DU PONT OF CANADA EXPLORATION LIMITED

TENAS JOINT VENTURE

Report on Geochemical Soil Survey of the Project Area

T, TENAS, WOP, BAR and MAL Claims

$62^{o}03'N$, $132^{o}20'W$

NTS: 105-K-1

by

F. Marshall Smith, P.Eng

~~090263~~ 061652

Office Of The Supervising Mining Recorder
NOV 14 1977
WHITEHORSE
Yukon Territory

See Geological Report for evaluation amount.

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work in the amount of

$43,492.33

D B Craig

Resident Geologist or
~~Resident Mining Engineer~~

Considered as representation work under Section 53 (4) Yukon Quartz Mining Act.

Commissioner of Yukon Territory

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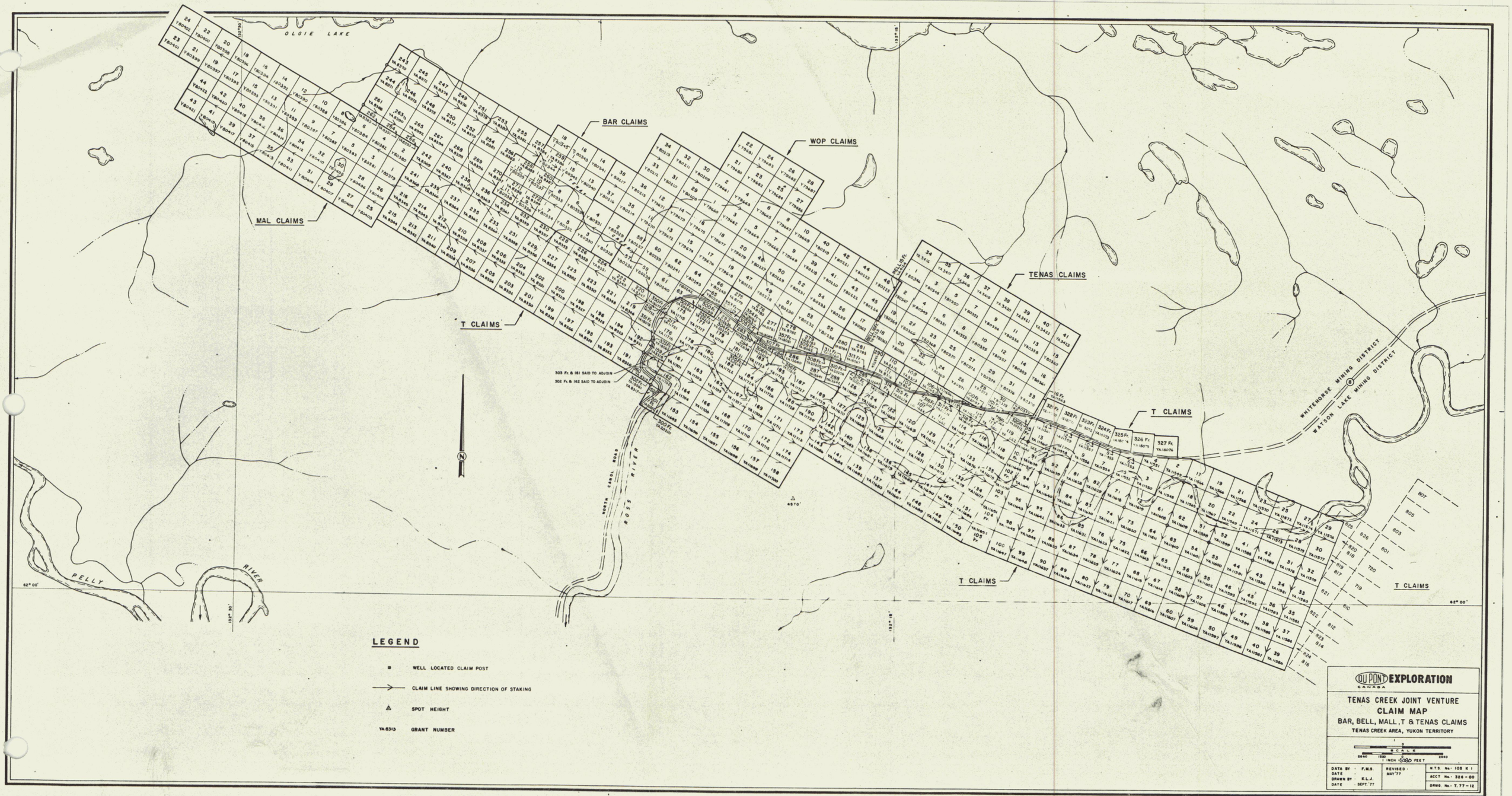
4.0 STATEMENT OF QUALIFICATIONS

1.0 INTRODUCTION

During the period May 15-June 30, 1977, Du Pont of Canada Exploration Limited carried out a programme of soil sampling on parts of the Tenas Project area which is shown on Map No.1.


OLGIE LAKE
BAR CLAIMS
WOP CLAIMS
MAL CLAIMS
T CLAIMS
TENAS CLAIMS
T CLAIMS
T CLAIMS
T CLAIMS
WHITEHORSE MINING DISTRICT
WATSON LAKE MINING DISTRICT
NORTH CANOL ROAD
ROSS RIVER
PELLY RIVER
62° 00'
132° 30'
132° 15'
305 Ft. & 181 SAID TO ADJOIN
302 Ft. & 182 SAID TO ADJOIN
4570'
LEGEND
WELL LOCATED CLAIM POST
CLAIM LINE SHOWING DIRECTION OF STAKING
SPOT HEIGHT
YA 8313 GRANT NUMBER
DU PONT CANADA EXPLORATION
TENAS CREEK JOINT VENTURE
CLAIM MAP
BAR, BELL, MALL, T & TENAS CLAIMS
TENAS CREEK AREA, YUKON TERRITORY
SCALE
1 INCH = 5280 FEET
DATA BY F.M.S.
DATE
DRAWN BY R.L.J.
DATE SEPT. 77
REVISED MAY '77
N.T.S. No. 105 K-1
ACCT. No. 326-00
DRWG. No. T. 77-12

1.2 LOCATION

The project area is approximately centered on the junction of Tenas Creek and Ross River, about 10 km east of the village of Ross River.

1.3 CLAIMS

Included in the project area are about 500 claims situated on both sides of the boundary between the Whitehorse Mining Division and the Watson Lake Mining Division, which is Yukon Highway 8 (North Canol Road).

WHITEHORSE M.D. CLAIMS

Claims	Record Nos.	Expiry Dates
T 108-111	YA8313-16	October 27, 1977
T 152	YA8317	October 27, 1977
T 153-158	YA11695-11700	October 28, 1977
T 159-160	YA8318, 8319	October 27, 1977
T 191-216	YA8320-8345	October 27, 1977
T 219-272	YA8346-8399	October 27, 1977
T 275-281	YA8779-8785	March 29, 1978
T 290	YA8786	March 29, 1978
T 302 Fr, 303 Fr	YA18061-18062	June 9, 1978
T 305 Fr	YA18063	June 9, 1978
T 307 Fr	YA18064	June 9, 1978
T 309 Fr	YA 18065	June 9, 1978
T 311 Fr	YA 18066	June 9, 1978
T 313 Fr	YA 18067	June 9, 1978
T 318 Fr, 319 Fr	YA18068, 18069	June 9, 1978
T 321 Fr-327 Fr	YA18070-76	June 9, 1978
T 350 Fr, 351 Fr	YA18077, 18078	June 9, 1978
T 353 Fr, 354 Fr	YA18079, 18080	June 9, 1978
T 357 Fr	YA18081	June 9, 1978
BAR 1-18	Y80328-Y80345	August 17, 1979
MAL 1-44	Y80379-Y80422	August 27, 1979
TENAS 1-33	Y80346-Y80378	August 27, 1979
TENAS 34-41	YA3416-YA3423	August 25, 1980
BELL 15 Fr, 16 Fr	YA4124-YA4125	December 8, 1977
WOP 1-28	Y79660-Y79687	July 22, 1980
WOP 29-66	Y80208-Y80245	August 16, 1980

cont....

1.3.1

WATSON LAKE M.D. CLAIMS

Claims	Record Nos.	Expiry Dates
T 1-14	YA11548-61	October 27, 1977
T 15, 16 Fr	YA11562-63	October 28, 1977
T 17-100	YA11564-YA11647	October 28, 1977
T 101 Fr-105 Fr	YA11648-52	October 28, 1977
T 106-107	YA11653, 11654	October 28, 1977
T 112-151	YA11655-94	October 28, 1977
T 161-190	YA11701-11730	October 28, 1977
T 217-218	YA11731, 11732	October 28, 1977
T 282-289	YA12636-12643	March 30, 1978
T 300 Fr, 301 Fr	YA20201-20202	June 13, 1978
T 304 Fr	YA20203	June 13, 1978
T 306 Fr	YA20204	June 13, 1978
T 308 Fr	YA20205	June 13, 1978
T 310 Fr	YA20206	June 13, 1978
T 312 Fr	YA20207	June 13, 1978
T 314 Fr-317 Fr	YA20208-11	June 13, 1978
T 320 Fr	YA20212	June 13, 1978
T 352 Fr	YA20213	June 13, 1978
T 355 Fr, 356 Fr	YA20214, 20215	June 13, 1978
TENAS 100 Fr, 101 Fr	YA20197-20198	June 13, 1978
WOP 500 Fr, 501 Fr	YA20199-20200	June 13, 1978

2.0 TECHNIQUES

2.1 SAMPLE SPACING AND GRID CONTROL

Approximately 1400 soil samples were collected on the Tenas Project geophysical grid (with fill in lines) from the break of slope (Ross River and Tenas Creek banks) in central portion of the grid to the claim group boundaries on the north and south. Intermediate lines were run between the 1972-1974 geophysical grid (at 200 m intervals) on the WOP, MAL and TENAS claims, and over the "Pelly" gravity anomaly in the southeast corner of the map area. Stations are in general 100 m along lines 200 m apart except as noted above. The geophysical grid used for control was run by crews from C.A. Ager and Associates and consist of flagged lines at about 400 m spacing with 100 m stations. The base line was cut and chained by Eastern Associates.

2.2 SAMPLING TECHNIQUE

All samples were collected with a grub hoe from the "Be" horizon (see below), sample information recorded on sample bags and later on sample sheets and the material air dried in Ross River. Samples were trucked and air freighted to Min-En Labs in Vancouver where the -80 mesh fraction was analyzed for lead and zinc using nitric and perchloric digestion and atomic absorption analysis. All pulps are retained in Vancouver at Min-En Labs.

JUL 4 197

MIN-EN Laboratories Ltd.

705 WEST 15th STREET,
NORTH VANCOUVER, B.C., CANADA V7M 1T2
TELEPHONE (604) 980-5814

2.3

ANALYTICAL REPORT

Project ..... Date of report June 30/77.

File No. 4260 Date samples received June 28/77.

Samples submitted by: F. Smith

Company: DuPont of Canada Explorations

Report on: 130 soils Geochem samples

..... Assay samples

Copies sent to:

1. DuPont of Canada Expl., Vancouver, B.C.
2. DuPont of Canada Expl., Ross River, Y.T.
3. .....

Samples: Sieved to mesh -80 Ground to mesh .....

Prepared samples stored ☒ discarded ☐

rejects stored ☐ discarded ☒

Methods of analysis: nitric, perchloric digestion. Atomic Absorption Analysis.

Remarks: .....

3.0 RESULTS

3.1 SOIL PROFILE

Soil Type	Definition	Thickness & Type
AL	Leafy undecomposed	Variable to 0.1 m in poplar and birch areas.
AH	Decomposed plant material with soil.	Variable but 5.0 cm common and usually + 1 cm.
Ash (Cx)	Ash layer - exotic	1 to 3 cm throughout true soil areas but not evident on steep hillsides.
Bh	Soil with roots and minor humus usually oxidized in part.	10 cm to 2 cm, most roots of spruce in AH, thicker in burn areas covered with poplar.
Be	Oxidized soil horizon	Nil (gleysols and leucustrine zones) to 50 cm in sandy well drained areas.
C	Residum, glacial till, older leucustrine deposits moraines, kame terraces.	

3.2 DETERMINATION

Samples from random lines were used for pH determinations by the use of a Lamotte-Morgan wet pH kit. The primary variability was very low but what little was noted was due more to transported soils near the river than residual or boulder tills on the hillsides. The pH on the hillsides varied from 6.5-8.0 with a very large number of values 6.9-7.2. The soils from near the river tended to be 6.5-7.0 with most values about 6.8-7.0.

3.3 STATISTICS

Both elements show lognormal distribution of the values. Lead has a higher kurtosis (peakedness) than zinc which has its typical broad skew to the higher values. The following table was used to evaluate the distribution of the values on the map:

	Pb	Zn
Mean (geometric)	17.2	99.1
Mean + 0.33 standard deviation (log)	22.7	134.8
Mean + 0.67 standard deviation	30.0	183.3
Mean + 1.00 standard deviation	39.6	349.4
Mean + 1.33 standard deviation	52.2	339.3
Mean + 1.67 standard deviation	69.0	461.5
Mean + 2.00 standard deviation	91.0	627.9

3.5 INTERPRETATION

Zinc and particularly lead values of interest cluster around or near the gravity features e.g "Pelly Anomaly" south of Ross River and the Tenas and Wop zones north, east and west of the andesite dome. The geochemically anomalous zones in the upper Tenas Creek, MAL claims area are as yet unsubstantiated by gravity surveys.

No true anomalous zones occur within the project area. The geochemistry can only be used in conjunction with geophysics in defining areas of interest.

TENAS CLAIMS

T CLAIMS

BASE LINE

LAKE

Pond

SWAMP

L 3950 E
L 4250 E
L 4550 E
L 4750 E
L 4900 E
L 5300 E
L 5700 E
L 6100 E
L 6300 E
L 6500 E
L 6900 E
L 7300 E
L 7700 E
L 8100 E
L 8500 E
L 8900 E
L 9300 E
L 9700 E
L 10100 E
L 10400 E
L 10900 E
L 11300 E
L 11650 E
L 12050 E
L 12500 E

L 3650 E
L 3950 E
L 4250 E
L 4600 E
L 4900 E
L 10100 E
L 10300 E
L 10500 E
L 10700 E
L 10900 E
L 11100 E
L 11300 E
L 11500 E
L 11700 E
L 11800 E
L 12000 E
L 12200 E
L 12400 E

LEGEND

- T SURVEY GRID - 1977
- TENAS SURVEY GRID - 1974
- WOP SURVEY GRID - 1974
- 26+132 LEAD IN P.P.M. TO LEFT OF SAMPLE POINT; ZINC IN P.P.M. TO RIGHT OF SAMPLE POINT
- CLAIM BLOCK BOUNDARY (APPROXIMATE)

WEST	CENTRAL	EAST
DRWG No.T.77-15	DRWG No.T.77-14	DRWG No.T.77-13

SHEET INDEX

DUPONT EXPLORATION CANADA

TENAS CREEK JOINT VENTURE
GEOCHEMICAL SOILS
LEAD & ZINC IN P.P.M.
BAR, BELL, MAL, T, TENAS & WOP CLAIMS
TENAS CREEK AREA, YUKON TERRITORY

SCALE 1 : 10,000 — 0 — 100 — 200 — 300 — 600 m
0 — 1 INCH = FEET

DATA BY	F.M.S.	REVISED	N.T.S. No. 105 K 1
DATE	Jun.-Jul.'77		ACCT No. 326-04
DRAWN BY	K.L.J.		DRWG No. T.77-13
DATE	Oct.'77		

BAR CLAIMS

WOP CLAIMS

TENAS CLAIMS

BELL CLAIMS

T CLAIMS

WOP BASE LINE

BASE LINE

CANOL ROAD

TO ROSS RIVER

ROSS RIVER

LAKE

CABIN

Road

T CLAIMS

LEGEND

- T SURVEY GRID - 1977
- TENAS SURVEY GRID - 1974
- WOP SURVEY GRID - 1974
- 36 • 132 LEAD IN P.P.M. TO LEFT OF SAMPLE POINT; ZINC IN P.P.M. TO RIGHT OF SAMPLE POINT
- CLAIM BLOCK BOUNDARY (APPROXIMATE)

SHEET INDEX

WEST	CENTRAL	EAST
DRWG No. T.77-15	DRWG No. T.77-14	DRWG No. T.77-13

DU PONT CANADA **EXPLORATION**

TENAS CREEK JOINT VENTURE
GEOCHEMICAL SOILS
LEAD & ZINC IN P.P.M.
BAR, BELL, MAL, T, TENAS & WOP CLAIMS
TENAS CREEK AREA, YUKON TERRITORY

SCALE 1 : 10,000 — 1 INCH = FEET

DATA BY	F.M.S.	REVISED	N.T.S. No. 105 K 1
DATE	Jun. - Jul. '77		ACCT No. 326 - 00
DRAWN BY	K.L.J.		DRWG No. T. 77 - 14
DATE	Oct. '77		

T CLAIMS

L 10300 W
L 9900 W
L 9500 W
L 9100 W
L 8700 W
L 8300 W
L 7900 W
L 7500 W
L 7100 W
L 6700 W
L 6300 W
L 5900 W
L 5500 W

BASE LINE

1000 m BASE LINE OFFSET

BASE LINE

MAL CLAIMS

LEGEND

- • • • • T SURVEY GRID – 1977
- •—•—•—• TENAS SURVEY GRID – 1974
- •—• •—• WOP SURVEY GRID – 1974
- 26 • 132 LEAD IN P.P.M. TO LEFT OF SAMPLE POINT; ZINC IN P.P.M. TO RIGHT OF SAMPLE POINT
- ——— CLAIM BLOCK BOUNDARY (APPROXIMATE)

SHEET INDEX

WEST	CENTRAL	EAST
DRWG No. T.77-15	DRWG No. T.77-14	DRWG No. T.77-13

DUPONT EXPLORATION CANADA

TENAS CREEK JOINT VENTURE
GEOCHEMICAL SOILS
LEAD & ZINC IN P.P.M.
BAR, BELL, MAL, T, TENAS & WOP CLAIMS
TENAS CREEK AREA, YUKON TERRITORY

m 300 00 100 0 1 : 10 000 300 600 m
SCALE
0 1 INCH = FEET

DATA BY : F.M.S.	REVISED	N.T.S. No.	105 K 1
DATE : Jun.-Jul.'77		ACCT No.	326 – 00
DRAWN BY : K.L.J.		DRWG No. :	T. 77 – 15
DATE : Oct.'77			