

RSGM R. Somerville Geological & Mining Engineering Ltd.

Ste. 103 - 255 West 1st Street • North Vancouver, B.C., Canada V7M 3G8 • Telephone (604) 986-5766

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A GEOCHEMICAL REPORT

on the

TAS 1 & 4 Claims of the TAS PROPERTY

OMINECA MINING DIVISION
BRITISH COLUMBIA

N.T.S. 93 K/16W

by

A.J. Boronowski, B.Sc., F.G.A.C.

Owners: Noranda Exploration Company Ltd.
Goldcap Inc.
Black Swan Gold Mines Ltd.

Operator: Black Swan Gold Mines Ltd.

Contractor: R. Somerville Geological & Mining
Engineering Ltd.

GEOLOGICAL BRANCH
ASSESSMENT REPORT

19,980

December 1, 1989

LAT. ⁵⁴55 degrees 52' N.
LONG. 124 degrees 16' W.

◆

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SUMMARY OF CONCLUSIONS AND RECOMMENDATIONS

A geochemical soil sampling survey was conducted over the northeastern portion of the TAS 1 claim and the southeastern portion of the TAS 4 claim. The claims are located approximately 40 kilometres north of Fort St. James, B.C. in the Omenica Mining Division.

The purpose of the survey was to determine whether the government airborne magnetic and Noranda reconnaissance I.P. anomalies underlying the claims indicate a porphyry copper-gold environment similar to the Mt. Milligan prospect. As well, the survey was established to define the extent of the gold-copper mineralization discovered in diamond drill hole 89-61 and determine whether there were other areas of mineralization masked by overburden.

The nearby Mt. Milligan porphyry Cu-Au deposit contains an aeromagnetic high anomaly associated with the economic mineralization. A portion of a large aeromagnetic high anomaly is situated within the southern portion of the surveyed area. This aeromagnetic high anomaly is caused primarily by magnetite within a large diorite intrusion. Most of the surveyed area lies on the northern flank of the diorite intrusive.

Soil samples were analyzed for gold and copper. A total of twenty-two samples contain values greater than 12 ppb gold and thirty-two samples contain values greater than 215 ppm copper. These anomalous values represent threshold plus one standard deviation. One extremely anomalous gold value and five extremely anomalous copper values were removed temporarily from the population in order to arrive at the above listed anomalous values.

The results for copper and gold geochemistry indicate coincident values trending northeast between 9800N-9600E and 10400N-10400E. This trend is coincident with a chargeability high (25-150 milliseconds at N=4) anomaly and a narrow resistivity low (300-600 ohm-metres at N=4) anomaly between 10025N-9000E and 10225N-10200E. The coincident geophysical and geochemical anomaly contains the three highest geochemical gold values. These values lie within 150 metres of either side of diamond drill hole 89-61. This diamond drill hole, which tested the flank of the chargeability anomaly at N=4, encountered several narrow (<5.8 m.), low-grade (0.20%) copper intersections. Trenching on surface within the core of the chargeability anomaly yielded rock chip & grab samples which assayed 0.12% copper over 16.5 metres. As well, the geochemical and geophysical trend lies on the northern flank of a large magnetic anomaly (>6900 nT) that is underlain by a portion of a large diorite intrusive.

To date, the near surface diamond drilling has tested the flanks of the chargeability anomaly. Deeper diamond drill holes are recommended to test the chargeability anomaly at depth. The I.P., magnetic, and geochemical soil sampling surveys should be extended to cover the area northward to the Ridge Area and eastward to approximately L50900E.

INTRODUCTION

A geochemical soil sampling survey was conducted over the northeastern portion of the TAS 1 claim and the southeastern portion of the TAS 4 claim. The purpose of the survey was to determine whether the government airborne magnetic and Noranda reconnaissance I.P. anomalies underlying the claims indicate a porphyry copper-gold environment similar to the Mt. Milligan prospect. As well, the survey was established to define the extent of the gold-copper mineralization discovered in diamond drill hole 89-61 and determine whether there were other areas of mineralization masked by overburden.

LOCATION AND ACCESS

The TAS 1 & 4 claims are located approximately 40 kilometres north of Fort St. James, B.C. and 6 kilometres east of the Germansen Highway (FIGURES 1 & 2). Access to the claims for this geochemical soil sampling survey was by four-wheel-drive truck.

The physiography of the TAS 1 & 4 claims is characterized by pine, spruce and poplar flats. Northeast trending swamps contain willow and alder. A gentle east-west trending ridge situated between diamond drill holes 89-60 & 61 is underlain by altered feldspar porphyry. This ridge is situated along the northern contact between the diorite intrusive and other rock-types underlying the property. The surveyed area has been covered with glacial till.

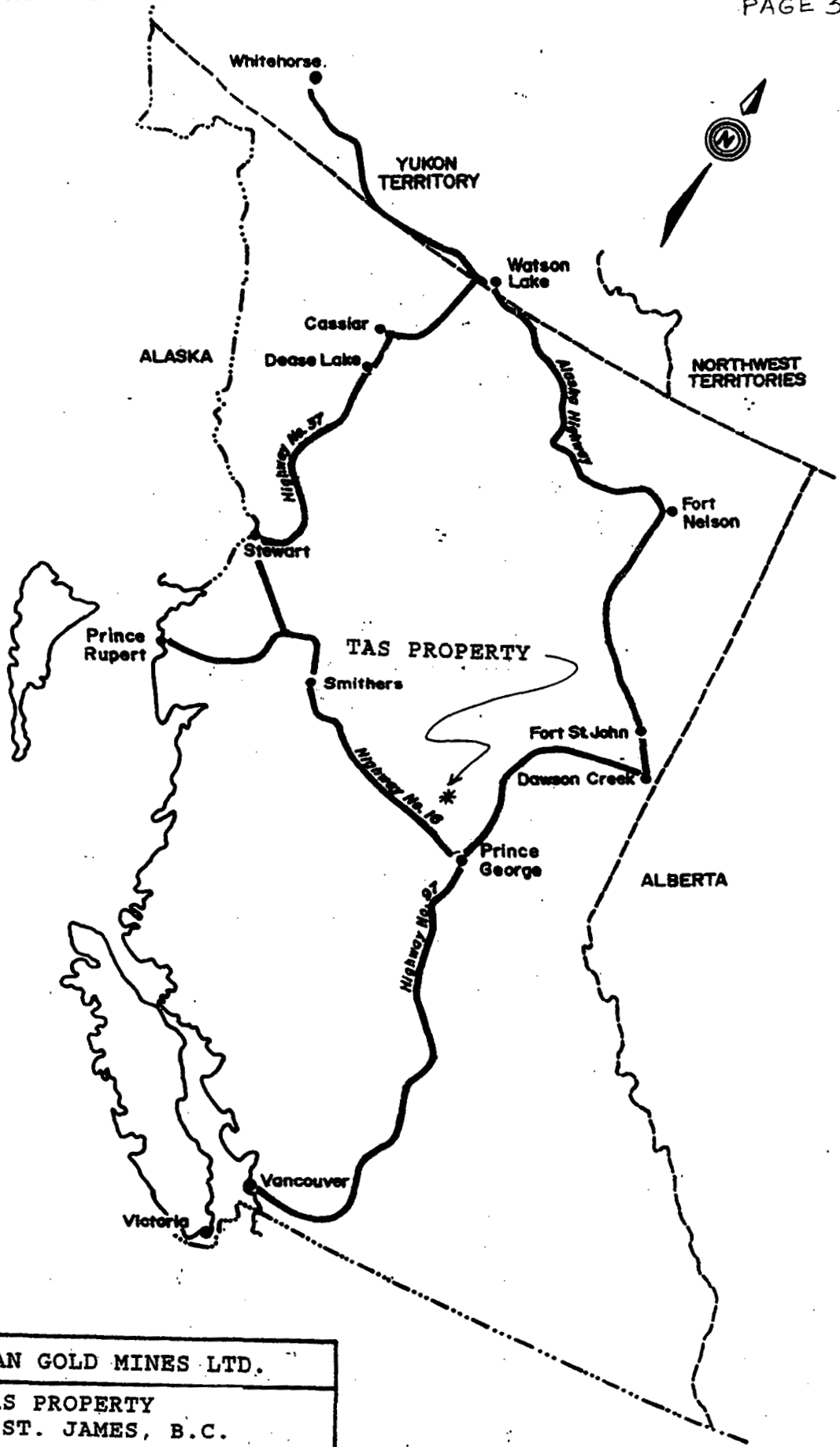
TENURE

The TAS 1 & 4 claims are part of the West Group of the TAS property (FIGURE 3).

<u>CLAIM</u>	<u>UNITS</u>	<u>RECORD NUMBER</u>	<u>EPIRY DATE</u>	<u>AREA</u>
TAS 1	9	10563	MAY 20,1990	225 Ha.
TAS 3	9	10565	MAY 20,1990	225 Ha.
TAS 4	12	10566	MAY 20,1990	300 Ha.
TAS 5	8	10567	MAY 20,1990	200 Ha.
TAS 7	20	7701	JUNE 24,1991	500 Ha.
TAS 11	20	7959	SEPT 17,1990	500 Ha.

HISTORY

Prior exploration on the TAS property was conducted by Noranda between 1985 and the winter of 1987, Goldcap Inc. from 1987 to the fall of 1988, and Black Swan Gold Mines Ltd. from 1988 to present. During this period the exploration programs have included geochemical, geological, and geophysical surveying, trenching, and diamond drilling.

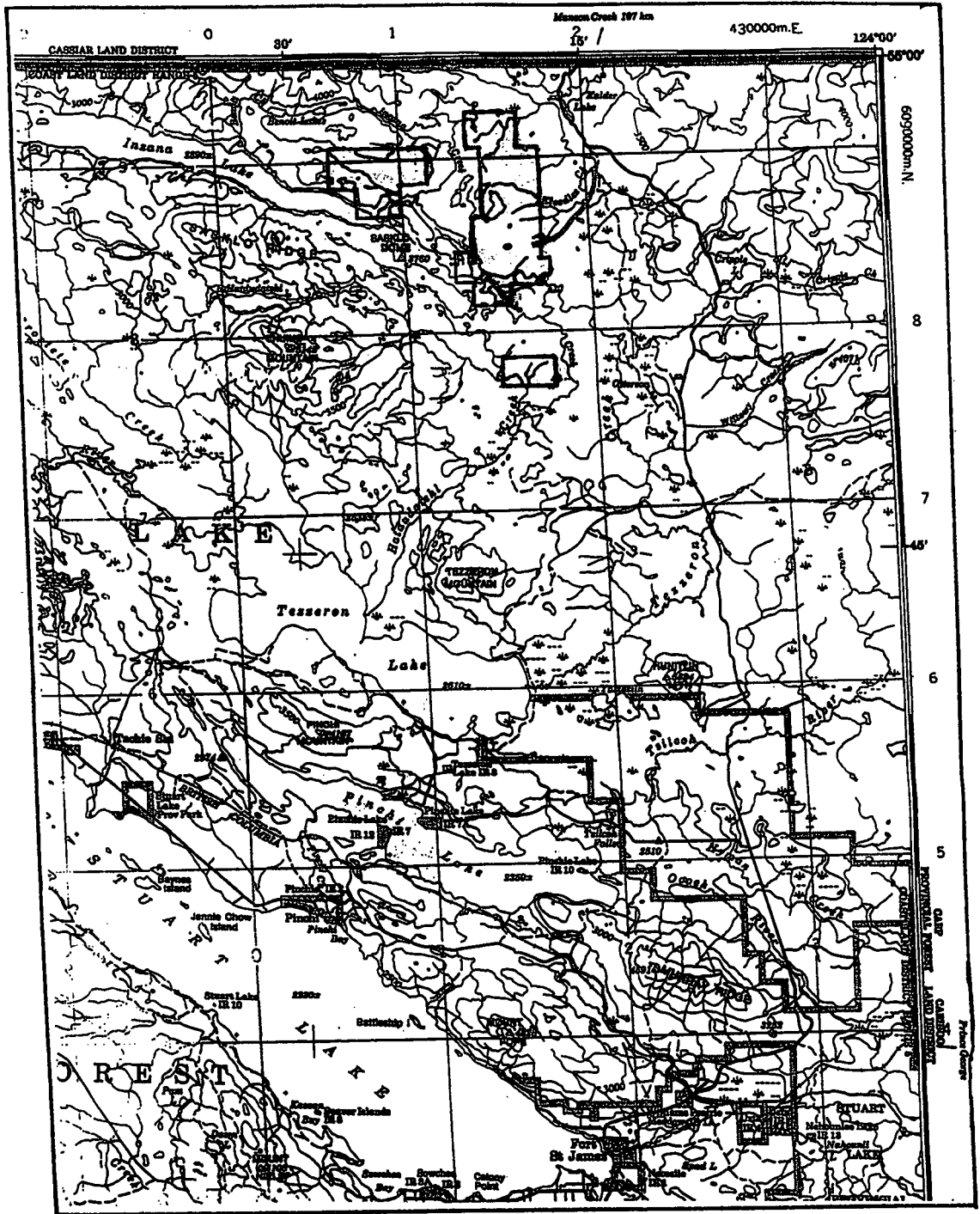


BLACK SWAN GOLD MINES LTD.
 TAS PROPERTY
 FORT ST. JAMES, B.C.
LOCATION MAP

DATE: Dec. 31/88

100 50 0 100 200 km
 SCALE 1:7,500,000

FIGURE 1

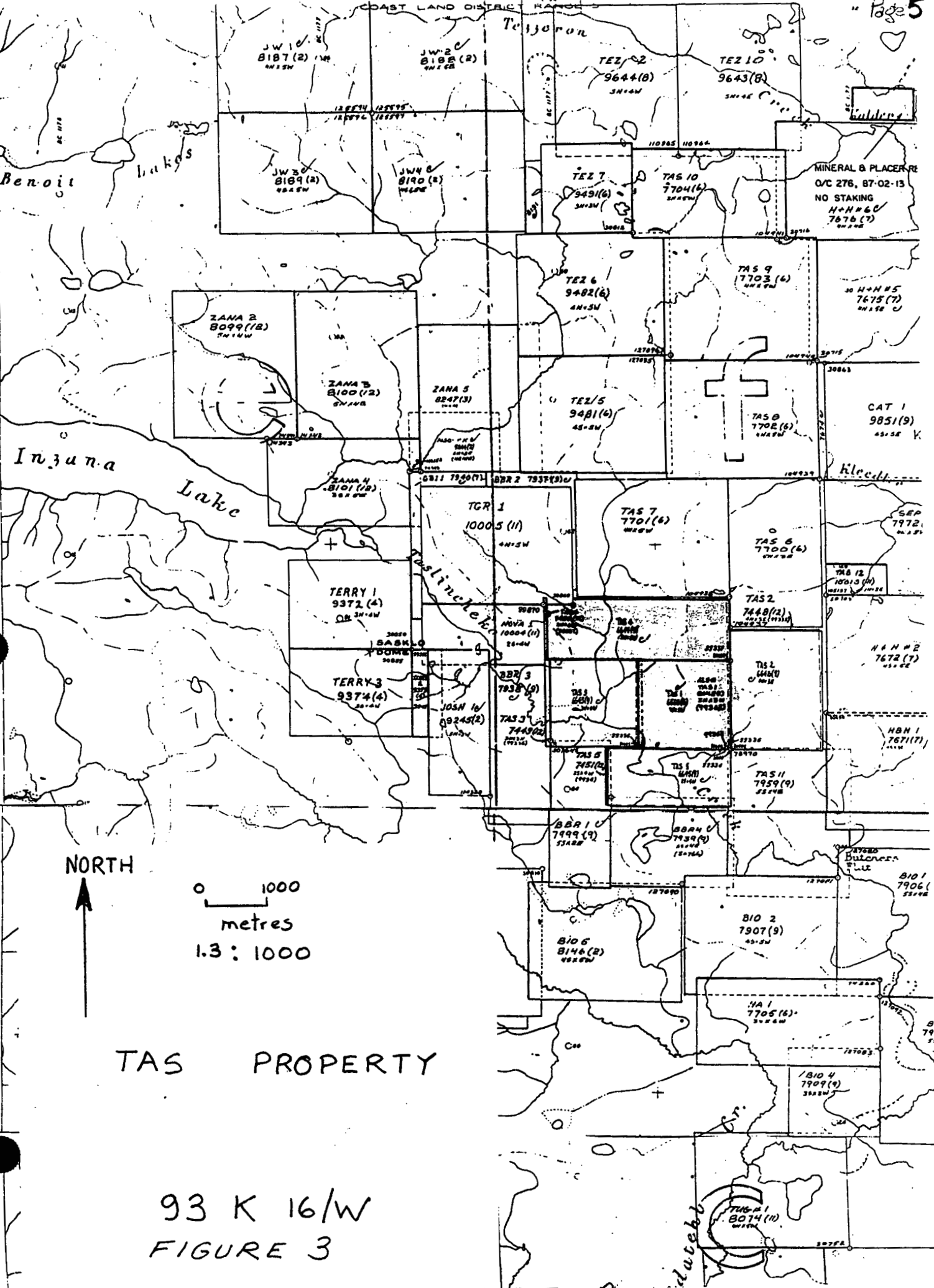


TAS PROPERTY
CLAIM LOCATION MAP
Figure 2

MSK/16W

(FOR PLACER SEE P 93K/16W)

TO WEST SEE MAP S. N. 15 E



TAS PROPERTY

93 K 16/W
FIGURE 3

GEOCHEMICAL SURVEY

The soil sampling survey was conducted by R. Somerville Geological & Mining Engineering Limited. Hewitt Company & Associates established the grid. Mr. T. Lloyd collected the samples, and noted the following data from each sample location: location, soil composition, colour of soil, depth of sample.

A grid was established over the northeastern portion of TAS 1 and the southeastern portion of TAS 4 claims. Control was established from the diamond drill hole 89-61 located at 10000N-10000E (Maps 1-4). The baseline (10000N) was tied into this diamond drill hole location. The baseline was established by compass and topofill survey. Crosslines were established at 50 metre spacing along the baseline. The baseline and crosslines were cut, chained, and picketed. Two tielines were established at 10400N and 9800N.

Soil samples were collected at 25 metre intervals along the crosslines, tielines and baseline. The stations were flagged with orange ribbon and station locations were noted on aluminum tags. Samples were collected using Eijkelkamp soil auger (7 cm. diameter).

A total of 460 B-horizon and 13 A-horizon, soil samples were collected. The most common soil type is a tan colored till which is sandy clay in composition. Samples were collected from a depth between 10 cm. and 120 cm. from surface. Approximately 13 of the collected samples were from swampy ground. These samples were rich in organics.

The soils were analyzed by Min En Laboratories of North Vancouver for Gold and Copper. The soils were dried at approximately 80 degrees celsius and sieved with an 80 mesh nylon screen. The -80 fraction (0.18 mm.) is used for geochemical analysis.

Copper analysis - (1.0 ppm.)

Decomposition of a 0.200 g. sample is done with concentrated perchloric and nitric acid (3:1), digested for 5 hours at reflux temperature.

The concentrations of Cu can be determined directly from the digest (dissolution) with conventional atomic absorption spectrometric procedure. A Varian-Techtron, Model AA-5 or Model AA-475 is used to measure elemental concentrations.

Gold Analysis - (5.0 ppb.)

5.0 g. sample is digested with aqua regia (1 part nitric and 3 parts hydrochloric acid). Gold is extracted with MIBX from the aqueous solution. AA is used to determine gold.

DETAILED TECHNICAL DATA

A total of 473 soil samples were collected and analyzed for copper and gold.

The results were plotted on MAPS 1 to 4 found in the pocket of the report. MAPS 1 and 3 contain the sample location and gold and copper values, respectively. MAPS 2 and 4 represent the gold and copper values as linear symbol plots. All maps indicate the grid lines and co-ordinates of the lines.

The data was extracted and presented in the TABLE - Tas Project Database -Detailed Geochemical Report in ascending order for sample numbers.

The data was analyzed using a histogram and line graph (Appendices).

Gold The lowest value is 5.0 ppb. and the highest value is 140.0 ppb. The mean is 6.7 ppb. and the standard deviation is 8.0 ppb. One gold value (140.0 ppb) was considerably greater than the remainder of the population, and therefore was temporarily removed from the population in order to calculate a reasonable threshold value. Any value greater than 12.0 ppb. is considered anomalous.

Copper The lowest value is 10.0 ppm. and the highest value is 3135.0 ppm. The mean is 106.5 ppm. and the standard deviation is 232.8 ppm. Five copper values greater than 1073 ppm were temporarily removed from the population in order to calculate a reasonable threshold value. Any value greater than 215.0 ppm. is considered anomalous.

Previous geochemical surveys by Noranda on other portions of the TAS property have calculated threshold values of 10 ppb gold and 100 ppm copper.

INTERPRETATIONS

The results for copper and gold geochemistry indicate coincident values trending northeast between 9800N-9600E and 10400N-10400E. This trend is coincident with a chargeability high (25-150 milliseconds at N=4) anomaly and a narrow resistivity low (300-600 ohm-metres at N=4) anomaly between L10025N-9000E and L10225N-10200E. The coincident geophysical and geochemical anomaly contains the three highest geochemical gold values. These values lie within 150 metres of either side of diamond drill hole 89-61. This diamond drill hole, which tested the flank of the chargeability anomaly at N=4, encountered several narrow (<5.8 m.), low-grade (0.20%) copper intersections. Trenching on surface within the core of the chargeability anomaly yielded rock chip & grab samples which assayed 0.12% copper over 16.5 metres. As well, the geochemical and geophysical trend lies on the northern flank of a large magnetic anomaly (>6900 nT) that is underlain by a portion of a large diorite intrusive.

To date, the near surface diamond drilling has tested the flanks of the chargeability anomaly. Deeper diamond drill holes are recommended to test the chargeability anomaly at depth. The I.P., magnetic, and geochemical soil sampling surveys should be extended to cover the area northward to the Ridge Area and eastward to approximately L50900E.

ITEMIZED COST STATEMENT

1. Soil Sampling		
sampling - 9 days x \$130/day		1,170.00
room & board - 9 days x \$50/day		450.00
2. Analysis		
473 samples x \$8.25/sample		3,902.25
3. Map preparation & reproduction		
Dave Carr (\$700/2=\$350)		350.00
reproduction		100.00
5. Miscellaneous		
sample bags, shipping, Fax etc.		500.00
6. Vehicle rental		
9 days x \$50/day		450.00
7. Report Writing		
3 days x \$350/day		<u>1,050.00</u>
	Sub-total	\$ 7,972.25
Management Fee (10% of Costs)		<u>797.25</u>
	TOTAL COST	<u>\$ 8,769.50</u>

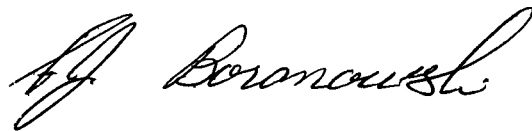
STATEMENT OF AUTHOR'S QUALIFICATIONS

I, Alexander J. Boronowski, B.Sc., 103 - 255 West 1st Street
North Vancouver, B.C. V7M 3G8

do hereby certify that:

1. I am a Geology graduate from the University of British Columbia (B.Sc. 1970).
2. I am a Fellow of the Geological Association of Canada and a member of the Canadian Institute of Mining and Metallurgy.
3. I have practised my profession as a Geologist continuously since graduation in exploration and mining for Cominco Ltd., Texas Gulf Inc., Kidd Creek Mines Ltd., British Columbia Ministry of Mines, and TOTAL Energold Corporation in North America, Mexico, and Europe.
4. My report is based upon information and data supplied by R.Somerville Geological & Mining Engineering Limited.
5. I currently hold stock in Black Swan Gold Mines Ltd. and Gold Cap Inc.

Dated at VANCOUVER, B.C. on this 1st. day of December, 1989.



A. J. BORONOWSKI, B.Sc., F.G.A.C.



APPENDIX 1

GEOCHEMICAL ANALYSIS CERTIFICATES

Pages (1057) 1 to 11

Pages (1067) 1 to 7



**MIN
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LABORATORIES**

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

VANCOUVER OFFICE:
705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate

9V-1057-SG1

Company: R.S.G.M.
Project: TAS
Attn: R.SOMERVILLE/R.DAY/A.BORNOWSKI

Date: SEP-15-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST.JAMES, B.C.

We hereby certify the following Geochemical Analysis of 30 SOIL samples submitted SEP-05-89 by R.DAY.

Sample Number	AU-WET PPB	CU PPM
01	5	35
02	5	25
03	10	20
04	5	30
05	5	50

06	5	39
07	5	28
08	10	32
09	5	42
10	5	57

11	5	45
12	5	37
13	5	29
14	5	40
15	5	30

16	10	28
17	5	28
18	5	34
21	5	68
22	5	48

23	5	105
24	5	73
25	5	74
26	10	67
27	5	57

28	5	65
29	5	41
30	5	49
31	5	85
32	5	159

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NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate **9V-1057-SG2**

Company: R.S.G.M.
Project: TAS
Attn: R.SOMERVILLE/R.DAY/A.BORNOWSKI

Date: SEP-16-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST. JAMES, B.C.

We hereby certify the following Geochemical Analysis of 30 SOIL samples submitted SEP-05-89 by R.DAY.

Sample Number	AU-WET PPB	CU FPM
33	5	207
34	5	33
35	5	41
36	5	28
37	5	41

38	5	49
39	5	26
40	5	46
41	10	38
42	5	30

43	5	23
44	5	27
45	5	66
46	5	34
47	5	960

48	5	74
49	5	77
50	5	25
51	5	47
52	10	23

53	5	62
54	5	20
55	5	48
56	5	844
57	5	37

58	10	198
59	5	40
60	5	63
61	5	45
62	5	21

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NORTH VANCOUVER, B.C. CANADA V7M 1T2
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TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate **9V-1057-SG3**

Company: R.S.G.M.
Project: TAS
Attn: R.SOMERVILLE/R.DAY/A.BORNOWSKI

Date: SEP-16-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST.JAMES, B.C.

We hereby certify the following Geochemical Analysis of 30 SOIL samples submitted SEP-05-89 by R.DAY.

Sample Number	AU-WET PPB	CU PPM
63	5	29
64	5	25
65	25	80
66	5	36
67	5	45

68	10	28
69	35	3135
70	5	164
71	5	16
72	5	27

73	5	21
74	5	24
75	5	30
76	5	19
77	5	23

78	5	29
79	10	24
80	5	35
81	5	138
82	5	28

85	5	39
86	5	231
87	5	45
88	5	43
89	5	79

90	5	53
91	5	31
92	5	47
93	5	35
94	5	64

Certified by *Benjamin*

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TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate

9V-1057-SG4

Company: R.S.G.M.
Project: TAS
Attn: R. SOMERVILLE/R. DAY/A. BORNOWSKI

Date: SEP-16-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST. JAMES, B.C.

We hereby certify the following Geochemical Analysis of 30 SOIL samples submitted SEP-05-89 by R.DAY.

Sample Number	AU-WET PPB	CU PPM
95	10	57
96	5	37
99	5	29
100	5	65
101	5	19

102	5	21
103	5	27
104	5	28
105	10	30
106	5	24

108	5	65
109	5	24
110	5	22
111	5	16
112	5	22

113	5	15
114	5	20
115	5	12
116	5	29
117	5	20

118	5	28
119	5	22
120	5	42
121	5	36
122	5	31

123	5	903
124	5	18
125	5	36
126	5	10
127	5	19

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NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate 9V-1057-SG5

Company: R.S.G.M.
Project: TAS
Attn: R.SOMERVILLE/R.DAY/A.BORNOWSKI

Date: SEP-16-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST.JAMES, B.C.

We hereby certify the following Geochemical Analysis of 30 SOIL samples submitted SEP-05-89 by R.DAY.

Sample Number	AU-WET FPB	CU PPM
128	5	23
129	5	24
130	5	70
131	5	109
132	10	96

133	5	141
134	5	53
135	5	67
137	5	78
139	5	32

140	5	37
141	5	45
144	10	80
145	5	88
147	5	112

148	5	166
149	5	50
150	5	157
151	5	56
152	5	24

153	5	64
154	5	121
155	5	26
156	5	52
157	5	26

158	5	47
159	5	34
160	10	40
161	5	147
162	5	34

Certified by *[Signature]*



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705 WEST 15TH STREET
NORTH VANCOUVER, B.C. CANADA V7M 1T2
TELEPHONE (604) 980-5814 OR (604) 988-4524
TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate

9V-1057-SG6

Company: R.S.G.M.
Project: TAS
Attn: R.SOMERVILLE/R.DAY/A.BORNOWSKI

Date: SEP-16-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST. JAMES, B.C.

We hereby certify the following Geochemical Analysis of 30 SOIL samples submitted SEP-05-89 by R.DAY.

Sample Number	AU-WET PPB	CU PPM
163	5	35
164	5	62
165	15	25
166	5	20
167	5	40

168	5	35
169	5	34
170	5	41
171	5	60
172	5	62

173	5	40
174	5	94
175	15	39
176	140	437
177	5	105

179	15	134
180	5	82
181	5	109
182	5	47
183	5	49

184	5	158
185	5	37
186	5	42
187	5	65
188	5	35

189	5	48
190	5	72
191	5	105
192	10	50
198	5	67

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TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate

9V-1057-SG7

Company: R.S.G.M.
Project: TAS
Attn: R. SOMERVILLE/R. DAY/A. BORNOWSKI

Date: SEP-17-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST. JAMES, B.C.

We hereby certify the following Geochemical Analysis of 30 soil samples submitted SEP-05-89 by R.DAY.

Sample Number	AU-WET PPB	CU PPM
199	5	68
200	5	58
201	5	31
202	10	41
203	5	59

204	5	75
205	5	65
206	10	68
207	5	65
208	5	38

209	5	49
210	10	174
211	10	142
212	5	49
213	5	54

214	5	54
215	5	68
216	10	80
217	5	117
218	5	53

219	15	54
221	10	71
222	5	110
223	5	41
224	10	91

225	5	39
226	5	41
227	5	36
228	5	12
229	5	108

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TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate

9V-1057-SG8

Company: R.S.G.M.
Project: TAS
Attn: R.SOMERVILLE/R.DAY/A.BORNOWSKI

Date: SEP-17-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST.JAMES, B.C.

We hereby certify the following Geochemical Analysis of 30 SOIL samples submitted SEP-05-89 by R.DAY.

Sample Number	AU-WET PPB	CU PPM
230	5	38
231	5	52
232	10	94
233	5	18
234	5	20

235	5	95
236	60	198
237	5	114
238	5	88
239	5	85

240	5	49
241	10	58
242	5	36
243	5	34
244	5	39

245	5	52
246	10	26
247	5	51
248	5	27
249	5	94

250	5	71
251	10	76
252	5	125
253	5	68
254	5	69

255	5	59
256	10	51
257	5	30
258	5	49
259	5	54

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TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
33 EAST IROQUOIS ROAD
P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate

9V-1057-SG9

Company: R.S.G.M.
Project: TAS
Attn: R.SOMERVILLE/R.DAY/A.BORNOWSKI

Date: SEP-16-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST.JAMES, B.C.

He hereby certify the following Geochemical Analysis of 30 SOIL samples submitted SEP-05-89 by R.DAY.

Sample Number	AU-WET PPB	CU PPM
260	5	48
261	5	48
262	55	316
263	5	31
264	5	153

265	5	82
266	5	72
267	5	105
268	5	41
269	5	110

270	5	33
271	5	19
272	5	49
273	5	70
274	5	112

275	40	140
276	5	42
277	5	63
278	5	71
279	5	21

280	5	91
281	5	46
282	5	51
284	5	57
285	5	37

286	5	54
287	5	51
288	5	61
289	5	158
290	NO	SAMPLE

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TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
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P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate

9V-1057-SG11

Company: R.S.G.M.
Project: TAS
Attn: R.SOMERVILLE/R.DAY/A.BORNOWSKI

Date: SEP-17-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST.JAMES, B.C.

He hereby certify the following Geochemical Analysis of 20 SOIL samples submitted SEP-05-89 by R.DAY.

Sample Number	AU-WET PPB	CU PPM
19	5	47
20	10	104
83	5	76
84	5	79
97	5	86

98	10	92
107	15	1880
136	10	78
138	5	103
42	5	29

143	10	73
146	5	118
178	10	1840
193	5	220
194	10	97

195	5	29
196	5	41
197	5	55
220	10	68
283	5	84

Certified by *Ben Frank*
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TIMMINS OFFICE:
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P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate

9V-1067-SG1

Company: R.S.G.M.
Project: TAS
Attn: R.SOMERVILLE/R.DAY/A.BORNOWSKI

Date: SEP-14-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST.JAMES, B.C.

We hereby certify the following Geochemical Analysis of SOIL samples submitted SEP-06-89 by R.DAY.

Sample Number	AU-WET PPB	CU PPM
292	5	128
293	5	137
294	5	50
295	5	40
296	5	73

297	5	138
298	10	22
299	5	57
300	5	77
301	5	58

302	5	34
303	5	48
304	5	55
305	5	108
306	10	79

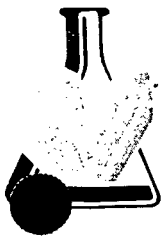
307	5	91
308	5	43
309	5	165
310	10	157
311	5	82

312	5	39
313	5	57
314	5	109
315	5	35
316	5	52

317	5	69
318	5	60
319	5	33
320	5	50
321	5	99

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P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate

9V-1067-SG2

Company: R.S.G.M.
Project: TAS
Attn: R.SOMERVILLE/R.DAY/A.BORNOWSKI

Date: SEP-14-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST.JAMES, B.C.

We hereby certify the following Geochemical Analysis of 30 SOIL samples submitted SEP-06-89 by R.DAY.

Sample Number	AU-WET PPB	CU PPM
322	5	48
323	5	62
327	10	58
328	5	107
329	5	81

330	5	95
331	5	1310
332	5	72
333	5	38
335	5	35

337	5	245
338	5	77
339	5	37
340	5	47
341	5	45

342	5	78
343	5	69
344	5	69
345	10	140
346	5	65

347	5	116
348	10	61
349	5	29
350	15	105
351	5	93

352	25	290
353	5	85
354	5	79
355	10	52
356	5	89

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P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate

9V-1067-SG3

Company: R.S.G.M.
Project: TAS
Attn: R.SOMERVILLE/R.DAY/A.BORNOWSKI

Date: SEP-14-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST.JAMES, B.C.

We hereby certify the following Geochemical Analysis of 30 SOIL samples submitted SEP-06-89 by R.DAY.

Sample Number	AU-WET PPB	CU PPM
357	5	83
358	5	39
359	5	95
360	20	28
361	5	45

362	10	49
363	5	50
364	5	82
365	5	52
366	5	76

367	5	84
368	5	42
369	5	29
370	5	113
371	10	56

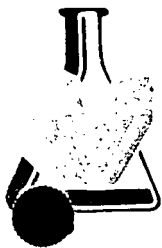
372	5	49
373	5	55
374	5	39
375	5	33
376	5	35

377	5	61
378	5	75
380	5	26
381	5	119
382	5	32

383	5	37
384	5	45
385	5	28
386	5	365
387	15	260

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33 EAST IROQUOIS ROAD
P.O. BOX 867
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TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate

9V-1067-SG4

Company: R.S.G.M.
Project: TAS
Attn: R.SOMERVILLE/R.DAY/A.BORNOWSKI

Date: SEP-15-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST.JAMES, B.C.

We hereby certify the following Geochemical Analysis of 30 SOIL samples submitted SEP-06-89 by R.DAY.

Sample Number	AU-WET PPB	CU PPM
388	35	424
389	10	367
390	5	204
391	5	32
392	5	151

393	5	72
394	5	38
395	5	37
396	5	48
397	5	31

398	5	50
399	10	74
400	5	35
401	5	104
402	5	113

403	5	94
404	5	50
405	5	75
406	10	32
407	40	250

408	5	62
409	5	143
410	5	50
411	10	71
412	5	100

416	5	53
417	5	46
418	5	55
419	5	56
420	5	37

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TIMMINS OFFICE:
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P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate

9V-1067-SG5

Company: R.S.G.M.
Project: TAS
Attn: R.SOMERVILLE/R.DAY/A.BORNOWSKI

Date: SEP-15-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST. JAMES, B.C.

We hereby certify the following Geochemical Analysis of 30 SOIL samples submitted SEP-06-89 by R.DAY.

Sample Number	AU-WET PPB	CU PPM
421	5	111
422	30	185
423	15	86
424	5	58
425	5	42

426	5	32
427	5	52
428	5	33
429	5	265
430	15	64

431	5	107
432	5	134
433	5	79
434	5	49
435	5	200

436	5	112
437	5	62
438	5	51
439	5	69
440	5	1000

441	5	62
443	5	240
444	5	159
445	5	86
446	5	127

447	5	53
448	5	93
449	5	45
450	5	27
451	5	44

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TELEPHONE (604) 980-5814 OR (604) 988-4524
TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
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P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate

9V-1067-SG6

Company: R.S.G.M.
Project: TAS
Attn: R. SOMERVILLE/R. DAY/A. BORNOWSKI

Date: SEP-15-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST. JAMES, B.C.

We hereby certify the following Geochemical Analysis of 19 SOIL samples submitted SEP-06-89 by R.DAY.

Sample Number	AU-WET PPB	CU PPM
452	5	35
453	5	56
454	15	55
455	15	194
456	5	144

457	5	52
458	10	73
462	5	47
463	5	42
464	5	46

465	5	56
466	5	80
467	5	84
468	5	565
469	5	69

470	5	53
471	5	52
472	5	735
473	5	40

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TELEX: VIA U.S.A. 7601067 • FAX (604) 980-9621

TIMMINS OFFICE:
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P.O. BOX 867
TIMMINS, ONTARIO CANADA P4N 7G7
TELEPHONE: (705) 264-9996

Geochemical Analysis Certificate **9V-1067-SG7**

Company: R.S.G.M.
Project: TAS
Attn: R.SOMERVILLE/R.DAY/A.BORNOWSKI

Date: SEP-15-89
Copy 1. R.S.G.M., NORTH VANCOUVER, B.C.
2. R.S.G.M., FORT ST.JAMES, B.C.

We hereby certify the following Geochemical Analysis of 13 ORGANIC SOILS.
samples submitted SEP-06-89 by R.DAY.

Sample Number	AU-WET PPB	CU PPM
324	5	1230
325	5	755
326	5	60
334	5	38
336	5	24

379	5	51
413	5	1040
414	5	232
415	5	575
442	5	425

459	5	362
460	10	670
461	10	595

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APPENDIX 2

TAS PROJECT DATABASE - DETAIL GEOCHEMICAL REPORT
on the
TAS 1 & 4 CLAIMS - LOCATION, GOLD PPB, COPPER PPM, SAMPLE NO.

Pages 1 to 9

AS PROJECT DATABASE - DETAILED GEOCHEMICAL REPORT

EAST	NORTH	AU FPB	CU PPM	SAMPLE NO.
9600.0	9800.0	5.00	35.00	1
9600.0	9825.0	5.00	25.00	2
9600.0	9850.0	10.00	20.00	3
9600.0	9875.0	5.00	30.00	4
9600.0	9900.0	5.00	50.00	5
9600.0	9925.0	5.00	39.00	6
9600.0	9950.0	5.00	28.00	7
9600.0	9975.0	10.00	32.00	8
9600.0	10000.0	5.00	42.00	9
9600.0	10025.0	5.00	57.00	10
9600.0	10050.0	5.00	45.00	11
9600.0	10075.0	5.00	37.00	12
9600.0	10100.0	5.00	29.00	13
9600.0	10125.0	5.00	40.00	14
9600.0	10150.0	5.00	30.00	15
9600.0	10175.0	10.00	28.00	16
9600.0	10200.0	5.00	28.00	17
9600.0	10225.0	5.00	34.00	18
9600.0	10250.0	5.00	47.00	19
9600.0	10275.0	10.00	104.00	20
9600.0	10300.0	5.00	68.00	21
9600.0	10325.0	5.00	48.00	22
9600.0	10350.0	5.00	105.00	23
9600.0	10375.0	5.00	73.00	24
9600.0	10400.0	5.00	74.00	25
9625.0	10400.0	10.00	67.00	26
9650.0	10400.0	5.00	57.00	27
9650.0	10375.0	5.00	65.00	28
9650.0	10350.0	5.00	41.00	29
9650.0	10325.0	5.00	49.00	30
9650.0	10300.0	5.00	85.00	31
9650.0	10275.0	5.00	159.00	32
9650.0	10250.0	5.00	207.00	33
9650.0	10225.0	5.00	33.00	34
9650.0	10200.0	5.00	41.00	35
9650.0	10175.0	5.00	28.00	36
9650.0	10150.0	5.00	41.00	37
9650.0	10125.0	5.00	49.00	38
9650.0	10100.0	5.00	26.00	39
9650.0	10075.0	5.00	46.00	40
9650.0	10050.0	10.00	38.00	41
9650.0	10025.0	5.00	30.00	42
9650.0	10000.0	5.00	23.00	43
9650.0	9975.0	5.00	27.00	44
9650.0	9950.0	5.00	66.00	45
9650.0	9925.0	5.00	34.00	46
9650.0	9900.0	5.00	960.00	47
9650.0	9875.0	5.00	74.00	48

19/10/89

R. SOMERVILLE GEOLOGICAL & MINING ENG. LTD.
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9650.0	9850.0	5.00	77.00	49
9650.0	9825.0	5.00	25.00	50
9650.0	9800.0	5.00	47.00	51
9625.0	9800.0	10.00	23.00	52
9675.0	9800.0	5.00	62.00	53
9700.0	9800.0	5.00	20.00	54
9700.0	9825.0	5.00	48.00	55
9700.0	9850.0	5.00	844.00	56
9700.0	9875.0	5.00	37.00	57
9700.0	9900.0	10.00	198.00	58
9700.0	9925.0	5.00	40.00	59
9700.0	9950.0	5.00	63.00	60
9700.0	9975.0	5.00	45.00	61
9700.0	10000.0	5.00	21.00	62
9625.0	10000.0	5.00	29.00	63
9675.0	10000.0	5.00	25.00	64
9725.0	10000.0	25.00	80.00	65
9775.0	10000.0	5.00	36.00	66
9825.0	10000.0	5.00	45.00	67
9875.0	10000.0	10.00	28.00	68
9925.0	10000.0	35.00	3135.00	69
9975.0	10000.0	5.00	164.00	70
9700.0	10025.0	5.00	16.00	71
9700.0	10050.0	5.00	27.00	72
9700.0	10075.0	5.00	21.00	73
9700.0	10100.0	5.00	24.00	74
9700.0	10125.0	5.00	30.00	75
9700.0	10150.0	5.00	19.00	76
9700.0	10175.0	5.00	23.00	77
9700.0	10200.0	5.00	29.00	78
9700.0	10225.0	10.00	24.00	79
9700.0	10250.0	5.00	35.00	80
9700.0	10275.0	5.00	138.00	81
9700.0	10300.0	5.00	28.00	82
9700.0	10325.0	5.00	76.00	83
9700.0	10350.0	5.00	79.00	84
9700.0	10375.0	5.00	39.00	85
9700.0	10400.0	5.00	231.00	86
9675.0	10400.0	5.00	45.00	87
9725.0	10400.0	5.00	43.00	88
9750.0	10400.0	5.00	79.00	89
9750.0	10375.0	5.00	53.00	90
9750.0	10350.0	5.00	31.00	91
9750.0	10325.0	5.00	47.00	92
9750.0	10300.0	5.00	35.00	93
9750.0	10275.0	5.00	64.00	94
9750.0	10250.0	10.00	57.00	95
9750.0	10225.0	5.00	37.00	96
9750.0	10200.0	5.00	86.00	97
9750.0	10175.0	10.00	92.00	98
9750.0	10150.0	5.00	29.00	99
9750.0	10125.0	5.00	65.00	100
9750.0	10100.0	5.00	19.00	101
9750.0	10075.0	5.00	21.00	102

R. SOMERVILLE GEOLOGICAL & MINING ENG. LTD.
BLACK SWAN/GOLDCAP/NORANDA - TAS OPTION

9750.0	10050.0	5.00	27.00	103
9750.0	10025.0	5.00	28.00	104
9750.0	10000.0	10.00	30.00	105
9750.0	9975.0	5.00	24.00	106
9750.0	9950.0	15.00	1880.00	107
9750.0	9925.0	5.00	65.00	108
9750.0	9900.0	5.00	24.00	109
9750.0	9875.0	5.00	22.00	110
9750.0	9850.0	5.00	16.00	111
9750.0	9825.0	5.00	22.00	112
9750.0	9800.0	5.00	15.00	113
9725.0	9800.0	5.00	20.00	114
9775.0	9800.0	5.00	12.00	115
9800.0	9800.0	5.00	29.00	116
9800.0	9825.0	5.00	20.00	117
9800.0	9850.0	5.00	28.00	118
9800.0	9875.0	5.00	22.00	119
9800.0	9900.0	5.00	42.00	120
9800.0	9925.0	5.00	36.00	121
9800.0	9950.0	5.00	31.00	122
9800.0	9975.0	5.00	903.00	123
9800.0	10000.0	5.00	18.00	124
9800.0	10025.0	5.00	36.00	125
9800.0	10050.0	5.00	10.00	126
9800.0	10075.0	5.00	19.00	127
9800.0	10100.0	5.00	23.00	128
9800.0	10125.0	5.00	24.00	129
9800.0	10150.0	5.00	70.00	130
9800.0	10175.0	5.00	109.00	131
9800.0	10200.0	10.00	96.00	132
9800.0	10225.0	5.00	141.00	133
9800.0	10250.0	5.00	53.00	134
9800.0	10275.0	5.00	67.00	135
9800.0	10300.0	10.00	78.00	136
9800.0	10325.0	5.00	78.00	137
9800.0	10350.0	5.00	103.00	138
9800.0	10375.0	5.00	32.00	139
9800.0	10400.0	5.00	37.00	140
9775.0	10400.0	5.00	45.00	141
9825.0	10400.0	5.00	29.00	142
9850.0	10400.0	10.00	73.00	143
9850.0	10375.0	10.00	80.00	144
9850.0	10350.0	5.00	88.00	145
9850.0	10325.0	5.00	118.00	146
9850.0	10300.0	5.00	112.00	147
9850.0	10275.0	5.00	166.00	148
9850.0	10250.0	5.00	50.00	149
9850.0	10225.0	5.00	157.00	150
9850.0	10200.0	5.00	56.00	151
9850.0	10175.0	5.00	24.00	152
9850.0	10150.0	5.00	64.00	153
9850.0	10125.0	5.00	121.00	154
9850.0	10100.0	5.00	26.00	155
9850.0	10075.0	5.00	52.00	156

R. SOMERVILLE GEOLOGICAL & MINING ENG. LTD.
BLACK SWAN/GOLDCAP/NORANDA - TAS OPTION

9850.0	10050.0	5.00	26.00	157
9850.0	10025.0	5.00	47.00	158
9850.0	10000.0	5.00	34.00	159
9850.0	9975.0	10.00	40.00	160
9850.0	9950.0	5.00	147.00	161
9850.0	9925.0	5.00	34.00	162
9850.0	9900.0	5.00	35.00	163
9850.0	9875.0	5.00	62.00	164
9850.0	9850.0	15.00	25.00	165
9850.0	9825.0	5.00	20.00	166
9850.0	9800.0	5.00	40.00	167
9825.0	9800.0	5.00	35.00	168
9875.0	9800.0	5.00	34.00	169
9900.0	9800.0	5.00	41.00	170
9900.0	9825.0	5.00	60.00	171
9900.0	9850.0	5.00	62.00	172
9900.0	9875.0	5.00	40.00	173
9900.0	9900.0	5.00	94.00	174
9900.0	9925.0	15.00	39.00	175
9900.0	9950.0	140.00	437.00	176
9900.0	9975.0	5.00	105.00	177
9900.0	10000.0	10.00	1840.00	178
9900.0	10025.0	15.00	134.00	179
9900.0	10050.0	5.00	82.00	180
9900.0	10075.0	5.00	109.00	181
9900.0	10100.0	5.00	47.00	182
9900.0	10125.0	5.00	49.00	183
9900.0	10150.0	5.00	158.00	184
9900.0	10175.0	5.00	37.00	185
9900.0	10200.0	5.00	42.00	186
9900.0	10225.0	5.00	65.00	187
9900.0	10250.0	5.00	35.00	188
9900.0	10275.0	5.00	48.00	189
9900.0	10300.0	5.00	72.00	190
9900.0	10325.0	5.00	105.00	191
9900.0	10350.0	10.00	50.00	192
9900.0	10375.0	5.00	220.00	193
9900.0	10400.0	10.00	97.00	194
9875.0	10400.0	5.00	29.00	195
9925.0	10400.0	5.00	41.00	196
9950.0	10400.0	5.00	55.00	197
9950.0	10375.0	5.00	67.00	198
9950.0	10350.0	5.00	68.00	199
9950.0	10325.0	5.00	58.00	200
9950.0	10300.0	5.00	31.00	201
9950.0	10275.0	10.00	41.00	202
9950.0	10250.0	5.00	59.00	203
9950.0	10225.0	5.00	75.00	204
9950.0	10200.0	5.00	65.00	205
9950.0	10175.0	10.00	68.00	206
9950.0	10150.0	5.00	65.00	207
9950.0	10125.0	5.00	38.00	208
9950.0	10100.0	5.00	49.00	209
9950.0	10075.0	10.00	174.00	210

R. SOMERVILLE GEOLOGICAL & MINING ENG. LTD.
BLACK SWAN/GOLDCAP/NORANDA - TAS OPTION

9950.0	10050.0	10.00	142.00	211
9950.0	10025.0	5.00	49.00	212
9950.0	10000.0	5.00	54.00	213
9950.0	9975.0	5.00	54.00	214
9950.0	9950.0	5.00	68.00	215
9950.0	9925.0	10.00	80.00	216
9950.0	9900.0	5.00	117.00	217
9950.0	9875.0	5.00	53.00	218
9950.0	9850.0	15.00	54.00	219
9950.0	9825.0	10.00	68.00	220
9950.0	9800.0	10.00	71.00	221
9925.0	9800.0	5.00	110.00	222
9975.0	9800.0	5.00	41.00	223
10000.0	9800.0	10.00	91.00	224
10000.0	9825.0	5.00	39.00	225
10000.0	9850.0	5.00	41.00	226
10000.0	9875.0	5.00	36.00	227
10000.0	9900.0	5.00	12.00	228
10000.0	9925.0	5.00	108.00	229
10000.0	9950.0	5.00	38.00	230
10000.0	9975.0	5.00	52.00	231
10000.0	10000.0	10.00	94.00	232
10000.0	10025.0	5.00	18.00	233
10000.0	10050.0	5.00	20.00	234
10000.0	10075.0	5.00	95.00	235
10000.0	10100.0	60.00	198.00	236
10000.0	10125.0	5.00	114.00	237
10000.0	10150.0	5.00	88.00	238
10000.0	10175.0	5.00	85.00	239
10000.0	10200.0	5.00	49.00	240
10000.0	10225.0	10.00	58.00	241
10000.0	10250.0	5.00	36.00	242
10000.0	10275.0	5.00	34.00	243
10000.0	10300.0	5.00	39.00	244
10000.0	10325.0	5.00	52.00	245
10000.0	10350.0	10.00	26.00	246
10000.0	10375.0	5.00	51.00	247
10000.0	10400.0	5.00	27.00	248
9975.0	10400.0	5.00	94.00	249
10025.0	10400.0	5.00	71.00	250
10050.0	10400.0	10.00	76.00	251
10050.0	10375.0	5.00	125.00	252
10050.0	10350.0	5.00	68.00	253
10050.0	10325.0	5.00	69.00	254
10050.0	10300.0	5.00	59.00	255
10050.0	10275.0	10.00	51.00	256
10050.0	10250.0	5.00	30.00	257
10050.0	10225.0	5.00	49.00	258
10050.0	10200.0	5.00	54.00	259
10050.0	10175.0	5.00	48.00	260
10050.0	10150.0	5.00	48.00	261
10050.0	10125.0	55.00	316.00	262
10050.0	10100.0	5.00	31.00	263
10050.0	10075.0	5.00	153.00	264

R. SOMERVILLE GEOLOGICAL & MINING ENG. LTD.
BLACK SWAN/GOLDCAP/NORANDA - TAS OPTION

10050.0	10050.0	5.00	82.00	265
10050.0	10025.0	5.00	72.00	266
10050.0	10000.0	5.00	105.00	267
10050.0	9975.0	5.00	41.00	268
10050.0	9950.0	5.00	110.00	269
10050.0	9925.0	5.00	33.00	270
10050.0	9900.0	5.00	19.00	271
10050.0	9875.0	5.00	49.00	272
10050.0	9850.0	5.00	70.00	273
10050.0	9825.0	5.00	112.00	274
10050.0	9800.0	40.00	140.00	275
10025.0	9800.0	5.00	42.00	276
10075.0	9800.0	5.00	63.00	277
10100.0	9784.0	5.00	71.00	278
10100.0	9825.0	5.00	21.00	279
10100.0	9850.0	5.00	91.00	280
10100.0	9875.0	5.00	46.00	281
10100.0	9900.0	5.00	51.00	282
10100.0	9925.0	5.00	84.00	283
10100.0	9950.0	5.00	57.00	284
10100.0	9975.0	5.00	37.00	285
10100.0	10000.0	5.00	54.00	286
10100.0	10025.0	5.00	51.00	287
10100.0	10050.0	5.00	61.00	288
10100.0	10075.0	5.00	158.00	289
10100.0	10100.0	5.00	80.00	290
10100.0	10125.0	5.00	86.00	291
10100.0	10150.0	5.00	128.00	292
10100.0	10175.0	5.00	137.00	293
10100.0	10200.0	5.00	50.00	294
10100.0	10225.0	5.00	40.00	295
10100.0	10250.0	5.00	73.00	296
10100.0	10275.0	5.00	138.00	297
10100.0	10300.0	10.00	22.00	298
10100.0	10325.0	5.00	57.00	299
10100.0	10350.0	5.00	77.00	300
10100.0	10375.0	5.00	58.00	301
10100.0	10400.0	5.00	34.00	302
10075.0	10400.0	5.00	48.00	303
10125.0	10400.0	5.00	55.00	304
10150.0	10400.0	5.00	108.00	305
10150.0	10375.0	10.00	79.00	306
10150.0	10350.0	5.00	91.00	307
10150.0	10325.0	5.00	43.00	308
10150.0	10300.0	5.00	165.00	309
10150.0	10275.0	10.00	157.00	310
10150.0	10250.0	5.00	82.00	311
10150.0	10225.0	5.00	39.00	312
10150.0	10200.0	5.00	57.00	313
10150.0	10175.0	5.00	109.00	314
10150.0	10150.0	5.00	35.00	315
10150.0	10125.0	5.00	52.00	316
10150.0	10100.0	5.00	69.00	317
10150.0	10075.0	5.00	60.00	318

R. SOMERVILLE GEOLOGICAL & MINING ENG. LTD.
BLACK SWAN/GOLDCAP/NORANDA - TAS OPTION

10150.0	10050.0	5.00	33.00	319
10150.0	10025.0	5.00	50.00	320
10150.0	10000.0	5.00	99.00	321
10150.0	9975.0	5.00	48.00	322
10150.0	9950.0	5.00	62.00	323
10150.0	9925.0	5.00	1230.00	324
10150.0	9900.0	5.00	755.00	325
10150.0	9875.0	5.00	60.00	326
10150.0	9850.0	10.00	58.00	327
10150.0	9825.0	5.00	107.00	328
10150.0	9800.0	5.00	81.00	329
10125.0	9800.0	5.00	95.00	330
10175.0	9800.0	5.00	1310.00	331
10200.0	9800.0	5.00	72.00	332
10200.0	9825.0	5.00	38.00	333
10200.0	9850.0	5.00	38.00	334
10200.0	9875.0	5.00	35.00	335
10200.0	9900.0	5.00	24.00	336
10200.0	9925.0	5.00	245.00	337
10200.0	9950.0	5.00	77.00	338
10200.0	9975.0	5.00	37.00	339
10200.0	10000.0	5.00	47.00	340
10200.0	10025.0	5.00	45.00	341
10200.0	10050.0	5.00	78.00	342
10200.0	10075.0	5.00	69.00	343
10200.0	10100.0	5.00	69.00	344
10200.0	10125.0	10.00	140.00	345
10200.0	10150.0	5.00	65.00	346
10200.0	10175.0	5.00	116.00	347
10200.0	10200.0	10.00	61.00	348
10200.0	10225.0	5.00	29.00	349
10200.0	10250.0	15.00	105.00	350
10200.0	10275.0	5.00	93.00	351
10200.0	10300.0	25.00	290.00	352
10200.0	10325.0	5.00	85.00	353
10200.0	10350.0	5.00	79.00	354
10200.0	10375.0	10.00	52.00	355
10200.0	10400.0	5.00	89.00	356
10175.0	10400.0	5.00	83.00	357
10225.0	10400.0	5.00	39.00	358
10250.0	10400.0	5.00	95.00	359
10250.0	10375.0	20.00	28.00	360
10250.0	10350.0	5.00	45.00	361
10250.0	10325.0	10.00	49.00	362
10250.0	10300.0	5.00	50.00	363
10250.0	10275.0	5.00	82.00	364
10250.0	10250.0	5.00	52.00	365
10250.0	10225.0	5.00	76.00	366
10250.0	10200.0	5.00	84.00	367
10250.0	10175.0	5.00	42.00	368
10250.0	10150.0	5.00	29.00	369
10250.0	10125.0	5.00	113.00	370
10250.0	10100.0	10.00	56.00	371
10250.0	10075.0	5.00	49.00	372

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R. SOMERVILLE GEOLOGICAL & MINING ENG. LTD.
BLACK SWAN/GOLDCAP/NORANDA - TAS OPTION

10250.0	10050.0	5.00	55.00	373
10250.0	10025.0	5.00	39.00	374
10250.0	10000.0	5.00	33.00	375
10250.0	9975.0	5.00	35.00	376
10250.0	9950.0	5.00	61.00	377
10250.0	9925.0	5.00	75.00	378
10250.0	9900.0	5.00	51.00	379
10250.0	9875.0	5.00	26.00	380
10250.0	9850.0	5.00	119.00	381
10250.0	9825.0	5.00	32.00	382
10250.0	9800.0	5.00	37.00	383
10225.0	9800.0	5.00	45.00	384
10275.0	9800.0	5.00	28.00	385
10300.0	9800.0	5.00	365.00	386
10300.0	9825.0	15.00	260.00	387
10300.0	9850.0	35.00	424.00	388
10300.0	9875.0	10.00	367.00	389
10300.0	9900.0	5.00	204.00	390
10300.0	9925.0	5.00	32.00	391
10300.0	9950.0	5.00	151.00	392
10300.0	9975.0	5.00	72.00	393
10300.0	10000.0	5.00	38.00	394
10300.0	10025.0	5.00	37.00	395
10300.0	10050.0	5.00	48.00	396
10300.0	10075.0	5.00	31.00	397
10300.0	10100.0	5.00	50.00	398
10300.0	10125.0	10.00	74.00	399
10300.0	10150.0	5.00	35.00	400
10300.0	10175.0	5.00	104.00	401
10300.0	10200.0	5.00	113.00	402
10300.0	10225.0	5.00	94.00	403
10300.0	10250.0	5.00	50.00	404
10300.0	10275.0	5.00	75.00	405
10300.0	10300.0	10.00	32.00	406
10300.0	10325.0	40.00	250.00	407
10300.0	10350.0	5.00	62.00	408
10300.0	10375.0	5.00	143.00	409
10300.0	10400.0	5.00	50.00	410
10275.0	10400.0	10.00	71.00	411
10325.0	10400.0	5.00	100.00	412
10350.0	10400.0	5.00	1040.00	413
10350.0	10375.0	5.00	232.00	414
10350.0	10350.0	5.00	575.00	415
10350.0	10325.0	5.00	53.00	416
10350.0	10300.0	5.00	46.00	417
10350.0	10275.0	5.00	55.00	418
10350.0	10250.0	5.00	56.00	419
10350.0	10225.0	5.00	37.00	420
10350.0	10200.0	5.00	111.00	421
10350.0	10175.0	30.00	185.00	422
10350.0	10150.0	15.00	86.00	423
10350.0	10125.0	5.00	58.00	424
10350.0	10100.0	5.00	42.00	425
10350.0	10075.0	5.00	32.00	426

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R. SOMERVILLE GEOLOGICAL & MINING ENG. LTD.
BLACK SWAN/GOLDCAP/NORANDA - TAS OPTION

10350.0	10050.0	5.00	52.00	427
10350.0	10025.0	5.00	33.00	428
10350.0	10000.0	5.00	265.00	429
10350.0	9975.0	15.00	64.00	430
10350.0	9950.0	5.00	107.00	431
10350.0	9925.0	5.00	134.00	432
10350.0	9900.0	5.00	79.00	433
10350.0	9875.0	5.00	49.00	434
10350.0	9850.0	5.00	200.00	435
10350.0	9825.0	5.00	112.00	436
10350.0	9800.0	5.00	62.00	437
10325.0	9800.0	5.00	51.00	438
10375.0	9800.0	5.00	69.00	439
10400.0	9800.0	5.00	1000.00	440
10400.0	9825.0	5.00	62.00	441
10400.0	9850.0	5.00	425.00	442
10400.0	9875.0	5.00	240.00	443
10400.0	9900.0	5.00	159.00	444
10400.0	9925.0	5.00	86.00	445
10400.0	9950.0	5.00	127.00	446
10400.0	9975.0	5.00	53.00	447
10400.0	10000.0	5.00	93.00	448
10400.0	10025.0	5.00	45.00	449
10400.0	10050.0	5.00	27.00	450
10400.0	10075.0	5.00	44.00	451
10400.0	10100.0	5.00	35.00	452
10400.0	10125.0	5.00	56.00	453
10400.0	10150.0	15.00	55.00	454
10400.0	10175.0	15.00	194.00	455
10400.0	10200.0	5.00	144.00	456
10400.0	10225.0	5.00	52.00	457
10400.0	10250.0	10.00	73.00	458
10400.0	10275.0	5.00	362.00	459
10400.0	10300.0	10.00	670.00	460
10400.0	10325.0	10.00	595.00	461
10400.0	10350.0	5.00	47.00	462
10400.0	10375.0	5.00	42.00	463
10400.0	10400.0	5.00	46.00	464
10375.0	10400.0	5.00	56.00	465
10025.0	10000.0	5.00	80.00	466
10075.0	10000.0	5.00	84.00	467
10125.0	10000.0	5.00	565.00	468
10175.0	10000.0	5.00	69.00	469
10225.0	10000.0	5.00	53.00	470
10275.0	10000.0	5.00	52.00	471
10325.0	10000.0	5.00	735.00	472
10375.0	10000.0	5.00	40.00	473



APPENDIX 3

CLASSICAL STATISTICS AND HISTOGRAMS

GOLD AND COPPER

CLASSICAL STATISTICS AND HISTOGRAMS

EXTRACTION FILENAME : \PCXPLOR\TAS\61AU.MEX
 DATA DESCRIPTION : TAS PROPERTY - 61 GRID
 USER DESCRIPTION : TAS PROPERTY - 61 GRID

DATA VALUES ENTERED

MINIMUM CUTOFF VALUE	:	5.000
MAXIMUM CUTOFF VALUE	:	140.000
TOTAL NUMBER OF SAMPLES USED	:	473
MINIMUM HISTOGRAM VALUE	:	5.000
MAXIMUM HISTOGRAM VALUE	:	140.000
CLASS INTERVAL	:	16.875
MINIMUM POPULATION DATA POINT	:	5.000
MAXIMUM POPULATION DATA POINT	:	140.000
TOTAL POPULATION	:	473

	UNGROUPED DATA	GROUPED DATA
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TOTAL NO OF SAMPLES	473	
ARITHMETIC MEAN	6.7125	14.1867
MEDIAN		13.6197
GEOMETRIC MEAN	5.7902	13.7734
NATURAL LOG MEAN	1.7562	2.6227
STANDARD DEVIATION	8.0449	6.6777
VARIANCE	64.7207	44.5918
COEFFICIENT OF VARIATION	1.1985	.4707
MOMENT 1 ABOUT ARITHMETIC MEAN	.0000	.0000
MOMENT 2 ABOUT ARITHMETIC MEAN	64.7207	44.5918
MOMENT 3 ABOUT ARITHMETIC MEAN	5886.0540	3952.9750
MOMENT 4 ABOUT ARITHMETIC MEAN	704992.6000	422605.3000
MOMENT COEFFICIENT OF SKEWNESS	11.3047	13.2752
MOMENT COEFFICIENT OF KURTOSIS	168.3054	212.5323

NB. LOG MEANS CALCULATED ON SAMPLES ABOVE ZERO

CLASSICAL STATISTICS AND HISTOGRAMS

```

EXTRACTION FILENAME : \PCXPLOR\TAS\61AU.MEX
DATA DESCRIPTION    : TAS PROPERTY - 61 GRID
USER DESCRIPTION    : TAS PROPERTY - 61 GRID

```

FREQUENCY DISTRIBUTIONS

CLASS INTERVAL		< UPPER BND					>= LOWER BND			
>= FROM	< TO	<-INCREMENTAL- COUNT	MEAN	CUM COUNT	INCREASING CUM MEAN	CUM FREQ PERCENT	><----- COUNT	DECREASING CUM MEAN	CUM FREQ PERCENT	
5.000	21.875	463	5.810	463	5.810	97.89	473	6.712	100.00	
21.875	38.750	5	30.000	468	6.068	98.94	10	48.500	2.11	
38.750	55.625	3	45.000	471	6.316	99.58	5	67.000	1.06	
55.625	72.500	1	60.000	472	6.430	99.79	2	100.000	.42	
72.500	89.375	0	.000	472	6.430	99.79	1	140.000	.21	
89.375	106.250	0	.000	472	6.430	99.79	1	140.000	.21	
106.250	123.125	0	.000	472	6.430	99.79	1	140.000	.21	
123.125	140.000	1	140.000	473	6.712	100.00	1	140.000	.21	

NB : (GM) - GEOMETRIC MEAN

C-XPLOR VERSION 1.21
Exploration Data Manager
by COM SERVICES INC.

12:55:36
19/10/89

R. SOMERVILLE
Serial no: 22380
Page : 3

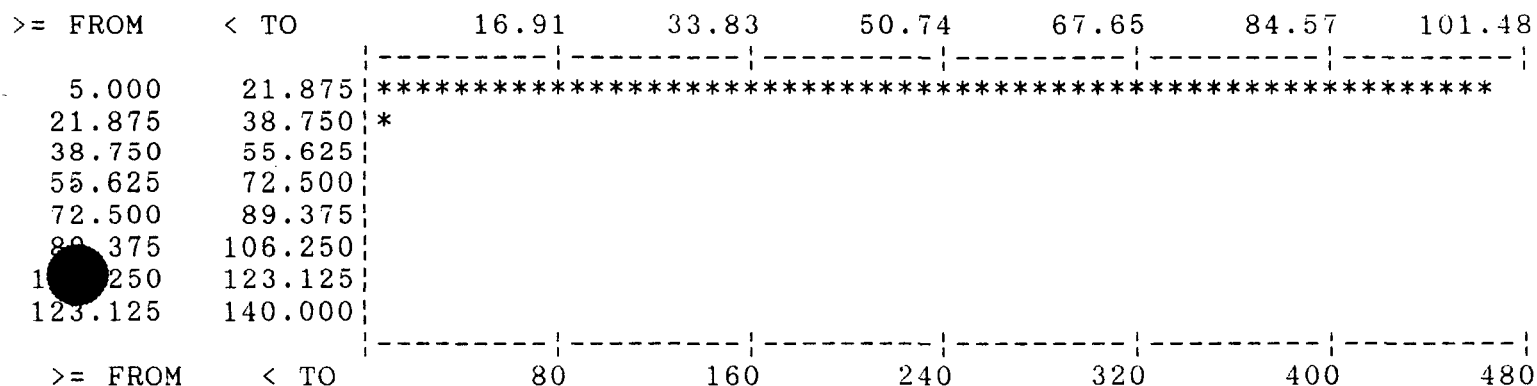
R. SOMERVILLE GEOLOGICAL & MINING ENG. LTD.
BLACK SWAN/GOLDCAP/NORANDA - TAS OPTION

CLASSICAL STATISTICS AND HISTOGRAMS

EXTRACTION FILENAME : \PCXPLO\TAS\61AU.MEX
DATA DESCRIPTION : TAS PROPERTY - 61 GRID
USER DESCRIPTION : TAS PROPERTY - 61 GRID

NORMAL HISTOGRAM

FREQUENCY 1.6913 PERCENT PER STAR



8.0000 COUNTS PER STAR

```

-----
C-XPLOR VERSION 1.21                               R. SOMERVILLE
xpation Data Manager                               12:43:15   Serial no: 22380
y COM SERVICES INC.                               19/10/89   Page :      1
***      R. SOMERVILLE GEOLOGICAL & MINING ENG. LTD.      ***
***      BLACK SWAN/GOLDCAP/NORANDA - TAS OPTION          ***
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CLASSICAL STATISTICS AND HISTOGRAMS

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EXTRACTION FILENAME : \PCXPLOR\TAS\61GRID.MEX
DATA DESCRIPTION    : TAS PROPERTY - 61 GRID
USER DESCRIPTION    : HISTOGRAM - COPPER PPM

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DATA VALUES ENTERED

```

-----
MINIMUM CUTOFF VALUE      :      10.000
MAXIMUM CUTOFF VALUE     :     3135.000
TOTAL NUMBER OF SAMPLES USED :           473

MINIMUM HISTOGRAM VALUE  :      10.000
MAXIMUM HISTOGRAM VALUE  :     3135.0002
CLASS INTERVAL           :      390.625

MINIMUM POPULATION DATA POINT :      10.000
MAXIMUM POPULATION DATA POINT :     3135.000
TOTAL POPULATION         :           473

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UNGROUPED DATA GROUPED DATA

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-----
TOTAL NO OF SAMPLES                473
ARITHMETIC MEAN                    106.5941*
MEDIAN                              213.4864
GEOMETRIC MEAN                      62.1638
NATURAL LOG MEAN                     4.1298
STANDARD DEVIATION                  232.77182
VARIANCE                            54182.7100
COEFFICIENT OF VARIATION              2.1837
MOMENT 1 ABOUT ARITHMETIC MEAN        .0000
MOMENT 2 ABOUT ARITHMETIC MEAN        54182.7100
MOMENT 3 ABOUT ARITHMETIC MEAN       97021250.0000
MOMENT 4 ABOUT ARITHMETIC MEAN       *****
MOMENT COEFFICIENT OF SKEWNESS        7.6926
MOMENT COEFFICIENT OF KURTOSIS       79.2061

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NB. LOG MEANS CALCULATED ON SAMPLES ABOVE ZERO

CLASSICAL STATISTICS AND HISTOGRAMS

EXTRACTION FILENAME : \PCXPLOR\TAS\61GRID.MEX
 DATA DESCRIPTION : TAS PROPERTY - 61 GRID
 USER DESCRIPTION : HISTOGRAM - COPPER PPM

FREQUENCY DISTRIBUTIONS

CLASS INTERVAL		<--INCREMENTAL-->			< UPPER BND			>= LOWER BND		
>= FROM	< TO	COUNT	MEAN	CUM COUNT	CUM MEAN	CUM PERCENT	CUM COUNT	CUM MEAN	CUM PERCENT	
10.000	400.625	454	68.493	454	68.493	95.98	473	106.594	100.00	
400.625	791.250	9	575.667	463	78.352	97.89	19	1017.000	4.02	
791.250	1181.875	5	949.400	468	87.658	98.94	10	1414.200	2.11	
1181.875	1572.500	2	1270.000	470	92.689	99.37	5	1879.000	1.06	
1572.500	1963.125	2	1860.000	472	100.178	99.79	3	2285.000	.63	
1963.125	2353.750	0	.000	472	100.178	99.79	1	3135.000	.21	
2353.750	2744.375	0	.000	472	100.178	99.79	1	3135.000	.21	
2744.375	3135.000	1	3135.000	473	106.594	100.00	1	3135.000	.21	

NB : (GM) - GEOMETRIC MEAN

CLASSICAL STATISTICS AND HISTOGRAMS

EXTRACTION FILENAME : \PCXPLOR\TAS\61GRID.MEX
DATA DESCRIPTION : TAS PROPERTY - 61 GRID
USER DESCRIPTION : HISTOGRAM - COPPER PPM

NORMAL HISTOGRAM

FREQUENCY 1.6913 PERCENT PER STAR

Table with columns: >= FROM, < TO, and frequency values (16.91, 33.83, 50.74, 67.65, 84.57, 101.48). Includes a secondary row for counts per star (80, 160, 240, 320, 400, 480).

8.0000 COUNTS PER STAR

C-XPLOR VERSION 1.21
Exploration Data Manager
COM SERVICES INC.

R. SOMERVILLE
12:52:57 Serial no: 22380
19/10/89 Page : 1

R. SOMERVILLE GEOLOGICAL & MINING ENG. LTD.
BLACK SWAN/GOLDCAP/NORANDA - TAS OPTION

CLASSICAL STATISTICS AND HISTOGRAMS

EXTRACTION FILENAME : \PCXPLOR\TAS\61AU.MEX
DATA DESCRIPTION : TAS PROPERTY - 61 GRID
USER DESCRIPTION : 61 GRID - TAS PROPERTY

DATA VALUES ENTERED

MINIMUM CUTOFF VALUE : 5.000
MAXIMUM CUTOFF VALUE : 72.500
TOTAL NUMBER OF SAMPLES USED : 472

MINIMUM HISTOGRAM VALUE : 5.000
MAXIMUM HISTOGRAM VALUE : 72.500
CLASS INTERVAL : 8.438

MINIMUM POPULATION DATA POINT : 5.000
MAXIMUM POPULATION DATA POINT : 140.000
TOTAL POPULATION : 473

UNGROUPED DATA GROUPED DATA

TOTAL NO OF SAMPLES	472	
ARITHMETIC MEAN	6.4301	9.9877
MEDIAN		9.4155
GEOMETRIC MEAN	5.7513	9.6227
NATURAL LOG MEAN	1.7494	2.2641
STANDARD DEVIATION	5.2095	4.4467
VARIANCE	27.1392	19.7734
COEFFICIENT OF VARIATION	.8102	.4452
MOMENT 1 ABOUT ARITHMETIC MEAN	.0000	.0000
MOMENT 2 ABOUT ARITHMETIC MEAN	27.1392	19.7734
MOMENT 3 ABOUT ARITHMETIC MEAN	904.7408	665.4672
MOMENT 4 ABOUT ARITHMETIC MEAN	38818.6800	26398.7900
MOMENT COEFFICIENT OF SKEWNESS	6.3993	7.5684
MOMENT COEFFICIENT OF KURTOSIS	52.7044	67.5180

NB. LOG MEANS CALCULATED ON SAMPLES ABOVE ZERO

CLASSICAL STATISTICS AND HISTOGRAMS

EXTRACTION FILENAME : \PCXPLOR\TAS\61AU.MEX
 DATA DESCRIPTION : TAS PROPERTY - 61 GRID
 USER DESCRIPTION : 61 GRID - TAS PROPERTY

FREQUENCY DISTRIBUTIONS

CLASS INTERVAL		< UPPER BND					>= LOWER BND			
>= FROM < TO		<-INCREMENTAL->		<-----INCREASING----->			<-----DECREASING----->			
COUNT	MEAN	CUM COUNT	CUM MEAN	CUM PERCENT	FREQ	CUM COUNT	CUM MEAN	CUM PERCENT	FREQ	
451	5.554	451	5.554	95.55		472	6.430	100.00		
12	15.417	463	5.810	98.09	21	25.238	4.45			
3	26.667	466	5.944	98.73	9	38.333	1.91			
2	35.000	468	6.068	99.15	6	44.167	1.27			
2	40.000	470	6.213	99.58	4	48.750	.85			
1	55.000	471	6.316	99.79	2	57.500	.42			
1	60.000	472	6.430	100.00	1	60.000	.21			
0	.000	472	6.430	100.00	0	60.000	.00			

NB : (GM) - GEOMETRIC MEAN

C-XPLOR VERSION 1.21
Exploration Data Manager
COM SERVICES INC.

12:53: 7
19/10/89

R. SOMERVILLE
Serial no: 22380
Page : 3

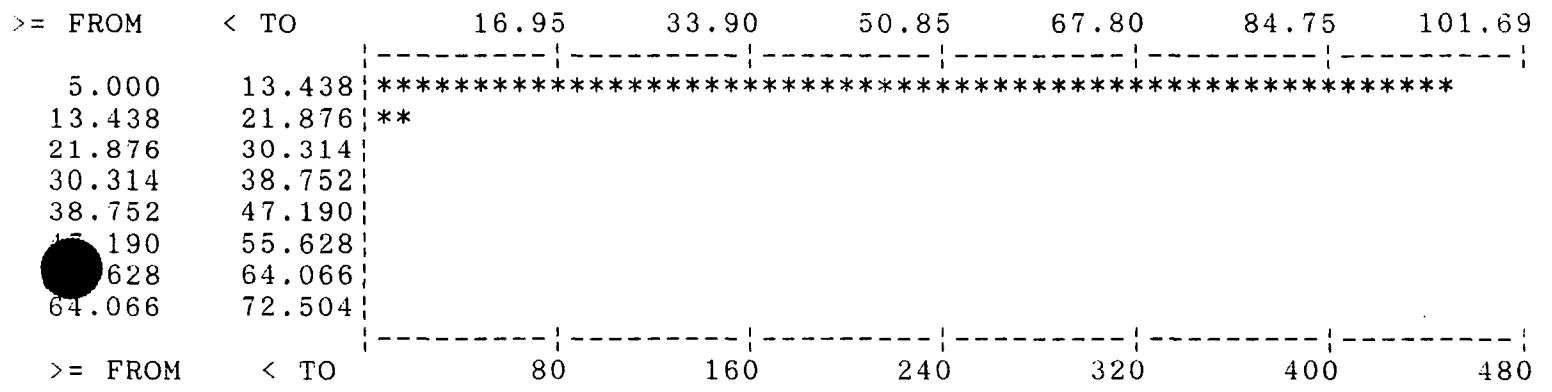
R. SOMERVILLE GEOLOGICAL & MINING ENG. LTD.
BLACK SWAN/GOLDCAP/NORANDA - TAS OPTION

CLASSICAL STATISTICS AND HISTOGRAMS

EXTRACTION FILENAME : \PCXPLOR\TAS\61AU.MEX
DATA DESCRIPTION : TAS PROPERTY - 61 GRID
USER DESCRIPTION : 61 GRID - TAS PROPERTY

NORMAL HISTOGRAM

FREQUENCY 1.6949 PERCENT PER STAR



8.0000 COUNTS PER STAR

CLASSICAL STATISTICS AND HISTOGRAMS

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EXTRACTION FILENAME : \PCXPLOR\TAS\61GRID.MEX
DATA DESCRIPTION    : TAS PROPERTY - 61 GRID
USER DESCRIPTION    : HISTOGRAM - COPPER PPM

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DATA VALUES ENTERED

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-----
MINIMUM CUTOFF VALUE           : 10.000
MAXIMUM CUTOFF VALUE           : 1073.000
TOTAL NUMBER OF SAMPLES USED   : 468

MINIMUM HISTOGRAM VALUE       : 10.000
MAXIMUM HISTOGRAM VALUE       : 1073.000
CLASS INTERVAL                 : 132.875

MINIMUM POPULATION DATA POINT : 10.000
MAXIMUM POPULATION DATA POINT : 3135.000
TOTAL POPULATION               : 473

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UNGROUPED DATA GROUPED DATA

	UNGROUPED DATA	GROUPED DATA
TOTAL NO OF SAMPLES	468	
ARITHMETIC MEAN	87.6581	107.1010
MEDIAN		84.2070
GEOMETRIC MEAN	59.9782	88.5120
NATURAL LOG MEAN	4.0940	4.4831
STANDARD DEVIATION	125.9959	120.5297
VARIANCE	15874.9600	14527.4100
COEFFICIENT OF VARIATION	1.4374	1.1254
MOMENT 1 ABOUT ARITHMETIC MEAN	.0000	.0000
MOMENT 2 ABOUT ARITHMETIC MEAN	15874.9600	14527.4100
MOMENT 3 ABOUT ARITHMETIC MEAN	9820156.0000	9251985.0000
MOMENT 4 ABOUT ARITHMETIC MEAN	*****	*****
MOMENT COEFFICIENT OF SKEWNESS	4.9096	5.2839
MOMENT COEFFICIENT OF KURTOSIS	30.5095	33.4356

NB. LOG MEANS CALCULATED ON SAMPLES ABOVE ZERO

CLASSICAL STATISTICS AND HISTOGRAMS

EXTRACTION FILENAME : \PCXPLOR\TAS\61GRID.MEX
 DATA DESCRIPTION : TAS PROPERTY - 61 GRID
 USER DESCRIPTION : HISTOGRAM - COPPER PPM

FREQUENCY DISTRIBUTIONS

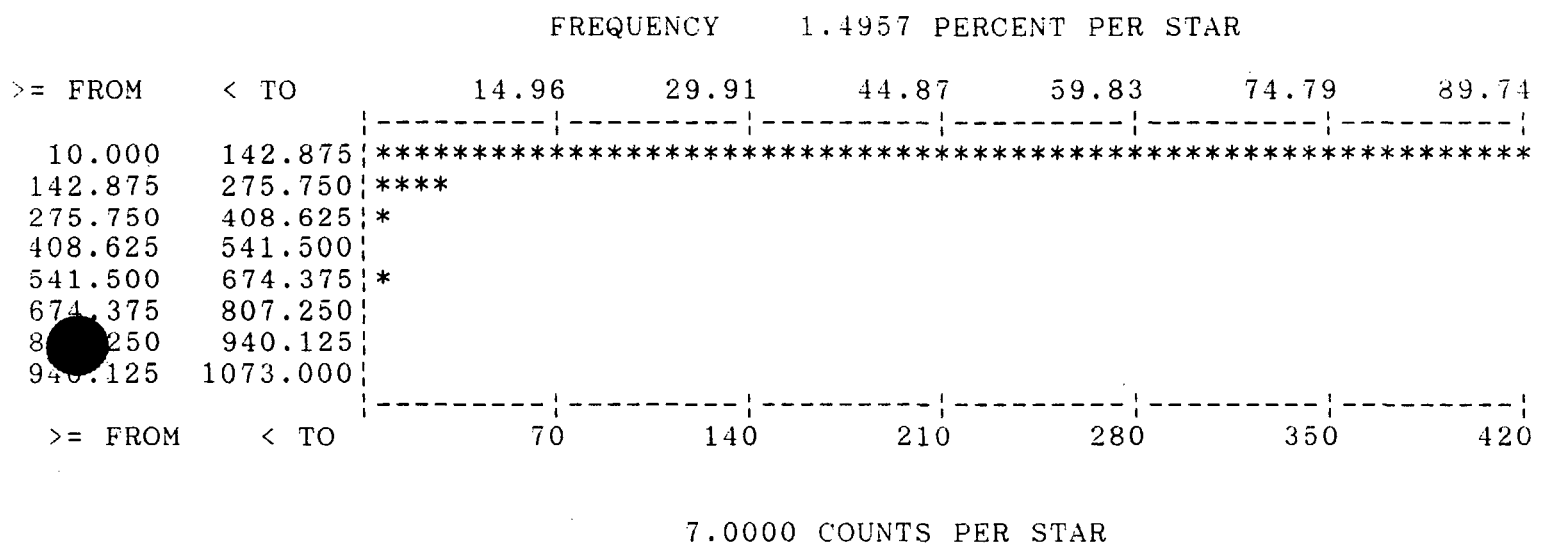
CLASS INTERVAL		< UPPER BND					>= LOWER BND			
>= FROM < TO		<--INCREMENTAL-->		<-----INCREASING----->			<-----DECREASING----->			
		COUNT	MEAN	CUM COUNT	CUM MEAN	CUM FREQ PERCENT	CUM COUNT	CUM MEAN	CUM FREQ PERCENT	
10.000	142.875	419	56.592	419	56.592	89.53	468	87.658	100.00	
142.875	275.750	30	189.467	449	65.470	95.94	49	353.306	10.47	
275.750	408.625	5	340.000	454	68.493	97.01	19	612.000	4.06	
408.625	541.500	3	428.667	457	70.858	97.65	14	709.143	2.99	
541.500	674.375	4	601.250	461	75.460	98.50	11	785.636	2.35	
674.375	807.250	2	745.000	463	78.352	98.93	7	891.000	1.50	
807.250	940.125	2	873.500	465	81.772	99.36	5	949.400	1.07	
940.125	1073.000	3	1000.000	468	87.658	100.00	3	1000.000	.64	

NB : (GM) - GEOMETRIC MEAN

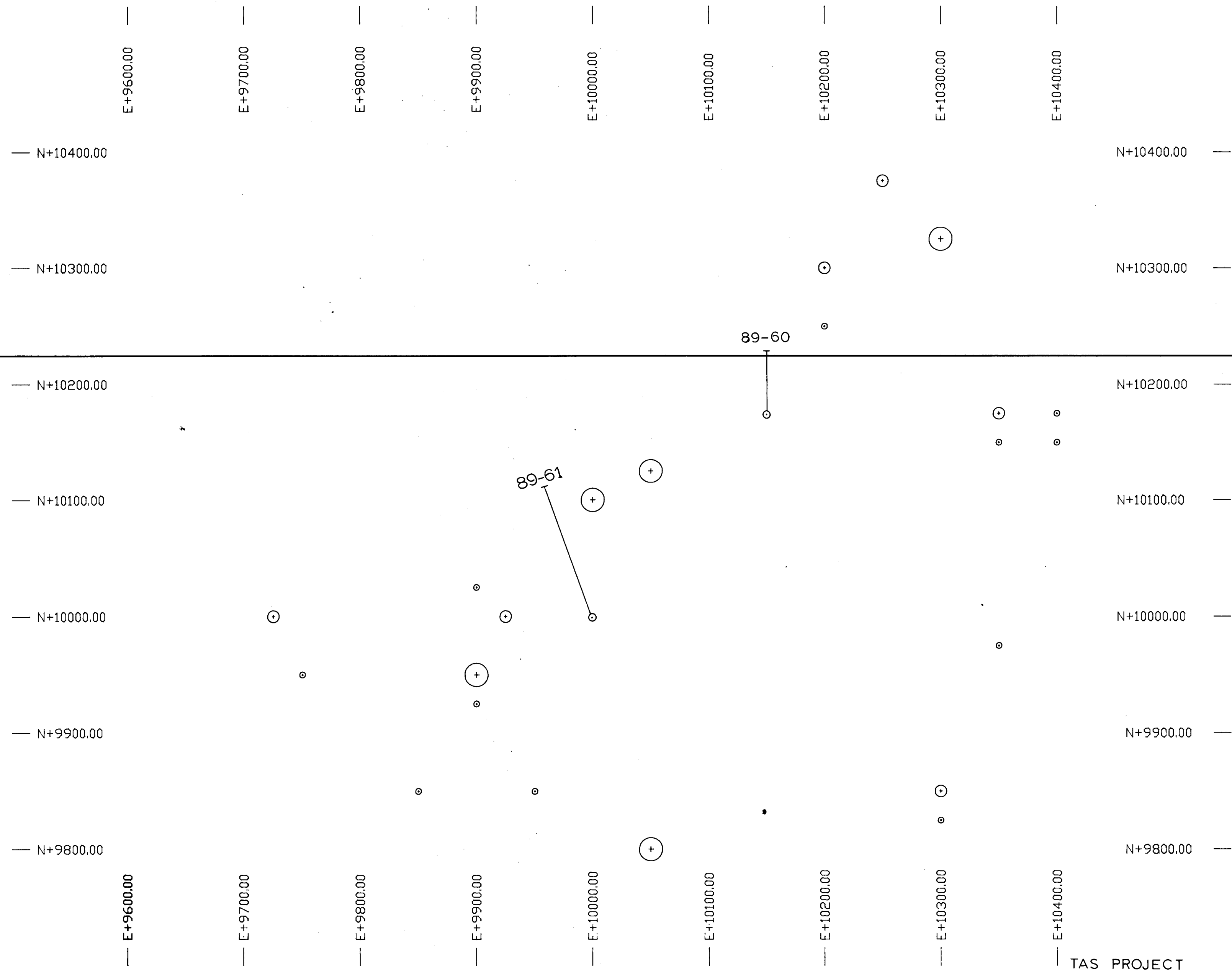
CLASSICAL STATISTICS AND HISTOGRAMS

EXTRACTION FILENAME : \PCXPLO\TAS\61GRID.MEX
 DATA DESCRIPTION : TAS PROPERTY - 61 GRID
 USER DESCRIPTION : HISTOGRAM - COPPER PPM

NORMAL HISTOGRAM



	E+9600.00	E+9700.00	E+9800.00	E+9900.00	E+10000.00	E+10100.00	E+10200.00	E+10300.00	E+10400.00	
— N+10400.00	+25 5.00	+26 10.00	+27 5.00	+28 5.00	+29 5.00	+30 5.00	+31 5.00	+32 5.00	+33 5.00	N+10400.00
	+24 5.00	+28 5.00	+25 5.00	+29 5.00	+139 5.00	+144 10.00	+193 5.00	+198 5.00	+247 5.00	
	+23 5.00	+29 5.00	+24 5.00	+21 5.00	+138 5.00	+145 5.00	+192 5.00	+199 5.00	+246 5.00	
	+22 5.00	+30 5.00	+23 5.00	+22 5.00	+137 5.00	+146 5.00	+191 5.00	+200 5.00	+245 5.00	
— N+10300.00	+21 5.00	+31 5.00	+22 5.00	+23 5.00	+136 5.00	+147 5.00	+190 5.00	+201 5.00	+244 5.00	N+10300.00
	+20 10.00	+32 5.00	+21 5.00	+24 5.00	+135 5.00	+148 5.00	+189 5.00	+202 10.00	+243 5.00	
	+19 5.00	+33 5.00	+20 5.00	+25 10.00	+134 5.00	+149 5.00	+188 5.00	+203 5.00	+242 5.00	
	+18 5.00	+34 5.00	+19 10.00	+26 5.00	+133 5.00	+150 5.00	+187 5.00	+204 5.00	+241 10.00	
— N+10200.00	+17 5.00	+35 5.00	+18 5.00	+27 5.00	+132 10.00	+151 5.00	+186 5.00	+205 5.00	+240 5.00	N+10200.00
	+16 10.00	+36 5.00	+17 5.00	+28 10.00	+131 5.00	+152 5.00	+185 5.00	+206 10.00	+239 5.00	
	+15 5.00	+37 5.00	+16 5.00	+29 5.00	+130 5.00	+153 5.00	+184 5.00	+207 5.00	+238 5.00	
	+14 5.00	+38 5.00	+15 5.00	+30 5.00	+129 5.00	+154 5.00	+183 5.00	+208 5.00	+237 5.00	
— N+10100.00	+13 5.00	+39 5.00	+14 5.00	+31 5.00	+128 5.00	+155 5.00	+182 5.00	+209 5.00	+236 5.00	N+10100.00
	+12 5.00	+40 5.00	+13 5.00	+32 5.00	+127 5.00	+156 5.00	+181 5.00	+210 5.00	+235 5.00	
	+11 5.00	+41 10.00	+12 5.00	+33 5.00	+126 5.00	+157 5.00	+180 5.00	+211 10.00	+234 5.00	
	+10 5.00	+42 5.00	+11 5.00	+34 5.00	+125 5.00	+158 5.00	+179 5.00	+212 5.00	+233 5.00	
— N+10000.00	+9 5.00	+43 5.00	+10 5.00	+35 5.00	+124 5.00	+159 5.00	+178 5.00	+213 5.00	+232 5.00	N+10000.00
	+8 10.00	+44 5.00	+9 5.00	+36 5.00	+123 5.00	+160 5.00	+177 5.00	+214 5.00	+231 5.00	
	+7 5.00	+45 5.00	+8 5.00	+37 5.00	+122 5.00	+161 5.00	+176 14.00	+215 5.00	+230 5.00	
	+6 5.00	+46 5.00	+7 5.00	+38 5.00	+121 5.00	+162 5.00	+175 5.00	+216 5.00	+229 5.00	
— N+9900.00	+5 5.00	+47 5.00	+6 5.00	+39 5.00	+120 5.00	+163 5.00	+174 5.00	+217 5.00	+228 5.00	N+9900.00
	+4 5.00	+48 5.00	+5 5.00	+40 5.00	+119 5.00	+164 5.00	+173 5.00	+218 5.00	+227 5.00	
	+3 10.00	+49 5.00	+4 5.00	+41 5.00	+118 5.00	+165 5.00	+172 5.00	+219 5.00	+226 5.00	
	+2 5.00	+50 5.00	+3 5.00	+42 5.00	+117 5.00	+166 5.00	+171 5.00	+220 5.00	+225 5.00	
— N+9800.00	+1 5.00	+51 10.00	+2 5.00	+43 5.00	+116 5.00	+168 5.00	+170 5.00	+221 5.00	+224 5.00	N+9800.00
		+52 10.00	+1 5.00	+44 5.00	+114 5.00	+167 5.00	+169 5.00	+222 5.00	+223 5.00	
		+53 5.00		+45 5.00	+113 5.00	+169 5.00	+170 5.00	+223 5.00	+224 10.00	
		+54 5.00		+46 5.00	+111 5.00	+168 5.00	+170 5.00	+223 5.00	+224 5.00	
		+55 5.00		+47 5.00	+110 5.00	+167 5.00	+170 5.00	+223 5.00	+224 5.00	
		+56 5.00		+48 5.00	+109 5.00	+166 5.00	+170 5.00	+223 5.00	+224 5.00	
		+57 5.00		+49 5.00	+108 5.00	+165 5.00	+170 5.00	+223 5.00	+224 5.00	
		+58 5.00		+50 5.00	+107 5.00	+164 5.00	+170 5.00	+223 5.00	+224 5.00	
		+59 5.00		+51 5.00	+106 5.00	+163 5.00	+170 5.00	+223 5.00	+224 5.00	
		+60 5.00		+52 5.00	+105 5.00	+162 5.00	+170 5.00	+223 5.00	+224 5.00	
		+61 5.00		+53 5.00	+104 5.00	+161 5.00	+170 5.00	+223 5.00	+224 5.00	
		+62 5.00		+54 5.00	+103 5.00	+160 5.00	+170 5.00	+223 5.00	+224 5.00	
		+63 5.00		+55 5.00	+102 5.00	+159 5.00	+170 5.00	+223 5.00	+224 5.00	
		+64 5.00		+56 5.00	+101 5.00	+158 5.00	+170 5.00	+223 5.00	+224 5.00	
		+65 5.00		+57 5.00	+100 5.00	+157 5.00	+170 5.00	+223 5.00	+224 5.00	
		+66 5.00		+58 5.00	+99 5.00	+156 5.00	+170 5.00	+223 5.00	+224 5.00	
		+67 5.00		+59 5.00	+98 5.00	+155 5.00	+170 5.00	+223 5.00	+224 5.00	
		+68 5.00		+60 5.00	+97 5.00	+154 5.00	+170 5.00	+223 5.00	+224 5.00	
		+69 5.00		+61 5.00	+96 5.00	+153 5.00	+170 5.00	+223 5.00	+224 5.00	
		+70 5.00		+62 5.00	+95 5.00	+152 5.00	+170 5.00	+223 5.00	+224 5.00	
		+71 5.00		+63 5.00	+94 5.00	+151 5.00	+170 5.00	+223 5.00	+224 5.00	
		+72 5.00		+64 5.00	+93 5.00	+150 5.00	+170 5.00	+223 5.00	+224 5.00	
		+73 5.00		+65 5.00	+92 5.00	+149 5.00	+170 5.00	+223 5.00	+224 5.00	
		+74 5.00		+66 5.00	+91 5.00	+148 5.00	+170 5.00	+223 5.00	+224 5.00	
		+75 5.00		+67 5.00	+90 5.00	+147 5.00	+170 5.00	+223 5.00	+224 5.00	
		+76 5.00		+68 5.00	+89 5.00	+146 5.00	+170 5.00	+223 5.00	+224 5.00	
		+77 5.00		+69 5.00	+88 5.00	+145 5.00	+170 5.00	+223 5.00	+224 5.00	
		+78 5.00		+70 5.00	+87 5.00	+144 5.00	+170 5.00	+223 5.00	+224 5.00	
		+79 5.00		+71 5.00	+86 5.00	+143 5.00	+170 5.00	+223 5.00	+224 5.00	
		+80 5.00		+72 5.00	+85 5.00	+142 5.00	+170 5.00	+223 5.00	+224 5.00	
		+81 5.00		+73 5.00	+84 5.00	+141 5.00	+170 5.00	+223 5.00	+224 5.00	
		+82 5.00		+74 5.00	+83 5.00	+140 5.00	+170 5.00	+223 5.00	+224 5.00	
		+83 5.00		+75 5.00	+82 5.00	+139 5.00	+170 5.00	+223 5.00	+224 5.00	
		+84 5.00		+76 5.00	+81 5.00	+138 5.00	+170 5.00	+223 5.00	+224 5.00	
		+85 5.00		+77 5.00	+80 5.00	+137 5.00	+170 5.00	+223 5.00	+224 5.00	
		+86 5.00		+78 5.00	+79 5.00	+136 5.00	+170 5.00	+223 5.00	+224 5.00	
		+87 5.00		+79 5.00	+78 5.00	+135 5.00	+170 5.00	+223 5.00	+224 5.00	
		+88 5.00		+80 5.00	+77 5.00	+134 5.00	+170 5.00	+223 5.00	+224 5.00	
		+89 5.00		+81 5.00	+76 5.00	+133 5.00	+170 5.00	+223 5.00	+224 5.00	
		+90 5.00		+82 5.00	+75 5.00	+132 5.00	+170 5.00	+223 5.00	+224 5.00	
		+91 5.00		+83 5.00	+74 5.00	+131 5.00	+170 5.00	+223 5.00	+224 5.00	
		+92 5.00		+84 5.00	+73 5.00	+130 5.00	+170 5.00	+223 5.00	+224 5.00	
		+93 5.00		+85 5.00	+72 5.00	+129 5.00	+170 5.00	+223 5.00	+224 5.00	
		+94 5.00		+86 5.00	+71 5.00	+128 5.00	+170 5.00	+223 5.00	+224 5.00	
		+95 5.00		+87 5.00	+70 5.00	+127 5.00	+170 5.00	+223 5.00	+224 5.00	
		+96 5.00		+88 5.00	+69 5.00	+126 5.00	+170 5.00	+223 5.00	+224 5.00	
		+97 5.00		+89 5.00	+68 5.00	+125 5.00	+170 5.00	+223 5.00	+224 5.00	
		+98 5.00		+90 5.00	+67 5.00	+124 5.00	+170 5.00	+223 5.00	+224 5.00	
		+99 5.00		+91 5.00	+66 5.00	+123 5.00	+170 5.00	+223 5.00	+224 5.00	
		+100 5.00		+92 5.00	+65 5.00	+122 5.00	+170 5.00	+223 5.00	+224 5.00	
		+101 5.00		+93 5.00	+64 5.00	+121 5.00	+170 5.00	+223 5.00	+224 5.00	
		+102 5.00		+94 5.00	+63 5.00	+120 5.00	+170 5.00	+223 5.00	+224 5.00	
		+103 5.00		+95 5.00	+62 5.00	+119 5.00	+170 5.00	+223 5.00	+224 5.00	
		+104 5.00		+96 5.00	+61 5.00	+118 5.00	+170 5.00	+223 5.00	+224 5.00	
		+105 5.00		+97 5.00	+60 5.00	+117 5.00	+170 5.00	+223 5.00	+224 5.00	
		+106 5.00		+98 5.00	+59 5.00	+116 5.00	+170 5.00	+223 5.00	+224 5.00	
		+107 5.00		+99 5.00	+58 5.00	+115 5.00	+170 5.00	+223 5.00	+224 5.00	
		+108 5.00		+100 5.00	+57 5.00	+114 5.00	+170 5.00	+223 5.00	+224 5.00	
		+109 5.00		+101 5.00	+56 5.00	+113 5.00	+170 5.00	+223 5.00	+224 5.00	
		+110 5.00		+102 5.00	+55 5.00	+112 5.00	+170 5.00	+223 5.00	+224 5.00	
		+111 5.00		+103 5.00	+54 5.00	+111 5.00	+170 5.00	+223 5.00	+224 5.00	
		+112 5.00		+104 5.00	+53 5.00	+110 5.00	+170 5.00	+223 5.00	+224 5.00	
		+113 5.00		+105 5.00	+52 5.00	+109 5.00	+170 5.00	+223 5.00	+224 5.00	
		+114 5.00		+106 5.00	+51 5.00	+108 5.00	+170 5.00	+223 5.00	+224 5.00	
		+115 5.00		+107 5.00	+50 5.00	+107 5.00	+170 5.00	+223 5.00	+224 5.00	
		+116 5.00		+108 5						



TAS 4

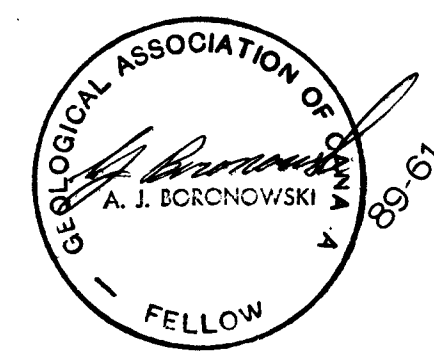
TAS 2

TAS 1

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

19,980

LEGEND



- (+) > 40 ppb Au
- ⊙ 20 - 40 ppb Au
- ⊙ 12 - 20 ppb Au

010 50m

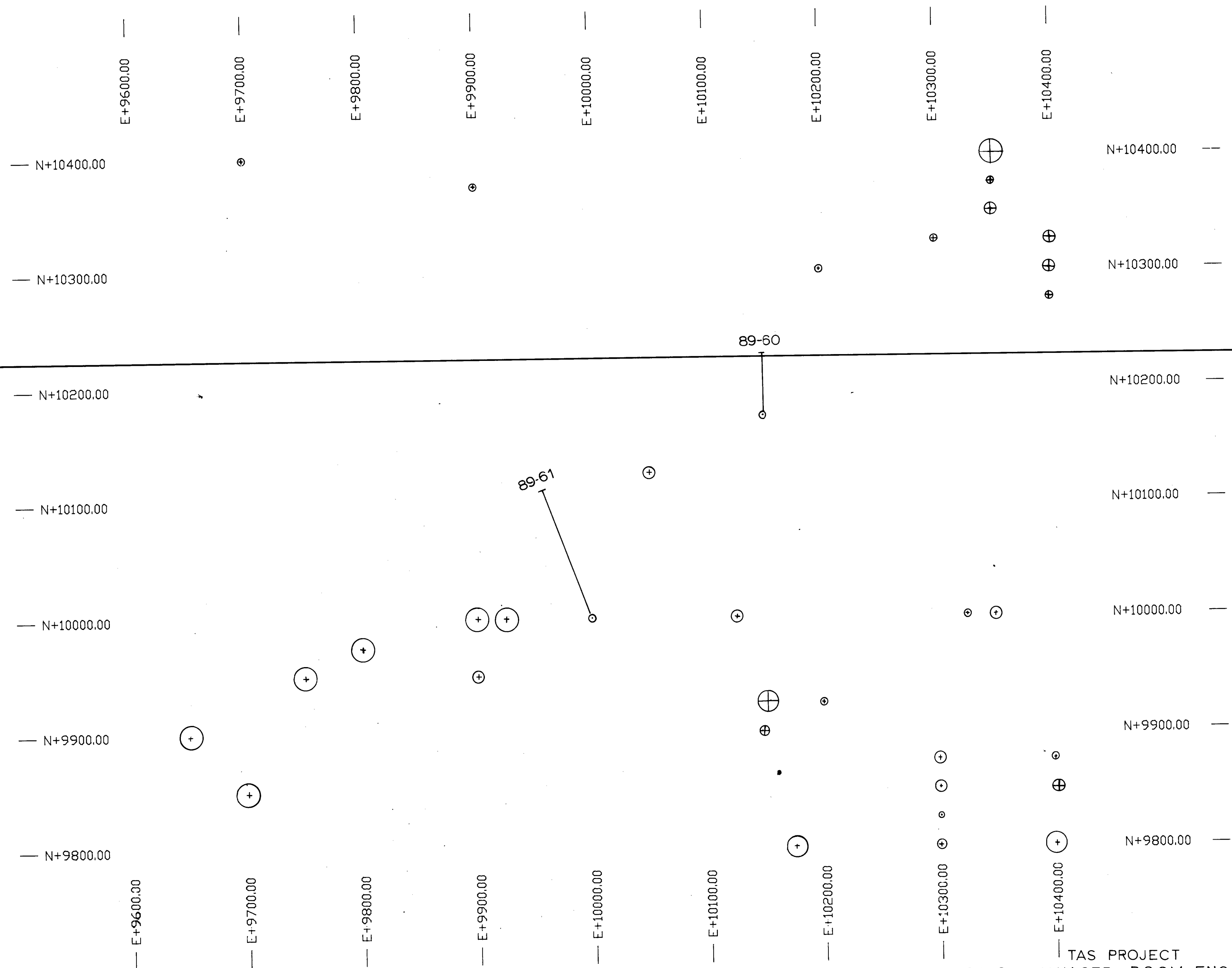
BLACK SWAN GOLD MINES LTD.

61 GRID

Au VARIABLE SYMBOL PLOT

MAP No 2	NTS No 93K16
SCALE: 1:2500	DEC 1 1989

TAS PROJECT
PROJECT MANAGER: R.S.G.M. ENG. LTD.



TAS 4

TAS 2

TAS 1

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**



19,980

LEGEND

- ⊕ > 800 ppm Cu
- ⊙ 400 - 800 ppm Cu
- ⊗ 215 - 400 ppm Cu
- ⊕⊙ ORGANIC
- ⊙⊗ 1989 DIAMOND DRILL HOLE

BLACK SWAN GOLD MINES LTD.

61 GRID

Cu VARIABLE SYMBOL PLOT

MAP No 4	NTS No 93K16
SCALE: 1:2500	DEC 1 1989

TAS PROJECT
PROJECT MANAGER: R.S.G.M. ENG. LTD.