

ASSESSMENT

GEOLOGICAL

REPORT

ON

[AIRPHOTO FRACTURE DENSITY ANALYSIS]

ON THE

TAT GROUP OF MINERAL CLAIMS

(TAT 6/1298 - TAT 8/1300)

MORRIS MINE AREA

TATLAYOKO LAKE, BRITISH COLUMBIA

CLINTON MINING DIVISION

51 24'N

124 25'W

92N8W

FOR

EXPRESS RESOURCES LTD

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**11,961**

February 12, 1984

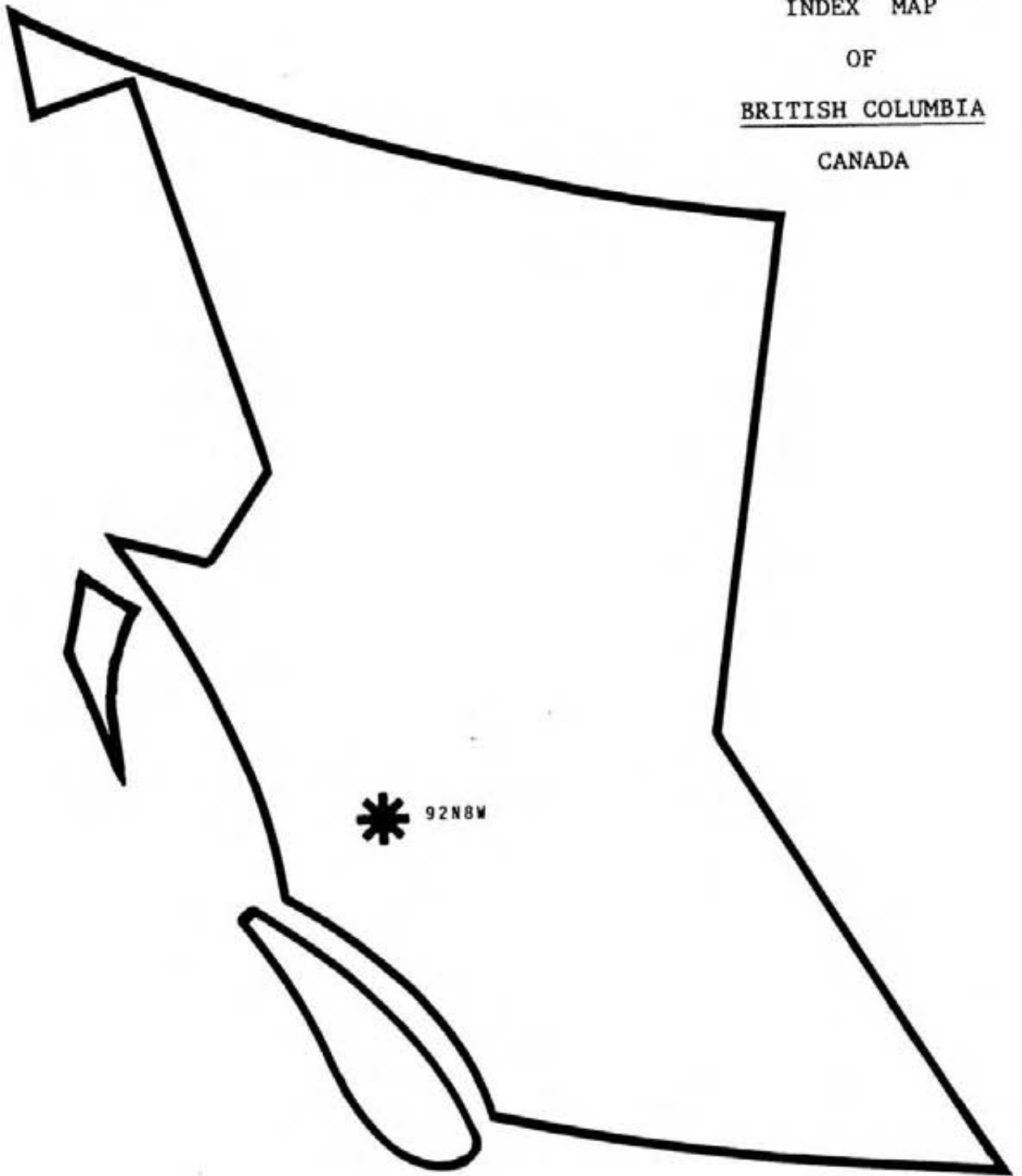
Gerhard von Rosen, P.Eng.

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**FIGURE "A"**

INDEX MAP  
OF  
BRITISH COLUMBIA  
CANADA



TAT GROUP MINERAL PROPERTY  
TATLAYOKO LAKE, BC                      CLINTON MD

### INTRODUCTION

The writer was commissioned by R.R. Dion to perform an air-photo fracture density analysis, and to compile the present summary report for assessment purposes.

D.A. Chapman, of J.C. Explorations, performed the annotation of vertical black/white airphotos, prepared the point counts, made the relative-density calculations, contoured the isogradients, and compiled an interpretative plan of the preferred shear faults within the surveyed area.

### PROPERTY HOLDINGS

This assessment work substantiates work performed on the TAT Group of mineral claims. A larger area than the actual claims was included in the airphoto study, in part because stereo-coverage was necessary, and also because it is valuable to compare signatures over surrounding terrain to make comparisons feasible.

<u>CLAIM NAME</u>	<u>RECORD #</u>	<u>UNITS</u>	<u>ANNIVERSARY</u>
TAT 6	1298	18	November
TAT 8	1300	20	November
CLINTON MINING DIVISION			NTS: 92N8W

Upon acceptance of the subject report for assessment purposes, the anniversary of the Tat Group will be November 1984.

The TAT group overlaps ground held by Stryker Resources Limited by an apparently large margin. (see Figure **C**)

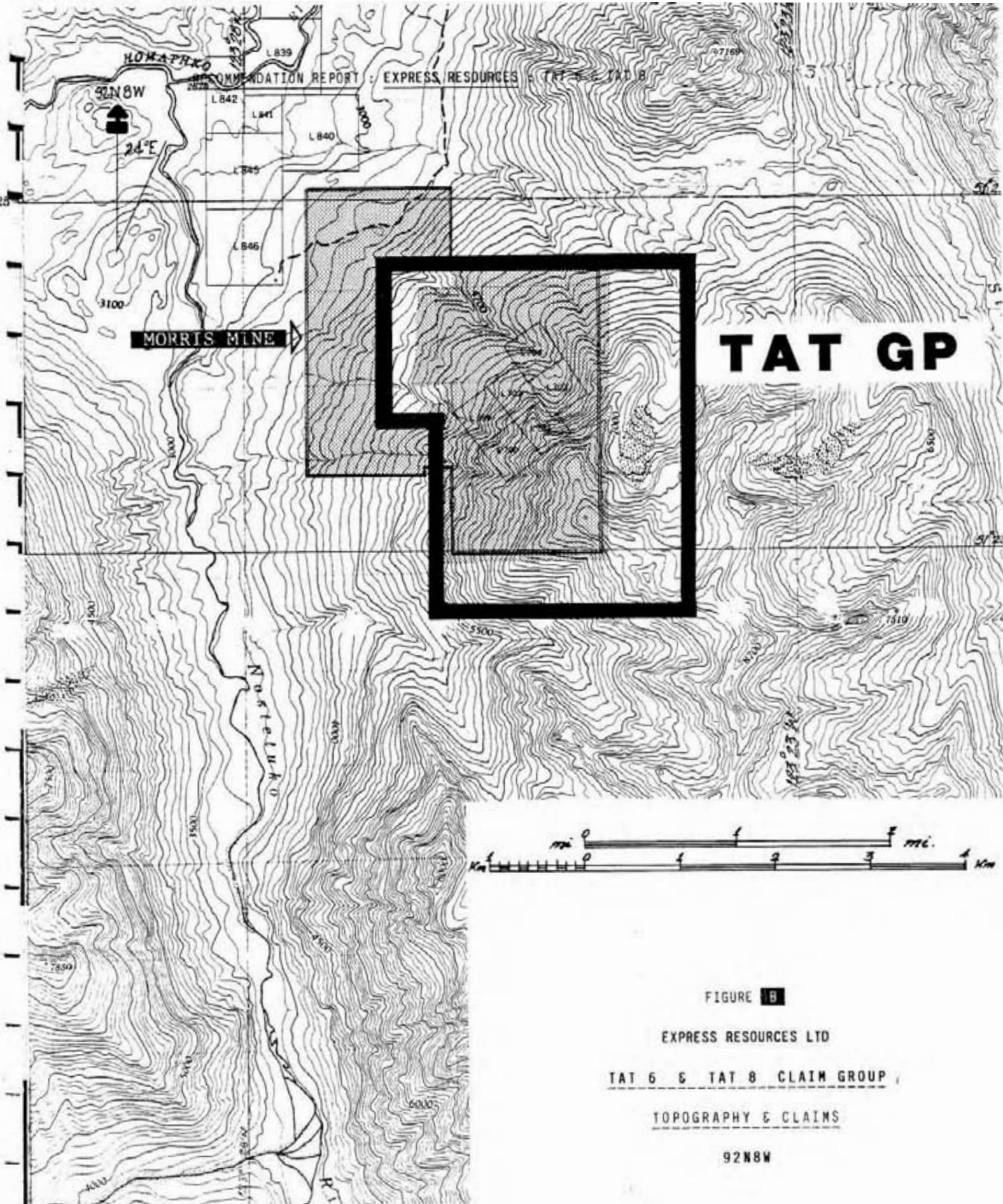


FIGURE B

EXPRESS RESOURCES LTD

TAT 6 & TAT 8 CLAIM GROUP

TOPOGRAPHY & CLAIMS

92N8W

NOTES: TAT 6 & TAT 8 OVERLAP THE HOLDINGS OF THE  
 MORRIS MINE & MAY INCLUDE SOME REVEALS.  
 THE CLAIM LOCATIONS ARE NOT SURVEYED.

### LOCATION & ACCESS

51 24'N

124 25'W

92N8W

To reach the general area one travels via good all-weather road to Tatla Lake, a distance of 250 kilometers from Williams Lake, British Columbia, the nearest supply base.

From this settlement a gravel road leads one along the east side of Tatlayoko Lake for a distance of 50 kilometers, until a logging road takes over and continues for a distance of 16 kilometers south east of the south end of the lake. It is from this area that a newly rehabilitated 4x4 road facilitates access to a heliport, and simplifies the heretofore difficult exploration logistics of the country. Access to the specific claims area surrounding the Morris Mine property at present is by helicopter and foot traverse.

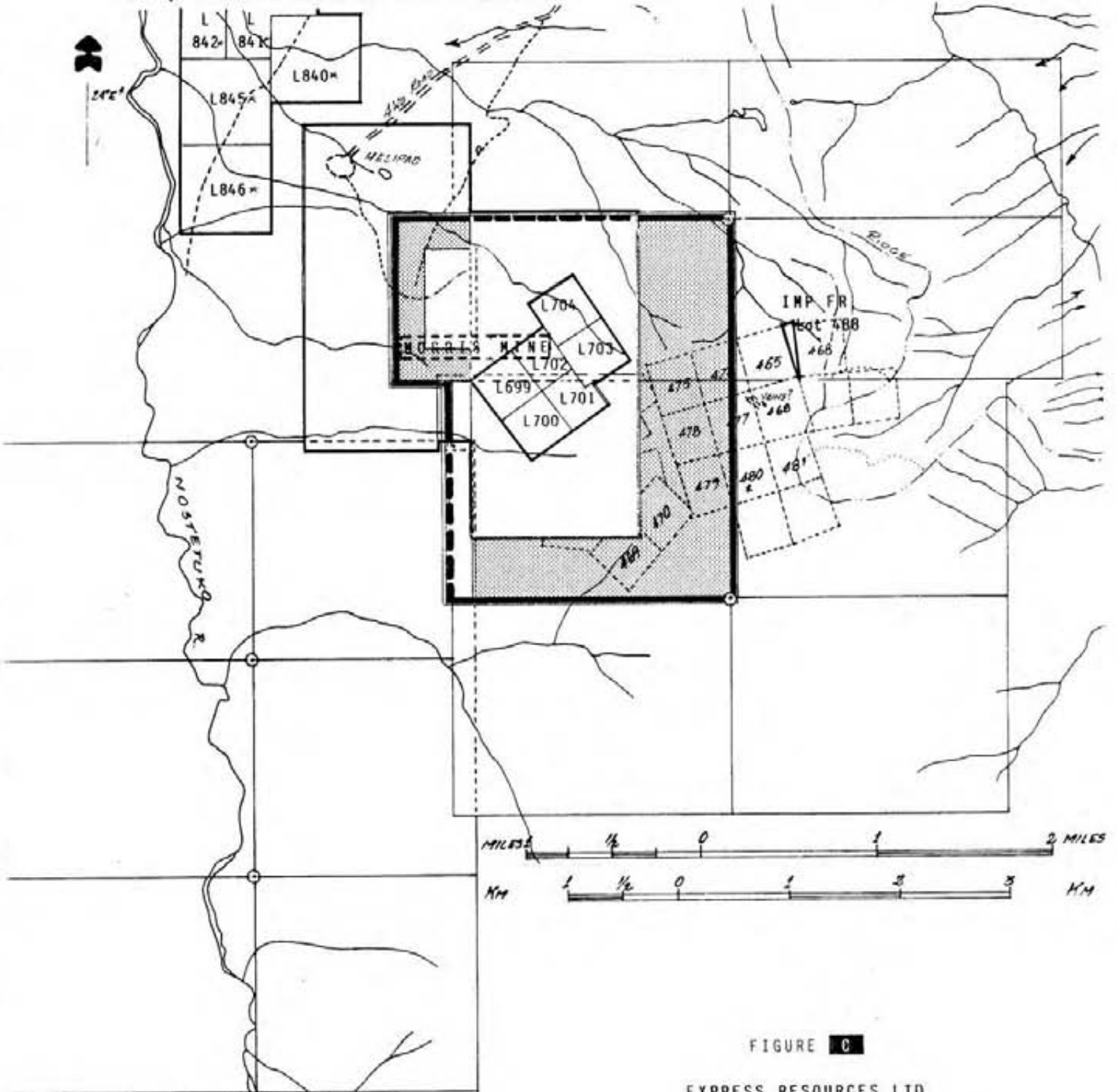
### PHYSIOGRAPHY, VEGETATION, CLIMATE

The claimed area straddles, and adjoins the Morris Mine holdings to the south, and east. A portion of Tat 6 reportedly overlaps the Morris ground to the west. See map.

The peak which rises to the east at about 2170 mASL is thereby included in the property, which therefore has a relief of around 500 meters.

Much of the claimed area is above timberline where outcrops should exist in plenty, and alpine conditions prevail.

Climate near Tatlayoko lake is pleasant in both summer and winter, although prospecting will be delayed by late snow packs on north aspects of the mountains.



**LEGEND**

- Road
- Trail
- Helicopter Landing
- Land Lot
- Mineral Crown Grant
- Reverted Mineral Crown Grant
- Two Post Claims (?1930's?)
- The dashed 1930's claims approximate the apparent claim layout surrounding the IMP FR #488.

**FIGURE C**  
 EXPRESS RESOURCES LTD  
 TAT 6 & TAT 8 CLAIM GROUP  
 CLAIM LAYOUT  
 92N8W

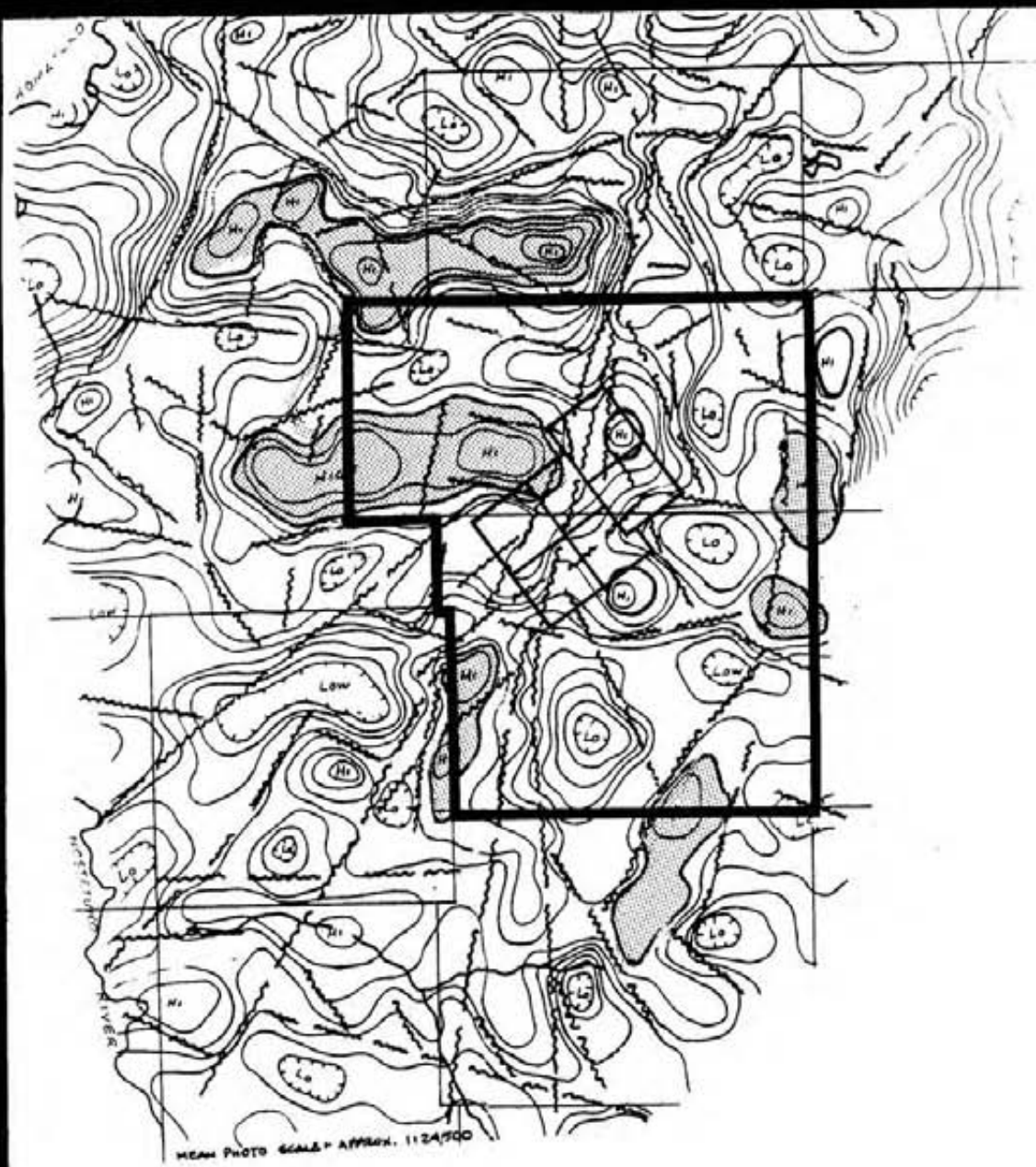


FIGURE **D**

EXPRESS RESOURCES LTD

TAT GROUP MINERAL PROPERTY

COMPILATION PLAN

92N8W

SHEET 5/5 - INDICATED PREFERRED SHEAR FAULTS

TAT 1-9 CLAIMS  
NOSTETUKO RIVER AREA  
CLINTON M.D., BRITISH COLUMBIA

INTERPRETED PREFERRED SHEAR FAULTS  
AS INDICATED BY THE RELATIVE DENSITY ISOGRADIENT  
AIRCOTE INTERPRETATION COMPILED BY D.A. CHAPMAN SEPT. 85

GEAREX ENGINEERING mission bc



### HISTORY

Discovery of quartz veins carrying appreciable gold and silver values in 1907 resulted in claiming the original property. These values were followed with difficulty on talus covered slopes, and within a few years adits #1 and #2 were driven on the Morris vein, and another one at lower altitude. Much work was performed during the years from 1911 to 1935, in the form of correlating the underground discoveries with the many outcrops of quartz veins on surface. Results were so promising that work including access road building, camp shelter establishment, and the hanging of an aerial tramway were undertaken. Tatlayoko Lake Gold Mines Ltd. performed the early work, while Bridge Island Gold Mines Limited drifted another 340 feet on the Morris vein in 1937. A copper showing located 700 meters north east of the Morris vein was also explored at this time. It is also likely that staking, and attempts at Crown Granting of further showings occurred during this time, as evidenced by the pie-shaped Lot 488., which is presently a reverted Crown Grant, to the east of the Morris Mine, and slightly east of the subject property. (see Figure **C**)

Rico Copper (1966) Ltd. acquired the property in 1966 and R.W. Phendler, P.Eng. wrote an assessment report [#1663] on their exploration program on the copper zone in 1968. Stryker Resources Limited optioned the Morris Mine property in 1980. Extensive exploration, including prospecting, trenching, and diamond drilling were recommended and completed under the supervision of Clive W. Ball, P.Eng. in 1981. Your company acquired the TAT 6 and TAT 8 mineral claims, staked during November 1982.

continued:

### HISTORY

Gerhard von Rosen, P.Eng. prepared a report dated 26/01/83, on the TAT 6 and TAT 8 mineral claims, without the benefit of ground inspection. This report served to summarize information to-date, and recommended a phased exploration program. D.A. Chapman was consulted to prepare a study of the visible lineations detected on stereo-airphotographs, to be used for future exploration, as well as assessment purposes.

The writer visited the property in November, 1983, and spent several hours during two days overflying, and landing at various locations. Snow and weather conditions precluded any detailed geologic examinations, however, several airphotos were taken for record, and to aid in interpretation of the subject study, as well as in planning future exploration projects.

### GEOLOGY

Geological information on the general area exists in the form of Geological Survey of Canada maps, and Reports on Activities as there is a current program of mapping in the area. Reports on the Morris Mine and other Tatlayoko Lake district properties can be found in the old Summary Reports of the Geological Survey of Canada and various Annual Reports of the British Columbia Department of Mines, cited.

The TAT 6 & TAT 8 subject property surrounds, and overlaps the Morris Mine property, thus any detailed information relating to the latter is valuable in describing the former.

The writer therefor takes the liberty of quoting verbatim from a comprehensive engineering report on the aforementioned mine.

## GENERAL GEOLOGY

Clive W. Ball, P.Eng. in his December 3, 1981 report to Stryker Resources Limited describes the general geology as follows:

"The property lies within a broad band of sedimentary and volcanic rocks that extend from Tatlayoko to Taseko Lakes. They are termed the Takla Group and consist of andesite and basalt beds with rhyolitic tuff and with lesser amounts of sandstones, conglomerates, mudstones, and limestones. The strata have been compressed into a series of close folds, the less competent beds of which have been intensely sheared. On the basis of fossil evidence, the Takla Group has been dated by the Geological Survey of Canada as Triassic in age.

The contact with the Coast Range Batholith passes the south end of Chilco Lake and crosses the Nostetuko Valley 10 kilometers south of Tatlayoko Lake. The Coast Range Batholith is commonly believed to be of Upper Jurassic age.

Stocks and sills invade the Takla Group and along the contacts silicification and pyritization are clearly visible in the invaded rocks. A typical stock invading the area consists of quartz-diorite with visible phenocrysts of plagioclase, quartz, biotite, and hornblende..."

## LOCAL GEOLOGY

In the aforementioned report detailed information is given relating to the specific area of the Morris Mine, which, in the opinion of the writer, best describes the probable geology of the subject property:

"The rocks underlying the mineral claims consist of volcanic and sedimentary beds of the Takla Group and comprise sheared and folded mudstone, argillite, and sandstone strata with interbedded andesite and basalt. Feldspar porphyry andesites occur in beds 40 meters thick which strike North-South and dip steeply to the East.

-over

continued:

LOCAL GEOLOGY

"...Along the contact of the sediments and the basalts considerable alteration and silicification has occurred and copper mineralization occurs in the andesite.

The gold bearing quartz stibnite veins strike North 15 degrees west to North 20 degrees west and dip at angles of 37 degrees to 52 degrees Easterly. They occur in mudstone, argillite, and sandstone beds that strike East-West and are highly sheared and folded. Swarms of quartz feldspar porphyry dykes together with basalt dykes cut the sediments which in turn have been displaced by East-West striking faults. The quartz veins are not offset by the latter faults and thus represent later fracture fillings. Many basalt dykes cut the sediments and are apparently younger than the quartz veins. For example, one persistent basalt dyke 1.5 metres thick follows the No. 1 vein for a distance of 55 metres.

Quartz-diorite intrusives are found throughout the property. They most probably represent offshoots from the Coast Range Batholith, the main contact of which about 6 kilometers south of the property. The quartz diorite is never far from the quartz stibnite veins and at one point forms the hanging-wall of the vein."

MINERALIZATION

Assay values from the Morris vein vary, however averages of samples taken by Clive W. Ball, P.Eng. from within the adit, averaged over eight chip samples resulted in: Gold, 0.54 oz/ton; silver, 7.36 oz/ton; antimony, 11.4% over 41 centimeters. Drill hole assays on the same vein ran lower. Surface samples tended to be higher in gold value.

The subject claims, TAT6 & TAT 8 appear to cover several of the originally-staked claims, long ago forfeited, which existed between the Morris Mine holdings and the remanent IMP Fraction, which now is the reverted Crown Grant Lot 488. An old map showing the claim names and lot numbers of these old claims indicates zones of apparent interest discovered during the time of their staking. Although this is of 'hearsay' inter-

continued:

MINERALIZATION

est only, the possibility of the existence of these mineralized zones should be investigated.

With the forgoing disclaimer, the following information is here offered:

Lot 478: rich float found on this claim.

Lot 470: zone of veins; assay (Haslam): Gold, 0.76 oz/ton; silver, 22.3 oz/ton.

It should be noted that none of these claim locations have been tied-in by survey, but their location appears reasonably well pinpointed relative to Lot 488, which remains today as a reverted Crown Grant.

The claims layout is shown as Figure **C**. The old Crown Grants of the Morris Mine are Lots 699 - 704, inclusive. The main adit appears on 699 & 700, while the copper zone extends along Lots 701, 703, 704. The older, now-forfeited claims of the 400 series are shown in dashed outline. The unsurveyed area apparently covered by the TAT 6 and TAT 8 mineral claims is shown as a stippled area.

AIRPHOTO  
FRACTURE DENSITY  
ANALYSIS

PURPOSE

Black and white, vertical airphotos provide valuable information in many ways, one of which derives from the stereoscopic study of straight, and/or arcuate lineations signifying elongate interruptions in the surface of the earth attributed to joints, faults, or other breaks in the surface of the bedrock.

It has been postulated that the relative density per unit area of these signs of rupturing (airphoto lineations) is an indication of the open-ness of the rocks to influx of mineralizing solutions.

Hence, the premise that the study of fracture density may give the explorationist another tool to be used in pinpointing exploration targets.

POSSIBILITIES OF METHOD

Large-volume "porphyry copper" type deposits tend to include ore mineral disseminations in stockwork fractures within granitic, volcanic, or other metamorphosed rocks at or near intrusive contacts of granitic bodies. Because ore metallization appears to be related to rock type contacts and changes in fracture density, this study was undertaken to attempt outlining of rock types, and pinpointing anomalously fractured zones.

continued: POSSIBILITIES OF METHOD

This method, when used in conjunction with other information, such as geophysics or geology, can be utilized to outline areas of interest with minor unit-area expense.

A follow-up program of helicopter-borne magnetometer, and electromagnetic surveying can reportedly be inter-related with a computer-filtered program of the digital point count information obtained in the present study. Through this combined study one can focus on exploration targets relating to shear/stress, 'plumbing', magnetic, and conductive parameters.

#### LIMITATION OF METHOD

Water, ice, heavy snow cover, and overburden tend to obscure the finer fracture details, although major trends will show through most surficial deposits.

Rock types fracture in different patterns, and each has a special signature under different stress situations. When lithologic boundaries are unknown to the interpreter then there may be difficulty in differentiating between fracture density increases caused by anomalous tectonic action within a homogeneous lithologic unit, or by simply changes in rock type. In the first case, additional fracturing may be of interest, while in the second instance, a non-mineralized rock body may exhibit more bedding, schistosity, and joints, without enhancement of the ore-hosting process.

Although fracture density anomalies could be assumed to always indicate zones more worthy of interest to the explorationist, it must be realized that metallization of favourable host rocks

continued;

LIMITATION OF METHOD

has been known to occur in moderately-fractured rocks. In the present study only, apparently vertical, fractures have been annotated by D.A. Chapman. Furthermore, their on-strike extrapolations have been connected to form semi-continuous lineations.

METHOD OF ANALYSIS

The following, vertical, black/white, airphotographs obtainable from the Map Division, Parliament Buildings, Victoria, British Columbia, were chosen to provide stereoscopic coverage of the area required:

BC7862: 206 & 207

BC7862: 125 & 126

Plastic overlays on #206, 207, & 125 were used to annotate the lineations seen on the airphotographs. The match-line method was employed to join adjoining flight lines.

The overlays were marked with geographic features so that pinpointing of information with respect to actual terrain could be made. A non-orthogonal mosaic is thus created, wherein linear scale varies from peak to valley areas.

Appendix Figure 1 displays the matchline mosaic of annotated overlays.



### POINT COUNT

In order to facilitate quantifying this information a method has been devised [Tait Blanchet, D.A. Chapman] whereby the airphoto overlays (annotated with the traced lineations) are divided by an orthogonal grid, - with 1 cm dimensions in this case. The grid is carried on a separate overlay. A moveable circle template, with diameter of 1 cm, is then centered on each of the grid points, and the quantizing of the fracture information commences. Valuation of the lineation sectors is as follows:

All traced fracture segments are counted:

- a) fractures that cross the circumference of the circle once are given one point.
- b) fractures that cross the circumference of the circle twice are given two points.
- c) fractures not crossing the circumference of the circle are given 1/3 points.

Thus the "sum" of quantized fractures is noted on an overlay at the grid intersections. (see Appendix Figure 2)

### RELATIVE DENSITY ESTIMATE

The relative density estimate of 'visible fracture/fault patterns' observed, is shown as Appendix Figure 3.

This is a plan showing arithmetically-obtained interpolated mean values observed between surrounding unit area samples.

This information is related to taking the first derivative of the point count information, and as such represents 'filtered' data.

### RELATIVE DENSITY ISOGRADIENT

The process of joining equal-value locations on the survey plan provides contour lines which show the isogradient of the relative density of visible fracture/fault patterns observed on the subject match-line mosaic.

This information is shown as Appendix Figure 4.

### INDICATED SHEAR/TENSION FAULT ZONES

Figure 5/Appendix shows the interpreted 'indicated preferred shear faults' in relation to the isogradients, and the outline of the Morris Mine Crown Grants.

### DISPLAY OF RESULTS

In order to facilitate correlation between results, topography, and property outlines, the following figures have been bound in the report at a similar scale:

Figure **B** Topography & Claims; showing the overlap of the subject property TAT 6 & 8 claims onto the Morris Mine property.

Figure **C** Claim Layout; showing the outlines of the old claims in dashed lines.

Figure **D** Compilation Plan; showing results of this survey at a scale comparable to the previous figures.

The relative density isogradient is shown as contoured areas of 'high' and 'low' value zones, of which the 'highs' are indicative of those areas which lie between highly fractured terrain, and those areas with sparse visible fracturing.

continued: DISPLAY OF RESULTS

Indicated, preferred shear-faults are shown as undulating (fault-symbol) lines trending in several directions.

### RESULTS

Appendix Figure 1: Apart from the numerous annotated linears on the overlay of the match-line mosaic, there are two larger, and one smaller bird's eye pattern which appear as traced concentric linears.

Appendix Figure 5: Several points of interest resulting from the study can be discerned on this map.

Firstly, as displayed on Figure 4, there are several patterns of 'high' relative density isogradient. One of these, elongated in the E-W direction, occurs as a sub-parallel pair. The more northerly of these lies just north of the subject property boundary, while the other starts down-hill, west of the Morris Mine, and trends through a portion of the subject property into the area just north of the Morris Mine. A similar, but weaker pattern can be found near the south-west corner of the map. Another pattern of 'high' values trends north, north-easterly near the eastern border of the subject claims. It consists of one lower level oblong 'high' at the south, followed by three more rounded patterns further north.

A few, isolated, rounded 'high' areas dot the remainder of the map area.

Figure 5 displays the indicated preferred shear faults trending in several directions. The most prominent, and continuous of these is one which follows a generally straight N-S attitude

continued:

### RESULTS

at the north end of the map, but horsetails into several diverging branches, starting approximately at the center of the surveyed area, which happens to be the general area of the Morris Mine, and the center of the subject claims.

The previously-mentioned strong E-W trending 'highs' are truncated at the east end by this throughgoing system.

The Morris vein, and the near-by copper deposit take the general NNW attitude, which basically parallels the bedding in this area. Several shear faults have been interpreted to follow this direction, but they are not generally as strong as the first-mentioned pattern.

In dealing with patterns, there are two south-west pointing 'fingers' of low-order 'high' isogradient value, which occur within close proximity of the Morris Mine. These represent an interesting pattern, which may deserve further investigation.

### DISCUSSION OF RESULTS

It is evident that the results of the survey have isolated a few parameters which will aid in the planning of further exploration of the subject property.

The attitude of the mineral-bearing structures at the nearby mine, and reported prospects appears to relate positively to results gained from this survey. It is possible that depending on further confirmation, one direction, and/or pattern of the results can be utilized in defining target areas to be explored.

### CONCLUSIONS

- 1) The known Morris Mine is overstaked by the subject property, and depending on the position of the actual claim boundaries there may be some claimed area to the northwest of the Morris Mine, proper, which belongs to the subject holdings. The subject claims adjoin the Morris Mine, Stryker Resources Limited, property to the south, and east.
- 2) The gold bearing stibnite veins of the area strike about N15W and dip around 45 degrees easterly. Along the contact of the sediments and the basalts considerable alteration and silicification has occurred and copper mineralization occurs in the andesite. The strike of the beds is generally NNW.
- 3) The present survey results consist of certain patterns of 'high' relative density isogradient, and through-going, and intersecting directions of indicated, preferred shear faults. These resultant signature appears to coincide, or at the least have some relation to the geographic location of the Morris Mine.
- 4) Further exploration of the subject property will most certainly include inspection of these target areas.
- 5) Further exploration could conceivably include helicopter-borne magnetometer, and electromagnetic surveys, as the modern, state-of-the-art instruments are highly sensitive, computerized, and relatively inexpensive to operate. Such information could be related to the digital information herein displayed.

### RECOMMENDATIONS

Ground-inspection of the subject area should include prospecting, soil-silt sampling, along foot traverses planned in such a way that the 'high' isogradient areas, as well as the through-going shear zones, are covered in detail.

Those sectors of the property where, from old maps, mineralized-float, and in-situ vein occurrences have been reported, should be prospected in detail.

Depending on logistics, it would be best to perform the airborne magnetometer-EM survey in advance of the ground program, as follow-up would again be indicated.

Considering that the terrain is 'alpine' in general character, it is important that the helicopter-supported ground crew be 'at ease' in such environments.

APPENDIX "A"

REPORT

ON

AIRPHOTO STUDY

OF

AIRPHOTOS: BC7862-206&207-125&126

COVERING

TAT GROUP MINERAL PROPERTY

MORRIS MINE AREA

BY

Douglas A. Chapman

TO: GERHARD VON ROSEN, P.ENG.

DEAR SIR:

AT YOUR REQUEST I HAVE COMPLETED A PHOTOSTUDY OF THE TAT GROUP OF CLAIMS. THESE CLAIMS ARE LOCATED ADJACENT TO THE MORRIS MINE, NEAR THE SOUTH END OF TAT-LAYOKO LAKE (92N8W) IN THE CLINTON MINING DIVISION. THE ENCLOSED MATCH-LINE MOSAIC OVERLAYS BC GOVERNMENT BLACK/WHITE AIRPHOTOS BC7862:#207(206) & #125. THE PHOTOSTUDY ENTAILS THE ANNOTATING OF APPARENT FAULT AND/OR FRACTURE SYSTEMS AND THE COMPILING OF THIS INFORMATION INTO EMPIRIC FORM THAT RELATES TO THE RELIEF OF STRESS IN THE CRUSTAL SURFACE BY FAULTING. FIGURE 1 INDICATES THE DATA AS ANNOTATED; FIGURE 2 DISPLAYS THE QUANTIFIED DATA AS POINT COUNTS; FIGURE 3 GIVES THE DERIVED MEAN OF THE POINT COUNT VALUES; FIGURE 4 IS A MAP OF THE ISOGRADIENT DERIVED BY JOINING EQUAL-VALUE POSITIONS ON THE 'MEAN', OR RELATIVE DENSITY PLOT; AND FIGURE 5 PRESENTS MY INTERPRETION OF THE LOCI OF INDICATED PREFERRED SHEAR FAULTS.

#### LOGIC OF SURVEY

THE ISOSTATIC TRACE OF APPARENT FAULT AND/OR FRACTURE JOINT SYSTEMS IN THE EARTH'S CRUST ARE THE RESULT OF THE VARIANCE OF HORIZONTAL STRESSES ACTING ACROSS THE EARTH'S BOUNDARY SURFACE REPRESENTED BY THE PLANE OF THE AERIAL PHOTOGRAPH.

THE MORE VISIBLE AND DENSE THE PATTERN, THE GREATER THE VERTICAL PRESSURE OF THE UNLOADING FORCE ACTING AT THE BOUNDARY RESULTING IN INCREASED SURFACE TENSION.



continued:

### LOGIC OF SURVEY

MOST OREBODIES ARE HOSTED BY ROCK STRUCTURES INDUCED IN THE ROCK AS A RESULT OF DEFORMATION; EITHER AS STRESS AND/OR STRAIN ENVELOPES WITH FRACTURE FLOODING BY MINERALIZERS, OR SHEAR TENSION FISSURES ASCENDED BY VEIN MATERIAL.

### METHOD OF SURVEY

THE JOINT PATTERNS AS ISOSTATIC TRACES ARE ANNOTATED TO EITHER THE PHOTOGRAPH OR AN OVERLAY AND ARE THEN ORGANIZED INTO AN EMPIRIC FORM BY ESTIMATING THE COUNT OF TRACES INTERSECTING THE PERIMETER OF EACH SAMPLE AREA TAKEN. SEE FIGURES 1&2.

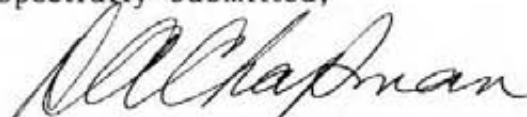
THE INITIAL ESTIMATE OF FRACTURES PER UNIT AREA IS AVERAGED FOR THE MEAN VALUE OF FOUR SAMPLE AREAS AROUND A CENTRAL POINT, THIS RESULTING VALUE FOR THE INTERPOLATED MIDPOINT IS THEN CONTOURED ALONG EQUAL VALUES TO DISPLAY AN ISOGRADIENT OF THE MAXIMA/MINIMA RELATIVE DENSITY. SEE FIGURES 3&4.

FIGURE 5 DISPLAYS MY INTERPRETATION OF THE DATA AND DISPLAYS THE INDICATED PREFERRED SHEAR FAULTS IN RELATION TO THE RELATIVE DENSITY ISOGRADIENT WITH RESPECT TO THE MORRIS MINE CROWN GRANT LOCATIONS.

RECOMMENDATIONS

- 1) AIRBORNE WORK OVER THE CLAIMS AREA USING LOW LEVEL MAGNETOMETER, VLF-EM GEOPHYSICAL SURVEYS IS RECOMMENDED AS PROVIDING A WEALTH OF INFORMATION AT REASONABLE COST.
- 2) THE DATA OBTAINED FROM THESE GEOPHYSICAL SURVEYS CAN BE MADE COMPUTER COMPATIBLE WITH THE DATA DERIVED FROM THE PRESENT AIRPHOTO STUDY. I RECOMMEND THAT THIS BE DONE, AND THAT A COMPARISON OF THE DERIVATIVE FEATURES BE PERFORMED USING SPECIAL PROGRAMMING.
- 3) GROUND INSPECTION AND SURVEYS ALONG PREFERRED SHEAR ZONES, AND OVER THOSE AREAS SHOWN TO BE OF INTEREST FROM THE RESULTS OF PREVIOUS WORK SHOULD BE PERFORMED. THESE DEEP SEATED FAULTS OFFER THE MOST LIKELY ZONES WHERE MINERALIZATION WILL OCCUR.

Respectfully submitted,



D.A. Chapman

APPENDIX "B"

FIGURES 1-2-3-4-5

FIGURE 1: MATCHLINE MOSAIC OF ANNOTATED OVERLAYS

FIGURE 2: POINT COUNT PLOT

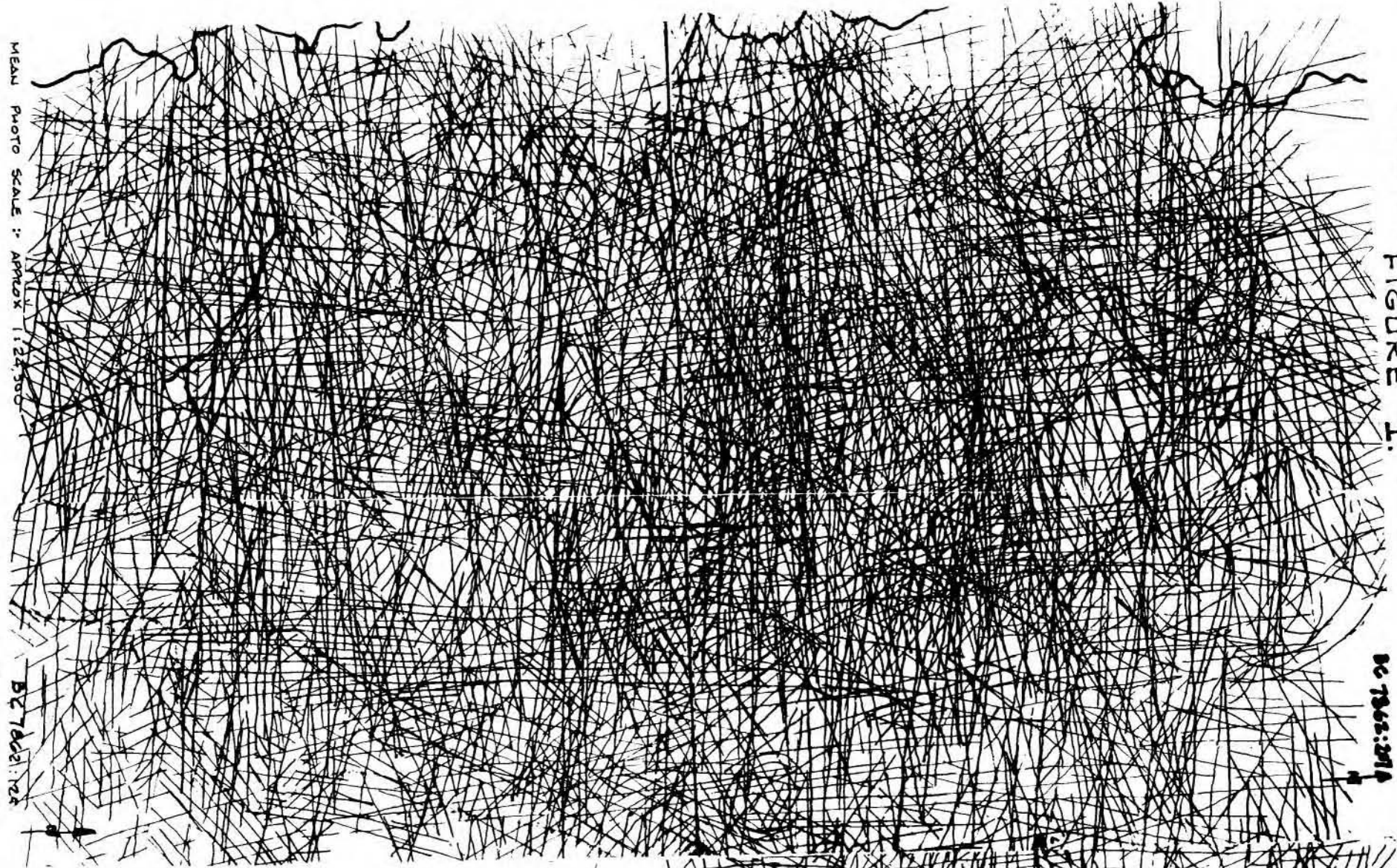
FIGURE 3: RELATIVE DENSITY ESTIMATE

FIGURE 4: RELATIVE DENSITY ISOGRADIENT

FIGURE 5: INDICATED PREFERRED SHEAR FAULTS

BC 7862: 211 A

200 E 1/2



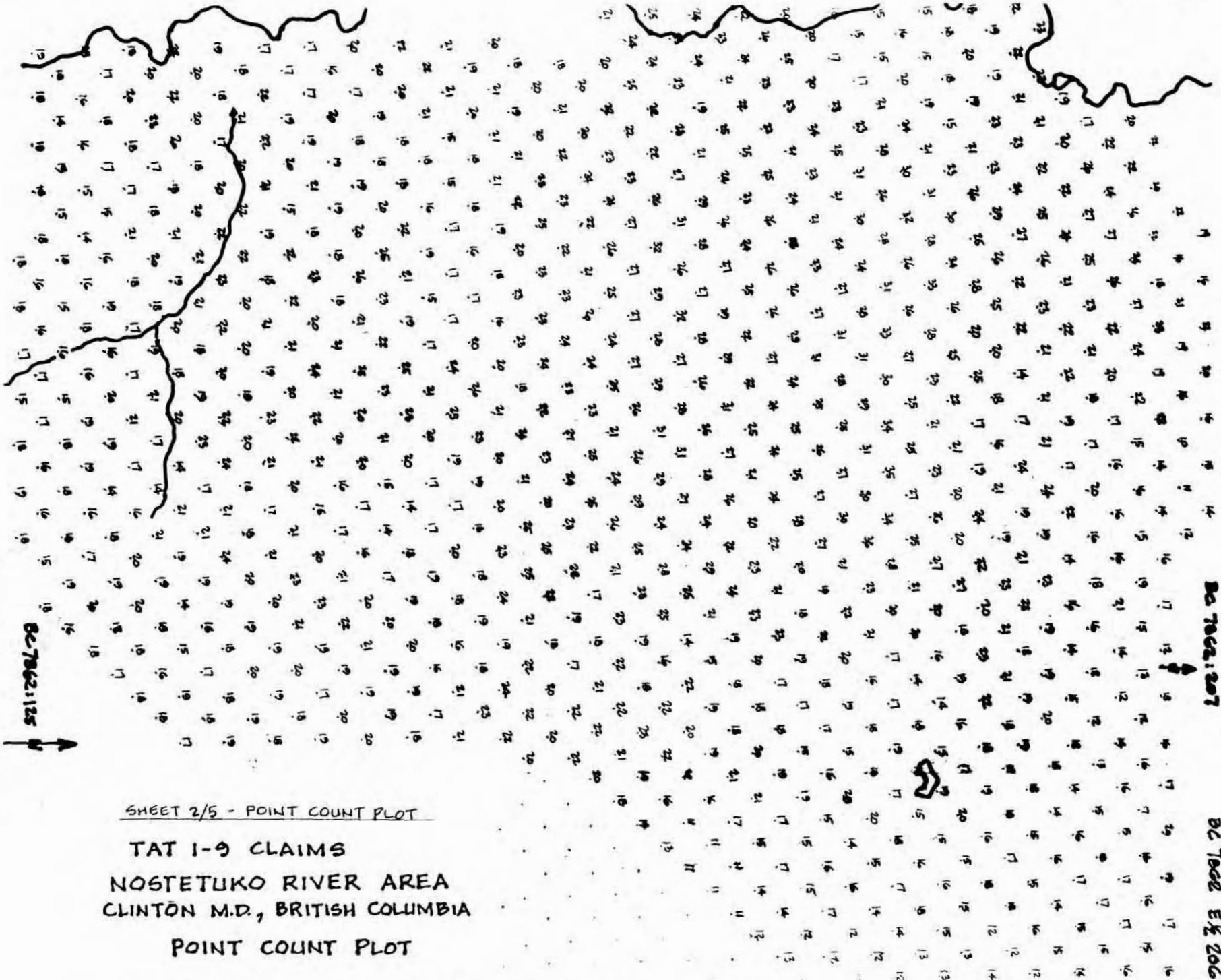
MEAN PHOTO SCALE: APPROX 1:24,500

BC 7862: 124

SHEET 1/5 - MATCHLINE MOSAIC OF ANNOTATED OVERLAYS

TAT 1-9 CLAIMS  
 NOSTETUKO RIVER AREA  
 CLINTON M.D., BRITISH COLUMBIA  
 ANNOTATED FRACTURE/FAULT PATTERN  
 AS OBSERVED IN B.C. GOVT. AIRPHOTOS  
 BC. 7862: 125 & BC. 7862: 207 & E 1/2 206

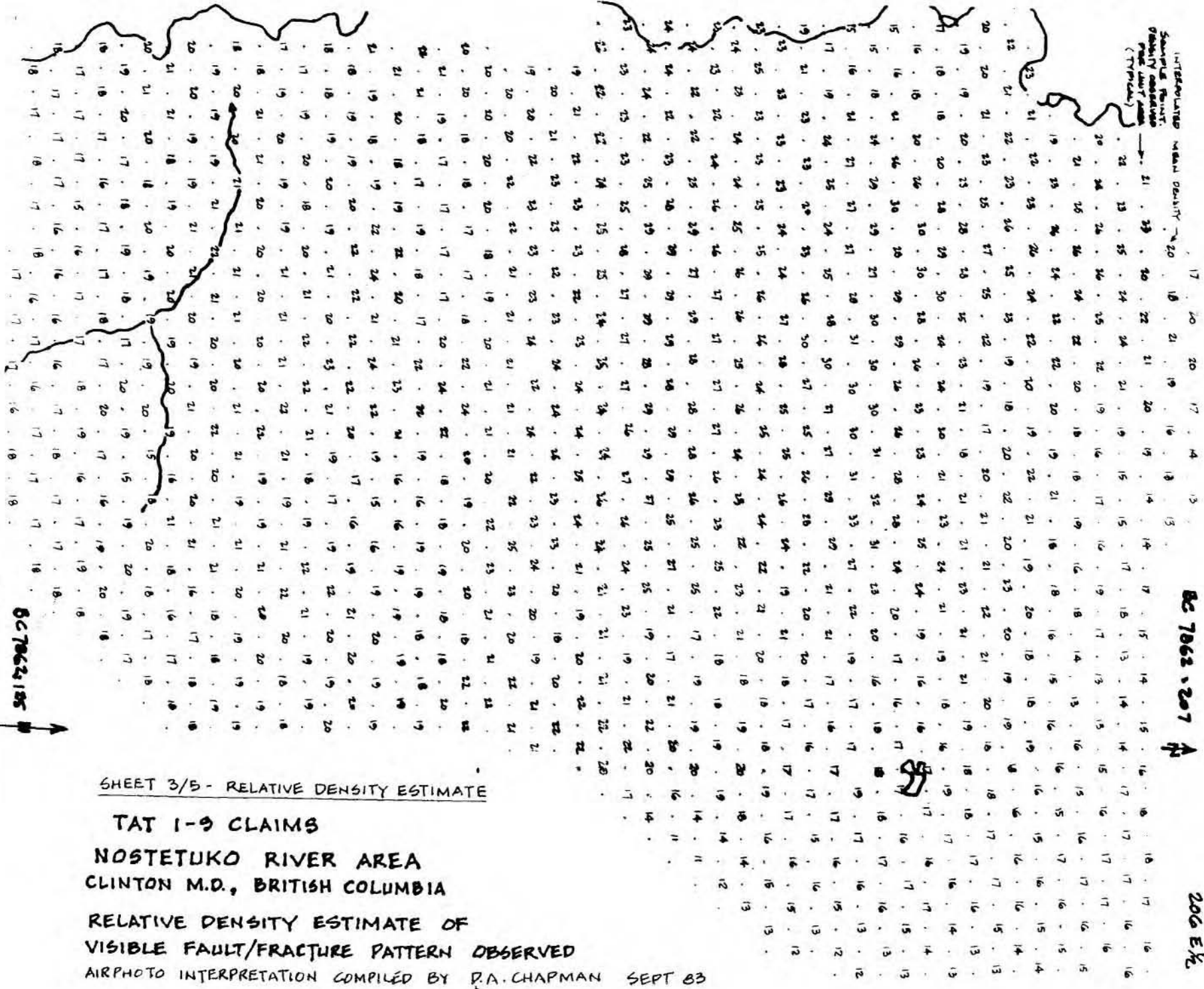
FIGURE 2.



SHEET 2/5 - POINT COUNT PLOT  
**TAT 1-9 CLAIMS**  
**NOSTETUKO RIVER AREA**  
**CLINTON M.D., BRITISH COLUMBIA**  
**POINT COUNT PLOT**

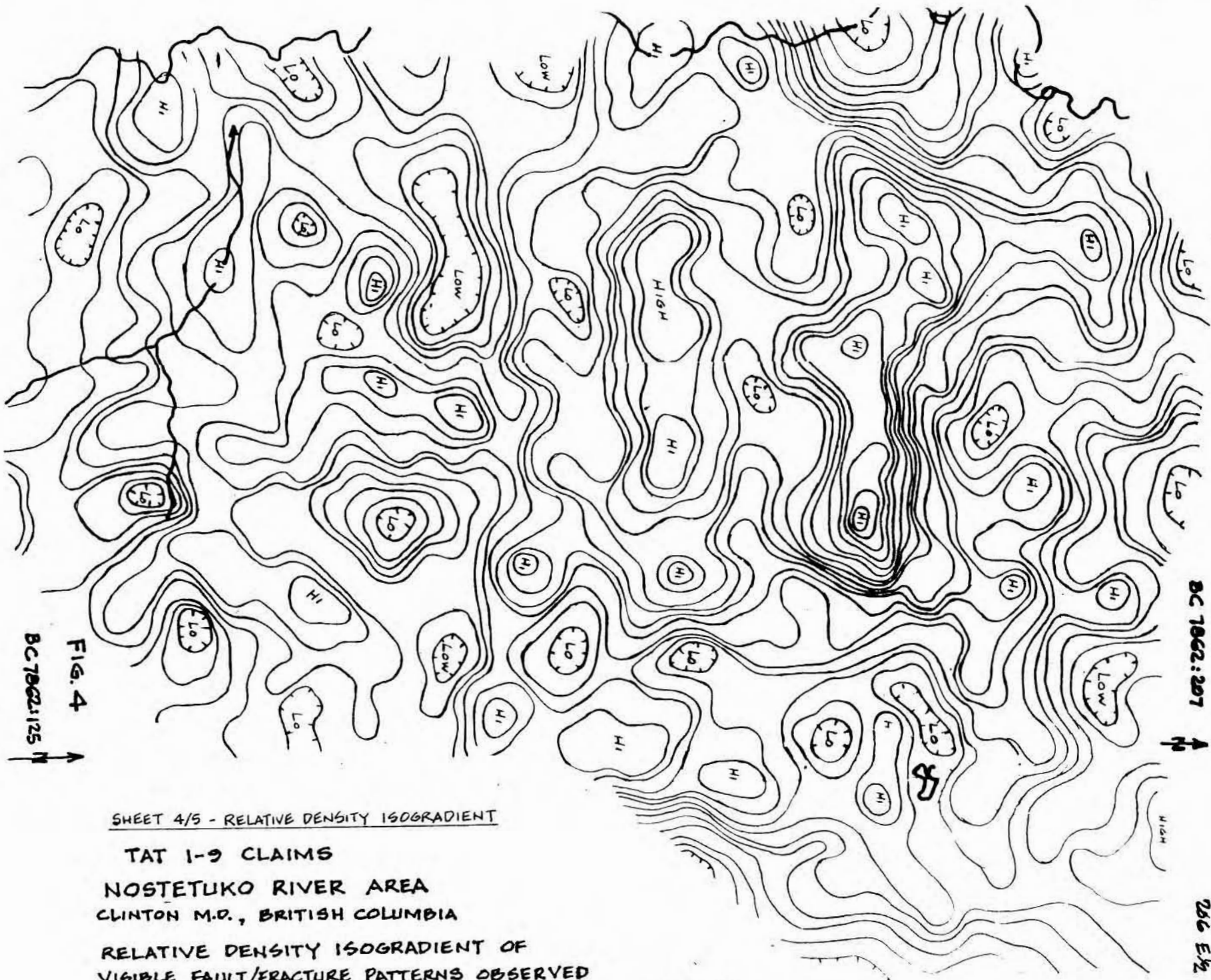
AIRPHOTO INTERPRETATION COMPILED BY D.A. CHAPMAN SEPT. 83

FIGURE 3.



BC 7862: 207

286 E/2



SHEET 4/5 - RELATIVE DENSITY ISOGRADIENT

TAT 1-9 CLAIMS  
NOSTETUKO RIVER AREA  
CLINTON M.D., BRITISH COLUMBIA

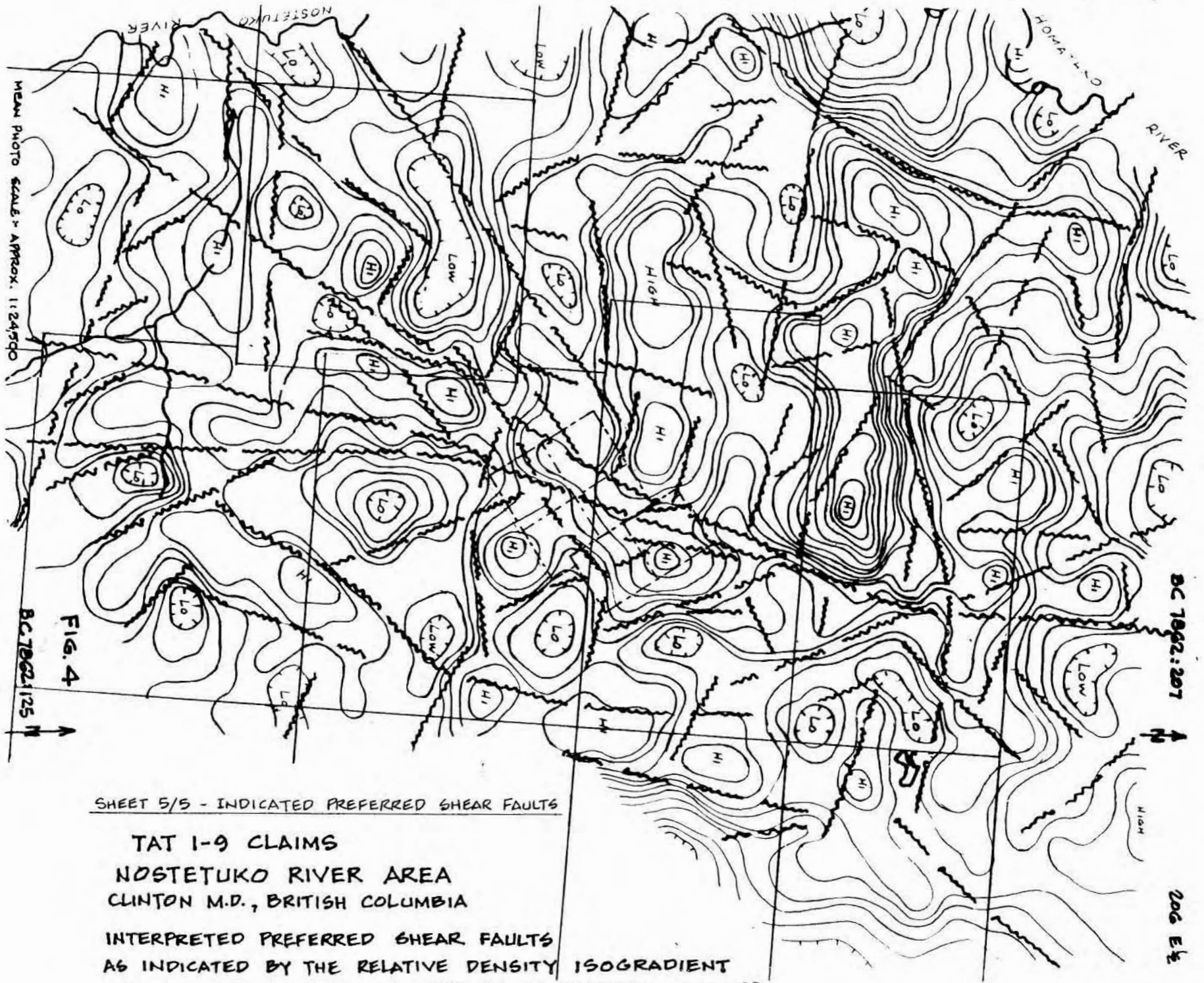
RELATIVE DENSITY ISOGRADIENT OF  
VISIBLE FAULT/FRACTURE PATTERNS OBSERVED  
AIRPHOTO INTERPRETATION COMPILED BY D.A. CHAPMAN

SEPT. 83

FIG. 4

BC 7862: 125

FIGURE 5.



SHEET 5/5 - INDICATED PREFERRED SHEAR FAULTS

TAT 1-9 CLAIMS  
NOSTETUKO RIVER AREA  
CLINTON M.D., BRITISH COLUMBIA

INTERPRETED PREFERRED SHEAR FAULTS  
AS INDICATED BY THE RELATIVE DENSITY ISOGRADIENT  
AIRPHOTO INTERPRETATION COMPILED BY D.A. CHAPMAN SEPT. 83



APPENDIX "C"

CERTIFICATION

D.A. CHAPMAN

GERHARD VON ROSEN

CERTIFICATION

1. I Douglas A. Chapman, certify that I have practised the art of photogeological interpretation for mineral exploration for more than 15 years.
2. I received a Technical Diploma in 1949 from the Vancouver Technical School.
3. From 1950 to 1955 I was engaged in mapping and surveys using both ground and airborne methods; first, with the Canadian Government and, secondly, with Photographic Surveys (Western) Ltd. in Vancouver.
4. From 1955 to 1959 I was engaged by Blanchet and Associates Ltd. in Calgary, Alberta, where I practised interpretation and compilation of fracture patterns for structural studies; studies related to oil exploration.
5. From 1961 to 1964 I was engaged by Chapman, Wood and Griswold Ltd. and assisted Mr. Blanchet in the formation of their air photo department as well as carrying out studies relating to tectonics and their association to mineral deposits.
6. In 1965 I formed D.A. Chapman & Associates Ltd. to provide air photo interpretation for mining exploration and, primarily, exploration reports to assist consulting engineers in planning field programmes.
7. In 1978 I formed J.C. Explorations to provide similar services as D.A. Chapman & Associates Ltd.

Signed this *28<sup>th</sup>* day of *OCTOBER*, A.D. 1983

  
D.A. Chapman

CERTIFICATE OF QUALIFICATIONS

I, Gerhard von Rosen, reside at Mission British Columbia, at 33176 Richards Ave.

I have been practicing my profession of consulting geologist since my graduation from the University of British Columbia in 1962 with a B.Sc., and in 1966 with an M.Sc. degree in Honours Geology.

I have been involved with this kind of survey several times before, and I am qualified to compile and interpret this information.

Respectfully submitted,

Gerhard von Rosen, M.Sc., P.Eng.

February 13, 1984

A circular stamp, likely a professional seal, is partially obscured by a handwritten signature in dark ink. The signature appears to be 'G. von Rosen'.

ITEMIZED COST STATEMENT

Airphoto Fracture Density Analysis: D.A. Chapman	\$2000
Assessment Report: Summary	\$1350
Report Preparation	\$250
<u>TOTAL COSTS</u>	<u>\$3600</u>

AREA COVERED

Total area of survey: 2 photos (1:24,500mean)	6800 ha.
Area covered by TAT Group	950 ha