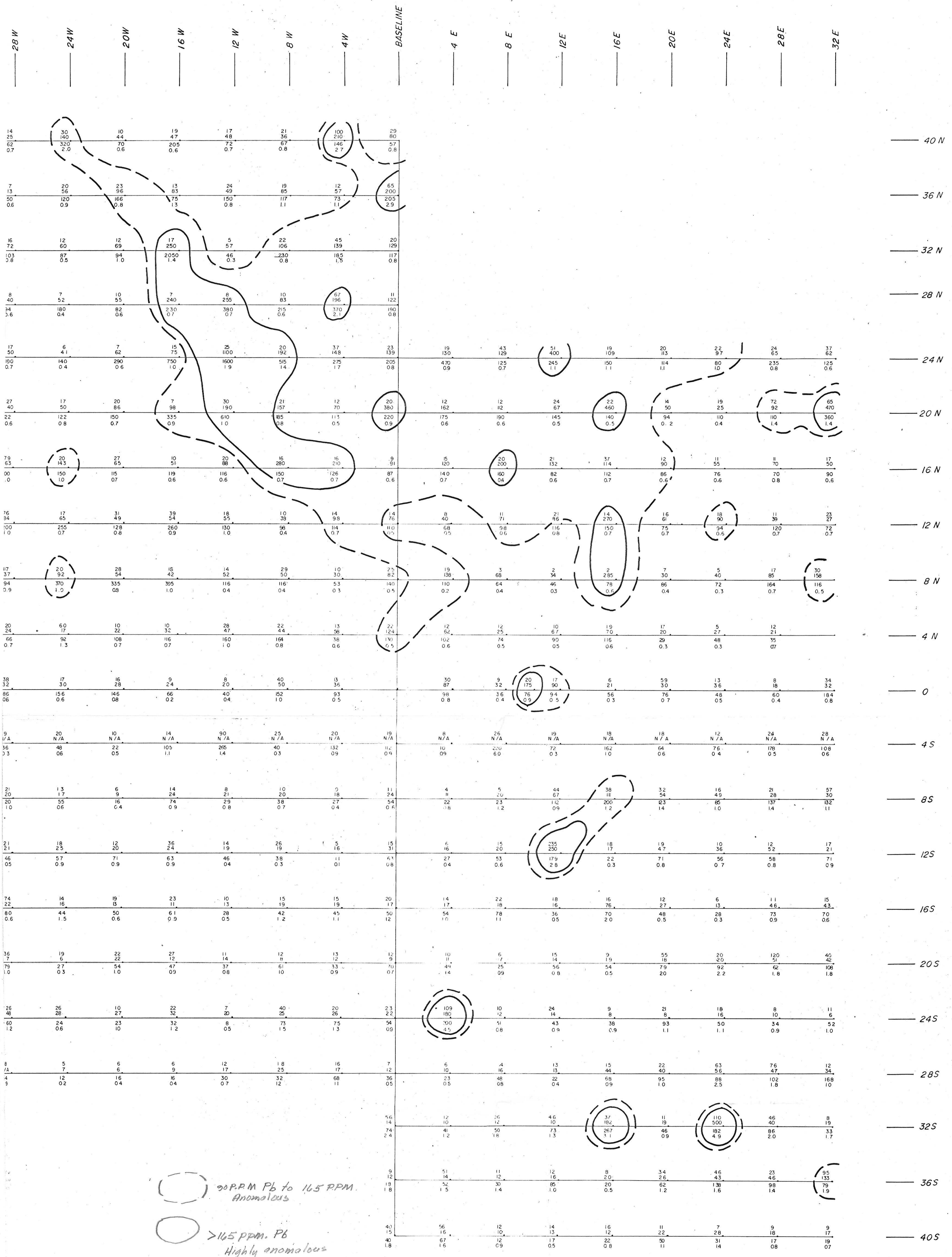
Such work should consist of additional geochemical sampling and trenching, an electromagnetic survey, geological mapping (including preliminary aerial photograph interpretation) and diamond drilling. If the expanded program is undertaken, some consideration should be given to improving access and camp facilities.

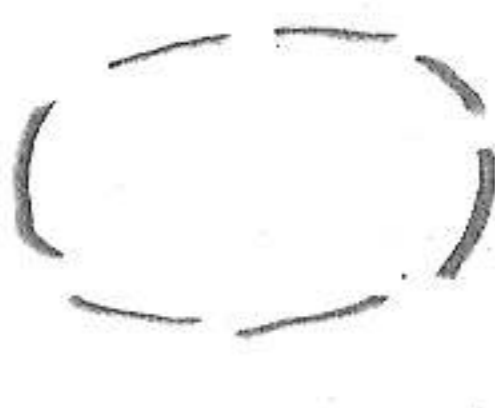

Respectfully submitted,



J.H. Montgomery, Ph.D., P.Eng.

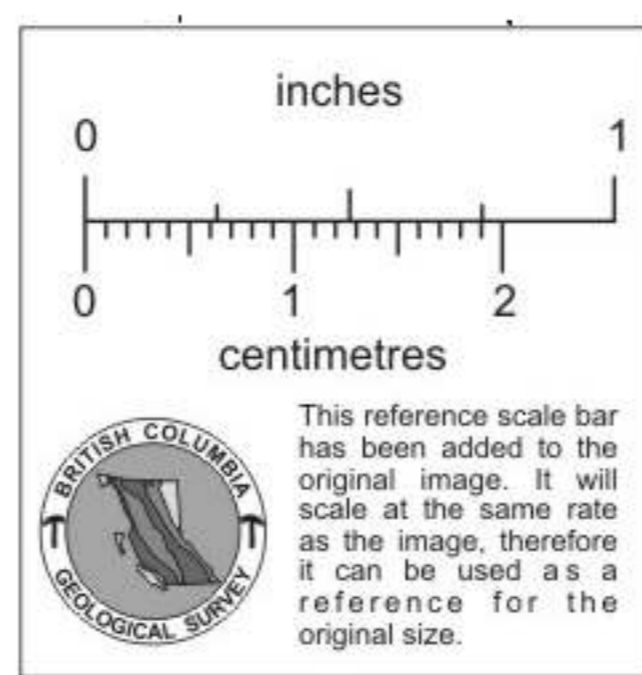
JHM/kjm



 20-165 ppm Pb to 165 ppm Anomalous  
 >165 ppm Pb Highly anomalous

**LEGEND**  
 16 Cu  
 202 34 Pb Ni  
 120 Zn  
 0.5 Ag

To accompany report by R. WOLFE, P.Eng., August 15, 1972



NORTHERN TUNGSTEN MINES LTD.  
 BOULDER CREEK PROJECT  
**GEOCHEMICAL SOIL SURVEY**  
 MANSON CREEK AREA, B. C.  
 SCALE  
 FT. 800 400 0 400 800 FT  
 MONTGOMERY, WOLFE & ASSOCIATES LTD.