



GEOCHEMICAL ASSESSMENT

REPORT

ON THE

TOAD CLAIM GROUP

SUNSHINE CREEK-DAWSON RANGE AREA

WHITEHORSE MINING DISTRICT

YUKON TERRITORY

FOR

PRADO EXPLORATIONS LTD.

BY

D. H. WAUGH

INTERNATIONAL MINE SERVICES LTD.

FIELD WORK: JUNE 13-JULY 11, 1970

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

\$ 11,087.00

D.R. Craig
Resident Geologist or
Resident Mining Engineer

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

[Signature]
Commissioner of Yukon Territory



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Fig. 1. Plan Map "Toad Claims" (geochemical sample locations)
Scale: 1" = 400'

GEOCHEMICAL REPORT

ON

TOAD 1 - 80 Mineral Claims

For

International Mine Services Ltd.

August, 1970

D. H. Waugh

Introduction

During the period of June 13th to July 11th, 1970, the author conducted a geochemical and geological investigation on the Toad Claim Group under the supervision of J. L. Tindale, Professional Engineer of the Province of Ontario.

The Toad Group includes the eighty contiguous mineral claims Toad 1 - 80, located at the head of Sunshine Creek, Dawson Range area in the Whitehorse Mining District of the Yukon Territory.

The Toad claims are situated $2\frac{1}{2}$ miles east of the Casino Silver Mines copper-molybdenum deposit, and are underlain by the favorable granodioritic host rock of the Klotassin Batholith.

The purpose of the geochemical survey carried out by International Mine Services Ltd. for Prado Explorations Ltd., both of Suite 1601 - 8 King Street East, Toronto, Ontario, was to attempt to locate geochemical anomalies of possible economic significance on the Toad claims.

History of Claims

On the 22nd of July and 24th of July, 1969, employees of International Mine Services Ltd. staked the 80 Toad claims on vacant lands to the east of the Casino Silver Mines, Canadian

Creek property in the Dawson Range. The eighty claims were recorded on August 19th, 1969, at the Whitehorse Mining Recorder's Office and subsequently transferred to the present owner Prado Explorations Ltd.. Past history of the property is unknown and would appear to include staking only. This is evidenced by the presence of old claim posts and the evident lack of any previous physical work such as trenching and linecutting.

Property Location and Access

The Toad 1 - 80 mineral claims owned by Prado Explorations Ltd. comprise a group of 80 contiguous claims situated at the head of Sunshine Creek, latitude 62° 43' and longitude 138° 40', in the Dawson Range area of the Whitehorse Mining District. The claim group boundary adjoins the Peg claims on the northwest corner and lies approximately 2½ miles from the Casino Silver Mines porphyry copper-molybdenum mineral deposit. The claims are located on Claim Sheet 115-J-10 in the Snag Map area approximately 180 air miles northwest of Whitehorse and some 60 miles west of the Minto airstrip situated at mile 148 of the Mayo - Dawson Hwy.

Access to the property was by a Bell 47G-3B-2 helicopter on contract from Trans North Turbo Air Ltd. of Whitehorse. Men, supplies and equipment were transported from Whitehorse to Minto by company trucks and flown by helicopter to the Toad claims by way of International Mine Services' base camp on Hayes Creek. Fuel supplies were flown into the Hayes Creek winter airstrip by fixed-wing aircraft in April and May.

Geomorphology

The Toad claims are situated in mountainous terrain straddling a smoothly eroded mountain ridge. The apex of this ridge roughly bisects the claim group in an east-west direction. The smooth ridge surface is occasionally broken by a few conspicuous castellated granite to granodiorite outcrops comprising less than 2% of the surface area on the Toad claims. The area is drained to the north by Sunshine Creek, and to the south by a tributary of Rude Creek. The ridge summit is relatively bare, covered by moss and some buckbrush. The lower slopes are covered by dense buckbrush, alders and spruce. The property is at an elevation of 3500 feet to 4798 feet above sea level.

Regional Geology

The Toad property is situated in the Dawson Range area of the Yukon Plateau. Most of the Yukon Plateau escaped glaciation during the Pleistocene ice age and is most readily illustrated by the lack of lakes, presence of V shaped valleys and abundant residual soils on hill tops and mountain slopes. The property is located along the northeast end of the Klotassin Batholith. The Klotassin Batholith consists chiefly of medium grained quartz monzonite and granodiorite that intruded the metasedimentary rocks of the Yukon Group. The Yukon Group of Cambrian age is comprised of schists, gneiss, quartzite, amphibolite and minor limestone and conglomerate and forms the basement rocks of the area. The Klotassin Batholith is intruded by younger quartz

rich stocks known to contain mineralization of economic interest in some locations.

Geochemical Survey

A total of 1275 soil samples were collected during the survey. The samples were sent to the Whitehorse Assay Office to be analyzed for copper, lead, and molybdenum by the hot acid extraction method.

Soil Type

The greater part of the survey area is covered by light to moderate overburden consisting of residual soils and felsensmeer covered slopes. The soil is an immature, skeletal or azonal soil variety. The soil horizons are poorly defined, lacking a well developed B horizon over most of the area. Much of the soil was impermeable below a few inches from surface due to permafrost conditions. The A horizon consists of a moss layer underlain by a thin dark brown to black layer of partially decomposed organic material. The B horizon is difficult to recognize or absent in most sample locations and is usually a thin layer of light to rusty colored sandy-clay material. The C horizon is a light colored sandy-clay material mixed with rock fragments. The pH of the soil ranges between 4.5 and 6.5, typical for this region.

Method of Control

A 13,500 foot north-south base line and 16,000 foot east-west control line were cut and chained at 100 foot intervals. East-west survey lines were turned off the north-south base line

at 800 foot intervals by Brunton compass and sample stations established at 200 foot intervals by chain and compass. The east west grid lines were tied in at the most easterly and most westerly limits by chain and compass from the central control line at the east and west ends.

Sampling Method

Samples were taken at a depth of 6 inches to 2 feet below surface with a soil auger from the B horizon or upper portion of the C horizon at 200 foot sample intervals on the grid lines. The sample locations were noted in a soil sample record book using the north-south and east-west grid coordinates to identify the sample and the sample location. A description of the soil type was noted by describing the sand, clay and organic composition of the sample taken. Samples were placed in water resistant Kraft bags and dried at room temperature.

Method of Analysis

The analyses were done at the Whitehorse Assay Office in Whitehorse, Y.T. Samples were dried and sieved to a minus 80 mesh. A one gram sample of the -80 mesh fraction was weighed out by an analytical balance and digested in a hot nitric acid and potassium perchloric acid bath. The digested sample was bulked to 20 cc and analyses made for copper, lead, and molybdenum by atomic absorption spectrometry with readings reported in parts per million.

Conclusions and Recommendations

Based on the results of International Mine Services regional

geochemical soil surveys in the Dawson Range during the 1969 and 1970 seasons, the following ranges for mean background and threshold values for soils in unglaciated regions are tabulated as follows:

	<u>Cu</u>	<u>Pb</u>	<u>Zn</u>	<u>Mo</u>	
Mean	20-30	10-20	50-100	0.5-2	(ppm)
Threshold	40-50	50-100	100-200	2-10	(ppm)

The three elements copper, lead and molybdenum show very weak response on the Toad claims. Mean background values for these three elements are at the lowest end of the range of background values for the Dawson Range area. The threshold value for lead was determined to be 30 ppm with 18 samples running higher. The threshold value for copper on the Toad claims was determined to be 40 ppm with only nine samples running above this threshold value. Values above threshold in both lead and copper occur sporadically and are interpreted as being weakly anomalous and do not warrant further investigation. Molybdenum values all occur in trace amounts, never exceeding 0.5 ppm.


An accompanying plan map on a scale of 1" = 400' shows the grid lines and sample locations with values indicated in the order of copper, lead, and molybdenum.

Statement of Qualifications

I, David H. Waugh of P.O. Box 1052, Whitehorse, Yukon Territory,
do hereby state that:

1. I am a geologist, educated in the geological sciences at Michigan College of Mining and Technology, '64.
2. I have practised my profession as a geologist in the field of mining exploration and development for the past six years.
3. I have been employed as senior geologist and resident Project Manager in the Yukon during the past three years for International Mine Services Ltd.
4. The information in this report represents the findings of this company during the 1970 survey conducted by myself under the direction and supervision of J. L. Tindale, Professional Engineer in the Province of Ontario.

Dated this 1st day of September, 1970, at Whitehorse, Yukon Terr.


David H. Waugh

List of Employees

Ian McRae, 1665 Bloor St., Mississauga, Ontario
linecutting and soil sampling, 17 man days

George Waugh, 11 Spruce Street, Kirkland Lake, Ontario
linecutting and soil sampling, 17 man days

Terrance Graham, 16 Saugeen Cr., Scarborough 703, Ontario
soil sampling, 21 man days

Robert Fawcett, 72 Walnut St., St. Thomas, Ontario
soil sampling, 12 man days

Kennith Hossick, 44 Gremona Cr., Ottawa 12, Ontario
soil sampling, 12 man days

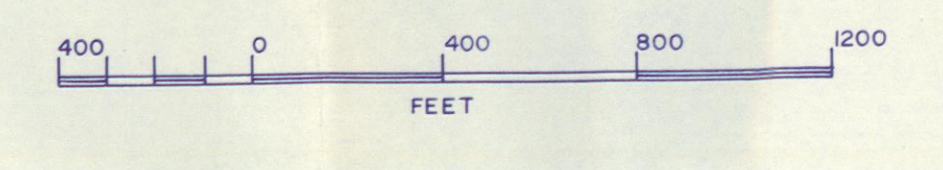
Michael Braet, Box 1052, Whitehorse, Y.T.
drafting, 5 man days

David Waugh, Box 1052, Whitehorse, Y.T.
supervision, 6 man days

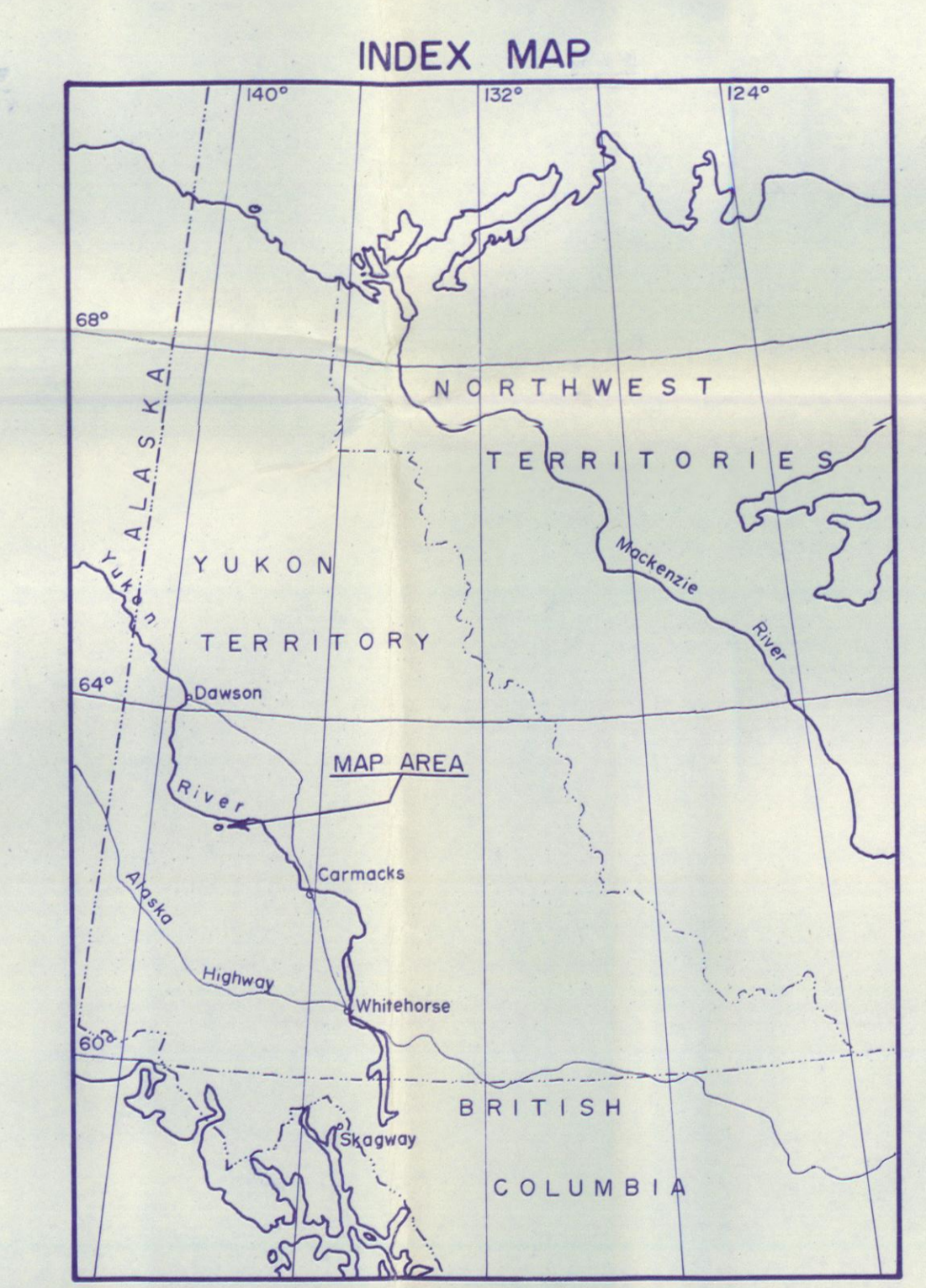
Summary of Costs

Wages:	79 man days @ \$20/day.....	1580.00
	6 man days @ \$40/day.....	240.00
	5 man days @ \$40/day.....	200.00
		<u>\$ 2020.00</u>
Camp and Cookery:	79 mandays @ \$10/day.....	790.00
Assays:	1275 samples @ \$2.50/sample.....	3187.50
Transport:	30.6 helicopter hours @ \$150/hr..... (\$130/hr. contract, \$20/hr. fuel)	4590.00
Miscellaneous:	sample bags, company trucks, field equip., flagging, lumber, etc....	<u>500.00</u>
	Total Expenses.....	\$11,087.50
Expenses on a per claim bases (80 claims).....		\$ 138.00

INTERNATIONAL MINE SERVICES LIMITED
"TOAD" Claim Group
 DAWSON RANGE AREA
 YUKON TERRITORY
 1969 - 1970
 Scale: 1" = 400'



Sample Location
 Cu, Pb, Mo
 Limit of Outcrop
 Claim Post and Line Location



TOAD CLAIM GROUPING

37	38	57	58	77	78
35	36	55	56	75	76
33	34	53	54	73	74
31	32	51	52	71	72
29	30	49	50	69	70
27	28	47	48	67	68
25	26	45	46	65	66
23	24	43	44	63	64
21	22	41	42	61	62
19	20	39	40	59	60
17	18	37	38	57	58
15	16	35	36	55	56
13	14	33	34	53	54
11	12	31	32	51	52
9	10	29	30	49	50
7	8	27	28	47	48
5	6	25	26	45	46
3	4	23	24	43	44
1	2	21	22	41	42

CLAIM SHEET 115-J-10

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