GEOLOGY AND GEOCHEMISTRY REPORT

on the

TULIN PROPERTY

CLAIMS:

TRAPPER I #3339
TRAPPER II #3340
TRAPPER III #3341
TRAPPER IV #3342

Atlin Mining District

Northwestern B.C.

N.T.S. 104K/7

Latitude 58° 21' N
Longitude 132° 40' W

for

CATHEDRAL GOLD CORPORATION

by

SANDRA T. BISHOP

OCTOBER, 1989

SUMMARY

The results of the Geological Survey of Canada's 1987 geochemical reconnaissance program of the Tulsequah, B.C., area were released in July, 1988 (Open File #1647). The Trapper I - IV claims were staked to cover ground which had returned anomalous base and precious metal values in this survey area.

The Tulin property is underlain primarily by a Triassic aged diorite which is intruded by a number of Tertiary felsite and mafic dykes. Quartz veining was encountered throughout the property and hosts significant molybdenite mineralization. Minor anomalous base and precious metal values were returned from sampling on the property.

The 1989 work program included detailed prospecting and rock sampling with some reconnaissance level soil and silt sampling.

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APPENDICES

FIGURES

1.1 LOCATION AND ACCESS

The Tulin property is located in northwestern British Columbia on the 1:250,000 Tulsequah map sheet 104K. The property lies 9 kilometers south of Trapper Lake. Atlin is 150 km north-northwest from the claims whereas Telegraph Creek lies 100 km to the southeast.

The property is accessible only by air and the 1989 field program was helicopter supported from Telegraph Creek.

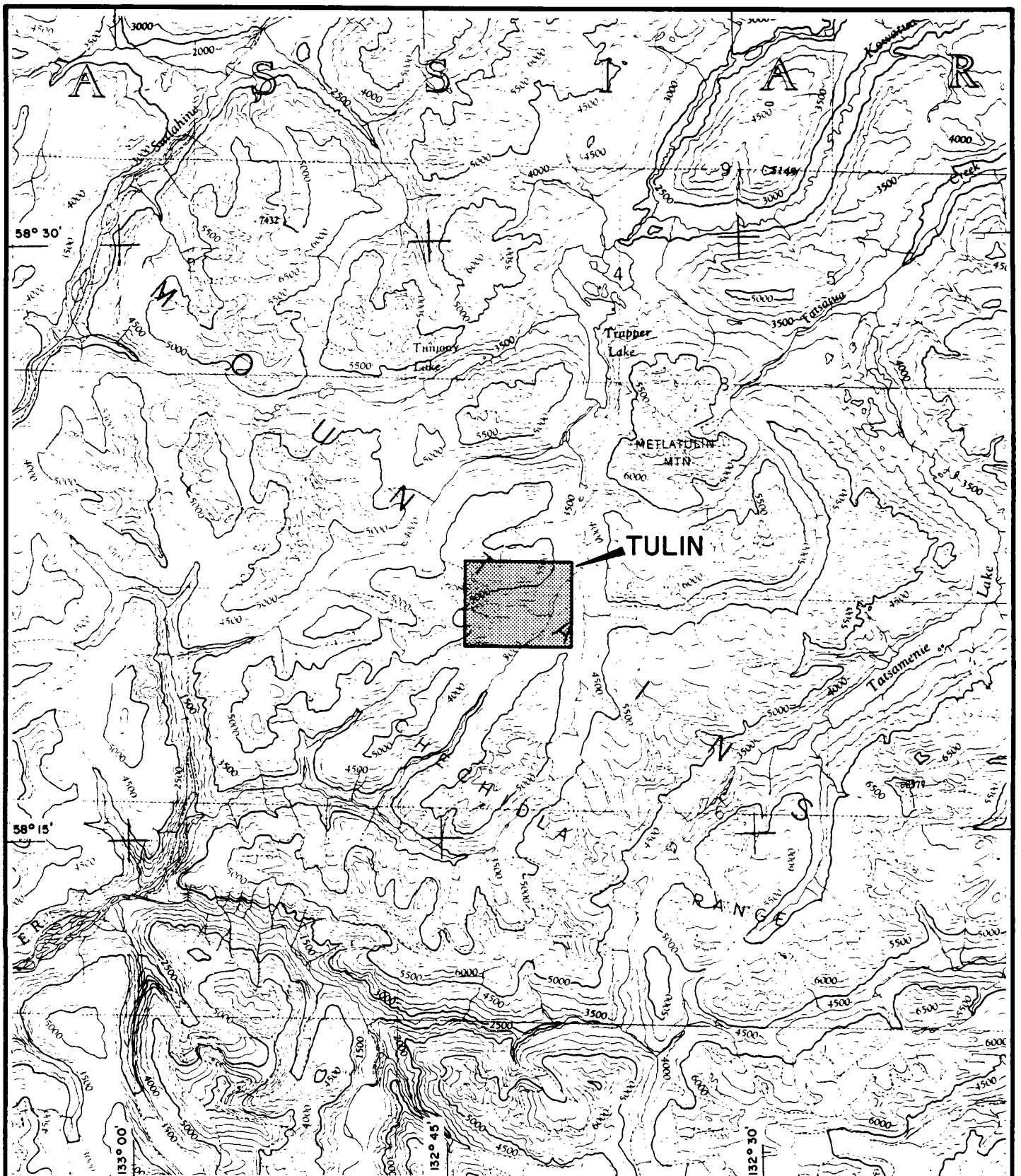
1.2 PHYSIOGRAPHY AND VEGETATION

The property lies in the Chechidla Range, near the east side of the Coast Range Mountains. Maximum elevation on the property is approximately 2150 metres A.S.L. The area is characterized by steep rugged terrain with relief in the order of 1000 metres.

A number of valleys in the area above 1400 metres are occupied by glaciers. Main valleys are generally U-shaped with well braided streams of silt laden glacier melt water.

Most of the area covered by the claims lies above tree line (1100 metres). The slopes are generally bare or covered only with moss and small shrubs. Below 1100 metres, the cover is dense in places with a mixture of large evergreens, cottonwoods and some underbrush.

Outcrop exposure makes up approximately 25% of the claim area and most is accessible on foot.



CATHEDRAL GOLD CORPORATION

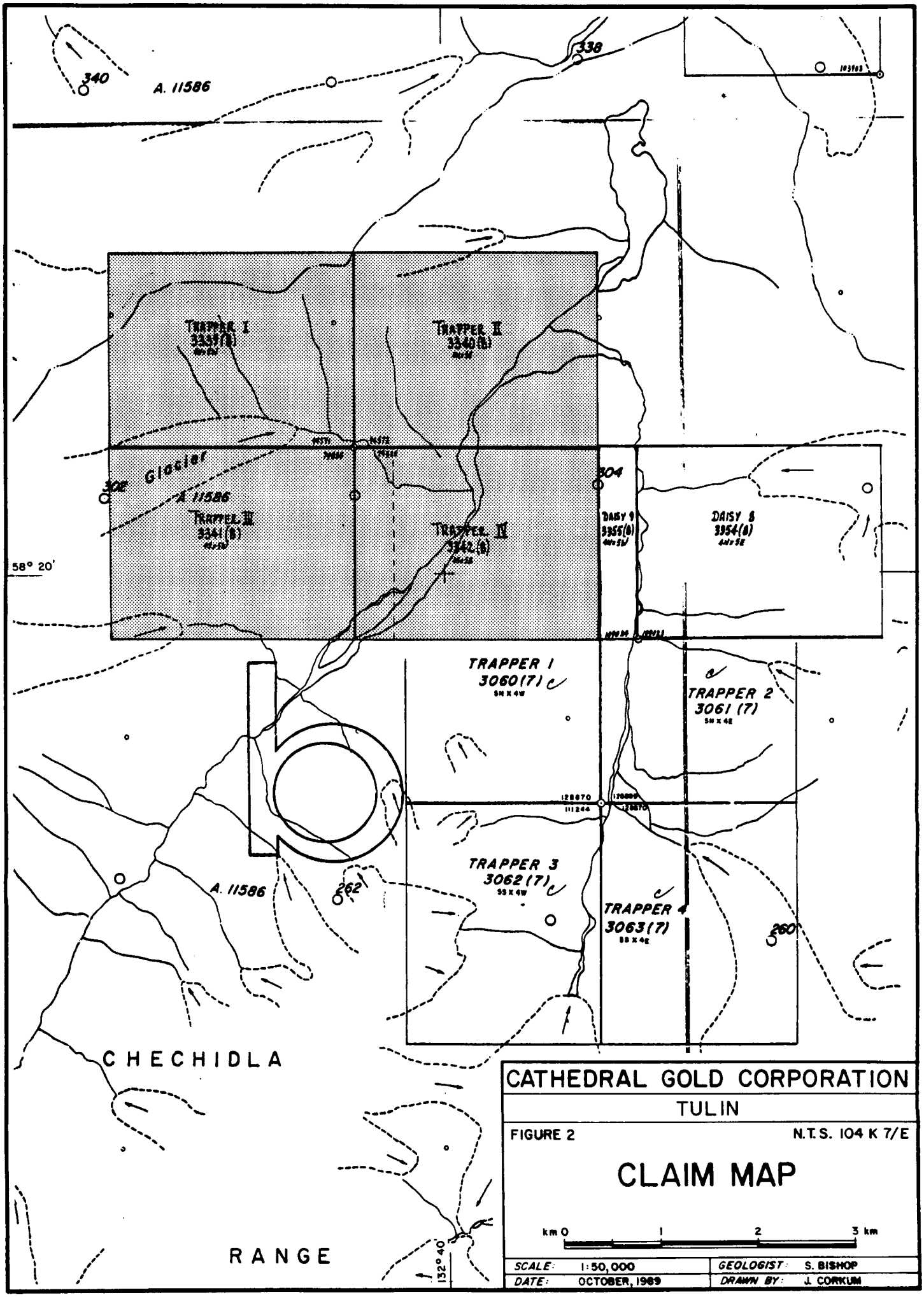
TULIN

FIGURE 1 N.T.S. 104 K 7/E

LOCATION MAP

km 0 5 10 15 km

SCALE: 1:250,000	GEOLOGIST: S. BISHOP
DATE: OCTOBER, 1989	DRAWN BY: J. CORKUM


340
A. 11586
338
TRAPPER I
3339(8)
TRAPPER II
3340(8)
304
302
Glacier
A. 11586
TRAPPER III
3341(8)
TRAPPER IV
3342(8)
DAISY 9
3955(8)
DAISY 8
3954(8)
58° 20'
TRAPPER 1
3060(7)
5KM X 4W
TRAPPER 2
3061(7)
5KM X 4E
TRAPPER 3
3062(7)
5KM X 4W
TRAPPER 4
3063(7)
5KM X 4E
A. 11586
262
260
CHECHIDLA
RANGE
132° 40'
CATHEDRAL GOLD CORPORATION
TULIN
FIGURE 2
N.T.S. 104 K 7/E
CLAIM MAP
km 0
1
2
3 km
SCALE: 1:50,000
GEOLOGIST: S. BISHOP
DATE: OCTOBER, 1989
DRAWN BY: J. CORKUM

1.3 CLAIMS AND OWNERSHIP

The Tulin property consists of 4 claim blocks which are 100% owned by Cathedral Gold Corporation (Figure 2). The claims have been grouped and consist of the following:

Claim Name	Record Number	No. of Units	Expiry Date
Trapper I	3339	20	August 11, 1990
Trapper II	3340	20	August 11, 1990
Trapper III	3341	20	August 11, 1990
Trapper IV	3342	20	August 11, 1991

Upon acceptance of this report, the claims will be in good standing until the above expiry date.

1.4 WORK COMPLETED AND SAMPLING TECHNIQUES

A helicopter supported fly camp was established on the Trapper claims from which all work was completed. Most of the ground covered by the claims was accessible from this camp. Two geologists, S. Bishop and D. Johannessen, completed a detailed prospecting and sampling program, covering most of the 80 units, between July 8 and July 16, 1989.

A total of 136 rock samples, 34 soil and 14 silt samples were collected from the Tulin property. All sample locations were flagged in the field (Figure 3). All rock samples were either chip or grab samples taken from outcrops or proximal scree (rock sample descriptions are presented in Section 1.5). Soil and silt samples were taken along two reconnaissance traverse lines from east to west across the main south facing slope on the property (Figure 3). The interval between stations varied from 50 to 100 meters. Soil samples were collected with a mattock and were taken from the B-Horizon soil found at a depth of 20-50 cm below surface. Silt samples were taken whenever drainages were crossed. A trowel was used to collect the finest silt possible at the sample location. Soil and silt samples were collected in high wet strength kraft paper bags and marked with an identifying number. The samples were dried before shipping.

All samples were shipped to Acme Labs in Vancouver, B.C., where they were analyzed for 30 elements by ICP methods. Gold was analyzed by atomic absorption to obtain an accurate ppb level (refer to Appendix 1).

1.5 ROCK SAMPLE DESCRIPTIONS

Note: S-1 = TUS-89-1 in Appendix
D-1 = TUS-89-1 in Appendix

TULIN PROPERTY - TRAPPER I - IV CLAIMS
JULY 1989 SAMPLE DESCRIPTIONS

Sample #	Description
S-1	Silicified zone, pyrite, scree
S-2	Silicified rusty diorite patch, pyrite
S-3	Rusty diorite with quartz
S-4	Quartz vein
S-5	Silicified rusty diorite, massive pyrite
S-6	Quartz-carbonate rusty diorite, pyrite, scree
S-7	Rusty carbonate (quartz), no sx
S-8	Rusty quartz-carbonate, <1% pyrite
S-9	" "
S-10	Silicified zone, pyrite and galena?
S-11	" "
S-12	Silicified rusty, pyrite
S-13	Quartz vein, malachite, pyrite
S-14	Quartz vein, pyrite, trace malachite
S-15	Oxidized gossan, boxwork
S-16	Diorite, rusty
S-17	Quartz, no sx
S-18	Rusty, gossan, pyrite, scree
S-19	Quartz vein, pyrite
S-20	Footwall diorite
S-21	Quartz veinlet, pyrite
S-22	Rusty silicified diorite, pyrite
S-23	Quartz vein, pyrite
S-24	Quartz vein, pyrite, molybdenite
S-25	Quartz vein, pyrite
S-26	Quartz patch, pyrite
S-27	Silicified rusty diorite
S-28	Quartz vein, pyrite
S-29	Rusty diorite, minor quartz

TULIN PROPERTY - TRAPPER I - IV CLAIMS
JULY 1989 SAMPLE DESCRIPTIONS - Continued

Sample #	Description
TUS-30	Quartz vein, pyrite
TUS-31	Grey quartz, pyrite, quartz-carbonate alteration
TUS-32	Quartz vein
TUS-33	Quartz vein, pyrite, molybdenite
TUS-34	Footwall diorite
TUS-35	Mixed rusty diorite and quartz
TUS-36	Rusty diorite
TUS-37	Quartz stringers
TUS-38	Quartz vein, galena, pyrite, sphalerite
TUS-39	Quartz vein, galena, pyrite, sphalerite
TUS-40	Quartz vein, galena, pyrite, sphalerite
TUS-41	Rusty diorite, 50% pyrite
TUS-42	Quartz veinlet, pyrite, galena
TUS-43	Quartz veinlet, pyrite, galena
TUS-44	Quartz vein, pyrite
TUS-45	Quartz vein, pyrite, molybdenite
TUS-46	Quartz veins, molybdenite, pyrite
TUS-47	Quartz veins
TUS-48	Quartz vein, pyrite
TUS-49	Rusty basalt dyke patch
TUS-50	Quartz vein, pyrite, molybdenite, malachite
TUS-51	Quartz vein, pyritized diorite footwall
TUS-52	Quartz veinlet, molybdenite rosettes
TUS-53	Quartz vein, molybdenite, pyrite
TUS-54	Quartz veinlet + diorite, pyrite, molybdenite
TUS-55	Quartz vein, molybdenite, pyrite
TUS-56	Footwall diorite, rusty, sheared
TUS-57	Quartz vein, molybdenite, pyrite
TUS-58	Quartz vein, molybdenite, pyrite
TUS-59	Silicified (diorite), quartz vein, pyrite
TUS-60	Rusty scree, pyrite, silvery mineral
TUS-61	Silicified diorite, pyrite
TUS-62	Silicified zone, pyrite
TUS-63	Breccia, carbonate/limonite matrix

TULIN PROPERTY - TRAPPER I - IV CLAIMS
JULY 1989 SAMPLE DESCRIPTIONS - Continued

Sample #	Description
D-1	Quartz vein
D-2	Quartz vein
D-3	Rusty diorite
D-4	Rusty diorite
D-5	Rusty quartz diorite
D-6	Quartz vein - float
D-7	Rusty andesite
D-8	Rusty diorite
D-9	Quartz vein
D-10	Rusty diorite - float
D-11	Rusty diorite - float
D-12	Rusty felsic dyke
D-13	Rusty felsic dyke
D-14	Rusty felsic dyke
D-15	Rusty diorite shear
D-16	Rusty diorite
D-17	Rusty andesite dyke
D-18	Quartz vein
D-19	Pyritic epidote rich vein? - float
D-20	Rusty quartz diorite
D-21	Quartz vein
D-22	Quartz diorite with pyritic fractures
D-23	Pyritic fracture surface on quartz diorite
D-24	Quartz vein
D-25	Quartz vein
D-26	Quartz vein
D-27	Quartz vein
D-28	Quartz vein
D-29	Quartz vein
D-30	Quartz vein - float
D-31	Quartz vein
D-32	Quartz vein
D-33	Quartz vein
D-34	Quartz vein
D-35	Quartz vein

TULIN PROPERTY - TRAPPER I - IV CLAIMS
JULY 1989 SAMPLE DESCRIPTIONS - Continued

Sample #	Description
D-36	Quartz vein
D-37	Rusty quartz diorite
D-38	Rusty quartz diorite
D-39	Rusty diorite
D-40	Quartz vein
D-41	Quartz vein
D-42	Rusty diorite - footwall of 43
D-43	Quartz vein
D-44	Quartz vein
D-45	Quartz vein
D-46	Quartz vein
D-47	Quartz vein - ?
D-48	Quartz vein
D-49	Shear gouge
D-50	Quartz veinlet
D-51	Rusty diorite
D-52	Quartz vein
D-53	Quartz vein
D-54	Quartz veinlet
D-55	Quartz vein
D-56	Shear gouge
D-57	Quartz vein
D-58	Quartz vein
D-59	Quartz vein
D-60	Rusty diorite - silicified zone
D-61	Rusty diorite - silicified zone
D-62	Quartz vein
D-63	Quartz vein
D-64	Quartz vein
D-65	Quartz vein
D-66	Quartz vein
D-67	Quartz vein
D-68	Rusty diorite - float
D-69	Quartz vein
D-70	Rusty diorite

TULIN PROPERTY - TRAPPER I - IV CLAIMS
JULY 1989 SAMPLE DESCRIPTIONS - Continued

Sample #	Description
D-71	Rusty shear gouge
D-72	Quartz vein
D-73	Rusty felsite
D-74	Quartz vein - float

2.1 HISTORY AND PREVIOUS WORK

The Trapper III group of 20 claim units covers an area that has been explored since 1968. Geophoto Services Ltd., carried out a geological mapping, prospecting and sampling program in 1968-69, the results of which are described in British Columbia Mineral Assessment Report #2059.

In 1979, Noranda Exploration Company Ltd., staked the same block of ground and conducted a small prospecting program. In 1981, they completed detailed geologic mapping of the area and concluded that the property hosts a widespread occurrence of molybdenite mineralization but not of significant size to warrant further surface work. Noranda's work is summarized in Assessment Report #9410. No work has been documented on the ground adjacent to this area, which is covered by the Trapper I, II, and IV groups.

Approximately 5 km south of the Tulin property lies the old "Elaine" or "Karen" molybdenum showings. This ground has been worked sporadically since the early 1960s and included nearly 1000 metres of diamond drilling in 1981. The property hosts molybdenite mineralization primarily in an alaskite intrusive. The alaskite is thought to intrude the extensive body of diorite that also underlies the Tulin property.

2.2 PROPERTY GEOLOGY

The property is largely underlain by a lower to mid Triassic, blockily jointed diorite-quartz diorite. It is generally a dark mottled grey colour, medium to coarsely crystalline and is predominantly composed of feldspar, hornblende and very minor quartz. The diorite is massive but locally strongly foliated.

The main intrusive mass is cut by a number of irregular Cretaceous to Tertiary aged quartz-feldspar porphyry dykes (felsites) and mafic, finely crystalline dykes.

The mafic dykes are commonly porphyritic with mm sized plagioclase phenocrysts. Dykes range in width from 1-3 metres, although a much larger mass of quartz-feldspar porphyry was noted in the northwest corner of the property. The two dyke types usually occur proximal to one another although they can occur individually. At one location, xenoliths of the felsite were observed in the mafic dyke, indicating the younger age of the latter. No crosscutting relationships were observed between the dykes, they generally parallel one another. The dykes strike north-south and dip steeply to the east or west.

2.3 GEOCHEMISTRY AND MINERALIZATION

Mineralization on the property is of two main types. It is either hosted by quartz veins or as silicification with associated veining related to the quartz-feldspar porphyry dykes. Molybdenite mineralization is widespread whereas other mineralization, either base or precious metals, is uncommon and not of appreciable extent.

The most significant mineralization is the molybdenite-pyrite associated with quartz veining. Two distinct styles of veining were observed on the property. The most predominant is a system of 0.5-1.5m wide white quartz veins with laminae composed of fine grained molybdenite and a distinct yellow "moly-ochre" oxide. Pyrite is commonly associated with this type of veining, whereas chalcopyrite, sphalerite or galena is rare. Occasionally veins of this type are spatially related to the mafic or felsite dyking.

Another style of quartz veining is localized within the Trapper III group of claims. It consists of molybdenite rosettes in open spaces of otherwise bull white quartz veins. The veins range in width from 5-50 cm. No other mineralization is associated with this vein type. No common orientation was noted in the veining and they range from nearly flat lying to steeply dipping.

The second main type of mineralization on the property is a contact feature, related to the quartz-feldspar porphyry dykes. Rusty zones in the diorite, up to several metres in size, represent intense silicification and pyritization. Quartz veining may or may not be present. Mineralization of this type returned some anomalous lead and silver values with occasional copper anomalies. 1-2% Pb with 100-230 ppm Ag was returned from a small number of samples. Anomalous gold values are rare. Two samples from the property returned in the order of 6000 ppb Au, but follow-up work indicates they are a localized phenomenon.

Results from the soil and silt sampling returned background level values for most elements with occasional elevated copper values. One sample, taken from rusty soil adjacent to a quartz vein, returned highly anomalous values of over 2.3% Pb, 56 ppm Ag and 1100 ppb Au. The vein sample returned weakly anomalous lead and zinc values (2600 and 4500 ppm respectively), no precious metals were detected by the analysis.

Figure 3 (back pocket) is a sample location map. The analytical results of all samples are presented in Appendix 1.

2.4 CONCLUSIONS AND RECOMMENDATIONS

Widespread molybdenite mineralization has been found on the property, however no significantly large areas of concentrated mineralization have been located to indicate economic potential. Although copper, lead, zinc, silver and gold values were returned from the property, they appear to be isolated highs and of a limited extent.

Considering the excellent rock exposure and the thoroughness of the prospecting program, the author feels that the property has limited potential and the chance of finding a large deposit by further surface exploration is minimal.

3.1 ITEMIZED COST STATEMENT

Transportation		
Helicopter 2 hrs @ $580/hr	1,160	
Fuel 200L @ $0.75/L	150	
Truck 2 days @ $70/day	140	
Fuel for truck	100	$ 1,550
Wages		
Senior Geologist 11 days @ $200/day (S. Bishop - July 6-16, July 30, 1989)	2,200	
Junior Geologist 11 days @ $125/day (D. Johannessen - July 6-16, July 30, 1989)	1,375	3,575
Geochemistry		
136 rock @ $15/sample	2,040	
34 soil @ $12/sample	408	
14 silt @ $12/sample	168	
Shipping	50	2,666
Accommodation		
22 man-days @ $40/day (S. Bishop/D. Johannessen)	880	
2 nights hotel @ $60/night	120	1,000
Expediting		90
Supplies		300
Report Preparation		
Senior Geologist 2 days @ $200/day (S. Bishop)	400	
Drafting & Typing	600	1,000
TOTAL		**$10,181**

3.2 STATEMENT OF QUALIFICATIONS

I, SANDRA T. BISHOP, residing at 3968 Commercial Avenue, Vancouver, in the Province of British Columbia hereby certify that:

(1) I received a B.Sc. (Geology) degree from the University of British Columbia, Vancouver, B.C. in May 1985.

(2) Since May 1983, I have worked on mineral exploration programs in British Columbia, Ontario, Yukon Territory and Northwest Territories.

(3) I am presently employed by Imperial Metals Corporation of Suite 800, 601 West Hastings Street, in the City of Vancouver, Province of British Columbia.

(4) I supervised and carried out most of the work conducted on the Trapper I-IV claims.

DATED this 8th day of November, 1989.

Sandra T. Bishop

3.3 BIBLIOGRAPHY

McArthur, R.G., 1981, Geological Report on the Fool-1 Mineral Claim, Assessment Report #9410.

Saunders, C.R., 1981, Georgia Resources Incorporated. Diamond Drilling Report on the Trapper Lake property, Assessment Report #9499.

Souther, J.G., 1960, Geology: Tulsequah and Juneau Map 1262A.

Souther, J.G., 1971, Geology and Mineral Deposits of the Tulsequah Map Area, B.C., Canada Geological Survey Memoir 362.

SB:rb:mes
D#2/SB/Rpts89(rb)

APPENDIX 1

SAMPLE PREPARATION AND ANALYSIS

ACME ANALYTICAL LABORATORIES LTD. 852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6 PHONE(604)253-3158 FAX(604)253-1716

GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.
THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.
- SAMPLE TYPE: P1 SOIL P2 SILT P3-P6 ROCK AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: JUL 25 1989 DATE REPORT MAILED: Aug 4/89 SIGNED BY. C. Leong ..D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

IMPERIAL METALS CORP. PROJECT 8109 TULIN File # 89-2439 Page 1

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	AU* PPB
T1-SO-A	13	204	22	69	.5	8	16	991	4.52	2	5	ND	1	18	1	2	2	73	.28	.132	22	19	.82	67	.02	2	2.47	.01	.04	7	35
T1-SO-B	20	51	13	69	.3	4	9	672	3.18	2	5	ND	1	21	1	2	2	74	.09	.081	7	17	.35	47	.03	6	2.07	.01	.04	2	27
T1-SO-C	23	107	18	55	.2	5	10	418	4.78	9	5	ND	1	21	1	2	2	94	.21	.134	6	19	.36	29	.02	2	1.78	.01	.02	1	17
T1-SO-F	6	103	29	97	.3	6	11	1133	4.02	6	5	ND	1	42	1	2	2	70	.55	.128	16	13	.57	188	.01	2	1.54	.01	.06	1	15
T1-SO-K	5	158	32	145	.4	7	15	1385	4.19	11	5	ND	1	37	1	2	2	59	.55	.129	21	10	.62	168	.01	4	1.67	.01	.07	3	19
T1-SO-M	9	156	71	194	.3	5	13	1257	4.77	15	5	ND	6	8	1	2	2	32	.10	.072	20	10	.41	63	.01	2	1.78	.01	.07	5	30
T1-SO-N	8	52	54	170	.5	2	8	716	2.53	6	5	ND	1	12	1	2	2	38	.11	.102	8	11	.40	45	.01	2	1.31	.01	.06	1	15
T1-SO-O	43	223	413	286	4.3	3	20	1672	6.75	11	5	ND	2	14	2	2	48	51	.32	.181	13	5	.64	46	.01	2	2.01	.01	.06	104	30
T1-SO-P	6	70	63	192	.9	3	10	949	4.05	22	5	ND	1	12	1	2	2	57	.17	.186	10	7	.40	90	.01	2	2.41	.01	.05	8	154
T1-SO-Q	20	160	47	251	.8	3	13	1145	4.87	39	7	ND	1	15	1	2	6	68	.19	.143	12	8	.54	60	.01	2	2.21	.01	.07	22	51
T1-SO-R	4	82	45	119	.7	2	11	1085	4.42	9	5	ND	1	12	1	2	2	60	.10	.118	11	8	.32	33	.02	2	2.87	.01	.03	5	11
T1-SO-S	5	94	40	117	.8	3	8	609	3.30	13	5	ND	1	15	1	2	2	59	.20	.187	10	7	.43	28	.02	3	2.46	.01	.04	8	50
T1-SO-T	10	147	41	165	.8	2	11	1070	4.17	11	5	ND	1	18	1	2	2	63	.22	.155	14	8	.57	83	.02	4	3.35	.01	.07	17	13
T1-SO-U	10	285	151	280	2.0	4	20	1562	5.73	25	5	ND	2	29	3	2	5	58	.46	.163	14	5	.73	117	.02	2	2.11	.01	.08	50	24
T1-SO-V	15	418	29	122	.7	5	31	1127	6.22	19	5	ND	1	45	1	2	2	64	.64	.151	11	5	.71	92	.04	3	1.99	.01	.05	82	13
T1-SO-W	12	151	22	154	.9	5	11	569	3.93	5	5	ND	1	18	1	2	2	63	.22	.156	10	8	.76	58	.02	3	2.95	.01	.07	26	57
T1-SO-X	34	213	28	160	.6	6	15	1348	4.51	6	5	ND	1	22	1	2	11	70	.40	.163	14	8	.90	82	.02	2	2.28	.01	.08	9	35
T1-SO-Y	273	609	154	261	5.5	2	19	1214	7.43	9	5	ND	1	22	2	2	294	69	.35	.179	10	4	.81	60	.02	2	2.77	.01	.07	41	26
T1-SO-Z	189	612*	226	456	6.8	2	33	2362	6.41	9	5	ND	1	30	2	2	162	65	.33	.190	11	3	.82	152	.01	2	3.45	.01	.08	85	30
T1-SO-AA	15	316	28	414	.3	2	14	3085	3.93	7	5	ND	1	39	7	2	35	59	.69	.162	17	4	.77	148	.01	2	2.08	.01	.07	109	7
T2-SO-A	17	254	53	104	.4	12	18	1873	4.87	9	5	ND	2	19	1	2	2	87	.40	.149	19	19	1.21	92	.04	5	1.94	.01	.08	3	71
T2-SO-B	39	649	20	235	.2	9	29	1807	8.32	14	5	ND	1	83	3	3	2	154	1.19	.291	25	24	1.42	124	.03	2	3.62	.01	.33	1	35
T2-SO-C	84	425	12	98	1.2	5	12	772	3.48	8	56	ND	1	72	1	2	2	61	.92	.156	44	25	.62	71	.02	2	1.74	.01	.05	1	66
T2-SO-D	9	267	34	124	1.2	11	23	1117	7.36	14	5	ND	2	162	3	2	2	176	1.82	.402	32	20	1.81	147	.08	2	2.81	.05	.25	1	29
T2-SO-E	17	344	11	65	.4	8	18	896	5.45	10	5	ND	1	86	1	2	2	112	1.02	.137	30	16	1.45	145	.03	3	2.78	.01	.12	1	47
T2-SO-F	15	139	18	95	.5	6	9	902	3.01	5	7	ND	1	86	1	2	2	59	.97	.108	48	17	.56	135	.01	2	2.07	.01	.05	1	38
T2-SO-G	19	135	25	111	.2	11	17	1943	4.46	4	5	ND	1	71	1	2	2	86	.72	.127	19	28	.86	152	.02	4	2.23	.01	.07	1	16
T2-SO-H	9	186	15	79	.4	6	14	1181	3.75	15	5	ND	1	30	1	2	2	41	.63	.149	25	8	.76	246	.01	2	1.61	.01	.12	1	41
T2-SO-I	7	148	17	123	.5	8	13	1002	4.09	7	5	ND	1	42	1	2	2	58	.52	.156	19	13	.75	143	.01	2	2.05	.01	.08	2	29
T2-SO-J	6	96	24	122	.3	2	10	862	2.50	8	5	ND	1	21	1	2	2	54	.30	.133	12	12	.47	97	.01	2	2.01	.01	.06	1	136
T2-SO-K	7	160	44	126	1.0	7	9	437	3.32	3	5	ND	1	34	1	2	2	56	.49	.108	19	17	.54	78	.01	2	2.50	.01	.05	4	21
T3-SO-A	5	61	10	56	.1	2	10	258	13.76	4	5	ND	2	12	1	2	2	101	.24	.155	4	5	.29	11	.07	4	.48	.01	.03	102	3
T4-SO-I	362	1033	23649	1757	56.0	15	16	445	24.46	138	15	ND	6	4	13	11	24	19	.06	.058	12	19	.18	6	.02	2	.94	.01	.03	1	1100
TSII-5	21	33	319	49	.9	4	4	113	3.28	3	5	ND	1	10	1	2	2	53	.07	.070	6	14	.20	25	.02	2	2.45	.01	.03	1	35
STD C/AU-S	18	63	42	132	6.7	68	31	1042	4.20	42	19	7	37	48	19	15	19	58	.50	.093	38	56	.95	171	.07	37	2.07	.06	.14	13	51

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
T1-SI-A	21	288	19	90	.6	19	22	938	5.33	7	5	ND	2	51	1	3	2	80	.76	.188	20	25	1.26	105	.02	2	1.66	.01	.07	6	26
T1-SI-D	14	262	22	208	.7	11	10	782	3.38	5	10	ND	1	105	3	2	2	77	1.29	.118	19	21	.57	91	.02	6	1.75	.01	.04	3	22
T1-SI-E	9	195	19	106	.4	8	13	1099	3.66	17	5	ND	1	74	1	2	2	48	1.12	.163	22	7	.59	158	.01	2	1.41	.01	.12	6	12
T1-SI-F	6	153	10	174	.4	10	11	875	3.17	6	5	ND	1	220	2	2	2	63	1.20	.109	19	15	.60	124	.01	7	1.26	.01	.06	5	11
T1-SI-G	11	196	33	132	1.9	12	20	1123	5.84	14	5	ND	2	111	2	2	2	126	1.35	.295	25	16	1.44	196	.04	5	2.08	.02	.16	3	2
T1-SI-H	4	60	35	142	.5	6	10	463	4.29	6	5	ND	3	45	1	2	2	86	.91	.219	17	6	.70	77	.03	5	1.06	.01	.05	13	310
T1-SI-I	5	145	20	378	.6	4	10	503	4.24	10	5	ND	1	59	1	2	2	89	.86	.190	16	7	.73	81	.03	2	1.12	.01	.05	20	4
T1-SI-J	5	184	33	104	.7	9	19	1261	4.89	11	5	ND	2	45	1	2	2	61	.81	.212	22	9	1.06	196	.01	2	1.63	.01	.09	1	8
T1-SI-L	8	199	32	233	.9	9	18	1811	5.02	19	5	ND	1	41	3	2	3	59	.69	.163	23	10	.64	206	.01	3	1.98	.01	.09	4	1
T1-SI-N	17	124	324	406	1.5	4	11	1408	3.58	19	5	ND	2	26	4	3	10	38	.40	.103	28	7	.51	181	.01	2	1.58	.01	.08	9	11
T1-SI-Q	5	186	39	334	1.1	5	12	950	3.51	23	5	ND	1	58	2	2	2	54	.69	.123	15	6	.52	93	.01	2	1.65	.01	.05	17	9
T2-SI-A	11	169	12	102	.5	20	18	1182	4.67	7	5	ND	3	42	2	2	2	70	.60	.160	21	26	1.57	126	.02	2	1.94	.01	.08	1	300
T2-SI-C	34	824	13	233	.8	17	32	870	3.17	3	49	ND	1	94	2	2	2	52	1.14	.142	37	25	.63	79	.02	5	1.81	.01	.04	2	200
T2-SI-D	9	3021	31	143	1.6	14	26	1201	7.79	18	5	ND	3	178	4	4	2	194	2.02	.446	33	19	1.92	168	.08	2	2.91	.05	.29	3	17
T3-SI-1	2	164	35	159	1.0	8	15	502	7.57	20	5	ND	5	38	3	2	2	194	1.34	.231	15	7	.43	28	.04	2	.56	.01	.04	19	1
T3-SI-2	3	140	52	129	1.1	4	13	519	6.89	20	5	ND	10	38	2	2	4	174	1.31	.220	14	6	.15	34	.04	2	.60	.01	.03	19	98
T3-SI-3	4	127	21	110	.6	8	11	614	4.37	7	5	ND	3	32	2	2	2	97	1.06	.189	13	4	.55	46	.04	2	.72	.01	.04	12	12
STD C/AU-S	17	59	42	132	6.6	68	31	1027	4.11	38	22	7	36	50	18	14	19	57	.50	.089	37	56	.93	183	.07	34	2.00	.06	.14	11	47

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
TUD-89-1	7	12	30	18	2.4	8	21	18	16.3%	2	5	ND	1	1	1	2	10	1	.31	.001	2	5	.01	1	.01	8	.06	.01	.02	2	10
TUD-89-2	17	14	22	17	4.5	6	10	18	16.66	2	5	ND	2	2	1	2	40	1	.01	.001	2	4	.01	1	.01	2	.07	.01	.04	1	14
TUD-89-3	7	6	18	6	.2	6	2	24	1.48	2	5	ND	5	8	1	2	2	1	.08	.031	15	4	.01	74	.01	3	.25	.01	.16	2	2
TUD-89-4	65	108	2	36	.5	4	12	381	3.82	5	5	ND	1	43	1	2	2	73	1.11	.161	6	5	.53	16	.14	5	.83	.03	.07	4	9
TUD-89-5	12	197	9	33	.8	6	10	474	4.19	5	5	ND	4	50	1	2	2	44	.66	.154	10	4	.52	15	.10	2	.92	.04	.08	37	20
TUD-89-6	20	19	2	17	.1	6	27	125	6.51	2	5	ND	1	12	1	2	2	41	.23	.060	3	6	.42	15	.07	5	.46	.02	.05	7	3
TUD-89-7	4	33	11	35	.2	7	9	665	2.82	6	5	ND	4	95	1	2	3	20	3.16	.100	26	5	.55	109	.01	2	.92	.02	.25	1	9
TUD-89-8	32	54	3	41	.1	6	16	448	4.93	10	5	ND	1	51	2	2	2	73	.89	.152	6	3	1.32	15	.12	2	1.30	.03	.07	3	8
TUD-89-9	8	153	2661	4530	5.0	11	5	105	4.82	9	5	ND	2	3	62	2	9	5	.04	.022	4	7	.02	22	.01	2	.18	.01	.10	1	34
TUD-89-10	1	1210	10	69	2.0	3	11	818	4.62	5	5	ND	1	94	1	2	7	91	2.80	.159	12	4	1.54	129	.01	4	1.79	.02	.14	1	13
TUD-89-11	16	156	26	55	.4	7	12	1272	4.12	15	5	ND	1	78	1	2	2	40	4.83	.048	11	3	.53	95	.01	2	.52	.01	.10	1	44
TUD-89-12	17	35	10	14	.1	6	4	76	1.61	43	5	ND	1	4	1	3	2	18	.16	.074	3	6	.07	21	.01	2	.49	.01	.08	2	16
TUD-89-13	39	49	14	13	.4	6	6	88	2.87	122	5	ND	2	18	1	9	2	12	.19	.112	10	9	.02	147	.01	12	.41	.01	.20	1	9
TUD-89-14	1	3	4	10	.1	4	6	417	3.05	55	5	ND	2	129	1	2	2	16	4.98	.121	8	2	.14	55	.01	2	.52	.01	.20	1	8
TUD-89-15	1	58	2	12	.1	5	7	445	2.61	6	5	ND	1	249	1	2	2	19	6.90	.079	10	3	.25	50	.01	6	.66	.01	.15	1	10
TUD-89-16	1	750	8	15	.1	4	6	393	2.26	3	5	ND	1	90	1	2	5	22	5.39	.151	11	2	.31	179	.01	3	.98	.01	.22	1	5
TUD-89-17	6	1330	3	43	.9	7	35	522	6.37	11	5	ND	1	105	2	2	6	39	3.04	.096	35	2	1.06	7	.01	3	1.48	.02	.11	1	15
TUD-89-18	10	25	155	264	10.5	12	3	69	7.21	3	5	ND	1	4	3	2	15	5	.03	.007	7	7	.05	6	.01	3	.20	.01	.10	1	420
TUD-89-19	5	17	2	14	.1	7	9	230	1.96	3	5	ND	1	627	1	2	2	36	1.75	.124	8	6	.48	11	.10	9	1.32	.01	.01	3	8
TUD-89-20	12	5	17	12	.3	5	7	29	4.25	6	5	ND	2	5	1	2	5	1	.04	.012	7	5	.01	20	.01	3	.18	.01	.13	1	160
TUD-89-21	21	6017	21	>99999	10.4	9	13	676	7.72	3	5	ND	1	7	1837	2	35	4	.33	.001	2	5	.03	4	.01	8	.08	.01	.01	3	25
TUD-89-22	24	83	35	857	1.3	10	7	197	4.31	2	5	ND	2	4	10	3	22	10	.07	.013	2	7	.17	27	.01	2	.27	.31	.09	9	5
TUD-89-23	16	285	389	36147	9.6	12	12	1116	5.15	2	5	ND	1	13	311	2	351	25	.53	.063	2	6	.36	9	.05	6	.45	.01	.10	4	8
TUD-89-24	134	229	148	273	4.8	18	30	146	16.79	2	5	ND	2	9	2	2	207	3	.35	.016	3	10	.07	1	.01	11	.17	.01	.06	138	8
TUD-89-25	3616	15	17	197	1.0	13	12	25	4.46	2	5	ND	1	1	2	3	5	1	.01	.001	2	9	.01	13	.01	2	.05	.01	.03	11	9
TUD-89-26	17	96	237	154	4.9	5	7	23	17.58	2	5	ND	1	1	1	3	413	1	.01	.001	2	7	.01	1	.01	3	.03	.01	.01	1	4
TUD-89-27	1080	37	2	570	.2	7	22	70	9.89	2	5	ND	1	2	7	4	2	1	.03	.003	2	8	.01	5	.01	3	.04	.01	.02	317	6
TUD-89-28	34	9	2	33	.2	11	9	43	7.38	2	5	ND	1	1	1	2	9	1	.01	.001	2	11	.01	2	.01	2	.03	.01	.01	6	3
TUD-89-29	170	7	10	24	.2	9	4	25	3.91	2	5	ND	5	1	1	2	7	1	.01	.002	11	7	.01	19	.01	2	.22	.01	.12	14	7
TUD-89-30	3	13293	299	68587	68.8	12	16	644	14.52	4	5	ND	1	9	643	2	1181	14	.30	.057	2	3	.24	4	.01	5	.42	.01	.11	5	43
TUD-89-31	29	31	6	207	.2	4	6	547	3.48	2	5	ND	1	30	2	3	2	80	.41	.102	5	6	.90	38	.15	2	.89	.04	.12	177	1
TUD-89-32	10	52	1337	140	191.6	10	21	136	13.52	2	5	ND	1	21	3	7	2352	15	.11	.019	2	6	.10	9	.04	9	.24	.02	.12	329	17
TUD-89-33	55	12	40	41	1.8	10	21	55	6.59	2	5	ND	1	13	1	2	39	7	.06	.019	2	7	.02	19	.02	3	.14	.01	.08	73	14
TUD-89-34	15	22	19	61	1.3	9	7	350	2.27	2	5	ND	1	21	1	2	24	6	.77	.038	3	8	.19	22	.01	2	.27	.01	.08	2	1
TUD-89-35	10008	12	576	29	10.8	12	3	46	.92	6	5	ND	1	1	1	2	389	2	.01	.006	2	12	.01	32	.01	5	.13	.01	.07	1	31
TUD-89-36	[illegible]	95	788	257	53.8	14	4	35	4.84	3	5	ND	1	2	2	3	864	1	.01	.007	2	12	.01	21	.01	2	.08	.01	.05	204	39
STD C/AU-R	18	62	39	132	6.7	68	31	1035	4.21	44	18	8	36	48	18	19	22	58	.50	.097	38	57	.93	182	.07	34	2.06	.06	.14	12	510

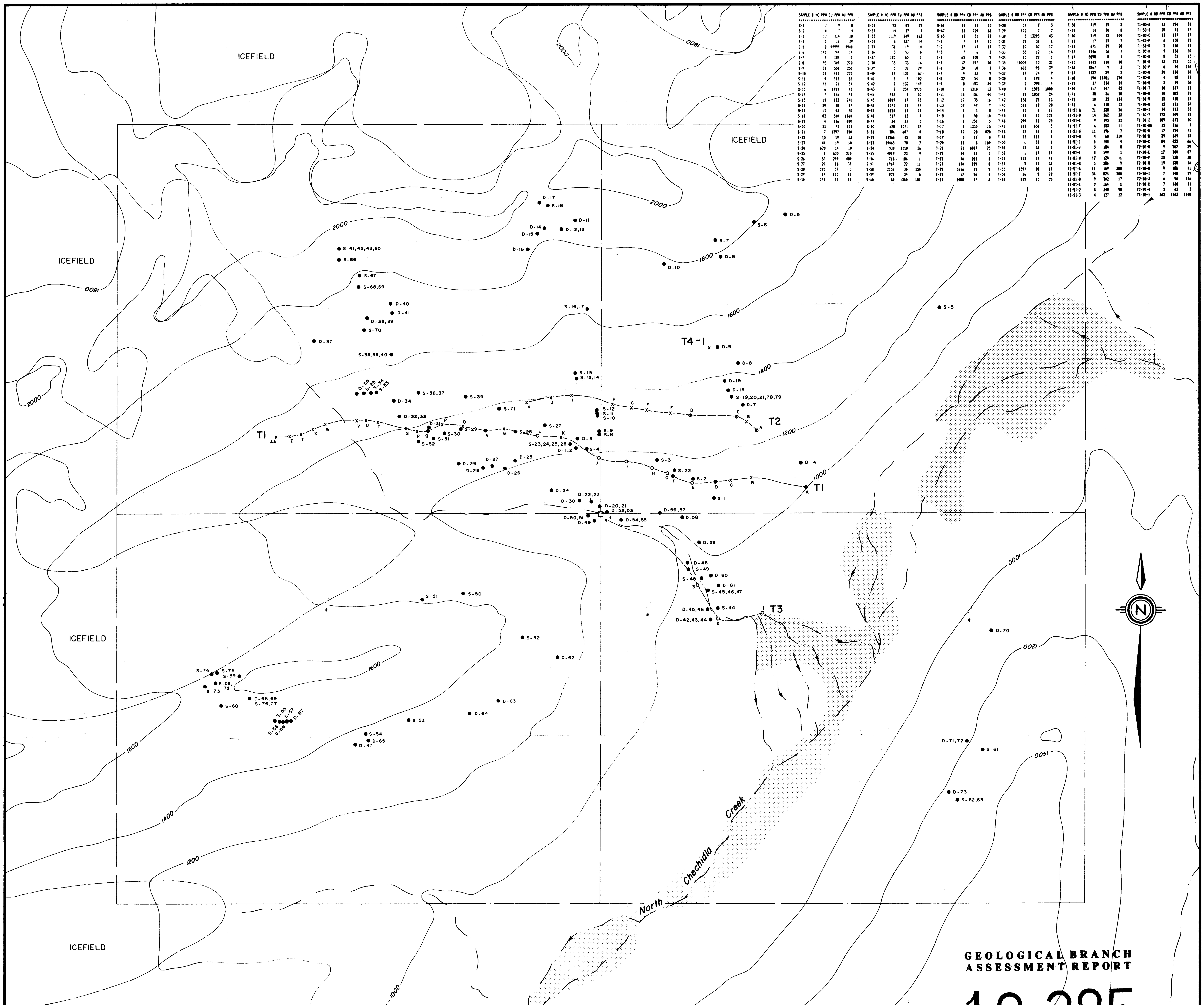
SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
TUD-89-37	17	74	24	64	1.5	5	5	523	3.37	13	5	ND	1	61	1	2	23	30	.61	.094	5	3	.43	50	.18	4	.77	.03	.05	3	9
TUD-89-38	1	198	3	194	1.0	2	8	975	6.25	26	5	ND	3	32	1	2	11	89	.58	.165	8	9	1.12	25	.15	4	1.72	.03	.11	20	4
TUD-89-39	2	298	2	103	.6	2	5	653	5.91	57	5	ND	3	10	1	2	23	83	.42	.119	8	8	.95	22	.01	6	1.61	.02	.08	7	4
TUD-89-40	7	1593	3323	580	222.8	6	17	36	14.44	29	5	ND	1	4	5	3	997	3	.07	.016	2	30	.01	9	.01	5	.16	.01	.05	1	1000
TUD-89-41	15	1052	7	43	7.3	3	6	90	5.07	11	5	ND	4	5	1	2	46	22	.20	.065	4	5	.17	17	.01	2	.55	.01	.18	4	24
TUD-89-42	138	23	27	6	1.4	2	2	19	1.96	3	5	ND	4	12	1	2	7	2	.05	.031	12	30	.02	66	.01	5	.30	.01	.18	1	13
TUD-89-43	512	12	26	19	.5	7	6	26	1.57	2	5	ND	1	7	1	2	23	1	.01	.002	2	8	.01	55	.01	2	.06	.01	.03	3	28
TUD-89-44	45	6	7	9	.2	4	2	6	1.76	4	5	ND	5	7	1	2	2	1	.01	.017	10	12	.01	30	.01	19	.22	.01	.14	1	17
TUD-89-45	91	13	13	62	.3	10	3	135	2.65	10	5	ND	2	7	1	2	6	4	.04	.010	5	6	.16	44	.01	8	.47	.01	.07	2	121
TUD-89-46	290	11	101	9	4.6	6	1	21	1.02	2	5	ND	1	1	1	2	133	1	.01	.002	2	44	.01	7	.01	16	.03	.01	.02	1	25
TUD-89-47	283	638	2	110	1.1	1	24	707	19.50	14	5	ND	1	12	1	2	13	151	.38	.048	7	1	.54	23	.01	2	1.05	.01	.06	66	5
TUD-89-48	52	46	20	124	.3	4	10	585	4.30	5	5	ND	1	43	1	2	2	33	1.45	.114	5	17	.64	14	.01	2	.88	.01	.19	42	1
TUD-89-49	22	165	17	90	.7	7	30	433	12.21	11	5	ND	1	16	1	15	2	16	1.36	.110	6	4	.36	5	.04	21	.63	.01	.13	1381	4
TUD-89-50	1	33	44	53	1.7	4	17	470	15.44	11	5	ND	1	54	1	4	132	8	2.69	.109	3	12	.19	7	.03	10	1.26	.06	.95	417	1
TUD-89-51	15	36	27	180	1.2	5	17	119	10.22	9	5	ND	1	59	2	13	2	6	1.33	.087	3	3	.11	12	.06	2	1.25	.05	.22	1339	2
TUD-89-52	1	14	4	19	1.3	10	16	31	12.69	2	5	ND	1	3	1	2	2	2	.02	.003	2	45	.01	3	.01	2	.10	.01	.05	18	14
TUD-89-53	215	37	1187	6183	39.5	10	4	35	3.80	2	5	ND	1	4	56	2	314	1	.03	.008	2	8	.01	19	.01	2	.13	.01	.12	9	41
TUD-89-54	5	12	4662	122	113.4	1	6	28	5.96	2	5	ND	3	16	2	2	376	2	.03	.009	6	16	.01	6	.01	2	.20	.01	.13	3	36
TUD-89-55	1597	20	182	42	5.9	8	4	31	3.24	2	5	ND	1	6	1	2	71	1	.03	.010	2	7	.01	11	.01	2	.12	.01	.09	3	19
TUD-89-56	16	9	22	37	.5	6	3	306	.98	6	5	ND	5	39	1	2	2	2	.47	.019	18	46	.09	384	.01	6	.38	.01	.13	1	78
TUD-89-57	822	10	88	19	4.0	3	10	21	11.19	5	5	ND	1	2	1	2	52	1	.01	.001	2	6	.01	5	.01	2	.08	.01	.05	4	25
TUD-89-58	419	15	5	14	.6	3	6	19	6.33	2	5	ND	1	1	1	2	2	1	.01	.001	2	33	.01	7	.01	2	.03	.01	.02	2	3
TUD-89-59	14	50	13	73	.6	8	9	519	6.52	11	5	ND	1	16	1	2	2	63	.34	.076	2	6	.96	14	.01	13	.81	.02	.08	2	8
TUD-89-60	219	15	19	15	.8	4	5	48	2.90	18	5	ND	2	2	1	2	2	8	.08	.034	6	27	.11	17	.01	2	.40	.01	.10	1	100
TUD-89-61	17	15	10	13	.2	4	2	45	1.78	5	5	ND	4	4	1	2	2	2	.02	.014	12	5	.05	89	.01	12	.35	.01	.17	1	7
TUD-89-62	671	49	51	40	2.0	8	9	91	3.90	3	5	ND	1	5	1	2	255	8	.02	.011	2	44	.01	61	.01	3	.12	.01	.05	7	28
TUD-89-63	1546	56	3	20	.2	9	5	199	1.45	5	5	ND	1	4	1	3	2	12	.05	.005	2	10	.10	28	.01	2	.17	.01	.02	332	7
TUD-89-64	8898	8	7	1	.2	3	2	35	.46	3	5	ND	2	1	1	2	2	9	.01	.012	2	50	.01	12	.01	2	.02	.01	.01	107	1
TUD-89-65	1445	110	5	15	1.8	7	7	44	3.62	23	5	ND	1	1	1	2	13	21	.01	.001	2	10	.01	9	.01	8	.03	.01	.01	25	10
TUD-89-66	7867	9	29	4	1.9	6	1	30	.62	5	5	5	1	1	1	2	48	1	.01	.005	2	51	.01	3	.01	2	.01	.01	.01	1	2
TUD-89-67	1332	29	68	121	2.6	5	2	42	2.00	2	5	ND	1	8	1	2	95	4	.03	.029	3	8	.03	41	.01	5	.23	.01	.14	3	2
TUD-89-68	190	10701	458	209	303.9	1	75	520	9.76	64	5	ND	2	5	2	13	62	18	.11	.029	3	31	.30	11	.01	2	.60	.01	.05	497	270
TUD-89-69	37	334	702	498	52.6	8	8	35	2.77	8	5	ND	1	1	11	2	847	2	.01	.009	2	11	.01	10	.01	2	.08	.01	.06	4	34
TUD-89-70	117	147	14	26	5.8	4	6	49	4.60	5	5	ND	1	6	1	2	42	22	.08	.036	2	50	.07	16	.05	2	.16	.01	.10	23	42
TUD-89-71	38	36	275	61	6.3	5	5	47	3.75	2	5	ND	3	3	1	2	32	2	.02	.054	2	7	.02	73	.01	2	.19	.01	.17	3	28
TUD-89-72	10	35	243	19	2216	3	3	35	2.75	2	5	ND	1	1	1	3	2592	1	.01	.002	2	51	.01	82	.01	12	.06	.01	.09	1	124
STD C/AU-R	18	58	40	132	6.6	67	30	1007	4.22	42	18	8	37	49	20	14	22	59	.52	.093	38	52	.90	175	.07	34	1.90	.06	.14	11	520

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPB	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	AU* PPB
TUS-89-[illegible]	6	116	12	46	0.3	21	13	949	3.17	10	5	ND	4	129	1	2	36	24	3.63	.102	16	7	.61	116	.01	2	.45	.01	.19	1	12
TUS-89-1	7	9	15	7	3.0	4	4	92	3.21	2	5	ND	3	21	1	2	4	1	.29	.027	3	3	.03	10	.01	4	.30	.01	.19	1	3
TUS-89-2	10	7	16	5	.3	6	4	27	4.61	2	5	ND	2	5	1	2	2	1	.03	.004	5	2	.01	6	.01	2	.24	.01	.18	1	4
TUS-89-3	17	314	49	47	2.1	13	18	30	17.09	11	5	ND	2	2	1	2	2	2	.01	.001	2	4	.01	3	.01	2	.12	.01	.09	1	18
TUS-89-4	10	16	54	16	3.8	10	12	27	14.12	3	5	ND	2	1	1	3	29	1	.01	.001	2	6	.01	1	.01	3	.04	.01	.01	1	39
TUS-89-5	8	99999	10	393	73.1	6	18	18	28.65	2	5	7	2	1	9	4	2	2	.01	.001	2	1	.01	6	.01	7	.05	.01	.01	1	5940
TUS-89-6	140	5744	10	39	1.4	10	9	342	4.38	5	5	ND	3	37	1	2	2	79	.65	.109	8	7	1.02	17	.12	3	1.03	.03	.07	32	14
TUS-89-7	9	194	6	39	.3	10	4	1115	2.13	2	5	ND	3	101	1	2	2	24	6.31	.033	7	5	.14	86	.01	2	.24	.01	.07	1	1
TUS-89-8	93	309	57	51	2.9	9	9	179	3.63	16	5	ND	1	9	1	2	32	18	.16	.066	4	4	.24	25	.01	2	.91	.01	.10	1	270
TUS-89-9	76	506	52	126	2.9	9	12	393	5.35	25	5	ND	1	10	1	2	3	33	.14	.043	6	4	.56	23	.01	2	1.92	.01	.09	1	250
TUS-89-10	26	412	10703	203	23.4	6	9	96	2.77	9	5	ND	5	3	3	2	24	1	.01	.004	6	5	.01	31	.01	2	.23	.01	.16	1	770
TUS-89-11	9	313	3983	1236	3.8	7	1	138	1.49	32	5	ND	12	10	14	2	2	1	.16	.008	13	5	.03	45	.01	2	.33	.01	.17	1	56
TUS-89-12	32	22	44	93	.4	11	7	271	3.15	20	5	ND	2	5	1	2	2	12	.09	.042	13	5	.27	63	.01	2	.91	.01	.10	1	54
TUS-89-13	6	6919	67	36	20.7	8	9	243	2.66	2	5	ND	1	6	1	2	2	8	.07	.014	2	4	.13	41	.01	2	.34	.01	.08	1	43
TUS-89-14	7	166	20	14	1.5	10	32	139	3.67	5	5	ND	2	4	1	2	2	6	.01	.001	2	6	.10	8	.01	2	.22	.01	.06	1	34
TUS-89-15	15	132	18	43	2.9	8	9	189	3.82	2	5	ND	1	17	1	2	3	22	.26	.113	7	3	.39	14	.01	2	.99	.01	.22	1	240
TUS-89-16	20	38	9	22	.1	9	10	1196	3.47	10	5	ND	1	14	1	2	2	18	.36	.119	10	5	.04	130	.01	7	.51	.01	.23	1	17
TUS-89-17	13	43	5	16	.1	9	7	1061	2.09	12	5	ND	1	9	1	2	2	15	.12	.032	3	7	.02	142	.01	2	.23	.01	.13	1	30
TUS-89-18	82	540	13	22	1.9	4	106	295	6.87	5	5	ND	1	46	1	2	2	14	1.36	.100	6	1	.42	5	.01	2	.95	.02	.14	1	1060
TUS-89-19	4	136	35	99	2.1	11	7	179	2.50	13	5	ND	1	10	2	2	2	14	.20	.059	8	5	.22	70	.01	2	.55	.01	.20	1	880
TUS-89-20	53	72	86	5203	3.4	8	13	345	4.56	7	5	ND	3	21	77	2	2	15	.54	.102	10	4	.22	25	.01	5	.66	.01	.24	1	125
TUS-89-21	7	1397	112	3262	14.7	16	7	520	5.01	33	5	ND	1	30	45	2	45	16	.55	.031	4	8	.47	5	.01	2	.61	.01	.11	1	350
TUS-89-22	15	19	15	53	.2	6	4	77	3.86	2	5	ND	4	8	1	2	2	3	.16	.023	5	3	.05	11	.01	2	.28	.01	.17	1	13
TUS-89-23	44	13	8	19	.3	10	22	22	11.74	2	5	ND	2	1	1	2	2	1	.01	.001	3	7	.01	2	.01	5	.16	.01	.09	31	10
TUS-89-24	620	14	14	12	.4	7	13	22	10.91	2	5	ND	1	1	1	2	2	1	.01	.001	2	4	.01	3	.01	2	.06	.01	.03	1	10
TUS-89-25	8	630	3609	16	26.5	10	9	35	17.50	4	5	ND	1	1	2	2	5978	1	.01	.001	2	8	.01	3	.01	2	.02	.01	.01	1	210
TUS-89-26	50	299	4964	419	190.9	6	9	23	17.16	6	5	ND	2	1	20	4	5830	1	.01	.001	2	5	.01	1	.01	2	.06	.01	.04	34	480
TUS-89-27	20	16	90	13	2.2	6	3	30	2.15	2	5	ND	9	5	1	2	83	1	.37	.029	10	5	.01	20	.01	2	.26	.01	.17	1	39
TUS-89-28	275	37	52	84	1.2	4	4	21	3.40	2	5	ND	4	2	1	2	38	1	.01	.002	10	5	.01	17	.01	2	.22	.01	.13	28	3
TUS-89-29	17	120	572	264	15.8	3	10	341	5.05	2	5	ND	1	20	3	3	536	26	.27	.087	2	5	.31	22	.09	2	.42	.01	.16	568	12
TUS-89-30	734	35	135	109	4.2	16	9	63	6.81	2	5	ND	1	3	1	3	121	2	.07	.015	2	12	.02	6	.01	7	.23	.01	.11	211	18
TUS-89-31	95	85	357	108	10.3	3	16	50	16.57	28	5	ND	1	4	2	3	888	5	.22	.039	2	5	.04	1	.01	6	.41	.01	.18	297	39
TUS-89-32	14	27	18	25	1.4	5	10	47	5.66	2	5	ND	1	5	1	2	28	6	.08	.028	2	4	.02	15	.01	2	.26	.01	.15	193	4
TUS-89-33	1119	249	3461	1080	173.2	8	5	49	2.35	2	5	ND	1	1	12	18	6820	1	.01	.001	2	11	.01	5	.01	8	.01	.01	.01	1	162
TUS-89-34	6	337	21	136	1.2	2	7	1201	3.79	3	5	ND	1	30	2	2	22	90	.55	.140	5	5	1.29	23	.18	2	1.04	.04	.26	3	14
TUS-89-35	136	19	645	195	4.4	5	2	53	1.64	4	5	ND	5	4	1	2	39	1	.01	.022	7	6	.02	137	.01	3	.23	.01	.14	1	14
STD C/AU-R	17	61	38	133	6.5	70	31	1046	4.16	38	19	7	36	49	19	15	23	59	.52	.091	38	58	.92	175	.07	39	2.07	.06	.14	11	490

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPB	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	AU* PPB
TUS-89-36	2	53	25	66	.7	5	7	899	3.42	2	5	ND	6	49	1	2	2	62	.52	.073	10	14	.85	38	.12	9	1.42	.07	.24	15	6
TUS-89-37	135	65	34	16	2.1	1	8	69	4.39	2	5	ND	1	13	1	2	19	8	.03	.021	2	28	.03	23	.03	7	.17	.01	.14	190	1
TUS-89-38	35	33	22317	103	104.0	2	2	29	2.26	22	5	ND	1	4	4	23	122	1	.01	.008	2	8	.01	11	.01	6	.07	.01	.36	69	16
TUS-89-39	5	32	33308	705	33.4	3	2	38	3.10	34	5	ND	1	3	7	10	27	1	.01	.006	2	50	.01	7	.01	2	.06	.01	.05	6	29
TUS-89-40	19	130	18143	6729	27.2	2	6	82	5.51	150	5	ND	1	3	66	5	23	3	.03	.015	2	6	.01	9	.01	9	.14	.01	.09	7	67
TUS-89-41	5	9	1106	230	16.0	3	3	24	9.04	232	5	ND	6	4	2	2	19	1	.01	.006	3	22	.01	6	.01	7	.25	.01	.16	1	102
TUS-89-42	2	122	13342	3451	52.2	2	81	2777	5.16	98	5	ND	1	95	31	2	19	15	5.51	.020	12	6	.30	15	.01	2	.62	.01	.18	1	149
TUS-89-43	2	234	39981	13218	122.8	1	21	15078	4.35	1049	5	6	1	55	166	3	100	29	3.73	.077	7	16	.60	23	.02	7	1.17	.01	.19	9	5970
TUS-89-44	958	4	141	24	1.0	1	14	46	3.69	4	5	ND	1	4	1	2	43	1	.04	.001	3	7	.01	9	.01	2	.12	.01	.07	4	52
TUS-89-45	8819	17	616	381	5.2	1	6	720	1.01	166	5	ND	1	10	4	2	67	1	.29	.005	2	46	.01	42	.01	2	.07	.01	.04	6	73
TUS-89-46	1375	24	165	9	2.8	4	6	31	4.30	2	5	ND	1	6	1	3	509	2	.01	.001	2	8	.01	6	.01	3	.07	.01	.03	4	47
TUS-89-47	1924	14	108	5	4.9	1	2	24	2.47	4	5	ND	1	5	1	2	136	4	.01	.002	2	42	.01	46	.01	2	.16	.01	.09	13	23
TUS-89-48	317	12	10	14	.3	3	15	15	17.26	2	5	ND	2	2	1	2	12	1	.01	.001	2	3	.01	2	.01	7	.15	.01	.08	3	4
TUS-89-49	34	23	11	34	.2	5	11	479	4.03	2	5	ND	2	123	1	2	2	44	2.65	.132	7	10	.91	16	.01	3	1.15	.02	.19	9	1
TUS-89-50	528	1071	2991	591	133.9	4	42	166	9.48	4	5	ND	1	5	13	3	12202	7	.04	.008	2	6	.07	5	.01	5	.19	.01	.04	6	52
TUS-89-51	304	687	27	2233	1.7	5	10	910	5.65	10	5	ND	2	16	22	3	185	75	.36	.100	19	26	1.37	38	.01	3	2.33	.02	.29	306	4
TUS-89-52	11566	65	21	17	.2	7	1	92	1.25	2	5	ND	1	8	1	17	103	17	.11	.017	2	8	.06	12	.01	2	.12	.01	.01	1687	10
TUS-89-53	14465	78	15	56	.3	6	1	71	1.15	2	5	ND	1	13	1	10	34	7	.09	.012	2	35	.04	27	.01	2	.09	.01	.02	908	2
TUS-89-54	530	2110	204	129	23.4	6	1	362	2.42	2	5	ND	1	7	1	12	1089	28	.14	.040	2	10	.45	28	.01	11	.67	.02	.06	961	26
TUS-89-55	4019	23	153	333	4.6	2	3	46	2.13	3	5	ND	2	2	3	2	170	3	.04	.022	4	41	.32	56	.01	2	.23	.01	.13	11	4
TUS-89-56	716	166	863	113	20.7	1	7	22	13.82	11	5	ND	3	10	1	3	594	34	.01	.097	2	1	.01	97	.01	3	.45	.01	.22	3	1
TUS-89-57	1367	22	206	44	6.6	6	2	40	1.40	2	5	ND	1	1	1	2	164	2	.01	.005	2	67	.01	7	.01	2	.04	.01	.02	2	11
TUS-89-58	2157	30	16327	39	258.8	5	2	37	1.65	11	5	ND	1	3	7	2	4065	1	.01	.002	2	8	.01	7	.01	2	.05	.01	.02	3	150
TUS-89-59	829	34	119	93	4.7	5	4	131	3.71	2	5	ND	1	16	1	2	43	11	.21	.027	2	43	.04	26	.01	11	.25	.01	.06	2	6
TUS-89-60	68	1365	[illegible]	[illegible]	[illegible]	6	29	336	19.48	197	5	ND	1	1	166	3	2514	3	.01	.001	2	5	.01	1	.01	2	.04	.01	.01	4	101
TUS-89-61	14	19	181	65	4.8	1	3	20	3.98	2	5	ND	5	27	1	2	90	1	.03	.023	8	17	.01	13	.01	2	.25	.01	.13	2	10
TUS-89-62	35	[illegible]	[illegible]	99	5.6	12	8	428	2.57	6	5	ND	2	215	1	2	20	34	3.98	.179	12	16	.42	110	.01	8	.63	.01	.32	1	66
TUS-89-63	12	31	19	56	.8	7	8	557	3.02	3	5	ND	3	212	1	2	2	30	8.67	.041	9	12	1.36	146	.01	3	.29	.01	.12	1	79
STD C/AU-R	18	59	43	132	6.9	70	31	1021	4.17	41	22	8	38	50	19	15	23	60	.53	.094	39	55	.95	176	.07	40	1.96	.06	.13	13	490

- ASSAY REQUIRED FOR CORRECT RESULT

for Mo, Cu, Pb, Zn >1%
Ag > 30 ppm
Bi & Sb > 1000 ppm



SAMPLE #	MO PPM	CU PPM	AU PPB
S-1	7	9	8
S-2	10	7	4
S-3	17	314	18
S-4	10	16	39
S-5	8	99999	5940
S-6	140	744	14
S-7	9	184	1
S-8	93	309	270
S-9	76	306	250
S-10	26	412	770
S-11	9	313	66
S-12	32	22	54
S-13	6	6919	43
S-14	7	164	34
S-15	15	132	240
S-16	20	38	17
S-17	13	43	30
S-18	82	540	1060
S-19	4	136	800
S-20	53	73	123
S-21	7	1397	350
S-22	19	19	13
S-23	44	19	10
S-24	620	14	10
S-25	8	630	210
S-26	50	299	480
S-27	20	16	39
S-28	275	37	3
S-29	17	120	12
S-30	734	35	18

SAMPLE #	MO PPM	CU PPM	AU PPB
S-31	95	85	39
S-32	14	27	4
S-33	1119	249	162
S-34	6	337	14
S-35	136	19	14
S-36	3	53	6
S-37	185	65	1
S-38	35	33	16
S-39	5	32	29
S-40	19	130	67
S-41	5	9	102
S-42	2	132	149
S-43	2	234	5970
S-44	958	4	52
S-45	6819	17	73
S-46	1375	24	47
S-47	1824	14	23
S-48	317	12	4
S-49	34	23	1
S-50	628	1071	52
S-51	384	687	4
S-52	13566	45	10
S-53	14465	78	2
S-54	530	2110	26
S-55	4019	23	4
S-56	716	186	1
S-57	1967	22	11
S-58	2157	30	150
S-59	829	34	6
S-60	68	1365	101

SAMPLE #	MO PPM	CU PPM	AU PPB
S-61	14	18	10
S-62	35	709	66
S-63	12	31	79
T-1	7	12	10
T-2	17	14	14
T-3	7	6	2
T-4	65	108	9
T-5	12	197	20
T-6	20	18	3
T-7	4	33	9
T-8	32	54	8
T-9	8	153	34
T-10	1	1210	13
T-11	16	156	44
T-12	17	35	16
T-13	39	49	9
T-14	1	3	8
T-15	1	58	10
T-16	1	750	5
T-17	6	1330	15
T-18	10	29	820
T-19	5	17	8
T-20	12	5	160
T-21	21	6017	25
T-22	24	83	5
T-23	16	205	8
T-24	134	229	8
T-25	3616	15	9
T-26	17	96	4
T-27	1000	37	6

SAMPLE #	MO PPM	CU PPM	AU PPB
T-28	34	9	3
T-29	170	7	7
T-30	3	13293	43
T-31	29	31	1
T-32	10	52	17
T-33	55	12	14
T-34	15	22	1
T-35	10008	12	31
T-36	606	95	39
T-37	17	74	9
T-38	1	198	4
T-39	2	298	4
T-40	7	1593	1000
T-41	15	1052	24
T-42	138	23	13
T-43	512	12	28
T-44	45	6	17
T-45	91	13	121
T-46	290	11	25
T-47	283	638	5
T-48	52	46	1
T-49	22	165	4
T-50	1	33	1
T-51	15	36	2
T-52	1	14	14
T-53	215	37	41
T-54	5	12	36
T-55	1597	20	19
T-56	16	9	78
T-57	822	10	25

SAMPLE #	MO PPM	CU PPM	AU PPB
T-58	419	15	3
T-59	14	50	8
T-60	219	15	100
T-61	17	15	7
T-62	671	49	28
T-63	1346	56	7
T-64	8890	8	1
T-65	1445	110	18
T-66	7867	9	2
T-67	1332	29	2
T-68	190	10781	270
T-69	37	334	34
T-70	117	147	42
T-71	38	36	28
T-72	10	35	124
T-73	6	110	12
T1-SI-A	21	228	26
T1-SI-B	14	262	22
T1-SI-E	9	195	12
T1-SI-F	6	153	11
T1-SI-G	11	196	2
T1-SI-H	4	60	310
T1-SI-I	5	145	4
T1-SI-J	5	184	8
T1-SI-L	8	199	1
T1-SI-M	17	129	11
T1-SI-O	5	186	9
T2-SI-A	11	169	300
T2-SI-C	34	824	200
T2-SI-D	9	302	17
T3-SI-1	2	164	1
T3-SI-2	3	140	98
T3-SI-3	4	127	12

SAMPLE #	MO PPM	CU PPM	AU PPB
T1-SO-A	13	204	35
T1-SO-B	20	51	27
T1-SO-C	23	107	17
T1-SO-F	6	108	15
T1-SO-K	5	158	19
T1-SO-M	9	156	30
T1-SO-N	8	52	15
T1-SO-O	43	223	30
T1-SO-P	6	70	134
T1-SO-Q	20	160	51
T1-SO-R	4	82	11
T1-SO-S	5	94	30
T1-SO-T	10	147	13
T1-SO-U	10	205	24
T1-SO-V	15	410	13
T1-SO-W	12	131	57
T1-SO-X	34	213	35
T1-SO-Y	278	609	26
T1-SO-Z	109	612	30
T1-SO-AA	15	316	7
T2-SO-A	17	254	71
T2-SO-B	39	649	35
T2-SO-C	84	425	66
T2-SO-D	9	267	29
T2-SO-E	17	344	47
T2-SO-F	15	138	38
T2-SO-G	19	139	16
T2-SO-H	9	186	41
T2-SO-I	7	180	29
T2-SO-J	6	96	134
T2-SO-K	7	160	21
T3-SO-4	5	61	3
T4-SO-1	362	1033	1100

LEGEND

□	Claim Post	———	Contour
———	Claim Boundary	●	Sample Location
—··—	Creek		NOTE: All rock sample numbers are prefixed "TU", i.e. TUD-89-__ TUS-89-__
— —	Icefield		
▒	Sand	x	Soil Sample Location
		o	Silt Sample Location

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FIGURE 3 N.T.S. 104 K/7

TRAPPER I - IV CLAIMS

SAMPLE LOCATION MAP

MOLYBDENITE, COPPER AND GOLD GEOCHEMISTRY

metres 0 200 400 600 800 1000 metres

SCALE: 1:10 000	GEOLOGIST: S. BISHOP
DATE: OCTOBER 1989	DRAWN BY: J.C./S.E.H.

ICEFIELD

ICEFIELD

ICEFIELD

ICEFIELD

ICEFIELD

2000

1800

2000

2000

2000

1800

1600

1600

1400

1200

1000

0001

0021

0001

quartz feldspar porphyritic dyke 2.5 m wide, rusty contact zones weakly pyritized

rusty diorite

85°

gossanous zone, rusty, silicified diorite with minor basalt dykelets and quartz veinlets (10-15 cm wide) with minor pyrite, galena, sphalerite

massive diorite

35°

- areas of rusty diorite
- weakly silicified
- disseminated pyrite on fractures
- occasional quartz veining 10-15 cm wide with coarse pyrite

subcrop, high grade sample of quartz vein stained with moly ochre, pyrite, malachite, galena.

quartz vein white - grey quartz fine grained moly along some fracture surfaces, minor pyrite

20 cm - 1.5 m wide

45°

massive diorite

primarily diorite with minor buff / white felsite dykes (± 040°/90°) rusty zones of silicification in diorite commonly associated with dyking. White quartz veins up to 50 cm wide are common often vuggy and mineralized with coarse pyrite cubes, traces of malachite, chalcopyrite or molybdenite

50°

primarily diorite with occasional white quartz veinlets 10-20 cm wide, pyrite, moly and malachite

massive diorite

56°

- massive diorite, swarmed with white quartz veinlets 5-10 cm wide, vuggy with moly rosettes or trace disseminated moly

rusty oxidized shear zone 1m wide silicified, minor pyrite

85°

massive diorite

rusty, silicified diorite with 0.5 m wide white quartz veining moly, pyrite

40°

1.25 meter wide white quartz vein hosted in diorite, 0.5 m of vein is well mineralized with moly, py
- rusty hangingwall and footwall diorite

quartz - moly veinlets in diorite
minor pyrite in places

PREDOMINANTLY DIORITE OUTCROPPING
GRASS COVERED AREA

PREDOMINANTLY DIORITE - OUTCROP
GRASS COVERED AREA

Minor rusty zones in diorite trace pyrite

massive diorite

poor rusty shear zone with 10-15 cm white quartz vein

15 cm white quartz vein raggy pyrite

46°

rusty diorite, minor white quartz veining 5-10 cm wide pyrite, malachite chalcopyrite

zone of intense sericite alteration.

massive diorite

small gossan silicified diorite with minor white quartz no sulphides visible

massive diorite

0.5 - 0.5m white quartz vein adjacent - gently dipping mafic sill
- pyrite in vein and in rusty hangingwall and footwall diorite

46°

20°

34°

15°

zone of rusty alteration and white quartz veining in diorite. Veins up to 1 m wide molybdenite, pyrite
- occasional mafic dyking 1-2 m wide

20-30°

rusty diorite, pyrite

Massive diorite

85°

rusty silicified zone in diorite pyritic

rusty zone, silicified diorite and minor quartz - carbonate breccia minor disseminated pyrite.

Chechidla Creek

North

GRASS COVERED AREA
PREDOMINANTLY DIORITE OUTCROP

N

GEOLOGICAL BRANCH
ASSESSMENT REPORT

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LEGEND

- Lower - Mid Triassic Diorite - Quartz Diorite
- Boundary Between Areas of Predominantly Outcrop (Diorite) and Areas Covered by Grassy Vegetation
- 150°/82° Strike, Dip, Foliation
- Outline of Areas of Rock Sampling
- Claim Post
- Claim Boundary
- Creek
- Icefield
- Sand
- Contour

MINERALIZATION

Moly = Molybdenite
Pyrite
Malachite
Chalcopyrite

NOTE: MOST OF THIS PROPERTY WAS TRAVERSED, THEREFORE, THE GEOLOGY AND SAMPLE LOCATIONS (MAPS) DEPICT THE AREAS COVERED IN THE 1989 WORK PROGRAM

CATHEDRAL GOLD CORPORATION

TULIN

FIGURE 4 N.T.S. 104 K/7

GEOLOGY

metres 0 200 400 600 800 1000 metres

SCALE: 1:10 000	GEOLOGIST: S. BISHOP
DATE: SEPT. 1989	DRAWN BY: S.B.