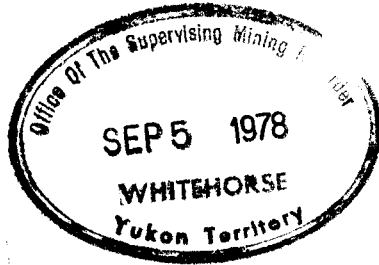


1978 Geophysical Assessment Report



TITLE STQ Option (Magnetometer Survey)

CLAIMS STQ #1 - 32 Inclusive

COMMODITIES W, Sn

LOCATION 18 km N of Swift River, Y.T.
Latitude 60°10'N Longitude 131°14'W
Watson Lake Mining District 105B/3

BY R.J. Roussain and C.J. Hodgson, P.Eng. (B.)

FOR AMAX Potash Limited

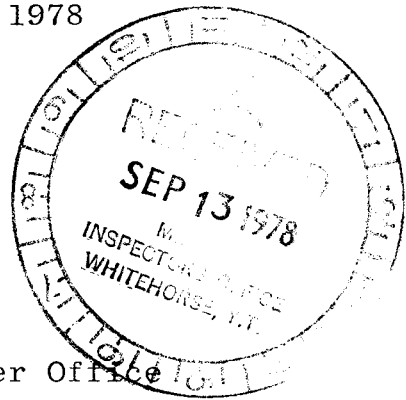
WORK PERIOD June 26 - July 16, 1978

This report has been examined by the Geological Evaluation Unit and is recommended to the Commissioner to be considered as representation work to the amount of \$14,100.00

[Signature]
Supervising Mining Recorder

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

[Signature]
Supervising Mining Recorder



AMAX Vancouver Office
090353

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APPENDICES

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ILLUSTRATIONS

FIGURE 1 - Location Map-----1"=120 miles-----	After Page 2
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3 - Magnetometer Survey--1:5,000-----	In Pocket

SUMMARY

A ground magnetic survey was carried out over 46 km of line on a cut grid established on the STQ property between June 26 and July 16, 1978.

The survey failed to delimit the boundaries of acid intrusive stocks but did define a diorite-metasedimentary contact zone.

CONCLUSIONS

The magnetometer survey aided in the geological mapping of the property by defining the diorite-metasedimentary contact zone and by locating units within the metasedimentary rocks containing anomalous amounts of pyrrhotite and magnetite. It is apparent that the outcropping acid intrusive plugs were too limited in dimension to provide a target for the magnetometer and that there are no other features detected by the survey in overburden covered areas that could be attributed to a larger intrusive stock.

INTRODUCTION

General Statement

A group of 32 contiguous claims located in the Watson Lake Mining District were acquired by option from Bath Investments Ltd. by AMAX Potash Limited in March, 1978. The property, referred to as the STQ Option, encompasses two acid intrusive stocks with associated tin, tungsten, copper and molybdenum mineralization.

As part of the evaluation of the property a magnetic survey was completed over a cut grid designed to cover both of the acid intrusive stocks.

The objective of the survey was to determine if the intrusive rocks could be outlined by a difference in their magnetic susceptibility from that of the intruded metasedimentary rocks, or by the development of a magnetite "halo" around the periphery of the intrusions. It was hoped that the survey would serve to indicate the presence of additional stocks in the till-covered central valley in the grid area.

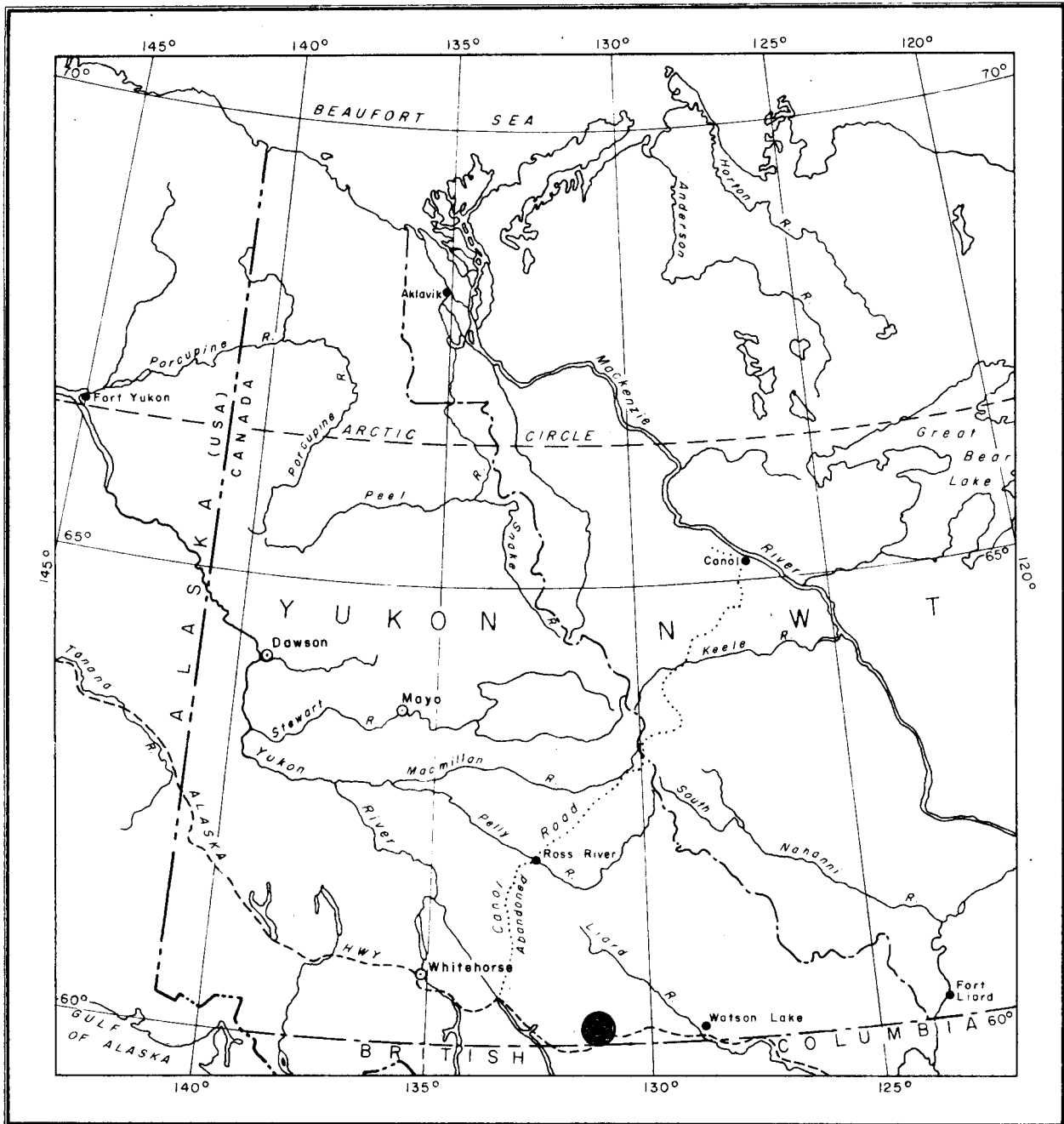
Location and Access

The STQ property is located in the Watson Mining District, Yukon Territory at latitude 60°10'N and longitude 131°14'W. The claim group lies 18 km (11 miles) north of the municipality of Swift River and is accessible by four-wheel drive vehicle on an old drill road extending from the Pine Lake airstrip on the Alaska Highway.

The most efficient means of access and that used by AMAX is by helicopter.

Topography

The property covers an area of alpine meadows, high ridges and cirques with elevations ranging from 1250 to 1950 m. The major portion of the grid area on which the magnetometer



N. T. S. Ref. 105 B 3

AMAX POTASH LIMITED

STQ PROPERTY
STQ CLAIMS

WATSON LAKE MINING DISTRICT — YUKON TERRITORY

LOCATION MAP

SCALE 1" = 120 MILES

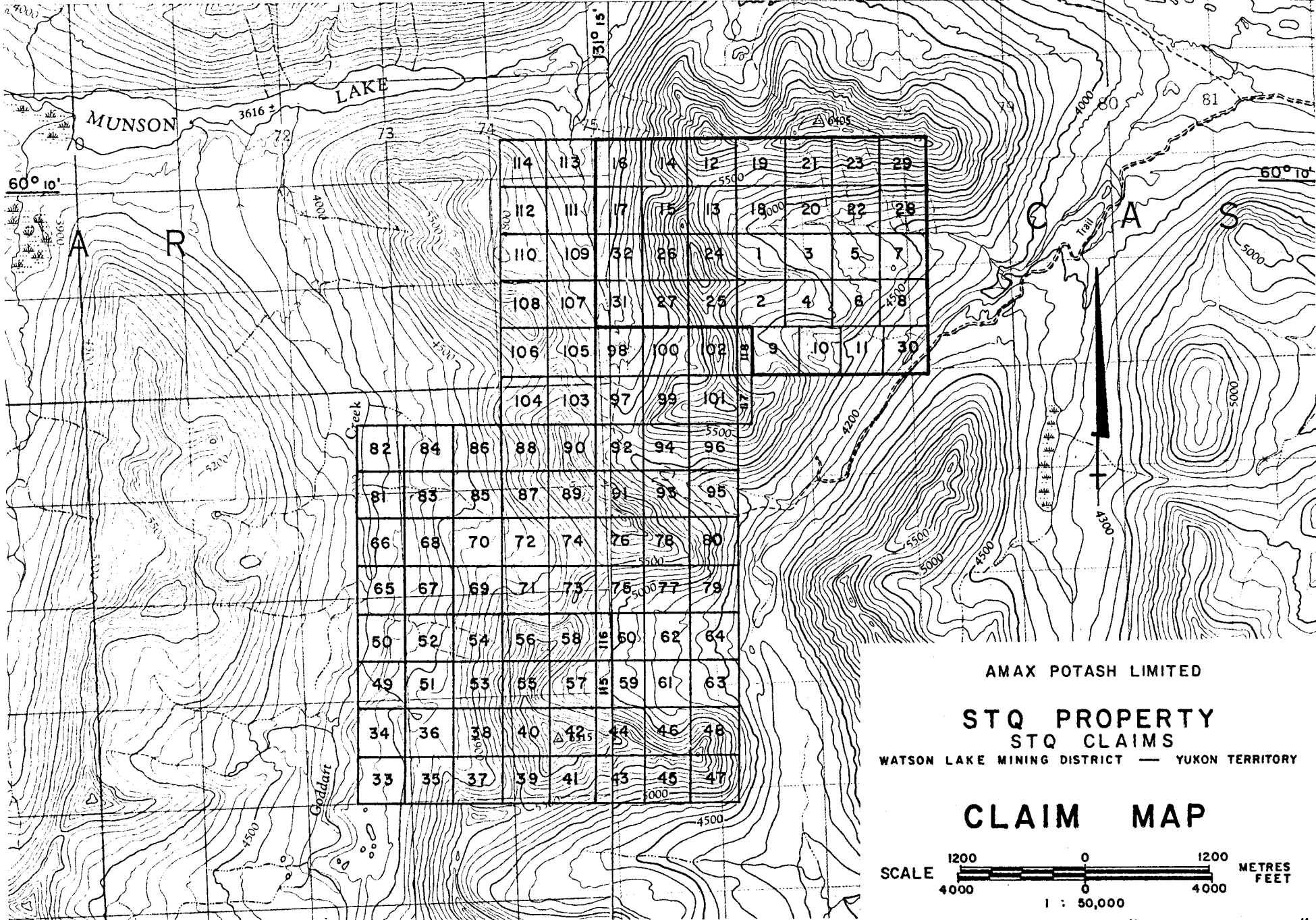
survey was conducted lies in an easterly-facing valley which drains into Swift River. West of Line 14+00E the grid covers a steep westerly-facing cirque which drains into Munson Lake.

Claims

The original STQ claims (STQ 1-32 inclusive) were staked in July, 1977. An additional 86 claims (STQ 33-118 inclusive) were staked in June and July, 1978 to cover geo-chemical anomalies west and southwest of the original claims.

LIST OF CLAIMS

<u>CLAIM</u>	<u>GRANT NUMBER</u>	<u>DUE DATE</u>
STQ 1-11 Inclusive	YA 21708-YA 21718 Inclusive	August 8, 1978
12-19	YA 21724-YA 21731	"
20-23	YA 21719-YA 21722	"
24-29	YA 21732-YA 21737	"
30	YA 21723	"
31-32	YA 21808-YA 21809	August 26, 1978
33-40	YA 33192-YA 33199	June 20, 1979
41-80	YA 33136-YA 33175	June 19, 1979
81-88	YA 33200-YA 33207	June 20, 1979
89-96	YA 33176-YA 33183	June 19, 1979
97-104	YA 33208-YA 33215	June 21, 1979
105-112	YA 33184-YA 33191	June 19, 1979
113-118	YA 34073-YA 34078	July 19, 1979



N. T. S. Ref. 105 B 3

FIG. 2

114	113	16	14	12	19	21	23	29
112	111	17	15	13	18	20	22	28
110	109	32	28	24	1	3	5	7
108	107	31	27	25	2	4	6	8
106	105	98	100	102	118	9	10	11
104	103	97	99	101	117			

82	84	86	88	90	92	94	96
81	83	85	87	89	91	93	95
66	68	70	72	74	76	78	80
65	67	69	71	73	75	77	79
50	52	54	56	58	116	60	62
49	51	53	55	57	115	59	61
34	36	38	40	42	43	45	48
33	35	37	39	41	43	45	47

GEOLOGY

The STQ claims are located in a belt of northwesterly trending, southwesterly dipping metasedimentary strata of Upper Devonian to Lower Mississippian age. The strata form the north limb of a syncline, the core of which is intruded by the Seagull Batholith of miarolitic quartz monzonite-alaskite composition and Mid-Cretaceous age. The northern contact of the batholith underlies the southwestern extremity of the claim group. Quartz monzonite stocks which are presumed to be outliers of the Seagull Batholith occur on the property on claims STQ 3 (East Showing), STQ 15 (West Showing) and at the northeastern corner of the claim block on STQ 30, 8 and 7. Near the northern boundary of the claims, the metasediments are intruded by a large concordant diorite "sill" of presumed Jurassic age.

MAGNETIC SURVEY

Instrument and Survey Procedure

The magnetic survey was completed utilizing a McPhar Geophysics Proton Precession magnetometer Model GP-70 with a 1.0 gamma accuracy. Prior to the commencement of the survey base stations were established at each line intercept along the full length of the base line and were then tied in to each other. This procedure allows a survey to be completed with a common base value and provides close control in the eventuality of instrument "drift".

During the course of the survey readings were taken along the grid lines at 50 m intervals with intermediate readings recorded wherever the magnetic gradient changed abruptly.

Results of the survey were plotted at a scale of 1:5,000 in plan form and contoured at fifty gamma intervals.

A total of 1050 readings were recorded over 46 km of line during the period June 26 - July 16, 1978 by R. Roussain.

The survey was disrupted and hampered by severe magnetic "storms" which occurred daily and contributed to much lost survey time.

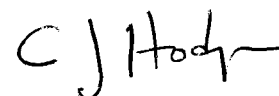
Survey Results

The major feature outlined by the magnetic survey is the contact between the diorite intrusive sill on the north edge of the grid and the magnetically less responsive meta-sedimentary rocks. A contrast in magnetic susceptibility of approximately 100 gamma distinguishes the two rock types and forms the assumed contact. However, the actual contact location has been obscured by talus fans of diorite boulders which appear magnetically as south-trending lobes.

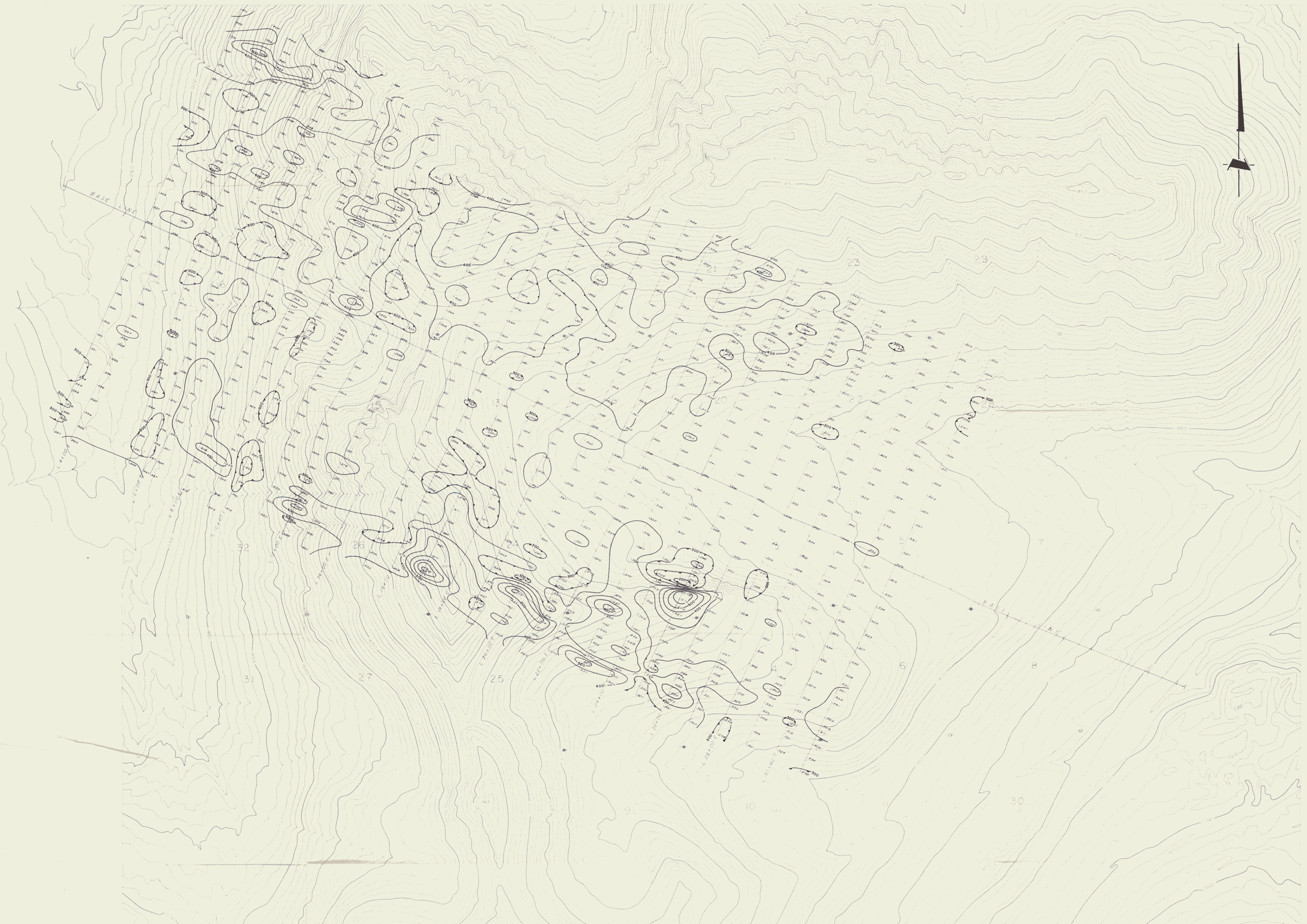
An additional area of high magnetic relief occurs between Lines 12E and 26E, predominantly from 2+50N to 4+00N. This zone is underlain by cherty argillite containing pyrrhotite as disseminations and thin streaks in the argillite laminae, and as coarse blebs in amphibolite interbeds.

A number of scattered 100 gamma anomalies were detected in the northwest portion of the grid and are once again attributed to magnetite and/or pyrrhotite-rich sedimentary horizons. Many of these "highs" were observed close to gossans in exposed outcrops along the base of ravines. However, in the same vicinity small "outliers" on "tongues" of diorite that extend from the main diorite intrusive mass respond magnetically, as at L7E; 14+00N where there is a 58429 gamma response, 100 gammas above background.

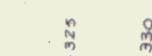
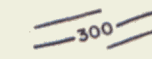


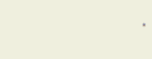
No positive or negative magnetic features can be attributed to the outcropping acid intrusive plugs.



C.J. Hodgson, P.Eng. (B.C.)

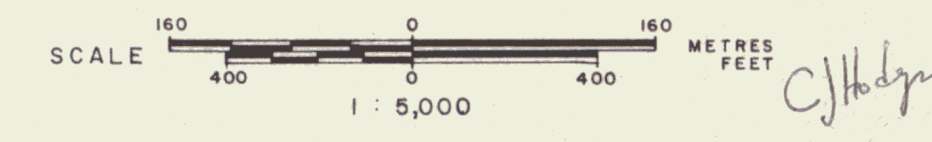


LEGEND

-  Magnetometer survey readings in gammas (base value 58,000 gammas).
-  Isomagnetic contour (contour interval 50 gammas).
-  Magnetic low.
-  Claim post (located, unlocated).
-  Grid picket line.

NOTE -
 Base map after fair drawn map by Pacific Survey Corporation at a scale of 1:5,000 and a 10 metre contour interval, modified.

AMAX POTASH LIMITED
STQ PROPERTY
 STQ CLAIMS
 WATSON LAKE MINING DISTRICT - YUKON TERRITORY
MAGNETOMETER SURVEY



To accompany 1978 geophysical assessment report "STQ OPTION, MAGNETOMETER SURVEY" by R. J. Roussain and C. J. Hodgson.