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PROSPECTUS

GLEN ECHO MINES LIMITED

Incorporated Under the Laws of the Province of Ontario

CAPITALIZATION

TRANSFER AGENT
Chartered Trust Company
Toronto

- 1. STATUTORY INFORMATION
- 2. GEOLOGIST'S REPORT
- 3. FINANCIAL STATEMENTS

2





Ø10C

PROSPECTUS

GLEN ECHO MINES LIMITED

Incorporated Under the Laws of the Province of Ontario

CAPITALIZATION

Authorized	Capital	 	3,000,000 shares \$1.00 par value	of
		100	1,650,005	: .

TRANSFER AGENT Chartered Trust Company Toronto

- 1. STATUTORY INFORMATION
- 2. GEOLOGIST'S REPORT
- 3. FINANCIAL STATEMENTS

PROSFECTUS

OF

GLEN ECHO MINES LIMITED

- (a) The full name of the Company is GLEN ECHO MINES LIMITED. The address of its head office is Suite 706, 217 Bay Street, Toronto, Ontario.
- (b) The Company was incorporated under Part XI of The Ontario Companies Act by Letters Patent dated October 25th, 1950.
- (c) The names, present occupations and home addresses in full of the officers and directors of the Company are as follows:-

OFFICE	FULL NAME	ADDRESS	OCCUPATION
President and Director	James Anderson Grant	86 Rosedale Heights Drive, Toronto, Ontario.	Stock- broker
Director	Donald Alexander Macintosh	Bridle Path, Toronto, Ontario.	Insurance Agent
Director	Foster William Hewitt	412 Rosemary Road, Toronto, Ontario.	Executive
Director	William Dickson George, Jr.	Sewickley, Pa., U.S.A.	Real Estate
Secretary- Treasurer and Director	Harvey Lanson Good	42 Beaufort Road, Toronto, Ontario.	Secretary- Treasurer

There are no promoters.

- (d) Auditors: Grier, Dyer & Company, 2085 Yonge Street, Toronto 7, Ontario.
- (e) Transfer Agent and Registrar: Chartered Trust Company, 34 King Street West, Toronto, Ontario.
- (f) The authorized capital of the Company is \$3,000,000 divided into 3,000,000 shares of the par value of \$1.00 each of which 1,650,005 are issued as fully paid shares.
- (g) There are no bonds or debentures of the Company presently outstanding.
- (h) No shares or other securities of the Company are held in escrow.
- (1) (1) 900,005 common shares have been sold for cash to date at the prices below set forth:

5 shares @ \$1.00 per share - \$5.00 400,000 shares @ .10 per share - 40,000.00 500,000 shares @ .10 per share - 50,000.00 900,005

- (ii) A total of \$90,005.00 has been received for the shares sold for cash.
- (iii) No commission has been paid on the sale of shares.
- (j) No securities other than the aforesaid shares have been sold for cash to date.
- (k) No shares have been issued or are to be issued nor has any cash been paid nor is any cash to be paid to any promoters as such.
- (1) (A) (1) The Company is the holder of thirty patented mining claims in Echo Township in the Province of Ontario recorded in the office of the Mining Recorder at Sioux Lookout, Ontario, as Numbers K-29250 to K-29258, both inclusive, and KRL 30661 to KRL 30681, both inclusive.
 - (ii) These mining claims were acquired under Agreement dated November 8th, 1950 with Donald Alexander

 Macintosh and James Anderson Grant as Vendors in consideration of the allotment and issue to the Vendors or their nominees of 750,000 shares of the capital stock of the Company as fully paid and non-assessable shares.
 - (iii) The following associates of the said Donald Alexander Macintosh and James Anderson Grant and none other received more than 5% of the 750,000 Vendors' shares of the Company allotted to the said Donald Alexander Macintosh and James Anderson Grant or their nominees:

V. Adelard Desjardins, Sioux Lookout, Ontario.

Foster William Hewitt, 412 Rosemary Road, Toronto, Ontario.

(B) (1) Subject to a 4 percent non-assessable interest held by Dr. John H. Low and Dr. Harold F. Morrow, Consulting Geologists of Toronto, Canada, this company together with Tombill Gold Mines Limited is the holder of 193 mining claims situate in the Separation

lake Area in the Kenora Mining Division, Province of Ontario, namely:-

- (a) 144 mining claims numbered K27579 to K27722 both inclusive.
- (b) 11 mining claims numbered K27777 to K27787 both inclusive.
- (c) 20 mining claims numbered K27977 to K27996 both inclusive.
- (d) 18 mining claims numbered K28110 to K28127 both inclusive.

The said mining claims are held jointly by Tombill Gold Mines Limited and this Company under the terms of an Agreement in writing between the said parties dated April 11th, 1957 which provides that the proportionate interests of the parties in the venture is Tombill Gold Mines Limited 70% and this Company 30%; that all exploration and prospecting of the said 193 mining claims shall be under the direction and management of Tombill; that this Company will pay its proportion of the expenditures made on the said 193 mining claims.

- (11) There were no Vendors of the said 193 mining claims.

 This Company and the said Tombill Gold Mines Limited caused the said 193 mining claims to be staked; the cost of such staking to this Company being \$2,841.23
- (C) In July 1955 the Company acquired an option to purchase 35 mining claims in South Chibougamau, Province of Quebec. The sum of \$1,000 was paid for the option. A magnetometer and geological survey of the claims under the option was carried out and nothing of economic interest was found and the option on the property was abandoned.

The Company acquired, by staking, a group of 18 mining claims in the Churchill mining division of Saskatchewan in the spring of 1956, the cost of staking such claims being \$538.23. The ground was prospected in the summer of 1956

with nothing of importance being discovered. These claims have been allowed to lapse on the recommendation of the Company's consulting geologists.

- (m) (A) The property listed in item (A) in the answer to question(l) is being held pending further developments; therefore, no reportis filed to cover this property.
- (B) The following are particulars relating to mining properties listed in item (B) in answer to question (1):-
 - (i) The said mining property is situated 35 miles due north of the Town of Kenora and is adjacent to the north shore of Separation Lake. Access is by float-equipped aircraft which may be chartered in Kenora. There is a good canoe route between Minaki located on the Canadian National Railway 15 miles south west of Separation Lake and Fiord Bay of Separation Lake via Sand Lake.
 - (ii) There has been no underground exploration or development nor is there any underground plant or equipment in the said property.
 - (iii) Surface exploration and development has consisted of a geophysical airborne survey which was completed in 1957, some ground geophysical traverses and some trenching; the Company does not own any surface plant or equipment.
 - (iv) For the known history of the property reference is made to the Report of N. H. Black P. Eng. dated July 8, 1957 which is attached hereto and forms part of this Prospectus.
 - (v) The airborne geophysical survey, the ground geophysical work and the trenching referred to in item (m)
 (B) (iii) above have been conducted by Tombill Gold Mines Limited as manager of the joint venture with the Company.
- (n) (i) The Company has entered into an agreement with Dr. John H. Low and Dr. Harold F. Morrow, Consulting Geologists

for the Company, dated April 19th, 1957 whereby the Company granted to the said John H. Low and Harold F. Morrow jointly the right and option to purchase an aggregate of 50,000 shares of the capital stock of the Company at the price of 10¢ per share exercisable at any time on or before the 10th day of April, 1959 provided that not more than 25,000 shares may be taken up and paid for on or before the 10th day of April, 1958.

(ii)The Company has entered into a stock agreement dated the 28th day of June, 1957 with Armac Securities Limited of 357 Bay Street, Toronto, hereinafter called the Underwriter-Optionee, whereby the Underwriter-Optionee subscribed for and agreed to purchase 200,000 shares of the capital stock of the Company at the price of 15ϕ per share, 100,000 of said shares to be taken up and paid for forthwith upon the acceptance for filing by the Ontario Securities Commission of this Prospectus which date is hereinafter referred to as the effective date and the remaining 100,000 of said shares to be paid for within 60 days from the effective date, and in consideration thereof the Company granted to the Underwriter-Optionee options to purchase a further 300,000 shares of the capital stock of the Company at the times and in the amounts and at the prices following:

any part of 100,000 shares at 20¢ per share to be taken up and paid for within 3 months from the effective date;

any part of 200,000 shares at 25¢ per share to be taken up and paid for within 6 months from the effective date.

John Maitland Macintosh, Charles Harold Walker,
Harry Fitzgerald Kimber, Archibald Burnside Whitelaw and
Robert Dean Poupore, all of 357 Bay Street, Toronto,
are the only persons having more than a 5% interest in
Armac Securities Limited.

Armac Securities Limited discloses that in entering into the said stock agreement of June 28, 1957, it is acting on its own behalf and there are no sub-underwriting agreements nor sub-option agreements outstanding or

proposed to be given nor any assignment of the said stock agreement.

In the event of any primary distribution to the public in Ontario of shares of the Company acquired by Armac Securities Limited from time to time under the stock agreement it is understood that such primary distribution must be made through registered dealers at the customary rates of commission set by the Toronto Stock Exchange for mining companies.

If default occurs in the taking down of the optioned shares, an amendment to the Prospectus will be filed within 20 days from the date of such default if the stock of the Company is still in course of primary distribution.

- (o) The Company proposes to expend the proceeds from the current sale of shares for exploration and development work primarily on and in connection with the said 193 mining claims in the Separation Lake Area, Kenora Mining Division described in clause (B) (1) of item (1) above.
- (p) The Company has been incorporated for more than one year.
- (q) The Company does not propose to create or assume any indebtedness which is not shown on the balance sheet as of the 31st day of May, 1957 filed with the Ontario Securities Commission and forming part of this Prospectus, except liabilities which will be contracted in the ordinary course of its business.
- (r) (i) The principal business in which each director or officer has been engaged during the past three years is as follows:-

JAMES ANDERSON GRANT

- President and Director -- Partner of Playfair and Company, Stockbrokers, Toronto, Ontario.
- DONALD ALEXANDER MACINTOSH- Director -- Sole proprietor of Macintosh and Company, Insurance Agents, Toronto, Ontario.

FOSTER WILLIAM HEWITT

- Director -- President of Foster Hewitt Broadcasting Limited owning and operating Radio Station CKFH WILLIAM DICKSON GEORGE, - Director -- Partner of George Brothers, Real Estate Brokers
Pittsburgh, Pennsylvania U.S.A.

HARVEY LANSON GOOD

- Secretary-Treasurer and Director -- Chartered Accountant employed as Treasurer of Aerofall Mills, Limited and Secretary-Treasurer of Tombill Gold Mines Limited.
- (ii) James Anderson Grant, Donald Alexander Macintosh,
 Foster William Hewitt and Harvey Lanson Good had an
 interest in the property in Echo Township mentioned in
 item (A) in answer to question (1) and received 137,500,
 187,500, 112,500 and 5,000 shares respectively of the
 750,000 Vendors' shares issued by the Company for such
 property.
- (iii) The aggregate remuneration paid by the Company during the last financial year to officers amounted to \$160.00 and to directors as such-none.

 Estimated remuneration payable to officers during the current financial year \$3,000.00 and to Directors as such-none.
- (s) No dividends have been paid by the Company.
- (t) No persons are, by reason of beneficial ownership of the securities of the Company or of any agreement in writing, in a position to elect or cause to be elected a majority of the directors of the Company.
- (u) The Company is not aware of any other material fact not disclosed in the foregoing. There is no arrangement for the sale of Vendor shares. Vendor shares outstanding and shares previously sold for cash may be offered for sale but the proceeds will not accrue to the treasury of the Company.
- (v) The foregoing constitutes full, true and plain disclosure of all material facts in respect of the offering of securities

referred to above as required by Section 38 of The Securities Act (Ontario), and there is no further material information applicable other than in the financial statements or reports where required.

DATED at Toronto, this 18th day of July, 1957.

J.A. GRANT	D.A. MACINTOSH
FOSTER WILLIAM HEWITT by his agent H.L. GOOD	WILLIAM DICKSON GEORGE JR. by his agent H.L. GOOD

H.L. GOOD

(w) To the best of our knowledge, information and belief, the foregoing constitutes full, true and plain disclosure of all material facts in respect of the offering of securities referred to above as required by Section 38 of The Securities Act (Ontario) and there is no further material information applicable other than in the financial statements or reports where required.

In respect of matters which are not within our knowledge, we have relied upon the accuracy and adequacy of the foregoing.

DATED at Toronto, this 18th day of July, 1957.

ARMAC SECURITIES LIMITED

by H. F. KIMBER

Vice-President

Corporate
and A. B. WHITELAW Seal

Secretary

REPORT ON TOMBILL GOLD MINES LTD. AND GLEN ECHO MINES LIMITED SEPARATION LAKE IRON PROPERTY, DISTRICT OF KENORA, ONTARIO

PROPERTY

The property consists of 212 unsurveyed contiguous mining claims of about 40 acres each, to total approximately 8,480 acres. They are located in two groups.

The mining claims held by the Company are numbered as follows:

 K 27579 to K 27722 inclusive
 (144)

 K 27777 to K 27787 inclusive
 (11)

 K 27977 to K 27996 inclusive
 (20)

Thirty-seven additional claims have been staked, but the numbers are not yet available.

LOCATION AND ACCESS

The property is situated 35 miles due north of the town of Kenora, and is adjacent to the north shore of Separation Lake, one of the many widenings of the English River. The claims trend E-NE for approximately 12 miles from a point on the river $l\frac{1}{2}$ miles west of Separation Rapids at the western end of the lake.

Access is by float-equipped aircraft, which may be chartered in Kenora. There is a good cance route between Minaki, located on the Canadian National Railway 15 miles southwest of Separation Lake, and Fiord Bay of Separation Lake, via Sand Lake.

FACILITIES

Hydro electric power is available at Kenora. The Ontario Hydro Electric Power Commission is building a new generating station at Caribou Falls, 22 miles west of the property. In addition, the Commission has an undeveloped water power reserve at Kettle Falls, approximately four miles downstream from Separation Lake.

HISTORY

The first comprehensive mapping of the area was done in 1929 by D. R. Derry for the Ontario Department of Mines. The map and report, entitled "Minaki to Sydney Lake", was published the following year in Volume 39, Part 3, of the Annual Report. Derry's mapping failed to discover the iron formation north of Separation Lake, probably because his work was of a reconnaissance nature only, and over a large area.

The iron formation was discovered in the fall of 1934 by two prospectors from the Dryden area, James Gordon and Harry Hawes, who

staked a group of claims covering part of the iron-bearing zone. They sank several pits but, unable to sell their claims finally allowed them to lapse.

The property was restaked in 1948, and considered for re-staking again in 1954 by W. S. Moore Co., of Duluth. At this time, M. W. Bartley was commissioned to make an examination, and advise on the economic possibilities. Representative samples were secured from three widely separated locations along strike of the formation, and tested both at Hibbing, Minn., and Ishpeming, Mich. Using a 100 M grind, the results were as follows:

A Tested at Hibbing

	Head		Concen	trate	•	Tails
	% Fe	% Wt	% Fe	% SiO ₂	% Fe Rec	% Fe
						
1	40.57	52.4	69 .7 7	2.24		
2	38.15	43.8	70.66	1.37		
3	36.85	52.8	63.79	10.00		
4	31.49	42.6	61.11	13.88		

B Tested at Ishpeming

	Head		Concen	trate		Tails
	% Fe	% Wt	% Fe	% S10 ₂	% Fe Rec	% Fe
1 2 3	20.50 28.40 36.50	26.00 40.62 53.06	70.60 66.70 67.20	2.24 6.74 6.60	89.56 95.39 97.70	2.90 2.20 1.80

Although these metallurgical tests were very favourable, the restricted width of known iron formation precluded open pit mining, and the property was not recommended.

The formation was recently brought to the attention of the Companies, who engaged an aerosurvey company to conduct a magnetic survey. Claims were then staked early in 1957 to cover the anomalous area.

GEOLOGY

The rocks of the Separation Lake area are of Precambrian age. They consist of Keewatin altered volcanics and sediments intruded by Algoman granite and granodicrite.

The Keewatin rocks mainly occur in a northeasterly trending band lying immediately north of Separation Lake. The band has a length of over 23 miles and varies in width between one-half mile and one mile. At the western end of Separation Lake, a tongue from the

band trends south and southwesterly for seven or more miles.

The greenstones, where seen by the writer consist of massive lavas and tuffaceous bands.

The granitic batholith composed of granite and granodiorite masses lies immediately south of the volcanics.

Iron Formation

The iron-bearing horizon, termed iron formation, occurs along the southern edge of the Keewatin volvanics at the granite contact. The horizon has been traced for approximately nine miles. Average dip is 75 degrees to the north.

The width of the ferruginous zone varies considerably along its length. Exposures are limited and thus the walls cannot be defined in many places. The average width may be something between 75 feet and 100 feet, but additional exploration will be required for verification.

The rock is laminated and generally more massive than typical banded siliceous iron formation of the Keewatin type. It is mainly a quartz biotite gneiss plus chlorite, containing coarse crystals of magnetite. It is thought that the formation may be an altered and replaced tuff band. Pyrite is present in some sections of the rock. A small gossan capping, about three feet wide, occurs in a trench which will be described below.

GEOPHYSICAL EXPLORATION

An aeromagnetic survey was made over the Separation Lake area as a prelude to claim staking operations. The survey covered about 9 lineal miles along the greenstone-granite contact, and extended laterally approximately eight miles across the strike. A long sinuous anomaly was delineated along this contact, as illustrated on Plate II. The maximum magnetic high of plus 16,000 gammas is located on the east shore of Boot Bay at the northwest end of the Lake. A separate anomaly of plus 10,000 gammas, located in an area of granitic rocks east of Fiord Bay, has been staked and will also be examined.

Ground geophysical traverses are still being conducted over the entire magnetic zone at line spacings of 400 feet. No magnetic contouring had been done, or magnetic sections made previous to the

writer's visit to the property.

DEVELOPMENT WORK

Only one trench had been blasted across the iron formation at the time of the examination, and it was not quite completed. The trench is situated less than one-quarter mile northeast of Boot Bay, on the location of the strongest aeromagnetic anomaly. At this point the formation occupies a prominent ridge, and the trench is cut across it. The completed trench has a length of 196 feet and has exposed the following sequence of rock formations reading from north to south:

Volcanics, mainly tuffs		feet
Iron formation		1'eet
Pegmatitic granite dike		feet
Iron formation		feet
Granite	18	feet

Total iron formation in the trench is 131 feet.

Another trench, some 2000 feet east of the first, and on the same anomaly, has been completed since the writer's examination.

This trench has a length of 152 feet, of which the northernmost 41 feet and the southernmost 11 feet are in the overburden, due to the steep dip of the outcrop at the ends of the trench.

The following sequence of rock formations are exposed reading from north to south:

Iron formation	69 feet
Pegmatitic granite dike	7 feet
Volcanics with sulphides	24 feet

Enclosed are copies of sketches of the trenches made by Mr. Low.

METALLURGICAL TEST RESULTS

A small bulk sample was taken from the trench by the writer, and this was subsequently analysed and tested at Steep Rock Iron Mines Limited. The sample was meant to be representative of the iron formation exposed in the trench, and was composed of small pieces taken from along its length.

After crushing to one-quarter inch, the material was screened at 100 and 200 mesh. Both the -100 M fraction and the -200M fraction were passed through the Davis tube for separation magnetically.

Results of the tests are as follows:

(1) Head Sample Analysis

% Fe	% P205	% Mn	% S10 ₂	%A1203	% S	% T102	% Cu
37,58	0.057	0.10	46.70	0.30	0.451	none	trace

(2) Concentration Test at -100	}]V[rest at -100	+ 200M
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Crude % Fe	% Wt	% Fe	Concentr % SiO ₂		% Fe Rec.	Tails % Fe
			7. 25		,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,	
40.48	62.68	63.47	12.80	0.073	98.28	1.87

(3) Concentration Test at -200M

Crude			Concent	trate	*.	Tails
% Fe	% Wt	% Fe	% S10 ₂	% S	% Fe Rec.	% Fe
40.98	56.80	70.85	2.94	0.117	98.20	1.70

The tests show that a very favourable concentrate can be produced at a 200 M grind. Although results are fair at 100 M grind, the silica content of the concentrate is much too high. This is overcome at 200 M, and a much higher grade concentrate is produced although at a lower weight recovery, which is to be expected at the finer grind.

The ore would be classified as a Non-Bessemer, sulphurous type.

Concentration tests were made on the Companies' behalf by Professor S. E. Wolfe at the University of Toronto. Samples from the two trenches were subjected to a 100 M grind, and concentrated in a Davis tube (Trench No. 1) and in a Dyer Machine, a refinement of the Davis tube, (Trench No. 2). The results of the tests on Trench 2 samples are appended. The others are not available at this time. TONNAGE ESTIMATE

A tonnage estimate cannot be made from the available information. Considerably more work remains to be done.

CONCLUSIONS

The iron formation at Separation Lake has excellent concentration characteristics. Tests show that a very favourable product can be produced at a maximum grind of 200 mesh. If a suitable tonnage can be proven for mining by open pit or open cut methods, the property will be very attractive.

It is premature to consider a tonnage estimate, even a very preliminary one. Little is known about actual widths, but the average width does not appear to be very great.

RECOMMENDATIONS

- 1. The ground magnetic survey should be completed, followed by geological mapping.
- 2. A comprehensive bulk sample for further testing should be taken from the completed trench, or trenches.
- 3. Every effort should be made to delineate the actual widths of the iron-bearing zone.
- 4. Diamond drilling should follow if warranted, depending on the results of the above.

Respectfully submitted,
BARTLEY, GREER & ASSOCIATES
"N.H.BLACK" (SEAL)

N. H. Black, B.Sc., P.Eng.

Port Arthur, Ontario July 8, 1957.

APPROVED:

"M. W. BARTLEY" (SEAL)

M. W. Bartley, Ph.D., P.Eng.

APPENDIX

Sample No.	% Fe	% S10 ₂
1712 DC Head	32.9	46.6
1712 Conc.	65.7	3.08
1712 Tail	7.3	79.5
1713 DC Head	35.2	44.6
1713 Conc.	67.4	4.54
1713 Tail	7.6	78.2
1714 DC Head	37.6	43.4
1714 Conc.	65.9	6.16
1714 Tail	5.5	79.7
1715 DC Head	40.1	38.0
1715 Conc.	64.5	7.92
1715 Tail	10.2	60.9
1716 D. C Head	37·3	41.1
1716 Conc.	64·3	8.50
1716 Tail	10·2	79.8
1717 DC Head	27.3	44.9
1717 Conc.	65.1	5.58
1717 Tail	11.6	60.5
1718 DC Head	36.2	44.6
1718 Conc.	59.2	14.3
1718 Tail	10.3	76.5

GLEN ECHO MINES LIMITED

BALANCE SHEET as at 31st MAY 1957

ASSETS

Cash		\$ 5,512.68
Account Receivable		400,00
Investments in Marketable Securities (approximate market value \$31,000)		21,336,25
Mining Claims: (note 1) Patented claims in Echo Township, Mining Division, Ontario - at co (represented by the valuation of placed upon 750,000 shares of c of the company issued in consid therefor and \$2,841.23 expended and other costs)	st \$75,000.00 apital stock eration	77,841.23
Deferred Exploration, Development an Expenditure (net) - Schedule 1 Deduct - Exploration and develop costs of abandoned claims (con	\$ 58,070.18	45,681.54
Organization Expense		2,445.45
		\$153,217.15
LIABILITIES		
Accounts Payable and Accrued		\$ 600.79
Capital: (Notes 2 and 3) Authorized - 3,000,000 shares of \$1.00 par va	lue \$ <u>3,000,000.00</u>	
Issued - 900,005 shares for cash \$900,0 Less - discount 810,0	05.00 00.00 90,005.00	
750,000 shares for mining claims 750,0 Less - discount 675,0	00.00 00.00 75.000.00	
1,650,005	165,005.00	
Deduct - Exploration and development costs of abandoned claims (contra)	12,388.64	152,616.36
		\$153,217.15

Approved on behalf of the Board.

"Foster Hewitt" Director

"H. L. Good"

Director.

The above statement should be considered in conjunction with the accompanying Notes to Financial Statements.

NOTES TO FINANCIAL STATEMENTS

31st MAY 1957

- 1. During the year 1957 the company acquired an interest, with Tombill Gold Mines Limited, in a group of mining claims in the Kenora Mining Division of Ontario. There were no vendors of the said mining claims, the company and Tombill Gold Mines Limited having caused the said claims to be staked. Expenditures to date on this project are shown on Schedule 1.
- 2. Options are outstanding on 50,000 shares of capital stock at 10¢ per share, exercisable by 10th April 1959.
- 3. The company has entered into an agreement, dated 28th June 1957, under which 200,000 shares of its capital stock are to be purchased at 15¢ per share, 100,000 of said shares to be taken up and paid for forthwith upon the acceptance for filing by the Ontario Securities Commission of a prospectus and the remaining 100,000 of said shares to be paid for within 60 days from date of acceptance. In consideration of such purchase the company has granted options to purchase a further 300,000 shares of its capital stock as follows:

any part of 100,000 shares at 20¢ per share to be taken up and paid for within 3 months

any part of 200,000 shares at 25¢ per share to be taken up and paid for within 6 months

from the acceptance for filing by the Ontario Securities Commission of the prospectus.



2

SUMMARY

A geomegnetic survey of the Tombill-Glen Echo properties has outlined numerous magnetic anomalies including 74 off-scale peaks indicative of the presence of magnetite in considerable concentrations.

Many or these are too small and isolated to be of sconomic interest at present but four continuous series virtually embraced by the 5,000 gamma contour have been traced over lengths of up to 61 miles.

Anomalies in excess of 50,000 gammas are believed to indicate approximately the extent of magnetite in economic concentrations at rock surface. Five zones which include anomalies with widths between 50,000 gammas contours of from 25 to 160 feet and lengths up to 5,000 feet appear to be of particular interest.

Geological data indicate that leaner magnetite formation and also depth of overburden and rock cover may occasion magnetic effects of less than 50,000 gammas. It is therefore apparent that detailed diamond drilling will be required to delimit ore.

A dismond drilling program involving semi-detailed drilling of ${}^{\dagger} K^{\dagger}$ Zone and reconnaissance drilling of the four anomaly series has been recommended.

INTRODUCTION

The presence of magnetite deposits in the band of volcants rocks which trends north of east from Separation Lake has been known since 1934 when Mr. Harry Hawes discovered them in the course of prospecting for gold. The occurrences have been examined from time to time with a view to locating workable bodies of iron ore but no detailed work was undertaken until the spring of 1957 when, as a result of pre-liminary concentration tests, reconnaissance ground magnetic prospecting and serial magnetic surveying, two groups of claims were staked by Tombill Gold Mines Limited to cover significant anomalies.

Ground magnetic surveys were commenced in March and completed in August, 1957 with the object of detecting and outlining deposits of magnetite.

PROPERTY, LOCATION, ACCESS

The property of Tombill Gold Mines Limited and Glen Boho Mines Limited consists of 212 unpatented claims as follows:

North group: 179 olsims

KAL 27579 to 27722 inclusive

KRL 27777 to 27787 inclusive

Kkt 27977 to 27996 inclusive

Kat. 28211 to 28214 inclusive

South group: -55 claims

KHL 28110 to 28127 inclusive

K#1 28235 to 28249 inclusive

Cart San Prod.

These are located in the Separation Lake area, district of Kenora. The north group extends in a N75°E direction along the north shore of Separation Luke between the English River and Lennan Lake for

a distance of about 10 5/4 miles. The south group lies south of Separation lake about 2 miles south of the west and of the north group.

The north group is located 20 miles north of the main line of the Canadian National Railway at Reditt and 35 miles north of the town of Kenora on the Canadian Pacific Railway and on the Trans-Canada natural gas pipe-line. Reditt is 521 miles west of the ore-docks at Fort William on Lake Superior.

Hydro-electric power will shortly be available at Caribou Falls, 20 miles west of the north group.

At present the property is conveniently reached by air from Kenors where Parsons Airways Limited and Onterio Central Airlines Limited maintain air bases. A road exists between Reditt and Lount Lake, about 8 miles southeast of the south group, which could be extended on the ice to the properties.

SURVEY PROCEDURE

A system of north-south picket lines was cut at 400-foot intervals across both groups with chainage stations at 100-foot spacings.

Observations were made at 25, 50 or 100-foot intervals, depending on magnetic conditions with Watts and Askania vertical magnetometers. In the western portion of the north group a system of east-west lines was later out and surveyed to clarify the magnetic conditions there.

Readings were converted to gammas plotted on 100 feet to the inch maps and contoured. Results were compiled on a 1,000 feet to the inch map to show the continuity between anomaly zones on different sheets.

Outcrops in anomalous areas were mapped from the same grid system.

GEOLOGY

The general geology of the Separation Lake area was mapped in 1950 by D. R. Derry* who shows a band of Keewatin (?) sediments, sedimentary gneisses and volcanic rocks up to 5 miles in width trending east-west through the area immediately north of Separation Lake.

The volcanics which border the sediments on the south are generally fine-grained green to black lavas showing pillow structure in places and a coarser, more massive type which is indicated on the accompanying maps as "hornblendite". In places, as on the English River at the west end of the north group, the hornblendite has the appearance of massive diorite. Derry notes irregular bands of garnetiferous rock within the lava which he considers to be metamorphosed tuffaceous material.

The sedimentary-volcanic series has been invaded and metamorphosed by a series of intrusive rocks ranging from diorite to acid granite and pegmatite.

In the Separation Lake area the magnetite deposits occur in the volcanics at or close to the contact of a granite body which lies to the south. The volcanics are typical of those described by Derry consisting of fine-grained dark-green to black andesites showing pillow structure at the west end of the property with relatively narrow banded basic tuffs and coarser hornblende schist and amphibolite.

Acid intrusives include fine-grained gneissic pink granite, coarse pink pegmatite and smaller dikes of white albite pegmatite. At the extreme western end of the north group coarse massive hornblendite occurs which may be intrusive diorite.

*Derry, D. R. "Minski - Sydney Lake Area" Ont. Dept. Min. Vol. 59, Part 3, 1930, Map No. 39g The south group is underlain almost entirely by granitic rocks except in the vicinity of the magnetite deposits where recrystallized volcanic rocks and garnetiferous quartz-sericite or quartz-biotite schist indicate the remnant of a volcanic band similar to that in the north group.

Dips of bending in tuffs and schists generally are steeply north with some steep $(80^{\circ} \text{ to } 85^{\circ})$ southward dips at the east and extreme west ends of north group.

Regional geology and magnetic data suggest that north group and south group lie on opposite flanks of an anticline overturned to the south. The axial region of the fold is occupied by granite which has also partially destroyed the south limb.

Magnetite Deposits

Extensive overburden covers most of the north group and outcrops of magnetite are visible only in the one-mile stretch east of Boot Bay ('A' Zone) and at the extreme west end of the property near the English River ('D' Zone).

On the south group most of the magnetite-bearing horizon is covered by swamp but a few scattered outcrops occur in the western portion of the group (${}^{\dagger}C^{\dagger}$ Zone).

The mineralized zones in 'A' Zone and 'C' Zone where exposed in Trenches 1, 2, 5 and 4 are generally similar in character consisting of massive to laminated granular magnetite with pyrrhotite, pyrite and a few grains of chalcopyrite.

Gangue minerals include silica, hornblende, biotite, chlorite.

Garnets were observed in Trench No. 2. Limonite gossan probably derived from weathering of sulphides was observed in Trench No. 1. (See trench sketches in appendix.)

The concentration of sulphides varies from trench to trench as would be expected in a deposit of this type, but the proportion of sulphides to magnetite will be better indicated by diamond drilling than by surface examination due to the effects of weathering which, it is apparent, have extended to considerable depths, at least below the floor of any of the trenches.

In 'D' Zone at the extreme west end of the north group, the magnetite formation appears to be somewhat different. On the north side of the zone crystalline quartzite is interlaminated with narrow bands of magnetite with some very fine sulphides. This is succeeded on the south by a band of heavy magnetite similar to the magnetite in Trenches 1, 2 and 5. This zone has not yet been trenched and the relationship between the two types of mineralization is not apparent in the scattered exposures available for study.

The magnetite deposits occur in irregular steeply-dipping tabular masses or elongated lenses close to the contact between volcanic rooks and granite. The deposits are invaded by irregular dikes of pink or white pagnetite, and quartz veins and may contain horses, of volcanic material.

Some of the pagnetites contain nests and grains of coarse magnetite apparently assimilated from the deposits.

Widths indicated in trenches range from 35 feet in Trench No. 4 to 155 feet, including a pagmatite dike, in Trench No. 1.

It is obvious from a consideration of the mineral assemblage, texture and mode of occurrence that these are not representative of the fine-grained banded miliceous magnetites or taconites commonly found in the Precambrian. It is considered that they are contact replacement deposits probably replacing folded tuff horizons in the volcanic assemblage.

Minor folds found in Trench No. 2 indicate a westward plunge for the magnetite bodies probably in sympathy with the anticlinal structures suggested above.

A metallurgical study of chip samples from the trenches was made by Prof. S. E. Wolfe.*

RESULTS OF THE MAGNETIC SURVEY

The results of the magnetic survey are shown on the accompanying maps. The 1,000 feet to the inch map is a compilation of the 100 feet to the inch maps.

In view of the strength of the magnetic anomalies encountered over the magnetite formation which in many places exceeds 45,000 gammas, a contour interval of 5,000 gammas adequately expresses the significant magnetic features. On the 1,000 feet to the inch map the 30,000 and 20,000 gamma contours only are shown.

A comparison of magnetic results with geology in the vicinity of Trenches 1, 2 and 5 suggests that heavy mineralization at rock surface is indicated by anomalies in excess of 50,000 gammas.

The overall impression is that of a series of lenses, probably plunging westward, connected either by narrow necks of mineralization or by wider zones of lean material. Although the paucity of rock exposures makes it difficult to confirm this supposition geologically, several instances of relatively low readings over lean magnetite mineralization were noted: on sheet 5, line 2395 400°N a reading of 20,235 gammas was obtained near the end of an outcrop of magnetite-bearing schist; on sheet 1 at 114W on the baseline, 15,999 gammas on a magnetite-bearing schist outcrop;

*Wolfe, S. E. Reports for Tombill Gold Hines Limited July 31, 1957, August 19, 1957 at 118%, 200'S, 2,045 gammas over magnetite-bearing quartz-serioite schist; line 110%, 100'N 3,446 gammas over magnetite-bearing quartz-serioite schist.

Decrease in anomaly strength may also be caused by increasing depth of overburden or barren rock covering. The effect of increasing depth of overburden would appear to be demonstrated by the smooth anomalies with meximum readings of 28,000 gammas on lines 20%, 24% and 28% east of ¹A¹ 2one. These occur in a marshy bay.

On the other hand the smooth decrease in magnetic intensity at the west end of 'A' Zone from line 4520 to line 6615 is probably due to increasing overburden depth towards and over Boot Bay and also to increasing depth of rook cover down the plunge of the magnetite deposit.

Therefore, although the surface contacts of the higher-grade deposits are quite closely defined by the 30,000 gamma contour, it is obvious that definition of potential ore-limits will require detailed dismond drilling. This reasoning is supported to some extent by the results of diamond drill hole \$5. This was drilled directly beneath Trench 4 where the off-scale section of the anomaly is less than 50 feet wide and in which 55 feet of mineralization was found. The drill hole, which intersected the mineralized zone about 250 feet below surface, contained a mineralized section 119 feet in length.

The 1,000-foot compilation shows 74 anomalies in excess of 30,000 gammas. Many of these are too small and isolated to be of much economic significance but a considerable number lie in four continuous series.

The first series extends for some of miles eastward from Boot Bay within a virtually continuous anomaly of over 5,000 gammas.

The second series extends for some 0,000 feet in an arc southward from the western side of Boot Bay apparently around the nose of the large fold structure described above. This series subraces three long, narrow snowlise and several minor ones.

The third series trends eastward from the English River for about 5,000 feet.

In south group a fourth series over 5,000 feet in length occurs in the western end of the claim group.

'A' Zone is featured by an off-scale anomaly extending for 5,000 feet eastward from Boot Bay across sheets 5 and 6. Widths between 30,000 gamma contours range from 25 feet to 160 feet. At the west end, the anomaly forks. The width across the two arms and covering a probable horse of barren or low-grade material is 500 feet. The anomaly continues eastward for an additional 2,000 feet with reduced intensity which may be due to depth of overburden in a swampy bey covering the eastern portion of the zone. This zone dips steeply to the north.

'E' Zone lies about 2 miles east of 'A' Zone on sheet 9 and consists of a rather irregular zone in excess of 20,000 gammas with six peaks over 50,000 gammas in a length of 2,800 feet. The dip here is vertical to steeply south.

'B' home begine about & mile east of 'E' lone on sheet 11 and extends for some 3,800 feet. In a section at least 400 feet long in the middle of the zone intensity is from 8,000 to 11,000 gammas. This again occurs beneath a swamp and may be due in part to overburden depth. Widths between 30,000 gamma contours range from 35 to 100 feet. The dip appears to be steeply north.

D' Zone at the extreme west end of north group is rather irregular (magnetically) and complexiwith possible widths of mineralization indicated by outcrops of up to 150 feet or more. No doubt some of the mineralization across this width is lean and siliceous. Dips appear to be steeply south or vertical.

101 Zone is located on the eastern portion of south group. Here a series of 4 peaks in excess of 30,000 gammas occur in a length of about one mile. Widths between 30,000 gamma contours range from 25 to 100 feet. The dip is to the north.

CONCLUSIONS AND RECOMMENDATIONS

The geomegnetic survey has indicated the presence of several long anomaly zones considered to be caused by magnetite with pyrrhotite and pyrite replacing an altered tuff band.

Magnetic intensity over 50,000 gammas indicates approximately the boundaries of mineralization at rock surface. However, there are several instances of lower grade material which are attended by intensity considerably less than 50,000 gammas. Depth of overburden or barren rock cover may also account for decreases in anomaly strength.

The grade and tonnage potential of the property must therefore be determined by correlating diamond drilling with magnetic data. Detailed diamond drilling will be required for accurate tonnage-grade estimation.

It is recommended therefore (1) that each of the five zones (¹A¹ to ¹E¹) mentioned above be tested by at lesst one diamond drill hole to obtain a fresh and complete sample across each zone for metallurgical tests, (2) that the series of anomalies be investigated by widely-spaced holes to determine the extent and the amount of variation of mineralization along the series, (3) that ¹A¹ Zone be drilled in somewhat more detail,

X

with holes on approximately 1,000-foot centres, to determine depth extent and enable an approximate grade/tonnage estimate to be made.

Respectfully submitted,

Low and Morrow

Toronto, Ontario October 11, 1957

John H. Low

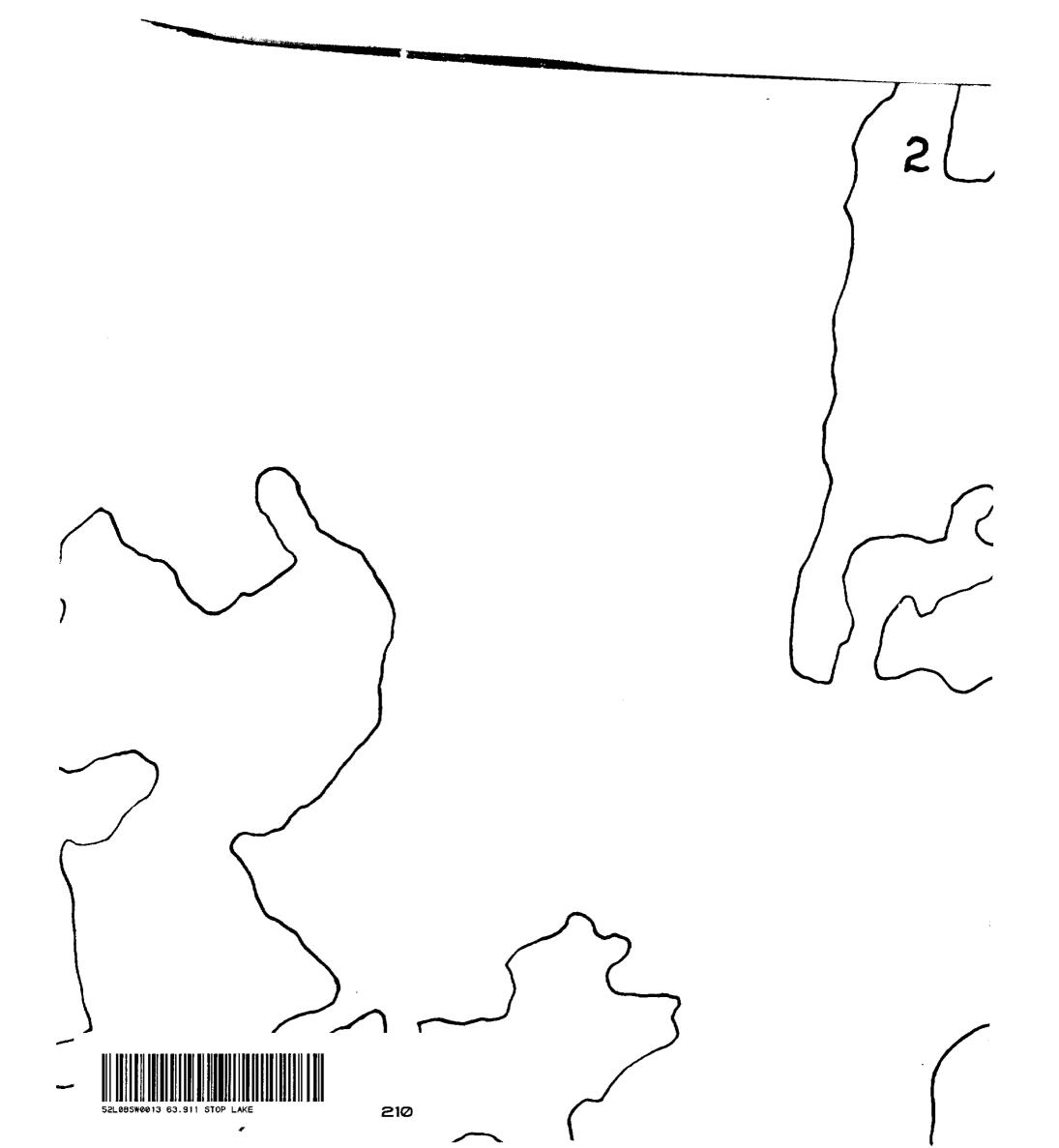
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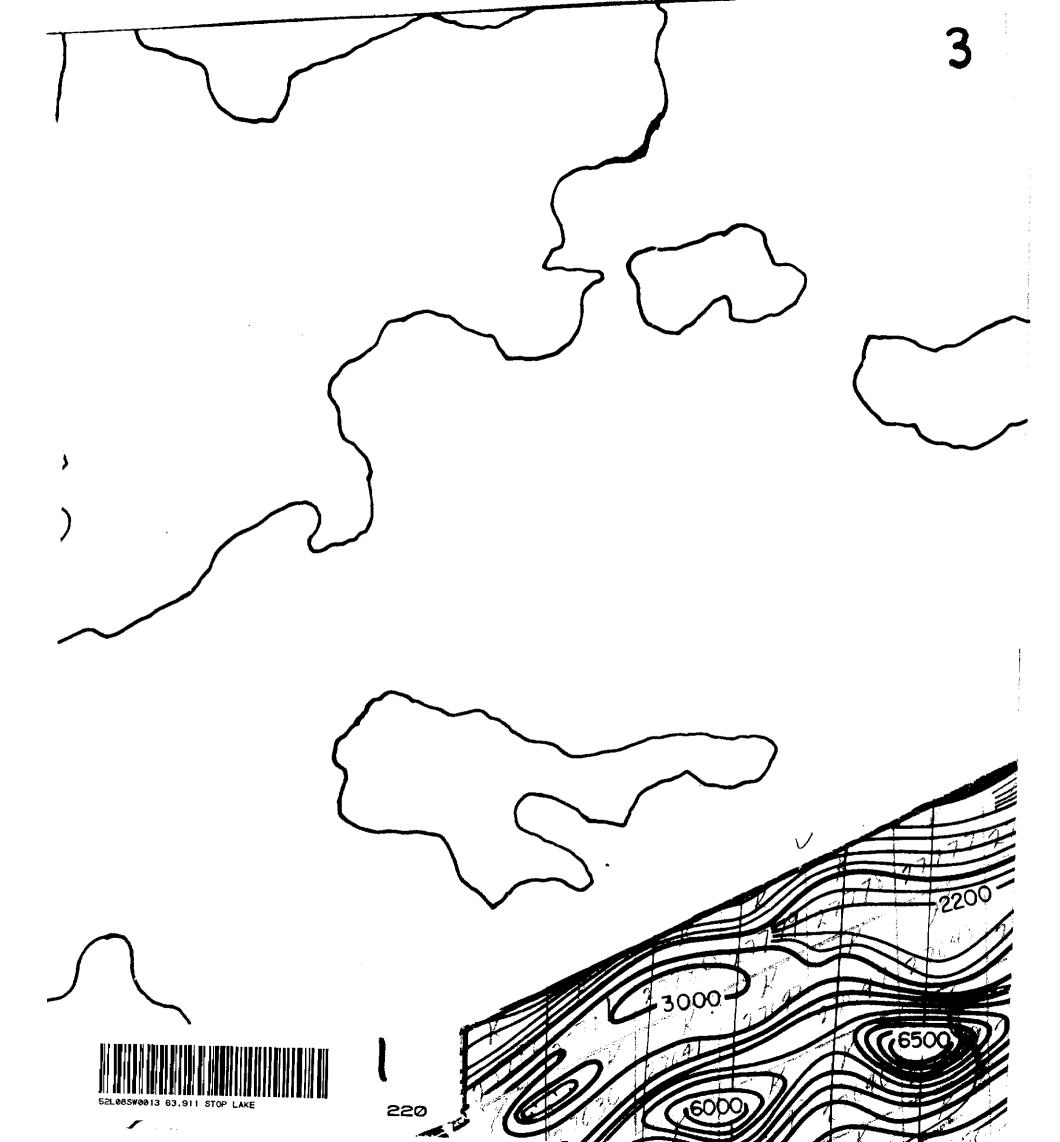
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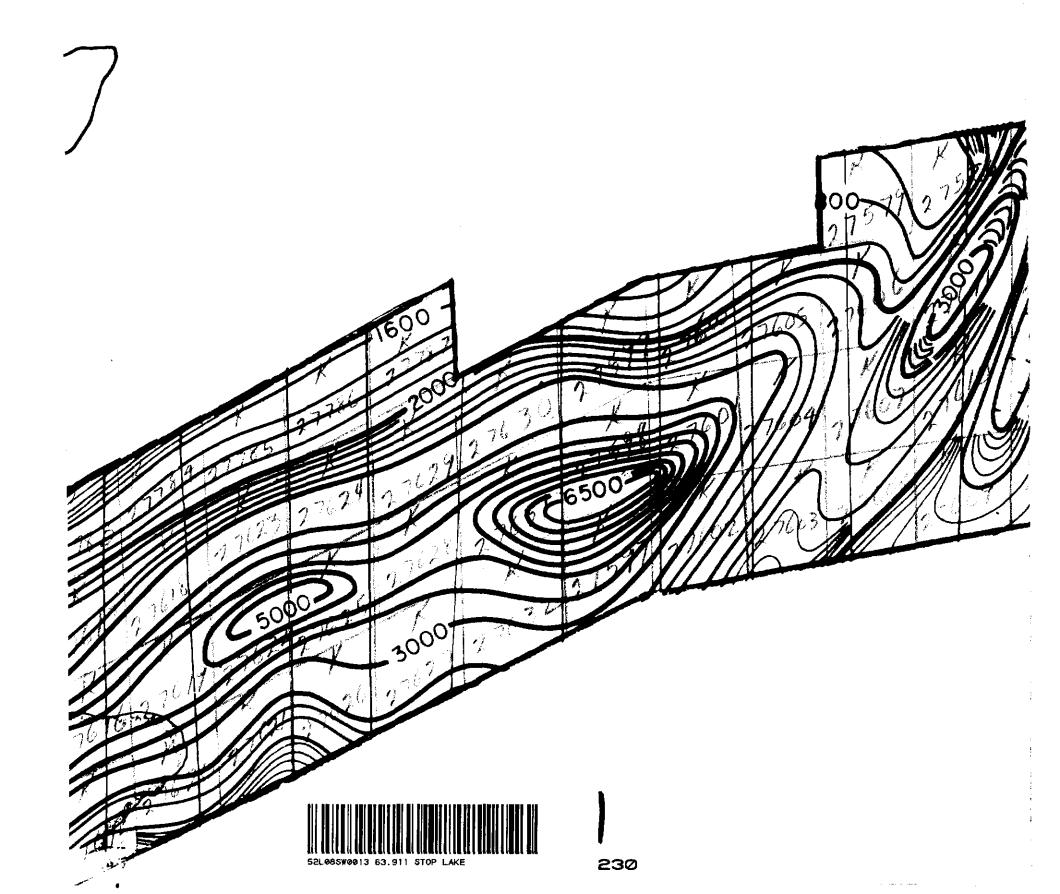
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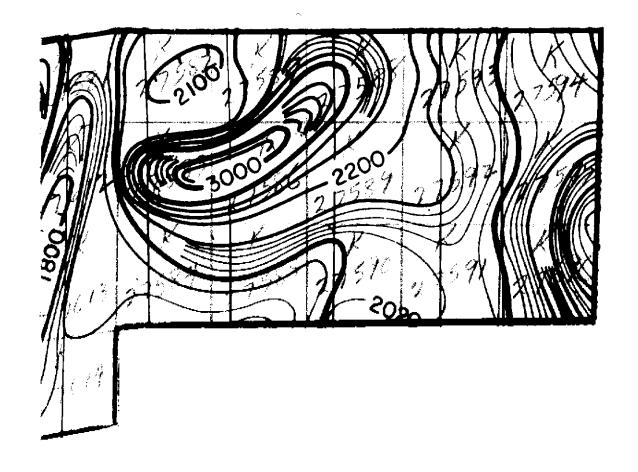
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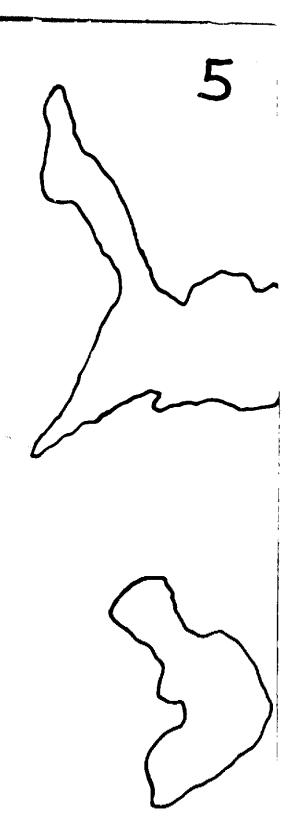
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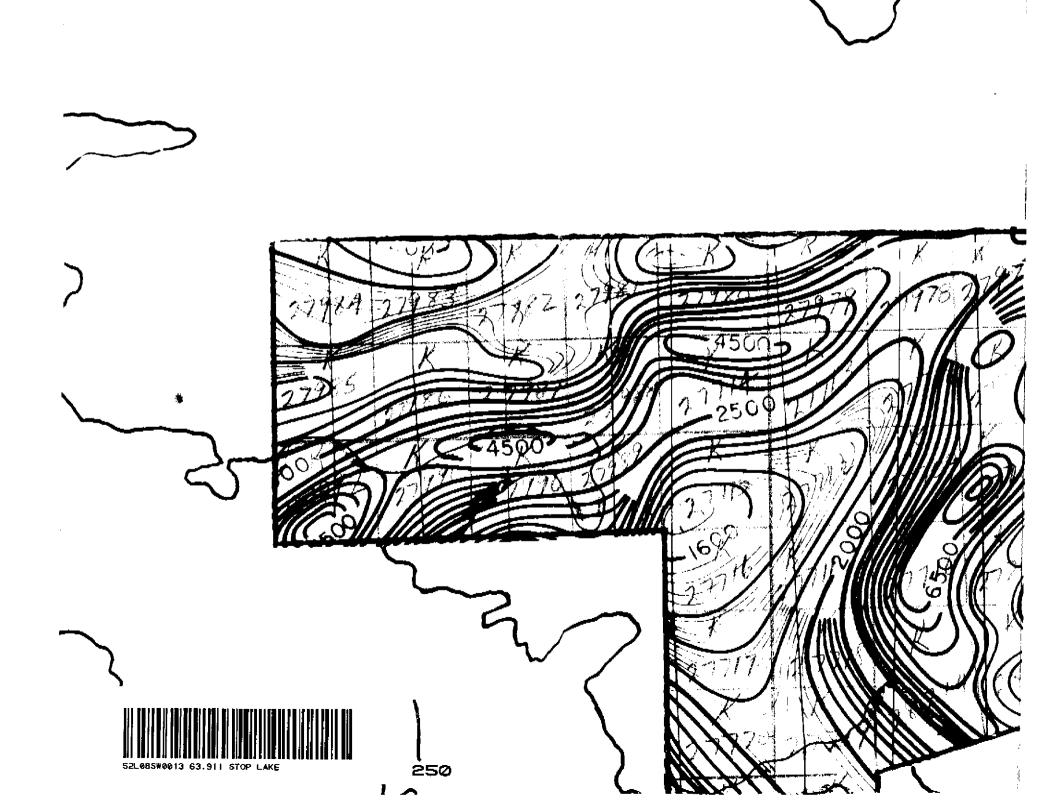


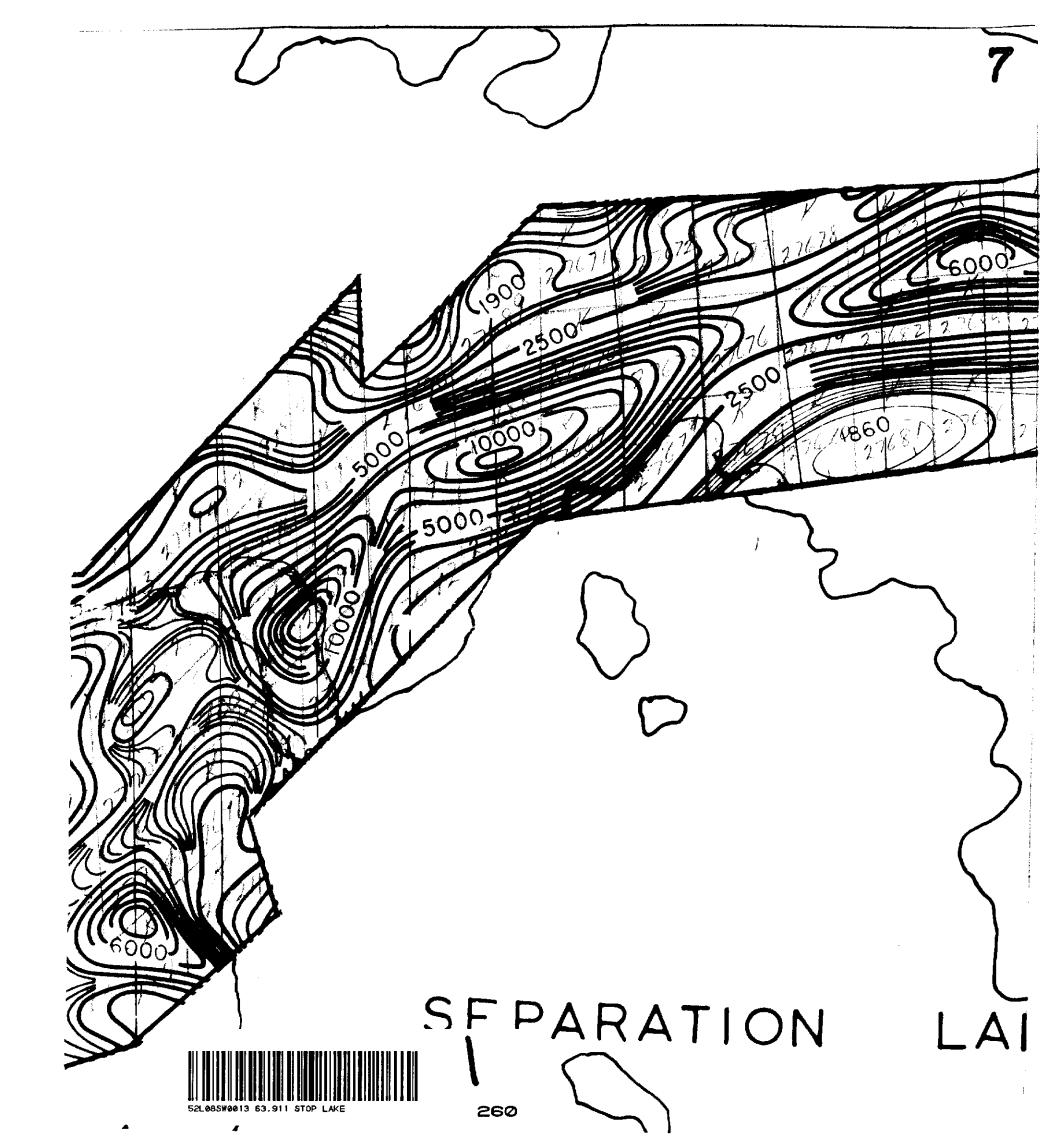


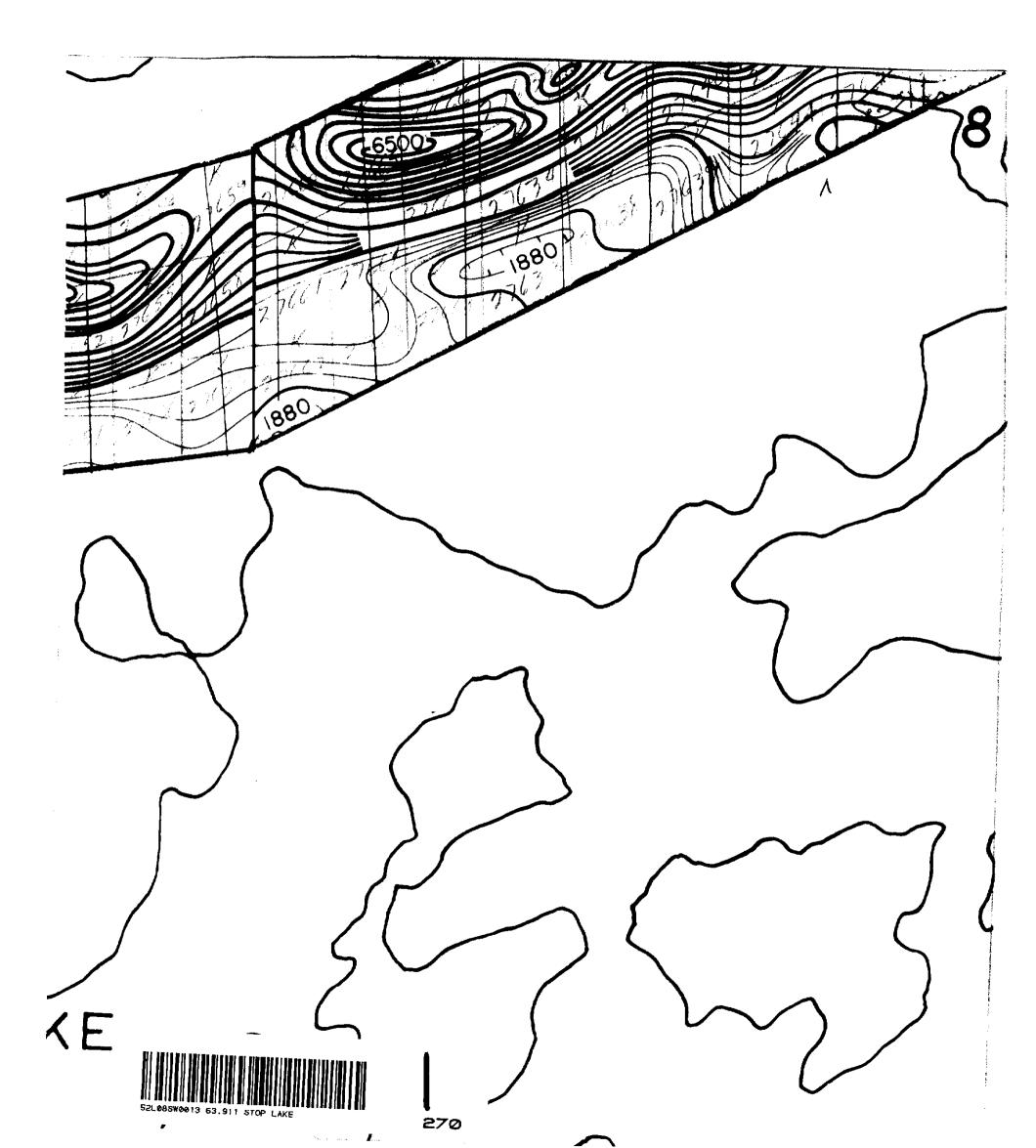


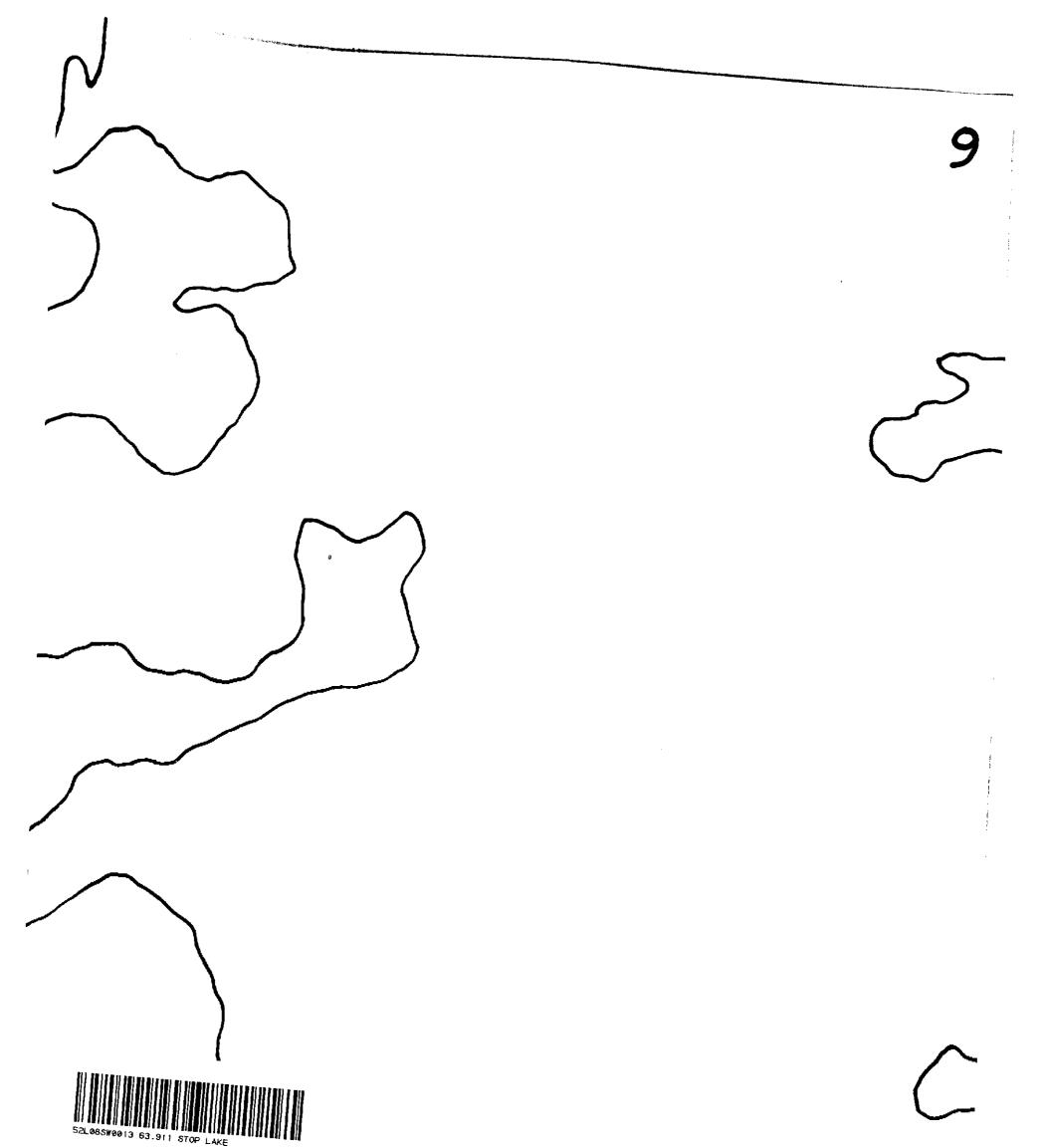
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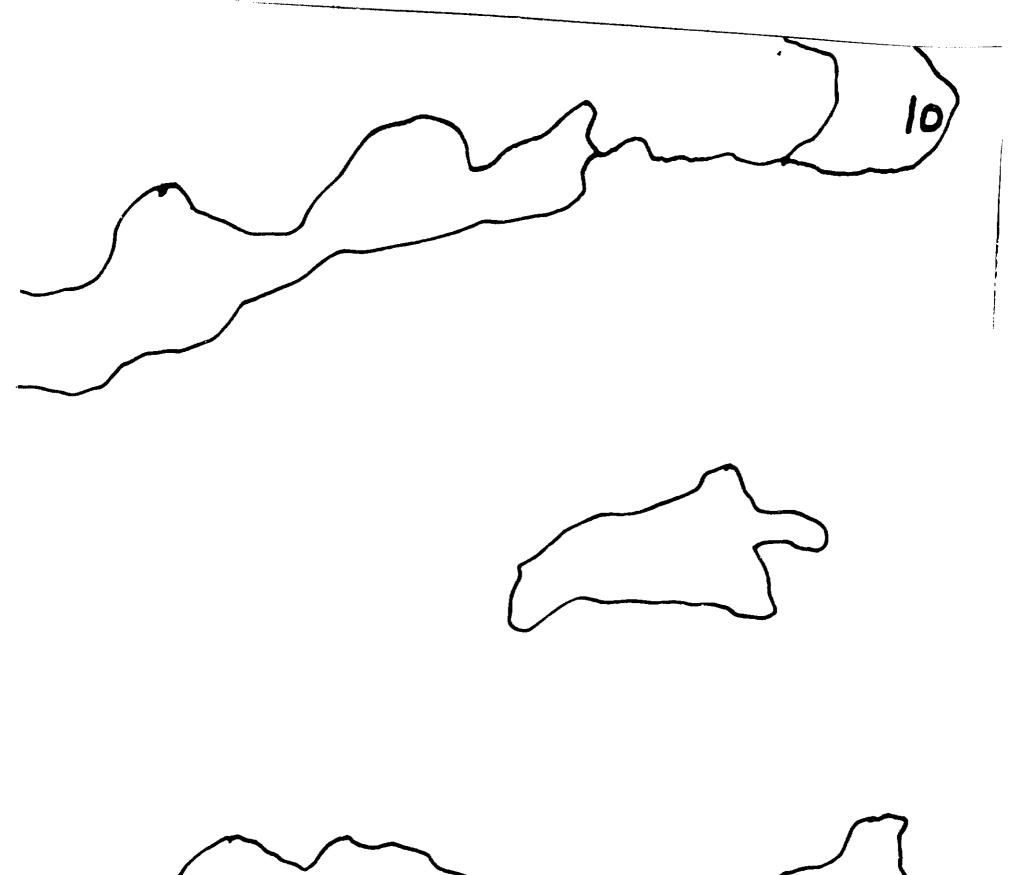


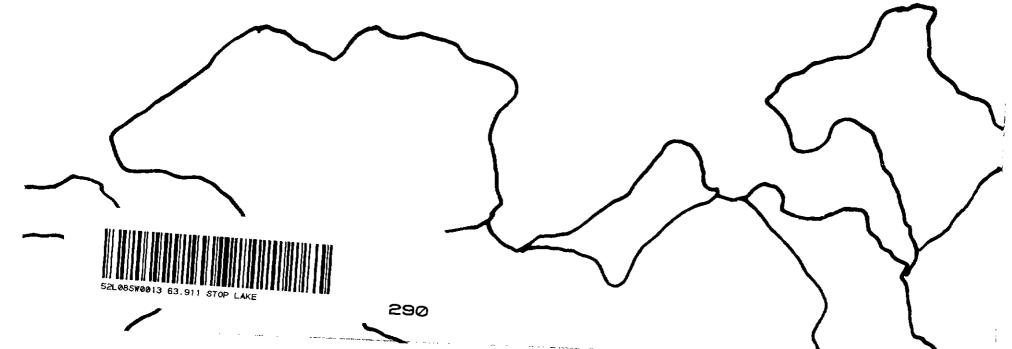






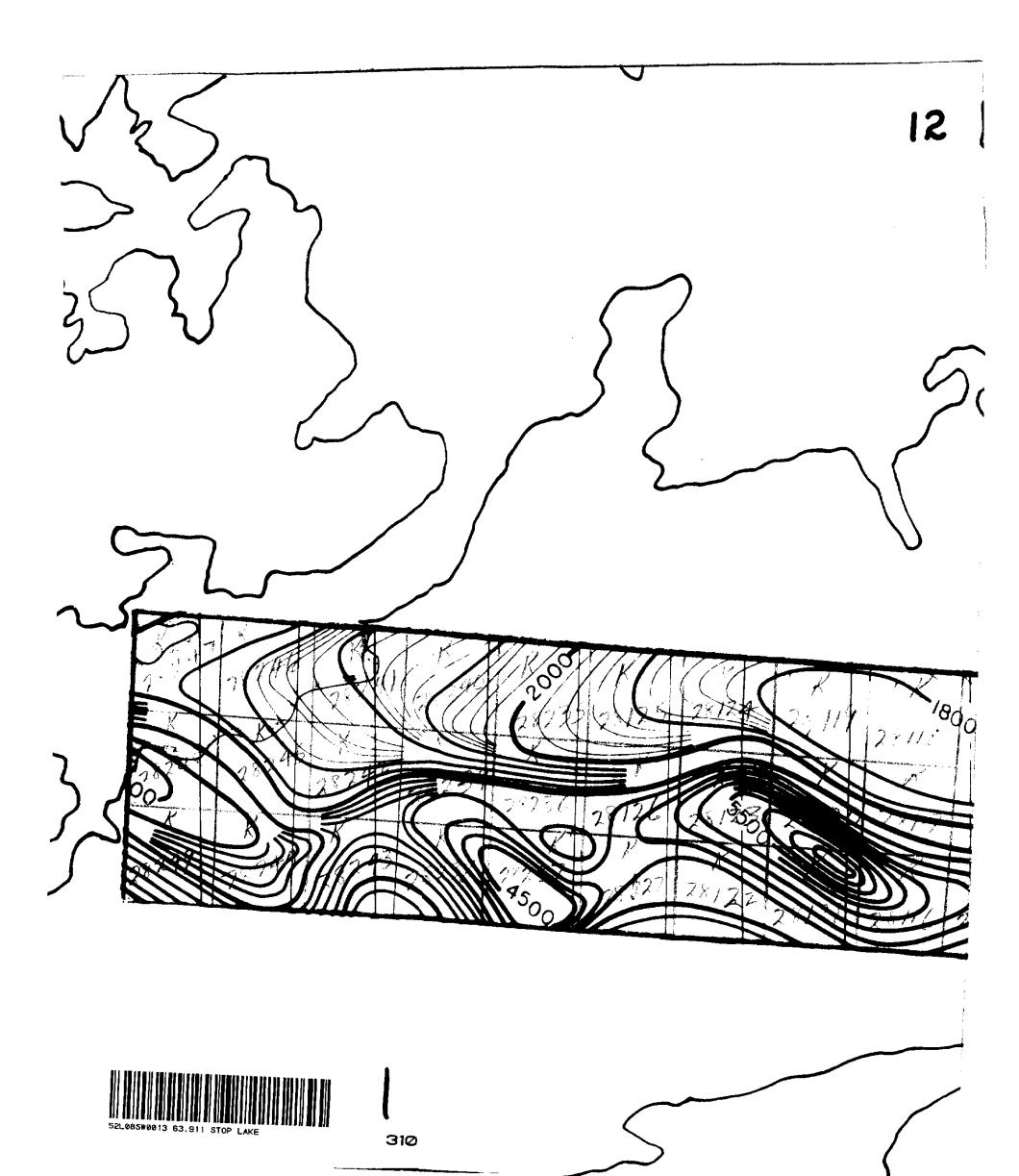


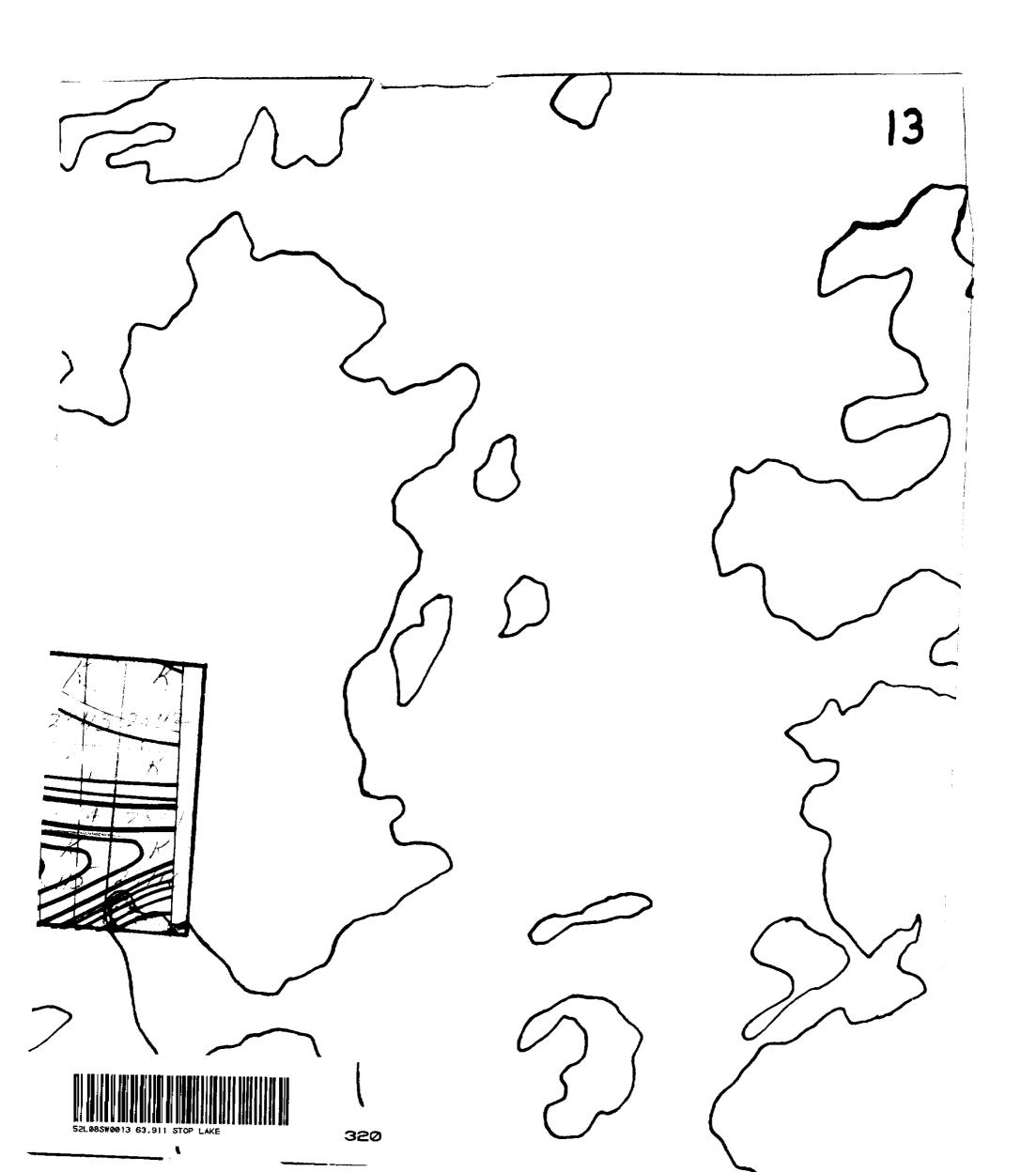


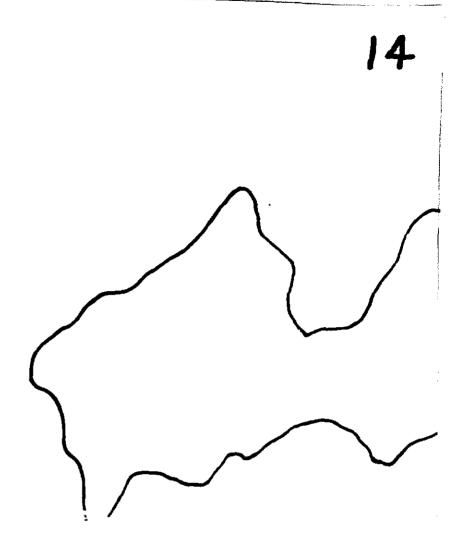




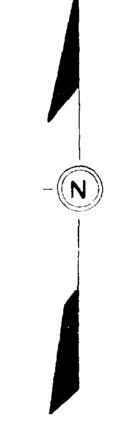
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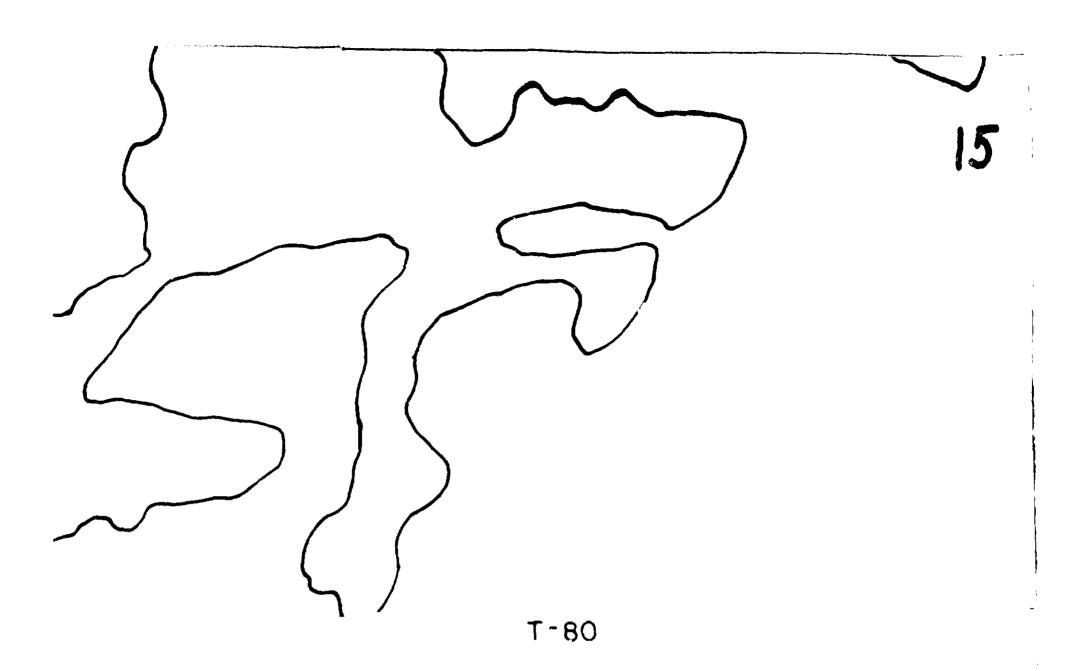


T-54



MEAN TERRAIN CLEARANCE
TRAVERSE INTERVAL....
CONTOUR INTERVAL....
BASE INTENSITY.....

^ ~ ROXIMATE



AIRBORNE MAGNETOMETER SURVEY

ENGLISH RIVER AREA



ONTARIO

340

500 FEET

...1/4 MILE

TOMBILL GOLD MINES LIMITED

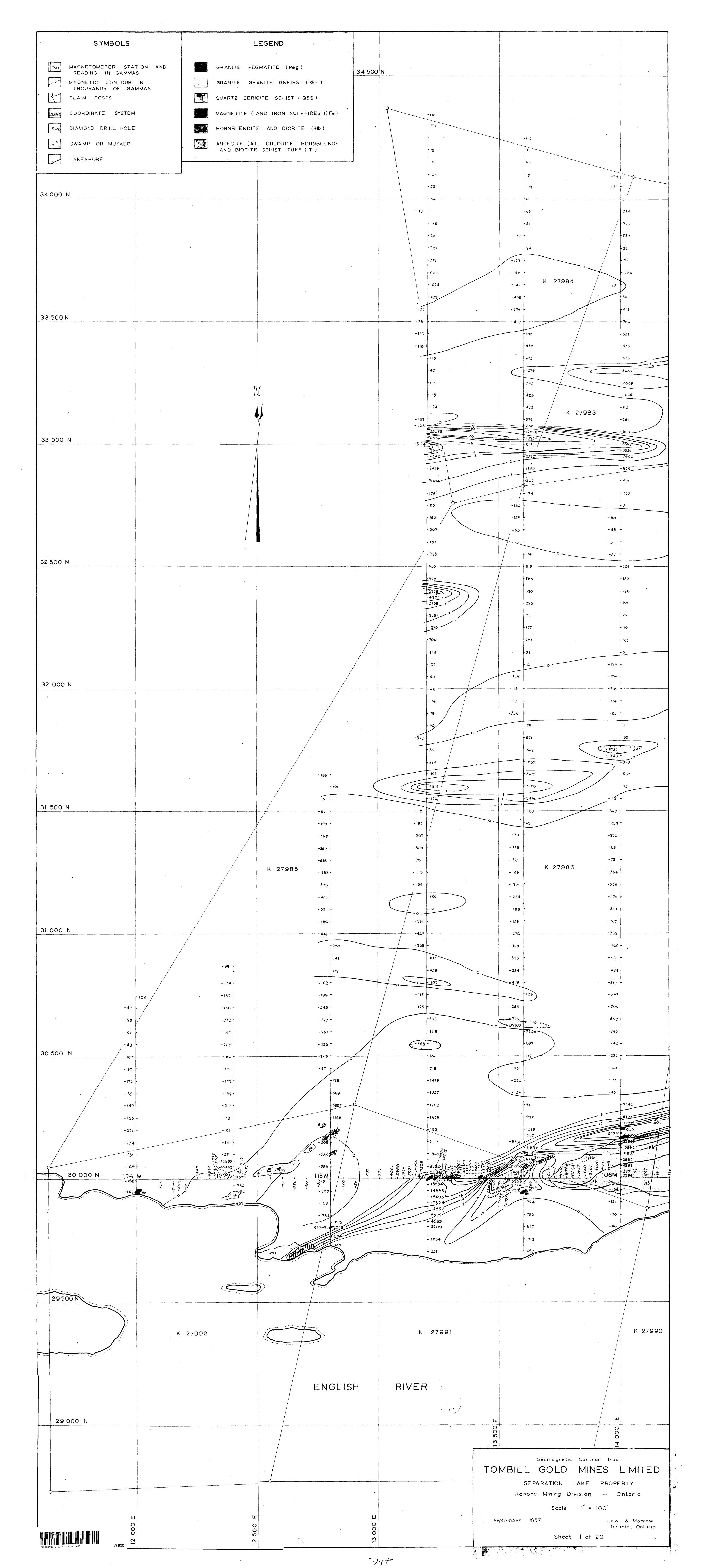
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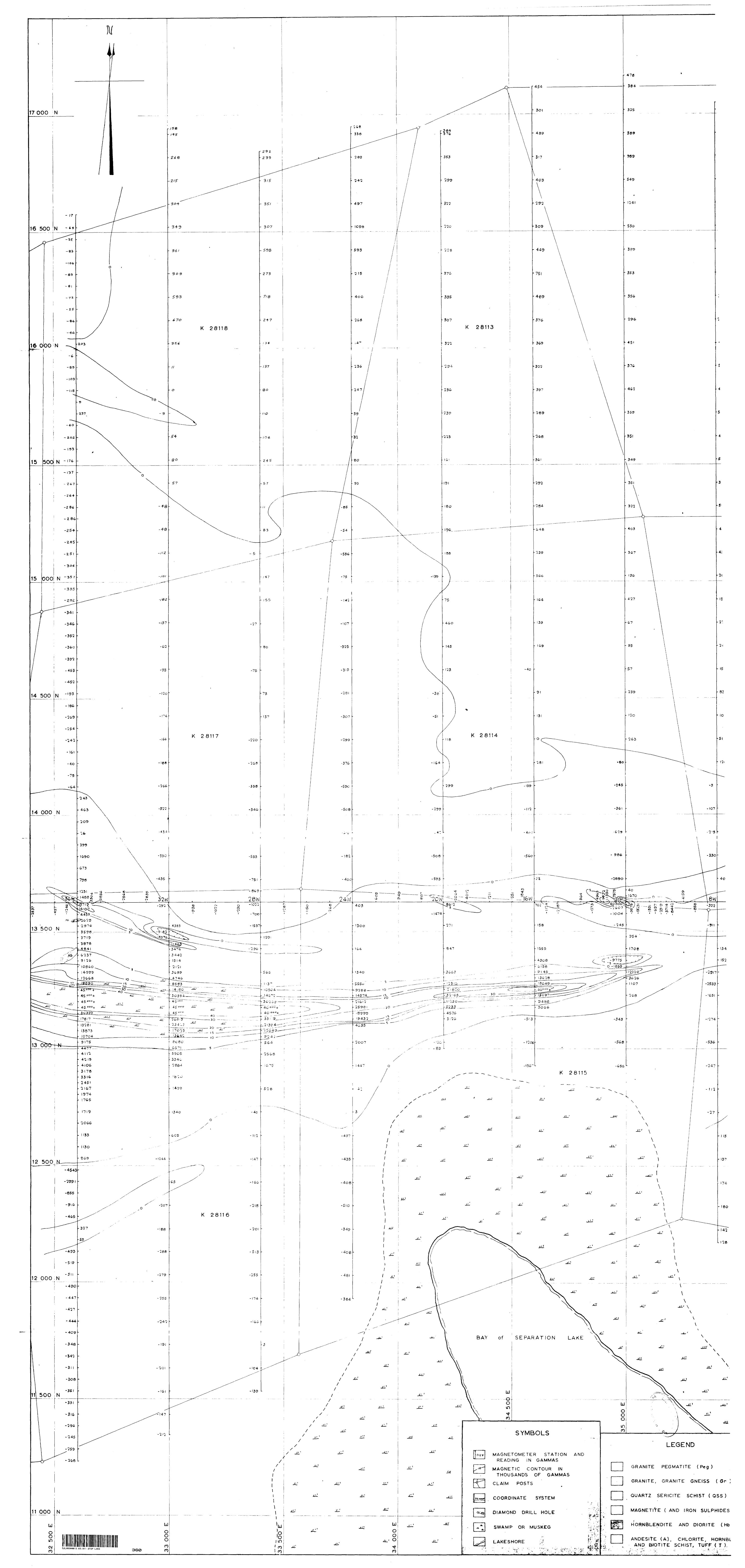
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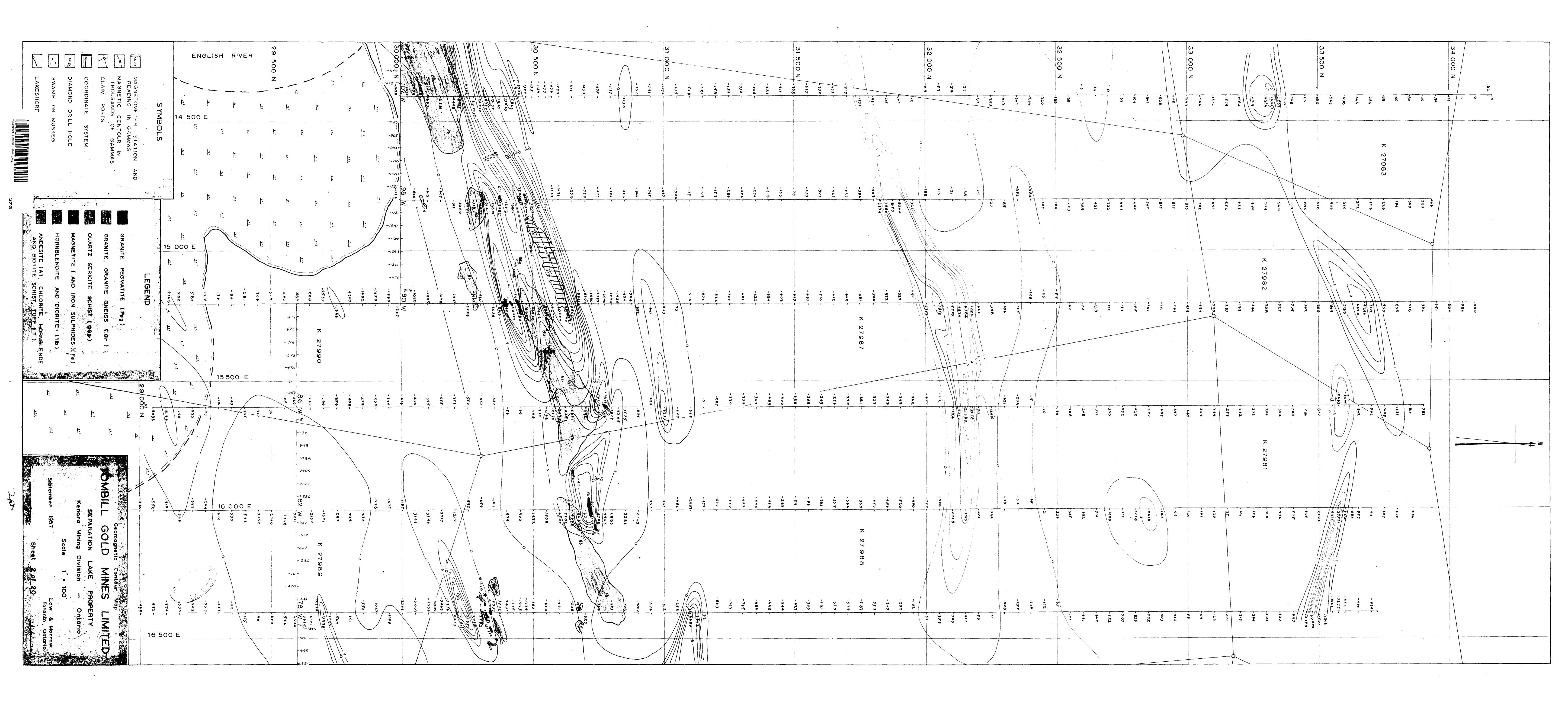
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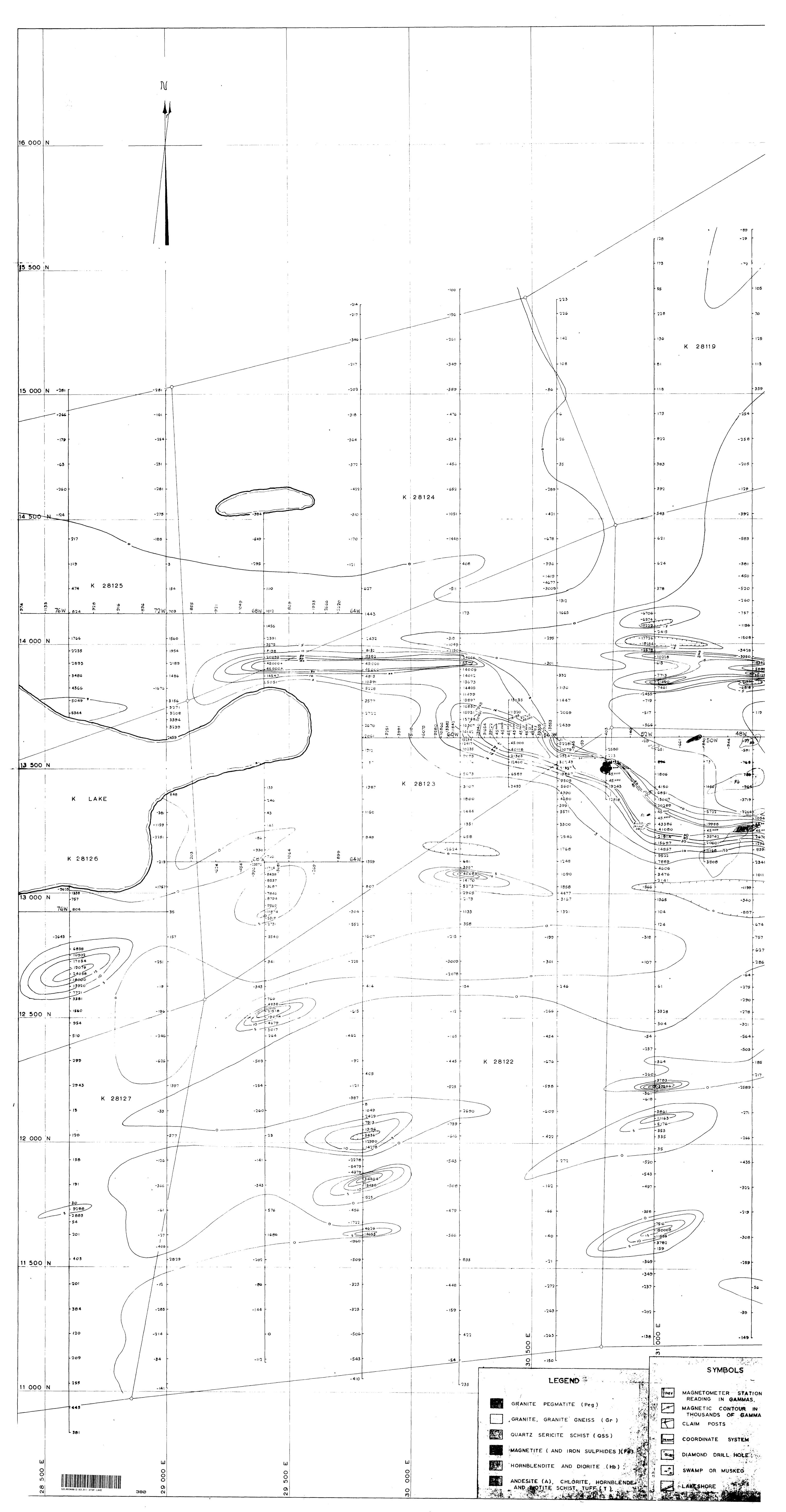
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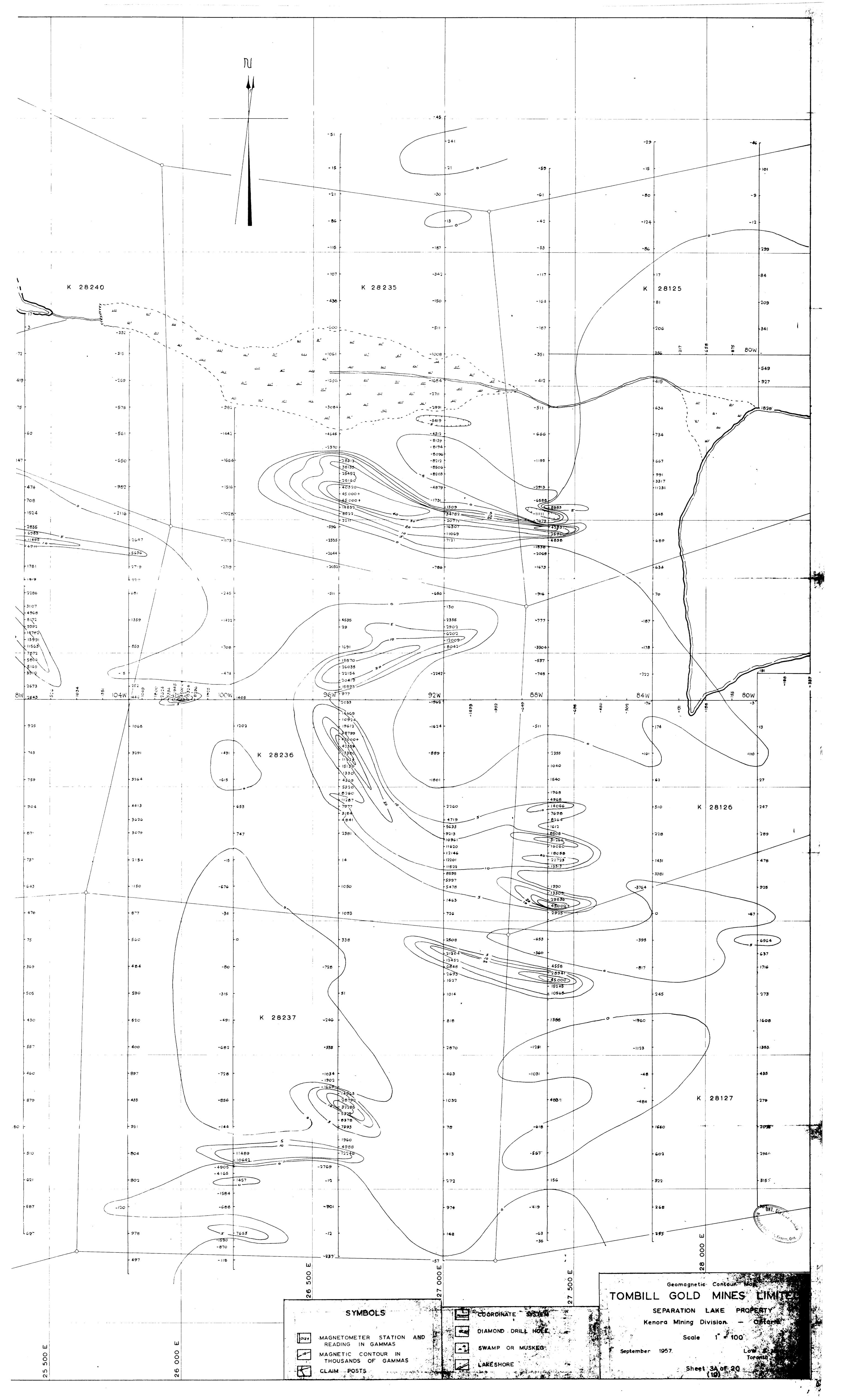
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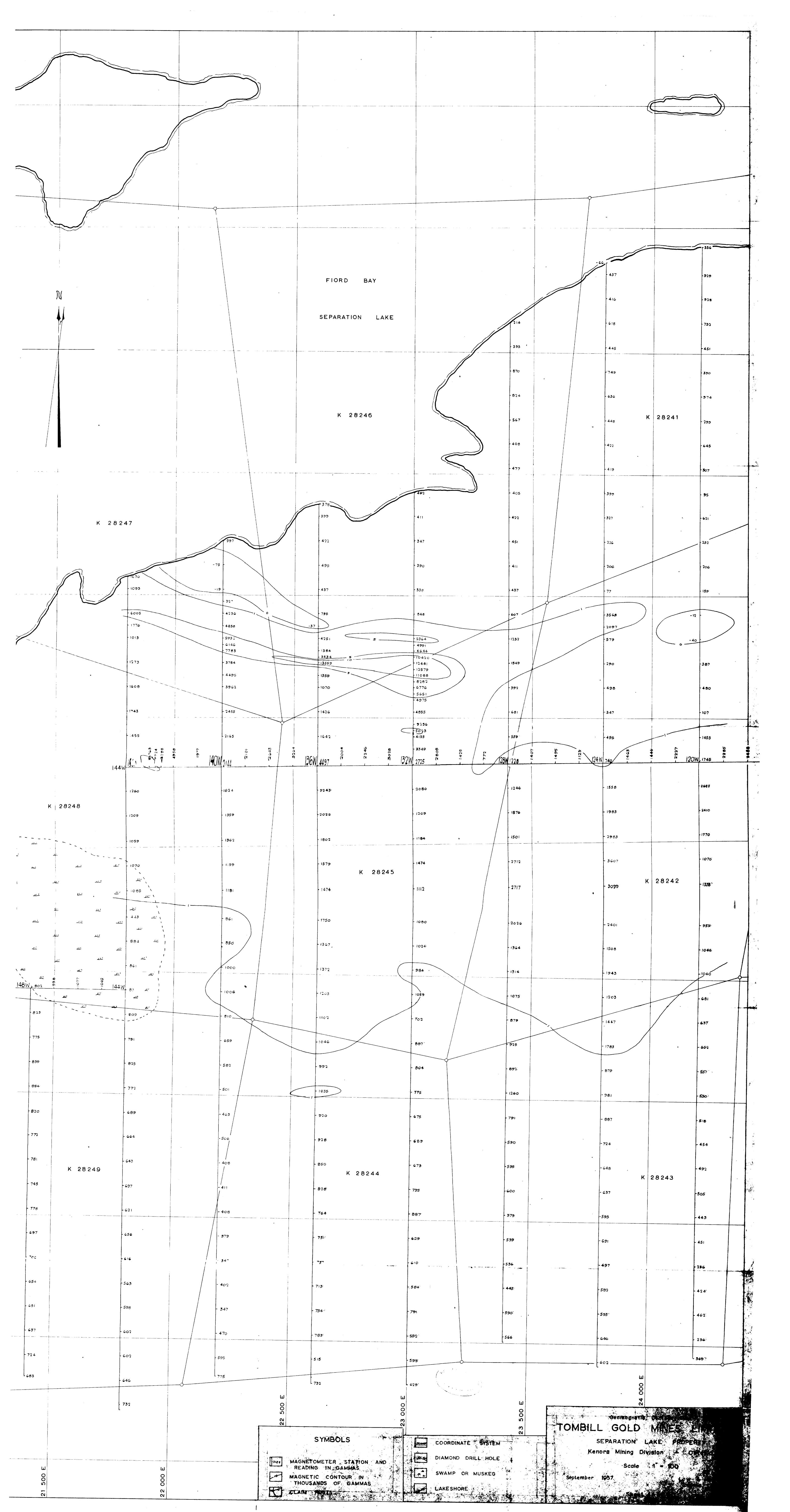


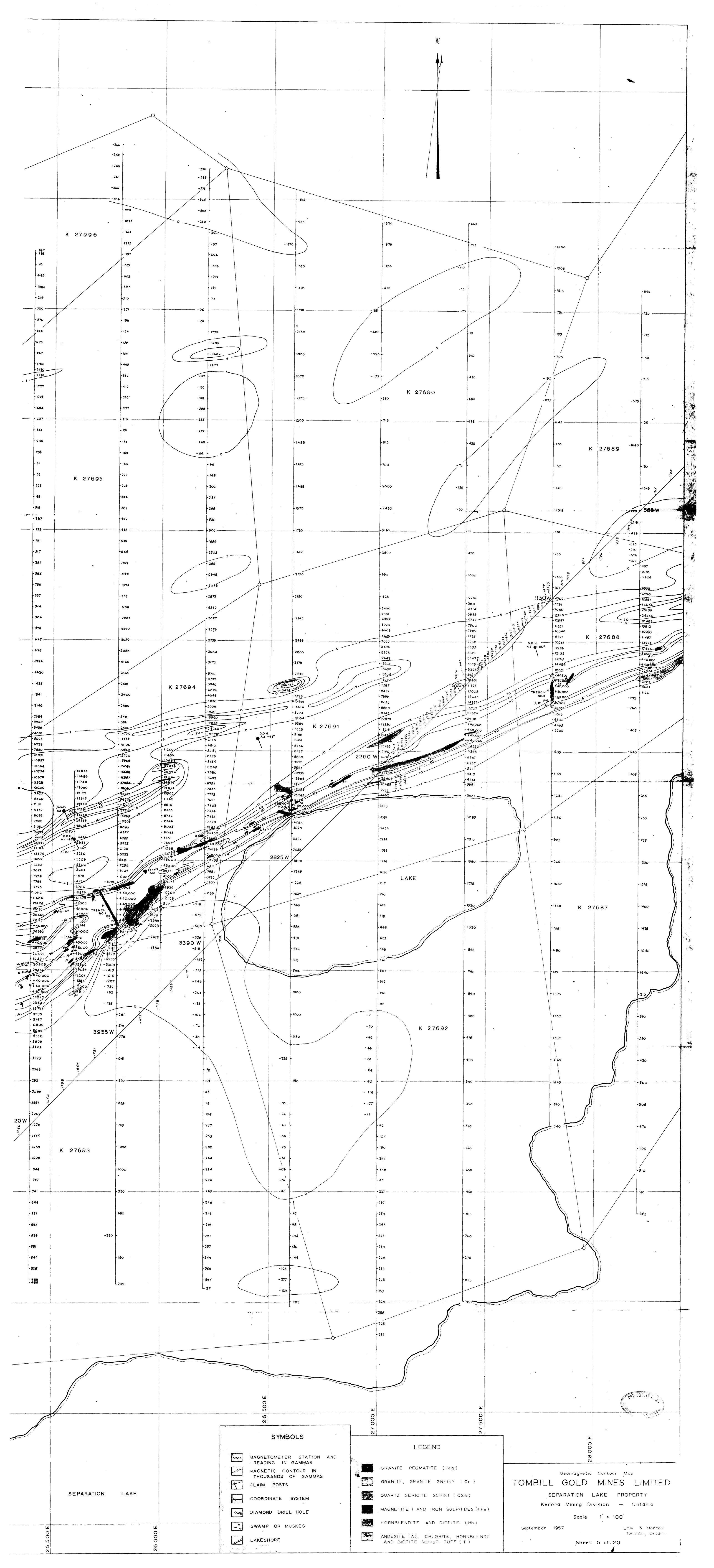


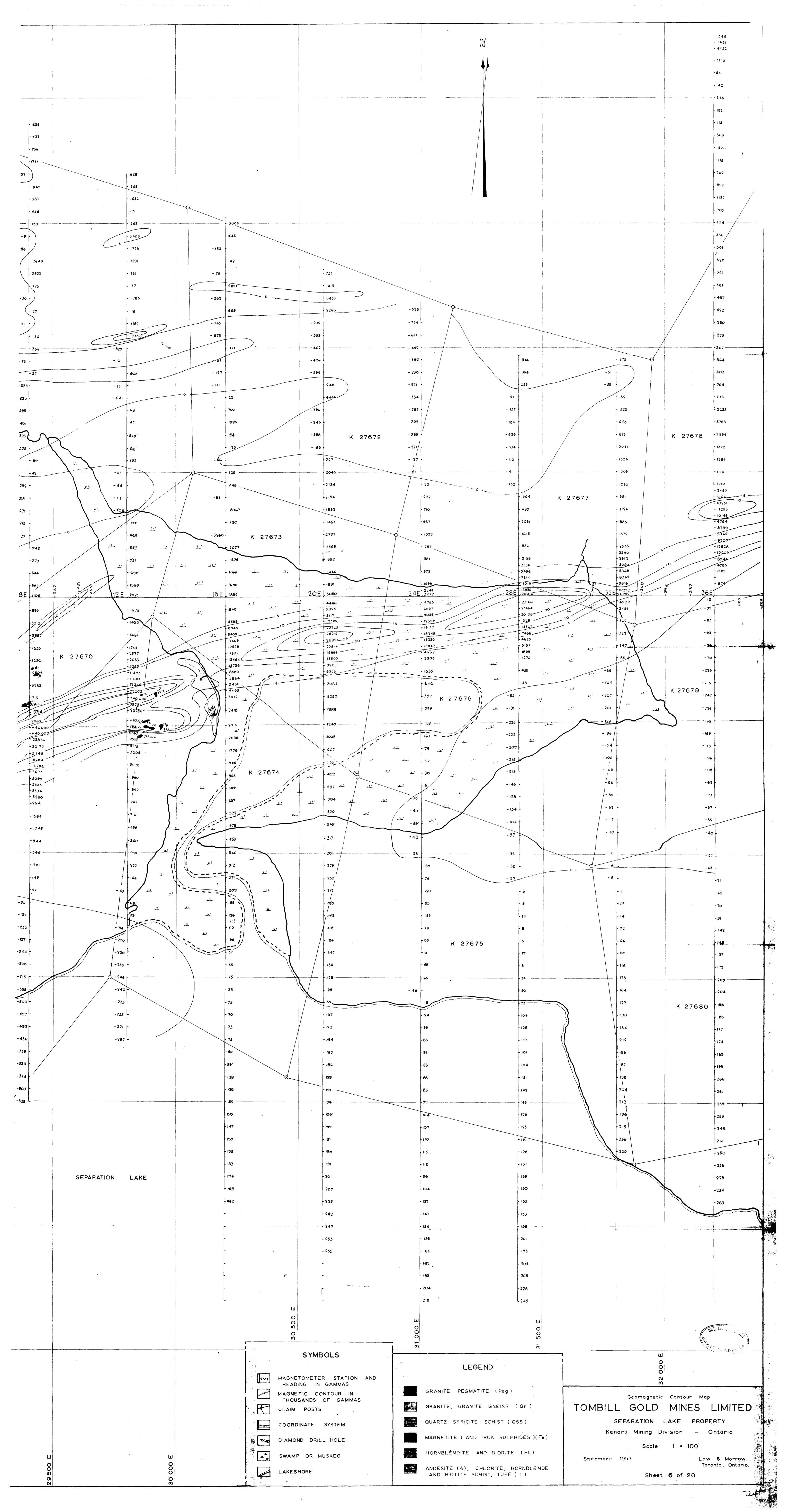


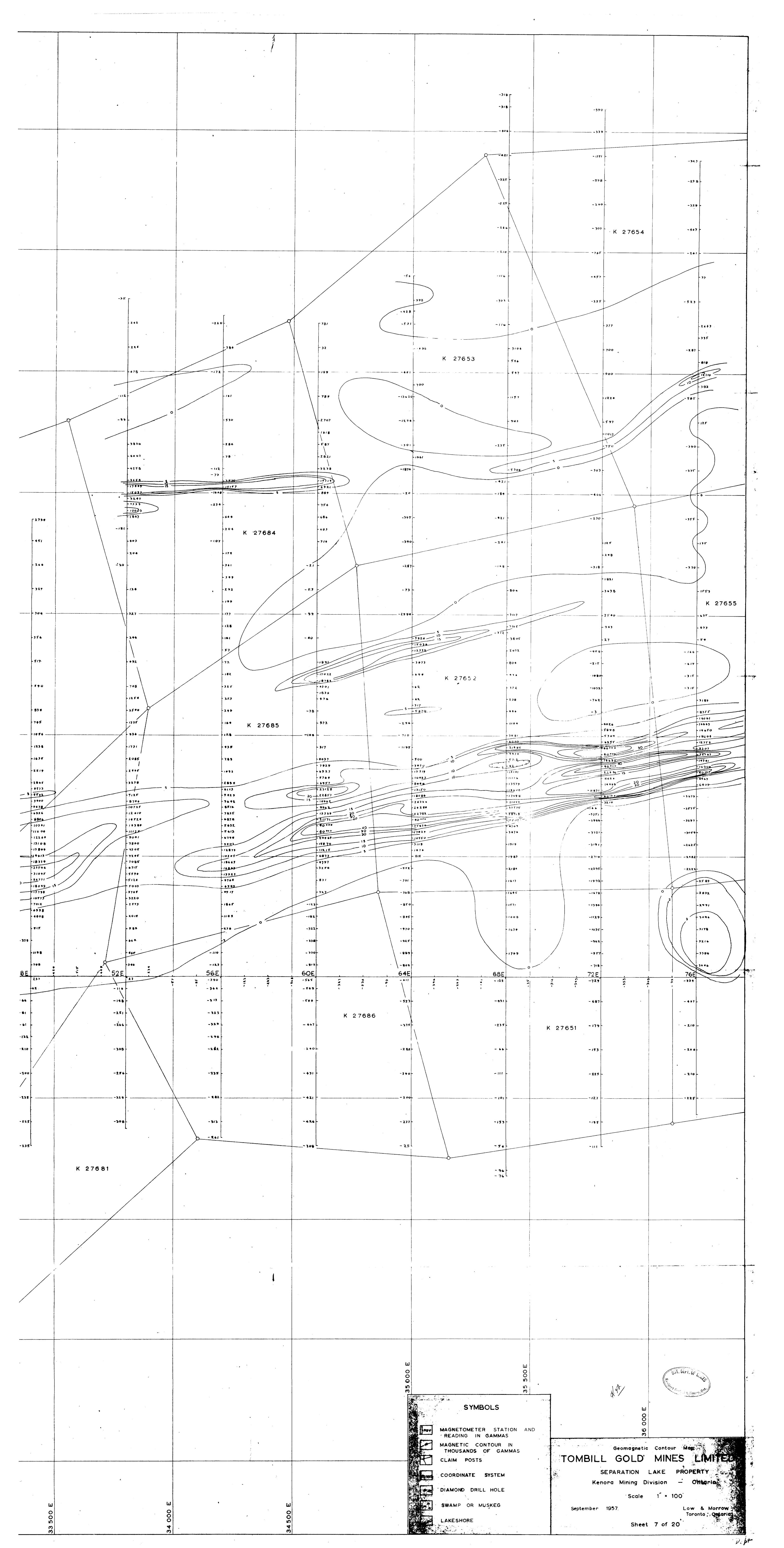


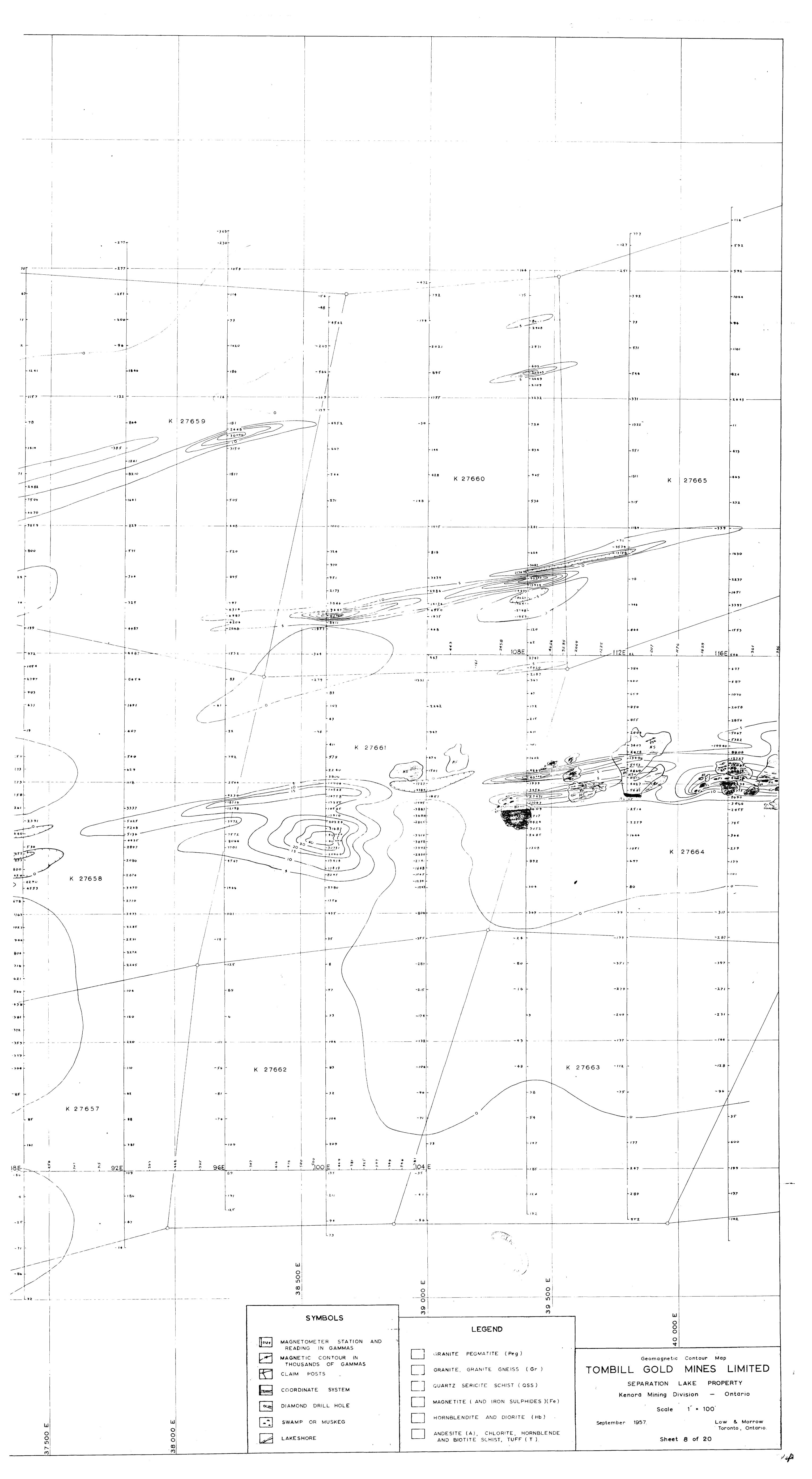


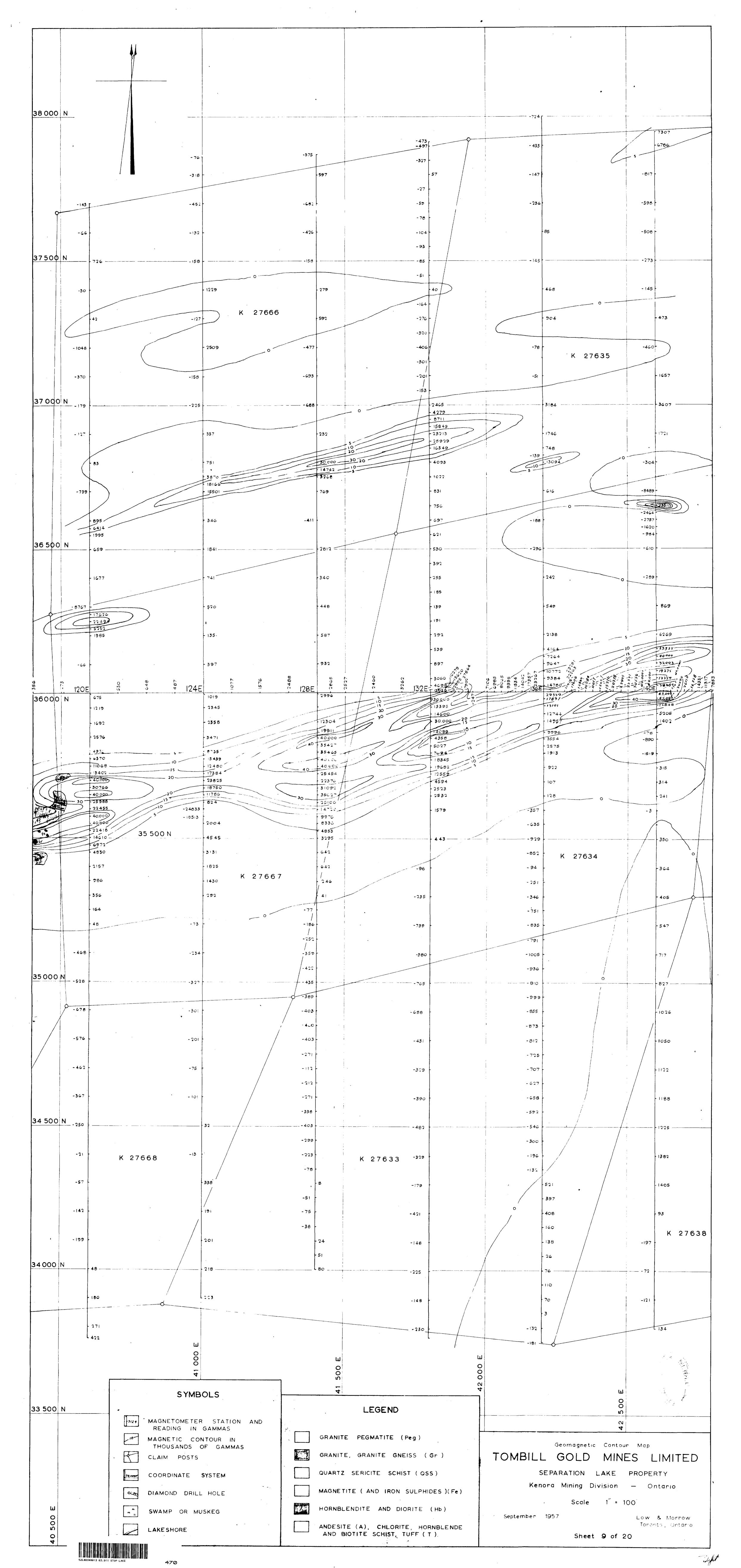


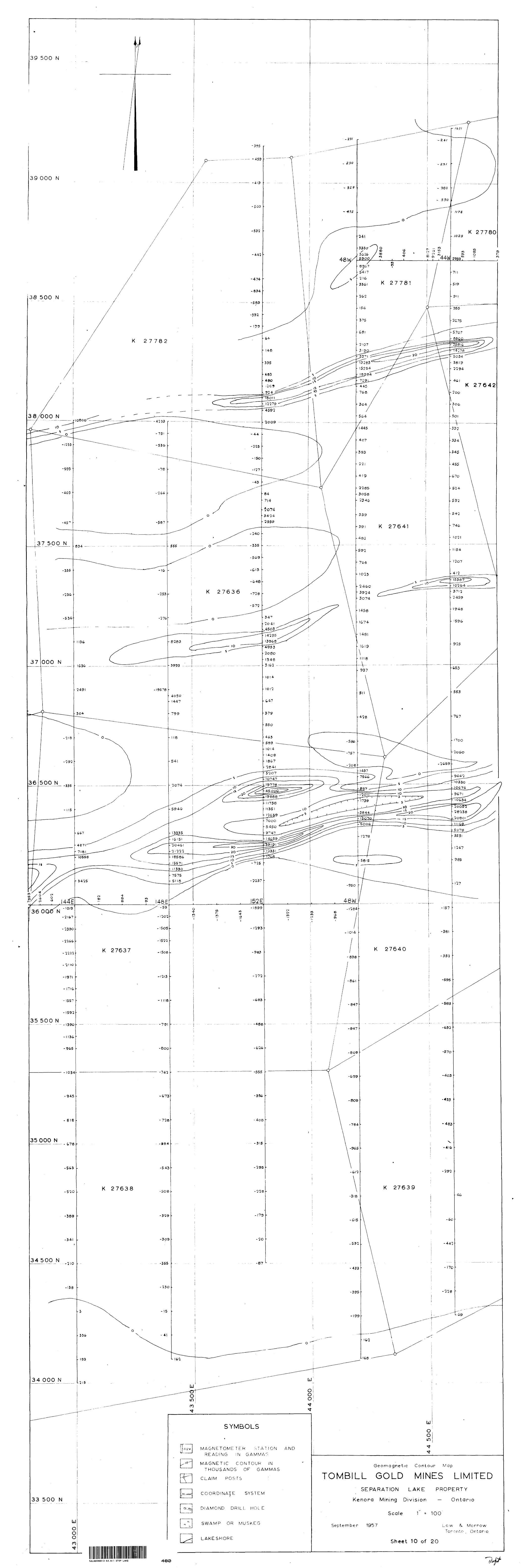


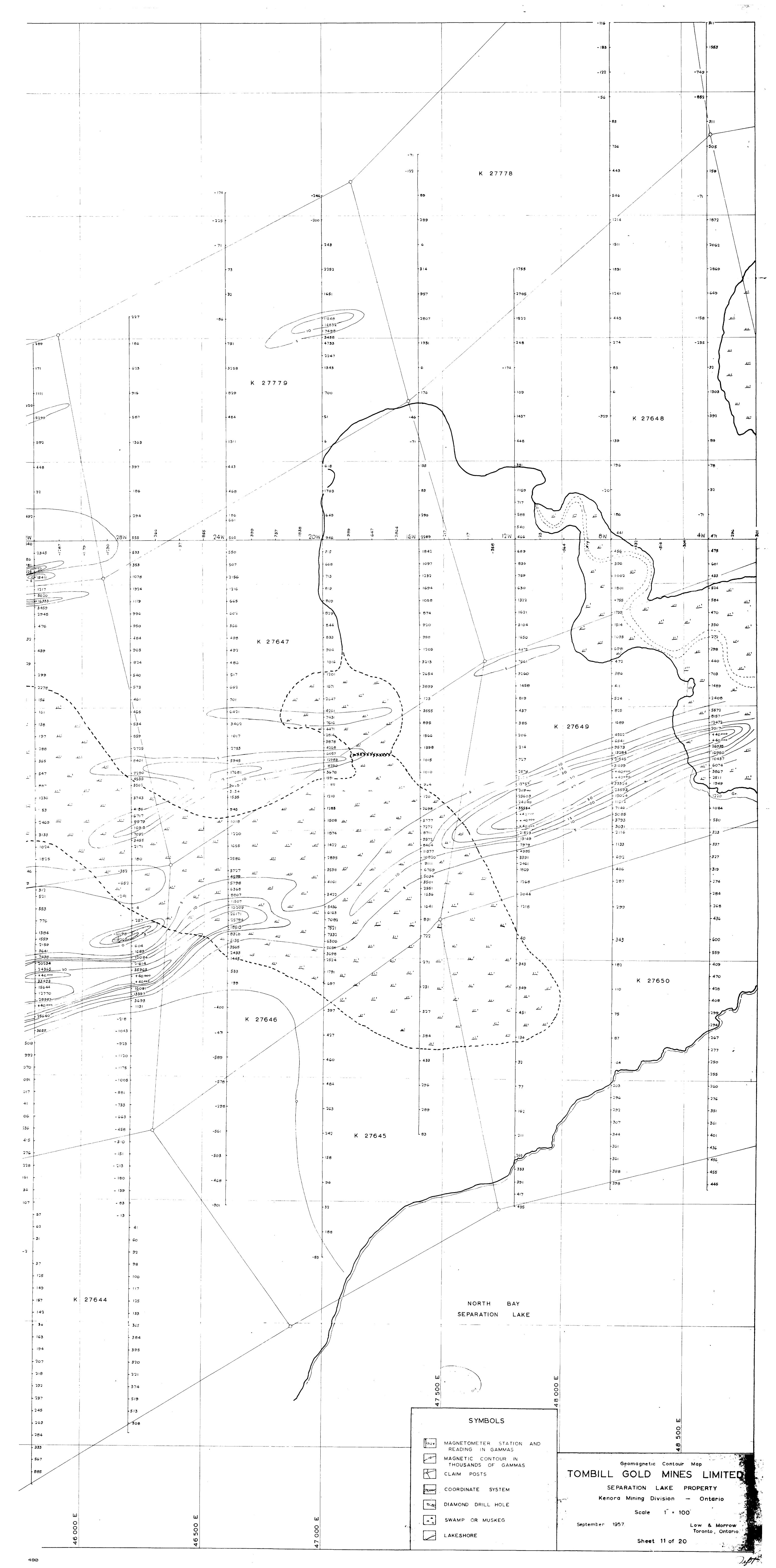


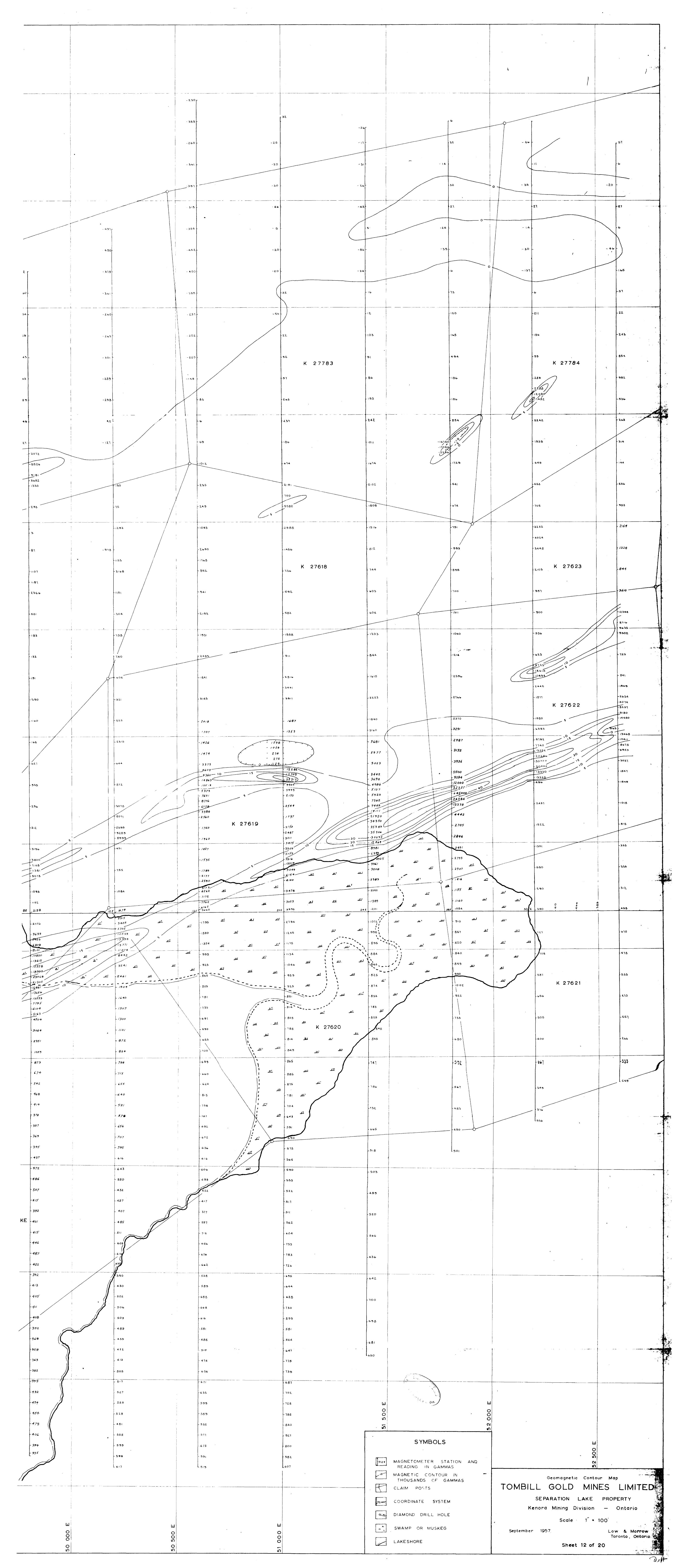


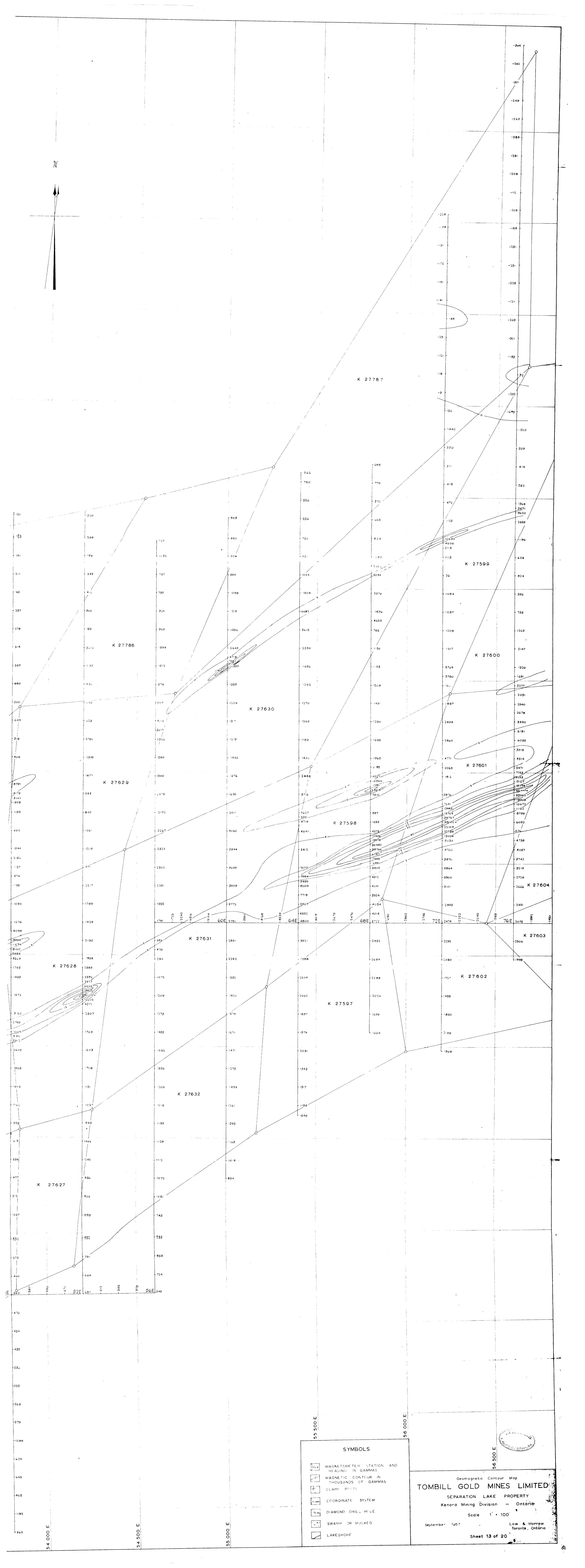


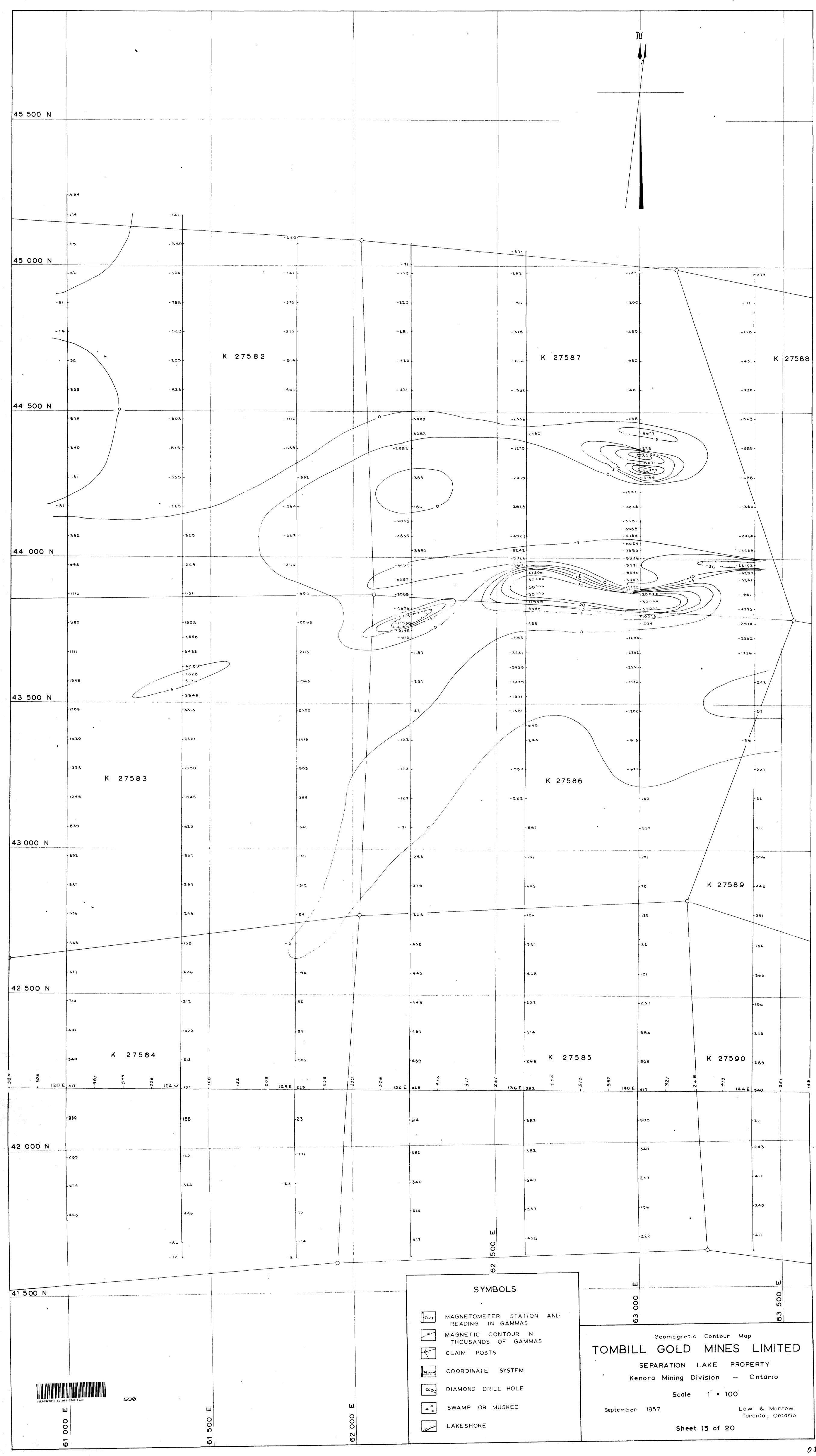












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