

COMINCO LTD.

EXPLORATION
N.T.S. 103P/5

WESTERN DISTRICT
December 14, 1976

ASSESSMENT REPORT

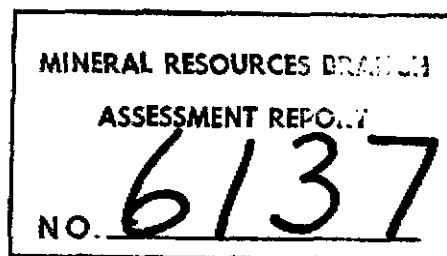
1976 GEOLOGICAL AND GEOCHEMICAL REPORT

ON

THE AHW, SUNDG FR., SUNRISE AND RUBY FR.
MINERAL CLAIMS IN THE ANYOX AREA

SKEENA MINING DIVISION, BRITISH COLUMBIA

LATITUDE: $55^{\circ}25'N$ - LONGITUDE $129^{\circ}50'W$



Period of Work
May 14-August 16, 1976

M. J. Osatenko, M.Sc
D. W. Heddle, B.Sc., P.Eng.

TABLE OF CONTENTS

	<u>Page No.</u>
SUMMARY AND CONCLUSIONS	1
INTRODUCTION	1
PROPERTY AND OWNERSHIP	2
LOCATION AND ACCESS	2
HISTORY	2
GEOLOGY	3
Regional Geology	3
Detailed Geology	3
STRUCTURE	5
GEOCHEMISTRY	5
REFERENCES	7
ATTACHMENTS	7

COMINCO LTD.

EXPLORATION
N.T.S. 103P/5

WESTERN DISTRICT
December 13, 1976

ASSESSMENT REPORT

1976 GEOLOGICAL AND GEOCHEMICAL REPORT

ON

THE AHW, SUNDOG FR., SUNRISE AND RUBY FR.
MINERAL CLAIMS IN THE ANYOX AREA

SUMMARY AND CONCLUSIONS

1. The Anyox property is located 80 miles north of Prince Rupert, British Columbia and covers an old copper mining camp dating back to 1910.
2. Work in 1976 consisted of geological mapping and rock geochemistry around the mineralized settings of the Hidden Creek and Bonanza Mines. Regional work along the basalt-argillite contact was also done and consisted of mapping and rock geochemistry.
3. This work confirms that the mineralization in the Anyox Camp is of the volcanogenic type. Features of interest at the Hidden Creek Mine include; (a) extensively chloritized and quartz veined footwall pillow basalts with widespread pyrite, pyrrhotite, and chalcopyrite, (b) massive sulfides (pyrrhotite, pyrite, and chalcopyrite) occur in a bedded chert unit with interbedded chloritic and biotitic, basaltic pyroclastics and sericite, and (c) overlying argillites are veined locally by quartz carrying minor pyrite, galena, and sphalerite. At the Bonanza Mine the deposit is hosted by highly chloritic and biotitic tuffs and agglomerates with chloritic tuffs in both the footwall and hangingwall zones. Fresh pillow basalts sandwich this tuffaceous package.
4. Volcanic and sedimentary rocks have undergone complex polyphase deformation (northerly, northeasterly, and possibly westerly trends).
5. Rock geochemical patterns in cherts, basaltic pyroclastics, and basalts exhibit distinctive patterns with respect to the known mineralization and show anomalous values beyond that evidenced by megascopic examination.
6. Patterns of alteration, rock types, and rock geochemistry are useful in predicting the likelihood of mineralization at depth at or near the basalt-argillite contact.

INTRODUCTION

This report describes the geology and rock geochemistry at Cominco's Anyox property, 80 miles north of Prince Rupert, British Columbia. The report is based on field investigations by M. J. Osatenko and assistants R. J. Sharp, D. W. Moore, B. G. Ames, J. Faubert, and P. Marshall during two periods between May 14 to July 1, 1976 for the whole crew and R. J. Sharp and J. Faubert from August 12-16, 1976. The work was supervised by D. W. Heddle, P. Eng.

The program for this year consisted of detailed geological mapping and rock geochemistry around the Hidden Creek and Bonanza Mines and reconnaissance traverses spaced 500-1500 feet apart away from these mineralized settings oriented normal to the basalt-argillite contact. Data are presented at a scale of 1" = 1000'.

PROPERTY AND OWNERSHIP

The Anyox property consists of 57 located and 65 crown granted mineral claims and is owned by Cominco Ltd. (see plate 1). This report files credit for the AHW claims and three newly acquired claims; Sundog Fr., Sunrise, and Ruby Fr., all of which are listed below:

<u>Claim Name</u>	<u>Record Number</u>	<u>Due Date</u>
AHW 1	39162	Dec. 16, 1976
2	39163	"
3	39164	"
4	39165	"
5	39166	"
6	39167	"
7	39168	"
8	39169	"
9	39170	"
10	39171	"
11	39172	"
12	39173	"
13	39174	"
14	39175	"
15	39176	"
16	39177	"
17	39178	"
18	39179	"
19	39180	"
20	39181	"
22 Fr.	39182	"
23	39183	"
24	39184	"
25	39185	"
26	39186	"
27	39187	"
29	39188	"
31	39189	"
33	39190	"
34 Fr.	39191	"
35 Fr.	39192	"
36 Fr.	39193	"
Sundog Fr.	246	May 18, 1977
Sunrise	247	"
Ruby Fr.	248	"

LOCATION AND ACCESS

The property is located at 55°25'N and 129°50'W, about 80 miles north of Prince Rupert, British Columbia (see plate 2). Access is by fixed wing aircraft, boat, or helicopter from either Prince Rupert or Stewart. Most areas in the claim group are within 2 miles of tidewater at Granby Bay.

The claims are situated in very rugged terrain (sea level to 2500 feet). However, mapping is greatly facilitated by the lack of dense primary forest cover. This is due to a number of forest fires that have passed through the area and to smelter smoke from the early operation.

HISTORY

The copper mineralization of the Anyox Camp was first discovered by Indians before the turn of the century. Granby acquired the property in 1910 and between 1915 and 1935 mined 25,000,000 tons of ore grading about 1.5 percent copper from the Hidden Creek and Bonanza Mines.

Cominco Ltd. bought Granby's interest in 1936 and intermittently from this year to the present has carried out geological mapping, E.M. surveys and drilling in a number of areas.

GEOLOGY

Regional Geology

The Anyox area is underlain by an assemblage of northerly trending basic volcanic and sedimentary rocks which forms a large roof pendant (9 x 6 miles) in the Coast Range batholith. Carter and Grove (1972) suggest a Jurassic age for the pendant rocks with the granitic rocks of probable late Mesozoic to early Tertiary age. The Anyox property lies on the east side of the pendant.

Detailed Geology

The geology of the Anyox claim group and just outside it is shown in plate 3. Units are briefly described below:

1. Pillow Basalt (unit 1)

Pillow basalts underlie the extreme western part of the central and northern areas of the claim group and most of the southern area around the Bonanza Mine. They consist of pillows about two feet wide with basaltic mud, rinds, and cherty material in the inter-pillow spaces. Tops are difficult to obtain, but the ones noted along the west side of the claim group point to the east indicating stratigraphic tops in this direction.

In some outcrops the outer part of the pillows have flowed plastically resulting in a pinching and a spalling off of parts of the pillows giving a brecciated texture to the outcrop. These are thought to represent both pillow and flow breccias.

Minor amounts of pyrite, pyrrhotite, and chalcopyrite have been observed along fractures and as disseminations in the inter-pillow sediments.

2. Basaltic Pyroclastics (unit 1a)

The basaltic pyroclastics include both basaltic tuffs and agglomerates (often with minor interbedded chert) and are found mainly just below the basalt-argillite contact and within the chert unit at the Hidden Creek Mine. They also occur 4,000 feet northeast and 1,500 feet southwest of the Double Ed deposit (agglomerates minor tuffs); at the Bonanza Mine (tuffs and minor agglomerate); and 3,500-5,000 feet south of the Bonanza Mine (tuffs). Basaltic tuffs are usually bedded and weakly to strongly chloritized. Minor amounts of pyrite, pyrrhotite, and chalcopyrite are present in disseminations, often parallel to the bedding. The basaltic agglomerates consist of subrounded basaltic fragments about 3-4 inches in length in a medium grained basaltic matrix. Minor amounts of pyrite, pyrrhotite, and chalcopyrite occur as fine-grained disseminations in the matrices of these rocks. Both the tuffs and agglomerates form horizons that are usually less than 100 feet in thickness.

3. Altered Pillow Basalts and Basaltic Pyroclastics (units 1b, 1c, 1d, 1e, & 1f)

The altered equivalents of rocks of units 1 and 1a occur near or within areas of copper mineralization at the Hidden Creek and Bonanza Mines as well as at locations 4,000 feet north of the Double Ed deposit and 3,500 feet south of the Bonanza Mine.

Unit 1b rocks occur principally in the footwall basalts peripheral to the Hidden Creek Mine and are essentially fresh basalts that show minor chloritic alteration and thin quartz veins. These rocks are usually gossaned and carry trace amounts of pyrite, pyrrhotite, and occasionally chalcopyrite in the quartz veins. Rocks of the 1b unit apparently grade into areas of moderate chloritic alteration and quartz veining with disseminations of chalcopyrite, pyrrhotite, and pyrite (often up to several percent copper, but more typically 0.1 percent or less), usually in the quartz veins (unit 1c). As can be seen in plate 3, unit 1c rocks form an area about 1000 x 1500 feet on the west side of the 2-3 deposit at Hidden Creek.

Rocks of unit 1d are moderately chloritized, but contain no quartz veins or visible sulfides and occur just to the south of the 2-3 deposit and parallel to the basalt-argillite contact.

The unit 1e rocks grade from the unit 1c rocks and are strongly chloritized and quartz veined. They carry abundant chalcopyrite, pyrite, and pyrrhotite in the veins and are found along the west and south sides of the 2-3 pit as well as in it. This type of mineralization is probably representative of the typical ore mined from the 2-3 deposit.

Unit 1f rocks are highly chloritic, basaltic pyroclastics that contain abundant fine to medium grained red biotite. Chalcopyrite, pyrrhotite, pyrite, and/or magnetite are present in irregularly disseminated blebs while pyrite and sphalerite occur in cherty, calcareous beds. These rocks are best developed at the Bonanza Mines, but biotitic tuffs and agglomerates also occur at the Hidden Creek Mine interbedded with cherts. A biotitic, tuffaceous horizon was also mapped 3,500 feet south of the Bonanza Mine.

4. Gabbro (unit 2)

The gabbroic to amphibolitic rocks are typically medium grained and occur principally to the northwest and north of the Hidden Creek Mine and 2000 feet southwest of the Double Ed deposit. They are sill-like and have sharp, chilled (?) contacts with the surrounding pillow basalts.

5. Chert and Chert Breccia (units 3 and 3a)

Chert (unit 3) is best developed along the basalt-argillite contact and is generally seen wherever the contact is exposed. It varies from a few inches to 250 feet in thickness. These rocks are grey to white, often bedded, and usually contain minor amounts of pyrite and pyrrhotite. Chalcopyrite and sphalerite along with chlorite, sericite, red biotite, and basaltic pyroclastics are also present locally.

Chert breccia (unit 3a) occurs along the basalt-argillite contact to the southwest of the Hidden Creek Mine and north of Bonanza Creek. This unit is about 20-30 feet in width and is strongly gossaned. It consists of chert and basalt fragments, usually 3-4 inches in length, in a basaltic to cherty matrix. No sulfides were observed but the rocks are highly leached. In some areas bedded cherts of unit 3 occur within or on top of the breccia unit mainly in lenses or discontinuous layers.

6. Massive Sulfides (unit 3b)

Massive sulfides outcrops were examined in some of the old Hidden Creek and Bonanza Mine pits. They consist of massive to bedded pyrrhotite, pyrite, chalcopyrite with chloritic and biotitic basaltic pyroclastics in chert. Locally the cherts are fractured and contain both iron sulfides and chalcopyrite.

7. Sediments (units 4 and 4a)

Sedimentary rocks occur stratigraphically above the basalts and underlie most of the claim group. They are usually thin bedded and consist of cherty argillite, argillite, and impure quartzite. Rusty weathering is common and is due to finely disseminated to bedded pyrite and pyrrhotite. Locally, cherty beds with pyrite are present especially near the basalt-argillite contact.

Near the mineralization at Hidden Creek and elsewhere the sediments are veined by quartz that sometimes contains pyrite, galena, and sphalerite (unit 4a).

8. Diorite Dykes (unit 5)

Diorite dykes are common in the claim group and generally strike to the northeast and dip steeply although some strike to the northwest. They are typically 15 feet in width, but show a range from less than one foot to about 50 feet. It appears that they cut all units in the area with the possible exception of the felsite dykes.

9. Felsite Dykes (unit 6)

Felsite dykes occur in a number of areas within the claim group. They strike east-northwest and northeast and are about 20 feet in width. Typically, they are chalky white and are composed of feldspar and possibly quartz with no mafic minerals.

10. Granodiorite (unit 7)

Granodiorite was mapped in only one area, about 3,500 feet northeast of the Bonanza Mine. These rocks are medium grained and contain a few quartz veins carrying pyrite and sphalerite. Some coarse-grained quartz-muscovite-feldspar pegmatites were also noted. Sediments along the contact of these intrusive rocks are bleached a few inches away from the contact.

STRUCTURE

The volcanic and sedimentary rocks have a general northerly trend which is disturbed by folding and faulting. General trends of folding are the synclinal and anticlinal structures south of Bonanza Creek. Local folding is well documented near Falls Creek and at the Hidden Creek Mine where the basalt-argillite contact plunges about 30 degrees to the northeast. A westerly trend of folding may also be present. Major faults trend northerly to northwesterly and have steep dips.

GEOCHEMISTRY

A total of 712 rocks (chert, basaltic pyroclastics, and basalts) were collected over the full extent of the claim group. This includes detailed sampling around the Bonanza and Hidden Creek Mines. Samples consist of a number of chips to make 2-3 lb. samples. These were crushed in a ceramic system and analyzed for Cu, Pb, and Zn by atomic absorption spectrophotometry after a nitric-perchloric acid digestion. Values are reproducible to ± 10 percent of the contained amount of base metal.

The levels of background and anomaly for the Cu, Pb, and Zn contents of cherts, basaltic pyroclastics, and basalts were established by employing the cumulative frequency methods of Sinclair (1974). These are shown in the table below:

		ppm		
		<u>Cu</u>	<u>Pb</u>	<u>Zn</u>
Chert	Background	<58	< 4	< 160
	Possibly anomalous	58-100	4-10	>160
	Anomalous	>100	>10	
Basaltic Pyroclastics	Background	<80	< 5	< 175
	Possibly anomalous	80-230	>5	175-360
	Anomalous	>230		>360
Basalt	Background	<130	< 5	< 150
	Possibly anomalous	130-290	>5	>150
	Anomalous	>290		

1. Cherts

The Cu, Pb, and Zn contents of cherts are shown in plates 4, 5, and 6 respectively.

Cu, Pb, and Zn in cherts show different degrees of dispersion away from the Hidden Creek Mine. Cu and Pb, especially a combination of the two, show anomalous values a minimum of 700 feet from ore grade mineralization and there is some suggestion of anomalous values as much as 3,000 feet from mineralization. Zn values in cherts at the Hidden Creek Mine show little dispersion with the highest values very close to mineralization.

Cherts away from the Hidden Creek Mine show a number of anomalous areas for follow-up work.

2. Basaltic Pyroclastics

The Cu, Pb, and Zn contents of basaltic pyroclastics (principally tuffs) are shown in plates 7, 8, and 9 respectively.

The distribution of samples in the Hidden Creek Mine area is insufficient to show any meaningful patterns of base metals with respect to the mineralized zones. However, of the five samples collected four are anomalous for Cu and one for each of Pb and Zn. However, at the Bonanza Mine anomalous Cu, Pb, and Zn values are present in the tuffaceous rocks up to 500 feet from ore grade mineralization.

A few base metal anomalies were located outside these two mineralized areas. These are located 3,000 feet west of Double Ed deposit and 3,500 feet south of the Bonanza Mine.

3. Basalts

The Cu, Pb, and Zn contents of basalts are shown in plates 10, 11, and 12 respectively.

The Cu content in altered basalts west of the 2-3 deposit is strongly anomalous over an area 2,000 x 1,000 feet. Beyond this zone exists a number of scattered anomalies up to several thousand feet from the main area of anomaly that may be related to the mineralization at Hidden Creek. Interesting anomalies exist 1,500 feet southwest, 3,500 feet west and 4,000 feet northeast of the Double Ed deposit.

Pb and Zn values in the altered footwall basalts west of the 2-3 pit show an area 1,000 x 1,000 feet of scattered anomalous values. A significant Pb anomaly exists 3,000 feet south of the Bonanza Mine. Zn in basalts shows only one area of interest, 3,500 feet west of the Double Ed deposit.

Report by:

M. J. Osatenko
M. J. Osatenko, M.Sc.
Project Geologist

Endorsed by:

D. W. Heddle
D. W. Heddle, P. Eng.
Assistant Manager
Western District

Approved for
Release:

W. T. Irvine
W. T. Irvine, P. Eng.
Manager
Western District

REFERENCES

1. Sinclair, A. J., 1974, Selection of threshold values in geochemical data using probability graphs, Journal of Geochemical Exploration, volume 3, pp. 129-149.
2. Carter, N. C. and Grove, E. W., 1972, Geological compilation map of the Stewart, Anyox, Alice Arm, and Terrace areas, B. C. D. M. preliminary map 8.

ATTACHMENTS

1. Appendix "A": "Exhibit A" - Statement of Expenditures
2. Appendix "B": Statutory Declaration in Support of Expenditures
3. Appendix "C": Statement of Qualifications
- 1 4. Plate 1: Claim Map - 1" = 1000 ft.
5. Plate 2: Location Map - 1" = 15.75 miles
- 2 6. Plate 3: Geology Map - 1" = 1000 ft.
- 3 7. Plate 4: Cu in Cherts - 1" = 1000 ft.
- 4 8. Plate 5: Pb in Cherts - 1" = 1000 ft.
- 5 9. Plate 6: Zn in Cherts - 1" = 1000 ft.
- 6 10. Plate 7: Cu in Basaltic Pyroclastics - 1" = 1000 ft.
- 7 11. Plate 8: Pb in Basaltic Pyroclastics - 1" = 1000 ft.
- 8 12. Plate 9: Zn in Basaltic Pyroclastics - 1" = 1000 ft.
- 9 13. Plate 10: Cu in Basalts - 1" = 1000 ft.
- 10 14. Plate 11: Pb in Basalts - 1" = 1000 ft.
- 11 15. Plate 12: Zn in Basalts - 1" = 1000 ft.

A P P E N D I X "A"

EXHIBIT "A"

STATEMENT OF EXPENDITURES ON THE AHW,
SUNDOG FR., SUNRISE, AND RUBY FR.
MINERAL CLAIMS FOR 1976

GEOLOGY

Salaries:

M. J. Osatenko	- May 17-June 20, June 29-July 1, 1976 (38 days @ \$110/day). Report writing and drafting (8 days @ \$100/day)	\$ 4,180.00 800.00
D. W. Moore	- May 25-June 7 (14 days @ \$85/day)	1,190.00
R. J. Sharp	- May 14-June 20, June 29-July 1, 1976; August 12-16, 1976 (43 days @ \$70/day)	3,010.00
B. G. Ames	- May 25-June 20, June 29-July 1, 1976 (27 days @ \$50/day)	1,350.00
J. Faubert	- May 14-June 20, June 29-July 1, 1976; August 12-16, 1976 (43 days @ \$40/day)	1,720.00
P. Marshall	- May 17-June 20, June 29-July 1, 1976 (38 days @ \$35/day)	1,330.00

Expense Accounts:

Accommodation and food for crew in Prince Rupert	512.00
--	--------

GEOCHEMISTRY

712 rocks for Cu, Pb, and Zn @ \$3.50/sample	2,492.00
--	----------

TRANSPORTATION

Helicopter - Bell 206	8,900.00
Fixed Wing	1,400.00

DOMICILE AND CAMP SERVICES

Tents, food, radio, and camp gear	<u>7,844.00</u>
-----------------------------------	-----------------

TOTAL EXPENDITURES	<u>\$34,728.00</u>
--------------------	--------------------

Signed: M. J. Osatenko

M. J. Osatenko, M.Sc.

This is "Exhibit A" to the Statutory Declaration of Expenditures relating to the geological and geochemical program on the AHW, Sundog Fr., Sunrise, and Ruby Fr. mineral claims declared before me on the 16 Day of December 1976 A.D.

[Signature]
A Notary Public in and for the
Province of British Columbia

A P P E N D I X "B"

IN THE MATTER OF THE

B.C. MINERAL ACT

AND

IN THE MATTER OF A GEOLOGICAL AND GEOCHEMICAL PROGRAMME CARRIED
OUT ON THE AHW, SUNDOG FR., SUNRISE, AND RUBY FR. MINERAL CLAIMS

Located in the Skeena Mining Division

of the Province of British Columbia

More Particularly N.T.S. 103P/5


A F F I D A V I T

I, MYRON J. OSATENKO OF THE CITY OF VANCOUVER IN THE PROVINCE OF
BRITISH COLUMBIA, MAKE OATH AND SAY:

1. THAT I AM EMPLOYED AS A PROJECT GEOLOGIST BY COMINCO LTD.,
AND AS SUCH HAVE A PERSONAL KNOWLEDGE OF THE FACTS TO
WHICH I HEREINAFTER DEPOSE;
2. THAT ANNEXED HERETO AND MARKED AS "EXHIBIT A" TO THIS MY
AFFIDAVIT IS A TRUE COPY OF EXPENDITURES ON A GEOLOGICAL
AND GEOCHEMICAL PROGRAMME CARRIED OUT ON THE AHW, SUNDOG
FR., SUNRISE, AND RUBY FR. MINERAL CLAIMS;
3. THAT THE SAID EXPENDITURES WERE INCURRED BETWEEN THE
FOURTEENTH DAY OF MAY AND THE 16TH DAY OF AUGUST, 1976
FOR THE PURPOSE OF MINERAL EXPLORATION ON THE ABOVE NOTED
CLAIMS.

Sworn Before Me at the City)
of Vancouver in the Province)
of British Columbia this)
16 day of December, 1976.)


A NOTARY PUBLIC IN AND FOR THE)
PROVINCE OF BRITISH COLUMBIA)


MYRON J. OSATENKO

A P P E N D I X "C"

COMINCO LTD.

EXPLORATION

WESTERN DISTRICT

STATEMENT OF QUALIFICATIONS

I, MYRON J. OSATENKO, OF THE CITY OF VANCOUVER, BRITISH COLUMBIA,
HEREBY CERTIFY:

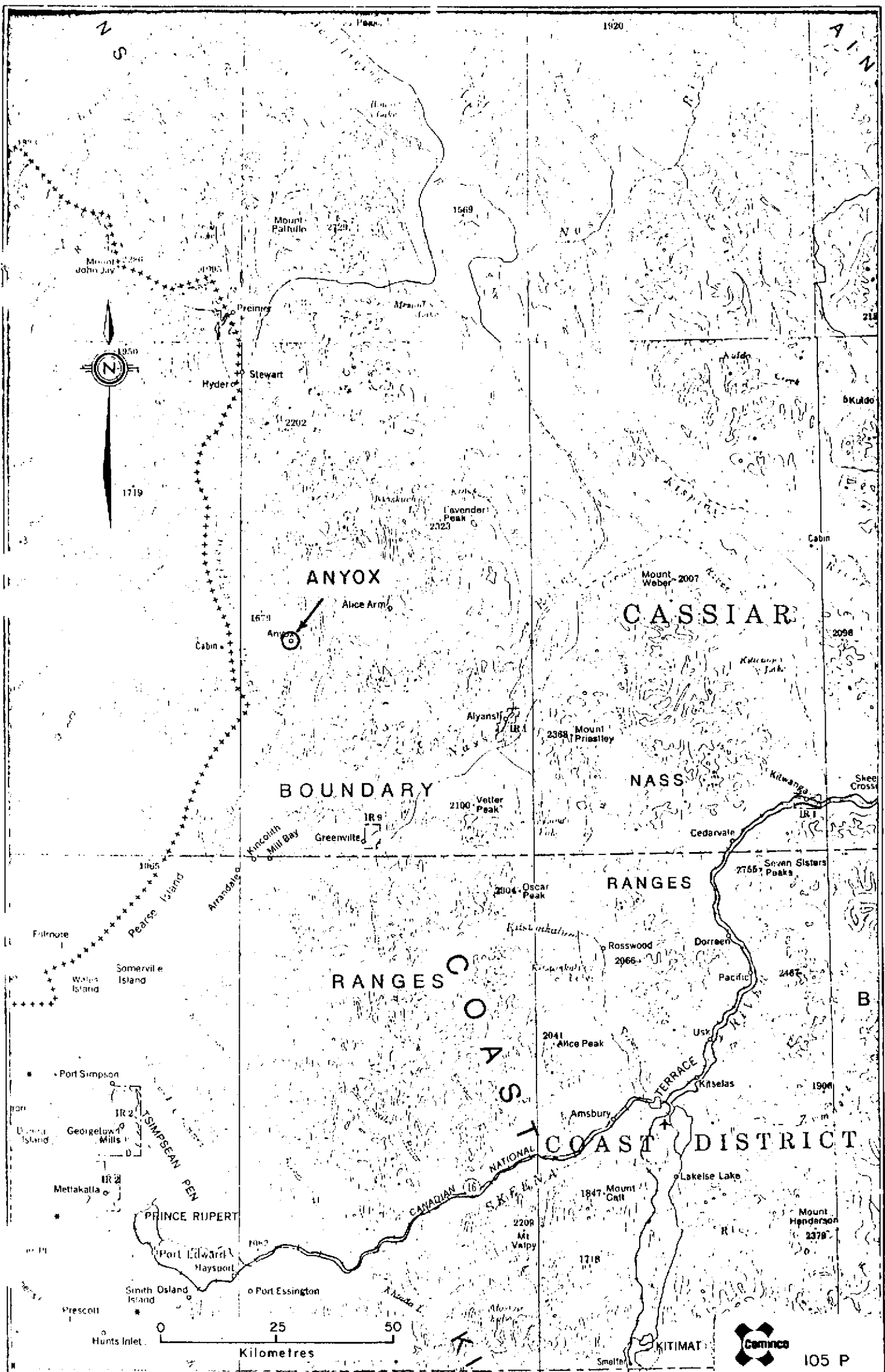
1. THAT I AM A GEOLOGIST, RESIDING AT 6437 - 116 STREET, DELTA,
BRITISH COLUMBIA WITH A BUSINESS ADDRESS AT 2200 - 200
GRANVILLE SQUARE, VANCOUVER, BRITISH COLUMBIA.
2. THAT I GRADUATED WITH B.SC. AND M.SC. DEGREES IN GEOLOGY
FROM THE UNIVERSITY OF BRITISH COLUMBIA IN 1965 AND 1967
RESPECTIVELY.
3. THAT I HAVE PRACTISED GEOLOGY WITH COMINCO LTD. FROM 1967
TO 1976.

DATED this 14th Day of December 1976, at Vancouver, British Columbia.

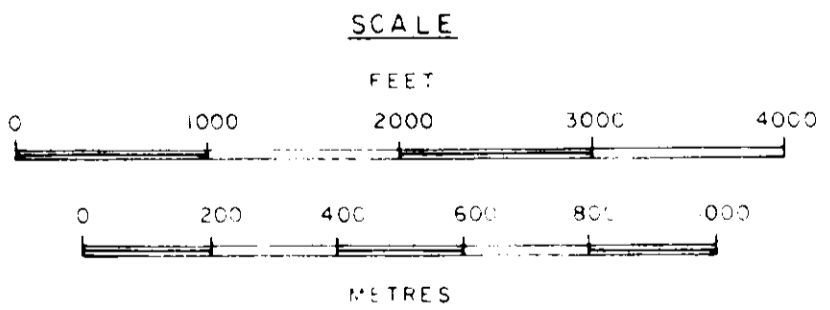
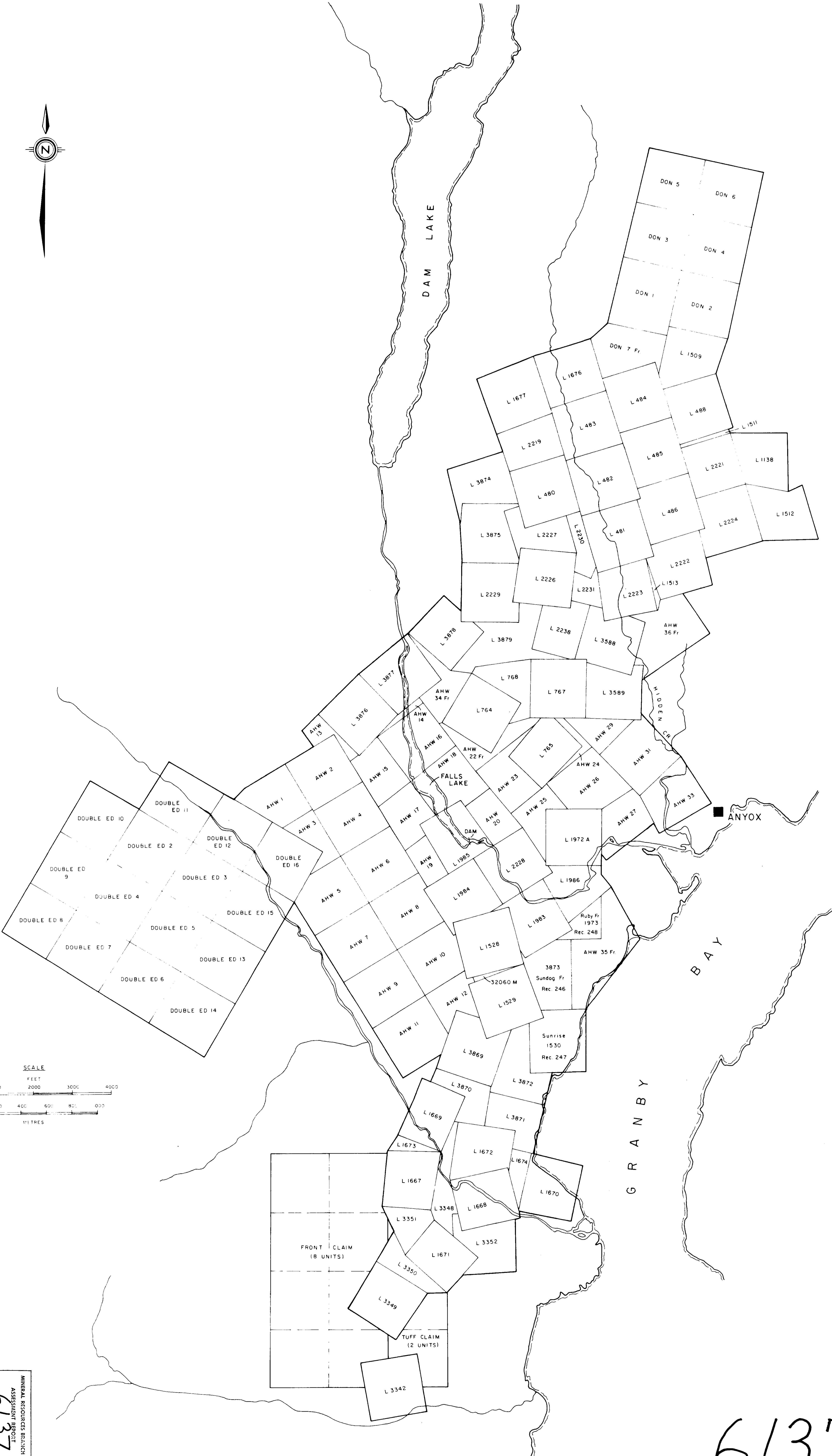
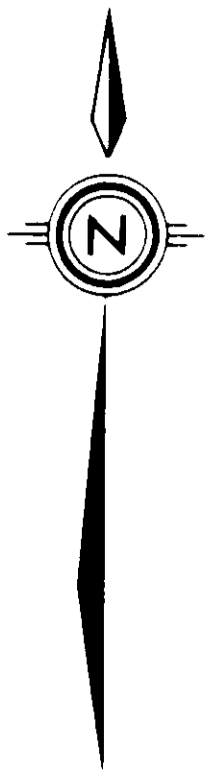
Signed:



Myron J. Osatenko, M.Sc.



Drawn by:		Traced by:		LOCATION OF ANYOX						
Revised by:	Date:	Revised by:	Date:					Scale: 1" = 15.75 miles	Date: NOV. 15, 1976	Plate: 2



Drawn by	ANYOX
Checked by	
Approved by	
Scale	1" = 1000'
Date	DECEMBER, 1976
Sheet	1

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6137
MAP NO. 1

6137

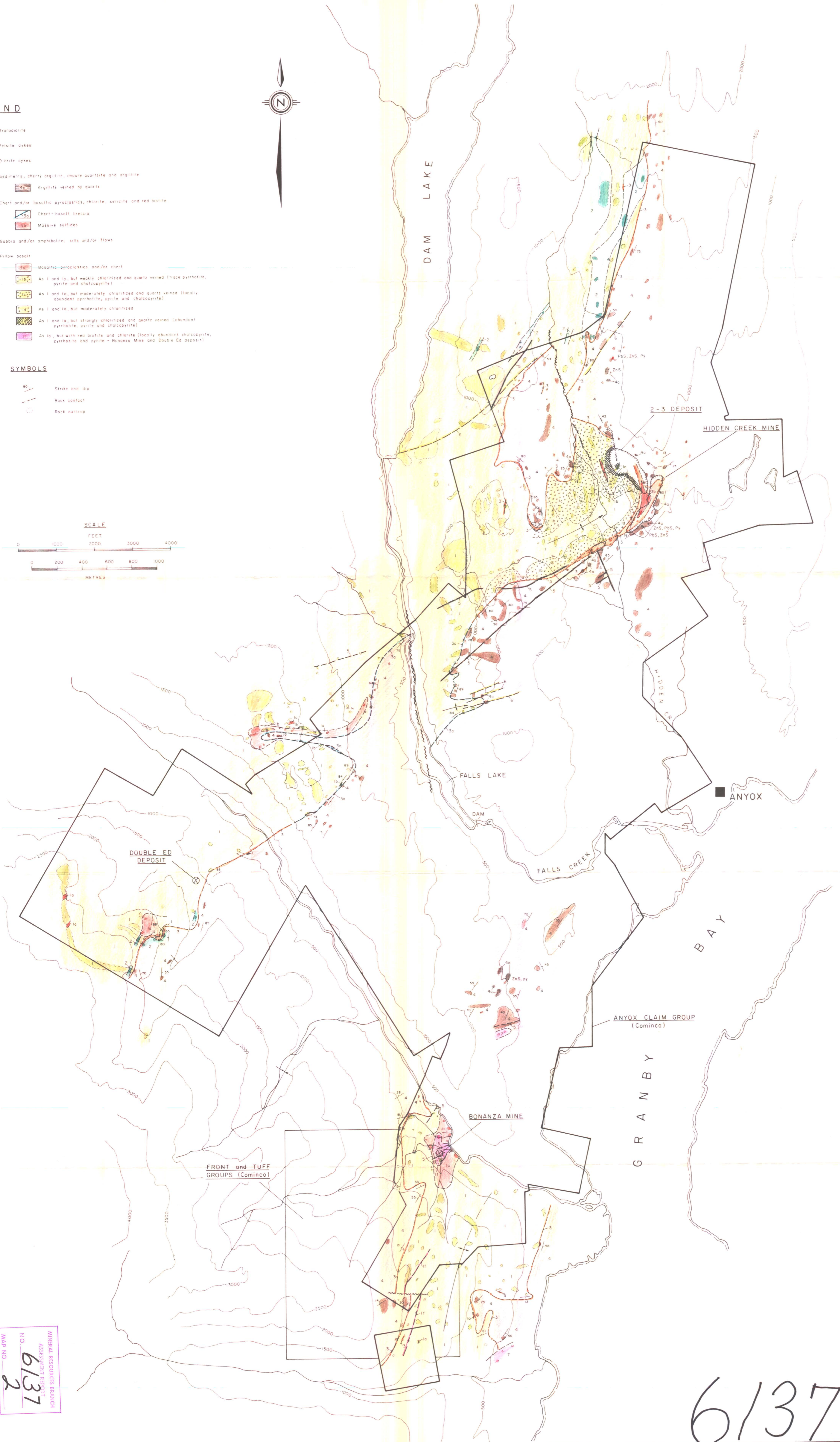
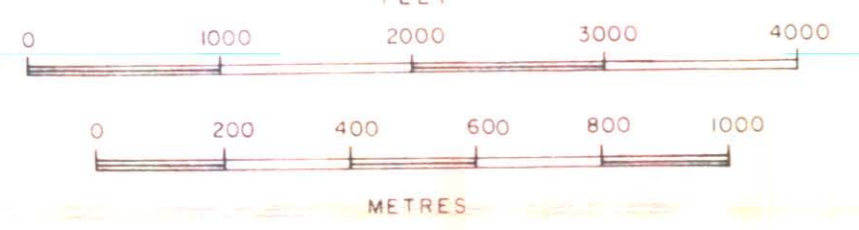
LEGEND

- Garnetiferous
- Felsite dykes
- Diorite dykes
- Sediments, cherty argillite, impure quartzite and argillite
- Argillite veined by quartz
- Chert and/or basaltic pyroclastics, chlorite, sericite and red biotite
- Chert-basalt breccia
- Massive sulfides
- Gabbro and/or amphibolite, sills and/or flows
- Pillow basalt
- Basaltic-pyroclastics and/or chert
- As 1 and 1a, but weakly chloritized and quartz veined (trace pyrrhotite, pyrite and chalcopyrite)
- As 1 and 1a, but moderately chloritized and quartz veined (locally abundant pyrrhotite, pyrite and chalcopyrite)
- As 1 and 1a, but moderately chloritized
- As 1 and 1a, but strongly chloritized and quartz veined (abundant pyrrhotite, pyrite and chalcopyrite)
- As 1a, but with red biotite and chlorite (locally abundant chalcopyrite, pyrrhotite and pyrite - Bonanza Mine and Double Ed deposit)

SYMBOLS

- Strike and dip
- Rock contact
- Rock outcrop

SCALE



Drawn By:	Traced By:
Checked By:	Reviewed By:
Scale: 1" = 1000'	Date: DECEMBER, 1976
ANYOX	
GEOLOGY	

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6137
MAP NO. 2

6137

LEGEND

- 1. Quartzite
- 2. Gneiss
- 3. Gneiss
- 4. Gneiss, chlorite, argillite, minor quartzite and argillite
- 5. Argillite veined by quartz
- 6. Tuff and/or basaltic pyroclastics, chlorite, sericite and red biotite
- 7. Chert, basalt breccia
- 8. Massive sulfides
- 9. Sulfides and/or amphibolite, silts and/or flows
- 10. Basalt
- 11. Basaltic pyroclastics and/or chert
- 12. A₁ and A₂, but weakly chloritized and quartz veined (trace pyrrhotite, pyrite and chalcopryite)
- 13. A₁ and A₂, but moderately chloritized and quartz veined (locally abundant pyrrhotite, pyrite and chalcopryite)
- 14. A₁ and A₂, but moderately chloritized
- 15. A₁ and A₂, but strongly chloritized and quartz veined (abundant pyrrhotite, pyrite and chalcopryite)
- 16. A₁ and A₂, but with red biotite and chlorite (locally abundant chalcopryite, pyrrhotite and pyrite - Bonanza Mine and Double Ed deposit)

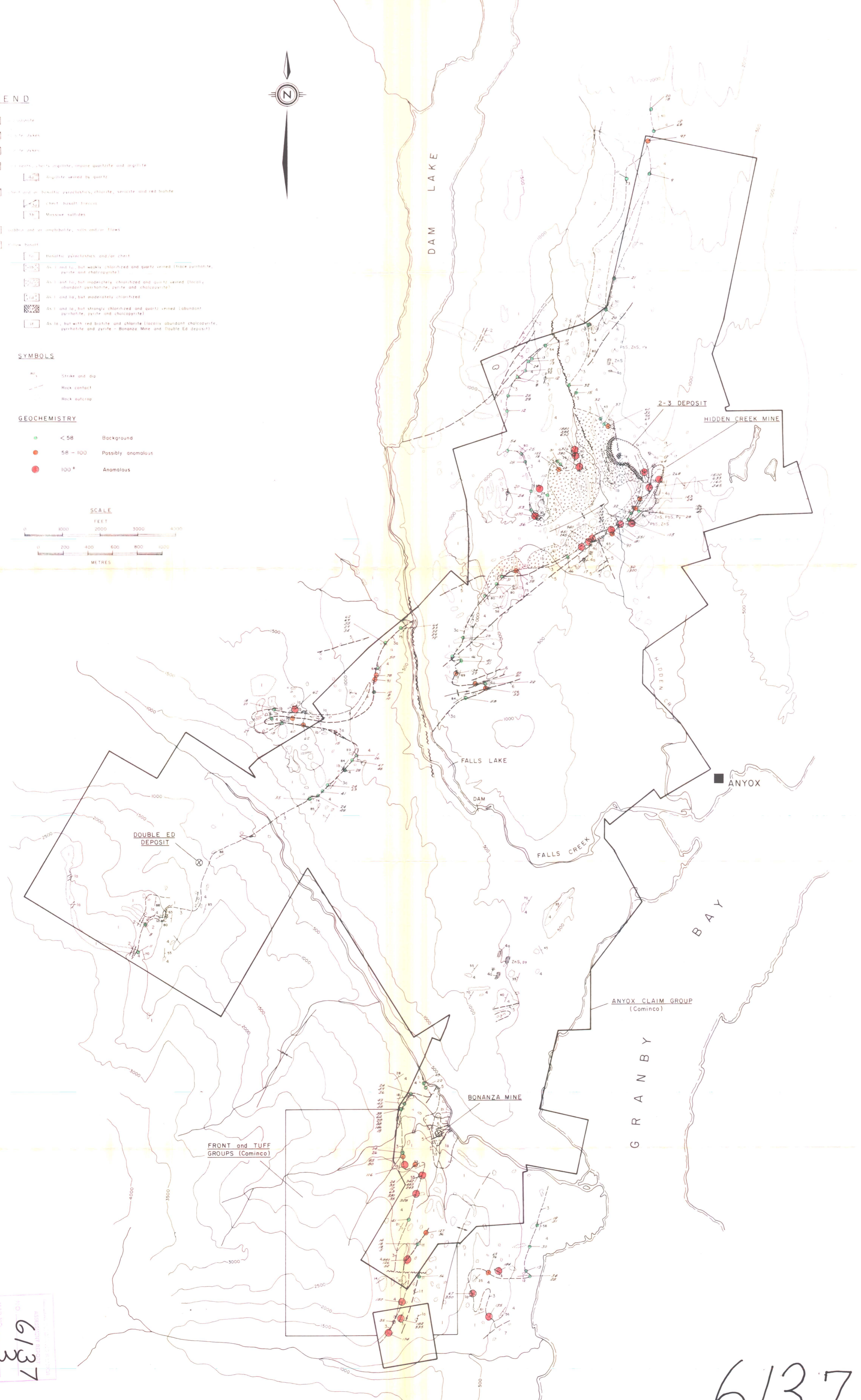
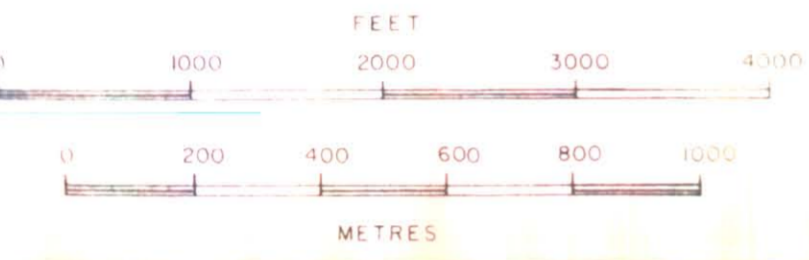
SYMBOLS

- Strike and dip
- Rock contact
- Rock outcrop

GEOCHEMISTRY

- < 58 Background
- 58 - 100 Possibly anomalous
- 100+ Anomalous

SCALE



Drawn By:	Checked By:
Revised By:	Revised By:
Scale: 1" = 1000'	Date: DECEMBER, 1976
Page: 4	

6137

6137

ANYOX
CHERT
Cu (ppm)

LEGEND

- Granodiorite
- Felsite dykes
- Basalt dykes
- Sediments, chiefly argillite, impure quartzite and argillite
 - Argillite veined by quartz
- Invert and/or basaltic pyroclastics, rhyolite, and/or red basalt
 - Chert-basalt breccia
 - Massive sulfides
- Gabbro and/or amphibolite, sills and/or flows
- Pillow basalt
 - Basaltic pyroclastics and/or chert
 - As 1 and 1a, but weakly chloritized and quartz veined (trace pyrrhotite, pyrite and chalcocite)
 - As 1 and 1a, but moderately chloritized and quartz veined (locally abundant pyrrhotite, pyrite and chalcocite)
 - As 1 and 1a, but strongly chloritized and quartz veined (abundant pyrrhotite, pyrite and chalcocite)
 - As 1a, but with red basalt and chlorite (locally abundant chalcocite, pyrrhotite and pyrite - Bonanza Mine and Double Ed deposit)

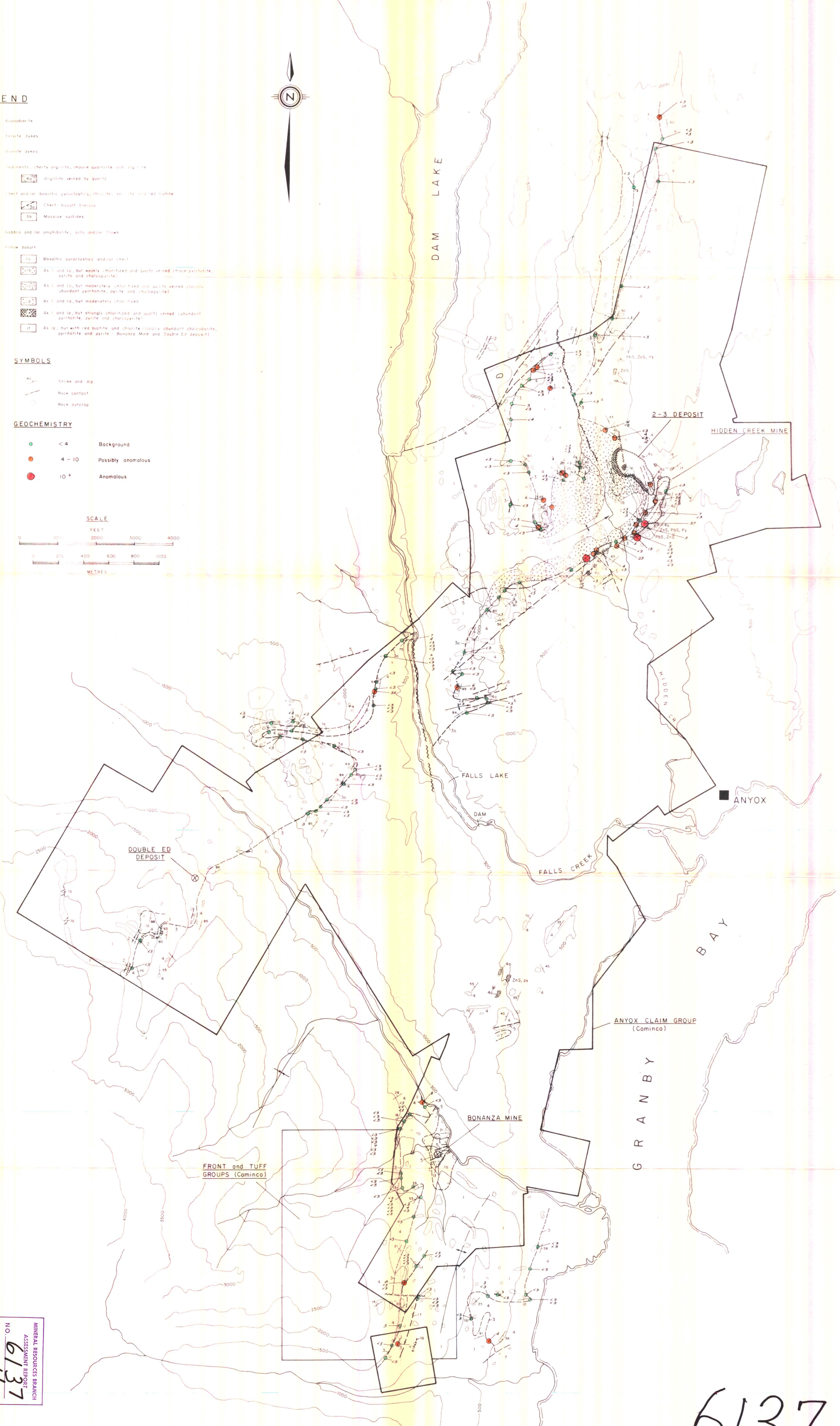
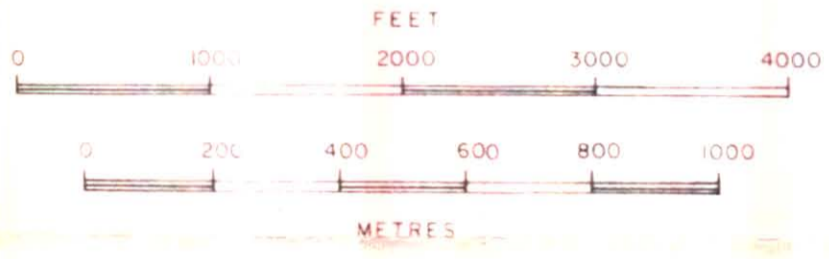
SYMBOLS

- Strike and dip
- Rock contact
- Rock outcrop

GEOCHEMISTRY

- < 4 Background
- 4 - 10 Possibly anomalous
- 10 + Anomalous

SCALE



Drawn by	Checked by
Approved by	Approved by
Scale: 1" = 1000'	Date: DECEMBER, 1976
Page: 5	

ANYOX
MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6137
MAP NO. 4

6137

LEGEND

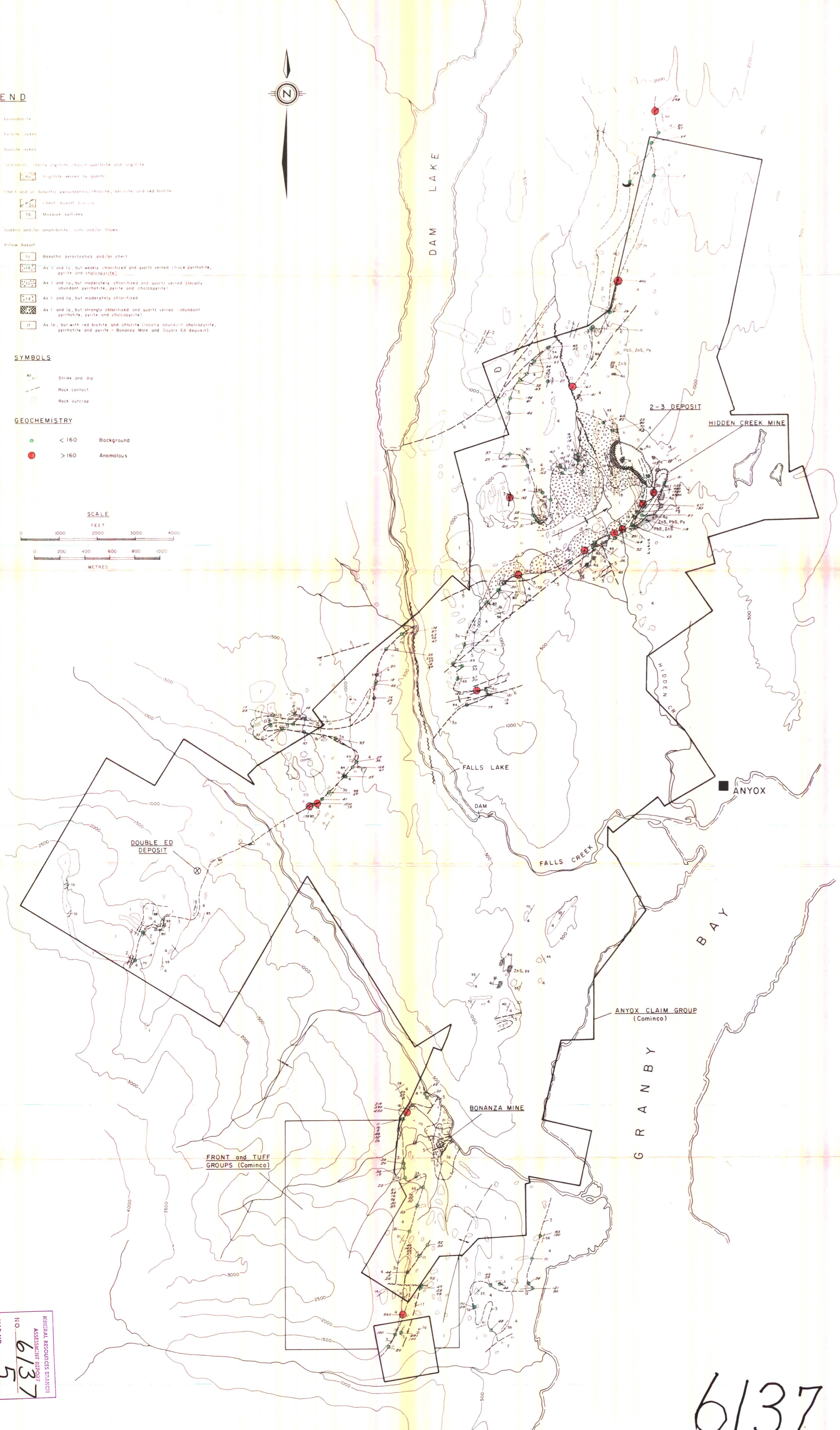
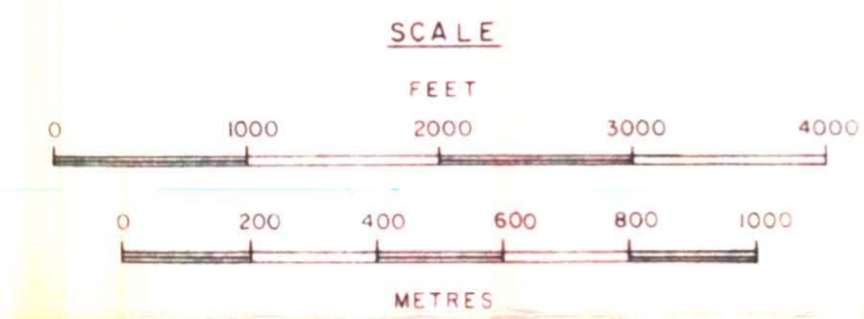
- Gneiss and/or quartzite
- Tertiary dykes
- Basaltic dykes
- Sediments: chert, argillite, micaceous quartzite and argillite
 - Argillite veined by quartz
- Chert and/or basaltic pyroclastics, chlorite, sericite and red biotite
- Chert basalt breccia
- Massive sulfides
- Gabbro and/or amphibolite, silt and/or flows
- Yellow basalt
 - Basaltic pyroclastics and/or chert
 - As 1 and 1a, but weakly chloritized and quartz veined (trace pyrrhotite, pyrite and chalcopyrite)
 - As 1 and 1a, but moderately chloritized and quartz veined (locally abundant pyrrhotite, pyrite and chalcopyrite)
 - As 1 and 1a, but strongly chloritized
 - As 1 and 1a, but strongly chloritized and quartz veined (abundant pyrrhotite, pyrite and chalcopyrite)
 - As 1a, but with red biotite and chlorite (locally abundant chalcopyrite, pyrrhotite and pyrite - Bonanza Mine and Double Ed deposit)

SYMBOLS

- Strike and dip
- Rock contact
- Rock outcrop

GEOCHEMISTRY

- < 160 Background
- > 160 Anomalous



Drawn by:	Checked by:
Revised by:	Approved by:
ANYOX	
CHERT	
Zn (ppm)	
Scale: 1" = 1000'	Date: DECEMBER, 1976
Page: 6	

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6137
MAP NO. 5

6137

LEGEND

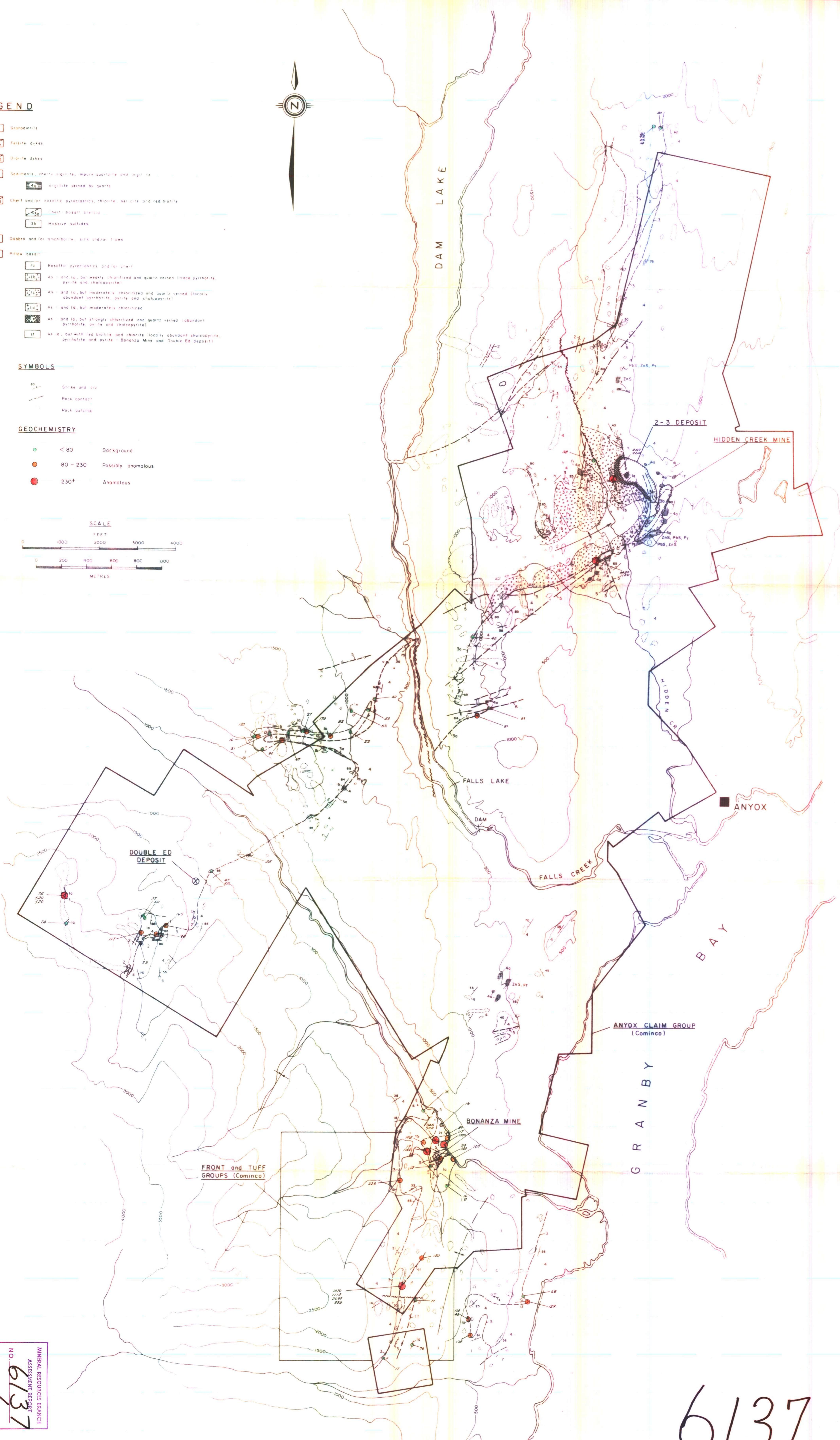
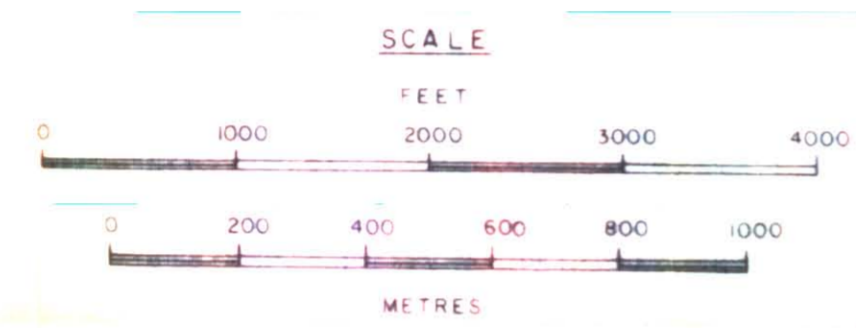
- 7 Granodiorite
- 6 Felsite dykes
- 5 Diorite dykes
- 4 Sediments, cherty argillite, micrite, quartzite and argillite
- 3a Argillite veined by quartz
- 3b Chert and/or basaltic pyroclastics, chlorite, sericite and red biotite
- 3c Chert basalt breccia
- 3d Massive sulfides
- 2 Gabbro and/or amphibolite, silt and/or flows
- 1 Pillow basalt
 - 1a Basaltic pyroclastics and/or chert
 - 1b As 1 and 1a, but weakly chloritized and quartz veined (trace pyrrhotite, pyrite and chalcocopyrite)
 - 1c As 1 and 1a, but moderately chloritized and quartz veined (locally abundant pyrrhotite, pyrite and chalcocopyrite)
 - 1d As 1 and 1a, but moderately chloritized
 - 1e As 1 and 1a, but strongly chloritized and quartz veined (abundant pyrrhotite, pyrite and chalcocopyrite)
 - 1f As 1e, but with red biotite and chlorite (locally abundant chalcocopyrite, pyrrhotite and pyrite - Bonanza Mine and Double Ed deposit)

SYMBOLS

- Strike and dip
- Rock contact
- Rock outcrop

GEOCHEMISTRY

- < 80 Background
- 80 - 230 Possibly anomalous
- 230+ Anomalous



Drawn by: ANYOX
 Traced by: ANYOX
 BASALTIC PYROCLASTICS
 Cu (ppm)
 Date: DECEMBER, 1976
 Scale: 1" = 1000'

MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
 NO. 6137
 MAP NO. 6

6137

LEGEND

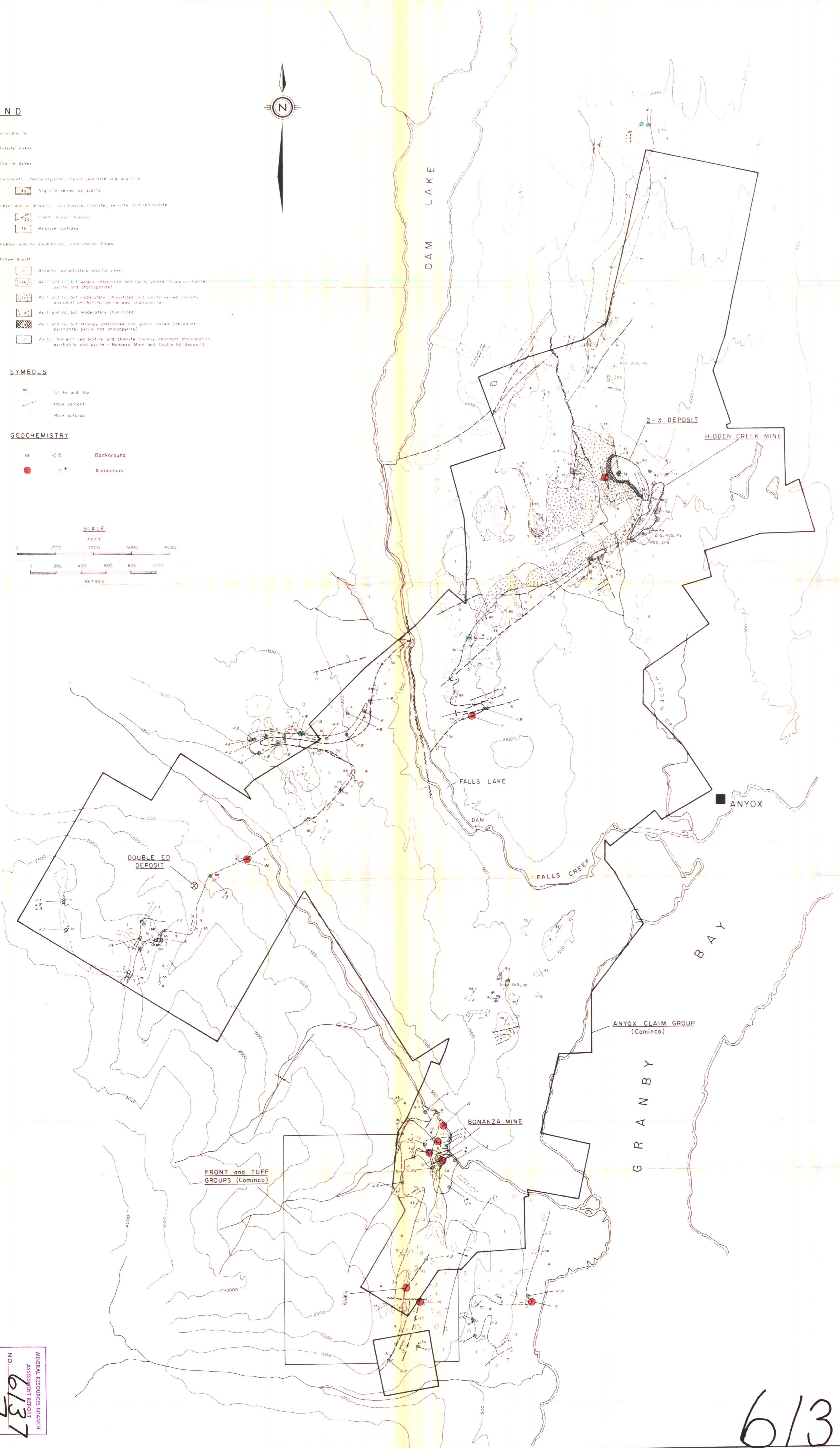
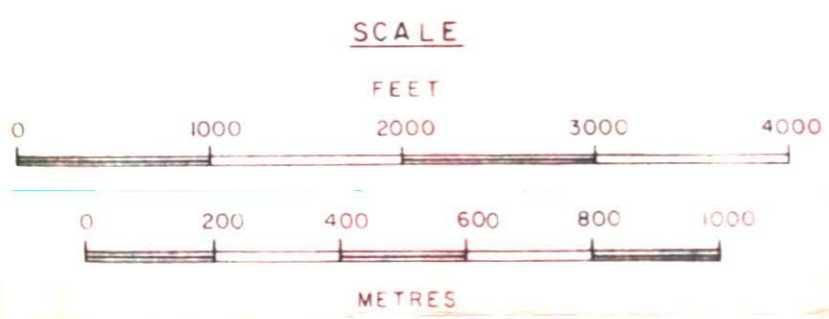
- 7 Granodiorite
- 6 Felsite dykes
- 5 Thiarite dykes
- 4 Sediments, chert, argillite, impure quartzite and argillite
 - 4a Argillite veined by quartz
- 3 Chert and/or basaltic pyroclastics, chlorite, sericite and red matrix
 - 3a Chert-basalt breccia
 - 3b Massive sulfides
- 2 Gabbro and/or amphibolite, silt and/or flows
- 1 Pillow basalt
 - 1a Basaltic pyroclastics and/or chert
 - 1b As 1 and 1a, but weakly chloritized and quartz veined (trace pyrrhotite, pyrite and chalcocopyrite)
 - 1c As 1 and 1a, but moderately chloritized and quartz veined (locally abundant pyrrhotite, pyrite and chalcocopyrite)
 - 1d As 1 and 1a, but moderately chloritized
 - 1e As 1 and 1a, but strongly chloritized and quartz veined (abundant pyrrhotite, pyrite and chalcocopyrite)
 - 1f As 1a, but with red matrix and chlorite (locally abundant chalcocopyrite, pyrrhotite and pyrite - Bonanza Mine and Double Ed deposit)

SYMBOLS

- Strike and dip
- Rock contact
- Rock outcrop

GEOCHEMISTRY

- < 5 Background
- 5+ Anomalous



Drawn By:	Traced By:
Checked By:	Reviewed By:
Scale: 1" = 1000'	Date: DECEMBER, 1976
Plate: B	Room: 3100B

ANYOX

BASALTIC PYROCLASTICS
Pb (ppm)

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6137
MAP NO. 7

6137

LEGEND

- 7 Granodiorite
- 6 Felsite dykes
- 5 Diorite dykes
- 4 Sediments, cherty argillite, impure quartzite and argillite
 - 4a Argillite veined by quartz
- 3 Chert and/or basaltic pyroclastics, chlorite, sericite and red biotite
 - 3a Chert-basalt breccia
 - 3b Massive sulfides
- 2 Gabbro and/or amphibolite, sills and/or flows
- 1 Pillow basalt
 - 1a Basaltic pyroclastics and/or chert
 - 1a.1 As 1 and 1a, but weakly chloritized and quartz veined (trace pyrrhotite, pyrite and chalcocopyrite)
 - 1a.2 As 1 and 1a, but moderately chloritized and quartz veined (locally abundant pyrrhotite, pyrite and chalcocopyrite)
 - 1a.3 As 1 and 1a, but moderately chloritized
 - 1a.4 As 1 and 1a, but strongly chloritized and quartz veined (abundant pyrrhotite, pyrite and chalcocopyrite)
 - 1f As 1a, but with red biotite and chlorite (locally abundant chalcocopyrite, pyrrhotite and pyrite - Bonanza Mine and Double Ed deposit)

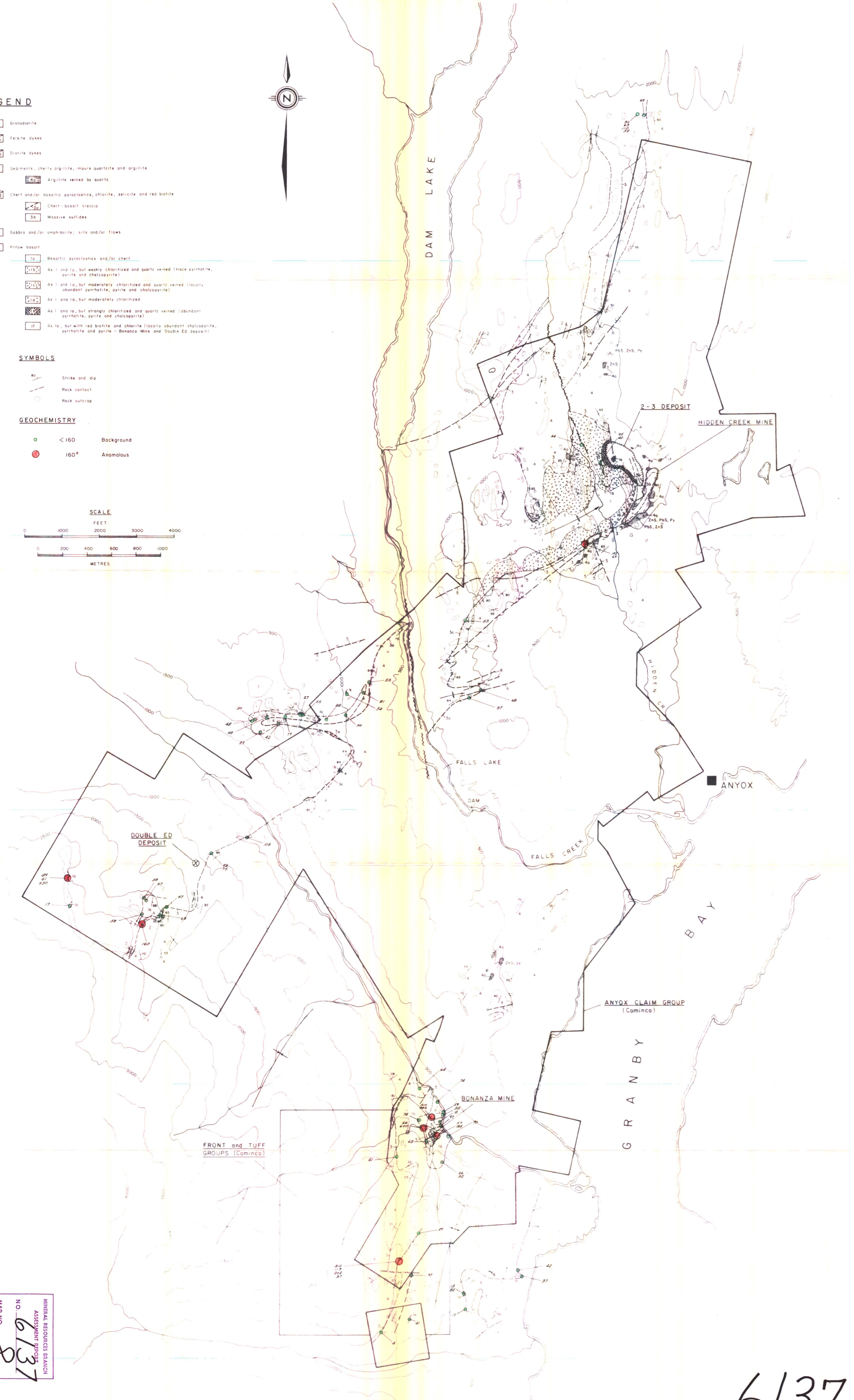
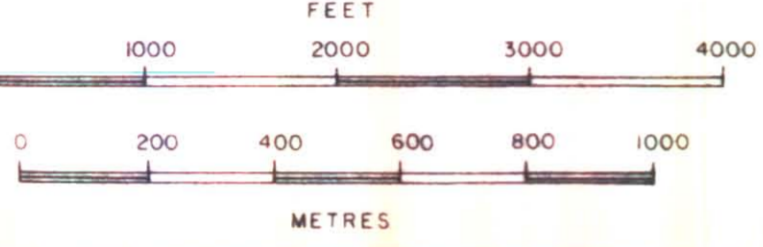
SYMBOLS

- 80 Strike and dip
- Rock contact
- Rock outcrop

GEOCHEMISTRY

- < 160 Background
- 160+ Anomalous

SCALE



Drawn by	Checked by
Revised by	Revised by
Scale 1" = 1000'	Date DECEMBER, 1976
ANYOX BASALTIC PYROCLASTICS Zn (ppm)	

MINERAL RESOURCES BRANCH
 ASSESSMENT REPORT
 NO. 6137
 MAP NO. 8

6137

LEGEND

- 7 Granodiorite
- 6 Felsite dykes
- 5 Diorite dykes
- 4 Sediments, cherty argillite, impure quartzite and argillite
 - 4a Argillite veined by quartz
- 3 Chert and/or basaltic pyroclastics, chlorite, sericite and red biotite
 - 3a Chert-basalt breccia
 - 3b Massive sulfides
- 2 Gabbro and/or amphibolite, silt and/or flows
- 1 Pillow basalt
 - 1a Basaltic pyroclastics and/or chert
 - 1b As 1 and 1a, but weakly chloritized and quartz veined (trace pyrrhotite, pyrite and chalcocopyrite)
 - 1c As 1 and 1a, but moderately chloritized and quartz veined (locally abundant pyrrhotite, pyrite and chalcocopyrite)
 - 1d As 1 and 1a, but strongly chloritized
 - 1e As 1 and 1a, but strongly chloritized and quartz veined (abundant pyrrhotite, pyrite and chalcocopyrite)
 - 1f As 1a, but with red biotite and chlorite (locally abundant chalcocopyrite, pyrrhotite and pyrite - Bonanza Mine and Double Ed deposit)

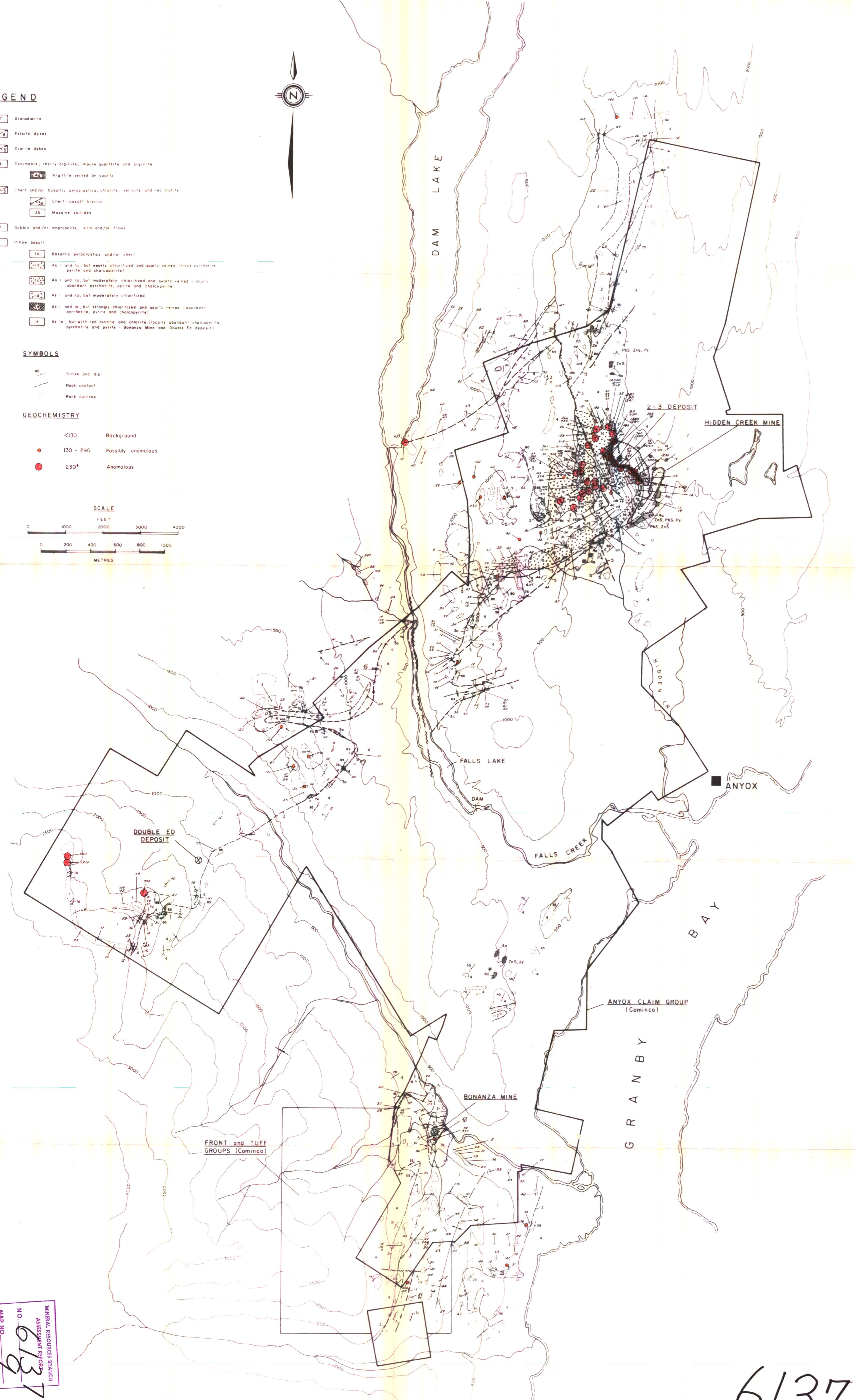
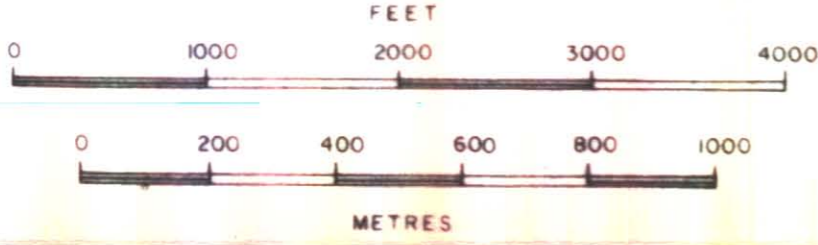
SYMBOLS

- 80 Strike and dip
- Rock contact
- Rock outcrop

GEOCHEMISTRY

- <130 Background
- 130 - 290 Possibly anomalous
- 230+ Anomalous

SCALE



Drawn by	Checked by
Revised by	Approved by
ANYOX	
BASALT	
Cu (ppm)	
Scale	1" = 1,000'
Date	DECEMBER, 1976
Plate	10

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6137
MAP NO. 7

6137

LEGEND

- 7 Granodiorite
- 6 Felsite dykes
- 5 Diorite dykes
- 4 Sediments; cherty argillite, impure quartzite and argillite
 - 4a Argillite veined by quartz
- 3 Chert and/or basaltic pyroclastics, chlorite, sericite and red biotite
 - 3a Chert-basalt breccia
 - 3b Massive sulfides
- 2 Gabbro and/or amphibolite; sills and/or flows
- 1 Pillow basalt
 - 1a Basaltic pyroclastics and/or chert
 - 1b As 1 and 1a, but weakly chloritized and quartz veined (trace pyrrhotite, pyrite and chalcopyrite)
 - 1c As 1 and 1a, but moderately chloritized and quartz veined (locally abundant pyrrhotite, pyrite and chalcopyrite)
 - 1d As 1 and 1a, but moderately chloritized
 - 1e As 1 and 1a, but strongly chloritized and quartz veined (abundant pyrrhotite, pyrite and chalcopyrite)
 - 1f As 1a, but with red biotite and chlorite (locally abundant chalcopyrite, pyrrhotite and pyrite - Bonanza Mine and Double Ed deposit)

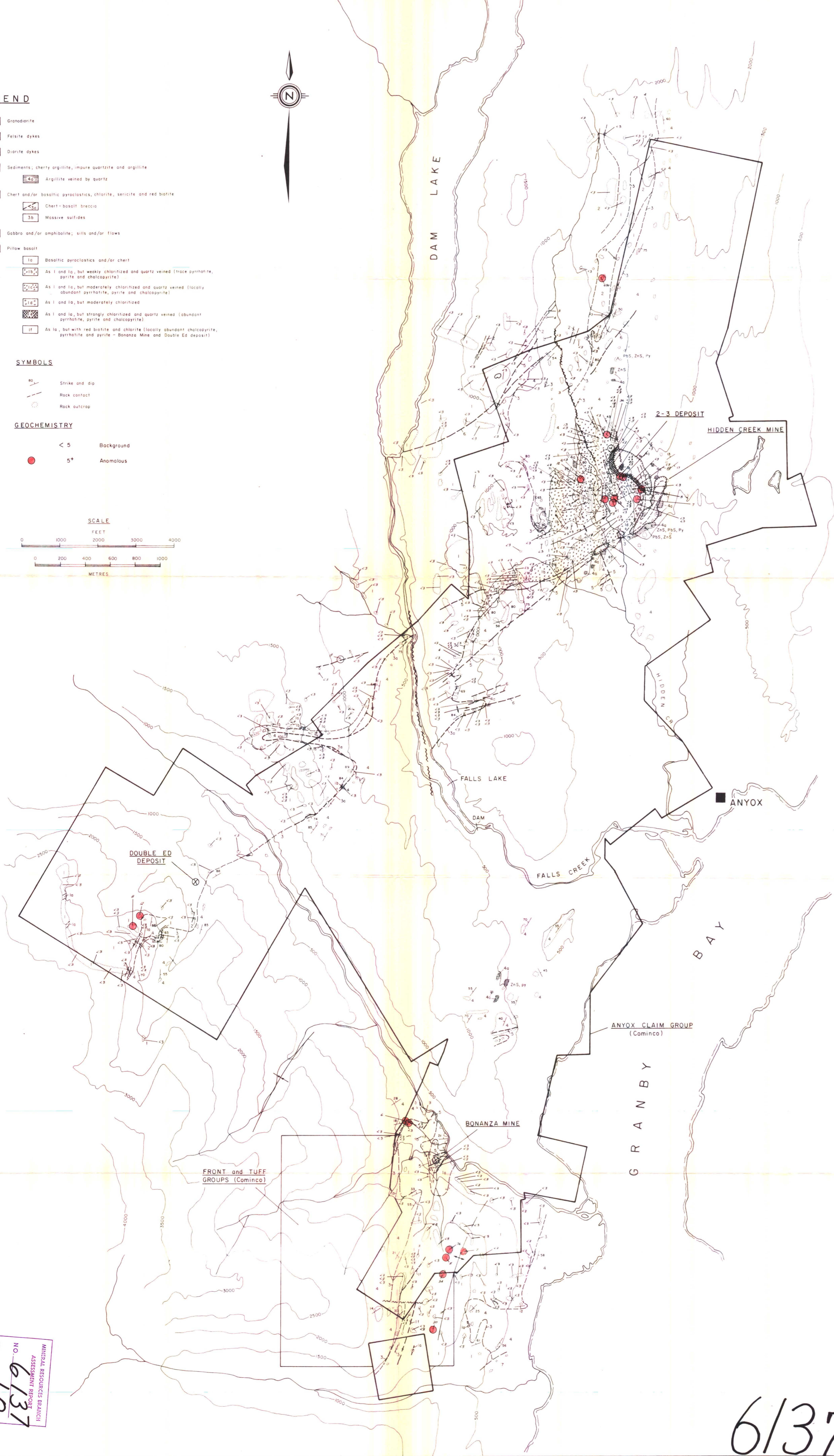
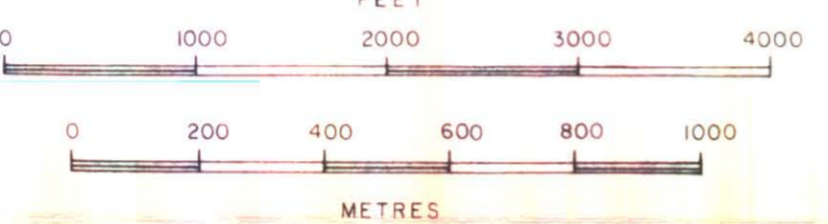
SYMBOLS

- 80 Strike and dip
- Rock contact
- Rock outcrop

GEOCHEMISTRY

- < 5 Background
- 5+ Anomalous

SCALE



Drawn By:	Traced By:
Checked By:	Checked By:
Scale: 1" = 1000'	Date: DECEMBER, 1976
Plate: II	

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6137
MAP NO. 110

ANYOX

BASALT
Pb (ppm)

6137

LEGEND

- 7 Granodiorite
- 6 Felsite dykes
- 5 Diorite dykes
- 4 Sediments: cherty argillite, maure quartzite and argillite
 - 4a Argillite veined by quartz
- 3 Chert and/or basaltic pyroclastics, chlorite, sericite and red biotite
 - 3a Chert-basalt breccia
 - 3b Massive sulfides
- 2 Gabbro and/or amphibolite, sills and/or flows
- 1 Pillow basalt
 - 1a Basaltic pyroclastics and/or chert
 - 1b As 1 and 1a, but weakly chloritized and quartz veined (trace pyrrhotite, pyrite and chalcopyrite)
 - 1c As 1 and 1a, but moderately chloritized and quartz veined (locally abundant pyrrhotite, pyrite and chalcopyrite)
 - 1d As 1 and 1a, but strongly chloritized
 - 1e As 1 and 1a, but strongly chloritized and quartz veined (abundant pyrrhotite, pyrite and chalcopyrite)
 - 1f As 1a, but with red biotite and chlorite (locally abundant chalcopyrite, pyrrhotite and pyrite - Bonanza Mine and Double Ed deposit)

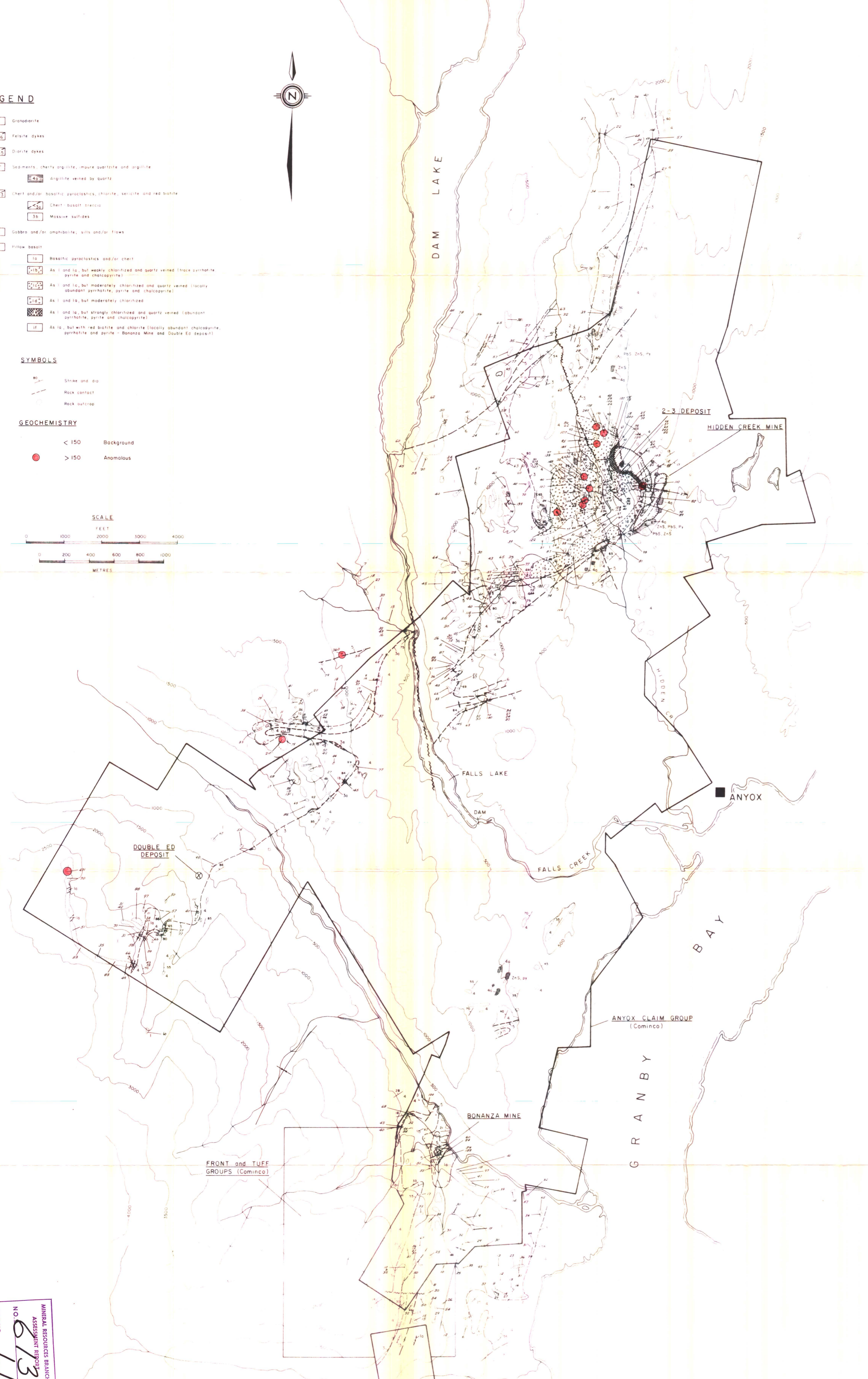
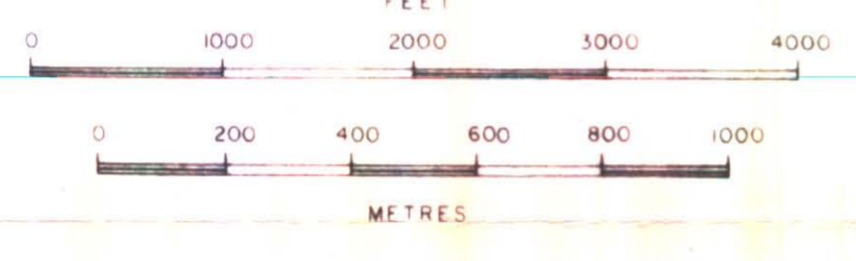
SYMBOLS

- 80 Strike and dip
- Rock contact
- Rock outcrop

GEOCHEMISTRY

- < 150 Background
- > 150 Anomalous

SCALE



Drawn by	Checked by
Revised by	Scale
Date	Plate
ANYOX	
BASALT	
Zn (ppm)	

MINERAL RESOURCES BRANCH
ASSESSMENT REPORT
NO. 6137
MAP NO. 117

6137