GEOREX
ENGINEERING
MANAGEMENT LTD

GEOLOGICAL
ASSESSMENT
REPORT

on an
AIRPHOTO FRACTURE DENSITY STUDY

on the
"Marlene Derome"
(Record Number 322017)
Mineral Claim

Goldstream R. Area, Revelstoke, B.C.

82M9W

for

THOUSAND HILLS MINING LTD (OWNER)
THOUSAND HILLS MINING LTD (OPERATOR)

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Summary

In fulfillment of 1997 work assessment requirements the present report describes an airphoto fracture density study performed over the "Marlene Derome" mineral claim.

The results of the present study indicate that several small-sized fracture density anomalies occur scattered over much of the land covered by the subject mineral claim.

The airphoto fracture density anomalies should be considered when ground inspections and further grass roots explorations are planned.
General

Overview
The subject report describes the airphoto fracture density study, performed by Gerhard von Rosen, on the 'Marlene Derome' mineral claim of Thousand Hills Mining Ltd.

This subject mineral claim comprises a small portion of the Company's total mineral and placer land holdings. The company operates a placer operation on French creek.

Introduction
The Company owns the French Creek Project in the Selkirk Mountains approximately 100 km north of Revelstoke, B.C. The property consists of mineral claims, placer claims and 1 placer lease. The placer claims cover the majority of French Creek, the most productive placer creek in the Revelstoke-Big Bend placer gold district. The Company has an active placer gold mining operation on the lower portion of French Creek and the delta area and has recently begun to assess the hardrock geological potential of the property. Significant potential exists for bedrock gold and possibly base metals.

Location and Access
The Company's French Creek Property is located 100 kilometers north of Revelstoke, British Columbia in an area known as the 'Big Bend District' on the Columbia River. This lies within the Selkirk Mountains on the north side of the Goldstream River. It is a large property that covers much of the French Creek drainage basin.

The placer operation, near the mouth of French Creek is centred at 51°39' north latitude and 116°25' west longitude.

The subject mineral claim is centred at approximately 51° 40' 30" north latitude and 118° 22' 30" west longitude and is found on NTS map sheet 82M9W. All the mineral and placer claims lie within the Revelstoke Mining Division.

Access to the property of Thousand Hills Mining Ltd. is gained by travelling north from Revelstoke on Highway #23 leading to Mica Creek for approximately 99 kilometres then east for approximately 13 kilometres on the French Creek logging road located on the north side of Goldstream River. The road passes through the heart of the placer mining operation and provides entry to the southwestern most claims. Logging roads up the French creek valley on both sides of the creek furnish access for the lower portions of the creek. The logging
company has extended the west-side road further up French Creek, approaching the confluence of Graham Creek.

The south west corner of the specific area of the subject property is dissected diagonally by French Creek. A recently-built logging main road provides excellent access up the north west side of the creek. This road passes through the subject property.

The steep slopes on either side of French Creek can only be traversed on foot.

**Topography, Vegetation and Climate**

The "Marlene Derome" property covers both sides of French Creek valley, rising up the steep slopes on each side.

Relief on the property ranges from around 800 metres at French creek level, rising to over 1200 metres on the north west corner, and to over 1700 meters at the south end.

Vegetation consists of mature stands of cedar, hemlock, Douglas fir and spruce over the lower portions of the claims with thick underbrush consisting of devils club, alder and willow, especially the creek valleys.

The property lies within the interior rain belt and the climate varies greatly with topography. Generally the summers are warm and fairly dry with cool and wet winters. Temperatures range from -30 C to +30 C in the lower areas and are cooler in the higher areas of the claims. Average annual precipitation is 1.0 to 1.2 metres, of which approximately half is snow.

At lower elevations on French Creek, placer operations could easily be conducted for 8 months of the year (over 200 days).
Mineral Claims

The subject mineral claim holdings are shown with other relevant data in the following table. The Company is registered as owning outright 100% of the "Marlene Derome" mineral claim listed in the following table, totalling 20 units.

<table>
<thead>
<tr>
<th>CLAIM NAME</th>
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<th>EFFECTIVE ISSUE DATE</th>
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<td>Total Units</td>
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Table 1 Mineral Claim Holdings
Local Geology

There has been very little detailed geological mapping in the Company's mineral claim holdings other than postgraduate thesis work. The area between Revelstoke and Kinbasket Lake is covered by Wheeler's (GSC 1965) 1 inch to 4 mile map. Preliminary 1:50,000 scale mapping is available for the Groundhog Basin and the ridges east of French Creek in Brown et al. (MEMPR Preliminary Map 25, 1977). Several geological maps for the Groundhog Basin occur in assessment reports by Aurum Mines Ltd (and Ark Energy Ltd) between 1981 and 1985.

Recent assessment reports by Thousand Hills Mining Ltd. on the general property describe "rock & soil geochemical, and pan & sluice concentrate" reconnaissance surveys, as well as "air photo fracture density studies" (von Rosen Jan1997, Sep1997, Dec1997).

South of the Company holdings along the Goldstream River a major shear zone, thrust fault separates the French Creek slice from the Goldstream slice to the south. The property covers part of the French Creek slice and extends eastward over the Illecilliwaet slice, Wheeler's "Selkirk fan" (1964) area.

It is evident that much of the Company property area is underlain by Proterozoic age Horsethief Creek Group rocks. Northerly trending bands of Lower Paleozoic age Hamill Group stratigraphy occur between French and Norman Wood Creeks. Another band occurs on the west side of French Creek near the mouth of Graham Creek (Brown 1977).

The Hamill Group consists of quartzites, slate and phyllite with minor limestone and local amphibolite, greenstone.

Zones of regional metamorphism cross the property east to west and increase northward in grade to sillimanite bearing assemblages near Argonaut Mountain, to the north of Graham Creek. A large part of the holdings is covered by the garnet isograd north and east of this creek.

Bedrock gold mineralization is recorded on the property in quartz veins in the Graham Creek Basin. Auriferous quartz veins in the nearby Groundhog Basin commonly have well carbonated wallrocks, especially in metasediments. Gold occurs free or in pyrite (where erratic). Gunning (1929) describes the veins at Old Bull and Orphan Boy as quartz with gold, pyrite and pyrrhotite that cut the sedimentary rocks at sharp angles. Quartz - tetrahedrite veins occur on the Old June, Tiger and George claims. These may carry galena, sphalerite and grey copper.

The writer is not aware of any further detailed geological information with regards to the subject "Marlene Derome" mineral claim property.
Placer History
The French Creek - Big Bend District has a long history of placer mining activity dating back to 1865 when gold was discovered on Goldstream River and McCulloch, and French Creeks. A large amount of gold was known to have been produced but no production records exist until 1886. After the initial flurry of work in the 1860's interest in the French Creek area waned and was not renewed until the mid 1880's. Further information is available in the previous reports.

Hardrock History
There is little documented mineral exploration in the area of the present day claims now held by the Company. The headwaters of the main placer creeks in the area are located on high ground above Groundhog Basin which is one possible source for the placer gold and is the area in which most exploration has been focused.

The earliest work on the Groundhog Basin began around 1885 with the discovery of free gold in quartz veins. This led to considerable work being done in 1896 on some Crown grants, mainly Ole Bull and Orphan Boy. Several shafts and adits were driven on vein systems and very high gold values were reported. In addition trenching was completed on several veins within the Crown grants and elsewhere in the area including the Graham Creek basin. During the period 1900 to 1959 very little work was recorded in the area. From 1959 to 1981 some work was recorded in the area by Stanmack Mines (1959), Spa Mines Ltd. (1967) and Ark Energy (1972).

More recent work was completed in 1981 by J. Chapman et al (a prospecting partnership) with the staking of the Carols, Rosalie, and Aurun claims. The land originally covered by the Carols 1 claim has been restaked by the Company as the Hilroy, and adjoins the Hilroy 100 claims also currently held by the Company along the western claims boundary. The work completed then consisted of linecutting, prospecting, geological mapping, geochemistry (silt samples) and geophysics. Most of this work was concentrated on the north side of McCulloch Creek now a part of the Company's land holdings. A few anomalous silt samples were returned mostly from areas of known mineralization.

The prospecting partnership continued work in the same area in 1982 and in 1983 became Aurun Mines Ltd. and obtained joint venture partner Ark Energy Ltd. Work programs were expanded but no new showings were found. General conclusions about the quartz veins are that the north trending set is the most likely gold host though some gold has also been found in an east-west trending set where they intersect the north trending set.

The most significant mineralization in the area came with the discovery of the Goldstream Mine in 1972 by prospectors F. King and G. Bried. The deposit was staked in 1973 and optioned in late 1974 by Noranda Co. Ltd. who outlined a
deposit of 3.175 million tons grading 4.49% copper and 3.14% zinc. The mine was opened in 1983 but shut down in 1984 due to prevailing low metal prices. In 1989 Bethlehem Resources Corp. and Goldnev Resources Inc. acquired the property from MacLaren Forest Products, a wholly owned subsidiary of Noranda. The mine was put back into production in 1991 and has operated nearly continuously since that time. It was recently shut down, however.

Other mineral showings of significance in the area are the Rift, a stratiform lead-zinc-(copper-silver) massive sulphide occurrence exposed in a creek gully approximately 500 metres east of Highway 23, north of the Company’s property. It consists of a number of thin layers of massive sulphide, the thickest being 2 metres. High grade lead and zinc values have been received from samples collected from the lenses. Drilling has not outlined a large enough deposit to warrant mining.

**Hardrock Exploration Program**

An exploration program of the hardrock sector of the Company’s holdings including prospecting, limited geological mapping, stream sediment (silt and heavy concentrate) sampling, and an airborne geophysical survey flown by Dighem, was carried out by the Company in 1994.

Virtually all of the stream sediment samples were collected from French Creek or tributaries draining into French Creek including Graham Creek with several samples picked up along Graham Creek. A few probes were taken from the headwaters of McCulloch Creek. Results from some of these samples were difficult to interpret because there were several results for the same sample number.

The sampling method used was to transport a portable sluice box and suction dredge pump to the site, and then suction approximately 1/3 yards of material into the sluice box. All of the material collected in the riffles or mat in the sluice box was saved. This sample was then further panned to separate the heavy mineral portion of the sluiced sample. These two samples, called the concentrate and the concentrate residual, were then analyzed. As expected the concentrate samples ran extremely well while the concentrate residual returned very low values.

In an attempt to gain more accurate gold assay for the whole original sample, the assay for both the concentrate and the concentrate residual was confirmed using a weighted average. Two values are given per sample number for the gold concentrates which were averaged then this averaged number was used in the weighted average calculation.

Cavey (1995) reports that results obtained from the sampling revealed some highly anomalous gold assays from both McCulloch and French Creek. Sample numbers #142715 to #142720, all from the headwaters of McCulloch Creek, returned weighted gold assays of 1.43 g/t to 31.58 g/t including three assays of
>10 g/t gold. These same weighted average samples contain anomalous silver with weighted average results ranging from 0.9 g/t to 6.3 g/t silver.

Numerous RGS samples were collected from the French Creek basin including the major tributary Graham Creek. Of interest is the one sample #3179 near the mouth of French Creek which assayed only 7 ppb gold, a surprisingly low result given the extensive placer history of the creek. This same sample also contained anomalous arsenic - 10 ppm, chromium - 260 ppm, and nickel - 100 ppm. Other samples have elevated values in cobalt, chromium, and nickel. The chromium and nickel are slightly stronger above Graham Creek and there is some tungsten showing in the analyses.

**Bedrock Gold Potential**

The Company's French Creek property has received little bedrock mineral exploration. In the nearby Groundhog Basin at the headwaters to McCulloch Creek discordant quartz veins locally yield high gold values with silver. The gold occurs free or in pyrite. Other metallics include tetrahedrite, galena and sphalerite. A very important point regarding these quartz veins and gold is that concordant (metamorphic) veins are barren, while discordant north trending veins are auriferous.

It is highly probable that the Groundhog Basin area contributed significant amounts of gold to the McCulloch, Graham, French and possibly Camp Creek placers. The McCulloch-French Creek watershed (ridge) between Graham Creek and the Goldstream valley is over 9 kilometres long. This ridge and the steep western slopes of the French Creek valley are highly prospective ground for bedrock gold. Testing done by the Company revealed high concentrations of placer gold on French Creek near the confluences with western tributaries such as Hunker [Graham] Creek.

In a prior assessment report (v Rosen, Jan 13/97) on stream reconnaissances the writer discovered elevated values of tungsten found in several of the stream sediment concentrates analyzed on the subject claim.
Airphoto fracture density analysis

Paradigm: The exploration target

The geology of Groundhog Basin area has been a favourable environment for the emplacement of gold metallization, judging by historical mining accounts. This fact is further evidenced by the large placer gold production of record, very likely originating from the basin area, and the conceivably huge amount of placer gold that has, as yet, escaped mining operations. Several high tenor gold, but small volume, quartz vein deposits have been located, and partly explored and mined in the basin area. Disseminated mineralization may also exist in the host rock. This possibility remains to be explored whether values encountered within the veins, will be sufficiently supported by the supposed host rock disseminations to warrant large-scale mining operations.

It has been suggested that fracturing of the Earth's crust allows percolating metallizing solutions access to precipitate the ore-forming metals within the host rock. The Earth's surface displays textural signatures of such fracturing, which can be recognized 'from the air'. Study of stereo airphotographs allows for the annotation of such fracture patterns. In certain rock types and conditions it can be stated that the higher the density per unit area of fracture patterns, the greater the evident "open-ness" or "plumbing" of the ore-host rocks. Large-scale low tenor gold deposition is certainly a target for exploration in the Ground Hog basin area.

The subject property may be investigated via air-photo studies, such as the one reported herein, with the purpose of identifying likely targets for grass roots ground explorations.

Method

Black and white, as well as colour, vertical airphotos provide valuable information in many ways, one of which derives from the stereoscopic study of straight, and/or arcuate lineations, caused by breaks in the rock, visible at the surface of the Earth. It has been postulated that the relative density per unit area, of these signs of rupturing (airphoto lineations) is an expression of the relief of vertical, and horizontal stresses acting at the Earth's surface.

Generally speaking, the higher the vertical forces that have been relieved at the Earth's surface, the higher the fracture density. Similarly it can be postulated that the relief of forces beneath the surface of the Earth has probably resulted in rupturing of the rock, thus creating an enhanced plumbing system for upward percolating mineralizing solutions. What remains to be ascertained is where, in
relation to areas of higher fracture incidence, the vertically continuous plumbing zones are likely to exist.

It is probable that 'high' fracture density, as seen on the Earth's surface, does not necessarily translate into a high priority exploration target, but rather that such would be the case near-by. This may occur, for example, in the zone of 'inflection' between 'highs' and 'lows' of fracture density.

It is understood that certain rock types are known to be much better mineralizing hosts than others, and that therefore the information gathered via airphoto fracture density studies needs to be incorporated into on-the-ground explorational studies.

Hence, the premise that the analysis 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 at times to be related to rock type contacts and to changes in fracture density, studies such as the present one, were undertaken to attempt outlining of rock types, and pinpointing anomalously fractured zones.

The subject inquiry identifies the fracture patterns, as annotated from airphotos, and compiles this information in digital form.

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

Limitations of Method & other Considerations

1. Certain conditions may prevail on an airphoto study area, which will result in the reduction of the surficial expression of bedrock ruptures. Such circumstances could include the following:
   - Heavy snow cover and/or deep overburden tend to obscure the finer fracture details. However major trends will show through most depths of surficial deposits.
   - The finer details of fracture expression may also be lost when utilizing higher level photography. Yet through-going features, such as major faults, will tend to come into prominence.

2. Rock types fracture in different patterns, and each has a special signature.
   - When lithologic boundaries are unknown to the interpreter there may be difficulty in differentiating between fracture density increases caused by
anomalous tectonic action within a homogeneous lithologic unit, and those simply from 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 potential, as considered herein.

3. Although fracture density anomalies (or the immediately surrounding area of them) could be assumed to always indicate zones more worthy of interest to the explorationist, it must be realized that metallization of favourable host rocks has been known to also occur in only moderately-fractured rocks.

- For this reason it may be worthwhile to investigate those areas on the density isogradient plot which represent the 'inflection point' between the high and low values of fracture density. In other words, the area displaying steep gradations between highs and lows, may provide the better targeting areas for follow-up investigations.

- In the present study neither arcuate lineaments, nor changes in attitude of structures, have been given special consideration. In other words, all lineations visible on the airphoto(s) were annotated, regardless of their origin, and/or inherent value.

4. Photographs on adjacent flight lines may provide dissimilar details for the same geographic area. These differences are presumably caused by diverse circumstances, explained as follows:

- Existing fracture patterns may become visible on airphotos as a result of several factors, such as:
  - The patterns will be visible variably in different lighting conditions, caused as for example, by the angle and/or position of the sun, or by the haze or the clouds in the skies.
  - Shadow may obscure bedrock exposures on the northern aspects of peaks as well as easterly-, or westerly-trending V-shaped valleys.
  - Patterns may be difficult to detect when there is no plant ground cover to accentuate the details. Forested areas commonly enhance the substrate irregularities, facilitating airphoto fracture density study. It is for this reason that fracture picking is much more difficult in areas above timberline, at least in part due to the fact that fracture patterns do not contrast well enough in certain rock types to allow easy airphoto definition.

5. Pattern frequency, i.e. fracture density, (that is discernible to the eye, viewing through a stereoscope) changes in intensity as the ground-to-camera lens distance varies. For example smaller particulars are more apparent near the
mountain tops, because they are more magnified on the airphoto, relative to the details noted in the valley bottoms.

6. The density of the annotation of fracture patterns on to the overlays is affected by the thickness of the pencil used for this purpose. This occurs when the lead thickness happens to be wider than single fracture lineations visible on the photo. This is a draw-back; yet thinner than 0.5 mm pencil leads constantly break off.

Method of Analysis
The following airphotos obtainable from Geographic Data, B.C., Victoria, B.C., were chosen to provide stereoscopic coverage:

BCC92115: 151-152-153
BCC92115: 233-232-231

These two adjacent airphotographs were chosen to fully include the area covered by the subject mineral property. Figure 1 shows the airphoto coverage in relation to the claimed area.

Using a stereoscope, all observable lineations were traced on the overlay, without judgement of their origin, or of their inherent value to the analysis. (Figures 2 & 3 for photo 152, and Figures 9 & 10, for photo 232)

Point-Count
In order to facilitate quantifying this information, a method has been devised (Tait Blanchet, D. A. Chapman) whereby the airphoto overlay (annotated with the traced lineaments) are divided by an orthogonal grid, - with 0.5 cm dimensions in the case of this study. The grid is carried on a separate overlay. A moveable circle template, with a 0.5 cm diameter, is then centered on each of the grid points, and the quantizing of the fracture information commences.

The annotated information is then converted into an empiric digitized form by the following valuation:

All traced fracture segments within the circle 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 fracture information is noted on an overlay at the grid intersections. (Figures 4 & 5, and 12 & 13)
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Figure 3

AIRPHOTO FRACTURE PATTERN PLOT

Marlene Derome (322017) Mineral Claim
FRENCH CREEK PROJECT

Resource Mining Division
British Columbia

NTS 82M9W

CEMILEE ENGINEERING USA
THOUSAND HILLS MINING LTD

Figure 4

AIRPHOTO FRACTURE PATTERN & POINT COUNT PLOT

Marlene Derome (322017) Mineral Claim
FRENCH CREEK PROJECT
Revelstoke Mining Division
British Columbia
NTS 112MWW
| 15 20 29 26 22 21 13 | 19 16 22 18 16 21 23 13 | 25 17 20 17 14 |
| 22 23 27 25 20 17 20 18 19 29 24 21 12 15 17 16 22 19 26 25 |
| 19 29 32 21 29 21 21 17 26 26 22 24 24 27 30 23 28 20 21 21 |
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| 08 14 18 18 12 18 08 08 10 05 10 10 10 10 13 15 16 12 11 10 |

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Figure 5

AIRPHOTO FRACTURE DENSITY POINT COUNT DATA

Montreal (322004) Mineral Claim

FRENCH CREEK PROJECT

Revelstoke Mining Division British Columbia NTS 82M9W

GRADE ENGINEERING 04/98
THOUSAND HILLS MINING LTD
Figure 6
AIRPHOTO FRACTURE DENSITY POINT COUNT CONTOUR PLOT
Marlene Derome (322017) Mineral Claim
FRENCH CREEK PROJECT
Riddox Mining Division
British Columbia
NT5 62MW
THOUSAND HILLS MINING LTD

Figure 9

AIRPHOTO FRACTURE PATTERN & GEOGRAPHY PLOT

Marlene Derome [322017] Mineral Claim
FRENCH CREEK PROJECT

Revelstoke Mining Division British Columbia NTS 82M8W

GEOLOGICAL ENGINEERING 1999
THOUSAND HILLS MINING LTD
Figure 10
AIRPHOTO FRACTURE PATTERN PLOT
Mariene Derome (322017) Mineral Claim
FRENCH CREEK PROJECT
Revelstoke Mining Division British Columbia NTS 825RMW
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THOUSAND HILLS MINING LTD
Figure 12
AIRPHOTO FRACTURE DENSITY POINT COUNT DATA
Montreal (322004) Mineral Claim
FRENCH CREEK PROJECT
Revelstoke Mining Division British Columbia NTS 62M9W

APPROXIMATE SCALE (IN METRES)

0  250  500  1000

G.L. Vlassen
Professional Engineers
small circles designate grid centers on the annotated overlay

large circles designate the individual count areas

numbers designate the point count values for each area

cross designates the airphoto center

creek

long lines crossing at center of airphoto, orthogonal alignment lines

mountain ridge line

Hilltop mineral claim outline

annotated fracture patterns on overlay on airphoto

countoured data

fracture density anomaly

roads, trails

airphoto center

THOUSAND HILLS MINING LTD

Figure 16

LEGEND

"Marlene Derome" Mineral Claim #322017

FRENCH CREEK PROJECT

British Columbia

Revelstoke Mining Division
Presentation of Data

The quantized fracture density point count values are shown in their relative positions plotted against the underlying tracing of the annotated fracture plot in Figure 4 (152) and Figure 11 (232). This same information is given without the underlying tracing of the annotated fracture plot in Figure 5 (152) & 12 (232).

Density Isogrids

The quantized fracture information, in the form of the point count plot, are contoured in the normal fashion with a resulting plot defining the maxima<>minima of fracture density. These results are shown as Figure 6 (152) & 13 (232).

Compilation Plan

The compilation plan depicts the fracture density patterns, with "high" areas outlined by shades of darker green (in the colour version of the display [Figure 7 (152) & 14 (232)], or by shades of darker grey (in the B/W version).

The geographic information is displayed to help orientation to the claim outline, and other salient features. [Figure 8 (152) & 15 (232)].

Display of Results

Results

The results of the investigation are shown on Figures 7 & 8, and 14 & 15. Figure 8 [photo 152] shows the anomalies in relation to the photo center, the property boundaries and the French creek valley, with its drainages. Figure 15 [photo 232] displays the claim outlines with reference to the airphoto center, ridges, drainage, and with French Creek.

Geographic Comparison

The reader should be cautioned that geographic comparison between the subject airphotographic depictions with the topographic map (Figure 1) is only possible in a relative sense for the following reasons:

1. The scale on the photograph varies according to the distance outward from the center, and the vertical height difference (e.g. valleys vis-à-vis ridges).

2. The True North direction may vary from one photograph to the next, as well as with the track of the parallel flight lines of adjacent photographs.
3. The actual outline of the claims is shown with only approximate accuracy (i.e. without the benefit of a ground survey definition of the actual position of the Location Corner Posts).

**Density Isogradient Contour Method**

The point count information was contoured with the use of a computer software program. Using 'zero' value as a basis, this program was calibrated to show every second contour as a black line, and to show digital values on every sixth drawn contour in red. The result is the anomaly depiction of five even-numbered, black coloured contour lines, followed by a single, even-numbered red contour line.

**Fracture Density Anomalies**

The background value for fracture density, specific to the subject photo (152) coverage was arbitrarily taken as <26. Fracture density areas with higher than (>26) were then grouped and outlined as shown.

The background value for fracture density, specific to the subject photo (232) coverage was arbitrarily taken as <26. Fracture density areas with higher than (>26) were then similarly combined, and represented as shown.

**Interpretation of Results**

**Overview**

The value of the study is in that it provides information on the relative fracture density exposed on the studied land surface; providing information that is useful in several ways, as previously described.

Several parameters must be considered in the evaluation of this data:

1. The introduced distortion due to contouring (skew-ness); affecting the shape of the anomalies.

2. The different types of cover:
   - trees
   - overburden
   - ice, snow
   - shadow

3. The different bedrock lithologies
• sediments, metasediments (exhibiting grain produced by bedding, schistosity, and so on.)
• rocks that have less unidirectional inherent grain, but have been strongly fractured in numerous bearings.

4. The relief of the point count data.
• relief of the data is from 0 counts to 35 counts in the case of photo 152, and from 0 to 33 counts in the case of photo 232.
• anomalous values were taken as >26 counts for photo 152, and >26 in the case of 232.

Interpretation
1. The “Marlene Derome” mineral claim overlays the south eastern portion of photo #152, comprising about 1/3 of the photo coverage.
   • When viewed from photo 152, anomalous relative fracture densities were found consisting of several small dispersed patches.
   • A small area anomaly, with a high value of 32, straddles the northern boundary of Marlene Derome. This anomaly displays the eastern half of a di-polar arrangement with an inflection trend aligned approximately north south.
   • The highest values (34 and 35) found on photo 152 are located outside of Marlene Derome mineral claim.
2. The subject mineral claim covers the north east quarter of Photo 232, comprising about 5/6th of the claim.
   • Several small patches of anomalous values were defined on photo 232. The highest values (32 and 33) were identified within anomalies included in the subject claim. These anomalies occur ‘inline,’ crossing the claim diagonally south of French Creek.
Conclusions

Fracture density investigations have revealed patterns which deserve further investigation in the field.

Recommendations

Several sectors of 'higher than average' fracture density, delineated as a result of this study, should be investigated further using exploration methods like geological mapping, prospecting, hand trenching, and stream sediment sampling.
## BIBLIOGRAPHY

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<th>Date</th>
<th>Authors</th>
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<td>Jul 01, 1981</td>
<td>J. Dagenais, et al</td>
<td>Prospecting Partners</td>
<td>Groundhog Project BCDM Asses. Rept. #10,393</td>
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<td>Report on Seismic Refraction Investigation, French Creek Project</td>
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<td>Ross Glanville &amp; Associates Ltd</td>
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<td>Report on Seismic Refraction Investigation, French Creek Project</td>
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<td>Oct 14, 1994</td>
<td>Smith, Paul A.</td>
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<td>Dighem V Survey for Thousand Hills Mining Ltd, French Creek Property</td>
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Statement of Qualifications

I Gerhard von Rosen, reside in Mission, British Columbia, Canada.
I have been practicing my profession of consulting geologist since my graduation from the University of British Columbia in 1962 with a Bachelor of Science, and in 1966, with a Master of Science degree in Honours Geology.
I have prepared the subject report from references cited.
I have performed many airphoto studies since the 1960's.
I have received the fees and expenses invoiced regarding the preparation of this report. As this is my sole remuneration, I have no interest in the company, its properties, or its shares, neither do I expect to receive any.

Respectfully submitted,

Gerhard von Rosen, P.Eng.

21/01/98
ITEMIZED STATEMENT OF COSTS

Expenses incurred are as follows:

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