

ASSESSMENT REPORT

1980 GEOCHEMICAL SURVEY FOR MINERAL CLAIMS -

TY 1, 3, 4, 5, 6;

SANDY 2, 3, 4;

QUEEN FRACTIONAL AND

MERCURY 1A

81 #600
9324

Lillooet Mining Division
920/2 E&W
51°03'N, 122°46'W

For: Western Mines Limited
and Florence C. Westbrook

By: Western Mines Limited
Rodney Arnold

DECEMBER 1980

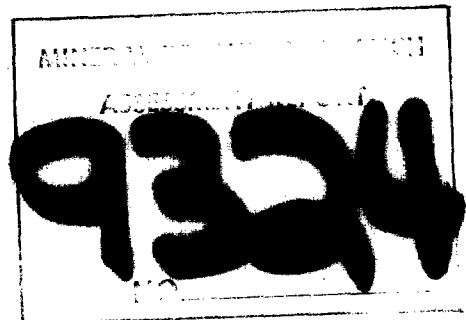


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INTRODUCTION

The property is located in the Chilcotin Range of the Coast Mountains partially straddling Tyaughton Creek. It extends from 1.2 km south of Noaxe Creek to 2½ km north of the Relay-Tyaughton Creek junction. Elevation ranges between 1,065m to 1,900m. The slopes are generally forest-covered, with pine, fir and occasional poplar groves, but boasts sporadic alpine meadows above 1,670m.

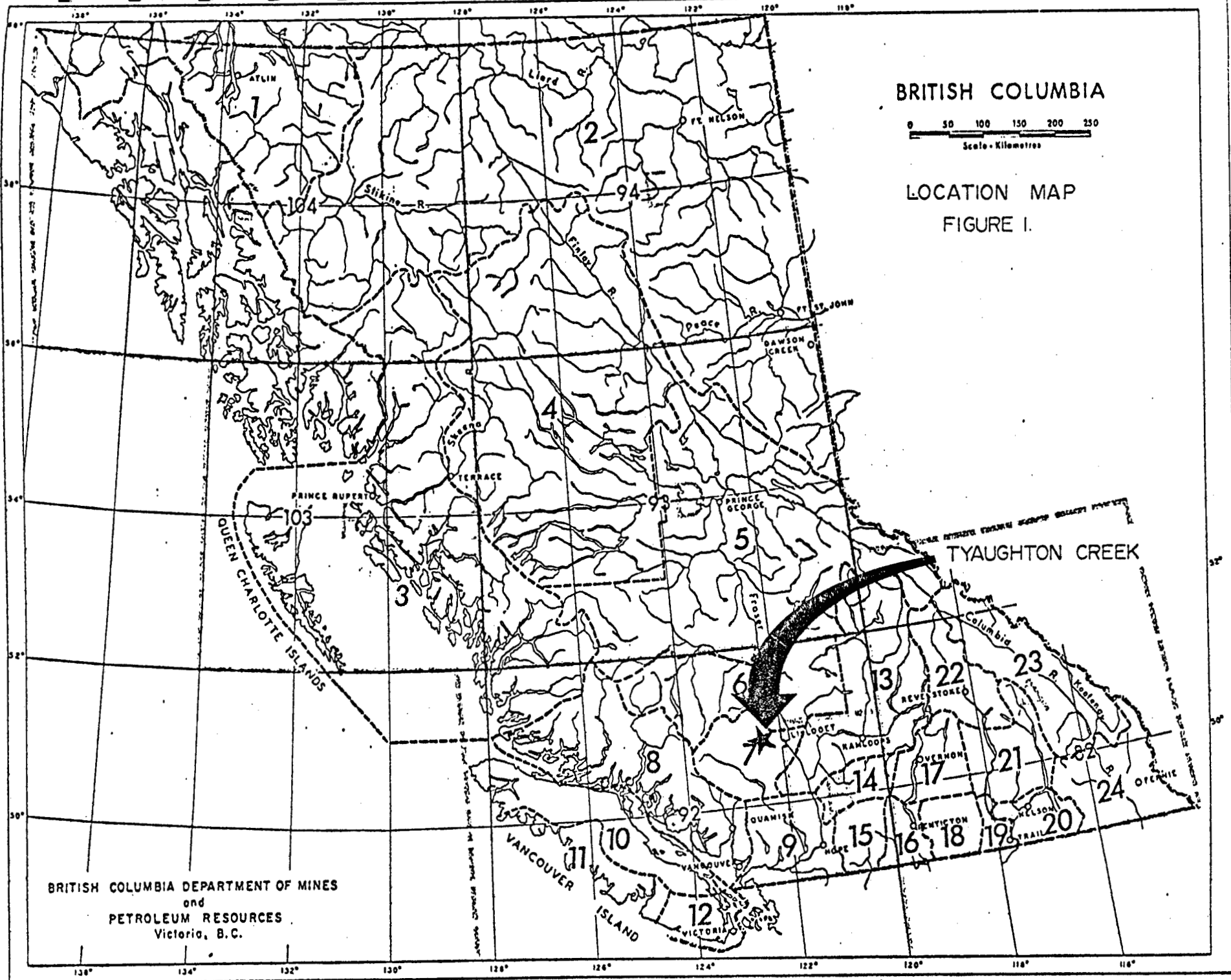
Access to the property is via good gravel road for 21½ kms north of Carpenter Lake. Gold Bridge lies 33 kms to the south.

This region has been explored for many mineral commodities - mercury, stibnite, scheelite, gold, silver, lead and zinc. Approximately 1500 pounds of mercury was produced by Empire Mercury Mines in 1938. Between 1939 and 1942 about 19 tons of hand-cobbed ore was shipped from the Tungsten Queen and Tungsten King workings.

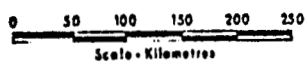
Interest in the area was renewed around the mid-sixties. Between 1964 and 1966 surface trenching, mine rehabilitation, percussion drilling and underground drilling was performed by Empire Mercury Corporation Ltd. on the old Empire Mercury Mines claims. In 1965, Canex undertook a regional exploration program centered around the Tungsten Queen minesite. A soil and silt geochemical survey, magnetometer survey, prospecting, mapping and trenching were carried out by Bethlehem Copper Corporation Ltd. in 1968. A five hole AX diamond drill program totalling 455 feet plus geological mapping was conducted by Nuspar Resources Ltd. in 1976 and 1977.

CLAIMS AND OWNERSHIP

The property consists of eleven located claims and two fractions within the Lillooet Mining Division on claim maps 920/2E and 2W.

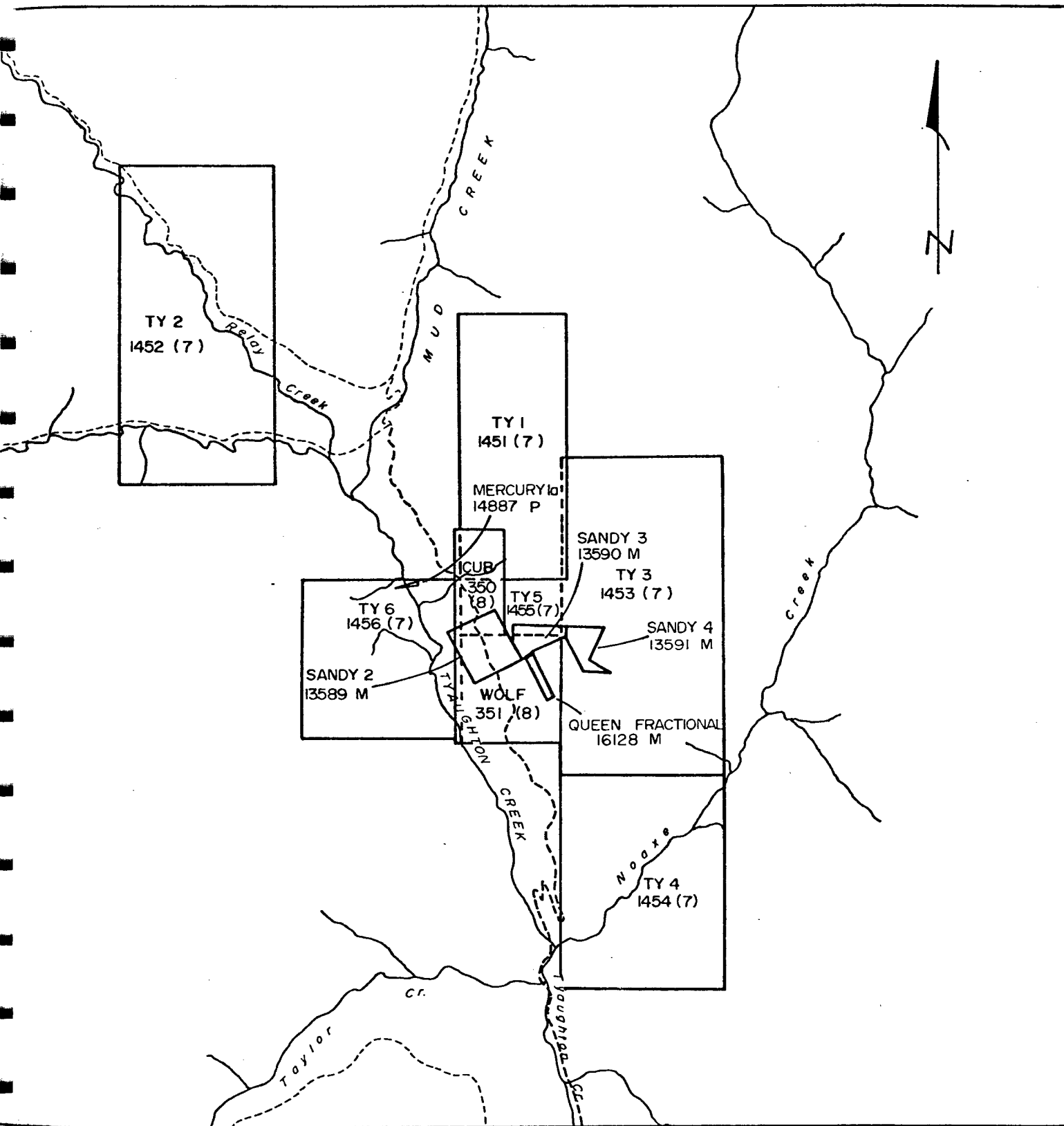


BRITISH COLUMBIA



LOCATION MAP
FIGURE I.

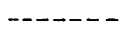
BRITISH COLUMBIA DEPARTMENT OF MINES
and
PETROLEUM RESOURCES
Victoria, B.C.



LEGEND



Creek



Trail



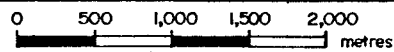
Road

SANDY 4
13591 M

Claim Name
Record Number, Month

WESTERN MINES LIMITED

TYAUGHTON CREEK PROJECT
CLAIM LOCATION MAP



SCALE 1:50,000

Date: Oct. '80	Drawn by: L. Connor	Revised:	N.T.S. No. 92-0-2
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FIGURE 2.

A soil grid with a baseline oriented at approximately 155 degrees was established with 100 meter line spacing increasing to 200 meter spacing towards the south and north ends of the grid. Sample separation of 25 meters was maintained for 200 meters on either side of the baseline then extended to 50 meter spacing thereafter. A total of 37 silt samples, 967 soil samples and 5 rock samples were collected and include:

- TY 1 RA 589-651, 655-661, 670-688
RB 46-52, 56, 57, 215, 220-263, 269-291
RGW 10-30, 35-44
RWA 7, 8, 145, 146

- TY 3 RA 420-430, 511-513, 517-523, 530, 531, 568-576
RB 53-55, 112-115, 119-123, 136-143, 146-162
PM 1422-1428, 1483-1485, 1494
RWA 1, 2
AY 45, 46, 75

- TY 4 RA 550-567, 577-583, 663
RB 174-214
RWA 12-24, 47-112, 147, 148
AY 64-74, 76-81

- TY 5 RA 414-419, 431
RB 41-45, 58-67
PM 1410-1421, 1429-1439
RWA 3-6
AY 47-52

- TY 6 RA 491-496
RB 6-9, 89, 90
RGW 49-56
RWA 39-44

Cub RA 488-490, 652-654, 669, 689-708
RB 1-5, 10-40, 68-71, 91-98, 265-268, 292-320
PM 1407-1409, 1441, 1442
RW 31-34, 47, 48
RWA 10, 11, 113-144, 149-151
AY 53-63

Wolf RA 407, 408, 497-505, 508-510, 532-535, 538-546, 584-588
RB 99-107, 110, 111, 124-132, 135, 163-172
PM 1495-1499, 1502-1510, 1521-1580

Sandy 2 RA 400-406, 443-456, 459-487
RB 72-88
PM 1400-1406, 1443-1467, 1511-1520

Sandy 3 RA 409-413, 432-442, 457, 458
PM 1440, 1468-1478

Sandy 4 RA 514-516, 524-529
RB 116-118, 144, 145
PM 1479-1482, 1486-1493

Queen Fr. RA 506, 507, 536, 537
RB 108, 109, 133, 134
PM 1500, 1501

A mattock was used to sample the "B" soil horizon to depths ranging from 15 to 45 cm. Rock fragments, roots and wood chips were removed to prevent contamination.

PURPOSE OF SURVEY

The intent of the geochemical surveys were to sample the "B" soil horizon and drainage systems to determine if mineralized rock is present on the property.

ANALYSIS

All samples were analysed by Chemex Labs Ltd. of North Vancouver, B. C. Silt and soil samples were sieved to minus 80 mesh and rock geochem and assay samples were ground to minus 100 mesh fractions. Of the 967 soil samples taken, 683 samples were analysed for Cu, Mo, Pb, Zn, Ag, As, Au, W and Sb; one sample for Cu, Mo, Pb, Zn, Ag, As, W and Sb and 256 samples for tungsten only. Thirty-seven silt and 27 soil samples were analysed for Cu, Mo, Pb, Zn, Sb, Hg and W. Two rock samples (RWA-147 and 148) were geochemmed for Cu, Pb, Zn, Ag, As, Au and W and three rocks were assayed for Ag, Au and WO_3 .

Analytical procedures for Cu, Mo, Pb, Zn, Ag and As involve digestion in nitric and perchloric acids with analyses via atomic absorption and spectrophotometry for As. Gold values are determined using aqua-regia and atomic absorption while hot hydrochloric acid and atomic absorption are used to obtain antimony values. A fusion-colorimetric procedure is used to determine tungsten values and a nitric-hydrochloric acid digestion and atomic absorption spectrophotometry are used to obtain mercury values. Assays for gold and silver employ a fire assay analytical method while WO_3 assays are obtained by leaching in ammonia hydroxide and phosphoric acid and analysed using colorimetry. All metal values for soil and silt samples are reported in parts per million except for gold which is given in parts per billion. Tungsten assays are reported in percent and gold, silver values in ounces per ton.

GEOLOGY AND MINERALIZATION

The property lies in rocks assigned by H.W. Tipper (O.F. 534) to the Middle Triassic or older Bridge River group consisting of interbedded siliceous, argillite and shale, ankeritic (?) stained locally siliceous dolomite with an unidentified green mineral, dolomitized grey brown limestone, amygdaloidal basalt, andesite tuff, immature hornblende-rich greywacke or tuffwacke, minor ribbon chert, and ultramafic (possibly peridotite). Though outcrop is scarce wackes with minor basalt flows (?) appear to be the predominate rock unit in the eastern half of the property. A feldspar-biotite porphyry intrusion appears to cut these rocks approximately parallel to the Tyaughton Creek access road. Bedding is variable but generally strikes ESE to SE and dips 45 degrees east to vertical.

Scheelite and stibnite were noted in quartz and calcite veins and stringers near the old Tungsten Queen and Tungsten King workings.

INTERPRETATION

Anomalous values for tungsten, antimony and arsenic exceed 3 ppm W, 15 ppm Sb and 10 ppm As. Contouring of the soil geochemical data resulted in delineation of several coincident W-Sb-As anomalies. The highest of these coincident anomalies occur over known tungsten-antimony mineralization, namely the old Tungsten Queen workings. It appears that these anomalies may be related to the ankeritic dolomite rock unit. Although some anomalous (?) values for Cu, Mo, Pb, Zn and Au were obtained these appear to reflect the underlying geology and may be useful in delineating rock units.

ITEMIZED COST STATEMENT

This statement covers costs incurred sampling this property between August 24 to September 8, 1980.

a) Demobilization		
2 man/days @ \$90/man/day		\$ 180.00
b) Wages		
34 man/days @ \$73/man/day		2,482.00
c) Camp Costs		
32 man/days @ \$25/man/day		800.00
d) Truck Rental		
(2 vehicles) 20 days @ \$20/day		400.00
20 miles/day @ .25/mile for 20 days		100.00
e) Sample Analysis		
508 samples @ \$18.95/sample		9,626.60
256 samples @ \$ 4.25/sample		1,088.00
176 samples @ \$15.20/sample		2,675.20
66 samples @ \$15.00/sample		990.00
3 samples @ \$23.00/sample		69.00
2 samples @ \$16.25/sample		32.50
f) Report Preparation (drafting, typing, interpretation, etc.)		
14½ man days @ \$90/man/day		<u>1,305.00</u>
		<u>\$19,748.30</u>

STATEMENT OF QUALIFICATIONS

I, Rodney W. Arnold, of 41751 Yarrow Central Road, Yarrow, B. C. do hereby certify that:

- a.) I am a geologist with office address at 1103-595 Burrard St., Vancouver, B. C. V7X-1C4
- b.) I am a graduate from the University of Calgary with a Bachelor of Science degree in Geology.
- c.) I have had five years geological experience in various phases of exploration in B. C., the Yukon and Northwest Territories.
- d.) I have supervised the soil sample collection and have assessed and interpreted the data results of said program on the Sandy 2,3,4; Mercury 1 & Queen Fractional mineral claims.

Respectfully submitted



Rodney Arnold
Project Geologist

<u>Claim Name</u>	<u>Record Number</u>	<u>Date Recorded</u>
Sandy 2	13589	September 25, 1936
Sandy 3	13590	September 25, 1936
Sandy 4	13591	September 25, 1936
Mercury 1A	14887	November 4, 1938
Queen Fractional	16128	September 26, 1941
Cub	350	August 25, 1976
Wolf	351	August 25, 1976

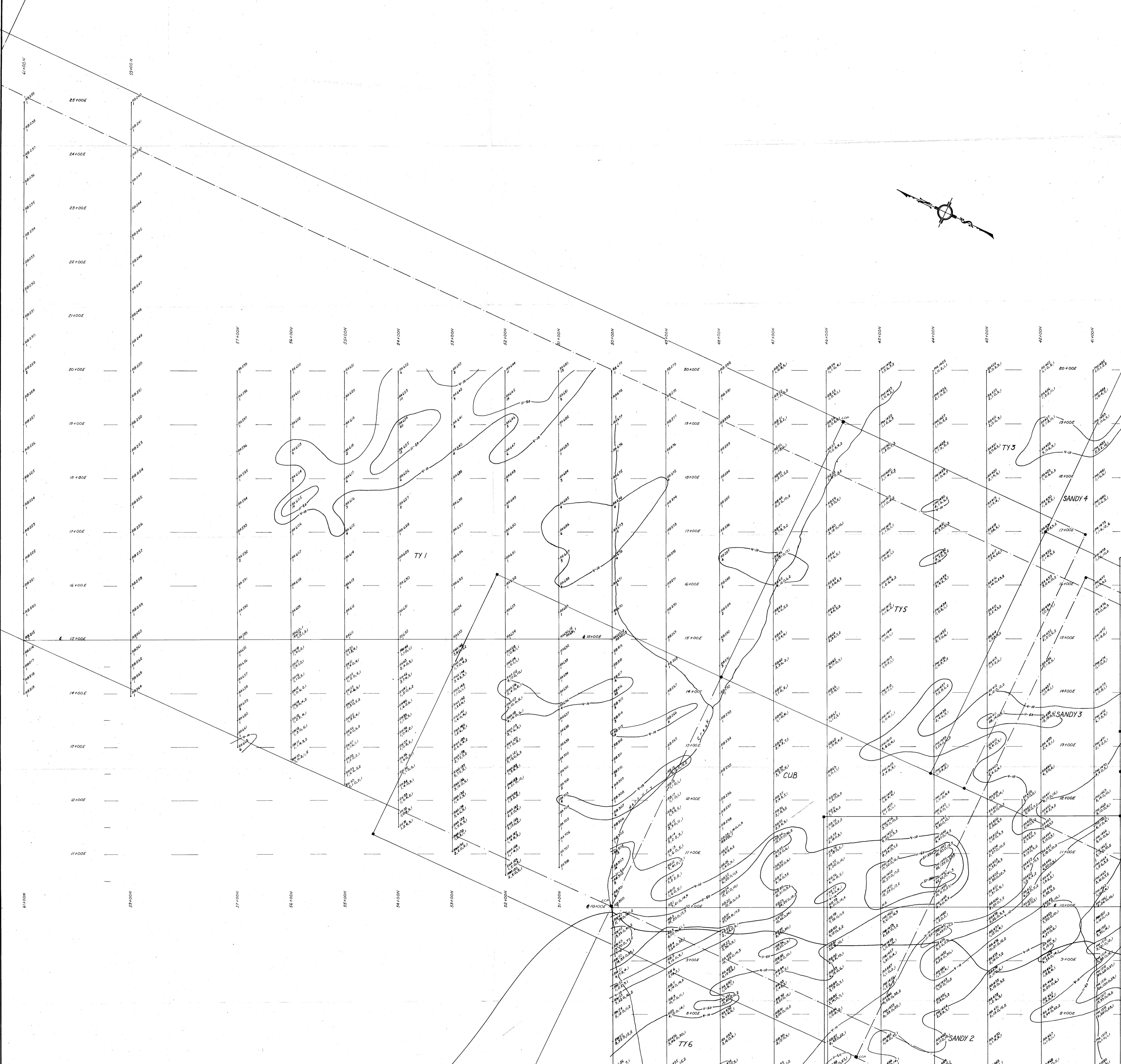
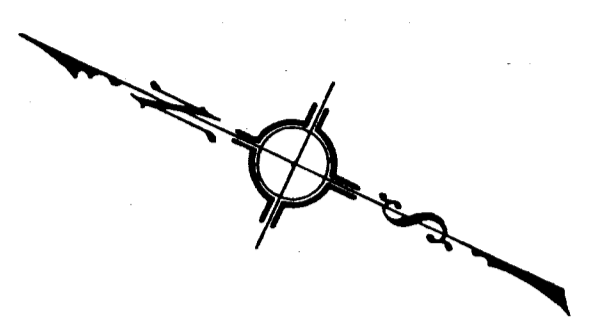
The above claims are under option to Western Mines Ltd. from Mrs. Florence C. Westbrook of Gold Bridge, B. C. In addition, Western Mines Ltd. has staked the following claims surrounding those held by Mrs. Westbrook.

<u>Claim Name</u>	<u>Record Number</u>	<u>Date Recorded</u>
TY 1	1451	July 23, 1980
TY 3	1453	July 23, 1980
TY 4	1454	July 23, 1980
TY 5	1455	July 23, 1980
TY 6	1456	July 23, 1980

In all, 61 units comprise the property.

GEOCHEMICAL SURVEY

Soil and silt geochemical surveys have been conducted on the property. Along Noaxe and Mercury Creeks a program of silt and soil sampling every 200 meters was undertaken.



LEGEND

Rob Bulger - RB25
 Rob Arthur - RA426
 Pat Meade - PM401
 Rod Amold - RWA112
 Rob Woodward - RW15

Sample Numbers

N.S. No Sample

----- Grid Line and Grid Station

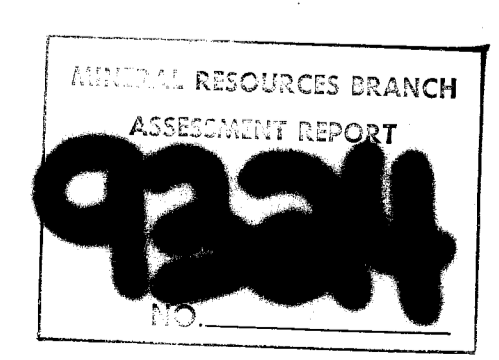
----- Road

~~~~~ Creek

--- Claim boundaries & corner post

■ Legal Corner Post

W CONTOURS  
 4-10  
 11-50  
 51-250  
 251-400



WESTERN MINES LIMITED

TYAUGHTON PROJECT

SOIL GEOCHEMISTRY CUB GRID

W, Sb, As, & Mo

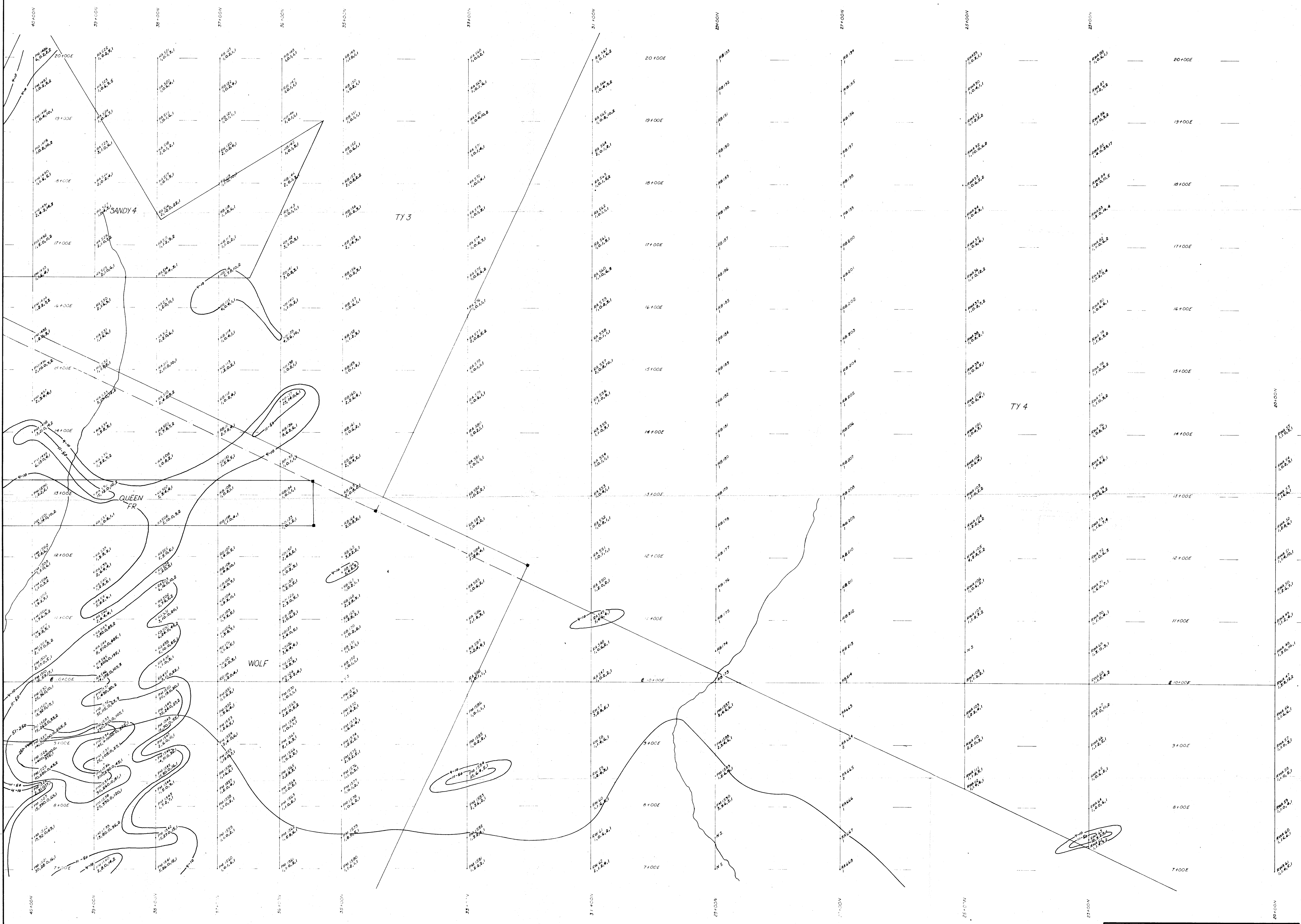
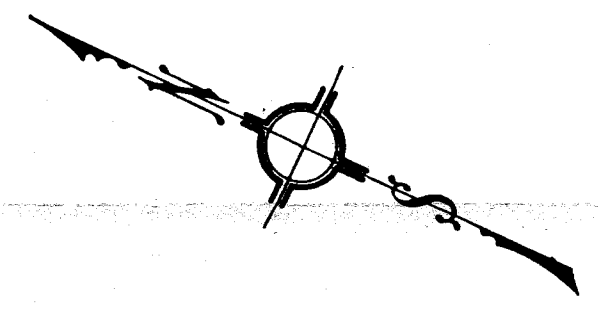
FIGURE NO. 3

SCALE

0 25 50 75 100 meters

Scale 1:2500

DATE: SEPT 1990 REVISED: DRAWN BY: L. CONNOR NTS NO. 92-0-2



**LEGEND**

|                     |                  |                                      |
|---------------------|------------------|--------------------------------------|
| Rob Bulger - RB25   | } Sample Numbers | — Grid line & Grid Stations          |
| Rob Arthur - RA425  |                  | — Road                               |
| Pat Meade - PM401   |                  | — Creek                              |
| Rob Arnold - RW112  |                  | — Claim boundary & Legal Corner Post |
| Rob Woodward - RW15 |                  | —                                    |
| N S                 | No Sample        | —                                    |

**W CONTOURS**  
4-10  
11-50  
51-250  
251-400

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**9324**

**WESTERN MINES LIMITED**

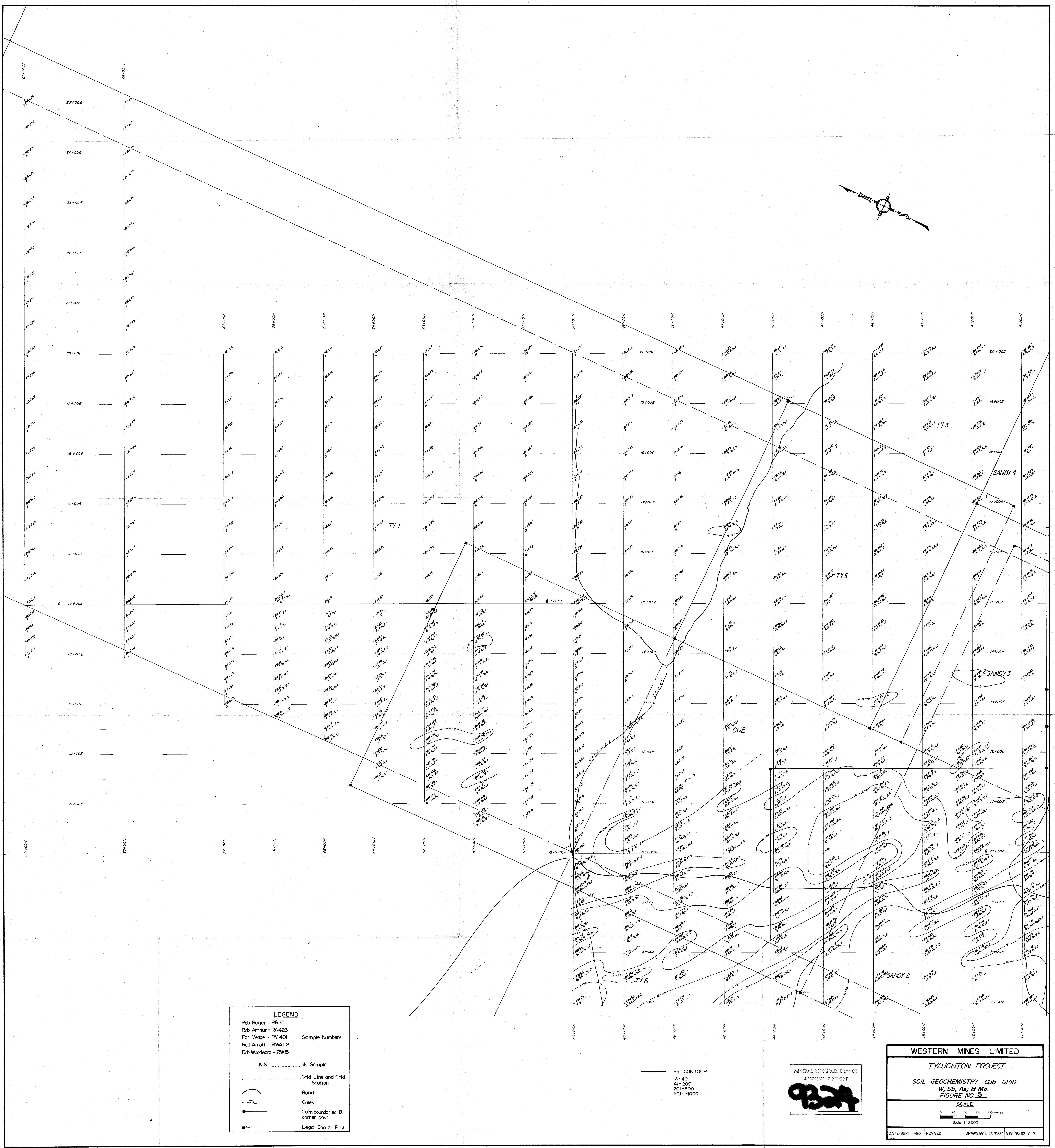
**TYAUGHTON PROJECT**

**SOIL GEOCHEMISTRY WOLF GRID**  
*W, Sb, As & Mo.*  
**FIGURE NO. 4**

SCALE  
0 25 50 75 100 METERS  
Scale 1:2500

DATE SEPT 1980 REVISED DRAWN BY L. COZZARINI NTS NO 92-D-2





**LEGEND**

Rob Butler - RB25  
 Rob Arthur - RA426  
 Pat Meade - PMA01  
 Rod Arnold - RWA112  
 Rob Woodward - RW15

Sample Numbers

N.S. .... No Sample

..... Grid Line and Grid Station

—— Road

~~~~ Creek

■ Claim boundaries & corner post

■ Legal Corner Post

Sb. CONTOUR
 10-40
 41-200
 201-500
 501->1000

MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT

937

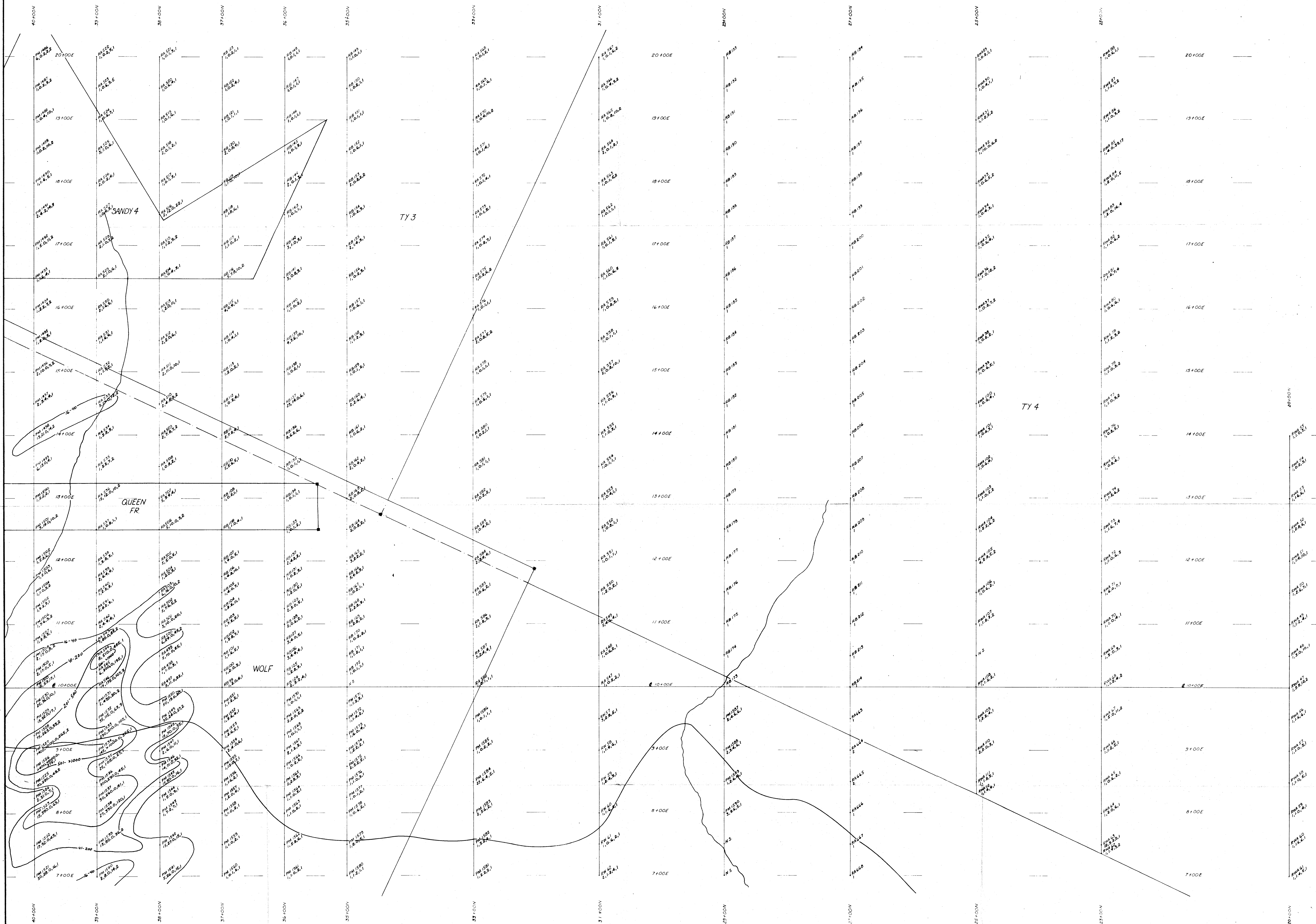
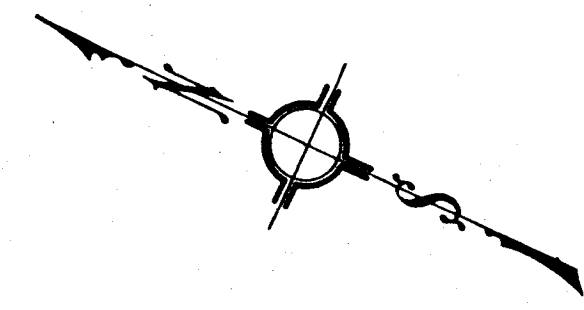
WESTERN MINES LIMITED

TYAUGHTON PROJECT

SOIL GEOCHEMISTRY CUB GRID
W, Sb, As, & Mo.
FIGURE NO. 5

SCALE
 0 25 50 75 100 METERS
 Scale 1:2500

DATE: SEPT. 1980 REVISED: DRAWN BY: CONNOR NTS NO. 92-0-2



LEGEND

| | | | | |
|---------------------|------------------|---|---------------------------|-----------------------------|
| Rob Bulger - RB25 | } Sample Numbers | — | Grid line & Grid Stations | |
| Rob Arthur - RA426 | | — | Road | |
| Pat Meade - PM401 | | — | — | Creek |
| Rob Arnold - RWA112 | | — | — | Claim boundary & Claim post |
| Rob Woodward - RW15 | | — | — | Legal Corner Post |
| N.S. | No Sample | ■ | | |

Sb CONTOUR
16-40
41-200
201-500
501-1000

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
9324

WESTERN MINES LIMITED

TYAUGHTON PROJECT

SOIL GEOCHEMISTRY WOLF GRID

W, Sb, As & Mo.

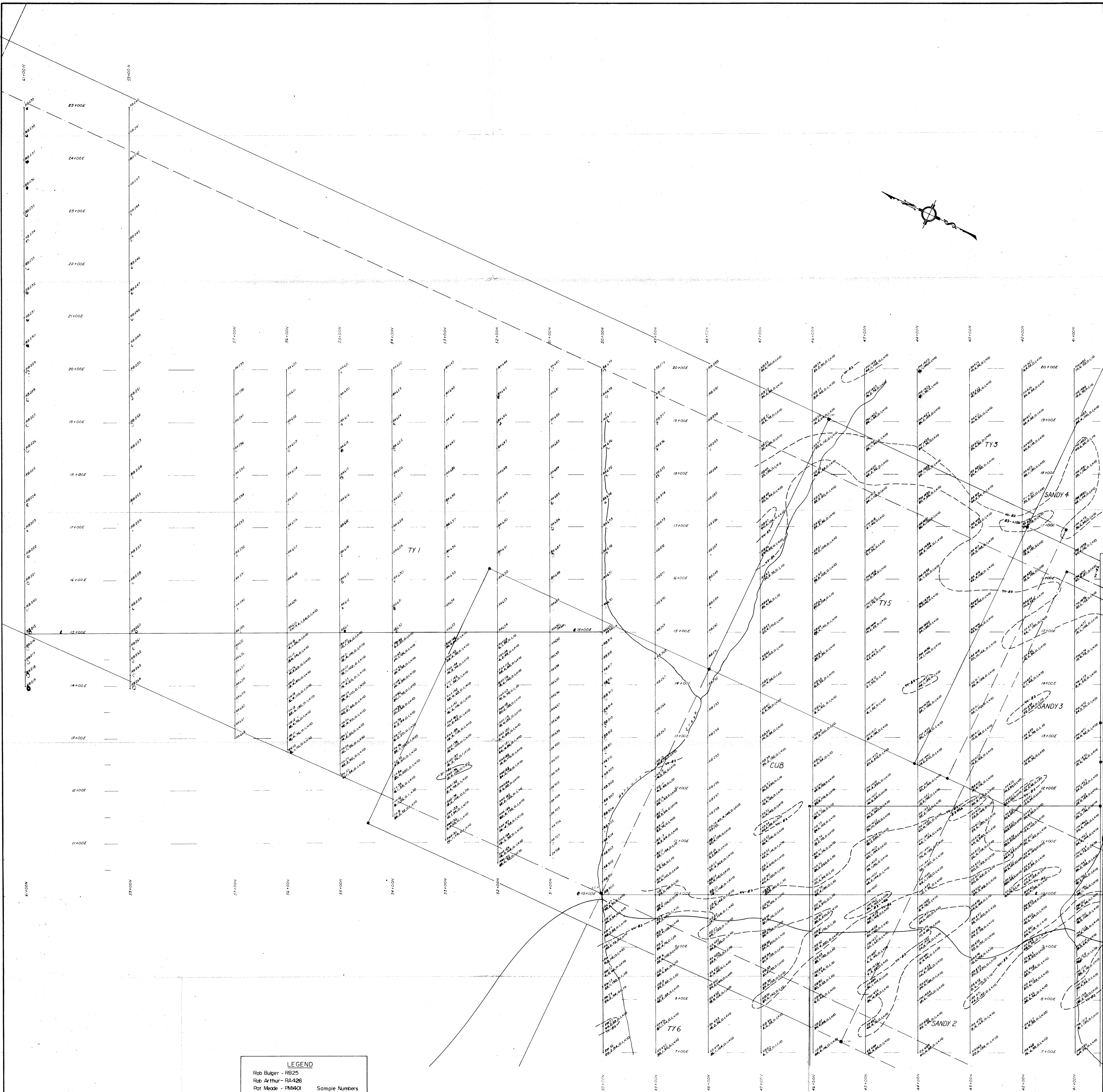
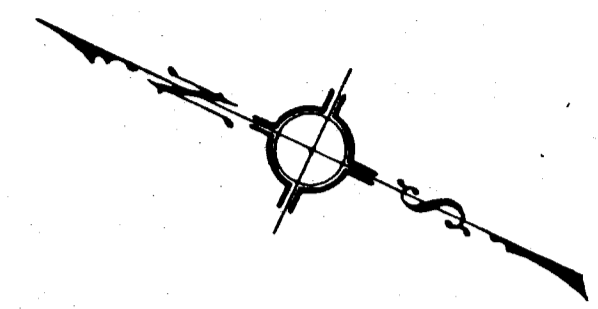
FIGURE NO. 6

SCALE

0 25 50 75 100 METERS

Scale 1:2500

DATE SEPT 1980 REVISED: DRAWN BY: CONFID: NTS NO 92-0-2



LEGEND

Rob Bulger - RB25
Rob Arthur - RA426
Pat Meade - FM401
Rod Arnold - RW112
Rob Woodward - RW15

N/S No Sample
..... Grid Line and Grid Station
..... Road
..... Creek
..... Claim boundaries & corner post
..... Legal Corner Post

--- Cu CONTOUR
44 - 82
83 - >156

--- Au CONTOUR
21 - >80

MINERAL RESOURCES BRANCH
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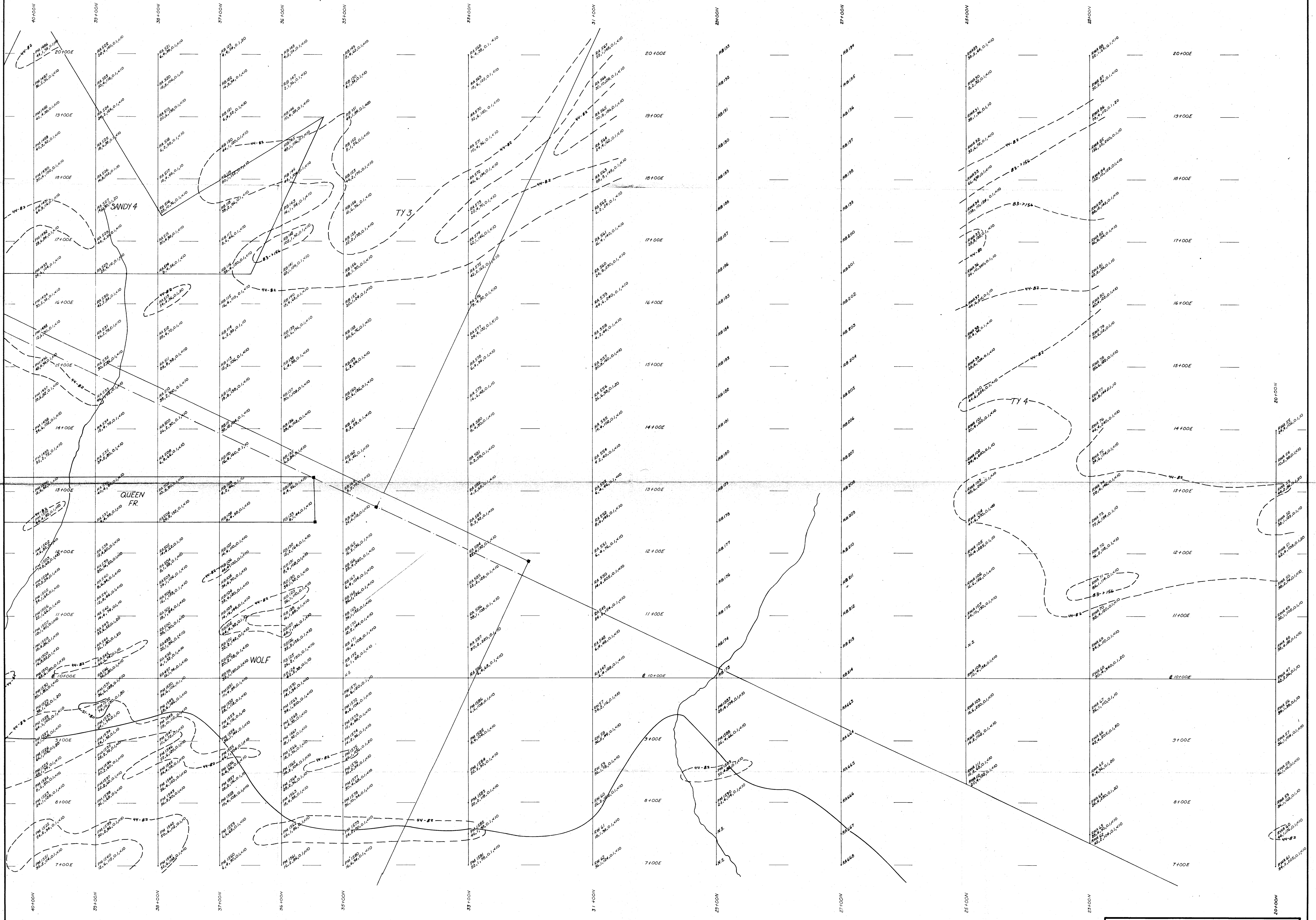
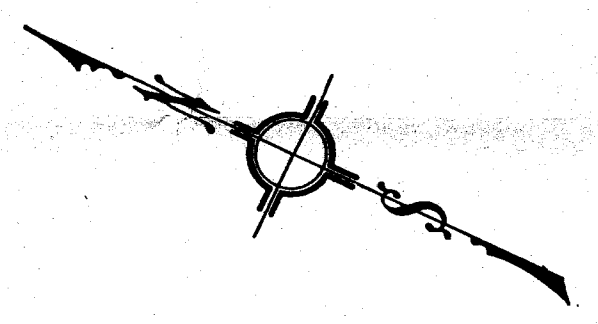
WESTERN MINES LIMITED

TYAUGHTON PROJECT

SOIL GEOCHEMISTRY CUB GRID
Cu, Pb, Zn, Ag & Au
FIGURE NO. 1

SCALE
0 25 50 75 100 METERS
Scale 1:2500

DATE SEPT 1980 REVISIONS DRAWN BY L. CONNOR INTS NO 92-0-2



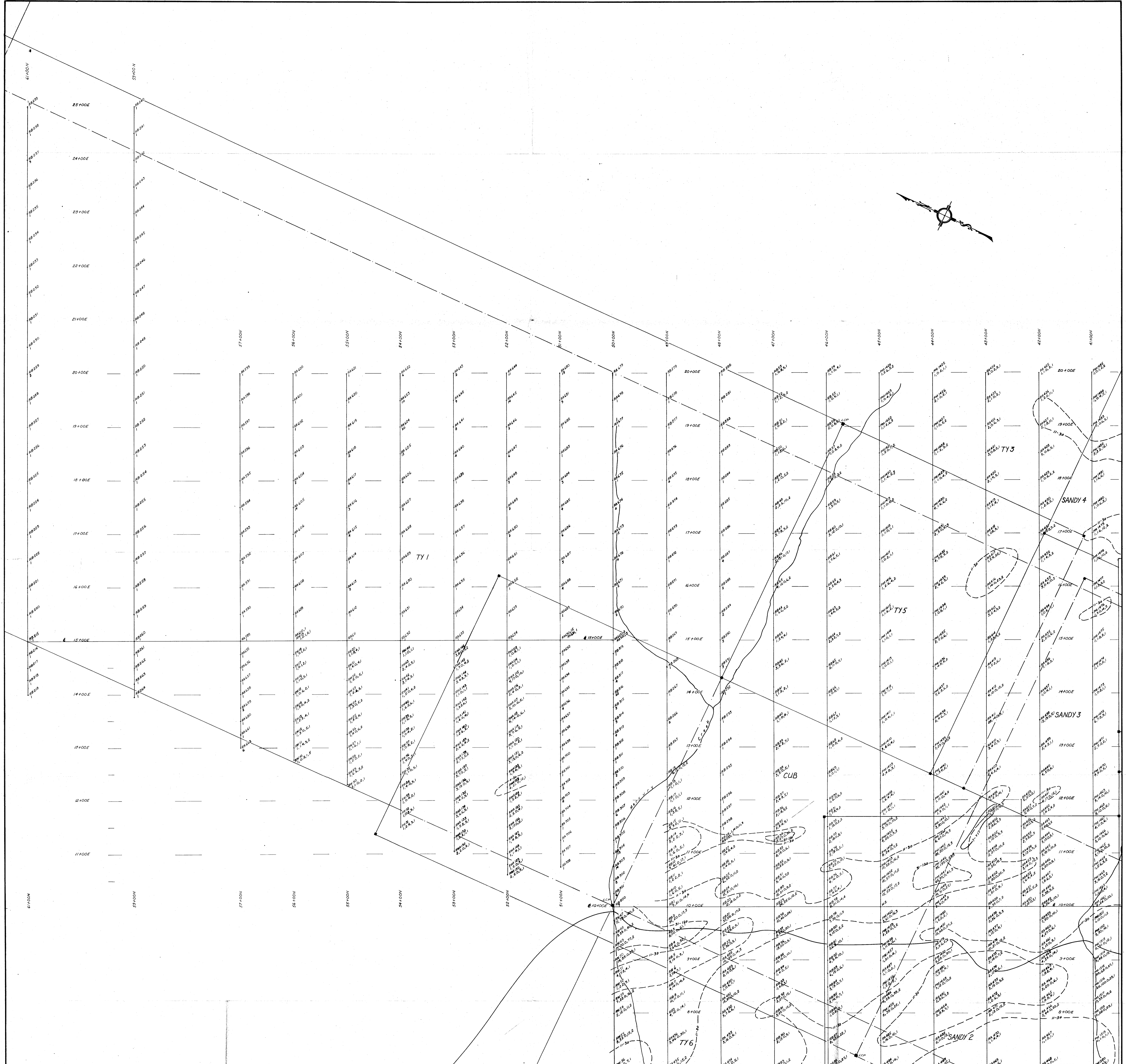
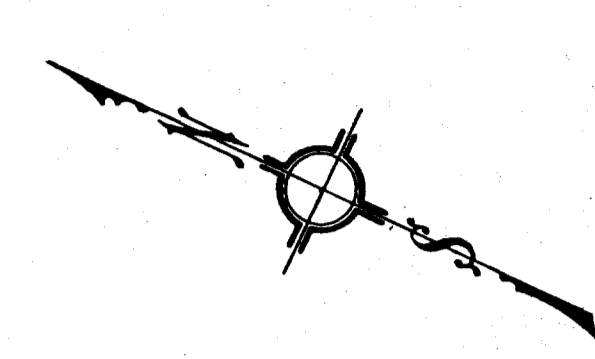
| LEGEND | | |
|---------------------|------------------|-------------------------------|
| Rob Bulger - RB25 | } Sample Numbers | — Grid line & Grid Stations |
| Rob Arthur - RA426 | | — Road |
| Pat Meade - PM401 | | — Creek |
| Rob Arnold - RWA112 | | — Claim boundary & Claim post |
| Rob Woodward - RW15 | | — Legal Corner Post |
| N.S. | No Sample | |

--- Cu CONTOUR
44 - 82
83 - 156

--- Au CONTOUR
21 - 80

MINERAL RESOURCES BRANCH
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9324

| | | | |
|-----------------------------|----------|---------------------|----------------|
| WESTERN MINES LIMITED | | | |
| TYAUGHTON PROJECT | | | |
| SOIL GEOCHEMISTRY WOLF GRID | | | |
| Cu, Pb, Zn, Ag and Au | | | |
| FIGURE NO. 8 | | | |
| SCALE | | | |
| 0 25 50 75 100 METERS | | | |
| Scale 1:2500 | | | |
| DATE: SEPT. 1980 | REVISED: | DRAWN BY: L. CONNOR | NTS NO. 92-0-2 |



LEGEND

Rob Bulger - RB25
Rob Arthur - RA426
Pat Meade - FM401
Rod Arnold - RWA112
Rob Woodward - RW15

N.S. No Sample

----- Grid Line and Grid Station

----- Road

----- Creek

----- Claim boundaries & corner post

----- Legal Corner Post

Mo CONTOUR
7 - 17

As CONTOUR
11 - 30
31 - 120
121 - 300
301 - 485

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
9324
NO.

WESTERN MINES LIMITED

TYAUGHTON PROJECT

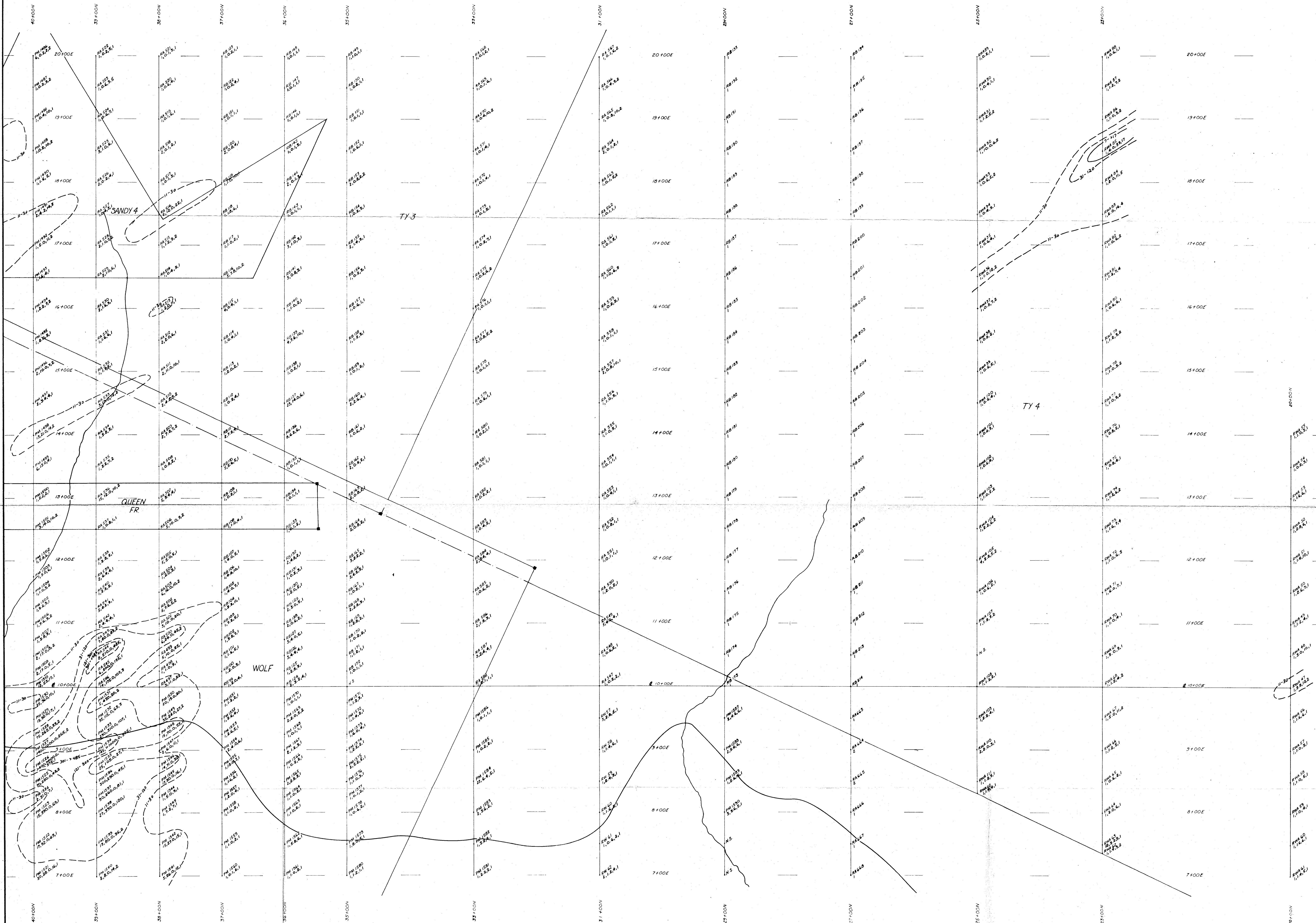
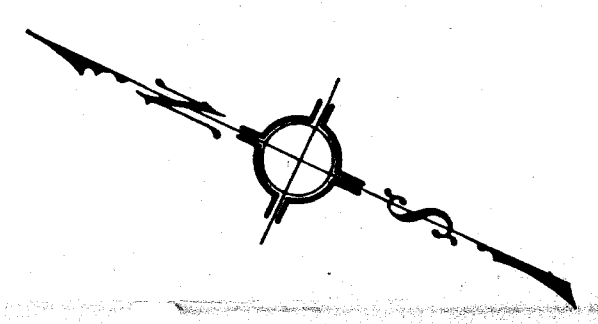
SOIL GEOCHEMISTRY CUB GRID

W, Sb, As, & Mo.

FIGURE NO. 9

SCALE
0 25 50 75 100 metres
Scale 1:2500

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LEGEND

| | | | | |
|---------------------|------------------|---|---------------------------|-----------------------------|
| Rob Bulger - RB25 | } Sample Numbers | — | Grid line & Grid Stations | |
| Rob Arthur - RA426 | | — | Road | |
| Pat Meade - PM401 | | — | — | Creek |
| Rob Arnold - RW112 | | — | — | Claim boundary & Claim post |
| Rob Woodward - RW15 | | — | — | Legal Corner Post |
| N.S. | No Sample | ■ | | |

Mo CONTOUR
7 - 17

As CONTOUR
11 - 30
31 - 120
121 - 300
301 - 485

MINERAL RESOURCES ENOUGH
ASSESSMENT REPORT
9324

WESTERN MINES LIMITED

TYAUGHTON PROJECT

SOIL GEOCHEMISTRY WOLF GRID

W, Sb, As & Mo.

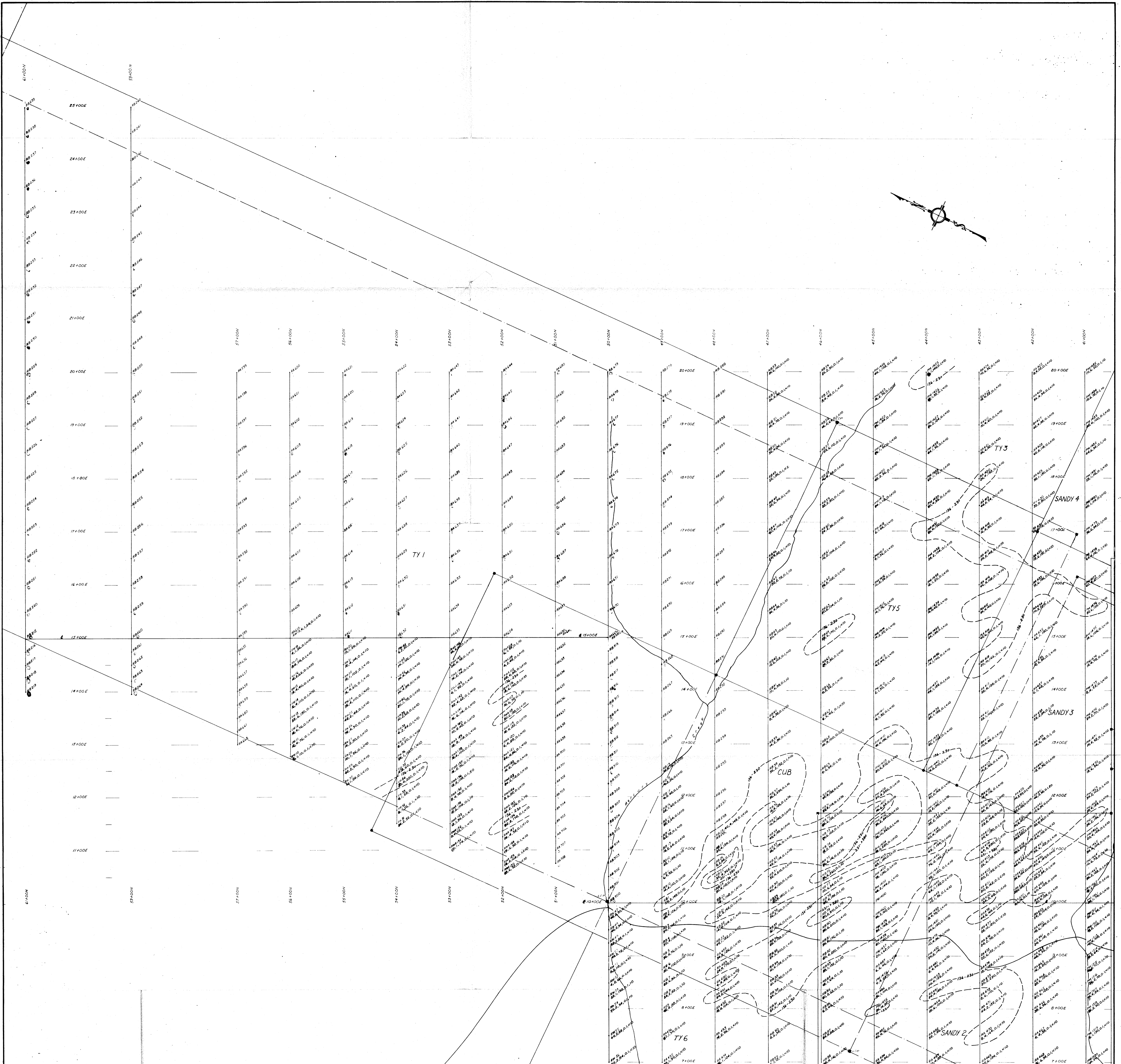
FIGURE NO. 10

SCALE

0 25 50 75 100 METERS

Scale 1:2500

DATE SEPT 1980 REVISED DRAWN BY L. CONNOR NTS NO 92-0-2



LEGEND

Rob Bulger - RB25
 Rob Arthur - RA426
 Pat Meade - PM401
 Rod Arnold - RW412
 Rob Woodward - RW15

Sample Numbers

N.S. No Sample

..... Grid Line and Grid Station

—— Road

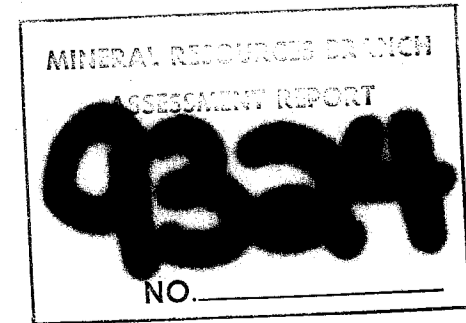
—— Creek

■ Claim boundaries & corner post

■ Legal Corner Post

—— Pb CONTOUR
 14 - 22

—— Zn CONTOUR
 136 - 230
 231 - 380



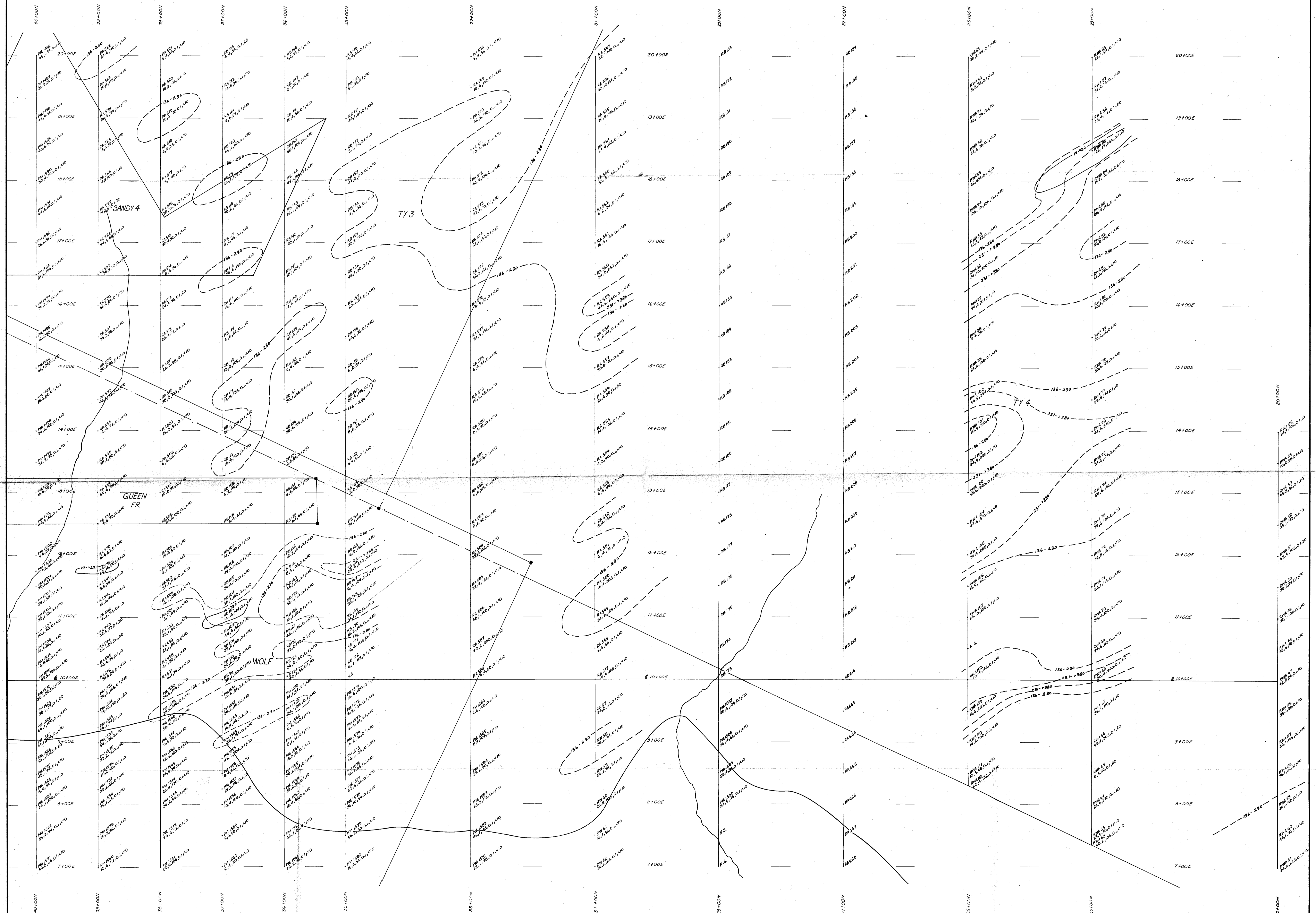
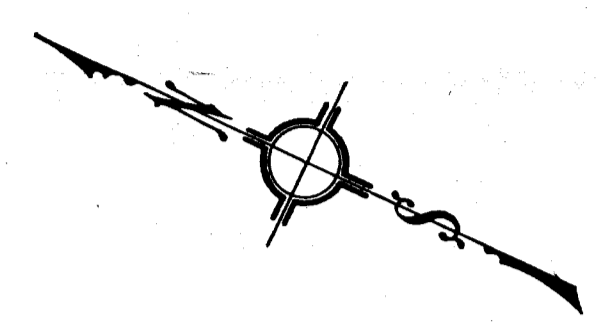
WESTERN MINES LIMITED

TYAUGHTON PROJECT

SOIL GEOCHEMISTRY CUB GRID
 Cu, Pb, Zn, Ag & Au
 FIGURE NO. 11

SCALE
 0 25 50 75 100 METERS
 Scale 1:2500

DATE: SEPT 1980 REVISION: DRAWN BY: L. CONNOR NTS NO. 92-0-2



LEGEND

| | | | |
|---------------------|------------------|---|-----------------------------|
| Rob Bulger - RB25 | } Sample Numbers | — | Grid line & Grid Stations |
| Rob Arthur - RA426 | | — | Road |
| Pat Meade - PM401 | | — | Creek |
| Rob Arnold - RWA112 | | — | Claim boundary & Claim post |
| Rob Woodward - RW15 | | — | Legal Corner Post |
| N.S. | No Sample | ■ | |

Pb CONTOUR
14 - 22

Zn CONTOUR
136 - 230
231 - 380

MINERAL RESOURCES BRANCH
ANNUAL REPORT
9324

WESTERN MINES LIMITED

TYAUGHTON PROJECT

SOIL GEOCHEMISTRY WOLF GRID

Cu, Pb, Zn, Ag and Au

FIGURE NO. 12

SCALE

0 25 50 75 100 METERS

Scale 1:2500

DATE: SEPT 1980 REVISED: DRAWN BY: L. COOPER NTS NO. 92-0-2