SUMMARY TECHNICAL REPORT
ONTARIO PROSPECTORS ASSISTANCE PROGRAM
OPAP FILE NUMBER OP93-489

MICHAEL E. CHUTE

JANUARY 27, 1994

DATE: January 27, 1994

NAME: Michael E. Chute

APPLICANT(S): Michael E. Chute

CHANGES TO PROPOSED PROJECTS:

PROJECT 1: KAKAGI LAKE-SCHISTOSE LAKE

This project was initially planned for 20 days in the field. Forty five days were spent prospecting, mapping, gridding, sampling, stripping and trenching. The entire proposed area was not prospected as work focused on the newly discovered alteration and mineralization. Three claims covering 36 claim units were staked as a result of this work.

PROJECT 2: CAMERON LAKE-STEPHEN LAKE

This project was initially planned for 25 days in the field. Significant new discoveries in the other project area warranted a higher priority, therefore time alloted to this project was spent on the Kakagi Lake-Schistose Lake project. After field examinations of both project areas, David Laderoute, Staff Geologist, Kenora Resident Geologists Office, concured with this decision. This decision was discussed with the Incentives Office on August 11, 1993.

PROJECT 1: KAKAGI LAKE-SCHISTOSE LAKE

LOCATION AND ACCESS

The project area (Figure 1) is located in the Kenora Mining Division, 22 kilometers east of Nestor Falls. The area is accessible by the Pipestone-Trilake road which begins 5 kilometers north of Nestor Falls on Highway 71. Permits to use this road are required and are available from the Ministry of Natural Resources, Kenora. Travel within the area is facilitated by numerous skidder roads.

CLAIM GROUP AND STATUS

The property consists of claim numbers 1161620, 1161621 and 1161622 (Figure 2) and contains 36 standard 16 hectare units. The property was staked on July 18-21, 1993 by Michael E. Chute (Licence No. H12896). The claims were recorded by him, in his name, on August 9, 1993.

WORK DONE

Geological Surveys: 12 man days mapping at 1:2400 and 1:120 to determine the character and extent of alteration and mineralization associated with the contact between the Katimiagamak Group and the Kakagi Lake Group.

Stripping/Trenching: 4 man days hand stripping with pick and shovel to expose mineralized zones located during prospecting and geological mapping.

Prospecting: 25 man days traditional prospecting to locate new zones of mineralization. Fifty seven grab samples and 4 continuous chip/channel samples were taken (7220-7280). Assay results are contained in Appendix 1. Sample descriptions are recorded in Appendix 2.

Surveying/Gridding: 4 man days establishing control for datailed geological mapping.

REGIONAL GEOLOGY

The project area lies within the Kakagi-Rowan Lakes greenstone belt (Blackburn et al. 1991) of the Wabigoon Subprovince (Figure 3). The area is underlain by the Katimiagamak Group and Kakagi Lake Group (Johns 1985).

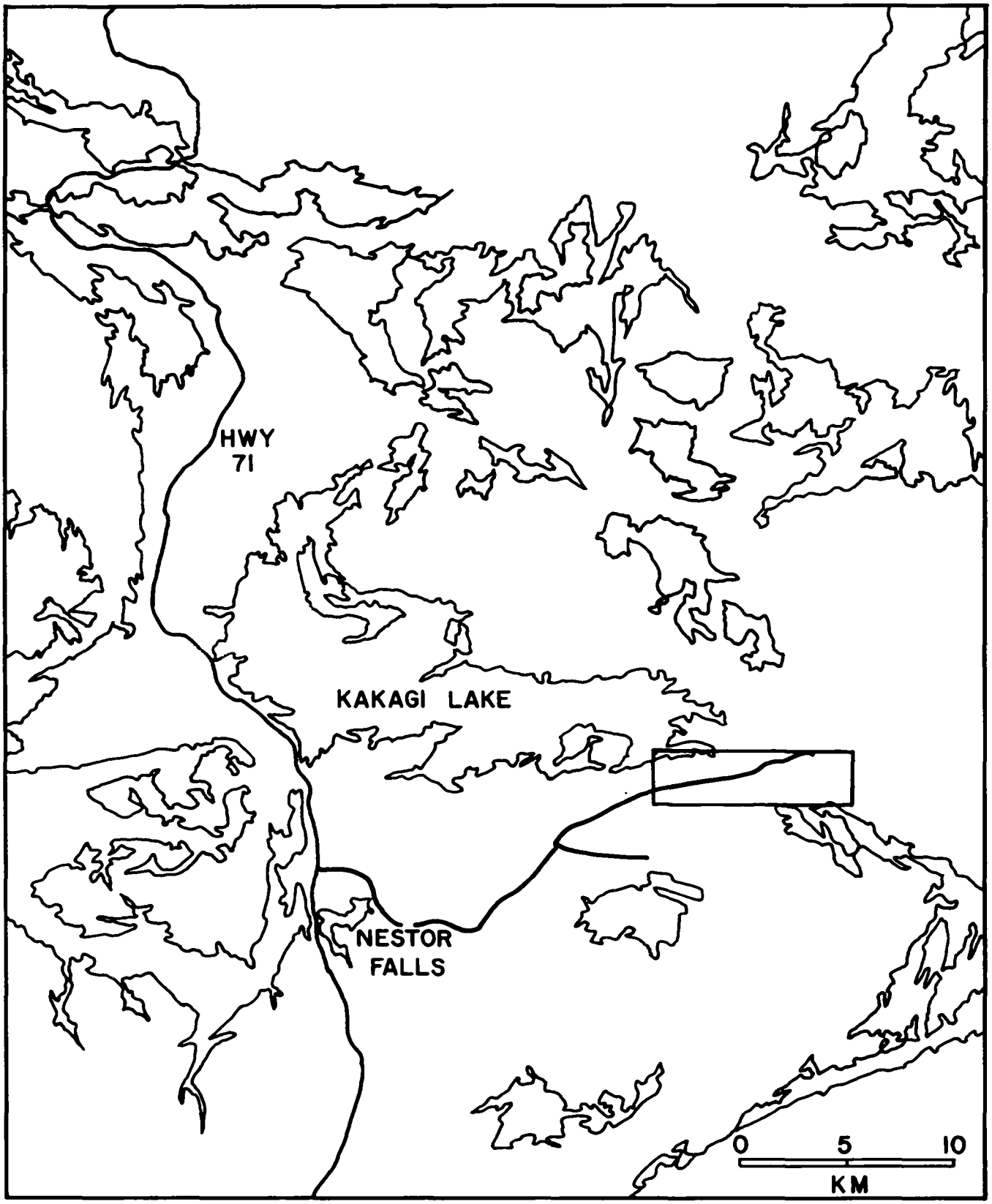

FIGURE 1: Location and Access

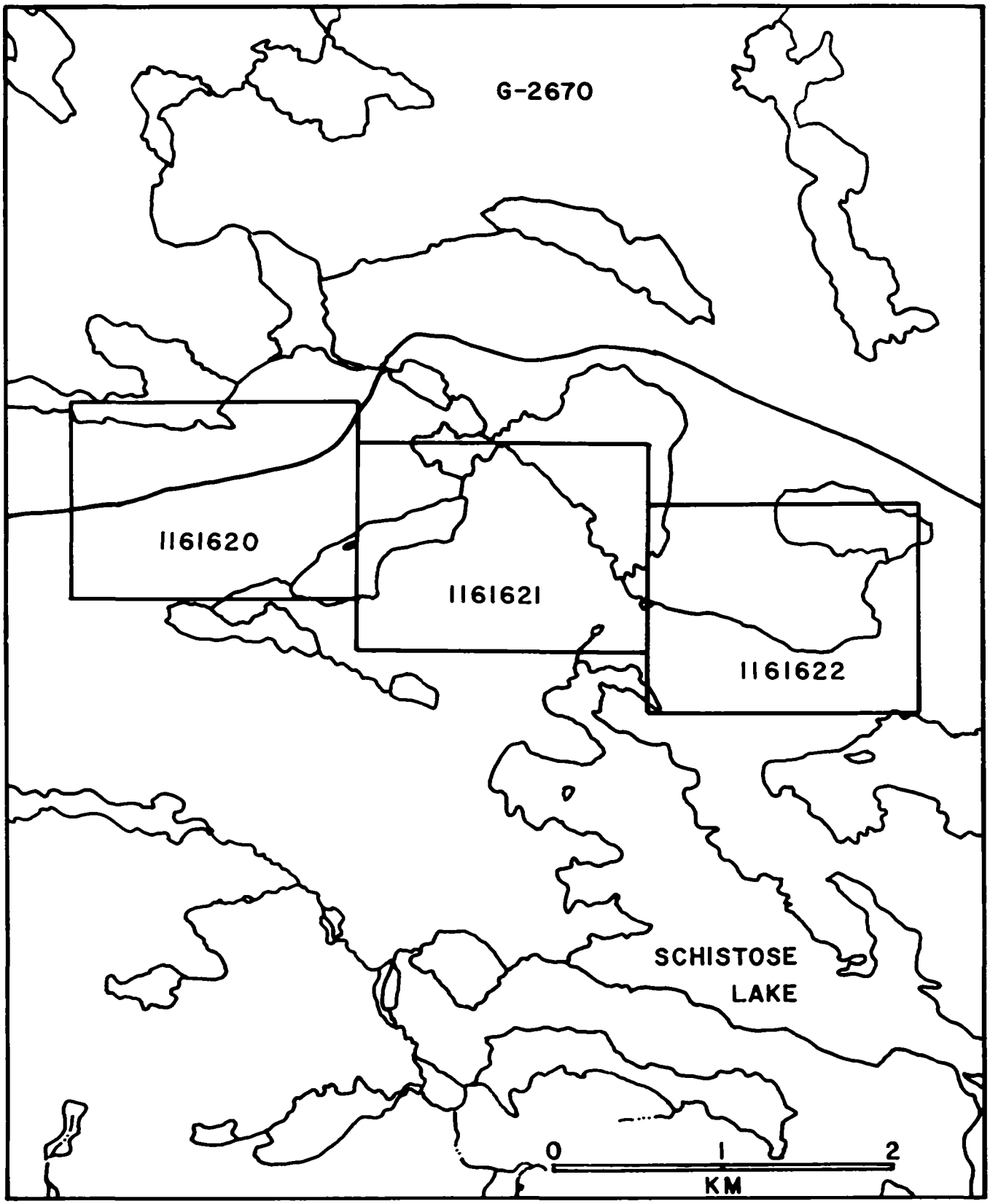

FIGURE 2: Claim Map

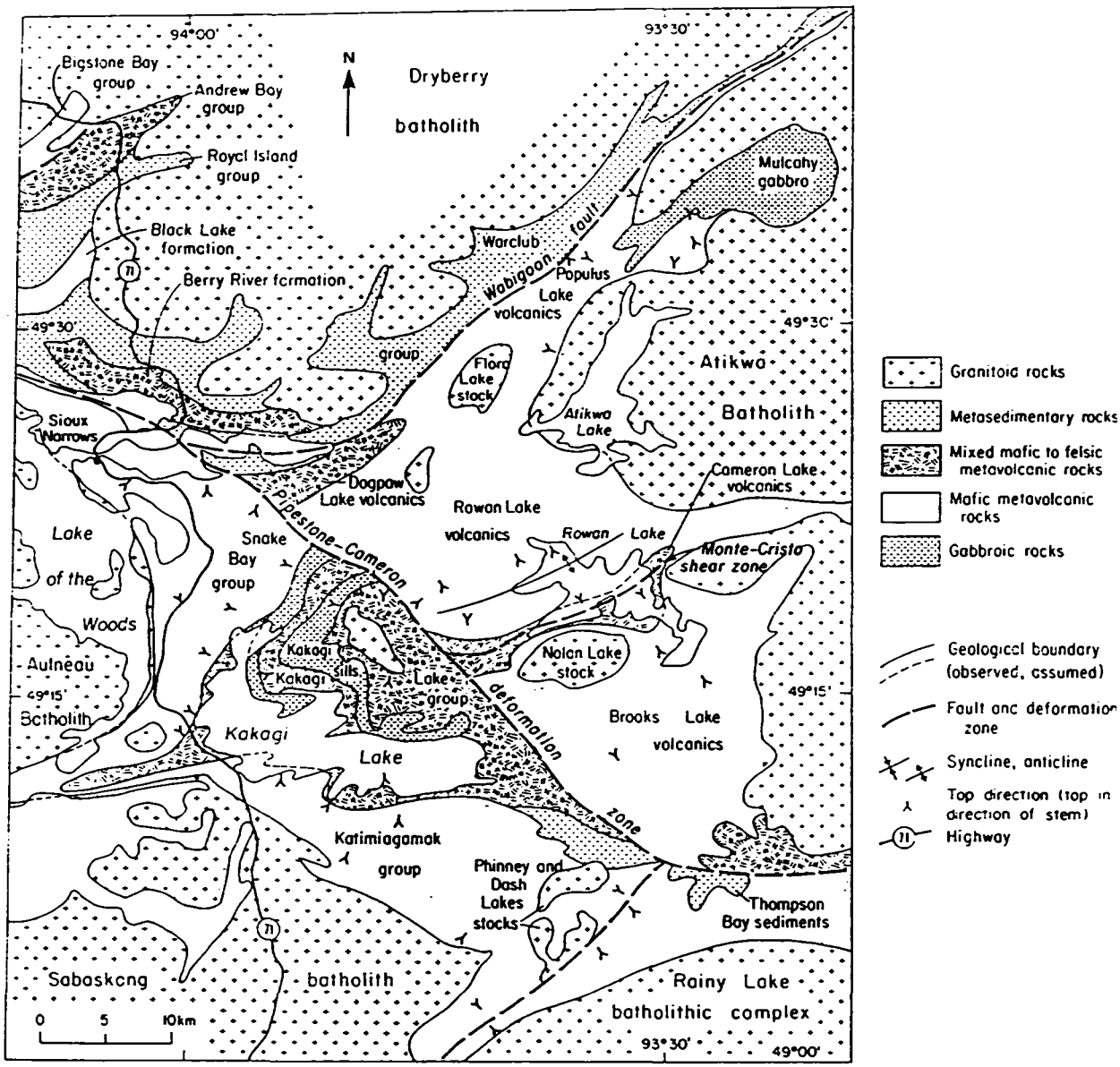

FIGURE 3: Regional Geology
(Modified after Blackburn et al. 1991)

GEOLOGY (Figures 3, 4)

Katimiagamak Group

The Katimiagamak Group consists mainly of pillowed and massive aphyric flows with minor amygdaloidal and plagioclase megaphyric flows. Subvolcanic gabbro and leucogabbro sills, up to 100 metres in thichness, intrude the subaqueous flow sequence.

Within the project area pillowed flow units of the Katimiagamak Group are characterized by well developed bun shaped pillows, generally less than 1 metre in diameter. The individual pillows display well developed selveges. Minor interpillow hyaloclastite and mafic tuffs are present. Observed minor mafic flows, interbedded with the pillowed flow units, range in thickess form 0.5 metres to greater than 10 metres.

The mafic rocks are characterized by a medium to dark grey-green weathered surface and a medium to dark green fresh surface. Color index is generally greater than 50. Pillowed flow units altered to carbonate and clinozoisite are light grey on the weathered surface and medium grey to white on the fresh surface and have a color index of 0. Primary pillow structures are well preserved. Pillowed flow units overprinted by intense iron carbonate alteration weather rusty brown to red and are generally characterized by a medium to coarse grain size. Within the iron carbonated pillowed flow units primary structures are well preserved.

Kakagi Lake Group

The Kakagi Lake Group is subdivided into the South Kakagi Kake, East Kakagi Lake, Emm Bay, Cedartree Lake and Stephen Lake formations (Johns 1985). The South Kakagi Lake Formation disconformably overlies the Katimiagamak Group and is conformably overlain by the East Kakagi Lake Formation.

The South Kakagi Lake Formation consists of two volcanic facies; an epiclastic plus distal facies and a distal plus epiclastic facies (Johns 1985). Both facies contain tuffs, reworked tuffs, cherts/cherty tuffs and arenites. The distal plus epiclastic facies also contains lapilli tuff and ash flow tuff. Within the project area the finer grained volcanic rocks are generally felsic in composition. These rocks are typically light grey or tan and

weather grey, tan or white. Bedding thickness ranges between very fine in cherty and siliceous tuffs to massive in medium grained tuffs and finer lapilli tuffs. Minor graphitic beds occur within sequences of cherty and siliceous tuffs.

The East Kakagi Lake Formation consists of two volcanic facies; a distal plus proximal facies and a subvolcanic intrusion plus flow facies (Johns 1985). The distal plus proximal facies consists mainly of tuffs, lapilli tuffs, tuff breccias, ash flow tuffs and intermediate to mafic intrusions. Within the project area the East Kakagi Lake Formation is differentiated from South Kakagi Lake Formation by the presence of coarser lapilli tuffs, lapillistones and tuff breccia. The volcanic breccias range from intermediate to felsic in composition. These breccias are light green, tan, grey or white and weather medium grey, light green or tan. The breccias are compositionally heterolithic with respect to fragment compostion and texture. Within the coarser fragmental units both matrix amd fragment supported breccias were observed. Bedding is typically massive.

Intrusive Rocks

Synvolcanic gabbroic sills within the Katimiagamak Group are prominent within the project area. They range in composition from melanogabbro through leucogabbro to diorite. The sills are dark green to black and weather medium green to dark grey, generally medium grained and difficult to distinguish from massive flows. Disseminated pyrite and pyrrhotite is common. Some sills are locally magnetic. Minor quartz-feldspar porphyry and felsite dikes and/or sills intrude the intermediate to felsic volcanic sequence.

A late regional diabase dike strikes southeast across the western side of the project area.

Structure

The lithostratigraphic units trend easterly across the project area. Within these units bedding trends easterly and is typically vertical to subvertical and faces northerly.

The Pipestone-Cameron Lake fault zone trends northwest and crosses the eastern margin of the project area. A west trending fault zone crosses the central portion of the

(IN POCKET)

FIGURE 4: Geology and Sample Locations
(Modified after Edwards 1975)

project area and is interpreted to be a spay off the Pipestone-Cameron Lake fault zone.

The fault zones are characterized by the development of a pronounced vertical to subvertical foliation and intense iron carbonate alteration.

RESULTS

Four main types of mineralization were observed. They include: disseminated sulphides associated with iron carbonate alteration and silicification; sulphide clast bearing volcanic breccias; sulphide bearing quartz veins; and disseminated sulphides within volcanic breccias and pillowed flow units.

Trilake Road Cu-Zn Showing (Figures 5, 6)

Intensely iron carbonated mafic pillowed flows of the Katimiagamak Group are in sheared contact with felsic tuffs of the South Kakagi Lake Formation. The altered assemblage is locally silicified. Very fine grained disseminated pyrite occurs within the silicified-iron carbonated zones which are developed in narrow zones of more intense shearing. These zones of shearing are accompanied by minor narrow quartz veins which postdate the silicification. Disseminated pyrite occurs as anhedral grains and clots of anhedral grains comprising generally 5% and locally up to 15% of the altered zones. Silicified-iron carbonated mafic volcanics (7250, 7261, 7267, 7276) are anomalous in copper, zinc and arsenic. Values range from 71 to 2720 ppm copper, 138 to 227 ppm zinc and 14 to 289 ppm arsenic.

Massive amorphous limonite (7251-7256, 7273) intruded by clear glassy quartz veinlets occurs as irregular beds(?) within the zone. Assay values range from 25.7 to 2850 ppm copper, 331 to 62300 ppm zinc, 7 to 173 ppm arsenic and <1 to 56 ppb gold.

Three 5 feet continuous chip/channel samples (7258, 7259, 7260) across the main zone average 1130 ppm zinc and 195 ppm copper. Three continuous grab samples (7263, 7264, 7265) across 1 foot of a chalcopyrite bearing zone averaged 2534 ppm copper and 387 ppm zinc. A single grab sample (7261) from the 7259 chip/channel section assayed 2720 ppm copper, 227 ppm zinc, 289 ppm arsenic and 28 ppb gold.

(IN POCKET)

FIGURE 5: Geology Claim 1161620

(IN POCKET)

FIGURE 6: Trilake Road Cu-Zn Showing

Assay values for copper, zinc, arsenic and gold for iron carbonated and silicified mafic rocks(7222, 7223, 7228, 7229, 7231, 7242-7244, 7249, 7277, 7278), spatially removed from the main showing area, are generally lower than those at the main showing. This is attributed to the more intense alteration and shearing at the Trilake Cu-Zn showing.

The altered zones are intruded by vertical quartz-iron carbonate veins (7020,7221,7224-7226, 7279) in which the iron carbonate has largely been altered to limonite. No sulphides were observed. These veins are barren, gold assays are <1 ppb. Maximum assay values for copper and zinc are 49.6 and 149 ppm respectively. Arsenic values are less than 11 ppm.

Eagle Ridge Zone (Figure 4)

A sequence of intermediate lapilli tuff (7234-7236, 7245-7247) contains up to 5% clastic fragments of pyrite. This sequence defines a stratigraphic horizon which can be followed more than 1500 feet along strike. The sulphide occurs as angular and rounded fragments up to 1cm in diameter. Pyrite fragments are composed of very fine anhedral grains and locally display fine bedding. Minor chert and disseminated pyrite occur within this unit. Trace chalcopyrite was also observed. Copper values range from 24.6 to 246 ppm, zinc values range from 46.2 to 126. Gold values are less than 3 ppb and arsenic values are less than 10 ppm.

Sulphide Bearing Quartz Veins (Figures 5, 7)

Quartz veins are present in all lithologic units.Pyrite bearing quartz veins (7237, 7238) hosted by a sheared, iron carbonated gabbro within the South Kakagi Lake Formation contain weakly anomalous gold values up to 43 ppb and anomalous arsenic values up to 87 ppm.

Disseminated Sulphides (Figures 4, 5, 6)

Disseminated pyrite occurs in all lithologic units. At Sandhill Creek coarse disseminated pyrite and trace chalcopyrite occur within intermediate to felsic tuff breccia. Up to 5% disseminated coarse euhedral pyrite occurs within pillowed flows. Minor interpillow pyrite occurs within the same unit.

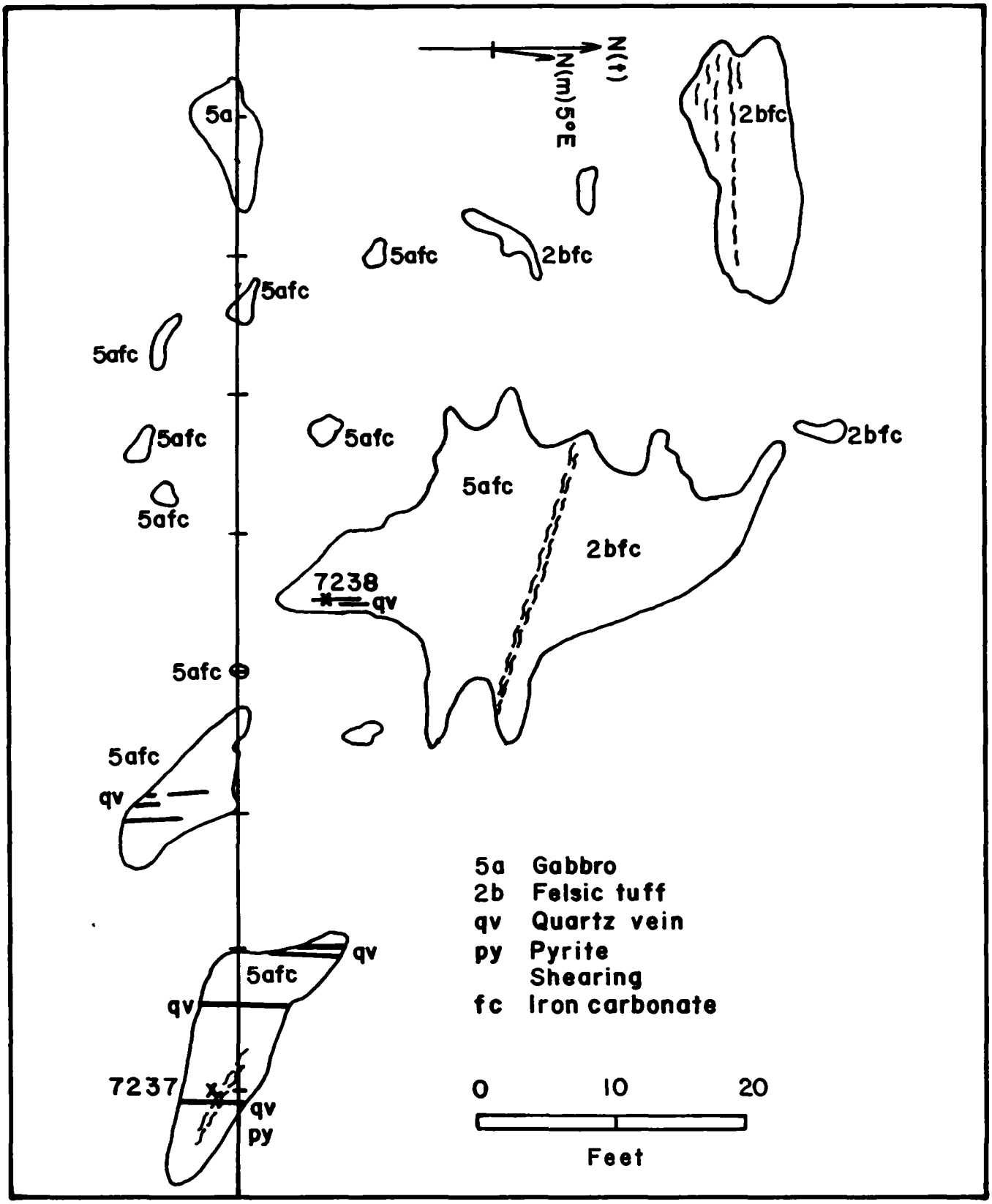

FIGURE 7: Sulphide Bearing Quartz Veins

RECOMMENDATIONS

Significant zinc and copper values and associated anomalous gold and arsenic values at the Trilake Road Cu-Zn showing and associated east trending altered fault zone warrant further exploration.

Detailed prospecting of the altered fault zone should be continued to the east toward the main Pipestone-Cameron Lake Fault Zone.

An orientation soil survey should be conducted over the Trilake Road Cu-Zn showing to determine the suitability of this method in this enviornment. If successfull, the zone should be systematically soil sampled.

The significance of the mineralization in relation to its location at the contact between the Katimiagamak Group and the South Kakagi Lake Formation should be evaluated by detailed geologic mapping.

IV. DAILY REPORTS (Summarize work activity in Section I)

Day	Project Area	Date	Work Performed
1	Kakagi-Schistose Lake	July 3	Recon prospecting
2	Kakagi-Schistose Lake	July 4	Recon prospecting
3	Kakagi-Schistose Lake	July 5	Recon prospecting
4	Kakagi-Schistose Lake	July 7	Recon prospecting
5	Kakagi-Schistose Lake	July 8	Recon prospecting
6	Kakagi-Schistose Lake	July 9	Prospecting
7	Kakagi-Schistose Lake	July 10	Prospecting
8	Kakagi-Schistose Lake	July 11	Prospecting
9	Kakagi-Schistose Lake	July 12	Detailed geologic mapping
10	Kakagi-Schistose Lake	July 13	Stripping/trenching
11	Kakagi-Schistose Lake	July 14	Prospecting
12	Kakagi-Schistose Lake	July 15	Detailed Prospecting
13	Kakagi-Schistose Lake	July 17	Prospecting
14	Kakagi-Schistose Lake	July 22	Surveying/griding
15	Kakagi-Schistose Lake	July 23	Prospecting
16	Kakagi-Schistose Lake	July 24	Geologic mapping
17	Kakagi-Schistose Lake	July 25	Geologic mapping
18	Kakagi-Schistose Lake	July 26	Prospecting/visit by MNDM
19	Kakagi-Schistose Lake	July 27	Geologic mapping
20	Kakagi-Schistose Lake	July 28	Prospecting
21	Kakagi-Schistose Lake	July 29	Stripping/trenching
22	Kakagi-Schistose Lake	July 30	Stripping/trenching
23	Kakagi-Schistose Lake	July 31	Surveying/griding
24	Kakagi-Schistose Lake	Aug 1	Detailed geologic mapping
25	Kakagi-Schistose Lake	Aug 2	Detailed geologic mapping
26	Kakagi-Schistose Lake	Aug 3	Chip/channel sampling
27	Kakagi-Schistose Lake	Aug 4	Chip/channel sampling
28	Kakagi-Schistose Lake	Aug 5	Prospecting
29	Kakagi-Schistose Lake	Aug 6	Detailed prospecting
30	Kakagi-Schistose Lake	Aug 7	Surveying/griding
31	Kakagi-Schistose Lake	Aug 8	Recon prospecting
32	Kakagi-Schistose Lake	Aug 9	Recon prospecting
33	Kakagi-Schistose Lake	Aug 10	Prospecting/visit by MNDM
34	Kakagi-Schistose Lake	Aug 11	Geologic mapping
35	Kakagi-Schistose Lake	Aug 12	Geologic mapping
36	Kakagi Schistose Lake	Aug 13	Prospecting
37	Kakagi-Schistose Lake	Aug 14	Recon prospecting
38	Kakagi-Schistose Lake	Aug 15	Recon prospecting
39	Kakagi-Schistose Lake	Aug 16	Recon prospecting
40	Kakagi-Schistose Lake	Aug 17	Recon prospecting
41	Kakagi-Schistose Lake	Aug 18	Geologic mapping
42	Kakagi-Schistose Lake	Aug 19	Recon prospecting
43	Kakagi-Schistose Lake	Aug 20	Recon prospecting
44	Kakagi-Schistose Lake	Aug 21	Recon prospecting

IV. DAILY REPORTS (Summarize work activity in Section I)

Day	Project Area	Date	Work Performed
45	Kakagi-Schistose Lake	Aug 22	Recon prospecting
46	Kakagi-Schistose Lake	Jan 19	Drafting
47	Kakagi-Schistose Lake	Jan 20	Drafting
48	Kakagi-Schistose Lake	Jan 21	Drafting/summary report
49	Kakagi-Schistose Lake	Jan 22	Drafting/summary report
50	Kakagi-Schistose Lake	Jan 23	Summary report

APPENDIX 1
ASSAY DATA

XRAL

X-RAY ASSAY LABORATORIES

A DIVISION OF SGS CANADA INC.

1885 LESLIE STREET • DON MILLS, ONTARIO M3B 3J4 • CANADA

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CERTIFICATE OF ANALYSIS

REPORT 23931

TO: MICHAEL E. CHUTE
1515 CHERRYHILL ROAD
PETERBOROUGH, ONTARIO
K9K 1A7

CUSTOMER No. 2413

DATE SUBMITTED
11-Aug-93

REF. FILE 15704-E4

Total Pages 2

49 ROCKS Proj. N.W. ONTARIO

	METHOD	DETECTION LIMIT
AU-1AT PPB	FADCP	1.
CO PPM	ICP	1.
NI PPM	ICP	1.
CU PPM	ICP	.5
ZN PPM	ICP	.5
AS PPM	FAA	1.
MO PPM	ICP	1.
AG PPM	ICP	.5
CD PPM	ICP	1.
PB PPM	ICP	2.

*** UNLESS INSTRUCTED OTHERWISE WE WILL DISCARD PULPS IN 90 DAYS ***
AND REJECTS IN 30 DAYS FROM THE DATE OF THIS REPORT

DATE 31-Aug-93

CERTIFIED BY .....

Jean H.L. Opdebeeck, General Manager

SAMPLE	AU-1AT PPB	CO PPM	NI PPM	CU PPM	ZN PPM	AS PPM	MO PPM	AG PPM	CD PPM	PB PPM
7220	<1	18	31	15.8	88.4	<1	<1	<.5	1	4
7221	<1	14	17	37.9	146	11	<1	.6	4	2
7222	<1	21	26	31.5	196	11	<1	<.5	5	<2
7223	<1	34	39	82.7	121	4	<1	.5	7	<2
7224	<1	16	35	14.8	73.5	5	<1	<.5	3	<2
7225	<1	28	32	49.6	117	4	<1	1.1	9	<2
7226	4	20	32	35.6	80.9	11	<1	<.5	4	11
7227	<1	65	58	93.5	154	6	<1	.9	10	<2
7228	<1	28	30	85.5	118	4	<1	1.1	11	6
7229	<1	33	27	80.9	132	4	<1	.9	10	<2
7230	<1	13	21	23.6	58.0	<1	<1	<.5	2	<2
7231	<1	31	19	133	1110	6	<1	1.3	21	6
7232	<1	3	9	7.2	20.6	8	<1	<.5	<1	<2
7233	11	26	139	30.9	148	23	<1	.5	6	9
7234	<1	40	41	24.6	81.1	5	<1	.6	5	<2
7235	<1	33	23	72.6	64.2	10	<1	<.5	3	<2
7236	3	42	30	40.2	108	6	<1	.9	5	<2
7237	43	7	6	10.5	5.5	12	<1	<.5	<1	3
7238	14	5	3	15.6	24.2	87	<1	<.5	2	2
7239	<1	17	14	95.4	132	3	<1	.9	6	<2
7240	2	21	34	36.9	115	19	<1	.5	3	23
7241	<1	8	12	13.3	90.0	2	<1	<.5	<1	<2
7250	4	48	35	1240	212	29	<1	1.2	12	5
7251	<1	20	21	164	1860	22	<1	1.0	13	4
7252	<1	21	17	334	1220	20	<1	.8	12	2
7253	<1	9	3	25.7	680	7	<1	1.2	11	8
7254	9	40	40	213	5140	67	<1	1.8	32	14
7255	13	27	28	244	11100	70	<1	1.7	54	16
7256	56	55	49	2850	62300	173	2	3.4	313	42
7257	20	14	9	218	11900	24	<1	1.5	58	16
7258	1	37	44	117	2180	75	<1	.8	15	4
7259	3	63	59	395	1030	61	<1	.7	11	6
7260	4	25	39	74.9	181	49	<1	.8	6	4
7261	28	143	101	2720	227	289	<1	2.7	12	33
7262	<1	11	19	35.5	367	20	<1	<.5	3	<2
7263	5	58	55	4860	268	57	<1	1.3	7	5
7264	5	30	24	1920	595	26	<1	1.2	8	7
7265	4	56	58	824	298	58	<1	.7	7	5
7266	<1	34	39	539	385	29	<1	.6	6	3
7267	<1	64	22	285	138	14	<1	1.2	13	<2
7268	2	30	32	67.2	151	61	<1	1.4	12	10
7269	<1	26	51	49.0	139	72	<1	.9	7	<2
7270	5	57	65	44.5	164	135	<1	1.9	10	17
7271	<1	50	69	61.4	206	125	<1	.8	6	5
7272	1	26	24	51.3	205	76	<1	1.6	13	13

AU-1AT PPB - ASSAY PERFORMED ON 30 GRAM ALIQUOT

SAMPLE	AU-1AT PPB	CO PPM	NI PPM	CU PPM	ZN PPM	AS PPM	MO PPM	AG PPM	CD PPM	PB PPM
7273	10	19	21	60.2	331	58	<1	1.2	12	8
7274	2	15	11	35.0	178	54	<1	1.0	11	15
7275	<1	26	26	52.0	149	59	<1	.8	9	6
7276	4	48	61	71.0	145	182	<1	1.4	12	21
D 7220	--	18	31	16.0	88.0	<1	<1	<.5	1	5
D 7232	--	2	8	7.4	20.0	8	<1	<.5	<1	2
D 7252	--	22	15	340	1250	20	<1	.8	12	3
D 7264	--	30	21	1950	602	27	<1	.7	8	5
D 7274	--	16	12	35.0	180	55	<1	1.3	10	13

AU-1AT PPB - ASSAY PERFORMED ON 30 GRAM ALIQUOT
D - QUALITY CONTROL DUPLICATE

XRAL

X-RAY ASSAY LABORATORIES

A DIVISION OF SGS CANADA INC.
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CERTIFICATE OF ANALYSIS

REPORT 24297

TO: MICHAEL E. CHUTE
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CUSTOMER No. 2413

DATE SUBMITTED
30-Aug-93

REF. FILE 15916-A6

Total Pages 4

12 ROCKS Proj. N.W. ONTARIO

	METHOD	DETECTION LIMIT
AU-1AT PPB	FADCP	1.
BE PPM	ICP	.5
NA %	ICP	.01
MG %	ICP	.01
AL %	ICP	.01
P %	ICP	.01
K %	ICP	.01
CA %	ICP	.01
SC PPM	ICP	.5
TI %	ICP	.01
V PPM	ICP	2.
CR PPM	ICP	1.
MN PPM	ICP	2.
FE %	ICP	.01
CO PPM	ICP	1.
NI PPM	ICP	1.
CU PPM	ICP	.5

	METHOD	DETECTION LIMIT
ZN PPM	ICP	.5
AS PPM	ICP	3.
SR PPM	ICP	.5
Y PPM	ICP	.1
ZR PPM	ICP	.5
MO PPM	ICP	1.
AG PPM	ICP	.1
CD PPM	ICP	1.
SN PPM	ICP	10.
SB PPM	ICP	5.
BA PPM	ICP	1.
LA PPM	ICP	.5
TA PPM	ICP	1.
W PPM	ICP	10.
PB PPM	ICP	2.
BI PPM	ICP	3.

*** UNLESS INSTRUCTED OTHERWISE WE WILL DISCARD PULPS IN 90 DAYS ***
AND REJECTS IN 30 DAYS FROM THE DATE OF THIS REPORT

DATE 26-Oct-93

CERTIFIED BY .....

Jean H.L. Oppenheeck, General Manager

SAMPLE	AU-1AT PPB	BE PPM	NA %	MG %	AL %	P %	K %	CA %	SC PPM
7242	7	2.3	.05	1.48	.85	.03	.02	7.83	18.9
7243	<1	.9	.06	.93	1.02	.03	.02	3.99	5.3
7244	<1	1.4	.06	1.32	.55	.03	.07	7.14	13.0
7245	<1	.7	.21	1.19	1.68	.03	.13	3.52	1.7
7246	<1	2.4	.04	2.06	5.06	.04	.02	3.91	23.3
7247	18	.9	.09	1.56	2.09	.03	.09	2.79	10.0
7248	<1	<.5	.07	.29	.50	.04	.25	1.47	<.5
7249	2	2.1	.05	1.72	3.76	.04	.03	5.35	24.1
7277	<1	2.6	.04	2.29	4.93	.05	.02	5.32	37.7
7278	<1	3.5	.05	2.44	1.37	.04	.03	4.45	28.5
7279	1	1.5	.02	1.44	.14	<.01	<.01	12.4	41.1
7280	41	2.8	.02	4.57	.89	<.01	<.01	8.05	27.1
D 7242	--	2.3	.06	1.51	.86	.03	.02	7.99	19.1

AU-1AT PPB - ASSAY PERFORMED ON 30 GRAM ALIQUOT
D - QUALITY CONTROL DUPLICATE

SAMPLE	TI %	V PPM	CR PPM	MN PPM	FE %	CO PPM	NI PPM	CU PPM
7242	<.01	106	36	4320	15.7	49	53	51.0
7243	<.01	64	221	1200	5.54	24	58	26.5
7244	.04	90	76	3140	9.03	24	39	49.9
7245	<.01	16	113	1420	4.01	11	12	26.6
7246	<.01	218	69	5490	16.1	35	51	72.1
7247	<.01	101	127	1320	4.82	77	68	246
7248	<.01	4	99	305	1.19	5	5	15.0
7249	<.01	206	53	3040	14.4	45	54	93.3
7277	<.01	293	63	2620	17.3	44	75	211
7278	<.01	163	32	6400	24.0	42	61	54.6
7279	<.01	24	123	3260	10.6	18	13	3.8
7280	<.01	102	20	4240	19.3	19	35	59.4
D 7242	<.01	107	36	4380	15.9	49	54	51.7

D - QUALITY CONTROL DUPLICATE

SAMPLE	ZN PPM	AS PPM	SR PPM	Y PPM	ZR PPM	MO PPM	AG PPM	CD PPM
7242	153	9	74.7	5.4	5.7	<1	.8	4
7243	72.3	<3	50.5	2.4	5.1	<1	<.1	1
7244	63.3	<3	61.4	4.0	7.1	<1	.5	2
7245	46.2	<3	51.4	2.2	7.4	<1	.2	<1
7246	126	<3	53.5	4.3	4.9	<1	1.1	3
7247	52.8	<3	30.1	2.8	3.0	<1	.3	<1
7248	25.1	<3	161	2.6	8.7	1	.4	<1
7249	152	<3	42.2	3.8	4.2	<1	.8	3
7277	143	<3	47.6	6.8	4.0	<1	.5	4
7278	164	<3	70.7	7.0	5.7	<1	1.3	6
7279	47.3	<3	148	9.9	2.2	<1	.3	3
7280	207	<3	66.9	5.7	4.7	1	1.3	5
D 7242	156	12	75.8	5.5	4.7	<1	.6	4

D - QUALITY CONTROL DUPLICATE

SAMPLE	SN PPM	SB PPM	BA PPM	LA PPM	TA PPM	W PPM	PB PPM	BI PPM
7242	<10	<5	10	11.7	3	<10	3	13
7243	<10	<5	17	6.1	2	<10	<2	6
7244	<10	<5	26	10.5	<1	<10	4	3
7245	<10	<5	16	8.1	2	<10	<2	4
7246	<10	<5	38	13.4	3	<10	<2	10
7247	<10	<5	26	6.7	2	<10	<2	<3
7248	<10	<5	77	16.3	1	<10	3	<3
7249	<10	<5	7	11.0	1	<10	<2	12
7277	<10	<5	5	12.8	5	<10	<2	12
7278	<10	<5	12	17.5	8	<10	3	15
7279	<10	<5	3	7.3	1	<10	3	8
7280	<10	<5	6	13.5	4	<10	3	15
D 7242	<10	<5	11	11.3	2	<10	4	14

D - QUALITY CONTROL DUPLICATE

APPENDIX 2
ASSAY SAMPLE DESCRIPTIONS

7220
Quartz vein, milky white, chloritic slickensided surfaces
25% amorphous limonite
No visible sulphides
Weakly sheared

7221
Quartz vein, milky white, chloritic slickensided surfaces
10% amorphous limonite
40% coarse orange-white carbonate
No visible sulphides, weakly sheared

7222
Limonitic crust on medium grained orange-white carbonate
Trace fine grained pyrite
5% clear glassy quartz veining up to 5mm wide, no sulphides
Weakly sheared

7223
Mafic volcanic, light grey-green, fine to medium grained
Minor quartz flooding with trace fine grained pyrite
Thin limonitic crust
Weakly to moderately sheared

7224
Massive quartz-chlorite-limonite
20% massive milky white quartz veining
No visible sulphides
Weakly sheared

7225
Mafic volcanic, grey-green, medium grained
Limonitic amorphous crust with milky white quartz veining
4% very fine grained disseminated pyrite, anhedral
Massive

7226
Quartz vein, milky white, massive
10% amorphous dark brown limonite
20% carbonate, grey, very fine grained, chloritic stringers
No visible sulphides

7227
Brecciated carbonate with dark green chloritic matrix
Localized grey quartz flooding
5% very fine grained disseminated pyrite in quartz
Minor pyrite stringers, trace chalcopyrite

7228
Chlorite-white carbonate, fine to medium grained
Quartz flooding
3% very fine grained disseminated pyrite
Part of sample similar to 7227

7229
Mafic volcanic, fine to medium grained, chloritic
Minor quartz flooding and quartz veining
2% very fine grained pyrite in quartz flooding
Minor iron carbonate, locally hematitic, sheared

7230
Massive quartz-chlorite-carbonate, medium grained
Intruded by massive clear to milky quartz veining
10% amorphous limonite
2% fine to medium grained pyrite clots

7231
Mafic volcanic, fine grained, grey-green carbonate
Coarse orange-white carbonate veining
Minor quartz flooding with 2% very fine grained pyrite
5% pyrite stringers with fine acicular tourmaline

7232
Massive orange-white carbonate
Intruded by clear glassy-white quartz veining
No visible sulphides
No amorphous limonite

7233
Siliceous cherty tuff, fine grained
2% fine grained disseminated pyrite
Fine bedding
Sheared

7234
Intermediate lapilli tuff
3% sulphide fragments
2% very fine grained disseminated pyrite
Minor iron carbonate

7235
Intermediate lapilli tuff
3% fine to medium grained disseminated pyrite
Massive
Not sheared

7236
Intermediate lapilli tuff with limonitic crust
Quartz flooding
5% fine grained disseminated pyrite
10% coarse pyrite fragments, minor pyrite stringers

7237
Milky white quartz vein with anastomosing fractures
Limonitic iron carbonate in fractures, hematitic
2% disseminated pyrite
Trace chalcopyrite, malachite

7238
Milky white quartz vein with limonitic fractures
5% disseminated pyrite
Minor pyrite clots
Trace chalcopyrite, malachite

7239
Mafic volcanic tuff
Weakly silicified
2% fine grained disseminated pyrite
Trace chalcopyrite

7240
Intermediate to felsic tuff, light green
Minor limonitic staining
5% disseminated pyrite and pyrite fragments
Trace chalcopyrite

7241
Felsic tuff, fine to medium grained, light blue-green
2% disseminated pyrite
Minor rounded pyrite grains
Minor limonite

7242
Brecciated mafic volcanic, light grey fresh surface
Iron carbonated, minor quartz veinlets
Quartz flooding with 2% disseminated pyrite and clots
Sheared, minor pyrite stringers

7243
Iron carbonated mafic volcanic, chloritic
Quartz-chlorite-iron carbonate veining
Trace pyrite
Weakly limonitic

7244
Mafic volcanic, highly iron carbonated, fine grained
Minor silicification and quartz veining
3% pyrite stringers in mafic volcanic
Massive

7245
Intermediate lapilli tuff with chert lapilli
Light grey-tan weathered surface, light grey fresh surface
5% pyrite as ash and lapilli sized fragments
Minor pyrite as fine grained disseminations and clots

7246
Intermediate lapilli tuff
Thick limonitic crust, light grey-green fresh surface
3% pyrite lapilli, angular and rounded
2% fine grained disseminated pyrite, trace chalcopyrite

7247
Intermediate lapilli tuff, light grey fresh surface
Weakly silicified, chloritic
4% disseminated fine grained pyrite, minor pyrite clots
2% fine grained chalcopyrite

7248
Felsic lapilli tuff, light yellow-green fresh surface
Minor quartz veining
2% disseminated fine to medium grained pyrite in tuff
Highly sheared

7249
Highly iron carbonated mafic volcanic, medium grained
Sheared, brecciated, limonitic crust
4% disseminated fine grained pyrite and stringers
Trace silicification

7250
Brecciated, limonitic carbonate with quartz flooding
Minor quartz veinlets
7% disseminated pyrite associated with quartz flooding
Minor pyrite clots and stringers, 2% chalcopyrite

7251
Amorphous limonite
10% clear glassy quartz stringers
No visible sulphides
Massive

7252
Similar to 7250 with edges similar to 7251
3% total disseminated pyrite
Trace chalcopyrite
Sulphides similar to sample 7250

7253
Similar to 7252 with 50% white massive quartz veining
No sulphides in quartz veining
3% very fine grained disseminated pyrite
Trace chalcopyrite

7254
Amorphous limonite with 20% glassy quartz veining
10% anhedral pyrite clots in limonite adjacent to quartz
No sulphides in quartz veining
Massive

7255
Grey-white carbonated vein/dike
10% very fine grained anhedral disseminated pyrite in clots
10% grey quartz microveining, no sulphides
Limonitic

7256
Amorphous limonite
15% clear glassy quartz veining up to 10mm wide
10% anhedral clots of pyrite in limonite
Massive

7257
Thin limonitic crust on grey-white carbonated vein/dike
5% stringers of very fine grained pyrite
Pyrite associated with zones of quartz flooding
Minor clots of anhedral very fine grained pyrite

7258
Five foot chip/channel sample
Material similar to 7250, 7253-7257
Moderately sheared
Highly limonitic

7259
Five foot chip/channel sample
Material similar to 7261-7265
Moderately sheared
Highly limonitic, trace malachite

7260
Five foot chip/channel sample
Material similar to 7269
Moderately sheared
Limonitic

7261
Highly sheared mafic volcanic, limonitic
Dark green with grey carbonate, silicified
10% very fine grained disseminated pyrite
Malachite staining

7262
One inch wide milky white quartz vein
20% dark brown limonite after hematite
No visible sulphides
Minor chlorite

7263
Dark green chloritic mafic volcanic with quartz-carbonate
10% very fine grained pyrite, 3% disseminated chalcopyrite
Sulphides associated with quartz flooding
Late iron carbonate veining

7264
Carbonated mafic volcanic with 50% grey quartz flooding
15% very fine grained disseminated pyrite
2% very fine grained disseminated chalcopyrite
Minor chlorite, sulphides associated with quartz flooding

7265
Brecciated carbonated fragments in quartz-chlorite matrix
Sulphides associated with quartz flooding
5% very fine grained disseminated pyrite
2% very fine grained disseminated chalcopyrite

7266
Five foot chip/channel sample
Similar to 7261-7265
Moderately sheared
Limonitic, malachite stain

7267
Brecciated carbonated fragments in green quartz matrix
70% carbonated white fragments
Sulphides associated with qrey quartz flooding
5% fine grained anhedral pyrite

7268
Massive grey carbonate partially flooded with quartz
Minor quartz and chlorite veinlets
5% very fine grained disseminated pyrite
Sulphides associated with quartz flooding and chlorite

7269
Brecciated carbonate fragments in grey-green quartz matrix
Limonitic crust, minor coarse chlorite
5% very fine grained disseminated pyrite
Trace chalcopyrite associated with quartz and chlorite

7270
Medium grained carbonated tuff, white-grey fresh surface
50% flooded with quartz, 5% chlorite
10% very fine grained disseminated pyrite
Limonitic, trace chalcopyrite

7271
Similar to 7270
15% very fine grained disseminated pyrite
10% late barren iron carbonate veining
Moderately sheared

7272
Silicified fine grained carbonated tuff
Dark grey quartz flooding
5% very fine grained disseminated pyrite in stringers
Quartz veinlets postdate pyrite stringers

7273
Amorphous limonite
20% clear glassy quartz veining
No visible sulphides
Massive

7274
Grey-white carbonated material flooded with grey quartz
7% very fine grained disseminated pyrite and stringers
Barren late quartz flooding and veining
5% chlorite associated with sulphides

7275
Medium grained carbonated tuff, grey-white fresh surface
Minor quartz flooding with associated pyrite
3% very fine grained disseminated pyrite
Minor quartz and chlorite veinlets

7276
Similar to 7275
15% very fine grained pyrite replacing chloritic fragments
Sheared
Brecciated

7277
Medium grained mafic volcanic, highly iron carbonated
2% minor disseminated pyrite and stringers
Limonitic
Chloritic

7278
Medium grained mafic volcanic, medium grey-green
Highly iron carbonated
2% disseminated pyrite associated with silicification
Brecciated, limonitic, sheared

7279
Massive quartz-carbonate veining
Chloritic rock fragments
No visible sulphides
Limonite after iron carbonate

7280
Medium grained mafic volcanic
Highly iron carbonated, limonitic
4% fine to medium grained euhedral pyrite
10% very fine grained disseminated magnetite

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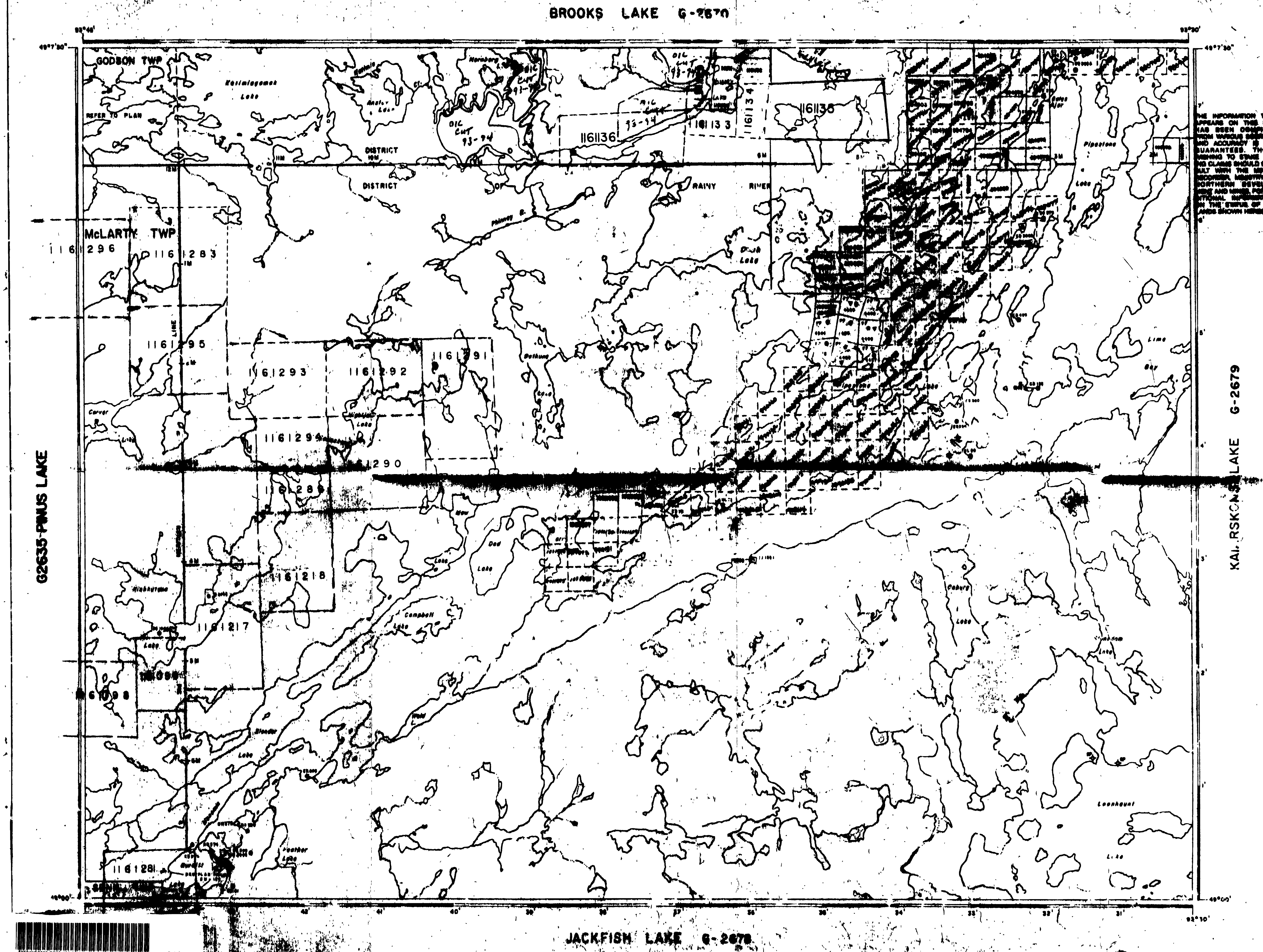
ROWAN LAKE AREA - G-2696
HERONRY LAKE AREA - G-2621
BLUFFPOINT LAKE AREA - G-2669
DASH LAKE - G-2671
GODSON TWP
Brooks Lake
Cameron Lake
Calvert L.
Lower Brooks L.
Hillside L.
Aronis L.
Pipestone
Derby Lake
Derby Lake Wilderness Area Reserved from Staking
Britton
Pivot Pt.
93/94 CUT
LEGEND
HIGHWAY AND ROUTE No.
OTHER ROADS
TRAILS
SURVEYED LINES:
TOWNSHIPS, BASE LINES, ETC.
LOTS, MINING CLAIMS, PARCELS, ETC.
UNSURVEYED LINES:
LOT LINES
PARCEL BOUNDARY
MINING CLAIMS ETC.
RAILWAY AND RIGHT OF WAY
UTILITY LINES
NON-PERENNIAL STREAM
FLOODING OR FLOODING RIGHTS
SUBDIVISION OR COMPOSITE PLAN
RESERVATIONS
ORIGINAL SHORELINE
MARSH OR MUSKEG
MINES
TRAVERSE MONUMENT
TOURIST CAMPS
DISPOSITION OF CROWN LANDS
TYPE OF DOCUMENT
SYMBOL
PATENT, SURFACE & MINING RIGHTS
SURFACE RIGHTS ONLY
MINING RIGHTS ONLY
LEASE, SURFACE & MINING RIGHTS
SURFACE RIGHTS ONLY
MINING RIGHTS ONLY
LICENCE OF OCCUPATION
ORDER-IN-COUNCIL
RESERVATION
CANCELLED
SAND & GRAVEL
REFERENCES
AREAS WITHDRAWN FROM DISPOSITION
M.R.O. – MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+ S. – MINING AND SURFACE RIGHTS
THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.
SCALE: 1 INCH = 40 CHAINS
FEET
METRES
AREA
BROOKS LAKE
M.N.R. ADMINISTRATIVE DISTRICT
FORT FRANCES
MINING DIVISION
KENORA
LAND TITLES / REGISTRY DIVISION
KENORA
Ministry of Natural Resources
Land Management Branch
Ontario
G-2670
52F04NE0008 OP93-489 BROOKS LAKE
200
492933



LEGEND

HIGHWAY AND ROUTE No.
OTHER ROADS
TRAILS
SURVEYED LINES:
TOWNSHIPS, BASE LINES, ETC.
LOTS, MINING CLAIMS, PARCELS, ETC.
UNSURVEYED LINES:
LOT LINES
PARCEL BOUNDARY
MINING CLAIMS ETC
RAILWAY AND RIGHT OF WAY
UTILITY LINES
NON-PERENNIAL STREAM
FLOODING OR FLOODING RIGHTS
SUBDIVISION OR COMPOSITE PLAN
RESERVATIONS
ORIGINAL SHORELINE
MARSH OR MUSKEG
MINES
TRAVERSE MONUMENT
TOURIST CAMPS

THE INFORMATION THAT APPEARS ON THIS MAP HAS BEEN COMPILED FROM VARIOUS SOURCES, AND ACCURACY IS NOT GUARANTEED. THOSE WISHING TO STAKE MINING CLAIMS SHOULD CONSULT WITH THE MINING RECORDER, MINISTRY OF NORTHERN DEVELOPMENT AND MINES, FOR ADDITIONAL INFORMATION ON THE STATUS OF THE LANDS SHOWN HEREON.

DISPOSITION OF CROWN LANDS

TYPE OF DOCUMENT	SYMBOL
PATENT, SURFACE & MINING RIGHTS	●
" , SURFACE RIGHTS ONLY	◐
" , MINING RIGHTS ONLY	◒
LEASE, SURFACE & MINING RIGHTS	■
" , SURFACE RIGHTS ONLY	▣
" , MINING RIGHTS ONLY	▤
LICENCE OF OCCUPATION	▼
ORDER-IN-COUNCIL	OC
RESERVATION	◎
CANCELLED	●
SAND & GRAVEL	€

NOTE: MINING RIGHTS IN PARCELS PATENTED PRIOR TO MAY 6, 1913, VESTED IN ORIGINAL PATENTEE BY THE PUBLIC LANDS ACT, R.S.O. 1970, CHAP. 380, SEC. 63, SUBSEC. 1

REFERENCES

AREAS WITHDRAWN FROM DISPOSITION

M.R.O. MINING RIGHTS ONLY
S.R.O. – SURFACE RIGHTS ONLY
M.+S. – MINING AND SURFACE RIGHTS

Description	Order No.	Date	Disposition	File

SCALE: 1 INCH = 40 CHAINS

FEET 0 1000 2000 4000 6000 8000
METRES 0 200 1000 (1 KM) 2000 (2 KM)

AREA

DASH LAKE

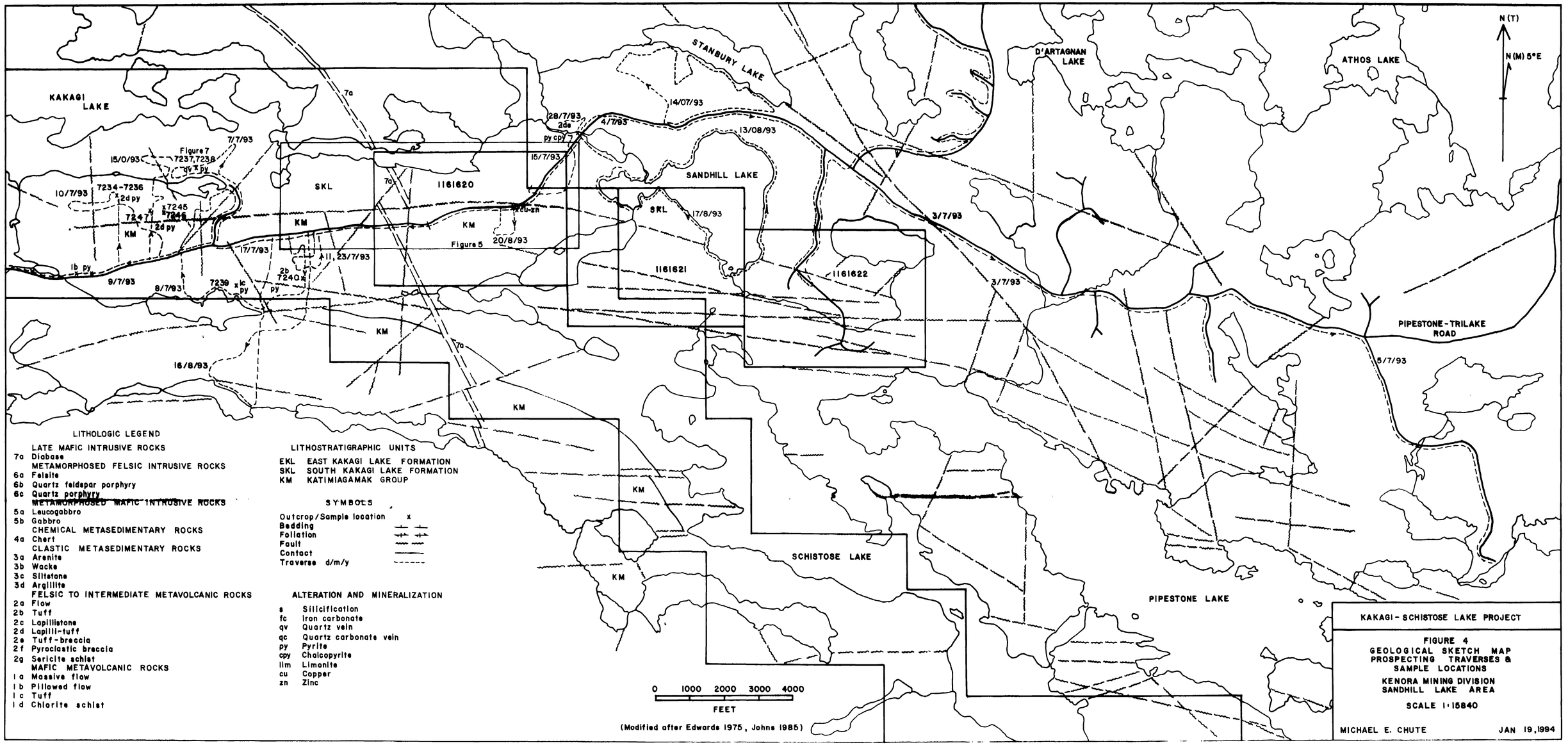
M.N.R. ADMINISTRATIVE DISTRICT
FORT FRANCES
MINING DIVISION
KENORA
LAND TITLES / REGISTRY DIVISION
KENORA/RAINY RIVER

Ontario Ministry of Natural Resources — Land Management Branch

Date MARCH, 1984 — Number G-2671

52F04NE0008 OP93-489 BROOKS LAKE

220



LITHOLOGIC LEGEND

LATE MAFIC INTRUSIVE ROCKS
- 7a Diabase

METAMORPHOSED FELSIC INTRUSIVE ROCKS
- 6a Felsite
- 6b Quartz feldspar porphyry
- 6c Quartz porphyry

METAMORPHOSED MAFIC INTRUSIVE ROCKS
- 5a Leucogabbro
- 5b Gabbro

CHEMICAL METASEDIMENTARY ROCKS
- 4a Chert

CLASTIC METASEDIMENTARY ROCKS
- 3a Arenite
- 3b Wacke
- 3c Siltstone
- 3d Argillite

FELSIC TO INTERMEDIATE METAVOLCANIC ROCKS
- 2a Flow
- 2b Tuff
- 2c Lapillistone
- 2d Lapilli-tuff
- 2e Tuff-breccia
- 2f Pyroclastic breccia
- 2g Sericite schist

MAFIC METAVOLCANIC ROCKS
- 1a Massive flow
- 1b Pillowed flow
- 1c Tuff
- 1d Chlorite schist

LITHOSTRATIGRAPHIC UNITS
- EKL EAST KAKAGI LAKE FORMATION
- SKL SOUTH KAKAGI LAKE FORMATION
- KM KATIMIAGAMAK GROUP

SYMBOLS
- Outcrop/Sample location x
- Bedding
- Foliation
- Fault
- Contact
- Traverse d/m/y

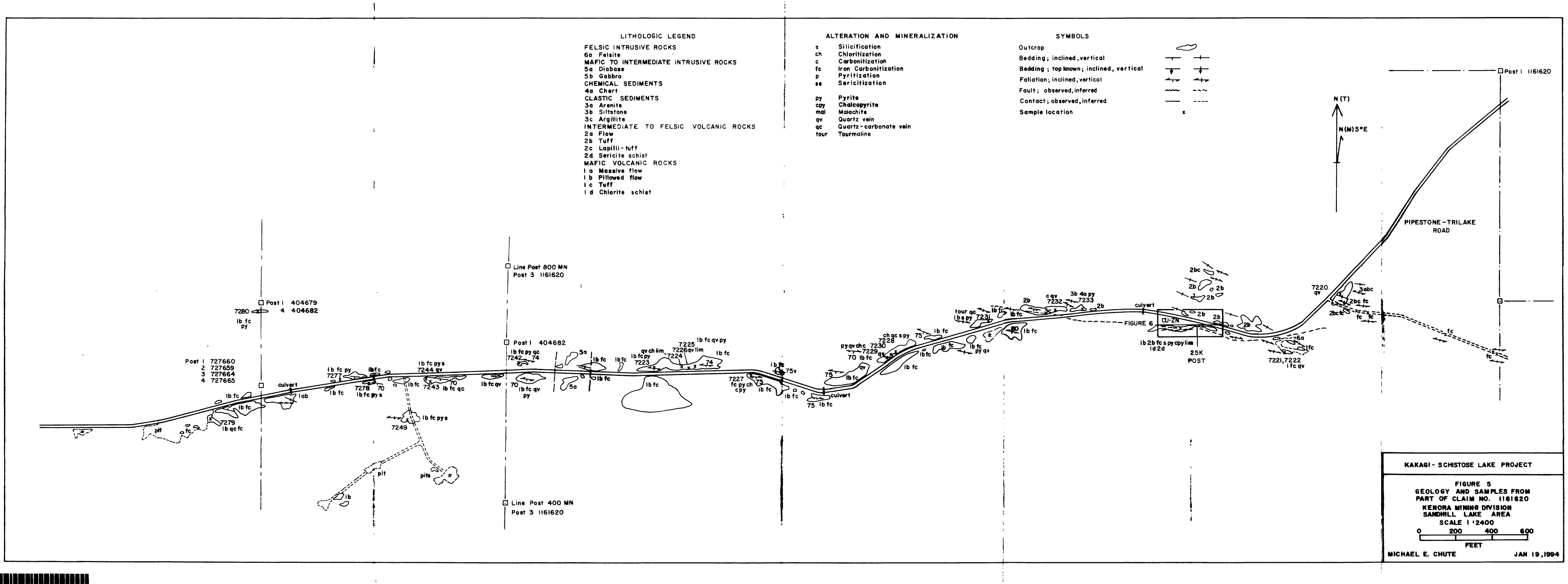
ALTERATION AND MINERALIZATION
- s Silicification
- fc Iron carbonate
- qv Quartz vein
- qc Quartz carbonate vein
- py Pyrite
- cpy Chalcopyrite
- lim Limonite
- cu Copper
- zn Zinc

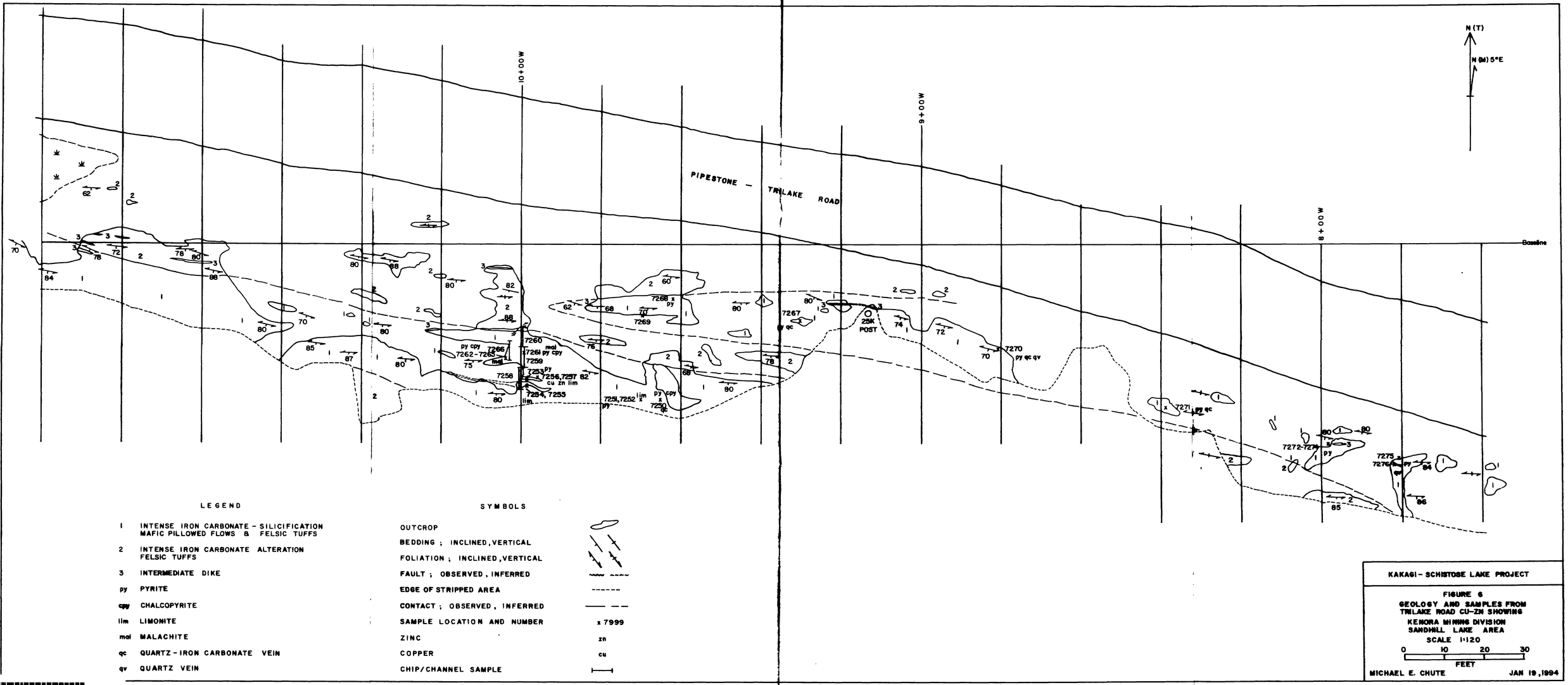
KAKAGI-SCHISTOSE LAKE PROJECT

FIGURE 4
GEOLOGICAL SKETCH MAP
PROSPECTING TRAVERSES &
SAMPLE LOCATIONS
KENORA MINING DIVISION
SANDHILL LAKE AREA

SCALE 1:15840

MICHAEL E. CHUTE JAN 19,1994


LITHOLOGIC LEGEND
FELSIC INTRUSIVE ROCKS
6a Felsite
MAFIC TO INTERMEDIATE INTRUSIVE ROCKS
5a Diabase
5b Gabbro
CHEMICAL SEDIMENTS
4a Chert
CLASTIC SEDIMENTS
3a Arenite
3b Siltstone
3c Argillite
INTERMEDIATE TO FELSIC VOLCANIC ROCKS
2a Flow
2b Tuff
2c Lapilli-tuff
2d Sericite schist
MAFIC VOLCANIC ROCKS
1a Massive flow
1b Pillowed flow
1c Tuff
1d Chlorite schist
ALTERATION AND MINERALIZATION
s Silicification
ch Chloritization
c Carbonitization
fc Iron Carbonitization
p Pyritization
se Sericitization
py Pyrite
cpy Chalcopyrite
mal Malachite
qv Quartz vein
qc Quartz-carbonate vein
tour Tourmaline
SYMBOLS
Outcrop
Bedding; inclined, vertical
Bedding; top known; inclined, vertical
Foliation; inclined, vertical
Fault; observed, inferred
Contact; observed, inferred
Sample location x
N (T)
N (M) 5°E
PIPESTONE-TRILAKE ROAD
Post 1 1161620
Line Post 800 MN
Post 3 1161620
Line Post 400 MN
Post 3 1161620
Post 1 404682
Post 1 404679
4 404682
Post 1 727660
2 727659
3 727664
4 727665
culvert
FIGURE 6
CU-ZN
25K POST
KAKAGI - SCHISTOSE LAKE PROJECT
FIGURE 5
GEOLOGY AND SAMPLES FROM PART OF CLAIM NO. 1161620
KENORA MINING DIVISION
SANDHILL LAKE AREA
SCALE 1:2400
0 200 400 600
FEET
MICHAEL E. CHUTE
JAN 19, 1994



LEGEND

1	INTENSE IRON CARBONATE – SILICIFICATION MAFIC PILLOWED FLOWS & FELSIC TUFFS	
2	INTENSE IRON CARBONATE ALTERATION FELSIC TUFFS	
3	INTERMEDIATE DIKE	
py	PYRITE	
cpy	CHALCOPYRITE	
lim	LIMONITE	
mal	MALACHITE	
qc	QUARTZ – IRON CARBONATE VEIN	
qv	QUARTZ VEIN	

SYMBOLS

OUTCROP	
BEDDING ; INCLINED, VERTICAL	
FOLIATION ; INCLINED, VERTICAL	
FAULT ; OBSERVED, INFERRED	
EDGE OF STRIPPED AREA	
CONTACT ; OBSERVED, INFERRED	
SAMPLE LOCATION AND NUMBER	x 7999
ZINC	zn
COPPER	cu
CHIP/CHANNEL SAMPLE	

KAKAGI – SCHISTOSE LAKE PROJECT

FIGURE 6
GEOLOGY AND SAMPLES FROM TRILAKE ROAD CU-ZN SHOWING
KENORA MINING DIVISION
SANDHILL LAKE AREA
SCALE 1:120
0 10 20 30
FEET

MICHAEL E. CHUTE JAN 19, 1994