EIP89-027
OBRIEN

V.1 of 2

GEOLOGICAL AND GEOCHEMICAL REPORT ON THE BUZ 1-14, HUD 1-6 AND TOOTH 1-180 CLAIMS

O'BRIEN PROPERTY
Antimony Mountain Area
Dawson Mining District
NTS 116 B/8
Lat. 64° 18' N, Long. 138° 45' W

Owner: TOTAL ENERGOLD CORPORATION
#21-1114 First Avenue
Whitehorse, Yukon
Y1A 1A3

work performed: June 20 to August 23, 1989

By: K. Pelletier and T. Tucker
November, 1989

SUMMARY

Five mineral occurrences are found on the property, the JC, Rainbow, TK, TT and Toby veins, composed of arsenopyrite-pyrite-quartz-tourmaline-calcite ±chalcopyrite ±pyrrhotite. Two pyrrhotite-diopside skarns are also found on the property. The JC and Rainbow veins and calc-silicate skarns are located on the Buz and Hud Claims while the TT and Toby veins are on the Tooth Claims.

The JC vein is 30-50 cm wide and continuous for 130 m with sporadic values up to 0.412 opt Au. Located on a steep mountain slope, the Rainbow vein can be traced for 170 m, is continuous for 85 m and averaged 0.19 opt Au in 19 one metre samples. Float from the TK trench assayed 0.32 opt Au.

The TT vein is approximately 25-35 cm in width and continuous for 200 m with values of 0.054 and 0.047 opt Au. The Toby vein is exposed in two trenches approximately 15 m apart and has values less than 0.1 opt.

Two skarn showings on North Ridge and Antimony Creek contain up to 2 m of massive pyrrhotite and pyrite. No significant gold values were returned.

A total of 245 rock chip samples and 1012 soil and silt samples were taken on the property including 151 soil samples collected on the Thor grid. The JC, Rainbow and TK showings were strongly reflected in the soil results. Contour soil samples along the slope where the TK trench float occurs showed anomalous Au. Anomalous silt sample results up to 172 ppb Au and 1030 ppm As were found at the headwaters of Antimony Creek below the JC and Rainbow showings.

Lost Creek, Skarn Gulch and Toby Gulch have possibly anomalous gold values that reflect the Toby and TT veins. The upper reaches of Jan Creek and Hawk Creek have anomalous silt geochemical gold values from areas draining the intrusive. The Walker claim antimony vein is the only showing in the vicinity but is too distant from these drainages to be a possible source.

Four drill holes were previously drilled on the Buz and Hud claims by Anaconda in 1980. Vein intersections were not assayed for Au but significant Ag values up to 39.9 ppm over 1 m were reported. Drill core will be resampled for Au assays.

TABLE OF CONTENTS

LIST OF FIGURES

IN APPENDIX

1.0 INTRODUCTION

Exploration work was carried out by Total Energold Corporation on the Buz, Hud and Tooth claims between June 20 and August 23, 1989. Regional geochemical and geological surveys were conducted over the entire property, and grid geochemistry and hand trenching were done within the Buz and Hud claims.

This report provides a summary of the details, results and costs of the work done during 1989 and recommends an exploration program for 1990.

2.0 LOCATION, ACCESS AND CLAIM INFORMATION

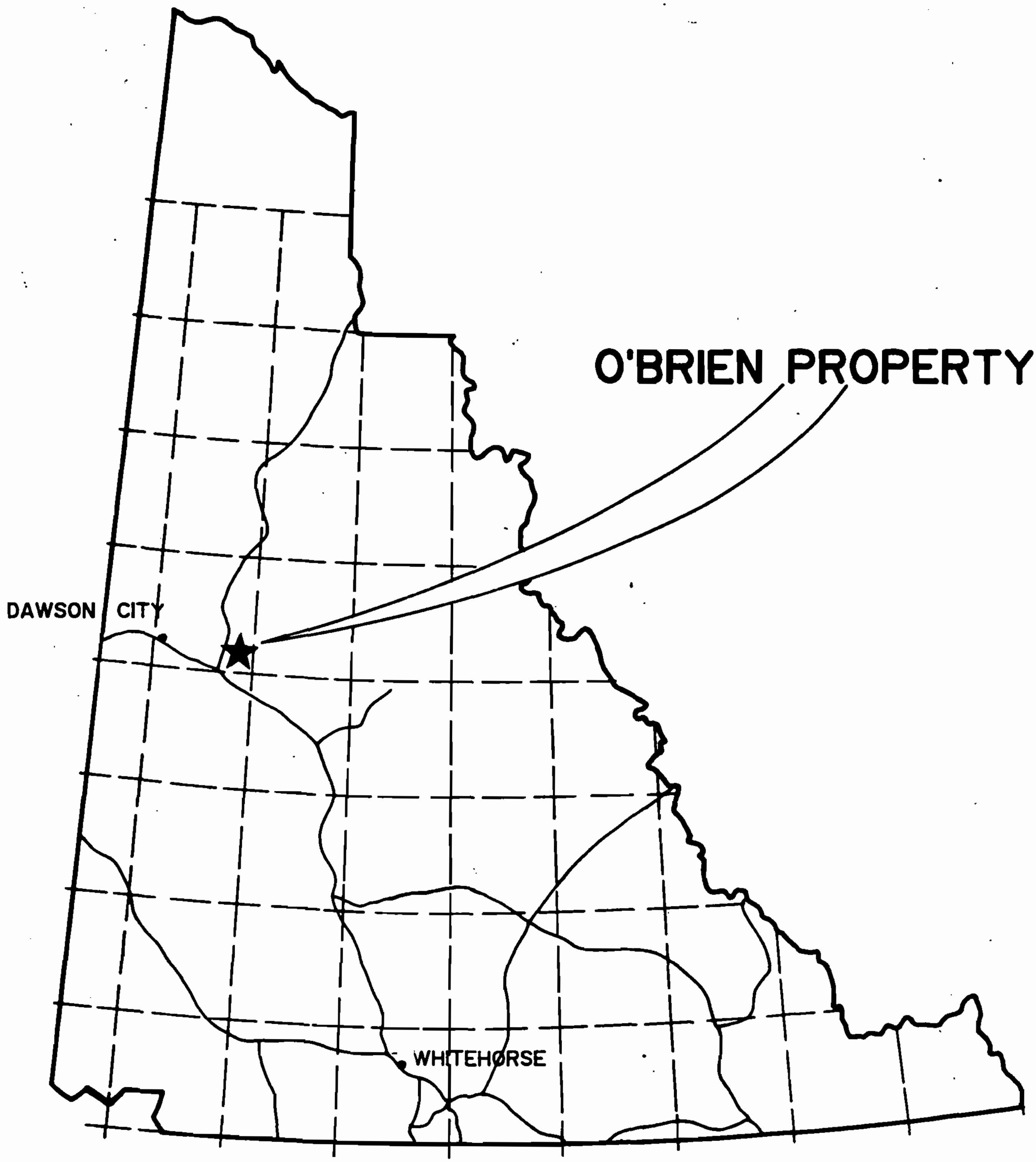
The Buz, Hud and Tooth claims, collectively named the O'Brien Property, are located in northwestern Yukon within the Dawson Mining District (Figure 1). The center of the property is at approximately latitude 64°18'N and longitude 138°13'W on claim sheet 116B/8. It comprises 198 claims owned by Total Energold Corporation; particulars of the claims are as follows.

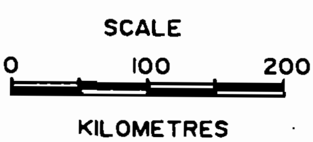
Claim Name		Record Number	Record Date	Expiry Date
TOOTH	1-35	YB17966-18000	16/09/88	01 Jan 1994
TOOTH	36-61	YB23001-23026	16/09/88	01 Jan 1994
TOOTH	63	YB23028	16/09/88	01 Jan 1994
TOOTH	65	YB23030	16/09/88	01 Jan 1994
TOOTH	68	YB23033	16/09/88	01 Jan 1994
TOOTH	70-96	YB23035-23061	16/09/88	01 Jan 1994
TOOTH	98	YB23063	16/09/88	01 Jan 1994
TOOTH	101	YB23066	16/09/88	01 Jan 1994
TOOTH	103-180	YB23068-23145	16/09/88	01 Jan 1994
HUD	1-12	YB04001-04012	08/09/87	01 Jan 1995
HUD	13-14	YB17940-17941	08/09/87	01 Jan 1994
BUZ	1-6	YB04013-04018	08/09/87	01 Jan 1995

Access to the property is by helicopter, available for charter in Dawson City approximately 65 km to the west. The property is located approximately 15 km east of the Dempster Highway, about 100 km by road from Dawson, where supplies may be ferried from Bensen Creek along the highway. An overgrown cat trail exists to the Walker claims in the southeastern corner of the property.

3.0 HISTORY

The Thor 1-192 claims were initially staked in 1979 by Anaconda Canada Exploration Ltd. following reconnaissance exploration in the area to examine causes for anomalous





TOTAL ENERGOLD CORPORATION

O'BRIEN PROPERTY

LOCATION MAP

N.T.S. 116 B/8	TECH: M.F.	DATE: DEC. '88
SCALE: 1 : 555,000	D'TING:	FIGURE 1

stream sediments identified by the GSC. During the same year grid sampling and a MAX-MIN electromagnetic survey was conducted but the geophysical data was defaulted due to instrument failure. In 1980 the property was mapped in detail, hand trenching was done on vein showings and 4 NQ holes were drilled.

Anaconda Exploration Ltd. allowed the Thor claims to lapse and the property was restaked by Kim Hudson, a prospector and geologist, in 1987. She collected rock samples on the property during that year and the previous field season.

In 1988, Total Energold Corporation staked 180 claims (Tooth Claims) to cover the area surrounding the Antimony Stock. The Buz and Hud claims were optioned by Total Energold in 1989.

4.0 REGIONAL GEOLOGY

The O'Brien Property is underlain by late Proterozoic metasediments of the "Grit" unit and Cambrian-Ordovician calcareous sediments of the Road River Formation (Green, 1972). The metasediments have been folded and thrust faulted during Jurassic time and intruded by the Antimony Mtn. Stock during the mid-Cretaceous. The Antimony Mtn. stock forms part of a linear group of northwest trending alkaline plutons which parallel the northern margin of the Tintina Trench. Many of these intrusions are associated with precious metal mineralization.

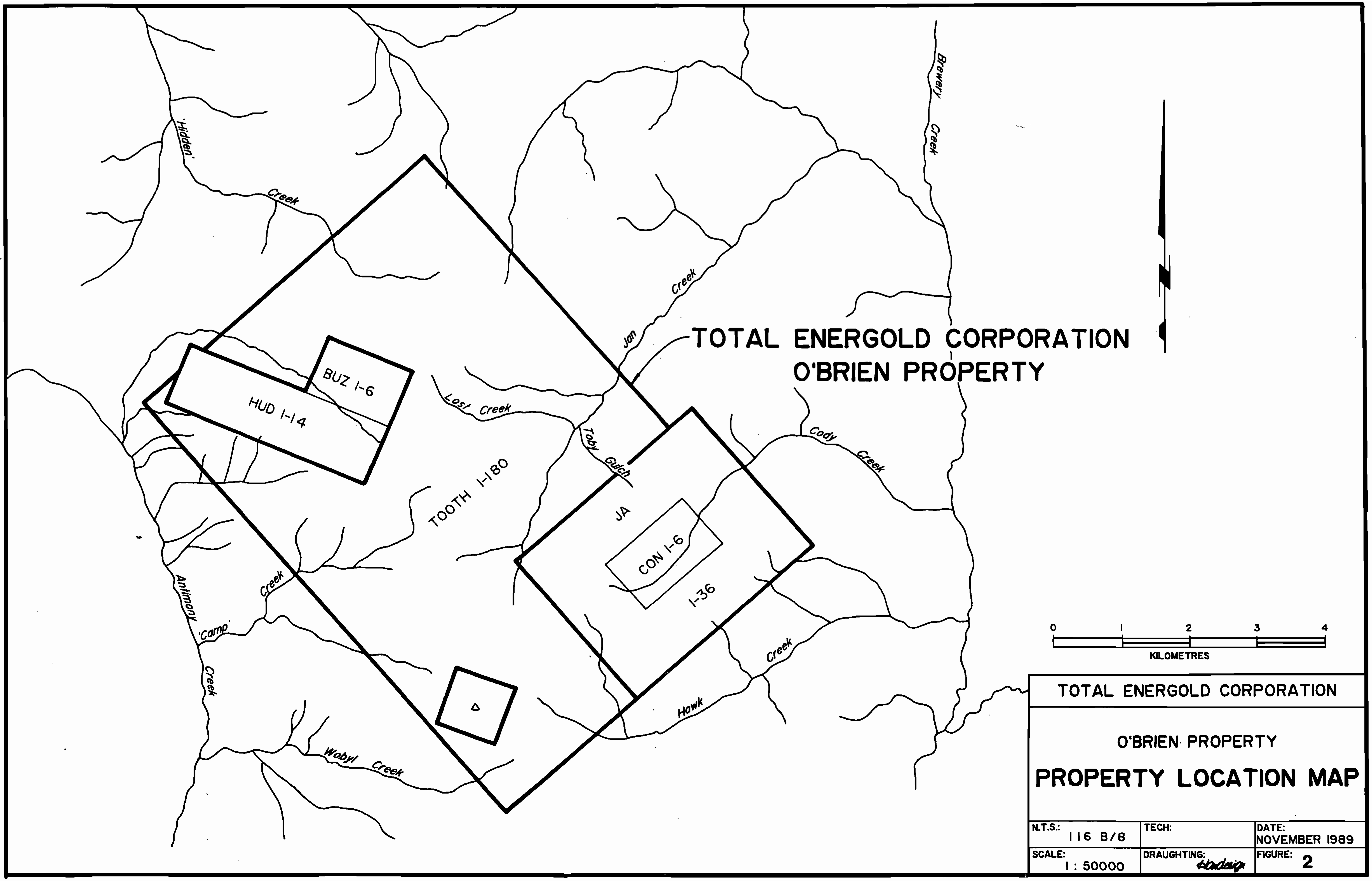
The "Grit" unit comprises intercalated shale (SHL), metagreywacke (MGWK), meta-quartzite (MQTZ) and coarse-grained greywackes and quartz pebble conglomerates (GRIT). Relatively thin (<5 m) units of calc-silicate skarn(SKRN) occur locally within the section. The Road River Formation includes a calcareous greywacke and calcilutite unit (CGWK), locally interbedded with calcarenite (GSSD).

The Antimony Mtn. Stock forms an oblong-shaped intrusive body, approximately 7 x 4 km, which dominates the central part of the property and two related apophyses at the northern extension of the stock. It is composed of medium-grained, feldspar porphyritic hornblende monzonite and quartz-monzonite in its core, and fine to medium-grained diorite forms the margins of the pluton. Related diorite dykes and sills occur locally.

5.0 BUZ AND HUD CLAIMS 1989 EXPLORATION

5.1 Local Geology, Mineralization and Prospecting

The Buz and Hud claims are located within the northwestern part of the property (Figure 2), at the western contact of the Antimony Mtn. Stock. Hornfelsed metagreywacke is the


TOTAL ENERGOLD CORPORATION
O'BRIEN PROPERTY
'Hidden' Creek
Brewery Creek
Jan Creek
Lost Creek
Toby Gulch
Cody Creek
Antimony Creek
'Camp' Creek
Wobyl Creek
Hawk Creek
BUZ 1-6
HUD 1-14
TOOTH 1-180
JA
CON 1-6
1-36
0 1 2 3 4
KILOMETRES
TOTAL ENERGOLD CORPORATION
O'BRIEN PROPERTY
PROPERTY LOCATION MAP
N.T.S.: 116 B/8
TECH:
DATE: NOVEMBER 1989
SCALE: 1 : 50000
DRAUGHTING:
FIGURE: 2

most abundant lithology in the area, and is at least 800 m thick on North Ridge. Both the meta-sediments and the Antimony Stock have undergone extensive alteration.

Adjacent to the contact with the Antimony Mountain Stock sedimentary rocks are intensely silicified, have undergone varying degrees of pyritization and locally have been intensely phyllically altered. Late stage tourmaline occurs within both the intrusion and adjacent metasediments, most commonly in vein structures.

Sediments throughout most of the property are rusty weathering due to the extensive pyrite alteration. Fine-grained and disseminated pyrite occurs within the country rock and as fine to medium-grained micro-fracture fill. It forms between 5% and 30% of the host rock, and is locally associated with finely disseminated pyrrhotite. Although pyritization is spacially related to the Antimony Mtn. Stock on a regional scale, on North Ridge it occurs up to 2.5 km away from the intrusion, suggesting that the stock is present at depth in the western part of the property.

Phyllic alteration appears locally in country rocks adjacent to the Antimony Mtn. Stock. Within the metasediments, phyllic alteration occurs along both fractures and bedding planes, forming bands ranging from 50 cm to up to 5 m wide. Within these alteration planes sediments are completely replaced by fine-grained sericite and chlorite, and are commonly associated with disseminated pyrite, pyrrhotite and tourmaline.

Potassic metasomatism is evident in the Antimony Stock near its contact with country rock. Medium-grained diorite is overprinted by fine-grained secondary biotite, feldspars are intensely sericitized and the fine-grained matrix is a characteristic light pink color due to secondary potassic feldspar overprinting plagioclase.

During mapping of the Buz and Hud property 46 rock chip samples and float of mineralized rocks were collected for assay. Results are shown on Figures 13 and 14.

Mineralization occurs within quartz-tourmaline-arsenopyrite-pyrite veins and quartz-chalcopyrite-arsenopyrite-pyrite-calcite veins ranging in thickness from 10 cm to up to 2 m wide. The three showings include the JC Vein at the headwaters of Antimony Creek, the Rainbow Vein located on the top of North Ridge and the TK showing at the base of North Ridge (Figure 3).

The JC vein is located adjacent to the contact of the Antimony Mtn. Stock (Figure 4). It is approximately 30 cm wide and is composed of fine-grained arsenopyrite, pyrite quartz and tourmaline. Previous trenching by Anaconda

(1980) has shown that it is continuous for at least 130 m, and drill hole data shows that it is also continuous at depth for at least 50 m.

A total of 10 rock chip grab samples were collected on the surface and trench exposures of the JC Vein (Figure 4). Assays include values of 0.108, 0.134 and 0.412 opt Au, but most samples returned values of <0.02 opt Au.

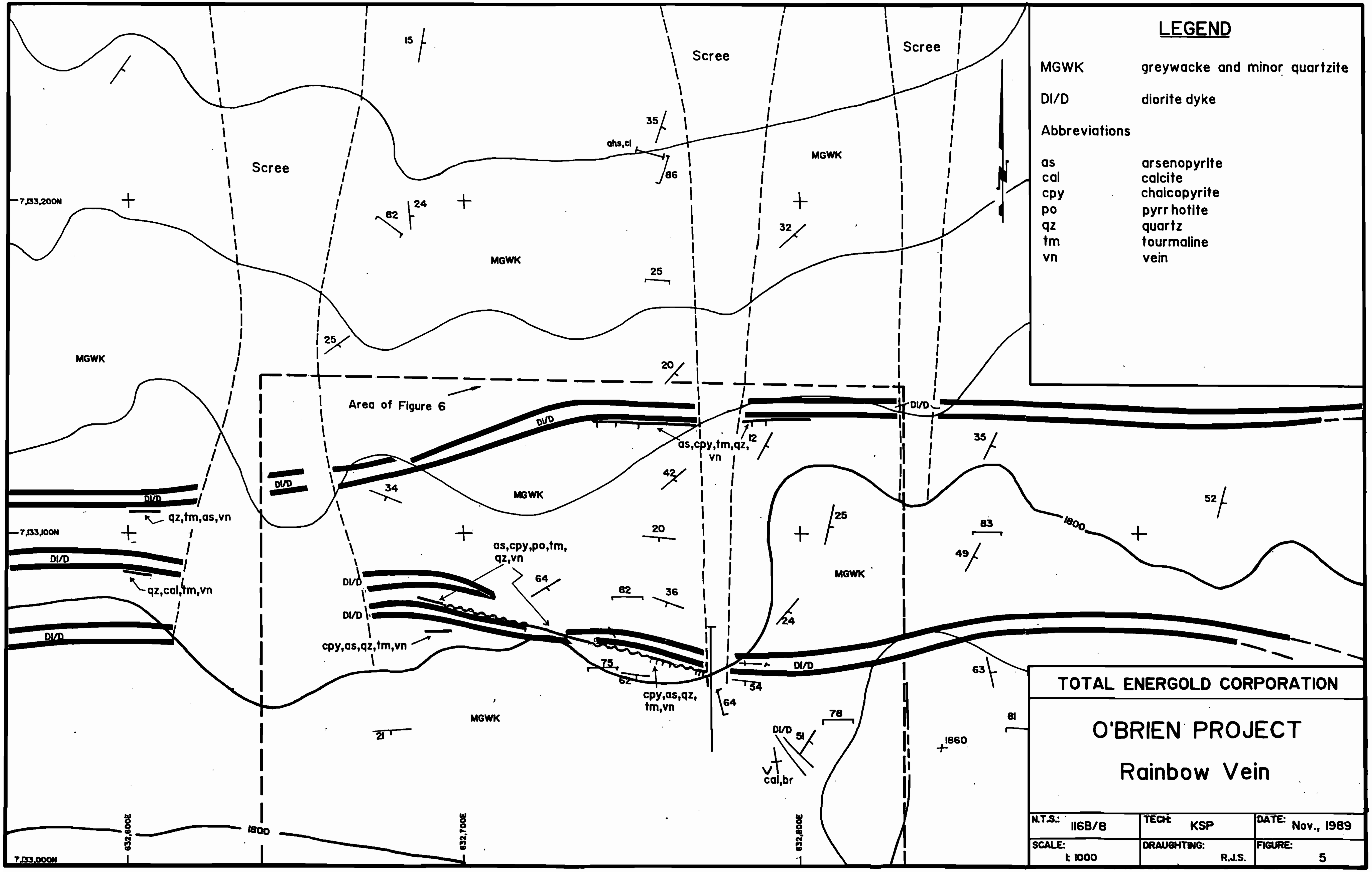
Anaconda drill hole 80-A2 (Figure 4) was drilled in order to intersect the JC Vein at depth. The hole intersected 20 cm of massive arsenopyrite and chalcopyrite with an adjacent 7 m of pyrrhotite-diopside skarn with 20% disseminated sulfides 70 m below the surface. Assay results from the logs indicate an intersection of 4.9 m at 0.581 opt Ag, 2220 ppm Cu, 706 ppm Pb and 2910 ppm Zn. Au was not assayed in core samples.

The Rainbow Vein is situated in the cliffs of a cirque at the headwaters of Antimony Creek (Figure 3). The vein structure is composed of two separate veins, one at 1800 m and one at 1760 m elevation. Both are spacially related to parallel trending diorite dykes but they also crosscut the dikes (Figure 5).

At 1800 m, the Rainbow Vein structure follows an east-west trending, steep to vertical fault structure within sediments adjacent to the monzonite stock. An offset along the contact suggests the intrusion may also be cut by the fault (Figure 3). The vein can be traced for 170 m; mineralization is continuous for at least 85 m and the vein pinches out rapidly in both an east and west direction to quartz-tourmaline-calcite. Massive, coarse-grained chalcopyrite and quartz with intergranular tourmaline and pyrite characterize the vein on the east where the structure is approximately 2 m wide. Towards the west along a 105^{o} strike, the vein thins to 50 cm and contains fine to coarse-grained arsenopyrite and minor chalcopyrite. The vein structure is typically associated with fault breccia at or near its margins, composed of angular massive quartz fragments in a tourmaline-pyrite matrix.

The upper vein is paralleled by a 20-30 cm wide arsenopyrite-pyrite-tourmaline-quartz vein at 1760 m, which is continuous for at least 65 m. This vein is highly lenticular in structure and could not be traced along strike.

A total of 19 one metre width samples and 9 grab rock chip samples were collected along the length of the Rainbow Vein (Figure 6). From the samples collected along the 1800 m vein, 2 trench samples returned Au values of 0.523 to 0.892 opt and a grab sample assayed 0.958 opt Au. The average Au for the trench samples was 0.19 opt Au. Ag values of up to


LEGEND
MGWK greywacke and minor quartzite
DI/D diorite dyke
Abbreviations
as arsenopyrite
cal calcite
cpy chalcopyrite
po pyrrhotite
qz quartz
tm tourmaline
vn vein
Scree
Scree
Scree
Scree
MGWK
MGWK
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Area of Figure 6
DI/D
DI/D
DI/D
DI/D
DI/D
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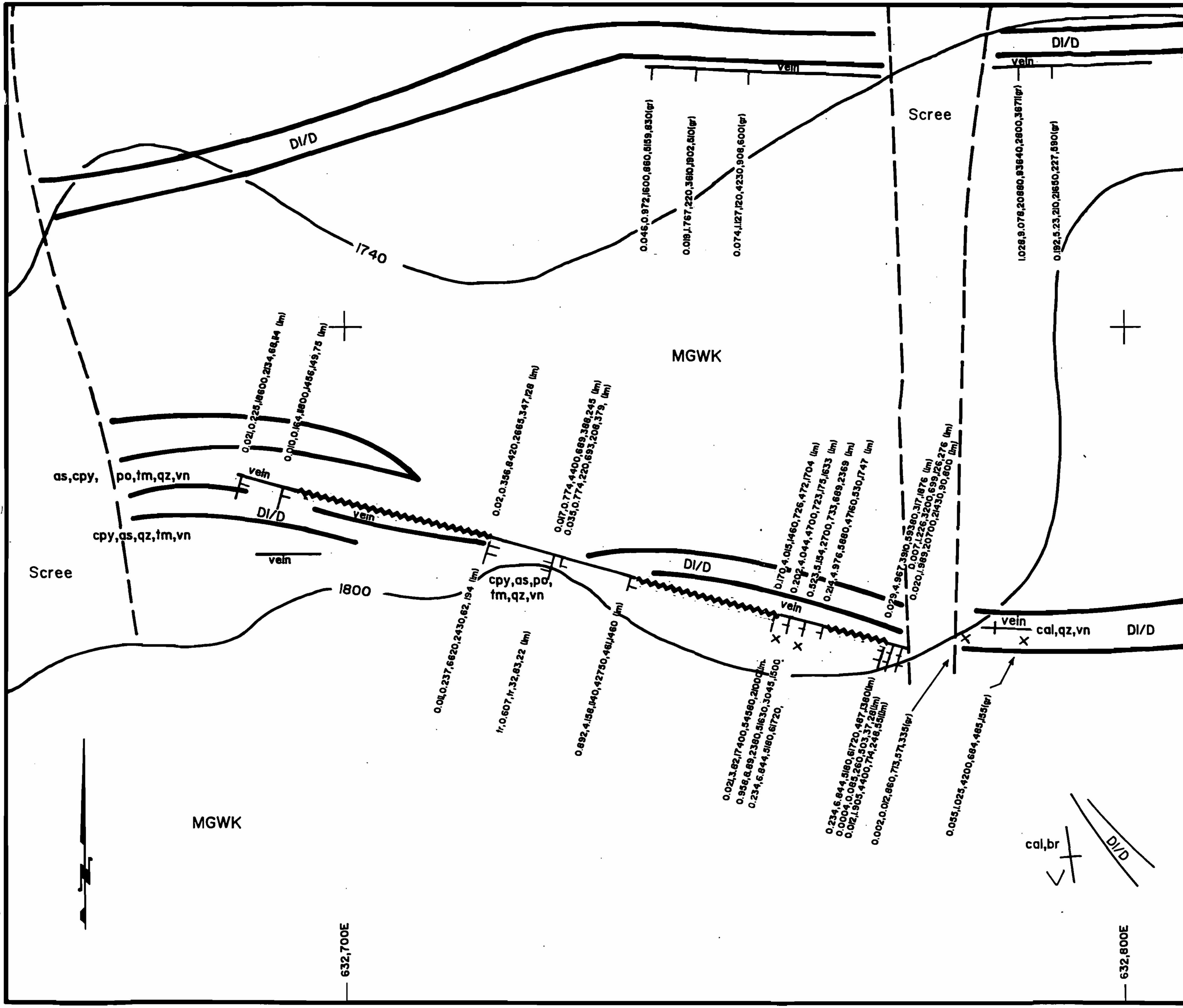
DI/D
DI/D
as,cpy,tm,qz,
vn
qz,tm,as,vn
qz,cal,tm,vn
as,cpy,po,tm,
qz,vn
cpy,as,qz,tm,vn
cpy,as,qz,
tm,vn
cal,br
7,133,200N
7,133,100N
7,133,000N
632,600E
632,700E
632,800E
1800
1800
1860
TOTAL ENERGOLD CORPORATION
O'BRIEN PROJECT
Rainbow Vein
N.T.S.: 116B/8
TECH: KSP
DATE: Nov., 1989
SCALE: 1: 1000
DRAUGHTING: R.J.S.
FIGURE: 5



LEGEND

MGWK	greywacke and minor quartzite
DI/D	diorite dyke

Abbreviations:

as	arsenopyrite
cal	calcite
cpy	chalcopyrite
po	pyrrhotite
qz	quartz
tm	tourmaline
vn	vein
Rock Chip Sample	Au opt, Ag opt, As ppm, Cu ppm, Pb ppm, Zn ppm, (width)
(wavy line)	Fault Line

TOTAL ENERGOLD CORPORATION

O'BRIEN PROJECT

Rainbow Vein

N.T.S.: 116B/8	TECH: KSP	DATE: Nov.,1989
SCALE: 1:500	DRAUGHTING: RJS	FIGURE: 6

5.154 and 8.890 opt over 1.0 m were returned, with an average value of 3.26 opt Ag for the 19 trench samples. Copper values of up to 61720 ppm were found. The lower vein assayed up to 1.028 opt Au and 9.078 opt Ag over 25 cm and averaged 0.27 opt Au and 3.63 opt Ag from 5 grab samples.

The TK showing comprises massive arsenopyrite-pyrite-chalcopyrite float obtained from trenching along the base of North Ridge, approximately 600 m westward along strike from the JC vein. A grab sample from the TK showing returned a Au assay of 0.32 opt.

Calc-silicate skarn occurs within a limestone unit on the western end of North Ridge and at 1370 m in Antimony Creek. The North Ridge showing occurs within a thin limestone horizon in the core of an overturned syncline. The syncline is located on the footwall of a north-south trending thrust fault. Massive limestone has local calc-silicate alteration with small pods of massive pyrrhotite and pyrite. Au values were between 56 and 156 ppb. In Antimony Creek, a thin skarn horizon (approximately 2 m) composed of fine-grained massive pyrrhotite, pyrite and calcite is interbedded with metagreywacke. The unit was not traceable along strike on either side of the creek. Rock chip samples returned values of 17 and 35 ppb Au.

5.2 Geochemistry

Random stream sediment samples were collected along the length of Antimony Creek. The samples consisted of silt size material which were collected in labelled paper envelopes. Sample depth was approximately 5 to 15 cm. The samples were forwarded to Northern Analytical Laboratories in Whitehorse, Yukon and analyzed for gold by a 15 gram Fire Assay, and silver, copper, lead, zinc and arsenic by Atomic Absorption (A.A.) technique. The geochemical results and procedures used to obtain those results are included in Appendices 1 and 2 respectively.

In general, the only anomalous assay values were collected at the headwaters of the creek where the JC showing occurs and on Camp Creek which drains the south slope of North Ridge near the Rainbow Vein. Values up to 172 ppb Au and 1030 ppm As were found on Antimony Creek and 192-366 ppb Au and up to 3180 ppm As on Camp Creek.

Contour soil sampling was carried out on the Buz and Hud claims in areas of high mineral potential. Approximately 39 samples were collected and treated in the same manner as the Thor grid samples. Nineteen contour soil samples were collected at 200 m intervals below the TK showing at the base of a recessive unit.. Of these, 12 samples returned anomalous values up to 272 ppb Au. These indicate that the TK vein has a lateral extent within the recessive unit.

Results from all stream and soil samples are shown on Figures 13 and 14.

A 475 m x 125 m grid was established on the property in order to conduct a geochemical survey over the area of the JC showing at surface and in the trenches along strike (Figure 4). Only the valley floor portion of the grid was soil sampled due to the rugged nature of the upper part of the grid and extensive coarse talus cover. The sampled area ranges from 6+50E to 11+00E and 50 m north and 100 m south of the baseline. A total of 151 samples were collected at 25 m intervals.

Soil samples along the grid were taken from the "B" soil horizon and placed in labelled paper envelopes. The samples were analyzed with the same procedure described for soil samples.

The results from the Thor grid soil geochemical survey were processed by the STATS+ computer program. The program is an integrated statistical data processing package. Each of the six elements in the 151 samples were processed in order to determine anomalous, probably anomalous and possibly anomalous cutoffs. The histograms and cumulative frequency diagrams for the Thor grid can be found in appendix X. The following chart lists the results of the statistical analysis. All assays are in parts per million (ppm) aside from gold which is reported in parts per billion (ppb).

THOR GRID

	GOLD (ppb)	SILVER (ppm)	ARSENIC (ppm)	COPPER (ppm)	LEAD (ppm)	ZINC (ppm)
BACKGROUND	< 40	< 1.8	< 1100	< 175	< 40	< 120
POSSIBLY ANOMALOUS	40 - 55	1.8 - 2.4	1100 - 1600	175 - 250	40 - 60	120 - 150
PROBABLY ANOMALOUS	55 - 70	2.4 - 3.0	1600 - 2000	250 - 350	60 - 80	150 - 190
ANOMALOUS	> 70	> 3.0	> 2000	> 350	> 80	> 190

Results from the Thor grid soil geochemistry survey have been plotted at 1:1000 scale and the six elements were contoured for delineation of any significant anomalous zones. Figures 7 to 12 are the contoured maps which were generated.

The soil geochemistry results have defined an anomaly which is east-west trending in the area of the known JC Showing. The showing is found between 8+75E to 10+25E and along 0+40S. Samples of the vein, which have been trenched periodically along strike for 130 m, returned values of up to 0.412 opt Au over 30 cm and 2.304 opt Ag over 50 cm.

Anaconda drill hole 80-A3 (Figure 4) was drilled approximately beneath this soil anomaly and a 1.0 m intersection, 50 m below the JC showing, assayed 0.931 opt Ag, 2590 ppm Cu, 7570 ppm Pb, and 911 ppm Zn over 0.3 m. Drill hole samples were not assayed for Au.

A local Au, Ag, Cu, Pb, Zn anomaly exists between 9+25E to 10+00E and 1+25S to 0+50S. This area, to the south of the JC showing, probably defines additional small scale veins which parallel the JC vein structure and do not outcrop on the surface.

All the elements exhibit local sporadic highs on other parts of the grid, particularly in the west on lines 6+50E and 6+75E. Due to the small size of the known veins it is likely that local highs are indicative of the presence of similar veins. A sample of massive arsenopyrite-chalcopyrite float was found in the vicinity of 6+75E and 0+75S, near the collar for drill hole 80A-3, which assayed 0.134 opt. Au and 3.784 opt. Ag. The float may be from a vein which is responsible for the anomalous results in the west. It should be noted that many of the anomalous samples were taken in the area of two small creeks which cut through the grid. The Rainbow vein is found in the cliffs above the grid and therefore these two creeks would contain anomalous material derived from this vein.

6.0 TOOTH CLAIMS 1989 EXPLORATION

6.1 Local Geology, Mineralization and Prospecting

Folded and block faulted metasediments of the "Grit" unit and Road River Formation are cut by the Antimony Mtn. Stock, which dominates the central part of the claim block area (Figure 3). Stratigraphic sections range from <100 to up to 2500 m in thickness, and in general are composed predominantly of the MGWK unit.

Detailed 1:10,000 scale geological mapping of the property has shown that the lower part of the Grit unit is composed of varicoloured shales interbedded with thick, massive layers of coarse-grained grit. This horizon grades upsection into fine-grained metagreywackes and intercalated meta-quartzite horizons, which are locally intercalated with calc-silicate skarns in the upper part of the section. The Grit unit is conformably overlain by calcareous greywackes, calcilutites and calcarenites of the Road River Formation in the northwestern and southwestern parts of the property.

There are two prominent fault directions in the area of the Tooth Claims, an east-west and north-northwest trending set, which cut both the metasediments and the Antimony Mtn. stock (Figure 3). Direction of movement along faults is difficult to acertain due to the monotony of stratigraphic sections and typical absence of marker horizons. Localized shear stress textures along the east-west trending faults suggest a large component of transcurrent motion, but mineralization along many of these structures also suggests that the faults underwent extensional or normal displacement. For the north-northwest trending faults, map patterns and intrusion breccias along the faults suggest a large component of normal displacement.

Two vein structures were discovered along possibly related east-west trending faults which cut the Antimony Mtn. Stock; the TT Vein on Rusty Ridge and the Toby Vein on the Ridge south of Jan Creek (Figure 3). They are composed of arsenopyrite-pyrite-quartz-tourmaline-calcite. The TT Vein is approximately 25-35 cm in width and continuous for at least 200 m. and the Toby Vein is poorly exposed and its exposure is localized.

The Antimony Mtn. stock is extensively cut by shear zones throughout the area of the Tooth Claims, many of which are associated with calcite veins and rarely with quartz-tourmaline veins. Exceptions include Toby and TT Veins described above, and calcite-chalcopyrite-azurite-malachite veins exposed on two ridges flanking the western slopes of Antimony Mtn..

Approximately 200 rock chip samples and float samples of mineralized rocks were collected for assay. Grab samples collected from the Toby Vein returned assayed values of 0.052, 0.032, 0.041 and 0.061 opt Au. Samples from The TT Vein returned values of 0.054 and 0.047 opt.

6.2 Geochemistry

The Tooth Claims have been intensively sampled. All major drainages have been stream sediment sampled and areas which displayed anomalous results were contour soil sampled.

The results from the regional stream sediment samples were processed by the STATS+ computer program. The program is an integrated statistical data processing package. Each of the six elements in 198 samples were processed in order to determine anomalous, probably anomalous and possibly anomalous cut offs. The following chart lists the results of the statistical analysis.

REGIONAL STREAM SEDIMENT SAMPLES

	GOLD (ppb)	SILVER (ppm)	ARSENIC (ppm)	COPPER (ppm)	LEAD (ppm)	ZINC (ppm)
BACKGROUND	< 80	< 1.3	< 450	< 110	< 55	< 180
POSSIBLY ANOMALOUS	80 - 160	1.3 - 1.7	450 - 650	110 - 140	55 - 75	180 - 240
PROBABLY ANOMALOUS	160 - 180	1.7 - 2.1	650 - 900	140 - 190	75 - 105	240 - 280
ANOMALOUS	> 180	> 2.1	> 900	> 190	> 105	> 280

Stream sediment samples were taken at random spacings along the creeks in order to determine anomalous areas on the property. The samples consisted of silt size material which was collected and placed into labelled paper envelopes. The samples were forwarded to Northern Analytical Laboratories in Whitehorse, Yukon and analyzed for gold by a 15 gram Fire Assay, and silver, copper, lead, zinc and arsenic by Atomic Absorption (A.A.) technique. The geochemical results and procedures used to obtain those results are included in Appendices 1 and 2.

In general, significant results for Au (>100ppb) were only obtained in areas with known mineralization such as the TT and Toby Veins, with the exception of headwaters of Jan Creek and Hawk Creek. Both of these areas are situated within the Antimony Mtn. Stock.

In Jan Creek Au values of 149, 159, 227 and 174 ppb were obtained from samples collected at the headwaters of the creek which drains Antimony Mountain and the Wizard Ridge. An anomalous value of 188 ppb Au and "possibly anomalous" values of 108, 105 ppb Au were obtained from the headwaters of Hawk Creek which also drains Antimony Mountain. A "possibly anomalous" Au value of 83 ppb Au was also found on Hidden Creek and an anomalous value of 338 ppb on Wobyl Creek.

Soil samples were taken along contours at regular spacings and at various locations on the property in order to establish the presence of anomalous areas. Samples were taken from the "B" soil horizon and placed in labelled paper envelopes. Sample depth ranged from 5 - 20 cm. They were assayed using the same procedure as for stream sediments.

Extensive contour soil sampling was done in areas where stream sediment surveys returned anomalous results of >100 ppb Au. Contour sampling was also done in areas at or near the contact with the Antimony Mtn. Stock, particularly downslope from sediments containing extensive secondary pyrite and pyrrhotite, and adjacent to known mineralized showings in order to delineate possible extensions of veins beneath cover.

Contour soil samples were collected on both sides of Rusty Ridge and on the Ridge north of Antimony Creek. Only one significant value of 1354 ppb was obtained from the ridge north of the creek, and 3 possibly anomalous values of 119, 138 and 167 ppb Au were collected on Rusty Ridge. The anomalous value was investigated and the country rocks above the sample location were found to contain pods of arsenopyrite and pyrite but mineralization was highly localized within a calcareous horizon within the sediments.

A randomly spaced contour sample line was collected on the slopes around Hawk Creek, located in the southeastern part of the property. Closely spaced samples were collected along the northern slopes along the contact with the Antimony Mtn. Stock and randomly collected throughout the rest of the valley. No significant Au values (>50 ppb) were returned.

At the headwaters of Jan Creek, "anomalous" soil samples values of 186, 269 and 285 were obtained from the slope below Wizard Ridge. Only one possibly anomalous value of 101 ppb Au was returned from the contour on the ridge north of the creek. Numerous shears occur in the area but no mineralization occurs at the surface.

7.0 CONCLUSIONS AND RECOMMENDATIONS

Extensive regional stream, soil and rock chip sampling throughout the O'Brien property has provided a large sample base from which to define statistical anomalous values for the six elements chosen for geochemical analysis including Au, Ag, As, Cu, Pb and Zn. Arsenic is correlative with high gold values throughout the property, and anomalous Cu values characterize the Rainbow Vein and small similar veins adjacent to the western contact of the Antimony Mtn. Stock.

Rock chip sampling of pyrite-pyrrhotite altered rocks and mineralized skarn horizons throughout the property returned assay values which were consistently <50 ppb Au for skarns and generally less than 50 ppb for metagreywacke and metaquartzite. Further exploration is necessary to determine the potential of mineralized skarns.

The soil geochemical survey has been successful in defining known showings throughout the property. The JC showing and Rainbow Vein have good geochemical expressions on Antimony Creek and Camp Creek, and the TT and Toby Veins in Lost Creek and Toby Gulch. Soil geochemistry indicates that the TK showing likely extends along strike within a recessive unit. Overall, the area was heavily glaciated and, therefore, overburden may be a factor towards why other veins have not been defined by the survey.

Jan and Hawk Creeks have anomalous gold in silt samples draining the intrusive. The Walker showing on the east side of Antimony Mountain is the only known mineral occurrence in the area but this is too distant a source for either Jan or Hawk Creeks. A more likely source is Wizard Ridge on the north side of Antimony Mountain.

It is recommended the shear zones on Wizard Ridge be sampled more extensively to determine whether they provide the source for anomalous stream and soil gold values found at the headwaters of Jan Creek. More intensive geochemical sampling to locate the source of the possibly anomalous values in Hidden, Wobyl and Hawk Creeks is required.

Further exploration on the Buz and Hud property would require further drilling of the known showings. Relogging and resampling of the existing core, available at the DIAND core library in Whitehorse, should be done to verify widths and assay results before drilling is recommended. The JC showing is currently considered the best target for further drilling. Although the vein is relatively narrow, regional mapping in the area of the O'Brien Property has shown that vein structures typically pinch and swell. Drilling of the JC showing along strike could test this potential. The TK showing is also considered a good candidate for further drilling. Geological mapping suggests that Anaconda drill hole 80-A1 may not have been deep enough to intersect the vein at depth.

8.0 COST STATEMENT

The following is a summary of the costs incurred on the BUZ, HUD, and TOOTH claims during 1989.

Description	
Labour (210 man days)	$ 33,070
Telephone	400
Stationary & Supplies	2,300
Maps/Publications(orthophotos)	12,300
Equipment Rental	4,000
Drafting	700
Vehicles	4,000
Consultants	2,000
Contractors- Non tech	1,000
Aircraft Charter (205 hr.)	121,370
Fuel	6,000
Assays (245 @ $17.50/sample)	4,290
Geochemistry (1012 @ $14.50/sample)	14,670
Camp Accom &Board (210 man days @ $50/md)	10,500
Travel	3,600
TOTAL EXPLORATION	$220,200

The names and addresses of all persons employed in performing the survey and preparing the report and the time employed are listed below.

Richard Basnett	45 Pelly Rd Whitehorse	Jan 89-Sept 89
Karen Pelletier	Box 4241 Whitehorse	May 04-Sept 89
Terry Tucker	4220 4th Av Whitehorse	May 17-Sept 89
Jan Tindle	3341 Lakeside Rd Whistler, B.C.	June 04-Sept 89
Kevin May	2790 Fairview Vancouver, B.C.	May 16-Sept 89
Wil VanRanden	111 Parklane Whitehorse	July 18-21 89
Mike Kendall	Bag 2775 Whitehorse	July 18-21 89

9.0 REFERENCES

Green, L.H., 1972. Geology of Nash Creek, Larsen Creek, and Dawson map-areas, Yukon Territory. Geol. Surv. Can. Memoir, 364, 157p.

Hall, R., Baldry, K. and Fitzmaurice, T. 1980. Anaconda Canada Exploration Ltd. Final Report - 1980 Antimony Mountain Project, Yukon Territory. 35p.

Roots, C., Baldry, K. and Carlson, G.G., 1979. Anaconda Canada Exploration Ltd., report - 1979 Yukon Project Geology, Geochemistry and Geophysics, THOR 1-192 Claim Group, Antimony Mountain. 44p.

10.0 STATEMENT OF QUALIFICATIONS

I, **KAREN S. PELLETIER**, hereby certify that:

1. I am a graduate of Memorial University of Newfoundland, having obtained a Bachelor of Science degree with specialization in geology. I have also obtained a Master of Science degree from Carleton University from the Faculty of Earth Sciences;

2. I have been active in both mineral exploration and academic geological studies on a full-time and part-time basis for 13 years in the Northwest Territories, British Columbia and the Yukon;

3. I participated in the work described in this report as an employee of Total Energold Corporation;

4. I have no interest in the claims or securities of Total Energold Corporation, nor do I expect to receive any.

SIGNED at Whitehorse, Yukon this 30 day of Nov. 1989.

Karen S. Pelletier, M.Sc.

STATEMENT OF QUALIFICATIONS

I, **TERRY LEE TUCKER**, hereby certify that:

1. I am a graduate of the University of Alberta, having obtained a Bachelor of Science degree, Specialization in Geology - May, 1989;

2. I have been active in mineral exploration in various capacities on a full-time and part-time basis for 2.5 years in the Yukon Territory, Canada, Australia and Papua New Guinea;

3. I participated in the work described in this report as an employee of Total Energold Corporation;

4. I have no interest in the claims or securities of Total Energold Corporation, nor do I expect to receive any.

SIGNED at Whitehorse, Yukon this 20 day of November 1989.

Terry Lee Tucker, B.Sc.


LEGEND
MONZ Fine to medium-grained, plagioclase porphyritic hornblende quartz-monzonite to diorite.
DI/D Fine-graied, hornblende and hornblende-biotite diorite dyke.
CGWK Fine-grained, laminated to thin bedded calcareous greywacke and siltstone with minor interbedded calcarenite.
CSSD Medium to coarse-grained, massive calcarenite with intercalated calcareous siltstone and calcilutite.
LST Massive limestone.
SHL Fissle, green, grey and red coloured shale.
MGWK Fine to medium-grained, laminated to thin bedded meta-greywacke, argillite, and minor quartzite. Upper greenschist facies with local hornfel facies metamorphic grade.
MQTZ Fine to coarse-grained, massive to poorly bedded quartzite. Typically recrystallized hornfel facies.
GRIT Medium to coarse-grained, quartz-rich, massive arkose, greywacke and quartz pebble conglomerate.
SKRN Fine-grained to aphanitic, pink and green banded calc silicate skarn.
Rusty weathering metasediments with 5-30% very fine-grained, disseminated pyrite and pyrrhotite.
ABBREVIATIONS
as arsenopyrite
az azurite
cal calcite
cpy calcopyrite
ml malachite
po pyrrhotite
py pyrite
qz quartz
sc scorodite
tm tourmaline
br breccia
vn vein
SYMBOLS
Marsh
Lake
Road
SCALE 1:10000
TOTAL ENERGOLD CORPORATION
O'BRIEN PROJECT
GEOLOGY MAP
Project Name: O'BRIEN
Project No.:
Latitude:
Longitude:
Mining Division: DAWSON
N.T.S.: 116 B/8
To accompany a report by:
Alpha No:
Drawing No: 3
Date: NOVEMBER 1989
Map No.:
Draughting:
TOBY GULCH
SKRN GULCH
HIDDEN CREEK
LOST CREEK
CODY CREEK
HAWK CREEK
JAN CREEK
CIRQUE LAKE
WIZARD RIDGE
THE WIZARDS
ANTIMONY MTN.
WALKER VEIN
AJ VEIN
TOBY VEIN
JC VEIN
TT VEIN
RAINBOW VEIN
RUSTY RIDGE
NORTH RIDGE
CAMP
LOKI CREEK
MIKE CREEK
ANTIMONY CREEK
WOBY CREEK
SKIPPY CREEK
EAGLE MAPPING SERVICES LTD.

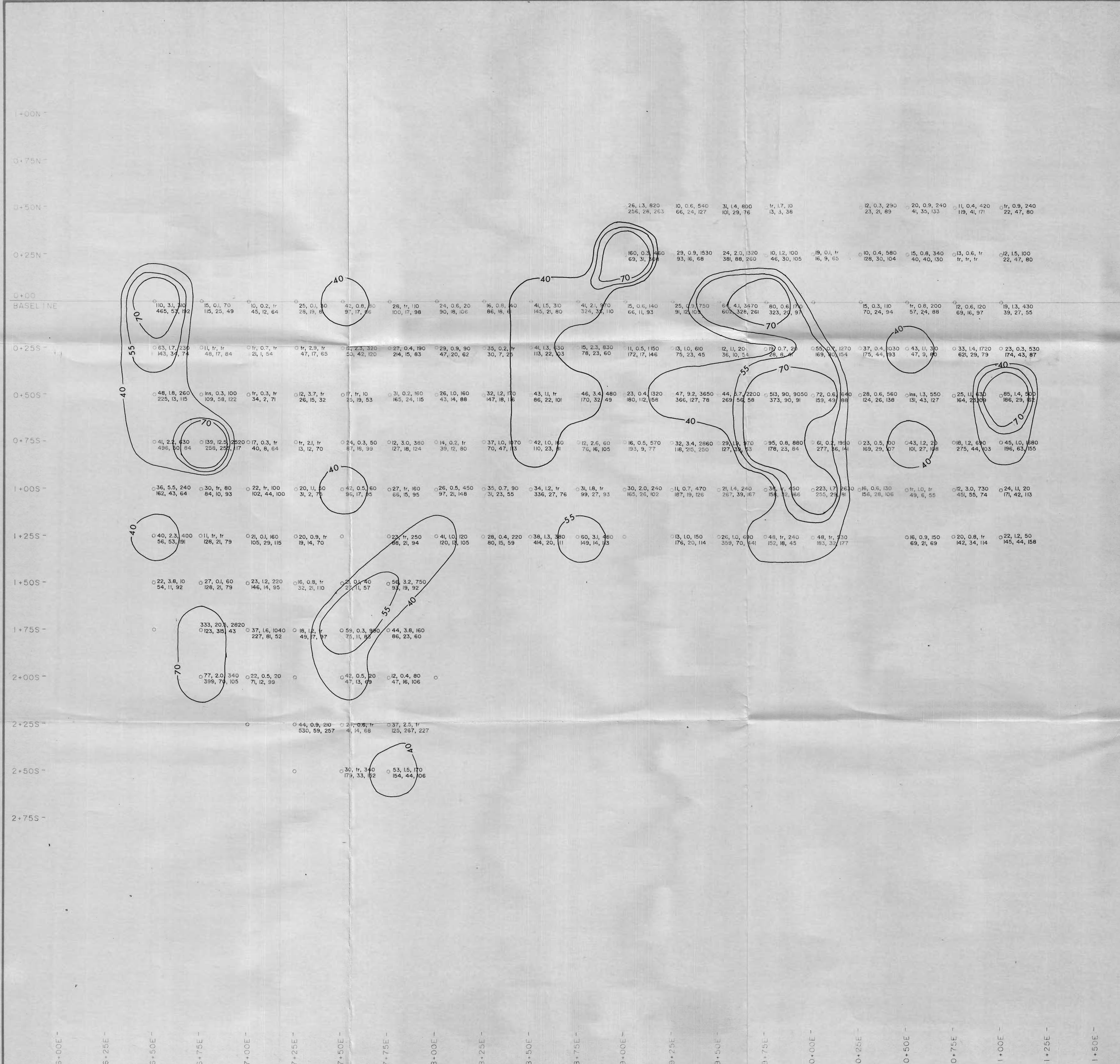
Sample	Au	Ag	Cu	Pb	Zn	As
3004	14100	78.9	692	226	119	3900
3005	1219	54.7	674	605	74	80
3006	125	0.1	14	5	6	4500
3007	1137	58.4	178	5240	19	4700
3008	926	1.7	543	227	25	4900
3009	316	46.9	688	1272	434	4700
3010	3688	5.7	490	113	18	1280
3011	78	0.7	467	29	497	4300
3012	335	2.9	405	93	33	4700
3013	4595	129.6	713	571	335	2010

TOTAL ENERGOLD CORPORATION

O'BRIEN PROPERTY

THOR GRID

Project Name: O'BRIEN Project No.:
Latitude: Longitude:
Mining Division: Dawson N.T.S.: 116B/8
To accompany a report by:
Alpha No.: Drawing No.: 4
Date: November, 1989 Map No.: 7-N



LEGEND :

SAMPLE LOCATION o Au(ppb), Ag(ppm), As(ppm)
Cu(ppm), Pb(ppm), Zn(ppm)

INSUFFICIENT SAMPLE ins

TRACE tr

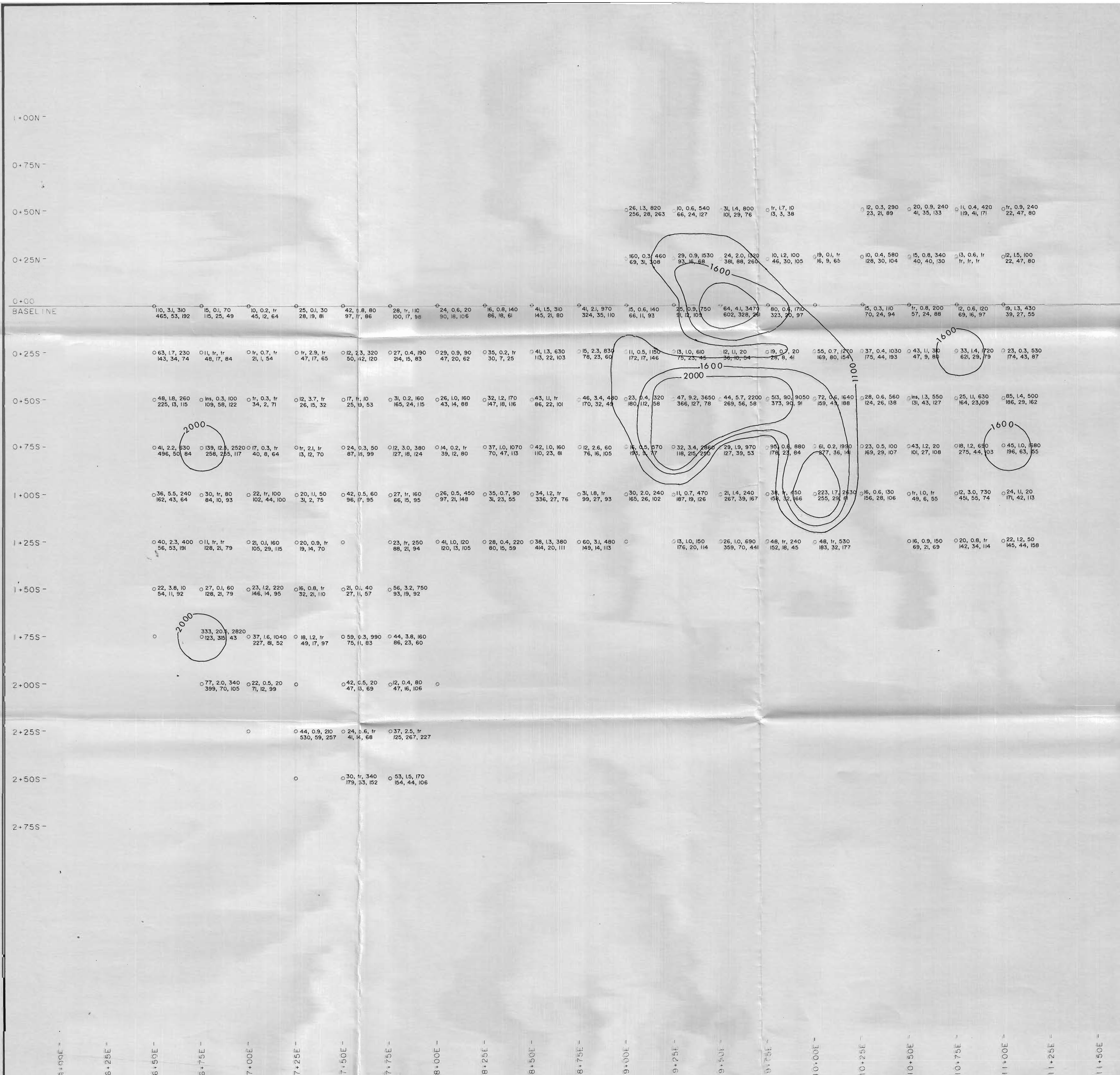
GOLD

	GOLD IN SOILS (PPB)
BACKGROUND	< 40
POSSIBLY ANOMALOUS	40 - 55
PROBABLY ANOMALOUS	55 - 70
ANOMALOUS	> 70

TOTAL ENERGOLD CORPORATION

O'BRIEN PROJECT
THOR GRID
SOIL GEOCHEMISTRY

N.T.S. 116 B/8	TECH.	DATE NOVEMBER 1989
SCALE 1 : 1000	DRAUGHTING	FIGURE : 7



LEGEND :

SAMPLE LOCATION ○ Au(ppb), Ag(ppm), As(ppm) Cu(ppm), Pb(ppm), Zn(ppm)

INSUFFICIENT SAMPLE ins

TRACE tr

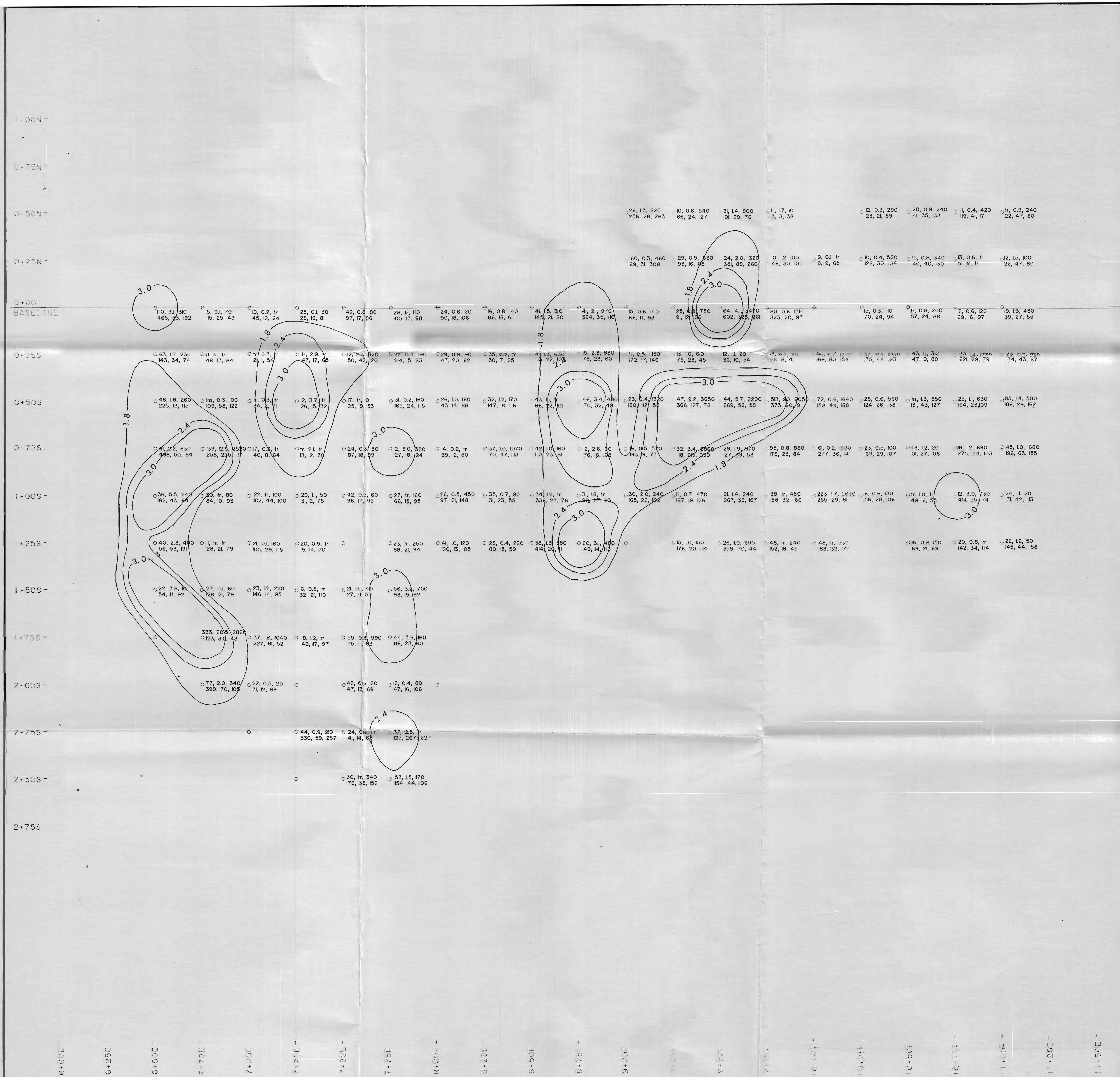
ARSENIC

	ARSENIC IN SOILS (PPM)
BACKGROUND	< 1100
POSSIBLY ANOMALOUS	1100 - 1600
PROBABLY ANOMALOUS	1600 - 2000
ANOMALOUS	; 2000

TOTAL ENERGOLD CORPORATION

O'BRIEN PROJECT
THOR GRID
SOIL GEOCHEMISTRY

N.T.S. : 116 B/8	TECH. :	DATE : NOVEMBER 1989
SCALE : 1:1000	DRAUGHTING :	FIGURE : 8



LEGEND :

SAMPLE LOCATION o Au(ppb), Ag(ppm), As(ppm)
Cu(ppm), Pb(ppm), Zn(ppm)

INSUFFICIENT SAMPLE ins

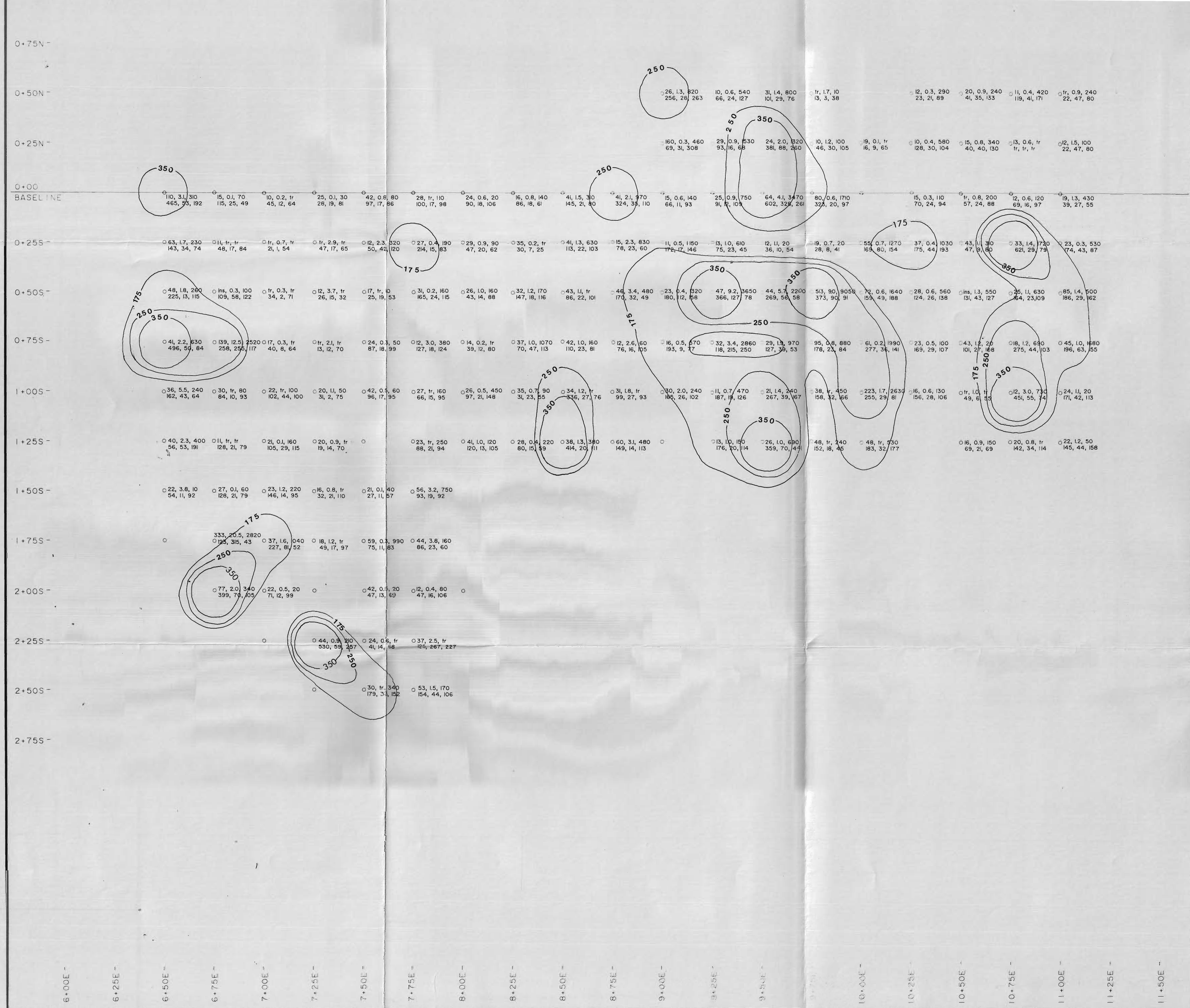
TRACE tr

SILVER	SILVER IN SOILS (PPM)
BACKGROUND	< 1.8
POSSIBLY ANOMALOUS	1.8 - 2.4
PROBABLY ANOMALOUS	2.4 - 3.0
ANOMALOUS	> 3.0

TOTAL ENERGOLD CORPORATION

O'BRIEN PROJECT
THOR GRID
SOIL GEOCHEMISTRY

N.T.S. 116 B/8	TECH. :	DATE : NOVEMBER 1989
SCALE : 1:1000	DRAUGHTING :	FIGURE : 9



LEGEND :

SAMPLE LOCATION ○ Au(ppb), Ag(ppm), As(ppm)
Cu(ppm), Pb(ppm), Zn(ppm)

INSUFFICIENT SAMPLE ins

TRACE tr

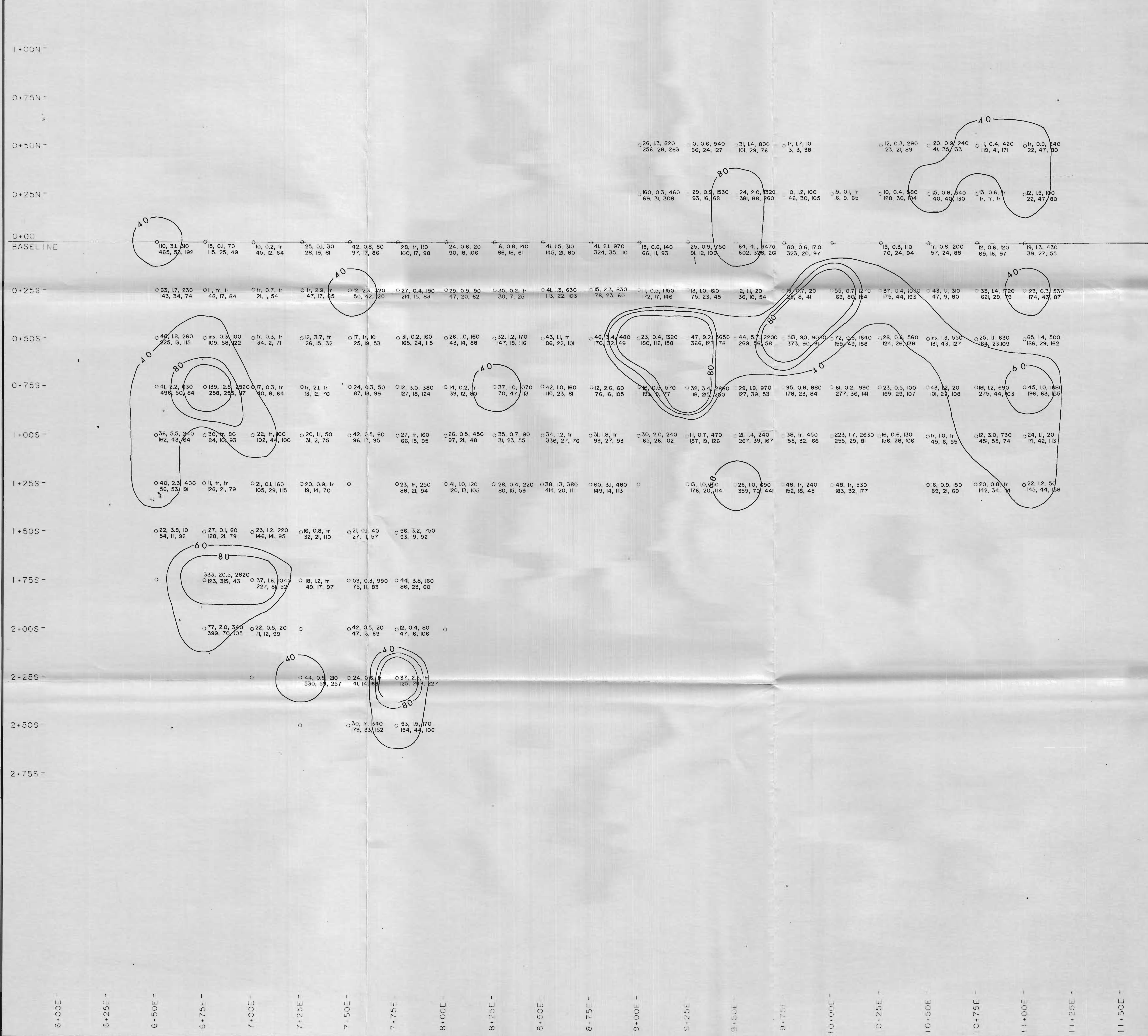
COPPER

	COPPER IN SOILS (PPM)
BACKGROUND	< 175
POSSIBLY ANOMALOUS	175 - 250
PROBABLY ANOMALOUS	250 - 350
ANOMALOUS	> 350

TOTAL ENERGOLD CORPORATION

O'BRIEN PROJECT
THOR GRID
SOIL GEOCHEMISTRY

N.T.S. : 116 B/8	TECH. :	DATE : NOVEMBER 1989	
SCALE : 1:1000	DRAUGHTING :	FIGURE : 10	



LEGEND :

SAMPLE LOCATION o Au(ppb), Ag(ppm), As(ppm) Cu(ppm), Pb(ppm), Zn(ppm)

INSUFFICIENT SAMPLE ins

TRACE tr

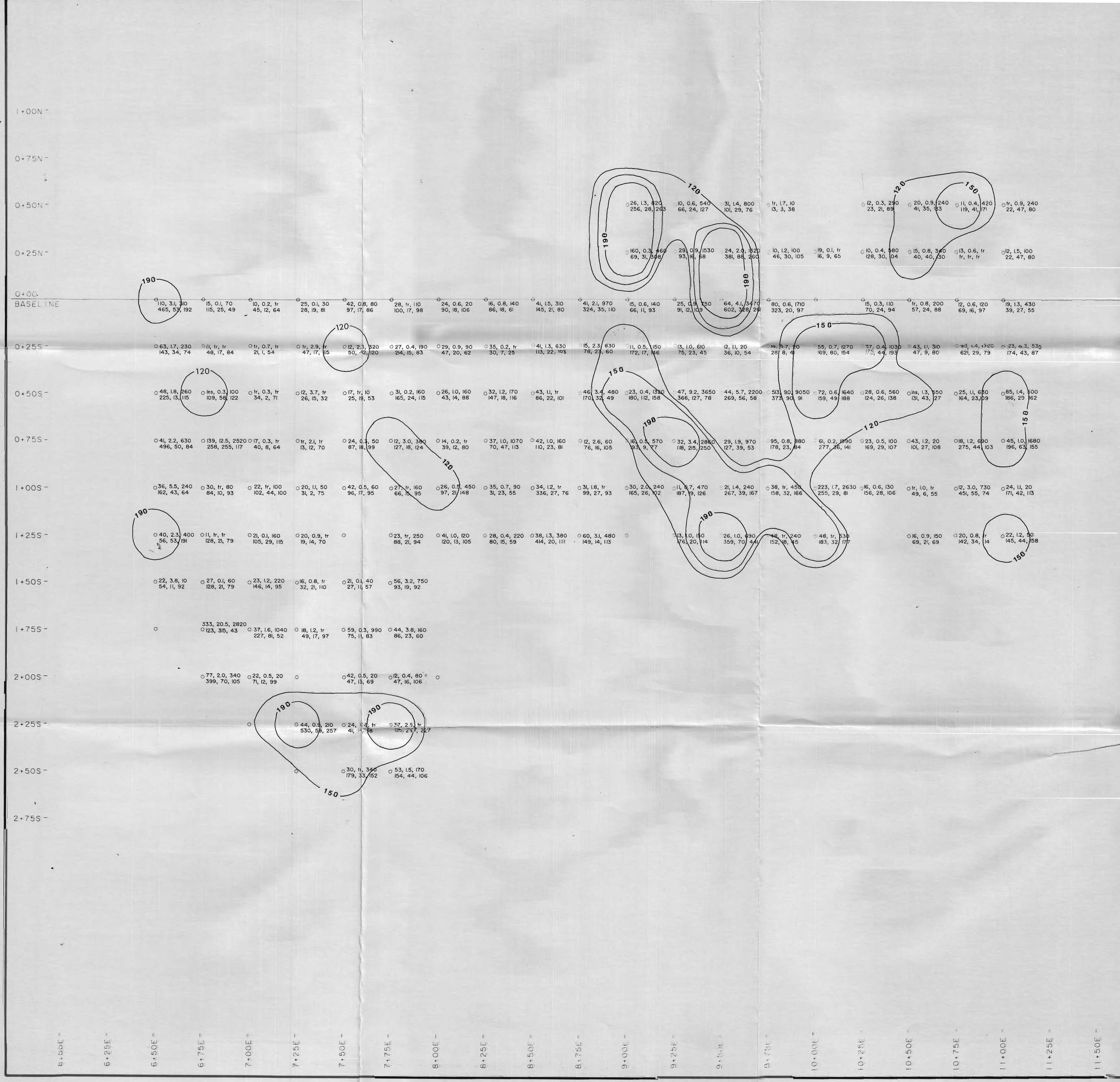
LEAD

	LEAD IN SOILS (PPM)
BACKGROUND	< 40
POSSIBLY ANOMALOUS	40 - 60
PROBABLY ANOMALOUS	60 - 80
ANOMALOUS	> 80

TOTAL ENERGOLD CORPORATION

O'BRIEN PROJECT
THOR GRID
SOIL GEOCHEMISTRY

N.T.S. : 116 B/8	TECH. :	DATE : NOVEMBER 1989
SCALE : 1 : 1000	DRAUGHTING :	FIGURE : 11



LEGEND :

SAMPLE LOCATION o Au(ppb), Ag(ppm), As(ppm) Cu(ppm), Pb(ppm), Zn(ppm)

INSUFFICIENT SAMPLE ins

TRACE tr

ZINC	ZINC IN SOILS (PPM)
BACKGROUND	< 120
POSSIBLY ANOMALOUS	120 - 150
PROBABLY ANOMALOUS	150 - 190
ANOMALOUS	> 190

TOTAL ENERGOLD CORPORATION

O'BRIEN PROJECT
THOR GRID
SOIL GEOCHEMISTRY

N.T.S. : 116 B/8	TECH. :	DATE : NOVEMBER 1989
SCALE : 1 : 1000	DRAUGHTING :	FIGURE : 12

RUSTY RIDGE
TT VEIN
RAINBOW VEIN
NORTH RIDGE
TOBY VEIN
AJ VEIN
WIZARD
RIDGE
CIRQUE LAKE
THE WIZARDS
ANTIMONY
MOUNTAIN
WALKER
VEIN
GEOCHEMISTRY SYMBOLS
Au (ppb), As (ppm) O x
1989 Soil Sample Location O
1989 Rock Chip Sample Location x
1989 Stream Sediment Sample Location
INS Insufficient Sample
NA Not Assayed
NS No Sample
tr trace
REGIONAL STREAM SEDIMENT SAMPLES
GOLD (PPB) ARSNIC (PPM)
BACKGROUND <80 <450
POSSIBLY ANOMALOUS 80-160 450-650
PROBABLY AMOMALOUS 160-180 650-900
AMOMALOUS >180 >900
N
SYMBOLS
Marsh
Lake
Road
0 50 100 200 300 m.
SCALE 1:10000
TOTAL ENERGOLD CORPORATION
O'BRIEN PROJECT
REGIONAL GEOCHEMISTRY
GOLD, ARSENIC
Project Name: O'BRIEN
Project No.:
Latitude:
Longitude:
Mining Division:
N.T.S. 116B/8
To accompany a report by:
Alpha No.:
Drawing No.:
Date: November 1989
Map No. 13


RUSTY
RIDGE
RAINBOW VEIN
NORTH RIDGE
TOBY VEIN
AJ VEIN
WIZARD
RIDGE
THE WIZARDS
ANTIMONY MOUNTAIN
WALKER VEIN
REGIONAL STREAM SEDIMENT SAMPLES
SILVER (ppm) COPPER (ppm) LEAD (ppm) ZINC (ppm)
BACKGROUND <1.3 <110 <55 <180
POSSIBLY ANOMALOUS 1.3-1.7 110-140 55-75 180-240
PROBABLY ANOMALOUS 1.7-2.1 140-190 75-105 240-280
ANOMALOUS >2.1 >190 >105 >280
GEOCHEMISTRY SYMBOLS
Ag (ppm), Cu (ppm), Pb (ppm), Zn (ppm)
1989 Soil Sample Location
1989 Rock Chip Sample Location
1989 Stream Sediment Sample Location
INS Insufficient Sample
NA Not Assayed
NS No Sample
tr trace
SYMBOLS
Marsh
Lake
Road
0 50 100 200 300 m.
SCALE 1:10000
TOTAL ENERGOLD CORPORATION
O'BRIEN PROJECT
REGIONAL GEOCHEMISTRY
SILVER, COPPER
LEAD, ZINC
Project Name: O'BRIEN
Project No.:
Latitude:
Longitude:
Mining Division:
N.T.S.: 116B/8
To accompany a report by
Alpha No.:
Drawing No.:
Date: November 1989
Map No.: 14

EIP 89-027
vol. 2 of 2

GEOLOGICAL AND GEOCHEMICAL REPORT ON THE BUZ 1-12, HUD 1-6 AND TOOTH CLAIMS

O'BRIEN PROPERTY

APPENDICES I, II and III

To accompany report by K. Pelletier and T. Tucker
November 24, 1989

APPENDIX 1

ASSAY RESULTS

Northern Analytical Laboratories ltd.

June 24, 1989

Total Energold Corp
21 - 1114 - 1st Ave
Whitehorse, Yukon
Y1A 1A3

ASSAY CERTIFICATE

Work Order # 29004 File # 29004c PO# None

KM89

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
1351	34	2.2	53	166	225	250
1352	33	1.3	42	80	137	150
1353	26	1.3	38	41	118	690
3151	68	0.3	86	96	172	110
3152	87	1.7	113	112	188	80
3153	50	0.5	91	42	106	190
3154	116	1.6	224	69	400	200
3155	68	0.5	95	46	182	210
3156	48	<0.1	177	59	249	250
3157	82	0.4	117	69	193	230
3158	63	0.2	84	59	149	380
3159	63	<0.1	77	44	133	290
3160	78	<0.1	64	64	127	170
3161	50	<0.1	55	61	112	160

Au -- 15g fire assay/AAS finish
Metals -- Aqua-regia digestion/AAS

Applied Science Technologists and Technicians of British Columbia
6992
GERALD F. HAYES
A.Sc.T.

105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: (403) 668-4968 Fax: (403) 668-4890

Northern Analytical Laboratories ltd.

July 8, 1989

Total Energold Corp
21 - 1114 - 1st Ave
Whitehorse, Yukon
Y1A 1A3

ASSAY CERTIFICATE

Work Order # 29004 File # 29004a PO#

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
1312	43	13.9	52	177	60	110
1313	1089	2.7	22	8	11	1550
1314	37	7.3	35	41	44	1370
1315	57	0.4	20	74	39	160
1316	30	2.4	4	3	14	70
1321	43	4.2	64	89	112	740
1322	31	2.9	56	11	46	110
1323	16	1.6	18	<1	59	40
1324	29	2.1	36	16	16	130
3273	41	<0.1	107	31	42	30
3274	25	<0.1	29	30	34	<10
3275	25	0.8	20	25	60	170
3276	25	6.8	149	95	73	240
3257	61	2.5	32	55	61	110

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Northern Analytical Laboratories ltd.

Applied Science Technologists and Technicians of British Columbia
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GERALD F. HAYES
A.Sc.T.

July 10, 1989

Total Energold Corp
21 - 1114 - 1st Ave
Whitehorse, Yukon
Y1A 1A3

ASSAY CERTIFICATE

Work Order # 29004 File # 29004b PO#

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
1317	<10	0.7	33	16	45	260
1318	22	2.9	22	351	505	170
1319	83	15.1	22	4782	31030	1190
1320	24	10.4	58	3883	6211	520
1401	12	1.1	9	32	62	120
1402	15	0.5	13	33	12	70
1403	<10	0.7	39	6	40	220
1404	24	0.9	45	30	32	150
1405	17	1.1	55	12	66	430
1406	31	0.7	206	23	20	930
1407	<10	1.2	42	26	70	<10
3309	12	1.8	58	20	33	240
1661	18	1.0	18	11	2	100
1662	<10	1.5	158	16	39	270
1663	11	1.6	319	41	33	650
1664	<10	1.1	12	<1	58	60
1665	<10	1.0	24	11	59	70
1666	14	0.7	24	50	71	360
1667	24	1.5	6	10	20	280
1668	35	3.3	91	6	26	310
1669	10	1.2	32	15	30	70
1670	18	1.5	96	15	27	190
1671	14	1.4	54	17	25	210
1672	<10	1.5	60	37	47	230

Au -- 15g fire assay/AAS finish
Metals -- Aqua-regia digestion/AAS

105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: (403) 668-4968 Fax: (403) 668-4890

Northern Analytical Laboratories ltd.

July 18, 1989

Total Energold Corp
21 - 1114 - 1st Ave
Whitehorse, Yukon
Y1A 1A3

ASSAY CERTIFICATE

Work Order # 29004 File # 29004e PO# NONE

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3284	238	1.1	90	79	210	920
3285	176	0.5	96	74	221	890
3286	144	0.9	87	73	201	640
3287	155	<0.1	87	68	190	670
3288	INS	0.2	72	60	159	500
3289	17	<0.1	55	59	145	560
3290	73	0.2	57	55	135	180
3291	97	<0.1	56	56	141	370
3292	89	0.3	60	62	129	60
3293	174	0.8	170	84	101	1140
3294	227	0.5	84	56	84	750
3295	159	0.5	110	72	93	740
3296	149	0.3	141	31	60	200
3297	21	0.3	131	44	85	770
3298	78	<0.1	119	42	99	480
3299	131	0.8	105	44	82	490
3300	59	1.4	106	39	84	1740
3301	82	0.7	83	48	93	280
3302	90	0.3	85	45	98	450
3303	74	0.4	70	37	100	300
3304	123	0.5	72	38	96	500
3305	77	0.6	77	41	96	530
3306	65	0.3	77	29	88	350
3307	69	0.6	11	7	16	90
3308	35	0.5	63	42	82	390

Au -- 15g fire assay/AAS finish
Metals -- Aqua-regia digestion/AAS

Applied Science Technologists and Technicians of British Columbia
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Northern Analytical Laboratories ltd.

July 18, 1989

Total Energold Corp
21 - 1114 - 1st Ave
Whitehorse, Yukon
Y1A 1A3

ASSAY CERTIFICATE

Work Order # 29004 File # 29004d PO# NONE

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3255	35	0.9	60	32	86	420
3256	108	0.7	36	23	68	400
3258	92	<0.1	69	34	150	600
3259	68	<0.1	39	19	91	300
3260	105	1.2	46	38	87	340
3261	46	1.0	46	8	106	300
3262	68	0.3	51	44	129	110
3263	110	0.1	53	46	83	230
3264	42	<0.1	51	78	134	100
3265	56	<0.1	32	27	82	<10
3266	13	0.2	54	33	89	50
3267	51	<0.1	25	42	81	<10
3268	45	0.9	61	73	94	340
3269	57	0.4	70	44	87	420
3270	57	0.6	76	21	93	250
3271	69	0.1	72	12	91	400
3272	65	0.6	47	27	83	140
3277	INS	0.4	34	53	101	100
3278	245	1.2	65	49	116	800
3279	956	1.4	99	74	151	4930
3280	1030	0.8	121	36	270	2130
3281	300	<0.1	110	12	218	1500
3282	176	0.9	76	31	149	530
3283	471	1.9	114	29	122	980

Au -- 15g fire assay/AAS finish
Metals -- Aqua-regia digestion/AAS

Applied Science Technologists and Technicians of British Columbia
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Northern Analytical Laboratories ltd.

July 19, 1989

Total Energold Corp
21 - 1114 - 1st Ave
Whitehorse, Yukon
Y1A 1A3

ASSAY CERTIFICATE

Work Order # 29019 File # 29019a PO# 3667

Sample	ppb Au	ppm Ag	ppm Pb	ppm Zn	ppm Cu	ppm As
1676	61	2.5	43	44	14	130
1677	77	1.4	25	42	25	150
1678	68	1.9	209	301	17	90
1679	51	1.8	65	32	31	130
1680	53	2.0	36	400	30	<10
1681	69	1.7	52	63	60	780
1682	56	2.6	19	42	165	100
1683	66	1.4	<1	17	83	210
1684	55	1.5	15	30	75	<10
1685	75	2.6	26	20	38	90
1686	42	1.6	26	25	83	380
3333	74	17.2	7093	124000	201	110
3334	54	5.5	793	23900	132	120
3335	49	1.1	12	18	24	<10
3336	53	1.1	30	17	22	10
3337	63	7.0	93	46	84	360
3329	52	1.9	16	51	65	30

Au -- 15g fire assay/AAS finish
Metals -- Aqua-regia digestion/AAS

Applied Science Technologists and Technicians of British Columbia
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Northern Analytical Laboratories ltd.

July 23, 1989

Total Energold Corp
21 - 1114 - 1st Ave
Whitehorse, Yukon
Y1A 1A3

ASSAY CERTIFICATE

Work Order # 29019 File # 29019b PO# 3667

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3367	100	1.1	100	57	127	930
3368	37	0.4	54	34	176	80
3369	42	0.9	57	32	156	80
3370	INS	1.0	80	44	157	80
3371	<10	0.8	49	30	156	50
3372	<10	0.5	50	33	132	30
3373	<10	0.7	47	20	140	50
3375	113	0.9	123	39	120	1220
3376	36	1.9	228	154	107	130
3377	24	0.7	101	50	122	260
1368	21	1.1	77	127	1320	2920
1369	<10	0.4	35	45	103	330
1370	<10	0.4	22	42	68	230
1371	<10	0.3	44	90	116	350
1372	30	0.9	20	67	118	140
1373	89	0.7	247	71	120	740

Au -- 15g fire assay/AAS finish
Metals -- Aqua-regia digestion/AAS

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Northern Analytical Laboratories ltd.

July 27, 1989

Total Energold Corp
21 - 1114 - 1st Ave
Whitehorse, Yukon
Y1A 1A3

ASSAY CERTIFICATE

Work Order # 29025 File # 29025a PO# 3671

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
1333	121	3.2	164	183	122	740
1334	87	5.0	241	404	123	150
1335	161	1.6	111	52	39	9810
1336	77	1.7	17	<1	61	210
1337	224	1.3	182	35	46	1900
1338	91	0.3	106	15	44	30
1339	82	0.2	54	38	25	60
1340	287	32.4	7578	359	337	7070
1341	5110	21.0	1107	1147	1787	218500
1342	654	402.7	8178	21760	5602	2520
1343	85	9.0	477	177	176	530
3453	52	1.6	44	89	169	340
3454	203	5.0	317	106	61	93200
3350	2057	1.7	92	<1	30	174000
3451	73	0.5	349	27	33	490

Au -- 15g fire assay/AAS finish
Metals -- Aqua-regia digestion/AAS

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July 27, 1989

Total Energold Corp
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Whitehorse, Yukon
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ASSAY CERTIFICATE

Work Order # 29009 File # 29009d PO# 3027

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3162	108	56.0	195	1407	515	5240
3163	48	2.5	111	146	156	210
3164	47	1.4	73	40	142	2990
3165	63	1.8	427	47	95	240
3166	166	111.2	560	14280	31380	146000
3167	681	2.9	176	190	6300	34700
3168	40	0.7	32	33	62	720
3169	32	0.5	40	56	54	440
3170	27	1.5	26	48	73	170
1363	25	0.7	53	79	147	80
1364	47	0.6	54	61	127	50
1365	40	0.3	45	44	131	<10
1366	43	0.2	49	50	130	20
1367	33	0.3	75	28	143	<10

Au -- 15g fire assay/AAS finish
Metals -- Aqua-regia digestion/AAS

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July 27, 1989

Total Energold Corp
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Whitehorse, Yukon
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ASSAY CERTIFICATE

Work Order # 29009 File # 29009c PO# 3027

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3315	48	0.9	168	34	123	610
3316	45	0.9	288	45	208	880
3317	46	0.6	276	13	31	830
3318	39	0.8	295	1	54	860
3319	38	1.2	229	34	21	780
3320	62	1.0	229	32	10	660
3321	32	0.9	235	24	33	680
3322	18	1.0	223	54	167	640
3323	14	1.6	106	110	186	160
3324	44	1.8	111	125	251	90
3325	28	1.5	111	68	167	140
3326	31	1.2	94	46	183	60
3327	36	0.6	79	35	158	130
3328	26	1.0	82	35	188	90

Au -- 15g fire assay/AAS finish
Metals -- Aqua-regia digestion/AAS

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July 31, 1989

Total Energold Corp
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ASSAY CERTIFICATE

Work Order # 29024 File # 29024a PO# 3670

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
1697	50	23.1	826	74	24	172000
1698	77	1.8	112	<1	<1	24800
1699	1978	4.1	320	14	1	97300
1700	267	0.3	54	36	4	7970
1751	55	0.6	60	<1	2	500
1752	5647	2.1	90	23	<1	76500
1753	65	0.2	25	5	<1	550
1754	311	1.2	55	17	<1	3900
1755	1475	33.6	813	112	8	197000
1756	18940	6.2	569	39	<1	54400
1757	2076	11.7	223	114	<1	102000
1758	180	1.0	116	5	3	1480
1759	496	1.7	32	41	<1	3780
1760	63520	12.0	1564	94	16	188000
1761	5033	0.9	104	20	3	9400
1762	164	0.5	34	2	13	410
1763	2443	1.9	24	19	1	17000
1764	74	<0.1	57	6	17	60
1765	2758	0.1	54	13	1	2080
1766	38460	66.8	794	621	58	116000
1767	20	0.7	209	29	22	740
1768	30	0.5	85	23	13	320
1374	94	1.3	270	13	176	840
1375	71	2.7	97	161	107	780
1376	58	1.9	74	20	133	290
1377	53	1.3	107	21	157	240

Au -- 15g fire assay/AAS finish
Metals -- Aqua-regia digestion/AAS

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July 31, 1989

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ASSAY CERTIFICATE

Work Order # 29025 File # 29025c PO# 3671

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3171	50	1.8	146	132	68	240
3172	117	2.9	169	107	85	50
3173	520	2.0	442	228	93	10500
3174	94	1.4	145	123	61	200
3175	76	1.2	76	165	175	70
3176	374	1.5	36	39	53	1310
3177	66	1.2	49	114	38	30
3378	27	1.4	74	78	42	450
3379	58	1.6	86	83	61	880
3380	35	3.6	122	84	47	830
3381	47	2.3	105	81	20	690
3382	22	1.3	113	94	44	550
3383	<10	1.8	15	58	15	140
3384	38	2.1	68	53	15	290
3385	43	1.0	76	62	56	280
3386	49	1.7	49	54	141	40
3387	45	1.7	151	93	55	110
3388	25	1.6	130	70	69	60
3389	32	0.7	91	50	44	150
3390	35	0.5	95	101	26	190
3391	47	0.4	89	16	34	30
3392	43	1.4	95	54	63	80
3393	44	0.5	64	17	52	110
3394	25	1.6	62	37	62	<10

Au -- 15g fire assay/AAS finish
Metals -- Aqua-regia digestion/AAS

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July 31, 1989

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ASSAY CERTIFICATE

Work Order # 29025 File # 29025b PO# 3671

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3338	38	1.5	133	62	67	<10
3339	44	0.3	97	37	4	<10
3340	53	1.1	478	24	16	<10
3341	76	0.7	642	42	20	160
3342	51	1.7	117	63	16	1110
3343	88	1.9	2550	78	81	1500
3344	156	1.5	84	62	8	280
3345	56	0.3	15	7	13	980
3346	1781	2.0	12	54	26	24330
3347	1178	2.7	12	24	419	19030
3348	1388	2.4	427	135	34	26010
3349	1871	2.5	11	79	24	23750
3395	16	2.3	55	26	84	130
3396	85	1.2	220	48	93	2260
3397	38	3.7	184	35	369	1080
3398	55	1.6	116	11	128	580
3399	67	2.4	161	53	174	880
3400	87	2.4	153	40	157	920

Au -- 15g fire assay/AAS finish
Metals -- Aqua-regia digestion/AAS

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August 5, 1989

Total Energold Corp
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Whitehorse, Yukon
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ASSAY CERTIFICATE

Work Order # 29055 File #29055b PO#3673

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3401	148	3.0	123	14	79	180
3402	192	<.1	289	25	95	60
3403	99	.4	103	7	63	13
3404	366	2.1	581	752	374	3180
3405	127	1.3	388	280	161	1320
3406	47	<.1	152	50	112	530
3407	115	.8	282	42	84	400
3408	84	.4	162	40	209	810
3409	57	<.1	152	63	108	570
3410	51	<.1	137	70	99	370
3411	31	.8	678	78	113	470
1378	2128	.3	56	29	41	1840
1379	173	4.9	114	1011	500	6970
3412	44	2.2	53	9	94	360
3413	35	1.0	109	2	53	10
3415	48	<.1	115	26	84	250
3416	37	<.1	122	19	158	380
3417	54	.4	140	31	49	100
3418	49	<.1	172	66	137	130
3419	40	<.1	181	60	103	150
3420	42	<.1	177	80	139	40
3421	18	<.1	174	31	90	170
3422	13	<.1	244	67	102	290

Au -- 15g Fire Assay/AAS
Metals-- Aqua-regia digestion/AAS

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August 5, 1989

Total Energold Corp
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Whitehorse, Yukon
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ASSAY CERTIFICATE

Work Order # 29055 File # 29055a PO# 3673

Sample	oz/t Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
1344	0.002	3.5	10020	22	22	130
1345	0.005	27.1	67230	1002	307	3420
1346	0.009	2.9	544	13	26	4460
1347	0.021	130.7	54580	71	2100	17400
1348	0.011	37.3	231	13870	1789	140180
1349	0.001	3.1	19	47	23	710
1350	0.002	1.3	126	25	59	1140
3455	0.003	4.2	264	14	16	1260
3456	0.958	304.5	51630	3045	1500	2380
3457	0.002	2.1	245	36	4	1170
3458	0.029	5.6	416	26	16	22900
3459	0.002	1.6	206	25	30	1980
3001	0.002	0.4	53	15	28	2100
3002	0.003	41.9	570	2202	36	7500
3003	0.006	0.6	30	10	<1	14900
1771	0.020	68.1	21430	90	800	20700
1772	0.001	2.7	255	24	74	2310

Au -- 15g Fire Assay/AAS
Metals-- Aqua-regia digestion/AAS

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August 6, 1989

Total Energold Corp
21 - 1114 - 1st Ave
Whitehorse, Yukon
Y1A 1A3

ASSAY CERTIFICATE

Work Order # 29055 File # 29055d PO# 3673

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3425	83	0.6	72	53	135	320
3426	57	0.1	47	51	115	220
3427	INS	1.1	81	58	157	380
3428	50	0.2	40	24	94	50
3429	INS	0.4	54	46	106	340
3430	INS	0.6	59	60	167	220
3431	82	0.4	76	47	155	420

Au -- 15g Fire Assay/AAS
Metals-- Aqua-regia digestion/AAS

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August 11, 1989

Total Energold Corp
21 - 1114 - 1st Ave
Whitehorse, Yukon
Y1A 1A3

ASSAY CERTIFICATE

Work Order # 29087   File #29087A   PO#3675

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
1408	108	0.3	92	9	31	280
1409	117	0.4	124	4	60	280
1410	88	0.8	61	19	36	160
1411	69	0.3	25	16	17	210
1412	73	<0.1	21	9	14	20
1413	59	<0.1	26	24	16	60
1414	73	<0.1	21	2	19	360
1415	61	0.1	27	22	23	140
1416	68	0.9	27	13	13	110
1417	58	0.3	29	<1	33	270
1418	100	0.6	74	46	111	1830

Au -- 15g Fire Assay/AAS
Metals-- Aqua-regia digestion/AAS

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August 25, 1989

Total Energold Corp
21 - 1114 - 1st Ave
Whitehorse, Yukon
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ASSAY CERTIFICATE

Work Order # 29087 File # 29087b PO# 3675

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
J8	<10	2.4	81	58	63	<10
J9	<10	2.3	170	46	71	220
J10	32	2.3	59	51	75	110
J12	16	1.9	87	60	56	310
J13	103	3.4	421	80	150	610
J14	24	2.9	104	16	35	100
J15	145	2.6	223	71	56	160
J16	23	2.4	191	36	98	70
J17	18	2.7	194	53	130	260
J18	34	2.0	120	37	60	230
J19	10	2.0	175	38	55	170
J21	<10	2.2	117	38	49	100
J22	33	2.7	290	50	48	270
J23	702	3.4	1033	72	104	1680
J24	2090	12.5	1240	1276	530	5040
J25	65	10.0	1100	1131	479	4550
J26	<10	1.2	101	32	73	180
J27	42	1.3	36	14	50	<10
J28	17	0.5	39	17	47	30
J29	<10	1.5	118	28	44	100
J30	<10	1.2	154	48	70	110
J32	19	1.6	88	45	75	220
J34	<10	1.2	69	46	78	180
J38	32	2.6	138	218	123	1690
J42	767	3.3	146	64	81	1750
J44	358	3.3	117	53	87	390
J45	1437	2.9	135	84	102	480
J46	39	2.8	50	26	83	370
J47	13	3.5	70	25	79	250

Au -- 15g Fire Assay/AAS
Metals -- Aqua regia digestion/AAS

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August 25, 1989

Total Energold Corp
21 - 1114 - 1st Ave
Whitehorse, Yukon
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ASSAY CERTIFICATE

Work Order # 29086 File # 29086a PO# 3676

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3464	750	2.4	87	46	7	5900
3465	5730	9.5	890	79	17	99200
3466	6860	18.8	1239	30	18	130100
3467	67000	27.9	357	174	14	307000
3468	53970	16.7	376	42	13	189000
3469	1900	3.9	27	51	7	2500
3470	23700	20.1	801	82	40	229400
3471	57940	28.0	483	134	12	247400
3472	4320	4.2	50	79	8	7500
3473	50950	30.0	249	149	15	10170
3474	6480	2.8	138	22	4	8100
3475	101600	18.6	149	55	13	332500
3476	4590	4.9	126	25	9	25400
3477	4530	9.3	325	8	13	42800
3478	16600	6.4	98	97	11	55800
3479	510	3.4	45	43	7	44600
3480	6210	10.5	166	100	11	4100

Au -- 1AT Fire Assay/Grav
Metals -- Aqua regia digestion/AAS

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Northern Analytical Laboratories ltd.

August 25, 1989

Total Energold Corp
21 - 1114 - 1st Ave
Whitehorse, Yukon
Y1A 1A3

ASSAY CERTIFICATE

Work Order # 29103 File # 29103a PO# 3683

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
1509	679	12.2	2665	347	128	8420
1510	35200	310.9	93640	2800	3671	20880
1511	3200	107.9	41250	1274	1449	3810
1512	1000	170.1	59380	317	1876	3910
1513	8000	234.4	61720	487	1380	5180
1514	7330	170.4	47160	530	1747	5880
1515	30533	142.4	42750	461	1460	1140
1516	858	13.6	3386	72	177	104800
1517	393	8.1	2430	62	194	6620
1518	354	5.6	1456	149	75	11800
1519	735	7.7	2134	68	114	18600

Au -- 15g Fire Assay/AAS
Metals -- Aqua regia digestion/AAS

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Northern Analytical Laboratories ltd.

August 25, 1989

Total Energold Corp
21 - 1114 - 1st Ave
Whitehorse, Yukon
Y1A 1A3

ASSAY CERTIFICATE

Work Order # 29103 File # 29103a PO# 3683

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
1509	679	12.2	2665	347	128	8420
1510	35200	310.9	93640	2800	3671	20880
1511	3200	107.9	41250	1274	1449	3810
1512	1000	170.1	59380	317	1876	3910
1513	8000	234.4	61720	487	1380	5180
1514	7330	170.4	47160	530	1747	5880
1515	30533	142.4	42750	461	1460	1140
1516	858	13.6	3386	72	177	104800
1517	393	8.1	2430	62	194	6620
1518	354	5.6	1456	149	75	11800
1519	735	7.7	2134	68	114	18600

Au -- 15g Fire Assay/AAS
Metals -- Aqua regia digestion/AAS

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September 5, 1989

Total Energold Corp
21 - 1114 - 1st Ave
Whitehorse, Yukon
Y1A 1A3

ASSAY CERTIFICATE

Work Order # 29161 File # 29161c PO# 3114

Sample	oz/t Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As	ppm Sb
4552	0.010	29.2	15630	33	578	1150	40
4565	<0.004	2.0	182	3	20	30	10
4566	0.012	3.3	589	8	24	60	10
4567	0.008	2.6	169	11	23	1240	10
4568	0.024	3.4	602	30	70	1880	50
4569	<0.004	2.7	767	38	92	<10	30
4572	<0.004	1.8	40	7	29	<10	10
4573	1.76	2.1	875	90	43	60600	270
4574	3.188	11.7	1463	303	61	84300	720
4575	0.012	20.4	2639	27	211	3880	210
4576	0.272	11.7	1382	109	106	75600	590
4577	0.040	8.6	1824	25	70	24200	200
4578	0.120	3.2	468	49	35	53000	300
4579	0.014	12.8	1956	37	114	5370	150
4580	0.896	8.9	1430	166	49	77700	800
4581	0.086	2.9	1309	40	123	38700	170
4585	0.008	0.9	286	20	43	3100	30
4588	<0.004	<0.1	62	<1	24	1240	10
4589	0.016	<0.1	42	14	15	830	<10
4599	0.012	11.9	2069	60	131	6720	210

Au -- 1/2 AT Fire Assay/Grav
Metals -- Aqua Regia Digestion/AAS

Note -- Sb will be low since assay was not prepared for Sb

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Northern Analytical Laboratories ltd.

November 3, 1989

Total Energold Corp
21 - 1114 - 1st Ave
Whitehorse, Yukon
Y1A 1A3

ASSAY CERTIFICATE

Work Order # 29055 File # 29055c PO# 3673

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3423	58	0.8	156	55	77	100
3178	88	1.8	312	187	102	250
3179	68	0.3	175	74	140	1280
3180	72	<0.1	81	16	220	920
3181	37	<0.1	112	77	98	690
3182	25	<0.1	106	65	101	610
3183	49	1.0	323	35	315	860
3184	72	1.3	269	32	274	1030
3185	33	1.0	203	44	246	730
3186	56	0.8	173	53	220	660
3187	65	1.6	67	297	310	350
3188	31	0.4	90	48	153	590
3374	54	0.6	82	34	148	350
3424	21	0.3	57	42	151	200

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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September 4, 1989

Total Energold Corp
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Whitehorse, Yukon
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ASSAY CERTIFICATE

Work Order # 29161 File # 29161b PO# 3114

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
4551	21	0.7	23	<1	11	150
4553	21	0.4	124	8	24	40
4554	35	0.2	38	17	9	<10
4555	11	<0.1	20	<1	8	<10
4556	23	0.5	20	<1	10	<10
4557	21	0.8	35	9	13	<10
4558	22	<0.1	33	2	14	<10
4559	25	<0.1	28	<1	11	<10
4560	37	1.5	36	16	12	<10
4561	29	0.4	30	15	10	<10
4562	21	0.2	26	10	20	<10
4563	26	<0.1	24	12	14	1010
4564	24	<0.1	90	1	14	240
4570	20	<0.1	50	10	30	<10
4571	28	0.3	50	18	22	60
4582	17	<0.1	74	65	114	890
4583	12	0.4	145	25	65	4640
4584	32	<0.1	277	22	75	2190
4586	34	1.4	135	145	182	990
4587	34	0.2	236	77	150	6200

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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September 4, 1989

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ASSAY CERTIFICATE

Work Order # 29161 File # 29161a PO# 3114

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
4590	37	0.6	38	1	22	<10
4591	22	0.4	102	<1	12	30
4592	37	<0.1	86	19	1	60
4593	42	0.8	49	38	54	1690
4594	40	1.0	42	15	<1	90
4595	24	<0.1	94	10	<1	<10
4596	24	0.6	26	15	9	<10
4597	28	0.1	35	20	13	<10
4598	21	0.6	15	17	12	<10
4600	49	<0.1	64	31	23	1600
4601	22	<0.1	31	30	34	280
4602	56	0.1	43	20	11	230
4603	22	0.2	65	1	13	<10
4604	17	0.7	56	2	30	<10
4605	15	<0.1	49	7	24	80
4606	16	<0.1	66	2	24	90
4607	27	1.0	60	<1	17	10
4608	29	<0.1	55	<1	12	<10
4609	37	0.5	99	7	12	30
4610	45	1.0	10	7	18	<10
4611	23	2.6	3	3	42	<10

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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September 7, 1989

Total Energold Corp
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ASSAY CERTIFICATE

Work Order # 29129 File # 29129a PO# 3688

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3705	21	2.5	64	32	114	460
3706	<10	2.3	68	44	190	430
3707	14	1.2	42	31	121	240
3708	15	2.0	49	26	109	240
3709	17	2.0	54	29	120	170
3710	18	0.3	61	29	142	300
3711	16	1.3	58	30	140	120
3712	<10	1.6	56	29	128	60
3713	<10	1.4	49	32	140	<10
3714	17	0.8	54	28	126	30
3715	<10	0.4	58	26	137	130
3716	<10	0.7	55	32	154	120
3717	32	0.3	43	46	117	40
3718	25	0.8	40	20	119	20
3719	20	1.1	42	21	122	40
3720	30	1.0	36	23	120	<10
3721	14	0.7	33	18	118	80
3722	32	0.8	32	16	111	20
3723	31	0.9	35	53	189	<10
3724	24	0.8	36	86	232	<10
3725	<10	1.0	30	26	145	<10
3726	15	0.6	40	24	167	120
3727	<10	1.4	53	14	317	30
3728	17	0.5	131	14	237	<10

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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September 7, 1989

Total Energold Corp
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ASSAY CERTIFICATE

Work Order # 29129 File # 29129b PO# 3688

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3729	18	3.1	52	112	307	<10
3730	11	0.9	34	73	324	<10
3731	20	0.1	24	24	124	110
3732	17	0.4	28	35	130	<10
3733	17	1.5	28	34	155	<10
3734	25	0.7	26	74	170	<10
3735	19	1.8	37	33	204	<10
3736	24	1.1	39	27	188	<10
3737	19	2.3	44	37	153	40
3738	24	1.2	30	25	140	<10

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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ASSAY CERTIFICATE

Work Order # 29161 File # 29161d PO# 3114

Sample	Au +100	Au -100	oz/t Au
4573	1.378	0.384	0.534
4574	2.906	2.546	2.589

Metallics Gold Assay

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ASSAY CERTIFICATE

Work Order # 29130 File # 29130C PO# 3687

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
1520	<10	20.8	32	83	22	<10
1521	6592	179.1	21650	227	590	210
1522	2551	38.6	4230	908	600	120
1523	674	60.5	3610	1902	510	220
1524	1590	33.3	860	2159	830	1600
1525	2009	2.4	77	23	27	17850
1780	267	5.7	84	43	8	16880
1781	8740	17.5	334	54	7	17260
1782	9293	14.9	149	92	4	78900
1783	2317	12.2	147	58	8	49200
1784	5257	15.1	220	33	15	48300

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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Total Energold Corp
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ASSAY CERTIFICATE

Work Order # 29130   File # 29130a   PO# 3689

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
J-108	119	1.9	56	33	108	<10
J-109	151	1.7	74	30	141	230
J-110	167	3.8	99	41	133	210
J-111	139	1.5	39	8	98	50
J-112	170	0.7	45	15	84	540
J-113	185	1.1	204	38	77	1220
J-114	220	1.9	168	38	112	920
J-115	334	0.6	109	20	81	<10
J-116	251	3.2	177	22	83	130
J-117	523	2.3	254	23	103	590
J-118	550	3.3	561	43	72	640
J-119	397	4.1	71	29	100	840
J-120	434	0.5	30	3	135	610
J-121	379	2.9	120	6	197	760
J-122	396	0.5	24	10	64	200
J-123	416	3.0	19	18	45	160
J-124	1516	2.4	82	47	124	190
J-125	411	0.8	17	28	65	10
J-126	365	2.9	30	60	86	<10
J-127	315	3.4	13	21	49	60
J-128	457	0.8	19	24	88	140
J-129	417	3.1	12	17	49	<10
J-130	461	1.9	10	14	57	<10
J-131	458	2.5	29	40	188	<10
J-132	<10	<0.1	37	14	68	<10
J-133	48	<0.1	16	10	40	<10
J-134	23	0.6	26	16	54	10
J-135	20	0.2	29	10	53	<10

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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ASSAY CERTIFICATE

Work Order # 29130 File # 29130b PO# 3687

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
J-136	65	0.1	22	4	45	<10
J-137	55	1.0	31	16	42	20
J-138	23	0.3	21	12	45	<10
J-139	78	0.3	46	22	49	120
J-140	100	<0.1	31	15	100	150
J-141	63	<0.1	56	39	77	160
J-142	21	0.3	13	11	39	<10
J-143	38	<0.1	21	24	62	120
J-144	27	0.3	17	10	52	40
J-145	138	0.3	61	31	66	600
J-146	89	<0.1	71	35	73	930
J-147	69	1.0	47	17	52	810
J-148	54	0.2	20	14	61	30
J-149	56	0.2	40	30	90	60
J-150	31	0.5	21	23	55	<10
J-151	76	0.3	49	42	107	40
J-152	52	0.2	19	11	46	<10
J-153	58	0.4	22	20	55	<10
J-154	51	0.3	20	62	60	100
J-155	61	0.1	28	32	79	920
J-156	35	1.3	93	299	185	950
J-157	110	5.0	145	85	175	600
J-158	46	3.9	22	5	39	110
J-159	78	1.0	136	203	252	360
J-160	19	0.6	14	19	33	<10
J-161	40	1.8	23	4	54	<10
J-162	40	0.2	21	15	62	<10
J-163	22	0.6	19	9	47	<10

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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ASSAY CERTIFICATE

Work Order # 29113 File # 29113b PO# 3687

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3651	20	1.2	32	10	50	250
3652	39	0.4	99	75	100	460
3653	112	2.2	105	95	127	2080
3654	62	1.2	60	91	93	440
3655	52	1.1	125	89	133	1960
3657	42	1.7	49	80	86	440
3658	18	2.9	75	88	117	730
3659	11	0.8	96	96	109	520
3660	24	1.7	53	28	68	460
3661	15	1.0	93	55	86	1110
3662	<10	0.5	48	22	59	310
3663	<10	<0.1	26	73	56	150
3664	<10	2.2	18	48	37	90
3665	18	1.5	76	73	89	830
3666	<10	0.1	70	63	78	470
3667	<10	2.3	47	54	65	510
3668	18	2.7	60	51	80	1060
3669	27	0.1	45	46	54	510
3670	10	0.9	55	61	72	880
3671	35	0.7	54	78	74	1030
3672	101	2.2	72	55	65	720
3673	31	1.2	68	55	60	380
3674	133	1.7	138	65	84	1500
3675	105	0.4	96	49	63	1170
3676	285	4.9	246	197	78	1520
3677	175	4.8	168	71	103	820

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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September 9, 1989

Total Energold Corp
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ASSAY CERTIFICATE

Work Order # 29113   File # 29113c   PO# 3687

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3678	269	3.6	170	53	87	1190
3679	186	4.4	103	28	86	420
3680	73	1.7	200	57	63	660
3681	93	2.4	145	38	74	1060
3682	24	1.2	182	35	76	1140
3683	53	4.2	164	19	49	470
3684	179	1.2	159	28	55	370
3685	155	1.4	549	75	63	1150
3686	172	3.7	281	49	71	1140
3687	110	0.8	338	37	69	900
3688	46	0.3	215	95	103	1020
3689	42	2.8	110	68	95	940
3690	47	1.2	155	57	73	620
3691	42	0.9	95	40	71	480
3692	<10	2.0	121	44	78	790
3693	<10	1.4	216	41	60	620
3694	20	0.2	149	58	83	1340
3695	<10	0.8	57	18	52	440
3696	60	1.9	68	26	54	330
3697	33	0.1	71	32	68	1050
3698	<10	<0.1	52	40	65	140
3699	40	0.7	40	18	32	10
3700	12	0.6	80	59	77	730
3701	11	0.3	42	40	48	<10
3702	19	1.3	190	244	107	1510
3703	64	0.5	200	75	86	1010
3704	52	0.2	125	70	42	1110

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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September 9, 1989

Total Energold Corp
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ASSAY CERTIFICATE

Work Order # 29113 File # 29113a PO# 3687

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
J-083	12	1.0	24	34	50	<10
J-084	22	1.4	81	386	124	460
J-085	57	<0.1	160	156	352	950
J-086	56	2.2	156	235	168	1920
J-087	1354	16.2	218	3664	342	2780
J-088	72	0.5	49	80	307	1430
J-089	37	1.9	54	22	59	350
J-090	78	1.4	200	32	53	1950
J-091	<10	0.7	99	38	80	2220
J-092	23	0.4	35	23	86	110
J-093	46	1.2	87	46	97	580
J-094	61	0.2	80	47	105	1400
J-095	25	<0.1	78	51	161	320
J-096	61	1.3	71	48	118	2010
J-097	46	0.9	62	46	90	2070
J-098	56	1.2	54	58	134	1160
J-099	51	0.4	36	48	91	730
J-100	172	0.4	38	90	129	2240
J-101	56	0.5	50	37	77	1290
J-102	59	1.2	24	36	89	280
J-103	54	1.5	32	60	83	50
J-104	70	1.2	65	41	76	230
J-105	52	1.5	51	23	65	<10
J-106	44	0.8	133	48	131	90
J-107	26	0.1	66	35	80	<10

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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ASSAY CERTIFICATE

Work Order # 29104 File # 29104b PO# 3681

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3550	30	2.0	165	26	102	240
3552	60	3.1	149	14	113	480
3553	31	1.8	99	27	93	<10
3554	12	2.6	76	16	105	60
3555	46	3.4	170	32	49	480
3556	15	2.3	78	23	60	830
3557a	38	1.7	105	20	94	320
3557b	41	2.1	324	35	110	970
3558	41	1.5	145	21	80	310
3559	41	1.3	113	22	103	630
3560	43	1.1	86	22	101	<10
3561	42	1.0	110	23	81	160
3562	34	1.2	336	27	76	<10
3563	38	1.3	414	20	111	380
3564	28	0.4	80	15	59	220
3565	35	0.7	31	23	55	90
3566a	37	1.0	70	47	113	1070
3566b	36	0.7	53	22	85	130
3567	32	1.2	147	18	116	170
3568	35	0.2	30	7	25	<10
3569	16	0.8	86	18	61	140
3570	24	0.6	90	18	106	20
3571	29	0.9	47	20	62	90
3572	26	1.0	43	14	88	160

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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ASSAY CERTIFICATE

Work Order # 29104 File # 29104a PO# 3681

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3501	43	1.1	47	9	80	310
3502	ins	1.3	131	43	127	550
3503	43	1.2	101	27	108	20
3504	<10	1.0	49	6	55	<10
3505	16	0.9	69	21	69	150
3506	16	0.6	156	28	106	130
3507	23	0.5	169	29	107	100
3508	28	0.6	124	26	138	560
3509	37	0.4	175	44	193	1030
3510	15	0.3	70	24	94	110
3511	10	0.4	128	30	104	580
3512	12	0.3	23	21	89	290
3513	19	0.1	16	9	65	<10
3514	55	0.7	169	80	154	1270
3515	72	0.6	159	49	188	1640
3516	61	0.2	277	36	141	1990
3517	223	1.7	255	29	81	2630
3518	48	<0.1	183	32	177	530
3520	48	<0.1	152	18	45	240
3521	38	<0.1	158	32	166	450
3522	95	0.8	178	23	84	880
3523	513	9.0	373	90	91	9050
3524	19	0.7	28	8	41	20
3525	80	0.6	323	20	97	1710

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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September 14, 1989

Total Energold Corp
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ASSAY CERTIFICATE

Work Order # 29104 File # 29104d PO# 3681

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3432	<10	0.9	22	47	80	240
3433	12	1.5	99	57	123	100
3434	19	1.3	39	27	55	430
3435	23	0.3	174	43	87	530
3436	85	1.4	186	29	162	500
3437	45	1.0	196	63	155	1680
3438	24	1.1	171	42	113	20
3439	22	1.2	145	44	158	50
3440	20	0.8	142	34	114	<10
3441	12	3.0	451	55	74	730
3442	18	1.2	275	44	103	690
3443	25	1.1	164	23	109	630
3444	33	1.4	621	29	79	1720
3445	12	0.6	69	16	97	120
3446	13	0.6	<1	<1	<1	<10
3447	11	0.4	119	41	171	420
3448	20	0.9	41	35	133	240
3449	15	0.8	40	40	130	340
3450	<10	0.8	57	24	88	200

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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ASSAY CERTIFICATE

Work Order # 29104 File # 29104e PO# 3681

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3526	10	1.2	46	30	105	100
3527	<10	1.7	13	3	38	10
3528	31	1.4	101	29	76	800
3529	24	2.0	381	88	260	1320
3530	64	4.1	602	328	261	3470
3531	12	1.1	36	10	54	20
3532	44	5.7	269	56	58	2200
3533	29	1.9	127	39	53	970
3534	21	1.4	267	39	167	240
3535	26	1.0	359	70	441	690
3536	13	1.0	176	20	114	150
3537	11	0.7	187	19	126	470
3538	32	3.4	118	215	250	2860
3539	47	9.2	366	127	78	3650
3540	13	1.0	75	23	45	610
3541	25	0.9	91	12	109	750
3542	29	0.9	93	16	68	1530
3543	10	0.6	66	24	127	540
3544	26	1.3	256	28	263	820
3545	16	0.3	69	31	308	460
3546	15	0.6	66	11	93	140
3547	11	0.5	172	17	146	1150
3548	23	0.4	180	112	158	1320
3549	16	0.5	193	9	77	570

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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ASSAY CERTIFICATE

Work Order # 29104 File # 29104c PO# 3681

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3573	14	0.2	39	12	80	<10
3574	26	0.5	97	21	148	450
3575	41	1.0	120	13	105	120
3576	28	<0.1	100	17	98	110
3577	27	0.4	214	15	83	190
3578	31	0.2	165	24	115	160
3579a	34	1.9	98	29	59	400
3579b	12	3.0	127	18	124	380
3580	27	<0.1	66	15	95	160
3581	23	<0.1	88	21	94	250
3582	56	3.2	93	19	92	750
3583	44	3.8	86	23	60	160
3584	12	0.4	47	16	106	80
3585	37	2.5	125	267	227	<10
3586	53	1.5	154	44	106	170
3587	30	<0.1	179	33	152	340
3588	24	0.6	41	14	68	<10
3589	42	0.5	47	13	69	20
3590	59	0.3	75	11	83	990
3591	21	0.1	27	11	57	40
3593	42	0.5	96	17	95	60
3594	24	0.3	87	18	99	50
3595	17	<0.1	25	19	53	10
3596a	12	2.3	50	42	120	320
3596b	24	3.2	134	20	130	280
3597	42	0.8	97	17	86	80
3598	25	0.1	28	19	81	30

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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Work Order # 29104 File # 29104f PO# 3681

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3599	<10	2.9	47	17	65	<10
3600	12	3.7	26	15	32	<10
3601	<10	2.1	13	12	70	<10
3602	20	1.1	31	2	75	50
3603	20	0.9	19	14	70	<10
3604	16	0.8	32	21	110	<10
3605	18	1.2	49	17	97	<10
3606	44	0.9	530	59	257	210
3607	22	0.5	71	12	99	20
3608	37	1.6	227	81	52	1040
3609	23	1.2	146	14	95	220
3610	21	0.1	105	29	115	160
3611	22	<0.1	102	44	100	100
3612	17	0.3	40	8	64	<10
3613	<10	0.3	34	2	71	<10
3614	<10	0.7	21	1	54	<10
3615	10	0.2	45	12	64	<10
3616	15	0.1	115	25	49	70
3617	11	<0.1	48	17	84	<10
3618	ins	0.3	109	58	122	100
3619	139	12.5	258	255	117	2520
3620	30	<0.1	84	10	93	80
3621	11	<0.1	34	4	77	<10
3622	27	0.1	128	21	79	60

Au -- 15g Fire Assay/AAS
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ASSAY CERTIFICATE

Work Order # 29104 File # 29104g PO# 3681

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3623	333	20.5	123	315	43	2820
3624	77	2.0	399	70	105	340
3625	22	3.8	54	11	92	10
3626	40	2.3	56	53	191	400
3627	36	5.5	162	43	64	240
3628	41	2.2	496	50	84	630
3629	48	1.8	225	13	115	260
3630	63	1.7	143	34	74	230
3631	110	3.1	465	53	192	310
3632	87	0.7	130	37	161	270
3633	47	0.4	122	40	247	30
3634	77	2.1	104	17	184	80
3635	125	2.4	74	55	119	420
3636	153	0.8	156	64	51	710
3637	107	2.7	440	166	125	830
3638	147	5.0	430	281	255	710
3639	273	7.5	508	675	3119	2140
3640	127	4.6	537	681	240	1400
3641	122	3.1	514	519	4506	1640
3642	127	4.3	543	846	4332	1110
3643	104	3.0	327	773	4601	1330
3644	43	1.5	97	128	184	300
3645	29	0.4	153	43	79	70
3646	31	0.4	72	27	98	110

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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ASSAY CERTIFICATE

Work Order # 29104 File # 29104h PO# 3681

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
J48	35	1.3	44	225	231	<10
J49	29	1.2	23	16	93	<10
J50	12	0.8	19	34	87	<10
J51	16	0.8	26	30	86	<10
J52	10	1.5	51	34	86	<10
J53	13	1.6	31	28	39	<10
J54	11	1.7	35	12	50	<10
J55	31	1.5	41	25	66	60
J56	31	1.1	64	23	81	30
J57	29	1.5	35	30	68	<10
J58	20	2.0	24	17	60	<10
J59	52	1.2	160	44	154	30
J60	29	1.0	54	27	55	<10
J61	34	1.4	61	43	90	110
J62	42	1.1	175	204	1052	80
J63	11	0.3	91	51	100	<10
J64	17	<0.1	78	29	90	<10
J65	19	<0.1	52	30	74	<10
J66	12	0.1	59	38	80	10
J67	<10	0.1	27	16	92	10
J68	18	0.1	43	28	81	<10
J69	50	0.1	173	35	127	50
J70	24	0.2	50	33	46	20
J71	17	0.3	49	25	76	<10

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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ASSAY CERTIFICATE

Work Order # 29104 File # 29104i PO# 3681

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
J72	12	1.2	54	24	100	<10
J73	<10	0.5	52	17	79	<10
J74	10	0.6	37	12	67	<10
J75	23	0.1	35	13	71	<10
J76	18	0.1	43	13	56	<10
J77	13	1.0	57	21	60	50
J78	20	0.8	71	26	62	620
J79	<10	1.3	42	13	53	10
J80	22	0.8	57	82	218	1040
J81	26	0.1	61	15	66	<10
J82	<10	0.7	18	10	53	<10
3647	57	2.5	321	138	223	1010
3648	48	2.0	262	115	257	790
3649	78	3.0	276	131	192	1190
3650	97	5.2	392	169	290	1750
1380	153	0.9	138	42	468	2570

float

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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ASSAY CERTIFICATE

Work Order # 29104 File # 29104j PO# 3681

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
1501	400	65.0 1.905	714	248	551	4400
1502	236	42.0 1.226	699	126	276	3200
1503	15	2.9	503	37	28	260
1504	17900 0.523	176.5 5.154	733	689	2369	2700
1505	6930 0.202	138.5 4.044	723	175	1633	4700
1506	5829 0.170	137.5 4.015	726	472	1704	1460
1507	1196 0.035	26.5 0.774	693	208	379	220
1508	585	26.5 0.774	689	378	245	4400
3004	14100 0.412	78.9 2.304	692	226	119	3900
3005	1219	54.7 1.597	674	605	74	80
3006	125	0.1	14	5	6	4500
3007	1137	58.4 1.705	178	5240	19	4700
3008	926	1.7	543	227	25	4900
3009	316	46.9 1.369	688	1272	434	4700
3010	3688 0.108	5.7	490	113	18	1280
3011	78	0.7	467	29	497	4300
3012	335	2.9	405	93	33	4700
3013	4595 0.134	129.6 3.784	713	571	335	2010
1526	64	0.4	369	34	30	860
3460	69	0.6	98	28	41	3800

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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ASSAY CERTIFICATE

Work Order # 29104   File # 29104k   PO# 3681

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3461	19	1.4	61	18	133	180
3462	69	3.2	531	53	83	4170
3463	1024	100.1	553	3809	1842	4460
1773	26	1.1	130	63	43	1890
1774	40	1.2	35	62	39	790
1775	<10	0.2	26	9	17	<10
1776	11	1.3	82	22	17	20
1777	20	1.2	73	20	18	<10
1778	2204	9.7	528	64	119	4390
1779	1450	38.3	564	245	330	1150
4512	2609	51.5	150	1991	16	4280
1419	124	0.9	112	24	28	1000

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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ASSAY CERTIFICATE

Work Order # 29172 File # 29172a PO# 3113

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3481	34	1.5	47	18	16	<10
1527	1884	35.1	684	485	155	4200
1528	5664	40.6	687	633	3420	3800
1529	867	35.8	707	189	3682	4200
1530	71	3.5	670	38	176	4200
1531	650	370.3	6750	10570	2860	16200

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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ASSAY CERTIFICATE

Work Order # 29172 File # 29172b PO# 3113

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
3739	15	0.4	194	236	199	990
3740	16	<0.1	90	31	65	<10
3741	38	<0.1	97	18	52	<10
3742	ins	11.5	415	393	372	3140
J164	77	<0.1	71	15	53	<10
J165	21	<0.1	117	14	102	<10
J166	49	0.8	69	53	178	<10
J167	<10	<0.1	212	28	133	<10
J168	35	<0.1	116	27	187	170
J169	29	<0.1	51	17	81	<10
J170	23	<0.1	87	36	219	<10
J171	17	<0.1	86	57	203	<10
J172	<10	<0.1	80	47	200	<10
J173	14	0.1	60	221	317	<10
J174	25	0.1	72	195	209	<10
J175	21	1.3	61	345	261	<10
J176	23	0.4	51	163	419	<10
J177	11	<0.1	67	272	430	<10
J178	22	<0.1	72	150	262	<10
J179	46	<0.1	85	108	184	<10
J180	39	<0.1	81	191	334	<10
J181	25	2.9	84	1367	1042	20
J182	21	<0.1	34	32	143	<10
J183	38	<0.1	46	28	198	70
J184	37	<0.1	36	18	179	20
J185	26	<0.1	45	30	193	40
J186	32	<0.1	66	38	311	70
J187	42	<0.1	35	29	208	50
J188	26	<0.1	36	26	158	<10

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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ASSAY CERTIFICATE

Work Order # 29209 File # 29209a PO# 3129

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
J189	39	0.1	37	18	104	50
J190	27	<0.1	59	20	136	<10
J191	28	1.7	48	23	142	<10
J192	29	1.9	51	18	169	<10
J193	38	0.5	44	12	158	<10
J194	60	0.6	51	18	126	<10
J195	37	0.4	101	64	547	<10

Au -- 15g Fire Assay/AAS
Metals -- Aqua Regia Digestion/AAS

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ASSAY CERTIFICATE

Work Order # 29024   File # 29024b   PO# 3670

Sample	ppb Au	ppm Ag	ppm Cu	ppm Pb	ppm Zn	ppm As
1769	104	1.4	38	85	51	300
1770	260	0.4	130	90	9	140
1687	29	<0.1	57	12	12	280
1688	54	<0.1	79	10	21	320
1689	40	1.9	125	5	40	140
1690	1291	34.5	210	1841	17	198000
1691	68	2.7	112	33	10	420
1692	17	2.1	51	54	28	690
1693	43	1.5	47	42	29	290
1694	10	1.2	38	11	45	140
1695	86	1.1	69	32	32	260
1696	71	90.9	381	14810	8370	110

Au -- 15g Fire Assay.AAS
Metals -- Aqua Regia Digestion.AAS

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APPENDIX 2

ANALYTICAL PROCEDURES

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SAMPLE PREPARATION

Soils

Incoming soils are sorted, counted and logged. The soils are placed in an oven devoted to geochem and dried at 150 F.

When soils are dry, they are sieved through an 80 mesh screen. If 20g of -80 # soil is not obtained, the +80 # is then sieved through a 40 # sieve and placed in a separate bag. The reject is stored in its' origional bag.

Rocks

Incoming rocks are sorted, counted and logged. Rocks are first crushed through a jaw crusher set at 3/8" gap and then crushed through a 1/8" gap.

The crushed sample is split using a Jones Riffle until a 250g sample is obtained. The reject is placed in its' origional bag and stored.

The sample is then dried at 150 F and pulverized to -150 # using a ring pulverizer.

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TRACE LEVEL GOLD FIRE ASSAY

15g of sample is mixed with a suitable flux in a 30g crucible, inquarted with 2 mg Ag and fused at 1900 F. The contents of the crucible is poured into a mold and allowed to cool. The slag is broken off and discarded. The lead button is then pounded into a cube.

The lead button is placed into a bone ash cupel which has been preheated to 1800 F. When the lead is completely molten, the temperature is dropped to 1750 F. The dampers are opened to allow air inside the furnace. When cupelation is complete, the cupel is taken out and allowed to cool.

The silver-gold prill is picked out of the cupel and dropped into a 16 x 150 mm test tube. 2 mls of 1:1 Nitric Acid is added and the test tube is heated to dissolve the silver. 3 mls of HCl is then added to dissolve the gold. The test tube is made up to 10 mls using a reference, mixed and run on the A.A.

ORE GRADE GOLD FIRE ASSAY

The furnace procedure is identical to the above method except that 30g or one Assay Ton of sample is usually weighed.

The resulting silver-gold prill is picked out of the cupel and hammered flat and dropped into a porcelein crucible. 1:9 Nitric acid is added and the crucible is placed on a 250 F hot plate until all the silver is dissolved. Some Conc. Nitric is added to ensure complete dissolution of the silver. The Silver Nitrate solution is decanted off and the gold is washed three times with D.I. water. The crucible is then replaced on the hot plate to dry.

The gold is annealed using a propane torch and allowed to cool to room temperature. The gold is now weighed on a micro-balance to one microgram. After calculations, oz/t or g/t gold is reported.

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ATOMIC ABSORPTION ANALYSIS

Geochem Digestion [Trace Level Analysis]

0.500g of sample is weighed into a 16 x 150 mm test tube. 2 mls of 1:1 Nitric Acid is added and the test tube is placed in a hot water bath for 20 minutes. 3 ml of HCl is added and the sample is heated for 40 minutes. When digestion is completed, the sample is cooled in a cold water bath. The test tube is then bulked to 10 mls using a reference, stirred and allowed to settle. The sample is now ready to run on the A.A.

For ICP the sample is digested in one step using 5 mls of 3 parts HCl, 1 Part Nitric Acid and 2 parts water.

Assay Digestion [Ore Level Analysis]

1.000g of sample is weighed into a class A 100 ml volumetric flask. 5 mls of Nitric Acid is added and the flask is placed on a 400 F hot plate until the red fumes indicating reaction subside. 20 mls of water* and 10 mls of HCL are added and placed on the hot plate for 5 minutes. The flask is then bulked to the neck with water and brought to a boil. The flask is then cooled, bulked to the mark, shaken and allowed to settle prior to running on the A.A.

* Some elements require special treatment. For example, Sb requires 20 mls 10% Tartaric acid.

105 Copper Road, Whitehorse, YT, Y1A 2Z7 Ph: (403) 668-4968 Fax: (403) 668-4890

APPENDIX 3

LEDGER OF COSTS

TOTAL ERICKSON RESOURCES LTD

JOURNAL ENTRY INPUT LISTING PAGE 58

O'Brien Project PERIOD END: Sept 30/89

ID	REF-1	REF-2	DATE	ACCT NO	--- DESCRIPTION ---	AMOUNT
			89 JUL 10	40402	AIR NORTH CHARTER AND TRA	191.00
			89 AUG 11	40402	AIR NORTH CHARTER AND TRA	191.00
			89 SEP 19	40402	FRONTIER HELICOPTERS LTD.	31,141.05
			89 MAY 29	40402	CAPITAL HELICOPTERS INC.	692.50
			89 MAY 31	40402	CAPITAL HELICOPTERS INC.	692.50
			16 JUN 89	40402	TERRY TUCKER	23.29
			30 JUN 89	40402	ACCRUE FRONT. HELICOPTER	35,754.00
			31 JUL 89	40402	JULY ACCRUALS	7,342.05
			31 JUL 89	40402	JE#84 JNE ACCRUAL REV.	35,754.00CR
			31 AUG 89	40402	TO ACCRUE AUG PAYABLES	27,000.00
			30 SEP 89	40402	CORR. CODE PO 3147,79,80	17,789.00CR
			89 JUN 02	40402	WHITEHORSE TRAVEL	754.00
			89 JUL 10	40402	AIR NORTH CHARTER AND TRA	286.00
			89 AUG 14	40402	WHITEHORSE TRAVEL	111.80
			89 SEP 19	40402	FRONTIER HELICOPTERS LTD.	5,218.23
			31 JUL 89	40402	JULY ACCRUALS	20,165.09
			89 JUN 02	40402	WHITEHORSE TRAVEL	378.00
			89 JUL 10	40402	AIR NORTH CHARTER AND TRA	191.00
			89 AUG 14	40402	WHITEHORSE TRAVEL	111.80
			89 SEP 30	40402	FRONTIER HELICOPTERS LTD.	18,572.41
			31 JUL 89	40402	JULY ACCRUALS	3,207.50CR
			89 OCT 04	40402	FRONTIER HELICOPTERS LTD.	3,156.14
			89 JUL 18	40402	WHITEHORSE TRAVEL	111.80
			89 JUN 30	40402	ALKAN AIR LTD.	72.42
			89 JUN 14	40402	AIR NORTH CHARTER AND TRA	40.00
			89 JUL 18	40402	WHITEHORSE TRAVEL	111.80
			89 AUG 18	40402	FRONTIER HELICOPTERS LTD.	2,681.23
			89 AUG 18	40402	FRONTIER HELICOPTERS LTD.	20,000.16
			89 JUN 29	40402	TRANS NORTH AIR	740.30
			89 JUN 30	40402	ALKAN AIR LTD.	478.14
			89 JUL 19	40402	FRONTIER HELICOPTERS LTD.	30,346.02
			89 JUL 24	40402	ALKAN AIR LTD.	210.00
			89 JUL 19	40402	WHITEHORSE TRAVEL	219.60
			89 JUL 19	40402	WHITEHORSE TRAVEL	111.80
					* TOTAL ACCOUNT	130,344.63 *
			89 SEP 12	40403	KAREN PELLETIER	193.01
			89 AUG 14	40403	KLONDIKE INN	85.00
			89 JUN 15	40403	DOWNTOWN HOTEL	1,165.90
			89 JUL 17	40403	RICHARD BASNETT	23.45
			89 MAY 24	40403	TERRY TUCKER	123.20
			31 MAY 89	40403	MAY PAYABLES ACCRUED	34.15
			16 JUN 89	40403	KEVIN MAY	65.20
			16 JUN 89	40403	NORTHERN EXPLORATION	6,966.10
			16 JUN 89	40403	KEVIN MAY	61.00
			30 JUN 89	40403	K. MAY EXPENSES	115.20
			30 JUN 89	40403	T. TUCKER EXPENSES	36.90
			31 AUG 89	40403	K. MAY'S EXPENSE ACCOUNT	62.95
			89 JUN 05	40403	BEAVER LUMBER	68.68
			89 JUN 29	40403	DAWSON CITY GENERAL STORE	1,799.51
			89 JUN 30	40403	TERRY TUCKER	36.90CR

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*** COMPANY NOT ON FILE ***

PERIOD END:

ID	REF-1	REF-2	DATE	ACCT NO	--- DESCRIPTION ---	AMOUNT	
			89 MAY 31	40403	KAREN PELLETIER	3.85	
			89 AUG 31	40403	DAWSON CITY GENERAL STORE	2,252.62	
			89 JUN 07	40403	YUKON INN	140.09	
			89 AUG 19	40403	DOWNTOWN HOTEL	162.60	
			89 SEP 20	40403	DOWNTOWN HOTEL	479.10	
			89 MAY 28	40403	KEVIN MAY	141.88	
			89 JUN 30	40403	DOWNTOWN HOTEL	393.35	
			89 JUL 05	40403	YUKON INN	50.00	
			89 AUG 21	40403	YUKON INN	50.00	
			89 SEP 25	40403	DOWNTOWN HOTEL	161.75	
			89 MAY 31	40403	RICHARD BASNETT	285.95	
			89 JUL 16	40403	DAWSON CITY GENERAL STORE	794.45	
			89 AUG 21	40403	YUKON INN	50.00	
			89 SEP 23	40403	DAWSON CITY GENERAL STORE	475.89	
			89 AUG 13	40403	DAWSON CITY GENERAL STORE	1,187.95	
			89 SEP 21	40403	JAN TINDUE	445.43	
			89 JUL 22	40403	DOWNTOWN HOTEL	116.65	
			89 JUN 14	40403	DAWSON CITY GENERAL STORE	317.84	
			89 SEP 14	40403	BRUCE MACDONALD	94.31	
			89 JUL 15	40403	TRIPLE J HOTEL	233.85	
			89 JUN 09	40403	DAWSON CITY GENERAL STORE	588.36	
			89 AUG 26	40403	DAWSON CITY GENERAL STORE	1,355.64	
			89 JUL 31	40403	DOWNTOWN HOTEL	649.90	
			89 JUN 08	40403	DAWSON CITY GENERAL STORE	38.30	
			89 AUG 14	40403	KEVIN MAY	20.79	
			89 JUL 30	40403	DAWSON CITY GENERAL STORE	904.86	
			89 AUG 07	40403	THE MONTE CARLO LIMITED	21.25	
			89 JUN 20	40403	KAREN PELLETIER	86.00	
			89 JUN 20	40403	TERRY TUCKER	36.90	
			89 JUN 09	40403	DAWSON CITY GENERAL STORE	1,000.00	
					* TOTAL ACCOUNT	23,522.91	*
			89 SEP 14	40404	RICHARD BASNETT	360.00	
			89 JUL 24	40404	THE MONTE CARLO LIMITED	5.95	
			18 SEP 89	40404	RECEIVER GENERAL	4,815.00	
					* TOTAL ACCOUNT	5,180.95	*
			89 APR 01	40405	STRATAGEX LTD	643.84	
			89 SEP 15	40405	STRATAGEX LTD	1,241.39	
			89 JUL 25	40405	STRATAGEX LTD	1,006.84	
			89 AUG 31	40405	CANADIAN AIRLINES INTERNA	13.00	
					* TOTAL ACCOUNT	2,905.07	*
			89 JUN 06	40406	FLECK RESOURCES LTD.	100.00	
			89 AUG 17	40406	CANADIAN AIRLINES INTERNA	23.00	
			89 JUN 30	40406	ALKAN AIR LTD.	451.80	
			89 AUG 31	40406	FRONTIER FREIGHTLINES LTD	248.00	
			20 APR 89	40406	AERODAT	15,500.00	
			7 SEP 89	40406	GO GETTERS	824.50	
			89 JUN 06	40406	UNDERHILL & UNDERHILL	92.80	
			89 SEP 14	40406	CANADIAN AIRLINES INTERNA	43.00	
			89 JUN 30	40406	GO-GETTERS EXPEDITING LTD	227.50	

2

ID	REF-1	REF-2	DATE	ACCT NO	--- DESCRIPTION ---	AMOUNT	
			89 AUG 31	40406	CANADIAN AIRLINES INTERNA	43.00	
			89 SEP 08	40406	CANADIAN AIRLINES INTERNA	43.00	
			89 JUL 13	40406	GO-GETTERS EXPEDITING LTD	35.00	
			89 SEP 15	40406	FRONTIER FREIGHTLINES LTD	234.00	
			89 SEP 06	40406	CANADIAN FREIGHTWAYS LIMI	84.15	
			89 JUL 31	40406	GO-GETTERS EXPEDITING LTD	130.00	
			89 SEP 15	40406	GO-GETTERS EXPEDITING LTD	490.00	
			89 SEP 14	40406	FRONTIER FREIGHTLINES LTD	15.00	
			89 SEP 13	40406	FRONTIER FREIGHTLINES LTD	26.00	
			89 SEP 14	40406	FRONTIER FREIGHTLINES LTD	43.00	
					* TOTAL ACCOUNT	18,633.75	*
			89 AUG 02	40407	DOMINION BLUEPRINT & REPR	291.63	
			89 MAY 11	40407	DOMINION BLUEPRINT & REPR	143.88	
			89 SEP 19	40407	BEHNSEN GRAPHIC SUPPLIES	42.69	
			31 AUG 89	40407	DRAFTING LABOUR SMEETON	40.00	
			31 AUG 89	40407	DRAFTING LABOUR K. COMEAU	172.50	
			89 AUG 14	40407	DOMINION BLUEPRINT & REPR	19.10	
			89 SEP 14	40407	BRUCE MACDONALD	46.80	
			89 MAY 17	40407	GREEN APPLE SERVICES	34.00	
			89 AUG 15	40407	DOMINION BLUEPRINT & REPR	21.05	
					* TOTAL ACCOUNT	811.65	*
			89 SEP 06	40408	E.G. WHALLEY & SON LTD	561.00	
			31 AUG 89	40408	TO ACCRUE AUG PAYABLES	22,779.50	
			89 AUG 31	40408	D.J.DRILLING COMPANY LTD	22,779.50	
			89 SEP 21	40408	D.J.DRILLING COMPANY LTD	43,003.00	
			89 SEP 21	40408	JAN TINDUE	60.00	
					* TOTAL ACCOUNT	89,183.00	*
			89 JUL 04	40409	NORTECH SERVICES	45.00	
			89 MAY 08	40409	DENECKI CORPORATION	590.00	
			1 JUN 89	40409	DENECKI CORP.	590.00	
			7 JUL 89	40409	DENECKI CORP.	590.00	
			4 AUG 89	40409	DENECKI CORP.	590.00	
			7 SEP 89	40409	DENECKI CORP.	590.00	
			89 JUN 21	40409	CANSEL SURVEY	995.00	
			89 JUL 21	40409	CANSEL SURVEY	995.00	
					* TOTAL ACCOUNT	4,985.00	*
			89 MAY 01	40410	RICHARD BASNETT	4.48	
			89 JUN 07	40410	A-1 DELIVERY	1,200.00	
			89 AUG 11	40410	FRED'S PLUMBING & HEATING	30.14	
			89 JUN 24	40410	THE MONTE CARLO LIMITED	78.90	
			89 JUN 30	40410	TERRY TUCKER	37.05CR	
			31 MAY 89	40410	CODING CHANGE - R.BASNETT	4,374.85	
			16 JUN 89	40410	R. BASNETT	338.92	
			30 JUN 89	40410	T. TUCKER EXPENSES	37.05	
			89 MAY 01	40410	NEVILLE CROSBY INC.	1,819.15	
			89 JUN 06	40410	DUNCAN'S LTD.	75.47	
			89 AUG 06	40410	BEAVER LUMBER	14.36	
			89 SEP 12	40410	KAREN PELLETIER	32.62	

2

*** COMPANY NOT ON FILE ***

PERIOD END:

ID	REF-1	REF-2	DATE	ACCT NO	--- DESCRIPTION ---	AMOUNT
			89 JUN 28	40410	THE MONTE CARLO LIMITED	63.35
			89 JUN 05	40410	INSTABOX VANCOUVER LTD.	208.40
			89 AUG 06	40410	B.C. TELEPHONE COMPANY	14.36CR
			89 SEP 14	40410	CANADIAN AIRLINES INTERNA	24.60
			89 JUN 17	40410	THE MONTE CARLO LIMITED	27.80
			89 MAY 18	40410	CANADIAN AIRLINES INTERNA	91.80
			89 JUN 05	40410	THE SPORTSLODGE	18.99
			89 JUN 05	40410	BEAVER LUMBER	9.32CR
			89 MAY 24	40410	TERRY TUCKER	25.31
			89 AUG 29	40410	COMPUTER & HOME ELECTRONI	349.00
			89 AUG 29	40410	NEVILLE CROSBY INC.	666.50
			89 JUN 02	40410	THE SPORTSLODGE	309.17
			89 JUL 18	40410	NEVILLE CROSBY INC.	152.80
			89 SEP 21	40410	JAN TINDUE	80.52
			89 MAY 31	40410	BEAVER LUMBER	22.08CR
			89 MAY 31	40410	KAREN PELLETIER	488.05
			89 JUN 05	40410	YUKON PRO HARDWARE	42.56
			89 JUN 08	40410	B.C. TELEPHONE COMPANY	14.36
			89 SEP 11	40410	THE MONTE CARLO LIMITED	57.30
			89 AUG 18	40410	THE MONTE CARLO LIMITED	50.30
			89 MAY 31	40410	RICHARD BASNETT	55.99
			89 JUN 05	40410	YUKON PRO HARDWARE	163.65
			89 SEP 08	40410	THE MONTE CARLO LIMITED	53.95
			89 JUL 13	40410	THE MONTE CARLO LIMITED	11.85
			89 AUG 25	40410	THE MONTE CARLO LIMITED	48.10
			89 MAY 31	40410	BEAVER LUMBER	220.73
			89 JUN 05	40410	YUKON PRO HARDWARE	265.89
			89 SEP 08	40410	THE MONTE CARLO LIMITED	4.50
			89 MAY 19	40410	AQUA TECH SUPPLIES & SERV	20.00
			89 AUG 29	40410	THE MONTE CARLO LIMITED	38.54
			89 JUN 02	40410	YUKON PRO HARDWARE	132.75
			89 MAY 25	40410	BEAVER LUMBER	109.00
			89 AUG 29	40410	THE MONTE CARLO LIMITED	25.85
			89 JUN 06	40410	AQUA TECH SUPPLIES & SERV	433.82
			89 AUG 29	40410	THE MONTE CARLO LIMITED	27.00
			89 MAY 31	40410	NORTHERN METALIC SALES	69.09
			89 JUN 06	40410	THE BAY	25.98
			89 AUG 14	40410	THE MONTE CARLO LIMITED	17.85
			89 JUN 05	40410	BEAVER LUMBER	24.49
			89 AUG 31	40410	THE MONTE CARLO LIMITED	103.85
			89 JUN 10	40410	BEAVER LUMBER	15.60
			89 JUN 06	40410	FRED'S PLUMBING & HEATING	102.36
			89 JUN 06	40410	FRED'S PLUMBING & HEATING	37.08
			89 JUN 06	40410	GRIFFITHS HEATING & SERVI	412.60
			89 JUN 06	40410	ICG LIQUID GAS LTD.	152.00
			89 JUN 06	40410	NELSON'S HARDWARE	37.36
			89 JUN 05	40410	YUKON BUILDING SUPPLIES L	30.88
			89 JUN 14	40410	THE MONTE CARLO LIMITED	36.95
			89 JUN 14	40410	THE MONTE CARLO LIMITED	52.43
			89 JUN 22	40410	THE MONTE CARLO LIMITED	11.65
			89 JUN 20	40410	KAREN PELLETIER	183.85
			89 JUN 20	40410	TERRY TUCKER	37.05

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PERIOD END:

ID	REF-1	REF-2	DATE	ACCT NO	--- DESCRIPTION ---	AMOUNT
			89 JUN 05	40410	NEVILLE CROSBY INC.	261.50
			89 JUN 15	40410	NEVILLE CROSBY INC.	485.10
			89 JUN 07	40410	BEAVER LUMBER	535.28
			89 JUN 10	40410	BEAVER LUMBER	14.04
			89 JUN 10	40410	BEAVER LUMBER	15.60CR
			89 JUN 12	40410	BEAVER LUMBER	252.81
					* TOTAL ACCOUNT	15,089.76 *
			89 SEP 12	40411	KAREN PELLETIER	27.00
			89 JUL 17	40411	RICHARD BASNETT	60.00
			89 MAY 24	40411	TERRY TUCKER	23.00
			89 JUN 30	40411	TERRY TUCKER	12.00CR
			16 JUN 89	40411	KEVIN MAY	10.00
			30 JUN 89	40411	K. MAY EXPENSES	10.00
			30 JUN 89	40411	T. TUCKER EXPENSES	12.00
			89 AUG 04	40411	WHITEPASS PETROLEUM SERVI	240.00
			89 JUN 20	40411	KAREN PELLETIER	318.34
			89 MAY 31	40411	KAREN PELLETIER	179.00
			89 JUL 31	40411	VAN EVERY INC	144.00
			89 AUG 31	40411	WHITEPASS PETROLEUM SERVI	105.10
			89 SEP 08	40411	WHITEPASS PETROLEUM SERVI	210.10
			89 JUN 20	40411	TERRY TUCKER	12.00
			89 AUG 25	40411	WHITEPASS PETROLEUM SERVI	367.60
			89 JUL 29	40411	GAS SHACK LTD.	34.00
			89 MAY 31	40411	RICHARD BASNETT	90.95
			89 SEP 07	40411	WHITEPASS PETROLEUM SERVI	341.25
			89 JUL 13	40411	GAS SHACK LTD.	61.00
			89 JUN 24	40411	GAS SHACK LTD.	72.08
			89 AUG 25	40411	GAS SHACK LTD.	186.00
			89 SEP 02	40411	ICG LIQUID GAS LTD.	32.00
			89 JUN 24	40411	GAS SHACK LTD.	55.00
			89 JUL 24	40411	GAS SHACK LTD.	73.00
			89 AUG 25	40411	WHITEPASS PETROLEUM SERVI	2,100.00
			89 JUN 05	40411	WHITEPASS PETROLEUM SERVI	700.00
			89 AUG 11	40411	WHITEPASS PETROLEUM SERVI	270.00
			89 SEP 21	40411	JAN TINDUE	12.00
			89 AUG 04	40411	VAN EVERY INC.	204.00
			89 JUN 05	40411	WHITEPASS PETROLEUM SERVI	1,750.00
			89 SEP 15	40411	GAS SHACK LTD.	67.00
			89 JUN 05	40411	WHITEPASS PETROLEUM SERVI	700.00CR
			89 SEP 15	40411	GAS SHACK LTD.	62.00
			89 SEP 08	40411	GAS SHACK LTD.	20.50
			89 SEP 07	40411	GAS SHACK LTD.	62.50
			89 SEP 08	40411	VAN EVERY INC	96.00
					* TOTAL ACCOUNT	7,295.42 *
			89 JUL 06	40412	NORTHERN ANALYTICAL LABOR	137.25
			89 SEP 07	40412	NORTHERN ANALYTICAL LABOR	501.50
			89 JUL 13	40412	NORTHERN ANALYTICAL LABOR	0.25CR
			21 JUL 89	40412	NTHRN ANALYTICAL LAB.	410.25
			31 JUL 89	40412	JULY ACCRUALS	1,130.75
			31 AUG 89	40412	REALLOCATE PO#S3675,3683	850.25CR

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*** COMPANY NOT ON FILE ***

PERIOD END:

ID	REF-1	REF-2	DATE	ACCT NO	--- DESCRIPTION ---	AMOUNT	
			89 AUG 07	40412	NORTHERN ANALYTICAL LABOR	48.75	
			89 SEP 09	40412	NORTHERN ANALYTICAL LABOR	1,150.50	
			89 JUL 15	40412	FRONTIER HELICOPTERS LTD.	85.00	
			31 JUL 89	40412	JULY ACCRUALS	619.75	
			89 SEP 07	40412	NORTHERN ANALYTICAL LABOR	1,169.50	
			89 AUG 25	40412	NORTHERN ANALYTICAL LABOR	620.25	
			89 SEP 15	40412	NORTHERN ANALYTICAL LABOR	1,056.00	
			89 JUN 24	40412	NORTHERN ANALYTICAL LABOR	1,565.00	
			89 AUG 25	40412	NORTHERN ANALYTICAL LABOR	230.00	
			89 AUG 06	40412	NORTHERN ANALYTICAL LABOR	935.25	
			89 SEP 14	40412	NORTHERN ANALYTICAL LABOR	1,418.00	
			89 AUG 19	40412	NORTHERN ANALYTICAL LABOR	1,947.00	
			89 AUG 06	40412	NORTHERN ANALYTICAL LABOR	1,017.75	
			89 SEP 21	40412	NORTHERN ANALYTICAL LABOR	525.50	
			89 AUG 25	40412	NORTHERN ANALYTICAL LABOR	488.75	
			89 SEP 21	40412	NORTHERN ANALYTICAL LABOR	868.50	
			89 JUL 31	40412	NORTHERN ANALYTICAL LABOR	676.50	
			89 SEP 14	40412	NORTHERN ANALYTICAL LABOR	961.50	
			89 JUL 31	40412	NORTHERN ANALYTICAL LABOR	1,020.00	
			89 SEP 27	40412	NORTHERN ANALYTICAL LABOR	103.25	
			89 SEP 28	40412	NORTHERN ANALYTICAL LABOR	694.50	
			89 SEP 18	40412	NORTHERN ANALYTICAL LABOR	1,030.00	
			89 SEP 29	40412	BONDAR-CLEGG & COMPANY LT	364.50	
					* TOTAL ACCOUNT	19,925.00	*
			89 JUL 19	40414	GEO-PHYSI-CON GEOPHYSICAL	7,746.87	
			89 JUN 22	40414	AERODAT LIMITED	15,500.00	
			89 AUG 31	40414	GEO-PHYSI-CON GEOPHYSICAL	815.00	
			89 JUL 31	40414	GEO-PHYSI-CON GEOPHYSICAL	897.88	
					* TOTAL ACCOUNT	24,959.75	*
			30 JUN 89	40415	INTER CO CHARGES JUNE	1,788.05	
					* TOTAL ACCOUNT	1,788.05	*
			89 JUL 05	40416	DOMINION BLUEPRINT & REPR	145.81	
			89 JUN 08	40416	DOMINION BLUEPRINT & REPR	267.33	
			89 MAY 09	40416	EAGLE MAPPING SERVICES LT	11,970.00	
			88 DEC 30	40416	INTEGRAPHICS LTD.	73.98	
			89 AUG 31	40416	INTEGRAPHICS LTD.	42.43	
			31 JUL 89	40416	INTERGRAPHICS INV 5188	216.02	
			89 JUL 04	40416	DOMINION BLUEPRINT & REPR	48.60	
			89 JUN 12	40416	DOMINION BLUEPRINT & REPR	97.21	
			89 MAY 31	40416	RICHARD BASNETT	7.75	
			89 JUN 09	40416	DOMINION BLUEPRINT & REPR	52.22	
			89 JUL 10	40416	DOMINION BLUEPRINT & REPR	340.24	
			89 MAY 31	40416	DOMINION BLUEPRINT & REPR	172.13	
			89 JUN 02	40416	DOMINION BLUEPRINT & REPR	97.21	
			89 JUL 19	40416	DOMINION BLUEPRINT & REPR	65.44	
			89 MAY 24	40416	DOMINION BLUEPRINT & REPR	66.22	
			89 JUN 14	40416	DOMINION BLUEPRINT & REPR	97.21	
			89 JUL 18	40416	DOMINION BLUEPRINT & REPR	184.33	
			89 JUL 18	40416	DOMINION BLUEPRINT & REPR	48.37	

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PERIOD END:

ID	REF-1	REF-2	DATE	ACCT NO	--- DESCRIPTION ---	AMOUNT	
			89 JUN 29	40416	DOMINION BLUEPRINT & REPR	227.88	
			89 JUL 19	40416	DOMINION BLUEPRINT & REPR	63.17	
			89 JUN 26	40416	DOMINION BLUEPRINT & REPR	26.44	
			89 JUL 24	40416	DOMINION BLUEPRINT & REPR	218.72	
					* TOTAL ACCOUNT	14,528.71	*
			89 SEP 22	40419	NORCAN LEASING LTD.	778.26	
			89 JUN 24	40419	RICHARD BASNETT	7.00	
			89 JUN 30	40419	NORCAN LEASING LTD.	833.25	
			89 MAY 31	40419	NORCAN LEASING LTD.	701.55	
			89 AUG 31	40419	NORCAN LEASING LTD.	1,000.00	
			89 SEP 14	40419	BRUCE MACDONALD	219.50	
			89 JUL 31	40419	NORCAN LEASING LTD.	1,000.00	
					* TOTAL ACCOUNT	4,539.56	*
			31 JAN 89	40420	ALLOC WAGES TO PROJECTS	375.00	
			31 MAR 89	40420	P/R ALLOC PROJECTS MAR/89	700.00	
			30 APR 89	40420	R. BASNETT SALARY ALLOC.	200.00	
			31 MAY 89	40420	PAYROLL ALLOC. R. BASNETT	927.50	
			31 MAY 89	40420	PAYROLL ALLOC. T. TUCKER	390.00	
			31 MAY 89	40420	PAYROLL ALLOC. K. MAY	910.00	
			31 MAY 89	40420	PAYROLL ALLOC.K.PELLETIER	1,600.00	
			31 MAY 89	40420	PAYROLL ALLOC. S.SMEETON	880.00	
			30 JUN 89	40420	PROJECT ALLOC SANDY	1,480.00	
			30 JUN 89	40420	PROJECT ALLOC. KAREN	180.00	
			30 JUN 89	40420	PROJECT ALLOC. R. BASNETT	1,325.00	
			30 JUN 89	40420	PROJECT ALLOC. J TINDLE	4,398.68	
			30 JUN 89	40420	PROJECT ALLOC. K. MAY	2,925.00	
			30 JUN 89	40420	PROJECT ALLOC T. TUCKER	2,275.00	
			30 JUN 89	40420	PROJECT ALLOC K.PELLETIER	3,806.88	
			30 JUN 89	40420	PROJECT ALLOC W VANRANDEN	697.86	
			30 JUN 89	40420	PROJECT ALLOC. M. KENDALL	1,268.96	
			31 JUL 89	40420	R. BASNETT EXPL. LABOUR	397.50	
			31 JUL 89	40420	J. TINDLE EXPL. LABOUR	4,229.50	
			31 JUL 89	40420	T. TUCKER EXPL. LABOUR	1,170.00	
			31 JUL 89	40420	K. MAY EXPL. LABOUR	2,470.00	
			31 JUL 89	40420	K. PELLETIER EXPL. LABOUR	2,934.47	
			31 JUL 89	40420	S. SMEETON EXPL. LABOUR	1,880.00	
			31 JUL 89	40420	K. COMEAU EXPL. LABOUR	585.00	
			31 JUL 89	40420	MT. SKUKUM EMPLOYEES	1,070.00	
			31 AUG 89	40420	EXPL/LABOUR MAY	2,665.00	
			31 AUG 89	40420	EXPL/LABOUR BASNETT	2,120.00	
			31 AUG 89	40420	EXPL/LABOUR TINDLE	4,229.50	
			31 AUG 89	40420	EXPL/LABOUR PELLETIER	4,124.12	
			31 AUG 89	40420	EXPL/LABOUR TUCKER	1,690.00	
			31 AUG 89	40420	EXPL/LABOUR MCDONALD	800.00	
			30 SEP 89	40420	EXPLOR LABOUR TUCKER	2,600.00	
			30 SEP 89	40420	EXPLOR LABOUR BASNETT	530.00	
			30 SEP 89	40420	EXPLOR LABOUR TINDLE	3,045.24	
			30 SEP 89	40420	EXPLOR LABOUR PELLETIER	3,886.19	
			30 SEP 89	40420	EXPLOR LABOUR MACDONALD	2,000.00	
					* TOTAL ACCOUNT	66,766.40	*

2

PRINTED IN CANADA

*** COMPANY NOT ON FILE ***

JOURNAL ENTRY INPUT LISTING PAGE 65

PERIOD END:

ID	REF-1	REF-2	DATE	ACCT NO	--- DESCRIPTION ---	AMOUNT
			89 SEP 12	40421	KAREN PELLETIER	20.75
			89 APR 13	40421	WHITEHORSE TRAVEL	708.00
			89 AUG 14	40421	FRONTIER FREIGHTLINES LTD	120.00
			89 JUL 31	40421	ALKAN AIR LTD.	60.25
			31 MAY 89	40421	MAY PAYABLES ACCRUED	31.45
			30 JUN 89	40421	KEVIN MAY CHQ #1431	0.50
			31 AUG 89	40421	K. MAY'S EXPENSE ACCOUNT	22.05
			30 SEP 89	40421	WHITEHORSE OFFICE	43.50
			89 SEP 08	40421	NORTHERN METALIC SALES	57.50
			89 APR 13	40421	WHITEHORSE TRAVEL	708.00
			89 AUG 30	40421	H.W. SELLNER	333.00
			89 APR 03	40421	RICHARD BASNETT	172.50
			89 SEP 21	40421	JAN TINDUE	21.00
			89 AUG 14	40421	KEVIN MAY	17.00
			89 SEP 14	40421	BRUCE MACDONALD	227.10
					* TOTAL ACCOUNT	2,542.60 *
			31 MAY 89	40425	FEB,MAR FLOW THRU RECEIV.	700.00
			31 MAY 89	40425	CORR.JE#58 FLOW THR REC.	1,400.00CR
			30 JUN 89	40425	REV. JE#68 MAY-FLOW THRU	700.00
			30 JUN 89	40425	FLOW THR PREMIUM MARCH 89	153.13CR
			31 JUL 89	40425	FLOW THRU APR - JUNE 89	19,316.06CR
			31 AUG 89	40425	AUG FLOW-THROUGH PREMU1M	14,042.81CR
			30 SEP 89	40425	SEPT FLOW THRU PREMIUM	11,556.21CR
					* TOTAL ACCOUNT	45,068.21CR*
			89 JAN 09	40521	SOURDOUGH SECRETARIAL SER	360.00
					* TOTAL ACCOUNT	360.00 *
			28 MAR 89	40601	#1366 CODY HAWK	20,000.00
					* TOTAL ACCOUNT	20,000.00 *
			24 APR 89	40701	MINISTER FINANCE	480.00
			27 JUN 89	40701	KIM HUDSON	10,000.00
			31 AUG 89	40701	K. HUDSON OPTION RECODING	10,000.00CR
					* TOTAL ACCOUNT	480.00 *
			89 JUN 06	40706	BANBURY GOLD MINES LTD.	80.50
					* TOTAL ACCOUNT	80.50 *
			89 JAN 13	40708	PURVES RITCHIE	1,382.44
					* TOTAL ACCOUNT	1,382.44 *
			89 JUN 09	40716	DOMINION BLUEPRINT & REPR	46.86
					* TOTAL ACCOUNT	46.86 *

~~TOTAL FOR O'BRIEN~~
NET OF F/T $407 954.00

2

PRINTED IN CANADA

TOTAL ERICKSON RESOURCES LTD.

*** COMPANY NOT ON FILE ***

JOURNAL ENTRY INPUT LISTING PAGE 67

PERIOD END: Sept 30/89

THOR PROJECT

ID	REF-1	REF-2	DATE	ACCT NO	--- DESCRIPTION ---	AMOUNT
1	8-8-1	JE#1	31 AUG 89	40901	K. HUDSON OPTION RECODING	10,000.00
					* TOTAL ACCOUNT	10,000.00 *
			31 JUL 89	40902	JULY ACCRUALS	785.90
			30 SEP 89	40902	CORR. CODE PO 3147,79,80	17,789.00
					* TOTAL ACCOUNT	18,574.90 *
			31 AUG 89	40907	DRAFTING LABOUR K. COMEAU	30.00
					* TOTAL ACCOUNT	30.00 *
			89 AUG 18	40912	NORTHERN ANALYTICAL LABOR	3,632.75
			31 JUL 89	40912	JULY ACCRUALS	1,629.55
			31 AUG 89	40912	REALLOCATE PO#S3675,3683	850.25
			30 SEP 89	40912	ADJ JULY ACCR. NTHRN ANAL	95.55CR
			31 JUL 89	40912	JULY ACCRUALS	1,637.50
					* TOTAL ACCOUNT	7,654.50 *
			89 AUG 31	40914	GEO-PHYSI-CON GEOPHYSICAL	10,978.13
					* TOTAL ACCOUNT	10,978.13 *
			31 JUL 89	40915	INTER CO TEC	353.00
					* TOTAL ACCOUNT	353.00 *
			31 JUL 89	40920	R. BASNETT EXPL. LABOUR	530.00
			31 JUL 89	40920	J. TINDLE EXPL. LABOUR	169.18
			31 JUL 89	40920	T. TUCKER EXPL. LABOUR	650.00
			31 JUL 89	40920	K. MAY EXPL. LABOUR	390.00
			31 JUL 89	40920	K. PELLETIER EXPL. LABOUR	1,348.27
			31 AUG 89	40920	EXPL/LABOUR TINDLE	1,015.08
			31 AUG 89	40920	EXPL/LABOUR PELLETIER	793.10
			31 AUG 89	40920	EXPL/LABOUR TUCKER	780.00
					* TOTAL ACCOUNT	5,675.63 *
			31 AUG 89	40925	AUG FLOW-THROUGH PREMUIM	1,639.18CR
			30 SEP 89	40925	SEPT FLOW THRU PREMIUM	2,974.19CR
					* TOTAL ACCOUNT	4,613.37CR*
					TOTAL THOR PROJECT NET OF F/T	48,652.79
			27 SEP 89	41001	TARZAN GOLD INC.	4,000.00
					* TOTAL ACCOUNT	8,000.00 *
			89 SEP 19	41006	GUY THIBAULT EXPLORATION	200.00
			89 AUG 31	41006	STRATAGEX LTD	3,856.33
					* TOTAL ACCOUNT	4,056.33 *
			89 SEP 08	41010	PORCUPINE CANVAS INC.	167.40
					* TOTAL ACCOUNT	167.40 *

SUMMARY REPORT

for
work performed on the

TOOTH 1 -180 CLAIMS
O'BRIEN PROPERTY

and examinations of the

BUZ/HUD and JA/CON CLAIM BLOCKS

in the

ANTIMONY MOUNTAIN AREA
116 B/8
DAWSON MININIG DISTRICT, YUKON

for

TOTAL ERICKSON RESOURCES LTD.
September, 1988

By

MARK FEKETE, B.Sc.
December 14, 1988.

TOTAL ENERGOLD CORPORATION

TABLE OF CONTENTS

LIST OF APPENDICES

LIST OF FIGURES

LIST OF PLATES

1. INTRODUCTION

Research and field work conducted in the Dawson Mining District of Yukon, as part of the 1988 SKUKUM RECCE. Program, resulted in the staking of the TOOTH 1-180 Claims and the creation of the O'BRIEN Project. Shortly after the claims were staked a two man exploration crew spent six days on the property. Prospecting and orientation geochemical and geophysical surveys were the basis of this brief, preliminary work program.

This report provides the details, results and conclusions of work completed on the property in 1988 and recommends a comprehensive, integrated exploration program for the summer of 1989.

2. SUMMARY

The O'BRIEN Property was staked as the TOOTH 1-180 Claims in early September for Total Erickson Resources Ltd.

The area of the property is underlain by the Antimony Mountain Stock and associated dykes which intrude into a Precambrian to Cambrian clastic succession locally referred to as the "Grit" Unit. The contact between the intrusive and sedimentary rocks is characterized by silicic, potassic, and pyritic alteration related to thermal metasomatism.

The Antimony Mountain Stock is one of several alkaline intrusive bodies that form a southeast to northwest trending belt on the north margin of the Tintina Trench. Alkaline intrusive rocks are associated with economic precious metal deposits throughout the North American Cordillera. The Antimony Mountain area has good potential for the occurrence of similar deposits; several gold-bearing showings have already been located.

Shortly after the claims were staked a brief prospecting, geochemical and geophysical program was conducted on the property which included examinations of the BUZ/HUD and JA/CON claim blocks. The purpose of the program was to obtain the basic data required to plan a major exploration program on the property for 1989.

Forty three rock samples were collected for assay, geochemical or petrogaghic analysis on several prospecting traverses and the two property examinations. Mineralization observed to date occurs primarily in the form of shear related arsenopyrite-quartz, quartz-tourmaline-arsenopyrite and carbonate-tourmaline-arsenopyrite veins. Breccias and skarns are also present.

The best showing examined was the AJ Showing on Cody Hawk Resources Ltd.'s property. Gold assays were as high as 2.68 opt from some vein samples while previous drilling by Conwest Explorations indicates a zone 3-5m wide with grades of 0.5-1.0 opt Au. Orientation type soil and silt geochemical and VLF-EM surveys were completed adjacent to the showing to determine if it would display particular characteristics related to the above exploration techniques that could be used to discover other deposits in the area. Tonnages from the known veins and similar veins likely to be found could contain 0.5-1.0 million tons at 0.5 opt Au.

Based on the results of the soil and silt surveys it appears that shear related veins in the Antimony Mountain Area will respond to geochemical surveys. Metals that show anomalous trends related to the mineralization include gold, arsenic, bismuth and cadmium. Although antimony, copper, lead and zinc do not form trends that profile the veins, they may be useful in regional geochemical reconnaissance.

The results of the VLF-EM survey indicate that the veins are conductive and will respond to high frequency electromagnetic methods.

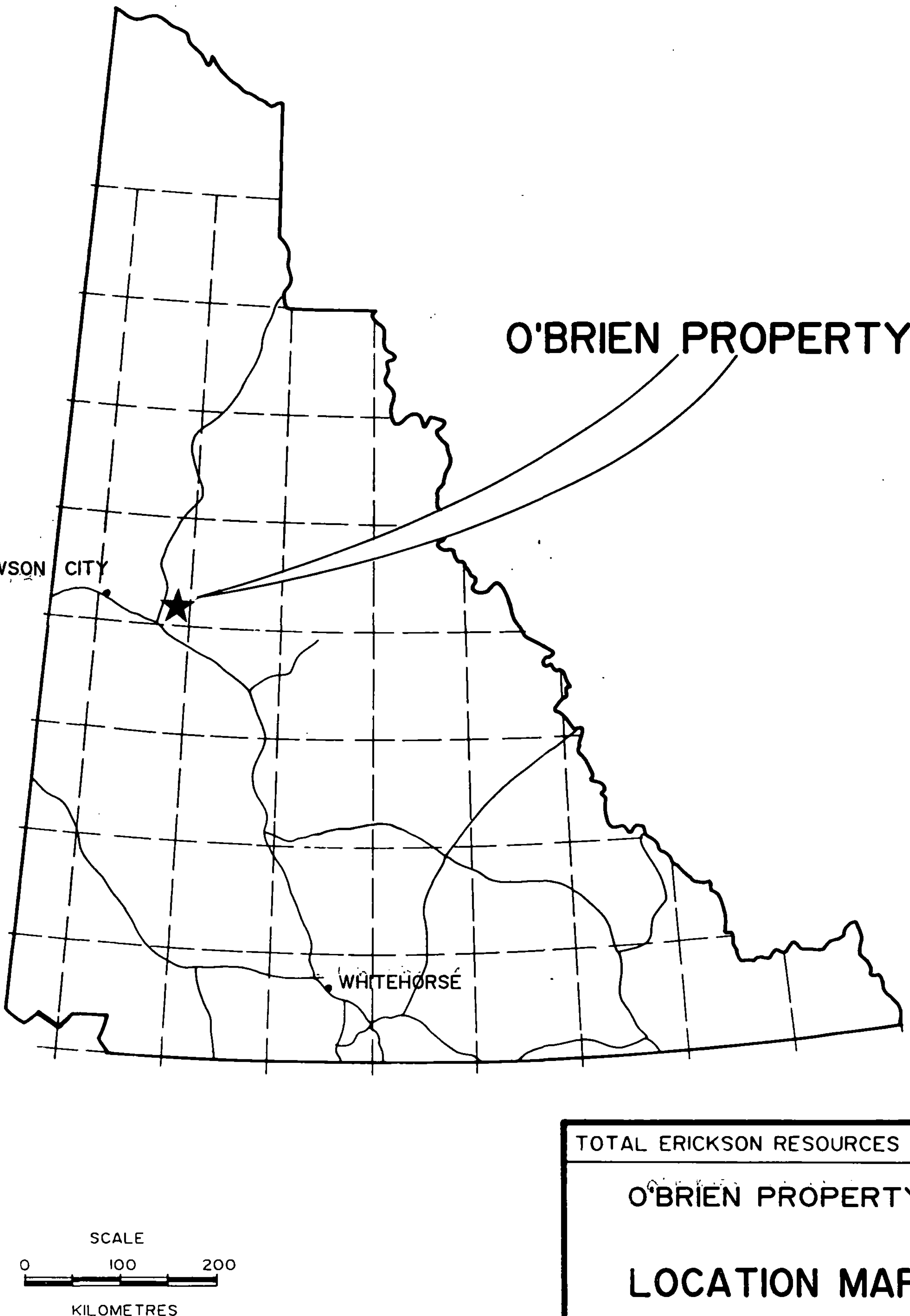
A three phase exploration program is recommended on the O'BRIEN Property for the summer of 1989. An airborne electromagnetic, magnetic and VLF-EM survey is the first phase of the recommended program, followed by a second phase of detailed geological, geochemical and ground geophysical surveys and a third phase of NQ diameter diamond drilling.

3. LOCATION and ACCESS

The O'BRIEN Property covers the area around Antimony Mountain in the Dawson Mining District of Yukon and appears on N.T.S Sheet 116 B/8. The centre of the claims is at Latitude 64 18'North and Longitude 138 13' West. Antimony Mountain lies approximately 8 km east of Kilometre 50 of the Dempster Highway. Dawson City , 65 km to the southwest is the nearest settlement that offers a full range of goods and services. By road it is roughly 100 km to Dawson City.

Access to the property is by helicopter available for charter in Dawson City on a year-round basis. Camp supplies, fuel, drills and work crews can be flown into the property from one of several staging points on the Dempster Highway. Round trip time form one of the staging points to any point on the property would be less than 0.15 helicopter hours.

There are several routes suitable for road construction if the O'Brien Property reaches a stage where road access is required.



TOTAL ERICKSON RESOURCES LTD.		
O'BRIEN PROPERTY		
LOCATION MAP		
N.T.S 116 B/8	TECH: M.F.	DATE: DEC. '88
SCALE: 1 : 555,000	D'TING:	FIGURE: 11

4. CLAIM STATUS

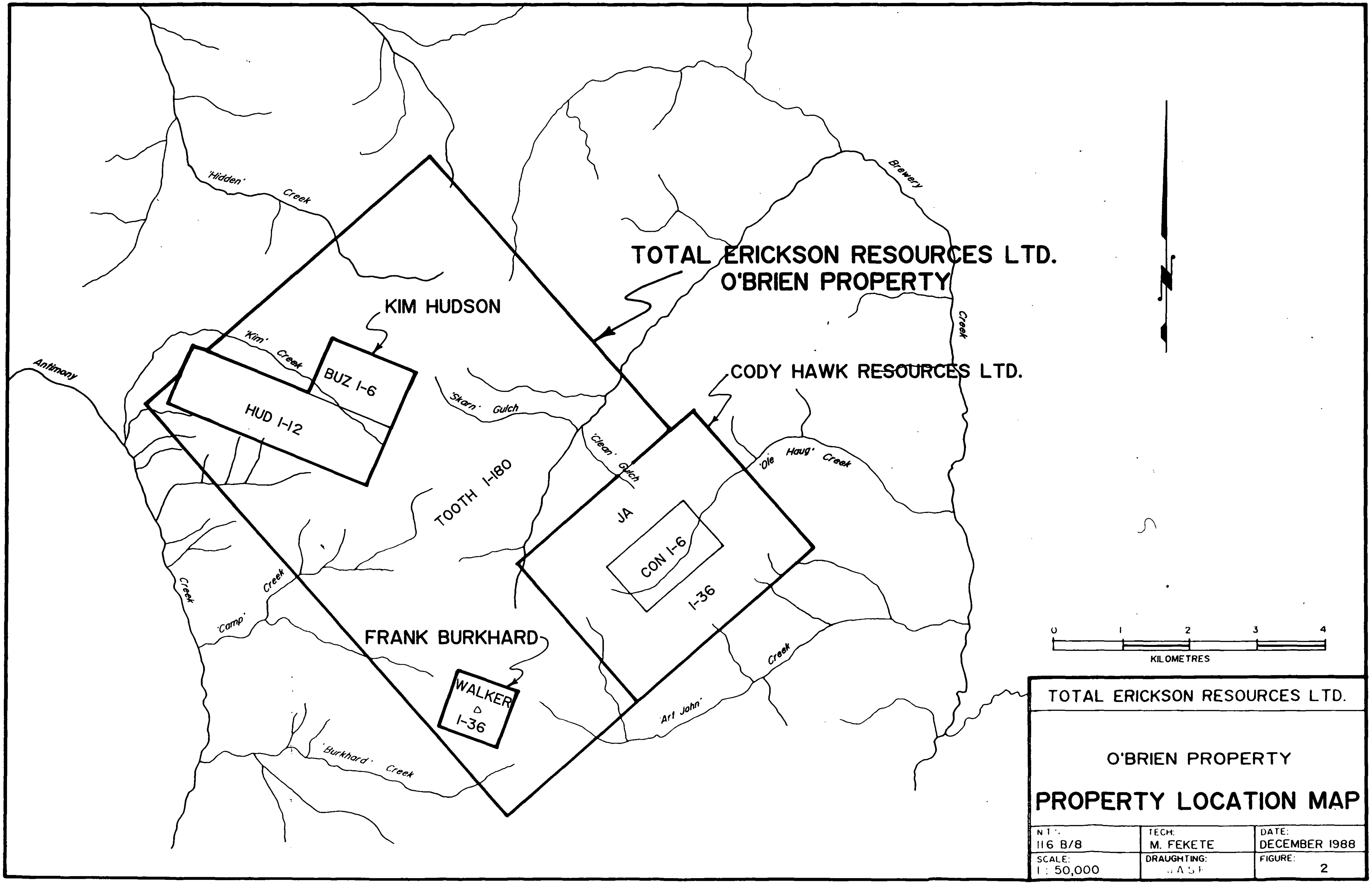
The O'BRIEN Property consists of 180 contiguous, unsurveyed mineral claims. The claims were located for Total Erickson Resources Ltd. by staking contractor Gordon Clark and Associates Ltd. on September 10, 1988 and were recorded with the Mining Recorder of the Dawson Mining District on September 16, 1988 under terms outlined in the Yukon Quartz Mining Act. The particulars of the claims are as follows:

Claim Name	Grant Number	Expiry Date
TOOTH 1-35 incl.	YB 17966 - YB 18000	16 September, 1989
TOOTH 36-180 incl.	YB 23001 - YB 23145	16 September, 1989

Several blocks of claims, located prior to the TOOTH Claims, are adjacent to the O'BRIEN Property (Figure 2.). The particulars of these claims, according to the records in the Dawson Mining District Office, are outlined as follows:

Claim Name	Grant Number	Expiry Date	Ownwership
WALKER 1-4 incl.	79291-79294	15 November, 1989	Frank Burkhard
HUD 1-12 incl.	YB 04001-40012	8 September, 1990	Kim Hudson
HUD 13-14 incl.	YB 17940-17941	14 September, 1989	Kim Hudson
BUZ 1-6 incl.	YB 04013-04018	8 September, 1990	Kim Hudson
CON 1-6 incl.	YA 87874-87879	21 March, 1990	Cody Hawk Resources Inc.
JA 1-36 incl.	YA 65342-65377	21 September, 1989	Cody Hawk Resources Inc.

There are several blocks of land in the area that were included in the 1984 Indian Land Claim selection. These are all "Site Specific" selections which means they were chosen to protect an existing building. In this area, it is likely that the buildings are a trapper's line cabins. These land selections do not present an obstacle to road access.



TOTAL ERICKSON RESOURCES LTD.
O'BRIEN PROPERTY
KIM HUDSON
CODY HAWK RESOURCES LTD.
FRANK BURKHARD
BUZ 1-6
HUD 1-12
TOOTH 1-180
JA
CON 1-6
1-36
WALKER
1-36
'Hidden' Creek
Brewery Creek
'Kim' Creek
Antimony
'Skarn' Gulch
'Clean' Gulch
'Ole Haug' Creek
Creek
'Camp' Creek
Creek
'Art John' Creek
'Burkhard' Creek
0 1 2 3 4
KILOMETRES
TOTAL ERICKSON RESOURCES LTD.
O'BRIEN PROPERTY
PROPERTY LOCATION MAP
116 B/8
TECH: M. FEKETE
DATE: DECEMBER 1988
SCALE: 1 : 50,000
DRAUGHTING:
FIGURE: 2

5. TOPOGRAPHY, VEGETATION and CLIMATE

Antimony Mountain lies within the Olgilvie Mountains which are noted for their ruggedness. Alpine type glaciation has left the area with broad U-shaped valleys that begin in cirques full of glacial morraine. Ridges are narrow and jagged (Plate 1.). Talus is present on most slopes and obscurs a large portion of rock outcrop. Elevations on the property range from 1200 m to 2040 m for a total elevation difference of 840 m.

The entire O'BRIEN Property is above treeline. Valley floors support a variety of grasses, mosses and lichens and thick patches of dwarf birch and Arctic willow. The relatively unstable side hills are barren of vegetation except for sporatic growths of rock lichen.

The climate is typical of northern continental regions, with long, often severe winters and short, but pleasant summers. The Dawson and Mayo districts of Yukon are noted for an extreme temperature range between seasons. Winter temperatures average -25 to -10 degrees C but "snaps" of -40 degrees C or colder are common. Summer days show average daily highs between 15 and 20 degrees C and are improved by long hours of daylight. Precipitation in the area is generally low. However, spring runoff lasts all summer and most creeks show continuous flow during the summer months.

Exploration work in area should be restricted to the period between early June and late September. Beyond this period the logistics of operation become expensive and hazardous.

1. The topography of the Antimony Mountain area is characterized by narrow, jagged ridges and U-sahped valleys due to Alpine-type glaciation.

6. HISTORY AND PREVIOUS WORK

Work was not recorded in the area until the early 1960's. In 1966 the AJ antimony-gold showing was discovered by Art Johns during a regional prospecting program by Conwest Exploration Company Ltd. Conwest staked the AJ 1-40 Claims and drilled the showing the same year.

The property sat idle until 1975 when Acheron Mines Ltd. optioned the property and completed blast trenching, orientation geochemical surveying and detailed geological mapping followed by three short diamond drill holes. The option was dropped apparently due to inconclusive results and difficulties with the option agreement.

Riocanex completed six short lines of vertical loop EM with a fixed transmitter set at 3555 and 888 Hz frequencies in 1980.

In 1983 Cody Hawk Resources Ltd. acquired the claims over the AJ showing through a deal which involved a cash payment and transfer of shares to Conwest Exploration Co. Ltd. In that year Cody hawk conducted VLF-EM, Vertical Loop EM, and MAG geophysical surveys and collected bulk samples for mineralogical and metallurgical testing.

The WALKER showing was also discovered in the mid-1960's (Green, 1972). Casca Enterprises walked a CAT into this property and did some bulldozer trenching in 1970.

In 1979 Anaconda Exploration Ltd. staked the THOR 1-192 claims in 1979 following regional reconnaissance work in the area. Between 1979 and 1980, Anaconda completed geochemical sampling, detailed geological mapping and 1000 m of diamond drilling. A MAX-MIN survey was also done but an instrument failure defaulted the data from interpretation.

Kim Hudson, a geologist and prospector staked the area of the THOR showings in 1987 well after the THOR Claims had lapsed. She has been prospecting and collecting rock samples on the claims for the last two field seasons.

Total Erickson Resources Ltd. staked the TOOTH Claims in 1988 after researching the available literature and a one day field examination of the area in late August.

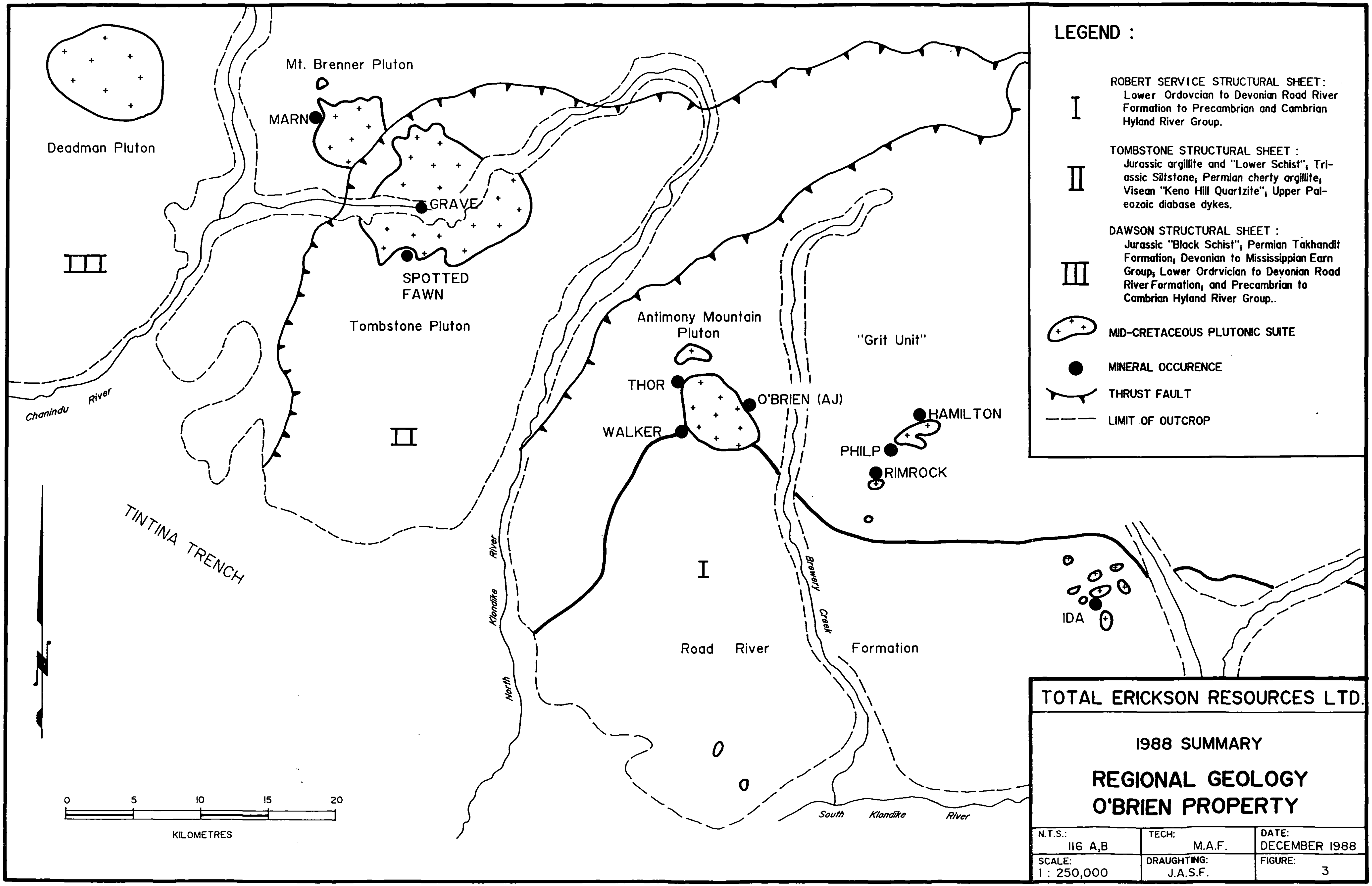
7. REGIONAL GEOLOGY

The Antimony Mountain Stock is one of several alkaline plutons that occur in a general southeast to northwest trend parallel to the north margin of the Tintina Trench. The Plutonic rocks were emplaced through folded and thrusted sediments of the Selwyn Basin during the Cretaceous (Green, 1972).

Sediments were deposited in the Selwyn Basin adjacent to the passive margin of the North American Craton between the mid-Proterozoic and the Jurassic in five major time-stratigraphic sequences (Anderson, 1987). Towards the close of the Jurassic, compressional stresses, related to the collision of allochthonous terranes of the Intermontane Belt with the continental margin, caused folding and thrusting of the Selwyn Basin sediments (Tempelman-Kluit, 1979). Up to 300 km of cumulative northeast-directed shortening occurred along three major thrust faults. These thrust faults divide the Selwyn Basin into four structural sheets (Anderson, 1987)

The O'BRIEN Property is located on the Robert Service Structural Sheet (Figure 3.) which is made up of Precambrian to Cambrian "Grit" Unit (Windermere Formation) sediments and Ordovician to Silurian Road River Formation slates and argillites (Green, 1972).

The TOOTH Claims were staked to cover the contact between the Antimony Mountain Stock and the surrounding sediments. Alkaline intrusions are known to be associated with precious metal deposits throughout the North American Cordillera (Mutschler et al., 1985). Examples of this sort of association include Cripple Creek in Colorado, the Sam Goosely Deposit and the Iskut/Sulphurets Camp in B.C., and the Ketza River Deposit in the Pelly Mountains of Yukon. Precious metal bearing showings have been discovered near several of the intrusive bodies in the same plutonic belt as the Antimony Mountain Stock (Figure 3.).


LEGEND :
ROBERT SERVICE STRUCTURAL SHEET: Lower Ordovcian to Devonian Road River Formation to Precambrian and Cambrian Hyland River Group.
TOMBSTONE STRUCTURAL SHEET : Jurassic argillite and "Lower Schist"; Triassic Siltstone; Permian cherty argillite; Visean "Keno Hill Quartzite"; Upper Paleozoic diabase dykes.
DAWSON STRUCTURAL SHEET : Jurassic "Black Schist"; Permian Takhandit Formation; Devonian to Mississippian Earn Group; Lower Ordrvician to Devonian Road River Formation, and Precambrian to Cambrian Hyland River Group..
MID-CRETACEOUS PLUTONIC SUITE
MINERAL OCCURENCE
THRUST FAULT
LIMIT OF OUTCROP
Deadman Pluton
Mt. Brenner Pluton
MARN
GRAVE
SPOTTED FAWN
Tombstone Pluton
III
II
I
Chanindu River
TINTINA TRENCH
Antimony Mountain Pluton
THOR
O'BRIEN (AJ)
WALKER
"Grit Unit"
HAMILTON
PHILP
RIMROCK
IDA
North Klondike River
Brewery Creek
Road River Formation
South Klondike River
0 5 10 15 20
KILOMETRES
TOTAL ERICKSON RESOURCES LTD.
1988 SUMMARY
REGIONAL GEOLOGY
O'BRIEN PROPERTY
N.T.S.: 116 A,B
TECH: M.A.F.
DATE: DECEMBER 1988
SCALE: 1 : 250,000
DRAUGHTING: J.A.S.F.
FIGURE: 3

8. GEOLOGY

8.1 Introduction

Detailed geological mapping was not the intent of the brief 1988 program. However a number of hand specimens were collected to provide an basic initial lithological and mineralogical inventory of the property. Six samples were sent to Vancouver Petrograghics for thin section analysis (Appendix III). Another thirty seven samples were collected during prospecting traverses (Figures 4. and 5.) and sent to Min-En. Labratories for geochemical and/or assay analysis (Appendices I and II). A bulk sample was also collected for metallurical testing but has not been sent to a lab yet.

8.2 Lithology and Alteration

The O'BRIEN Property is on the Northwest flank of the Tintina trench where an alkaline syenite body, referred to as the Antimony Mountain Stock, intrudes a well bedded clastic "Grit" Unit of Paleozoic shales and quartzites (Green, 1972). The contact between the Antimony Mountain Stock and the surrounding sediments is marked by a metasomatic thermal aureole and alteration in both the sediments and the intrusive.

The "Grit" Unit consists of interlayered bands of shales, quartz arenites and calc-arenites. These beds have been thermally altered to hornfels, quartzites and skarns with the degree of alteration increasing towards the contact. The contact zone is also marked by pyrite-pyrrotite alteration in the sediments which is expressed on surface by dark brown to red limonitic gossans. The following descriptions of the sedimentary lithologies are based on field observations and petrographic reports.

The shales are typically black, maroon or green and vary from slightly to very fissile. They often show fine laminations (Plate 2) and curious mottles of diagenetic or epigenetic hydrothermal origin (Plate 3). Primary textures are preserved in the hornfelsed equivalents (thin section 88-C, Appendix III). The hornfels are usually black and competent with an imperfect concoidal fracture.

Most of the arenaceous rocks are poorly sorted, dirty, quartz sandstones. Grain sizes range from fine to coarse. Colour varies from buff white to brownish-black. The quartzite equivalents of the quartz arenites generally show a blocky fracture pattern, especially towards shear zones.

Fresh calc-arenites were not observed on the property but limy beds are reported to occur (Tempelman-Kluit, 1981). Bands of skarnified equivalents were located. The skarns have a banded green and brown appearance. In the field it was initially thought that colour banding was caused by alternating layers of diopside and garnet. However the skarn consists mainly of plagioclase and diopside with no garnet (Thin section 88-E, Appendix III).

The sediments appear to be conformable and show a general south to southeast dip. In places they show complex folding and high angle faulting.

The main intrusive is a hornblende-pyroxene-bioite syenite. It often shows porphyritic, sometimes trachytic, textures. Towards the contact, potassic alteration is indicated by secondary K-feldspar and biotite growths (Plate 4.). Syenite, lamprophyre and intermediate (often sulphide-rich) dykes, probably genetically related to the main syenite, body are common.

The lamprophyre dykes (Plate 5.) consist of phenocrysts of phlogopite/biotite and clinopyroxene in a groundmass dominated by K-feldspar and plagioclase with minor mafics, carbonates and quartz (Thin section 88-D, Appendix III).

High temperature metasomatism is evidenced in a sample of one of the intermediate dykes (Thin section 88-A). Actinolite occurs as rims on biotote phenocrysts. Clinopyroxene occurs in veinlets and replacements of hornblende. Fine-grained K-feldspar and biotite dominate the groundmass.

8.3 Mineralization and Rock Geochemistry

Veins of massive sulphides with quartz-calcite-tourmaline gangue form the most prevalent deposit type within 200m of the syenite contact. The veins form within zones of sheared quartzite and hornfels. The shear zones are usually near vertical and subparallel a nearby sedimentary-intrusive contact. Typically, they are very rusty and closely fractured. Veins in place were observed at the AJ showing, on the CON Property, and at the GULLY AND R9 showings on the former THOR Property. No veins in place were discovered on any of the prospecting traverses but vein material in float and a few shear zones were observed. Prospecting did result in the location of both skarn and mineralized breccia.

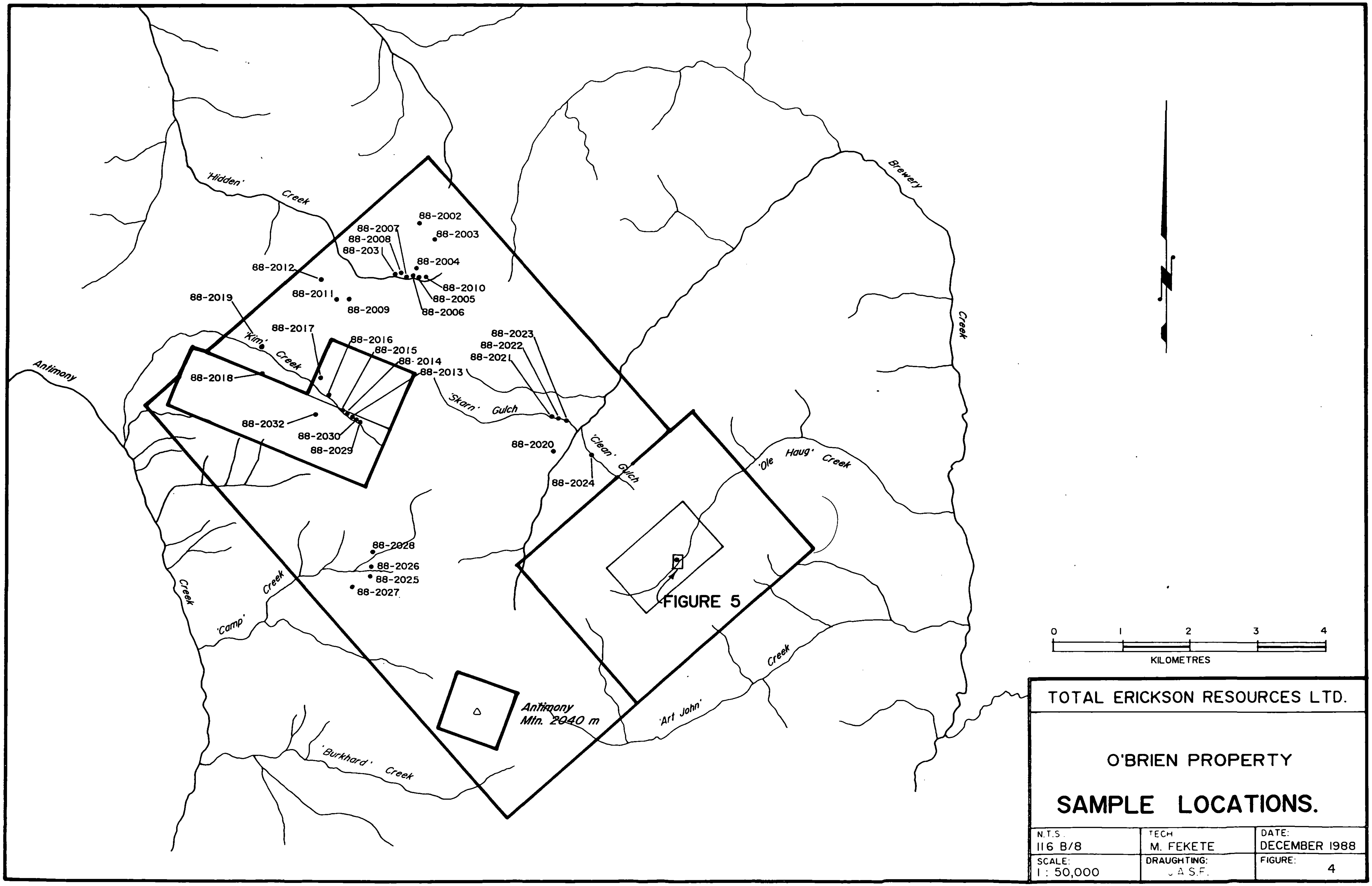
The AJ is the best showing known to date. Previous work has delineated three shear zones. Geochemistry, geophysics and diamond drilling by Conwest Explorations indicates one of the zones is 3-5m wide with grades of 0.5-1.0 opt Au. The SOUTH and NORTH Zones both occur in "Ole Haug Creek" (local name) and are within 75 m of each other (Figure 5.). Veins in these zones consist of massive arsenopyrite with minor scorodite, tourmaline and quartz (Plate 6.; Polished Section 88-F, Appendix III). The veins vary from 0.2 to

2.4 m wide and are generally oriented 110/85 S but appear to be discontinuous along strike (Plate 7.). Samples of the veins were assayed for gold by fire and cyanide leach methods. The fire assays consistently returned greater gold values than cyanide leach assays. The best assay was 2.683 opt Au over 2.0 m. The samples were also analyzed for copper, lead, zinc, silver, arsenic and antimony and returned anomalous values for all of these elements except zinc. The RIDGE Showing, on the west-facing slope above the creek showings, was not examined.

The second set of previously discovered showings that were examined are the GULLY and R9 which are now located on the BUZ/HUD Property (Figure 4.). The R9 consists of several narrow arsenopyrite-quartz-tourmaline veins which outcrop in "Kim's Creek" (local name) a few hundred metres above the old Anaconda camp. The veins occupy rusty shears and typically show composite textures with well-developed euhedral crystals of quartz, needles of tourmaline, and blebs of arsenopyrite with minor amounts of other sulphides (Plates 8. and 9.). Generally quartz content is about 50%, tourmaline is 25% and sulphide is 25%. The samples were analyzed by 12-element ICP and wet AA gold techniques. Only one sample, a 0.2 m chip, returned a significantly anomalous response; Sample 2013 showed anomalous values for arsenic, bismuth, cadmium, copper, antimony and gold. There are apparently six veins in the GULLY Showing, which is on the south slope above the old Anaconda camp, but only one vein was located. The vein is only 0.15 m wide and occurs in a shear directly below an old drill pad on the cliff. It consists of massive arsenopyrite and chalcopyrite but returned only a slightly anomalous gold value.

Quartz, tourmaline float was discovered in "Skarn Gulch" a few metres below an outcrop of skarn but neither the skarn or the vein float returned any anomalous values. A quartz breccia with a green stain (Plate 10.) that was discovered in "Clean Gulch" did not return any significant values. In "Camp Creek" a sample of quartz float with malachite/azurite stain returned 690 ppb gold and anomalous values for arsenic, copper and bismuth. A shear zone, barren of sulphides, discovered in "Hidden Valley" failed to return any anomalous values.

Rock sample descriptions are included in the following rock sample reports on the following two pages. Complete analytical results appear in Appendix II.


'Hidden' Creek
Brewery Creek
Creek
Antimony
'Kim' Creek
'Skarn' Gulch
'Clean' Gulch
'Ole Haug' Creek
Creek
'Camp' Creek
'Art John' Creek
'Burkhard' Creek
Antimony Mtn. 2040 m
FIGURE 5
88-2002
88-2003
88-2007
88-2008
88-2031
88-2004
88-2012
88-2010
88-2005
88-2006
88-2011
88-2009
88-2019
88-2017
88-2016
88-2015
88-2014
88-2013
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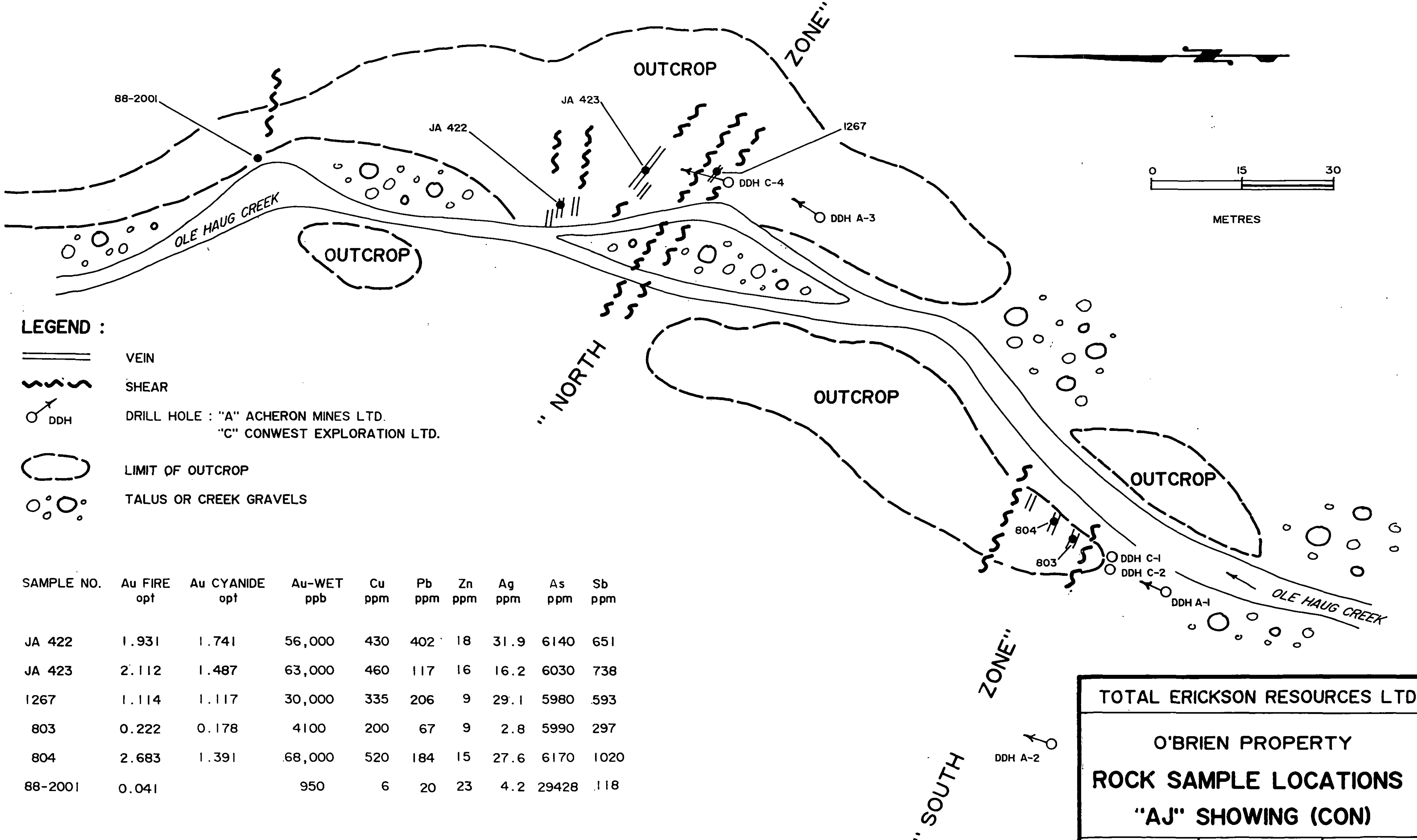
88-2029
88-2023
88-2022
88-2021
88-2020
88-2024
88-2028
88-2026
88-2025
88-2027
0 1 2 3 4
KILOMETRES
TOTAL ERICKSON RESOURCES LTD.
O'BRIEN PROPERTY
SAMPLE LOCATIONS.
N.T.S. 116 B/8
TECH M. FEKETE
DATE: DECEMBER 1988
SCALE: 1 : 50,000
DRAUGHTING:
FIGURE: 4



SAMPLE NO.	Au FIRE opt	Au CYANIDE opt	Au-WET ppb	Cu ppm	Pb ppm	Zn ppm	Ag ppm	As ppm	Sb ppm
JA 422	1.931	1.741	56,000	430	402	18	31.9	6140	651
JA 423	2.112	1.487	63,000	460	117	16	16.2	6030	738
1267	1.114	1.117	30,000	335	206	9	29.1	5980	593
803	0.222	0.178	4100	200	67	9	2.8	5990	297
804	2.683	1.391	68,000	520	184	15	27.6	6170	1020
88-2001	0.041		950	6	20	23	4.2	29428	118

AFTER HOLCAPEK, 1975

TOTAL ERICKSON RESOURCES LTD.

O'BRIEN PROPERTY

ROCK SAMPLE LOCATIONS "AJ" SHOWING (CON)

N.T.S.: 116 B/8	TECH: M.F./ A.G.N.	DATE: SEPTEMBER 1988
SCALE: 1 : 600	DRAUGHTING: J.A.S.F.	FIGURE: 5

TOTAL ERICKSON RESOURCES LTD.

PROPERTY: TOOTH

N.T.S: 116 B/8

DATE: SEPTEMBER, 1988.

SAMPLE REPORT

SAMPLE NO.	LOCATION	DESCRIPTION	ATTITUDE	WIDTH M	Au	Ag	Pb	Zn	Cu	As	Sb
88-2001	CON VALLEY	Rusty oxide from shear zone		grab							
2002	HIDDEN VALLEY	Rusty sst bx w/ bx frags up to 5cm; drusy qtz filling spaces between fragments		float							
2003	"	drusy qtz in open spaces in rusty, gritty sst		float							
2004	"	qtz mat'l w/ 1% py in blebs or minor open space fillings		Float							
2005	"	qtz mat'l w/ rusty fractures & minor drusy qtz		float.							
2006	"	qtz mat'l; bx'ed w/ open space drusy textures wall rock bx. frags; v rusty weathering		float.							
2007	"	qtz bx w/ large frags of sil wallrock; minor dissem py and cpy.		float.							
2008	"	shear zone: 2m wide; sample from bx'ed qtz bearing section of shear.	070/65°S	1.2							
2009	"	Rusty float w/ open spaces filled w/ qtz or sx py + aspy + cpy?		float.							
2010	"	drusy qtz mat'l from creek w/ minor aspy.		float.							
2011	"	qtz vein bx w/ fragments up to 3cm of greenish shale; no sx.		float.							
2012	"	black shale w/ 1-2% sx (syngenetic); v. rusty ox. weathered surface		float.							
2013	KIM'S VALLEY	aspy w/ qtz gangue in narrow shear	080/90°	0.2							
2014	"	mottled gy/white qtz in shear; py on fr + aspy/py dissem as blebs sx 5%	080/90°	0.5							
2015	"										

TOTAL ERICKSON RESOURCES LTD.

PROPERTY: TOOTH.
N.T.S: 116 B/8.
DATE: SEPTEMBER, 1988

SAMPLE REPORT

SAMPLE NO.	LOCATION	DESCRIPTION	ATTITUDE	WIDTH M	Au	Ag	Pb	Zn	Cu	As	Sb
88-2016	KIM'S VALLEY										
88-2017	"										
		or outside w/ 10% dissem. aspy, py w/ bladed mineral possible tremolite.									
88-2018	"										
88-2019											
88-2020	BENNY VALLEY	sheared syenite; light pink colour (hematite or possible K spar alt'n)	000/90°	1 m.							
88-2021	SKARN GULCH.	skarn alternating green (diop) + brown (garnet) bands; v. hard & silicified; varies from 2 to 5 cm wide	125/55SW	grab.							
88-2022		shear zone 1 m wide w/ thin calcite vein; sx; host rock is quartzite	020/90	.35 m							
88-2023		dark mineral w/ radiating habit (actinolite or tourmaline); qtz w/ 5% sx (py + po + cpy).		float.							
88-2024	CLEAN GULCH	qtz breccia; angular fx up to 1cm; distinctive green stain - possible oxide after aspy		float.							
88-2025.	CAMP CREEK	qtz float w/ malachite/azurite stain; also a dk red oxide?		float.							
88-2026	"	narrow shear in hnfls; As oxide stain no visible sx.	045/90	grab.							
88-2027	"	rusty outcrop in creek; alt. dk red to rusty bands py + aspy?		grab.							

TOTAL ERICKSON RESOURCES LTD.

PROPERTY: TOOTH

N.T.S: 116 B/8

DATE: SEPTEMBER, 1988

SAMPLE REPORT

SAMPLE NO.	LOCATION	DESCRIPTION	ATTITUDE	WIDTH M	Au	Ag	Pb	Zn	Cu	As	Sb
88-2028	CAMP CREEK	qtz float		Float.							
88-2029	KIM'S VALLEY	multiple vein w/ bands of tourmaline (25%) quartz (50%) sx (25%); sx → aspy > py > cpy ± ga sph		Float.							
88-2030	"	multiple vein as above; float from creek.		float.							
88-2031	HIDDEN VALLEY	from shear (chip sample 2008); qtz bx.	070/65°S.	grab.							
88-2032	KIM'S VALLEY	in gulch below drill pad; narrow shear aspy vein	040/90	0.2 m.							

TOTAL ERICKSON RESOURCES LTD.

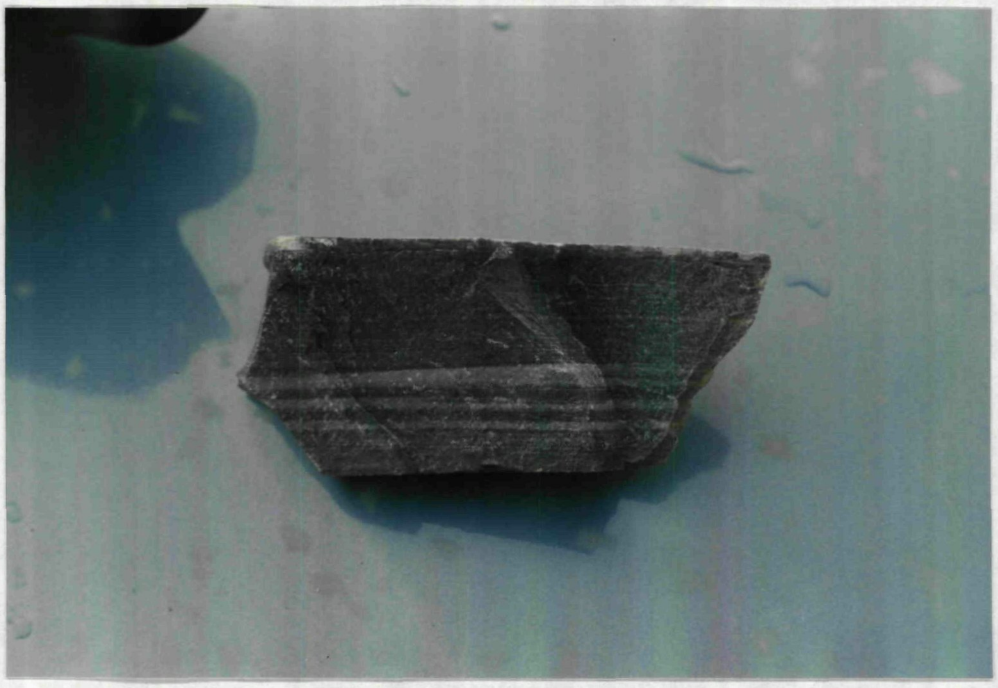
PROPERTY: JA-CON.

N.T.S: 116 B/8

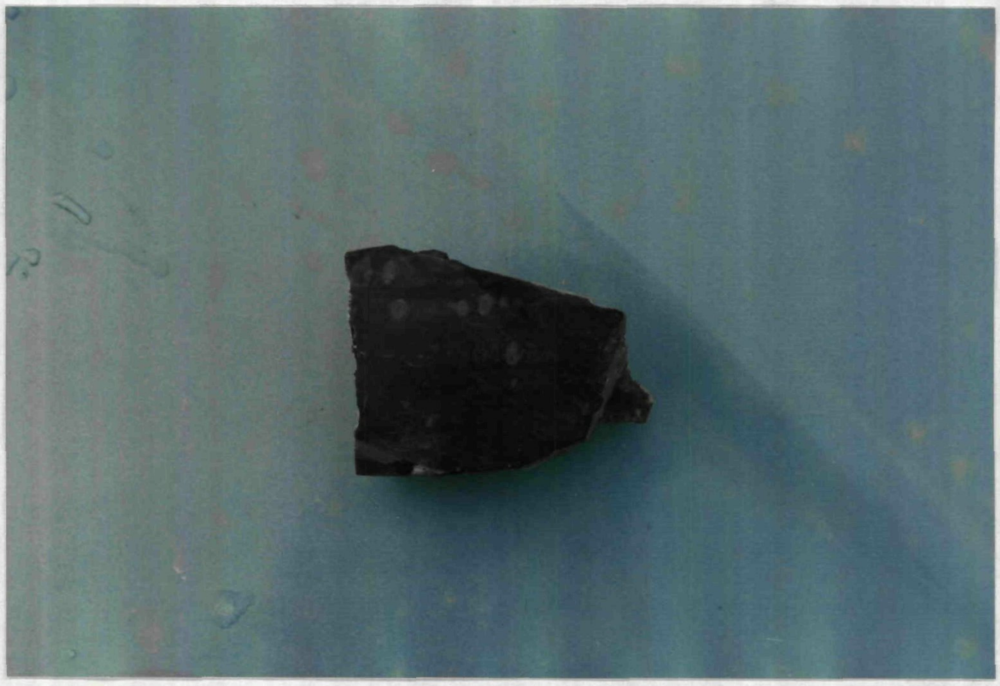
DATE:

SAMPLE REPORT

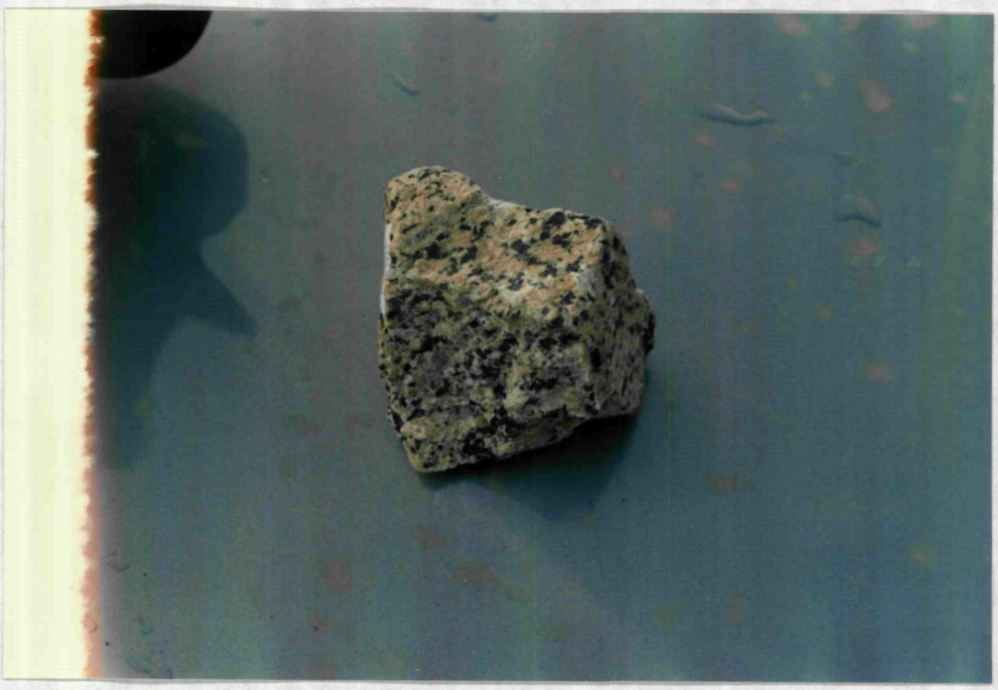
SAMPLE NO.	LOCATION	DESCRIPTION	ATTITUDE	WIDTH M	ANALYTICAL RESULTS Au	Ag	Pb	Zn	Cu	As	Sb
JA 422	AJ-Fig.5.	Rusty shear w/ quartz (10%) and massive arsenopyrite	110/85°S	1.5							
JA 423	"	Massive arsenopyrite	110/85°S	2.4							
803	"	Massive arsenopyrite vein in sheared quartzite	110/85°S	2.0							
804	"	Massive arsenopyrite/scorodite vein in sheared quartzite	110/85°S	2.0							
1267	"	Narrow quartz arsenopyrite vein		grab							
88-2001	"	Rusty oxide from shear zone		grab							



2. Quarzite showing primary lamination textures.



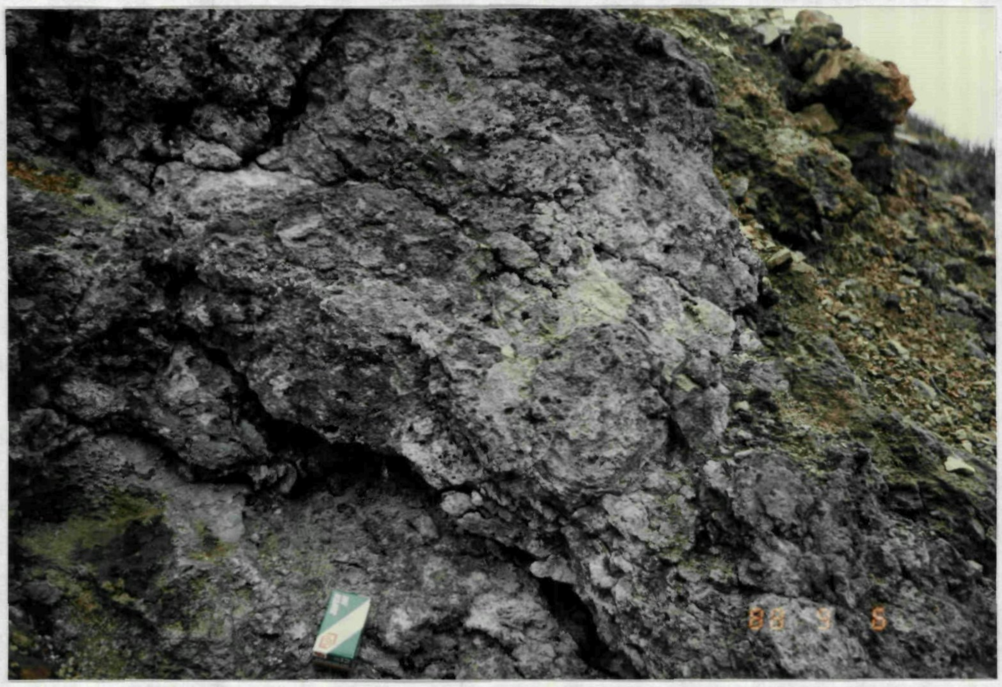
3. Mottles of hydrothermal or diagenetic origin in hornfelsed shale.



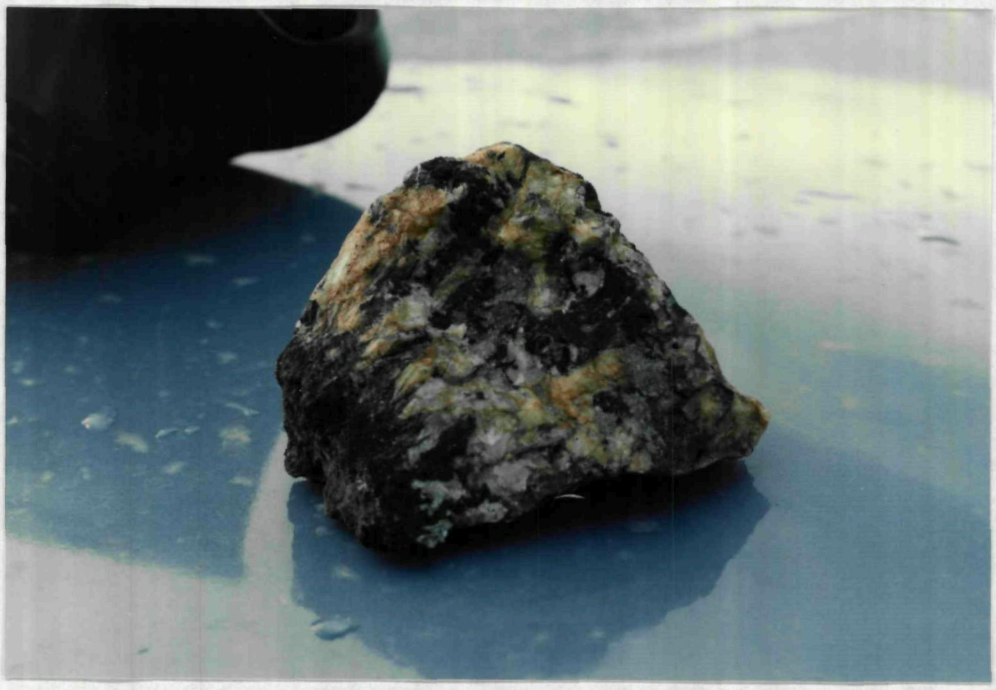
4. Potassic alteration is displayed in the Antimony Mountain Syenite by secondary biotite and K-feldspar overgrowths.

5. Lamprophyre dyke.

6. AJ Showing, NORTH Zone; Arsenopyrite-scorodite-quartz-tourmaline vein.



7. AJ Showing, SOUTH Zone; Massive arsenopyrite vein in place.



8. R9 Showing, BUZ/HUD (THOR); Quartz-tourmaline-arsenopyrite vein.

9. R9 Showing, BUZ/HUD (THOR); Quartz-tourmaline-calcite vein.

10. Breccia from "Clean Gulch"

9. SILT AND SOIL GEOCHEMISTRY

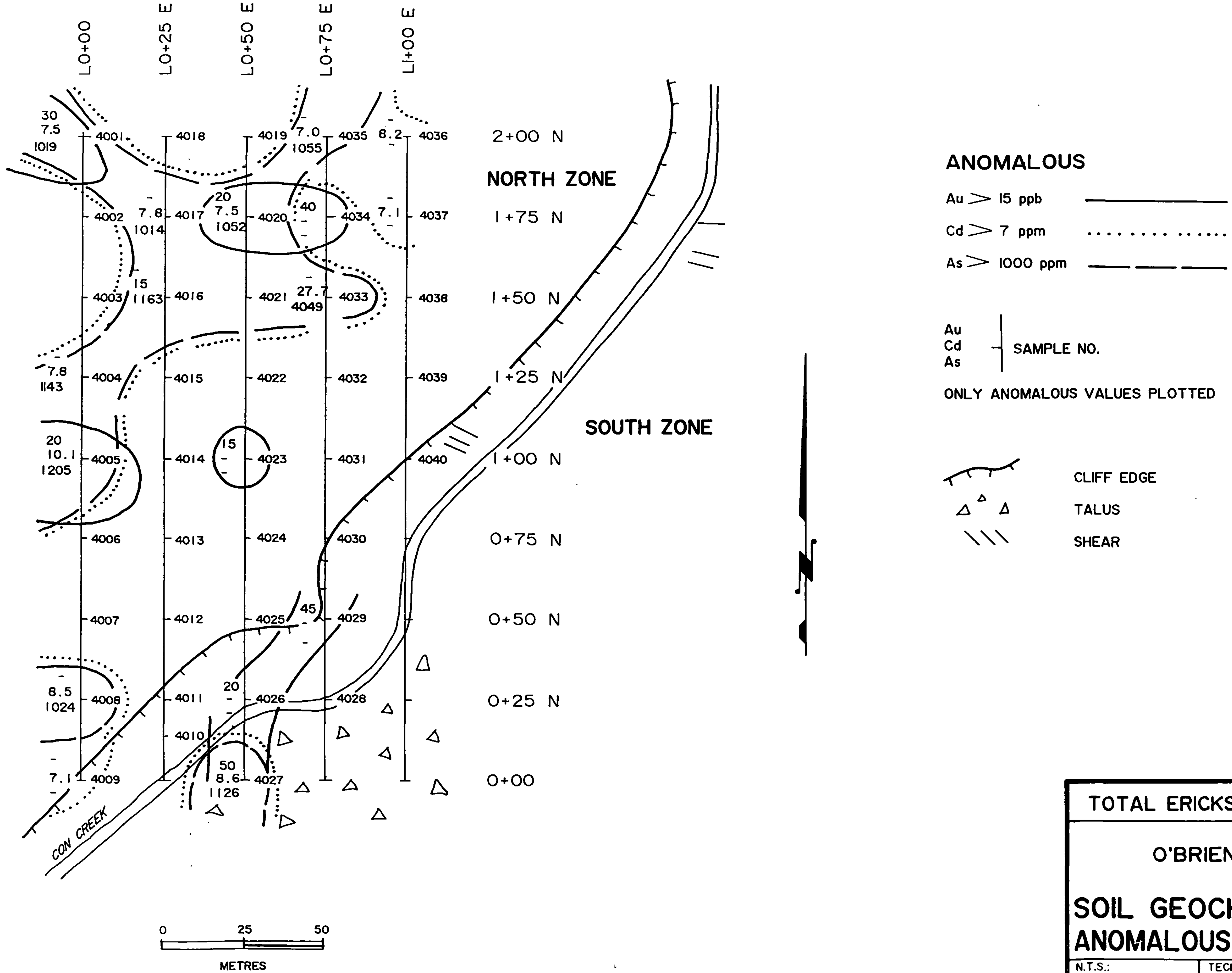
Two small orientation geochemical surveys were completed near the AJ showing on the CON Claims. The samples were analyzed for gold and twelve other elements to determine if geochemisty would be an effective exploration tool on the O'BRIEN Property.

On the east side of "Ole Haug Creek", a small grid was laid out with a base line at 110 degrees, parallel to the general orientation of the shears in the SOUTH Zone (Figure 6.). Samples were collected at 25 m spacings on five lines spaced 25 m apart. Anomalous gold values were obtained in some samples. The analytical results also revealed that arsenic, bismuth, and cadmium are three elements that share a consistent relationship with gold. These elements also show good background-anomalous value contrast. Some samples returned anomalous responses for copper, lead, antimony, and zinc but these are not always consistent with elevated gold values.

Threshold values were arbitrarily chosen for several elements without any statistical calculations. These values and corresponding peak values are summarized as follows:

Metal	Threshold	Peak	Gold Correlation
Au ppb	15	2400	
As ppm	4049	1000	good
Bi ppm	8	24	good
Cd ppm	8	27.7	good
Cu ppm	20	169	moderate
Pb ppm	50	390	moderate
Sb ppm	20	69	moderate
Zn ppm	100	261	moderate

Eleven silt samples were collected at 200 m intervals from "Ole Haug Creek" downstream from the AJ showing (Figure 7.). The silt samples show a much greater metal concentration than soil samples but reflect the same trends and associations between various metals. There is a definite geochemical gradient in the silt which increases towards the AJ showing.

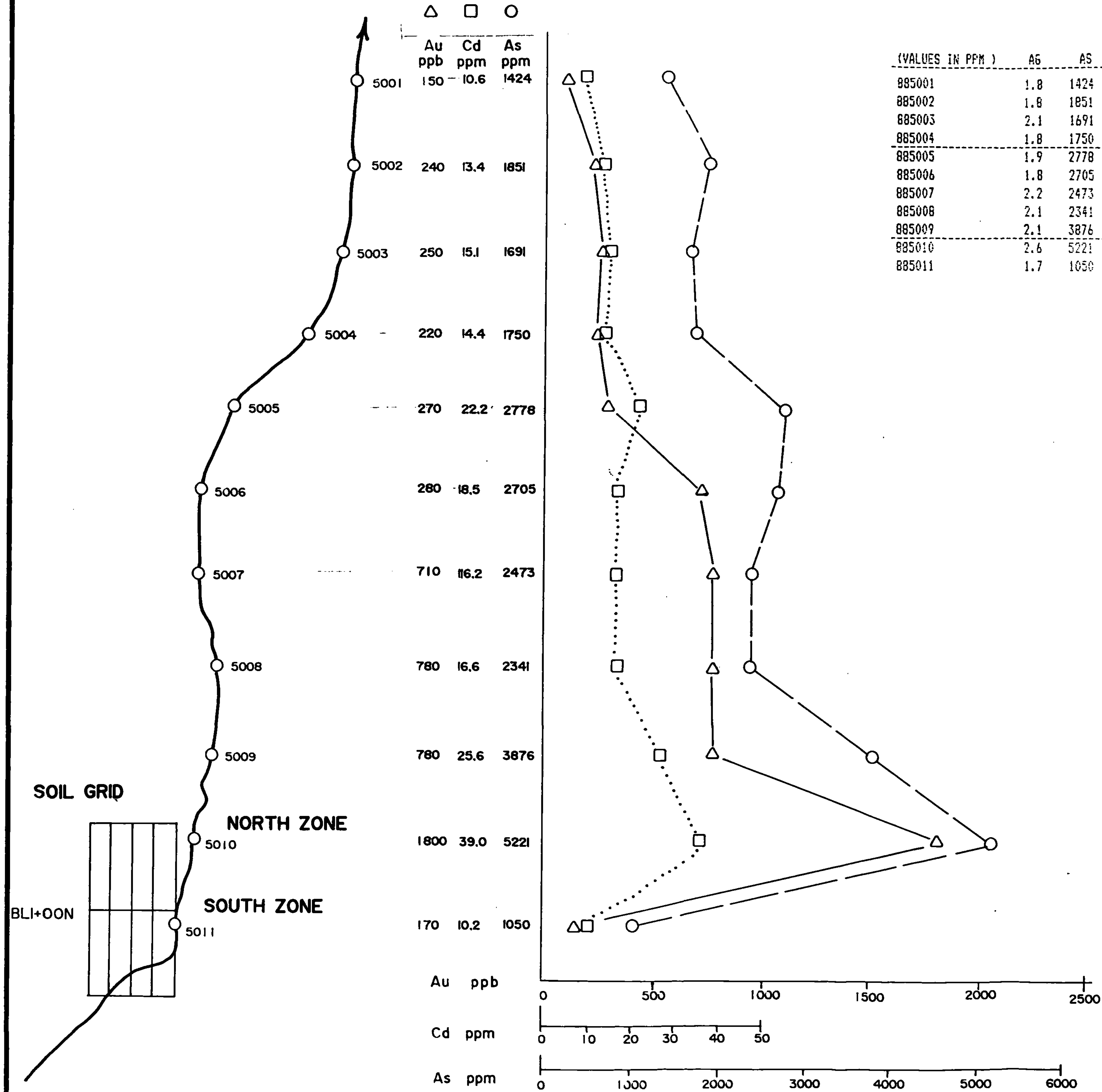


TOTAL ERICKSON RESOURCES LTD.

O'BRIEN PROPERTY

SOIL GEOCHEMISTRY (CON)
ANOMALOUS Au,Cd,As PLOT

N.T.S.: 116 B/8	TECH: M.F. & A.G.N.	DATE: OCTOBER 1988
SCALE: 1 : 1250	DRAUGHTING: J.A.S.F.	FIGURE: 6



(VALUES IN PPM)	AG	AS	BA	BI	CD	CU	MO	PB	SB	V	ZN	W	AU-PPB
885001	1.8	1424	232	13	10.6	205	9	100	21	62.8	410	2	150
885002	1.8	1851	236	13	13.4	84	9	115	24	64.4	274	2	240
885003	2.1	1691	246	13	15.1	87	9	97	23	68.3	265	2	250
885004	1.8	1750	232	13	14.4	89	9	99	24	65.0	260	2	220
885005	1.9	2778	243	14	22.2	84	13	126	24	64.7	353	2	270
885006	1.8	2705	243	14	18.5	97	14	121	27	65.5	386	1	280
885007	2.2	2473	237	18	16.2	92	12	100	30	65.3	220	2	710
885008	2.1	2341	221	21	16.6	84	6	91	26	64.0	190	2	780
885009	2.1	3876	225	20	26.6	94	8	101	36	63.9	199	1	780
885010	2.6	5221	209	39	39.0	81	8	88	38	61.3	170	2	1800
885011	1.7	1050	222	13	10.2	82	6	93	22	66.8	190	2	170

TOTAL ERICKSON RESOURCES LTD.

O'BRIEN PROPERTY

SILT GEOCHEMISTRY "AJ" SHOWING (CON)

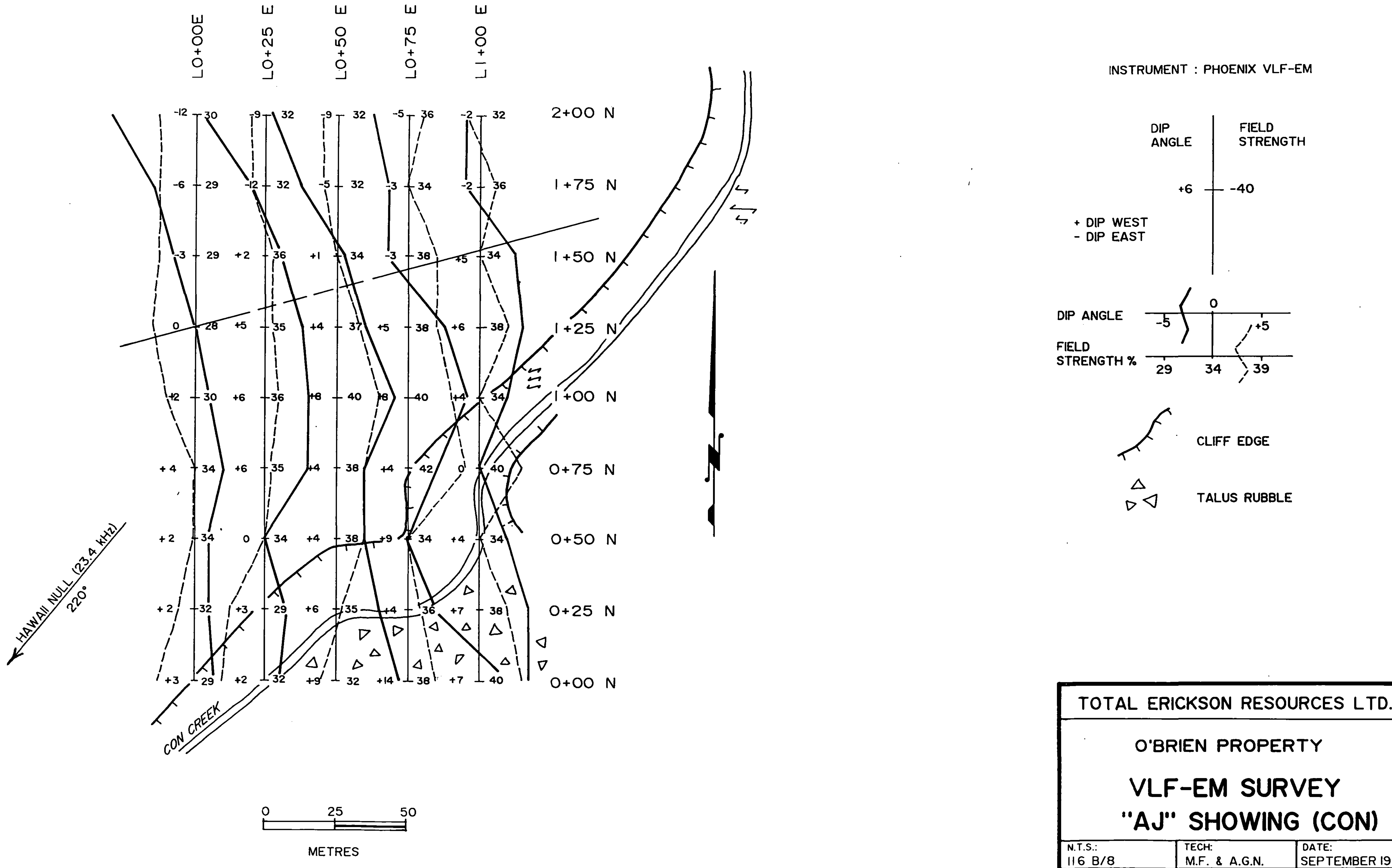
N.T.S.: 116 B/8	TECH: M.F. & A.G.N.	DATE: NOVEMBER 1988
SCALE: 1 : 5000	DRAUGHTING: J.A.S.F.	FIGURE: 7

10. VLF-EM GEOPHYSICAL SURVEY

A small geophysical survey was conducted over the soil grid to determine if the shear zones on the AJ showing would respond to the VLf-EM method. Readings were taken at 25 m intervals on five lines spaced 25 apart. A Phoenix VLF-EM instrument was used for the survey with the Hawaii Remote Transmitter Station (23.4 kHz) as the null. West was arbitrarily designated as the negative dip direction. Hawaii was not the ideal station to use but a signal from a more suitable station (Cutler, Maine for example) could not be obtained.

Dip Angle and Field Strength data was plotted and interpretted in profile format (Figure 8.). There was too little data to warrant a "Fraser Filter" interpretation but this type of interpretation was not really necessary, in any case, due to the level nature of the survey area. The Dip Angle and Field Strength profiles suggest a cross-over with an axis slightly displaced and roughly parallel to the trend of the North Zone.

Based on this small orientation survey, it appears that the mineralized shear zones in the Antimony Mountain Area are conductive and will respond to a high frequency electro-magnetic method such as VLF.



TOTAL ERICKSON RESOURCES LTD.		
O'BRIEN PROPERTY		
VLF-EM SURVEY "AJ" SHOWING (CON)		
N.T.S.: 116 B/8	TECH: M.F. & A.G.N.	DATE: SEPTEMBER 1988
SCALE: 1 : 1250	DRAUGHTING: J.A.S.F.	FIGURE: 8

11. RECOMMENDATIONS

A comprehensive, integrated exploration program is recommended for the O'BRIEN Property in the 1989 field season. The program would consist of detailed and reconnaissance geological, geochemical, and geophysical surveys followed by diamond drilling.

The first phase of the program would consist of an airborne geophysical survey which would employ electromagnetic, magnetic and VLF-EM methods. An area of 4100 hectares (400 km of line) is suggested for airborne coverage (Figure 9.). An orthophoto base map is required for this survey. An area of 8000 hectares is suggested for orthophoto map coverage (Appendix IV).

The first part of the second phase would utilize regional prospecting and geochemical surveys to better define and add to areas of interest determined in the first phase. This part would be followed by the preparation of regional geological maps at 1:5000 and 1:10,000 scales, directed towards outlining the sedimentary-intrusive contact, and detailed geological maps, at 1:500 and 1:1000 scales, of specific areas. 56 km of ground electromagnetic, magnetic, and VLF-EM geophysical work would be completed along with the collecting of 500 rock, and 1000 soil and silt geochemical samples.

Diamond drilling of structures outlined in the first two phases would complete the 1989 exploration program. The fractured nature of the shear zones requires that NQ diameter rods and plenty of mud be used for drilling. Sludge samples may have to be taken if core recovery is poor.

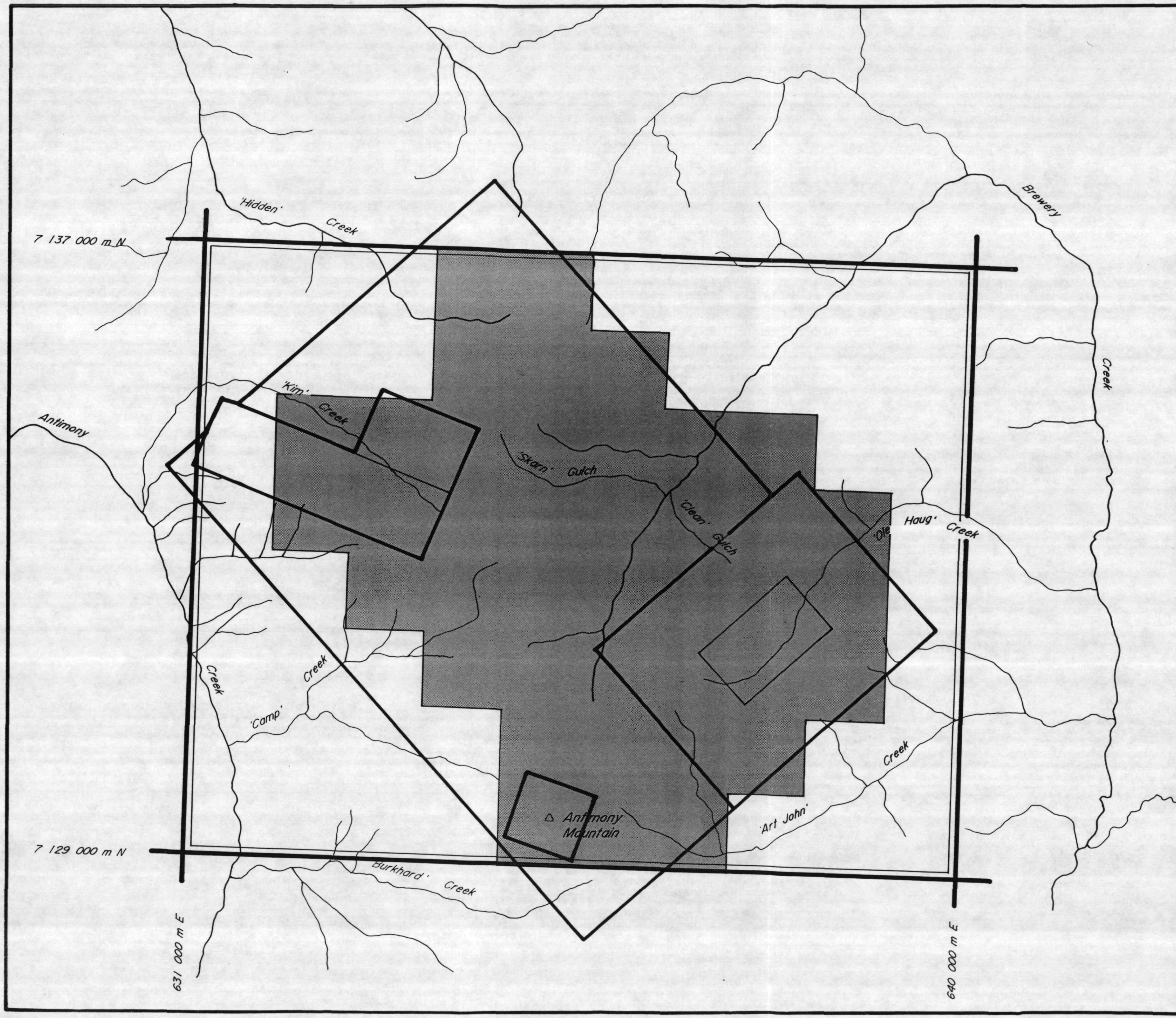
The estimated cost of the program is outlined as follows:

Wages Permanent		10,000
Wages Temporary	project geologist (3 mo.)	11,880
	mapping geologist (2 mo.)	5,760
	third year student(2 mo.)	5,040
	core splitter (2 wks.)	1,000
Fringe Benefits		7,050
Office Rental		
Telephone		500
Stationary and Supplies		2,000
Maps/Publications (orthophotos)		8,000
Equipment Rental		4,000
Drafting		2,000
Vehicles		4,000
Contractors-	Non Tech	
	Tech Surveying	
Aircraft Charter		77,000

Drilling (1500 ft.@$40/ft.)	60,000
Fuel (diesel-50 bbl @ 185/bbl)	9,300
(jet-85 bbl @190/bbl)	16,200
Assays (500 @ $20/assay)	10,000
Geochemistry (1000 @ $15/sample)	10,000
Geophysics	
AEM/MAG(440 line km @$108/km)	47,500
(mob./demob.)	10,000
Ground-MAG/VLF-Omni IV(15d@$400/d)	6,000
-EM max-min (15d @ $500/d)	7,500
data prep./maps	3,700
mob./demob.	4,000
Geology	
Trenching	
Road Building	
Field Equipment	8,000
Camp Accom & Board (420 mandays @ $40/manday)	16,800
Option Payments (Cody Hawk Agt)	20,000
Claim Staking Mtn. (filing fees)	2,500
Legal	2,500
JV Overhead	
Totals	372,230
less TEC Staff Charge	(13,500)
Net Cost to TEC	358,730

The airborne survey should be done in the spring. The mobilization cost could be cut in half if the airborne crew is already in Yukon (Appendix IV).

The second phase should begin in late June and would overlap the drilling phase which would begin in mid-August and end in early September.



TOTAL ERICKSON RESOURCES LTD.

O'BRIEN PROPERTY

RECOMMENDED COVERAGE

ORTHOPHOTO BASE MAP & AIRBORNE

N.T.S.: 116 B/8	TECH: M. FEKETE	DATE: DECEMBER 1988
SCALE: 1 : 50,000	DRAUGHTING: JASF	FIGURE: 9

12. REFERENCES

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13. STATEMENT OF QUALIFICATIONS

I, MARK FEKETE, of Whitehorse, Yukom do hearby STATE:

1. I am a graduate of the University of British Columbia, having obtained a B.Sc. degree in Geology - May, 1986;
2. I have been active in mineral exploration in various capacities on a full-time and part-time basis for ten years in Yukon, British Columbia and Australia;
3. I am familiar with the theory, method and interpretation of VLF-EM;
4. I participated in the work described in this report as an employee of Total Erickson Resources Ltd. under explicit directions from Walter Sellmer, Vice President and Richard Basnett, Yukon Exploration Manager.

SIGNED at Whitehorse, Yukon, this 14th. day of December, 1988

Mark Fekete, B.Sc.

APPENDIX I

ANALYTICAL PROCEDURES

Routine Gold–Assay Procedures Used by Min-En Labs. Ltd.

1. Samples are received, cataloged and dried at 105°C if necessary.

2. Whole sample is passed through a primary crusher which reduces sample to -½ inch.

3. Whole sample is further passed through a secondary crusher which further reduces the sample to -10 mesh.

4. The whole sample is riffled through a ½ inch riffle to obtain a subsample of approx 300-400 grams. The remaining reject is bagged and stored.

5. The above 300-400 gram split is then pulverized to obtain -100 mesh using an iron plate rotary mill pulverizer.

6. Sample pulp is now rolled and analysed.

7. The sample pulp is assayed for gold using a 1 assay ton fire assay preconcentration and atomic absorption finishing techniques.

8. The remaining sample pulp is retained and stored.

PHONE: (604) 980-5814 or 988-4524 TELEX: 04-352828

MIN-EN Laboratories Ltd.
Specialists in Mineral Environments
Corner 15th Street and Bewicke
705 WEST 15TH STREET
NORTH VANCOUVER, B.C.
CANADA V7M 1T2

Analytical Procedure Report for Assessment Work

31 Element ICP

Ag, Al, As, B, Ba, Be, Bi, Ca, Cd, Co, Cu, Fe, K, Li, Mg, Mn, Mo, Na, Ni, P, Pb, Sb, Sr, Th, U, V, Zn, Ga, Sn, W, Cr

Samples are processed by Min-En Laboratories Ltd., at 705 West 15th Street, North Vancouver, employing the following procedures.

After drying the samples at 95^{o}C soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed by a jaw crusher and pulverized by ceramic plated pulverizer or ring mill pulverizer.

1.0 gram of the sample is digested for 4 hours with an aqua regia $HClO_4$ mixture.

After cooling samples are diluted to standard volume. The solutions are analysed by computer operated Jarrall Ash 9000 ICAP or Jobin Yvon 70 Type II Inductively Coupled Plasma Spectrometers. Reports are formatted and printed using a dot-matrix printer.

PHONE 980-5814

MIN-EN Laboratories Ltd.
Specialists in Mineral Environments
Corner 15th Street and Bewicke
705 WEST 15TH STREET
NORTH VANCOUVER, B.C.
CANADA V7M 1T2

GOLD GEOCHEMICAL ANALYSIS BY MIN-EN LABORATORIES LTD.

Geochemical samples for Gold processed by Min-En Laboratories Ltd., at 705 W. 15th St., North Vancouver Laboratory employing the following procedures.

After drying the samples at 95°C soil and stream sediment samples are screened by 80 mesh sieve to obtain the minus 80 mesh fraction for analysis. The rock samples are crushed and pulverized by ceramic plated pulverizer.

A suitable sample weight 5.0 or 10.0 grams are pretreated with HNO_3 and $HClO_4$ mixture.

After pretreatments the samples are digested with Aqua Regia solution, and after digestion the samples are taken up with 25% HCl to suitable volume.

Further oxidation and treatment of at least 75% of the original sample solutions are made suitable for extraction of gold with Methyl Iso-Butyl Ketone.

With a set of suitable standard solution gold is analysed by Atomic Absorption instruments. The obtained detection limit is 0.005 ppm (5ppb).

APPENDIX II

ANALYTICAL RESULTS

MIN • EN LABORATORIES LTD.

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Certificate of ASSAY

Company: TOTAL ERICKSON RESOURCES LTD.
Project: SKUKUM RECCE P.O.#2327
Attention: A.NIKOLAJEVICH

File: 8-1509/P1
Date: SEPT 21/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
JA422	66.20	1.931
JA423	72.40	2.112
1267	38.20	1.114
803	7.60	0.222
804	92.00	2.683

Certified by ________

MIN-EN LABORATORIES LTD.

MINERAL
• ENVIRONMENTS
LABORATORIES LTD.

TO: Total Erickson Resources,

PROJECT: O'Brien

Attn: Marke Fekete

File: 8-1509R

GOLD RECOVERY BY CYANIDE LEACH

Date: October 9, 1988.

Sample weight one Assay Ton. (30 gram)

Sample size -150 mesh.

Leach solution 100 ml of 0.25 % NaCN.

Reagents used: 0.5% CaO.

Time leached two hrs. under constant agitation.

Sample Number	Cyanide Leach Au gm/tonne	Cyanide Leach Au oz/ton
JA 422	59.70	1.741
JA 423	51.00	1.487
1267	38.30	1.117
803	6.11	.178
804	47.70	1.391

Certified By

OFFICE AND LABORATORIES:
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Certificate of GEOCHEM

Company: TOTAL ERICKSON RESOURCES LTD.
Project: SKUKUM RECCE P.O.#2327
Attention: A.NIKOLAJEVICH

File: 8-1509/P1
Date: SEPT 21/88
Type: ROCK GEOCHEM

We hereby certify the following results for samples submitted.

Sample Number	CU PPM	PB PPM	ZN PPM	AG PPM	AS PPM	AU-WET PPB	SB PPM
JA422	430	402	18	31.9	6140	56000	651
JA423	460	117	16	16.2	6030	63000	738
1267	335	206	9	29.1	5980	30000	593
803	200	67	9	2.8	5990	4100	297
804	520	184	15	27.6	6170	68000	1020

Certified by ________________

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Certificate of ASSAY

Company: TOTAL ERICKSON RESOURCES
Project: OBRIEN
Attention: M.FEKETE

File: 8-1701/P1
Date: OCT.14/88
Type: ROCK ASSAY

We hereby certify the following results for samples submitted.

Sample Number	AU G/TONNE	AU OZ/TON
88 2001	1.40	0.041
88 2013	3.00	0.088

Certified by ____________________

MIN-EN LABORATORIES LTD.

COMPANY: TOTAL ERICKSON RESOURCES
PROJECT NO: OBRIEN
ATTENTION: M.FEKETE

MIN-EN LABS ICP REPORT
705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2
(604)980-5814 OR (604)988-4524 * TYPE ROCK GEOCHEM *

FILE NO: 8-1701/P1+2
DATE:OCTOBER 14, 1988

(VALUES IN PPM)	AG	AS	BA	BI	CD	CU	MO	PB	SB	V	ZN	AU-PPB
882001	4.2	29428	44	13	205.1	6	13	20	118	3.7	23	950
882002	1.2	1061	108	6	8.2	8	3	22	1	74.8	28	30
882003	.3	235	44	6	8.4	7	3	16	1	5.9	19	5
882004	1.4	128	43	5	5.4	7	6	41	1	23.1	80	10
882005	1.4	68	23	3	4.3	16	4	19	3	11.4	96	5
882006	.1	1	37	3	8.5	8	2	14	4	12.6	31	5
882007	2.3	63	235	12	2.7	16	4	39	10	47.5	57	20
882008	1.1	33	29	8	3.2	6	4	29	1	9.8	65	5
882009	1.9	79	4	8	1.1	13	3	32	5	14.2	22	5
882010	1.8	48	31	7	4.2	7	5	10	1	11.5	23	5
882011	2.0	57	50	9	2.3	115	5	10	5	9.7	11	5
882012	2.3	123	50	13	1.5	7	5	52	13	61.4	37	5
882013	3.3	77290	20	47	699.8	795	3	46	246	5.7	28	2150
882014	1.4	1858	6	7	13.1	141	4	13	4	6.9	11	10
882015	1.7	599	13	6	4.9	394	7	18	9	7.8	16	35
882016	2.1	191	34	8	3.4	58	5	26	1	21.6	26	5
882017	2.7	141	19	17	.3	7	4	44	20	35.4	119	5
882018	10.7	1142	1	28	.4	4279	1	209	5	1.4	221	30
882019	3.2	190	72	13	3.5	91	4	39	15	45.9	49	5
882020	2.7	99	37	10	2.0	47	5	54	11	24.6	36	5
882021	1.3	66	26	13	.3	26	6	45	20	31.6	56	5
882022	.8	82	11	4	4.6	14	4	13	1	6.2	13	5
882023	2.6	41	101	7	4.5	80	5	174	1	26.5	86	5
882024	.6	43	124	6	6.0	7	5	39	2	39.9	40	5
882025	69.7	231	30	109	5.4	24165	6	49	26	16.1	91	690
882026	3.7	67	36	11	.7	436	9	24	6	63.0	29	5
882027	3.2	70	160	12	1.4	397	5	26	10	61.1	25	10
882028	1.8	42	19	2	2.1	53	4	18	1	7.2	9	5
882029	2.2	5448	8	8	33.3	65	5	13	15	5.7	10	55
882030	2.3	4182	10	7	30.1	54	5	13	11	6.7	10	125
882031	1.1	69	26	8	3.4	19	5	13	3	8.8	18	30
882032	13.5	46464	112	85	370.3	4463	8	62	459	21.9	71	260

COMPANY: TOTAL ERICKSON RESOURCES | MIN-EN LABS ICP REPORT | (ACT:F31) PAGE 1 OF 1
PROJECT NO: O'BRIEN | 705 WEST 15TH ST., NORTH VANCOUVER, B.C. V7M 1T2 | FILE NO: 8-1701S/P1+2+3
ATTENTION: M.FEKETE | (604)980-5814 OR (604)988-4524 | * TYPE SOIL GEOCHEM * | DATE:OCT 19, 1988

(VALUES IN PPM)	AG	AS	BA	BI	CD	CU	MO	PB	SB	V	ZN	W	AU-PPB
884001	1.2	1019	158	8	7.5	25	8	53	16	64.0	80	2	30
884002	1.2	455	164	7	4.1	16	6	44	13	61.9	81	2	10
884003	1.3	206	94	8	3.0	8	7	30	7	72.5	53	2	5
884004	1.4	1143	183	8	7.8	20	10	71	22	77.9	85	3	10
884005	1.2	1205	183	9	10.1	30	11	72	23	72.8	88	2	20
884006	1.1	55	90	7	3.2	8	5	23	4	64.4	47	2	5
884007	1.1	63	131	8	1.5	7	5	30	7	67.9	53	2	5
884008	1.4	1024	175	9	8.5	19	9	60	20	74.8	83	3	10
884009	1.3	870	153	9	7.1	19	9	52	19	67.7	82	2	10
884010	1.3	380	170	8	3.4	11	7	37	10	64.3	76	2	5
884011	1.1	456	129	7	4.0	9	7	36	11	66.8	61	2	10
884012	1.1	189	132	8	2.1	7	7	32	6	70.2	51	2	10
884013	1.3	113	148	9	2.1	9	6	34	8	72.3	70	3	5
884014	1.3	74	137	8	1.8	8	5	29	8	70.1	60	2	5
884015	1.2	539	169	9	4.3	8	7	42	15	71.7	73	2	5
884016	1.4	1163	184	8	8.2	18	10	67	23	80.5	89	3	15
884017	1.4	1014	182	8	7.8	13	11	55	20	81.9	86	2	10
884018	1.3	696	147	9	4.9	14	7	46	13	71.2	77	2	10
884019	1.4	748	159	8	5.7	11	10	46	15	73.0	76	2	5
884020	1.4	1052	201	9	7.5	26	8	58	22	74.4	86	3	20
884021	1.0	153	197	8	2.2	6	6	35	9	56.6	61	2	5
884022	1.0	67	128	7	1.5	7	5	28	8	60.8	54	2	5
884023	1.2	124	196	10	2.2	7	5	33	9	66.7	65	2	15
884024	1.1	104	123	8	1.4	8	4	26	8	70.3	58	2	10
884025	1.2	130	171	8	2.5	8	5	33	8	63.0	77	2	10
884026	1.6	341	240	11	3.2	46	5	76	15	77.2	116	3	20
884027	2.8	1126	244	24	8.6	156	11	266	69	81.8	164	3	50
884028	1.4	248	250	10	3.5	29	7	51	12	69.6	88	2	10
884029	1.1	207	125	8	2.8	9	5	32	5	59.6	64	2	45
884030	1.1	85	96	6	2.4	9	4	24	6	56.5	58	1	15
884031	1.1	88	97	9	2.1	7	5	27	7	63.4	61	2	5
884032	1.4	84	123	6	2.8	9	6	26	6	56.6	47	2	10
884033	3.6	4049	188	20	27.7	169	11	390	18	77.1	261	1	2400
884034	1.2	825	180	8	6.8	15	11	59	14	64.3	88	2	40
884035	1.2	1055	174	9	7.0	11	9	62	19	81.5	90	3	5
884036	1.0	775	170	8	8.2	8	11	45	12	66.4	80	2	5
884037	1.0	775	169	8	7.1	18	11	52	9	60.3	81	2	10
884038	.9	128	105	7	2.9	11	5	24	5	49.1	56	1	5
884039	.9	50	99	8	2.8	8	5	26	5	59.3	57	2	5
884040	.9	78	89	8	1.4	7	5	25	5	60.1	56	2	5
884041	.5	3255	299	1	13.5	16	13	17	1	78.6	128	1	10
885001	1.8	1424	232	13	10.6	205	9	100	21	62.8	410	2	150 —
885002	1.8	1851	236	13	13.4	84	9	115	24	64.4	274	2	240
885003	2.1	1691	246	13	15.1	87	9	97	23	68.3	265	2	250
885004	1.8	1750	232	13	14.4	89	9	99	24	65.0	260	2	220
885005	1.9	2778	243	14	22.2	84	13	126	24	64.7	353	2	270
885006	1.8	2705	243	14	18.5	97	14	121	27	65.5	386	1	280
885007	2.2	2473	237	18	16.2	92	12	100	30	65.3	220	2	710
885008	2.1	2341	221	21	16.6	84	6	91	26	64.0	190	2	780
885009	2.1	3876	225	20	26.6	94	8	101	36	63.9	199	1	780
885010	2.6	5221	209	39	39.0	81	8	88	38	61.3	170	2	1800
885011	1.7	1050	222	13	10.2	82	6	93	22	66.8	190	2	170

APPENDIX III

PETROGRAPHIC REPORTS

Vancouver Petrographics Ltd.

JAMES VINNELL, Manager
JOHN G. PAYNE, Ph. D. Geologist

P.O. BOX 39
8887 NASH STREET
FORT LANGLEY, B.C.
VOX 1JO

PHONE (604) 888-1323

Report for: **Mark Fekete,**
Total Erickson Resources, Ltd.,
21 - 1114 1st Street
WHITEHORSE, Y.T.

Invoice 7705
October 1988

Samples: 88-A, 88-B, 88-C, 88-D, 88-E, 88-F

Summary:

88-A porphyritic andesite (plagioclase, hornblende, biotite phenocrysts) in groundmass dominated by K-feldspar and plagioclase. Veinlets are of K-feldspar-clinopyroxene (diopside) and of actinolite. Adjacent to the former, hornblende phenocrysts are altered to clinopyroxene. The veins, K-feldspar in the groundmass, and clinopyroxene alteration of hornblende phenocrysts suggest contact metasomatism at a high temperature.

88-B metamorphosed, poorly sorted dirty sandstone dominated by detrital quartz with groundmass quartz, plagioclase, and minor calcite/dolomite, secondary muscovite, pyrite, and tourmaline, and cut by a veinlet of calcite-(kaolinite)

88-C contact metamorphosed, finely laminated mudstone with secondary biotite; mottles, probably of hydrothermal origin, up to several mm across consist of cores of sericite and rims of biotite; veinlets consist of varying proportions of opaque, biotite, and quartz.

88-D lamprophyre dike with phenocrysts of phlogopite/biotite and clinopyroxene in a groundmass dominated by K-feldspar and plagioclase, with much less mafic minerals and dolomite/calcite, and a few amygdules or replacement patches of calcite-(quartz).

88-E plagioclase-diopside skarn with secondary poikilitic diopside, replacement patches of diopside, and a large replacement patch dominated by quartz with much less diopside, in part altered to actinolite and calcite, and interstitial fluorite and calcite.

88-F massive sulfide dominated by medium to coarser grained arsenopyrite with interstitial patches of bright blue tourmaline and quartz. Arsenopyrite was fractured moderately and replaced along fractures and grain borders by scorodite. Other sulfides which form inclusions in arsenopyrite are minor pyrrhotite, a trace of galena, and a speck of chalcopyrite.

John G. Payne

John G. Payne
604-986-2928

Sample 88-A Porphyritic Andesite cut by Veinlets of K-feldspar-Clinopyroxene and of Actinolite

The rock contains phenocrysts of plagioclase, hornblende, and biotite in a groundmass dominated by K-feldspar and plagioclase. It contains a few inclusions up to a few mm across of exotic rocks. It is cut by a few veinlets of K-feldspar-clinopyroxene and of actinolite; adjacent to the former, hornblende phenocrysts are replaced partly by clinopyroxene.

phenocrysts	
plagioclase	17-20%
hornblende	8-10
biotite	8-10
groundmass	
plagioclase	35-40
K-feldspar	15-20
biotite	1- 2
inclusions	
diorite	2
biotite diorite	1
biotite-Ti-oxide-(tourmaline)	1
veinlets	
K-feldspar-clinopyroxene	1
actinolite	0.2

Plagioclase forms euhedral phenocrysts averaging 0.5-1.5 mm in size, with a few elongate prismatic grains up to 2.5 mm long. They show strong, oscillatory growth zoning, with composition gradually becoming more sodic and then sharply becoming more calcic before resuming the normal fractionation trend towards a more-sodic rim. Based on overall appearance of the grains, composition is in the range of labradorite. The core of one grain gave a composition of **An60** by the Carlsbad-albite twin method; a second grain gave a composition in the range **An40**. Grains are fresh.

Hornblende forms subhedral, commonly prismatic phenocrysts averaging 0.5-1.5 mm in size. Pleochroism is from light to medium brownish green to locally greenish brown. Several grains are relatively fresh. Alteration commonly is moderate to strong to extremely fine grained biotite.

Biotite forms subhedral to euhedral hexagonal phenocrysts averaging 0.5-1 mm in size, with a few up to 1.5 mm across. Pleochroism is from light orange brown to deep reddish brown or brown. Several biotite phenocrysts have irregular overgrowths of extremely fine grained, pale green actinolite on their ends.

The gabbroic diorite inclusion contains ragged, relic grains of clinopyroxene surrounded by and replaced by brownish green hornblende. Plagioclase forms less abundant interstitial grains and patches of fine to extremely fine grains.

A cluster up to 2 mm across consist of fine grained plagioclase (as in the phenocrysts) intergrown with abundant skeletal to interstitial grains of biotite.

An inclusion up to 4 mm long contains patches dominated by extremely fine grained Ti-oxide, which grade into extremely fine grained aggregates of plagioclase(?)-biotite-Ti-oxide. Biotite also is concentrated in patches and veinlets up to 0.1 mm wide. At one end, a biotite patch contains a few subhedral to euhedral grains of tourmaline averaging 0.05-0.08 mm across in cross section. Tourmaline grains are zoned, with cores of bluish green color and rims of light to medium greenish brown color.

(continued)

The groundmass is dominated by very fine grained, moderately interlocking feldspar grains (plagioclase?) with very abundant, extremely fine grains of K-feldspar(?) and with minor to moderately abundant, extremely fine grained flakes of biotite.

Apatite forms subhedral to euhedral, prismatic grains averaging 0.05-0.07 mm in size.

Zircon forms a few equant to prismatic grains averaging 0.03-0.06 mm in size.

The rock is cut by a few veinlets up to 0.15 mm in width of very fine grained K-feldspar with patches of clinopyroxene. Where these cut hornblende phenocrysts, the latter are altered strongly to completely to ragged aggregates of clinopyroxene. One wispy veinlet up to 0.1 mm wide is dominated by very fine grained actinolite. Associated with this veinlet is a patch 0.7 mm wide of very fine grained actinolite with lesser quartz and Ti-oxide.

The presence of actinolite rims on biotite phenocrysts and of clinopyroxene in the veins and replacements of nearby hornblende grains suggests a high-temperature metasomatism. Evidence for K-metasomatism includes the presence of K-feldspar in the groundmass and veins.

Sample 88-B   **Metamorphosed, Poorly Sorted Dirty Sandstone**

The rock is a slightly metamorphosed, poorly sorted, dirty sandstone containing detrital, fine to very fine grained quartz in an extremely fine grained groundmass dominated by quartz and plagioclase, with much less calcite and secondary muscovite, and with minor opaque (pyrite), tourmaline, chlorite, and Ti-oxide, and trace zircon. It is cut by a calcite-(kaolinite) veinlet.

detrital grains			
quartz	45-50%		
groundmass			
quartz	25-30	veinlet	
plagioclase	17-20	calcite	0.2%
calcite-dolomite	1- 2	kaolinite	minor
muscovite	0.7		
pyrite	0.7		
tourmaline	0.5		
chlorite	0.3		
Ti-oxide	minor		
zircon	trace		

Quartz forms subrounded to rounded, detrital grains averaging 0.15-0.5 mm in size. A few patches up to 1 mm in size consist of aggregates of fine grained quartz. Grains show uniform extinction. These grade down in size to subrounded to subangular, probably detrital grains averaging 0.07-0.12 mm in size.

The groundmass is dominated by quartz grains averaging 0.04-0.08 mm in size, and lesser plagioclase grains averaging 0.04-0.1 mm in size. Plagioclase is altered slightly to moderately to sericite and carbonate. Some grains are replaced by ragged porphyroblasts of muscovite from 0.15-0.5 mm in size.

Calcite-dolomite forms anhedral patches averaging 0.03-0 05 mm in size.

Opaque (pyrite) forms disseminated grains averaging 0.03-0.15 mm in size. A few of the larger grains are associated with calcite.

Tourmaline forms ragged grains averaging 0.03-0.07 mm in size, and subhedral to euhedral prismatic grains up to 0.15 mm in length. Pleochroism is mainly from pale or light brownish green to light or medium brownish green. Many larger grains have ragged overgrowths of pale green to colorless tourmaline in optical continuity with the main grain. A few clusters rich in tourmaline and pyrite contain prismatic tourmaline grains up to 0.25 mm long and pyrite grains averaging 0.1-0.15 mm across.

Chlorite forms scattered patches up to 0.2 mm in size of pale green flakes up to 0.15 mm long.

Ti-oxide forms disseminated, anhedral grains averaging 0.05-0.12 mm in size.

Zircon forms disseminated subhedral to euhedral prismatic grains from 0.07-0.15 mm in length.

The rock is cut by a slightly braided veinlet up to 0.07 mm wide of very fine grained calcite with several patches of extremely fine grained kaolinite.

Sample 88-C Contact Metamorphosed, Mottled Finely Laminated Mudstone, cut by veinlets of Opaque-Biotite-(Quartz)

The sample is an extremely fine grained mudstone dominated by sericite with less biotite, quartz and chlorite, and much less opaque (pyrite?). Delicate compositional layering is defined by variation in abundance of major and minor phases. The rock contains mottles up to several mm across in which cores are dominated by sericite, and rims contain an enrichment of biotite over its normal content in the layer away from the mottle. Mottles probably are of hydrothermal origin, and may be associated in origin with discontinuous veins of biotite, quartz and opaque in varying proportions.

sericite	55-60%
biotite	15-17
quartz	15-17
chlorite	5- 7
opaque	2- 3
tourmaline	trace
veinlets	
biotite-opaque-quartz	1

Sericite, biotite, and chlorite form equant flakes averaging 0.01-0.02 mm in size. Quartz and opaque form equant grains of similar size. The following main types of layers are present, with gradations between them:

1) sericite-rich (broad)
2) sericite-biotite-rich (broad)
3) biotite-rich (less than 0.1 mm wide)
4) sericite-quartz-(biotite) (broad)
5) quartz-(sericite) (one layer)
6) chlorite-rich (patches)
7) opaque-biotite-quartz-tourmaline-rich (less than 0.4 mm wide, commonly in sets of several closely spaced layers; commonly slightly coarser grained tan other types of layers)

Textures of biotite flakes suggest that they were formed by contact metamorphism.

Chlorite is concentrated in a few layers up to 1 mm wide, where it forms moderately dense patches intergrown with much less sericite and quartz.

In opaque-rich layers, opaque forms irregular grains and patches up to 0.1 mm in size. In mica-rich layers nearby, opaque forms a few lenses up to 0.6 mm long and 0.07 mm wide, bordered by concentrations of biotite and of quartz. In opaque-poor layers, opaque forms disseminated grains averaging 0.005-0.01 mm in size.

Tourmaline forms subhedral to anhedral prismatic grains up to 0.035 mm long. Pleochroism is from pale to light brownish green, and locally to medium brownish green. Tourmaline is concentrated in the opaque-rich layers, and forms scattered grains elsewhere.

Mottles are concentrated in broad layers dominated by sericite with lesser quartz and biotite. They probably formed by mobilization of iron (in biotite) out of the core of the mottles, and concentration of iron (in biotite) on the borders of the mottles.

Quartz forms a few wispy veinlets up to 0.02 mm wide, in part subparallel to compositional banding.

Discontinuous crosscutting veins up to 0.3 mm in width are dominated by biotite, opaque, and quartz grains averaging 0.02-0.03 mm in size.

Sample 88-D Lamprophyre

The rock contains phenocrysts of phlogopite-(biotite) and clinopyroxene in a groundmass dominated by plagioclase and K-feldspar with lesser mafic grains, dolomite/calcite and opaque, and minor apatite. It contains a few late patches (amygdules or replacement) of calcite-(quartz).

phenocrysts			
phlogopite/biotite	8-10%		
clinopyroxene	5- 7		
groundmass			
K-feldspar	35-40	opaque	1%
plagioclase	25-30	quartz	0.3
phlogopite/biotite	4- 5	apatite	0.1
dolomite/calcite	3- 4		
clinopyroxene	2- 3		
chlorite	2- 3		
amygdules or replacement patches			
calcite	0.5		
quartz	0.1		

Phlogopite and much less biotite form subhedral to euhedral phenocrysts averaging 0.2-0.8 mm in size. Many are color zoned, with broad cores of pale brown phlogopite grading sharply to rims of medium brown biotite. Biotite forms a few flakes up to 0.3 mm long, with uniform medium brown color. (Note: All colors are in the position of maximum absorption).

Clinopyroxene forms anhedral to euhedral prismatic to equant grains averaging 0.3-1 mm in size, with a few up to 1.7 mm long. Some grains are fresh, and others are altered moderately to completely to aggregates of chlorite, with or without dolomite. Some of the completely altered grains may be after original hornblende.

Mafic phenocrysts grade downwards in size to groundmass grains of similar compositions averaging 0.05-0.1 mm in size. Groundmass phlogopite/biotite is subhedral to euhedral, and groundmass clinopyroxene is anhedral to subhedral.

The groundmass is dominated by anhedral feldspars averaging 0.07-0.15 mm in grain size. Grain borders are diffuse. Dusty alteration inhibits distinction of K-feldspar and plagioclase; however, the stained offcut block indicates that K-feldspar is more abundant. K-feldspar locally is concentrated in halos up to 1 mm wide surrounding mafic phenocrysts. Possibly some of the K-feldspar was formed by replacement of original plagioclase.

Dolomite/calcite forms irregular patches averaging 0.05-0.2 mm in size, mainly replacing or intergrown with feldspars.

Chlorite forms patches up to 0.15 mm in size of very fine to extremely fine grained, pale green aggregates.

Opaque forms patches up to 0.2 mm in size of aggregates of very fine to extremely fine, equant grains, and a few single grains also up to 0.2 mm across.

Quartz forms interstitial grains averaging 0.03-0.15 mm in size.

Apatite forms abundant acicular grains averaging 0.05-0.07 mm in length, mainly associated with feldspars, and scattered prismatic grains with cross sections up to 0.03 mm in size, and lengths up to 0.4 mm.

Calcite/dolomite forms a few late or replacement grains up to 0.7 mm in size, in part associated with finer grained quartz.

Sample 88-E Plagioclase-Diopside Skarn Replaced by Quartz-Diopside-Actinolite-Fluorite-Calcite

The rock is dominated by a very fine grained, mainly finely banded aggregate of plagioclase and lesser diopside. It contains a few coarser grained lenses dominated by poikilitic diopside grains. The rock is replaced by veinlike to irregular patches of diopside. A coarse patch is dominated by quartz with lesser diopside, much less actinolite, and minor fluorite and calcite.

host rock	
plagioclase	40-45%
diopside	30-35
sphene	1- 2
coarser patches	
poikilitic diopside	3- 4
veins and replacements	
1) diopside	4- 5
2) quartz	10-12
diopside	2- 3
actinolite	1
fluorite	0.4
calcite	0.2

The host rock is dominated by equant grains of plagioclase and of diopside averaging 0.02-0.03 mm in size, with local patches of coarser grain size (0.05-0.1 mm). Fine compositional banding is outlined by variation in plagioclase/diopside ratio, with layers averaging 0.3-1.5 mm in width. Sphene forms grains averaging 0.01-0.02 mm in size, and is concentrated moderately to strongly in some wispy layers and patches, commonly in plagioclase-rich layers. Grains up to 0.05 mm in size occur in coarser grained patches rich in plagioclase. Calcite forms anhedral, interstitial grains up to 0.2 mm in size in some coarser grained patches of plagioclase-diopside.

A few patches and layers contain abundant clusters of grains and single grains up to 0.6 mm in size of diopside. These have ragged outlines and are moderately poikilitic.

Diopside forms veins and irregular patches up to a few mm across composed of aggregates of equant, anhedral grains averaging 0.07-0.2 mm in size. Larger patches contain minor interstitial quartz grains, and patches locally grade into the quartz-rich patch.

A replacement patch up to several mm in size is dominated by medium to fine grained quartz. Diopside forms scattered anhedral to subhedral prismatic grains averaging 0.5-0.8 mm in size. It is altered slightly to moderately to pale green actinolite and/or irregular patches of calcite. A few irregular patches up to 1.5 mm in size consist of ragged, fine to medium grained actinolite with minor grains of calcite. Fluorite forms irregular interstitial seams and patches up to 0.1 mm wide, mainly between quartz grains. Sphene forms a few trains of elongate grains up to 0.05 mm in grain size. Clinozoisite forms one anhedral grain 0.2 mm across interstitial to quartz. Commonly bordering the quartz-rich patch is a zone of fine to locally medium grained diopside.

Sample 88-F   Massive Arsenopyrite-Tourmaline-(Quartz)

The rock is an aggregate of arsenopyrite which was fractured moderately, and replaced along grain borders and some fractures by secondary arsenic minerals dominated by scorodite. Interstitial patches are dominated by tourmaline with lesser quartz.

arsenopyrite	90-92%
scorodite	4- 5
tourmaline	2- 3
quartz	0.5
pyrrhotite	minor
galena	trace
chalcopyrite	*

Arsenopyrite forms equant, anhedral grains averaging 0.7-2 mm in size. They are fractured slightly to locally strongly, and replaced mainly in these zones by extreme fine grained patches of scorodite. A few arsenopyrite grains have very ragged borders against scorodite. Some interstitial cavities up to 0.5 mm across are rimmed by thin overgrowths of scorodite on arsenopyrite grains. Similar seams of scorodite occur on borders of some interstitial patches of tourmaline-quartz.

Tourmaline forms clusters up to 1.5 mm in size of anhedral to euhedral grains averaging 0.1-0.3 mm in size. The largest grain, which is associated with a coarse grain of quartz, is an elongate prismatic grin 1.1 mm long. Pleochroism is from pale to medium and locally deep bluish green to blue. Grains commonly are strongly color zoned. For examples, one grain 0.6 mm long contains two main patches, one pleochroic from light to deep bluish green, and the other from medium green to almost opaque. Several shows a gradational change from pale to deep blue in the maximum absorption direction; this grain is colorless in the other optic direction.

Quartz forms anhedral to subhedral, interstitial grains averaging 0.1-0.3 mm in size, with a few up to 2 mm across.

Pyrrhotite forms scattered inclusions from 0.03-0.1 mm in size in arsenopyrite.

Galena(?) forms a few proximal patches in arsenopyrite, ranging from 0.04 mm long down to 0.01 mm across. Associated with one 0.015 mm long is a grain 0.0025 mm across of pyrrhotite and one of chalcopyrite 0.002 mm across.

APPENDIX IV

THE VLF METHOD

THE VLF METHOD

The VLF (very low frequency) method uses powerful radio transmitters set up in different parts of the world for military communications (see Figure 6.34). In radio communications terminology, VLF means very low frequency, about 15 to 25 kilocycles/second. Relative to frequencies generally used in geophysical exploration, this is actually very high.

These powerful radio transmitters induce electric currents in conductive bodies thousands of miles away. Induced currents produce secondary magnetic fields which can be detected at surface through deviations of the normal VLF field. The VLF method is relatively inexpensive and can be a useful prospecting tool.

Successful use of VLF requires that the strike of the conductor be in the direction of the VLF station so that the lines of magnetic field from the VLF transmitter cut the conductor. The upper half of Figure 6.35 shows the magnetic field vector in relation to the transmitting antenna. The lower half of Figure 6.35 shows that currents will be induced in conductor C1 but not in conductor C2 because the lines of magnetic field cut conductor C1 but not conductor C2.

Figure 6.36 shows schematically how the secondary field from the conductor is added to the primary field vector so that the resultant field is tilted up on one side of the conductor and down on the other side. A VLF receiver measures the field tilt and hence we have the tilt profile shown in the upper part of Figure 6.36.

Interpretation is quite simple. The conductor is located at the inflection point marking the crossover from positive tilt to negative tilt, and the maximum in field strength. One cannot make reliable estimates of conductor quality, however. A rule of thumb depth estimate can be made from the distance between the positive and negative peaks in the tilt angle profile. The major disadvantage of the VLF method, however, is that the high frequency results in a multitude of anomalies from unwanted sources such as swamp edges, creeks and topographic highs. It is sometimes impossible to get a powerful enough VLF station to be near the strike direction of the expected conductor. On the other hand, the tendency for VLF to respond to poor conductors has aided in mapping faults and rock contacts.

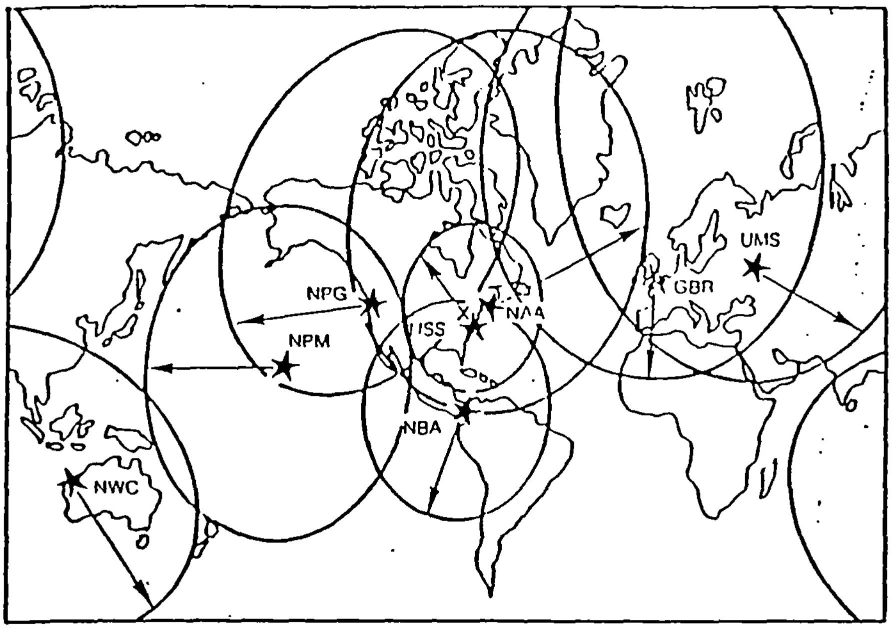

FIGURE 6.34
Locations of well-known VLF transmitter stations

Coverage shown only for well-known stations

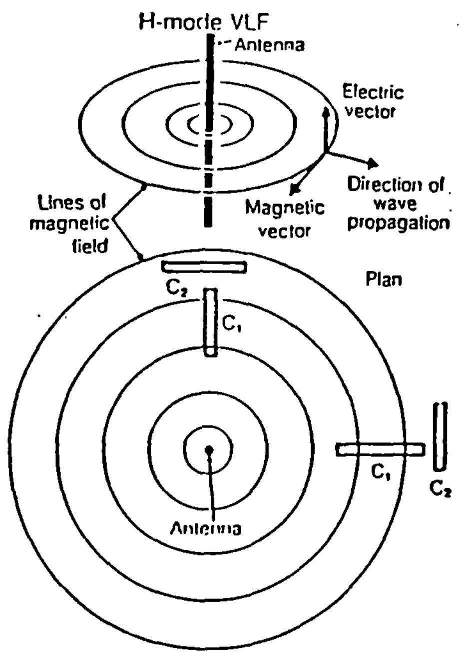

FIGURE 6.35
The VLF field

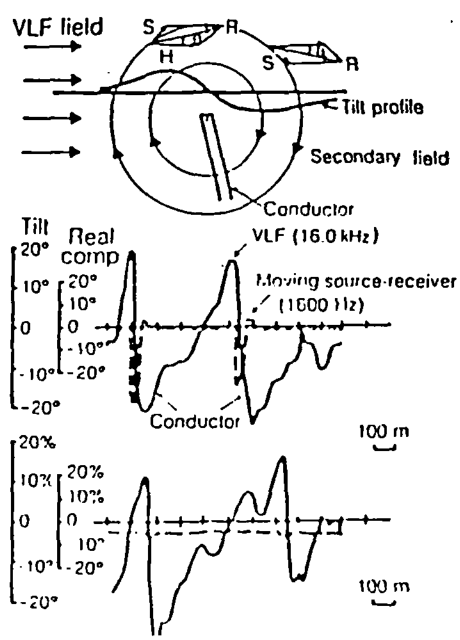

FIGURE 6.36
Tilt of the VLF field vector over a conductor

APPENDIX V

PRICE QUOTATIONS
for
ORTHOPHOTO MAP PREPARATION
and an
AIRBORNE GEOPHYSICAL SURVEY

EAGLE MAPPING
SERVICES LTD.

Topographical Mapping

(604) 942-5551 Office
(604) 942-6472 Residence

109-2331 Marpole St.
Port Coquitlam, B.C.
V3C 2A1

October 7, 1988
Our File P88-105

Total Erickson
Mt. Skukum Gold Mining Corp.
#21- 1114 First Avenue
Whitehorse, Yukon
Y1A 1A3

Attention: Mr. Mark Fekete

Re: Antimony Mountain - Base Mapping

Dear Sir:

With reference to your recent Fax message, we understand that you require a stable base map for your claims area near Antimony Mountain in the Yukon Territories.

We understand that you require a quotation of two options; first being a photo enlargement of the NTS map and subsequent fine line drafting of the 1:10,000 scale map on four sheets which would be standard Total Erickson mylars. The second option would be orthophoto mapping at 1:10,000 scale with either 20 metre or 40 metre contour intervals. These maps would be on the same four sheet presentation as option 1 or fitted onto two Total Erickson sheets.

For option one we would photo-mechanically enlarge the 1:50,000 NTS map sheets at 1:10,000 scale. We would then draft fine black ink lines of your claims area on four standard Total Erickson mylars as outlined on figure one which is a 1:50,000 map you have provided to us.

For the 1:10,000 orthophoto mapping, we will utilize 1951 1:70,000 Federal Government aerial photography. This photography will be aero-triangulated and adjusted to the best available control derived from the existing 1:50,000 NTS maps.

.../2

From the controlled photography we will compile 40 metre contours of some 7500 hectares as outlined in figure two. We feel that the 20 metre contours would be too tight and mask too much of the orthophoto image at the 1:10,000 scale. At the same time, we will prepare the 1:10,000 orthophoto negatives. The contours will be scribed using the scribing technique and a clear contour overlay will be prepared. The clear contour overlay will be registered to the orthophoto negative and we will provide the following final products to you:

1. One stable base KRC print showing the orthophoto image and contours in white

2. One cronaflex positive of the same as above

3. One clear contour overlay showing the contours in black lines

All maps will be compiled on standard Total Erickson mylars.

FEE SCHEDULE:

1. For the provision of four 1:10,000 scale fine line drafted maps from 1:50,000 enlargements

   FIRM LUMP SUM......$ 1,790.00

2. For the provision of 1:10,000 scale orthophoto maps with 40 metre contours of the same area on four sheet presentation as for option one (15,000 hectares)

   FIRM LUMP SUM......$12,800.00 north to top.

3. For the provision of 1:10,000 orthophoto maps with 40 metre contours restricted to the area of the claims and one km border (7500 hectares) on two Total Erickson sheets

   FIRM LUMP SUM......$ 7,685.00

We appreciate this opportunity of submitting these cost estimates to you and look forward to your comments and/or instructions in the near future.

Yours truly,
Eagle Mapping Services Ltd.

L.J. Hume

L.J. Hume, A.Sc.T.
President

AERODAT LIMITED
3883 NASHUA DRIVE • MISSISSAUGA • ONTARIO • CANADA • L4V 1R3
Telephone: (416) 671-2446 Telex: 06-968872 Fax: (416) 671-8160

September 30, 1988

Mr. Mark Fekete
Total Erikson
Mount Skukum Gold Mining Corporation
Bag 2775
Whitehorse, Yukon
Y1A 3V5

Dear Mark,

Please find attached our proposal for a combined helicopter-borne electromagnetic/magnetic/VLF-EM survey over the Dawson area, that you faxed to me. Our price is consistent with our December, 1987 charges for the Mount Skukum flying. The price for mobilization/demobilization is the maximum charge for your budgetary purposes. When you decide to proceed with the survey, we will inform you whether we have acquired other work in the area, in which case there may be a substantial reduction in the mobilization/demobilization charge.

We also recommend an orthophoto base map for the area due to the extreme ruggedness of the terrain. Ortho-photomosaics are easier to fly from in rugged terrain, and the data presentation is superior to that presented on standard semi-controlled photomosaic base maps.

We have offered the same range of products for the Dawson survey as previously presented in the Mount Skukum area. Should you require additional or alternate products for the Dawson survey, we would be happy to provide them.

We appreciate the opportunity to quote on this survey for Total Erikson and look forward to carrying out another survey on your behalf.

Best regards,

AERODAT LIMITED

Douglas H. Pitcher

Douglas H. Pitcher,
Vice President

AERODAT LIMITED

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Telephone: (416) 671-2446 Telex: 06-968872 Fax: (416) 671-8160

PROPOSAL

1. Aerodat Limited proposes to undertake for Total Erikson a combined helicopter electromagnetic, magnetic and VLF-EM survey in accordance with your request of September 29, 1988.

2. SURVEY LOCATION:

The survey area is located approximately 65 kilometres northeast of Dawson, Yukon. The survey quantity is approximately 535 line kilometres.

3. SURVEY SPECIFICATIONS:

(a) Flight lines will be flown at spacings of 100 metres in a north-south line direction over the area outlined in Appendix "A" of this proposal.

(b) The nominal EM sensor height will be 30 metres and will be consistent with safety of aircraft and crew. Magnetometer and VLF sensors will be at 45 metres and 50 metres, respectively. Terrain clearance will be recorded using a radar altimeter.

(c) The survey will be flown visually from photomosaics of the area utilizing a colour video camera system for flight path recovery.

(d) Reflights will be attempted wherever lines or part lines are noted in the field to be beyond the agreed tolerances and unacceptable.

(e) The most suitable VLF station for the specified flight direction will be used. If a station shut-down occurs, the survey will proceed on an alternate station.

(f) Occasional deficiencies or discontinuities of VLF information due to VLF transmission conditions will not be grounds for rejection of acquired data.

4. INSTRUMENTATION:

(a) The electromagnetic unit will be an Aerodat 3-frequency system consisting of two vertical coaxial coil pairs operating at approximately 935 and 4600 Hz, and one horizontal coplanar coil pair operating at 4175 Hz. The coils are mounted in a Kevlar "bird" at a separation of approximately 7 metres. The system measures inphase and quadrature responses at each frequency with a 0.1 second time constant.

System noise level is generally less than 1 ppm excluding spherics. EM data will be digitally recorded at 0.1 second scan rate permitting computer filtering of spherics to approximately 1 ppm.

(b) Magnetometer: Cesium optically pumped magnetometer will be operated at 5 samples per second and at a sensitivity of 0.1 gamma or better.

(c) VLF-EM: Herz Totem 2A measuring the total field and the quadrature components with full scale sensitivity of plus/minus 25%.

(d) Digital Recorder: RMS-DGR33 data acquisition system. EM channels will be scanned at 0.1 second rate. The magnetometer and VLF channels will be scanned at 0.2 second rate. In addition, altimeter, camera, manual fiducials and time, will be digitally recorded at appropriate times.

(e) Analog Recorder: RMS GR-33 dot-matrix recorder with resolution of 0.01 inches.

(f) Tracking Camera: An Aerodat video flight path recovery system will be used.

(g) Radar Altimeter: Hoffman HRA 100, or King KRA 10.

(h) Magnetic Diurnal Monitor: IFG (GSM-8), recording analog and digital modes located at base of operations.

5. DATA PRESENTATION:

The presentation will be at a scale of 1:5,000 or 1:10,000 to be specified in black on cronaflex base and/or in colour.

The various products described in the attached list identified as Appendix "B", will include data from EM, High Sensitivity Magnetometer and VLF-EM.

6. TIMING:

The survey will either be flown in late 1988 or March or April, 1989, weather permitting and upon the exact requirements of Total Erikson. Preliminary maps will be prepared within 3-4 weeks of completion of flying. Final maps and reports will be submitted 6 weeks after completion of the flying.

7. SURVEY QUANTITY

The survey quantity totals approximately 535 line kilometres.

8. SURVEY CHARGES

Basic Costs

(i)	Mobilization/demobilization	$10,000.00
(ii)	Survey charges including helicopter charges and the presentation of data described in Appendix "B" for approximately 535 line kilometres @ $108.00/km	$57,780.00

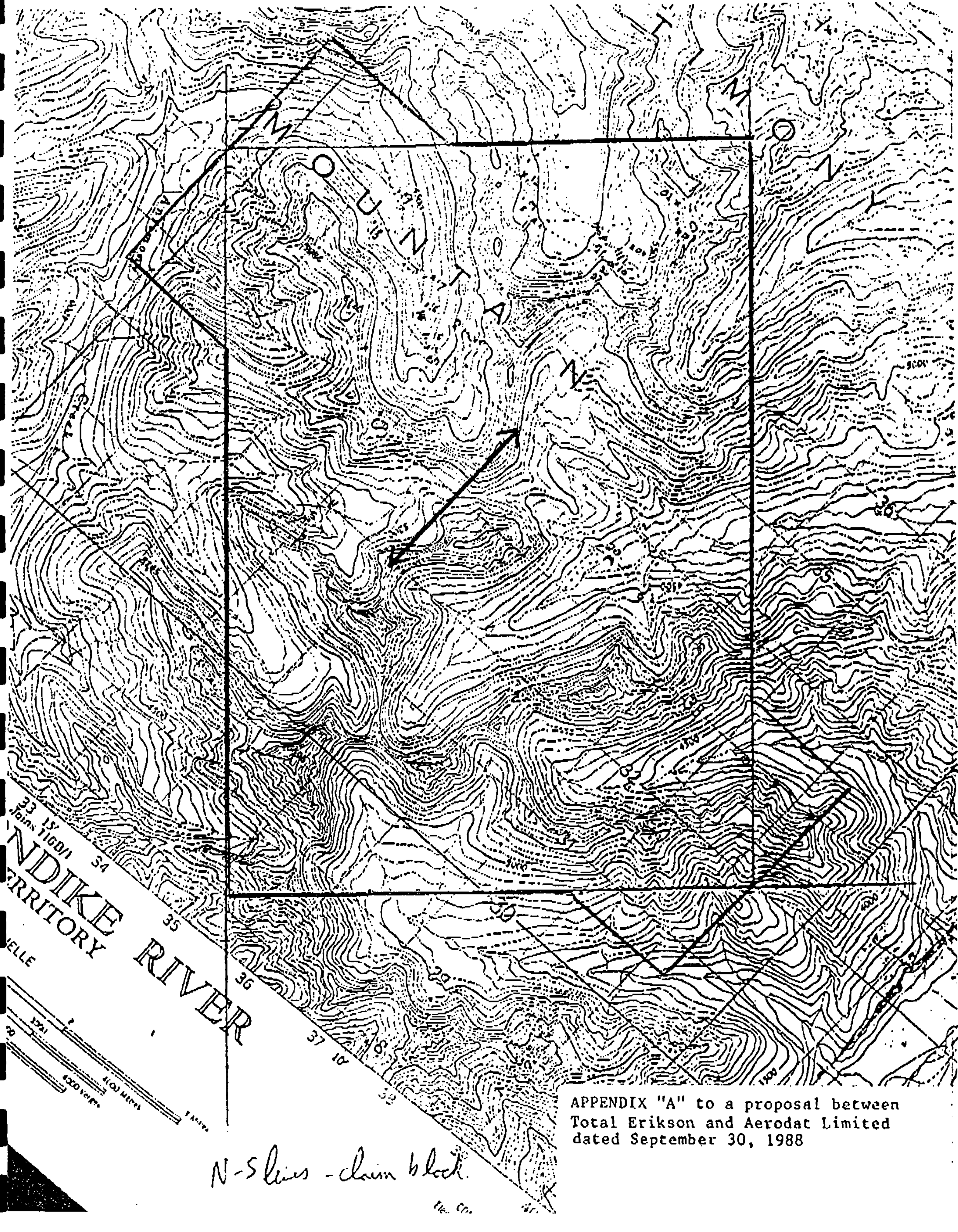
Note: 1) Mobilization/demobilization charges specified herein represent the maximum charges and may be substantially reduced if Aerodat acquires other work in the general area.

2) Due to the ruggedness of the terrain, we recommend flying the survey and presenting the data utilizing an orthophoto base map. The estimated cost for an orthophotomosaic base is $ 5,000.00.

Respectfully Submitted

AERODAT LIMITED

Douglas H. Pitcher
Vice President



APPENDIX "A" to a proposal between Total Erikson and Aerodat Limited dated September 30, 1988

APPENDIX "B"

LIST OF PRODUCTS

To be provided in conjunction with the Proposal to Total Erikson for a helicopter survey in the Dawson Area, Yukon.

I. Basic Products (Scale 1:5,000)

1. Base Map - Photomosaic or topographic base to be specified by Total Erikson.

2. Flight Lines - Photocombination of flight lines, anomalies and fiducials with the base map.

3. EM & Report - Photocombination of EM anomalies with Interpretation, with the base map and Report.

4. Magnetics - Photocombination of Total Field Magnetic Contours with the base map.

5. Magnetics - Photocombination of Calculated Vertical Gradient Contours with the base map.

6. Apparent Resistivities - Photocombination of Apparent Resistivity Contours with the base map.

7. VLF-EM - Photocombination of Total Field VLF-EM contours with the base map.

II. Colour Products (Scale 1:5,000 or 1:10,000)

1. Magnetics - Colour of Total Magnetic Field with superimposed contours and EM anomalies.

2. Magnetics - Colour of calculated Vertical Magnetic Gradient with superimposed contours and EM anomalies.

3. Apparent Resistivities - Colour of Apparent Resistivity with superimposed contours and EM anomalies.

4. VLF-EM - Colour of Total Field VLF-EM with superimposed contours and EM anomalies.

5. Electromagnetics Profiles showing all EM parameters, EM anomalies, flight lines and magnetic bar in colour. The magnetic bar will indicate magnetic highs and lows.

III. Miscellaneous

1. The Total Magnetic Field maps will be contoured at 5 gamma intervals or better where permitted by local magnetic gradient.

2. The Report will be presented in four copies.

3. All colour maps will be produced in four copies.

4. The colour products outlined in Par. II, if so requested, could be combined with information of other products. For example, flight lines, EM anomalies and contours of Total Magnetic Field could be superimposed on a colour map of the Calculated Vertical Gradient.

5. All Analog Records, Film and Digital Archive Tapes of Field and Gridded data will be provided with the final presentation.