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**ASSESSMENT REPORT**

**on**

**GEOLOGICAL MAPPING AND PROSPECTING**

**INTREPID AND TICK CLAIMS**

**ANGUS CREEK AREA**

**FORT STEELE MINING DIVISION**

**NTS 082F/9E  
TRIM 082F.060**

**Latitude 49° 33' N**

**Longitude 116° 08' W**

**UTM 5489000N 563000E**

**By**

**Douglas Anderson, P.Eng.**

**Craig Kennedy, Prospector**

**February, 2003**

**GEOLOGICAL SURVEY BRANCH  
ASSESSMENT REPORT**

**27,095**

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## **REPORT ON THE GEOLOGICAL MAPPING AND PROSPECTING OF THE INTREPID AND TICK CLAIMS**

### **1.00 Introduction**

This report details the exploration work completed on these claims during the 2002 field season. Some geological mapping and interpretation work was part of a larger program extended from the south. In addition, some rocks were examined and collected during prospecting of the area.

### **1.10 Location and Access**

The Intrepid and Tick claims are located approximately 28 kilometres southwest of Kimberley, B.C. and about 6 kilometres south of the St. Mary valley. They lie on the east side of Angus Creek, a north-flowing tributary to the St. Mary river. Location is shown on Figures 1 and 2. Access is from Highway 95, west along the St. Mary river road about 21 kilometres then south on the Angus Creek logging road. So there is ready access with additional haul roads of various ages, extending up from the main Angus Creek road.

### **1.20 Property**

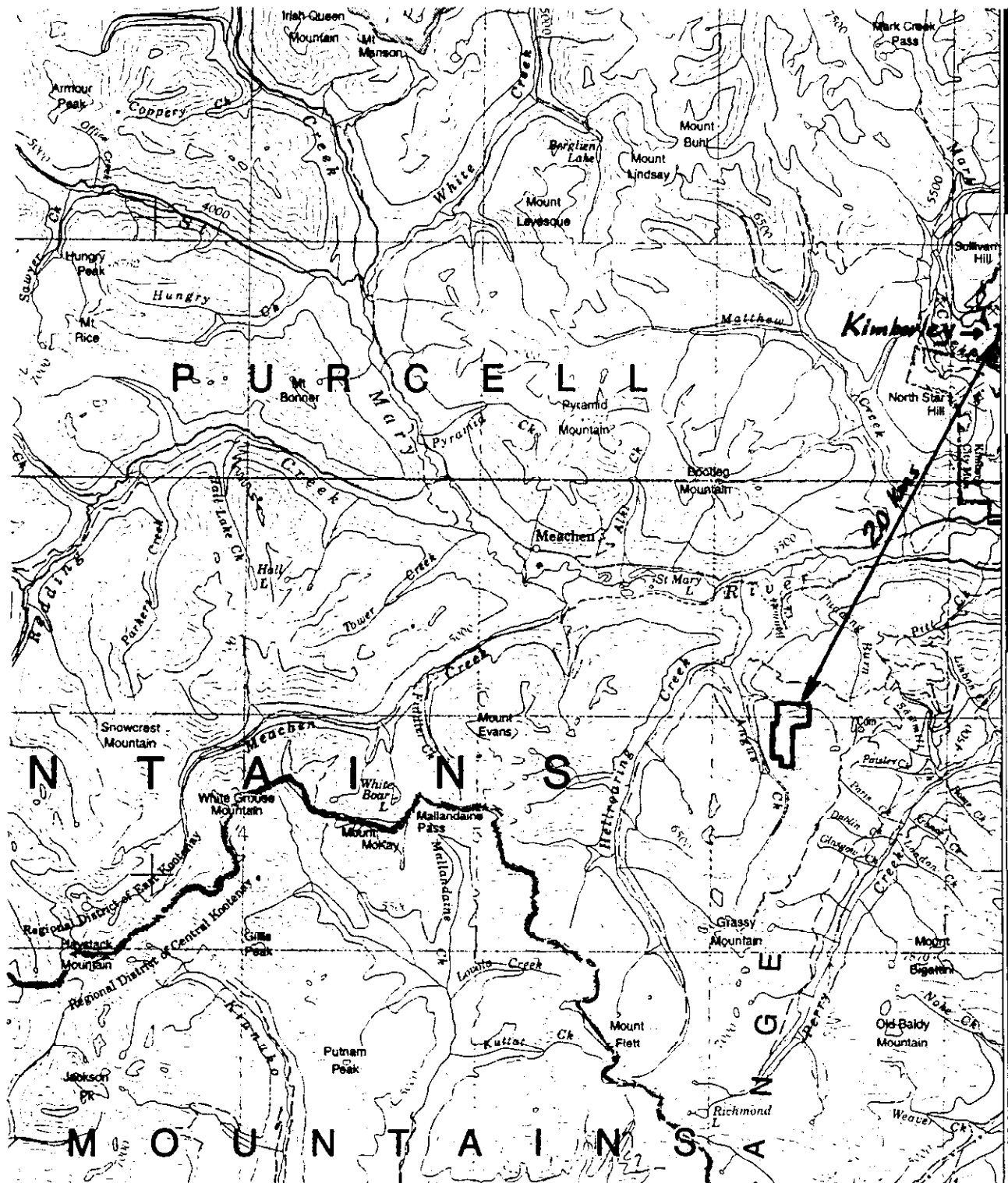
The Intrepid and Tick claims are thirteen contiguous claims owned by Super Group Holdings Ltd. (optioned to Chapleau Resources subsequent to the mapping).

### **1.30 Physiography**

The claims cover a relief of about 500 metres from 1500 to 2000 metres. It is relatively easy going, in part due to the extensive road network supporting logging in the area and on the property.

### **1.40 History of Previous Exploration**

Most of the previous work has focussed on the Leader quartz vein, a northeast-trending vein along a shear in the Kitchener Formation. It contains visible base metals, principally chalcopryrite, and interesting gold values. The property has been known as the Mascot and Eclipse. It is Minfile number 082FNE060. Various B.C. Ministry of Mines reports describe early work on the claims in years 1915, 1936, and 1950. The original owner of the claims, J. Angus did some of the underground work. Previous claims from the 1980's were known as the Wellington and Leader. Work has included modest underground/excavation along the vein; soil geochemistry, ground geophysics (VLF-EM and magnetics); mapping and diamond drilling. Although narrow, significant assays have been achieved for gold thus creating the continued interest. Gold in sampling has ranged from 0.7 to 164grams/tonne. Some descriptions include scheelite, tetrahedrite, hematite, and stolzite. More recent exploration over a somewhat broader area has included mapping and geophysics attempting to trace the zone. In 1985, diamond drilling was done by Donnex Resources Ltd. (AR#14112) with five holes completed, testing the vein and structure to a depth of about 50 metres with mixed results. A soil grid documents the presence of significant gold in the soils over the intrusion.



**INTREPID/TICK PROPERTY**

**LOCATION MAP**

Trim Map: 082F060  
 SCALE: 1:250,000

FIGURE: 1

### **1.50 Objective of Work**

The mapping and sampling were attempts to better understand the claim area and determine the setting for the mineralization in a more regional sense.

## **2.00 Geology**

### **2.10 Regional Geology**

The claims are underlain by Mesoproterozoic rocks of the Purcell Supergroup including the lower members up-sequence of Aldridge, Creston and Kitchener Formations. Included within the sedimentary package are primarily sills but also dykes of gabbroic Moyie intrusions.

The quartzite-dominated turbidites of the Aldridge Formation give way to quartzites and siltstones of the Creston Fm which are shallower-water derived cover rocks. The overlying rocks of the Kitchener Fm are mixed argillites, silty carbonates, and siltstones.

This predominantly sedimentary package is within the core of the Purcell Anticlinorium where it is cross-cut by a major east-west reverse fault – the St. Mary fault. Younger faults of north and northeast trends offset the St. Mary fault at numerous points.

Granitic intrusives in the region are of two distinct ages and are very dissimilar. Proterozoic-age pegmatites of the Hellroaring Creek assemblage form sills, dykes, and small stocks, intruding only the Aldridge Formation. Much younger, likely Cretaceous-age stocks such as the Angus Creek stock are granodiorite to quartz monzonite compositionally.

### **2.20 Property Geology**

The area of the Intrepid/Tick claims is within the Geological Survey of Canada Map 15-1957 (Leech, 1957). The claims are cut by at least three faults with lower Aldridge Fm occurring north of the major St. Mary fault and Creston up into Kitchener Fms. to the south.

Of greatest economic significance on the claims is the Leader Vein – a narrow, northerly-striking copper, lead, and gold bearing vein localized along a shear. Some of the work done over the years is summarized above.

## **3.00 Geological Mapping – 2002**

The mapping done in 2002 was a continuation of work from the south in Angus Creek which was mapping to assess the gold potential of the belt of Proterozoic sediments with included structure and intrusive activity. The Mesoproterozoic sediment package is segmented by the major St. Mary reverse fault. To the north, the older Aldridge Formation and included Moyie intrusions is dominantly an east-west striking package of Lower Aldridge thin bedded to medium bedded quartzites and wackes which are very rusty weathering. A major north-trending fault (Hum) with a wide disruption zone and adjacent folding has been mapped farther north and projected onto the property. The St.

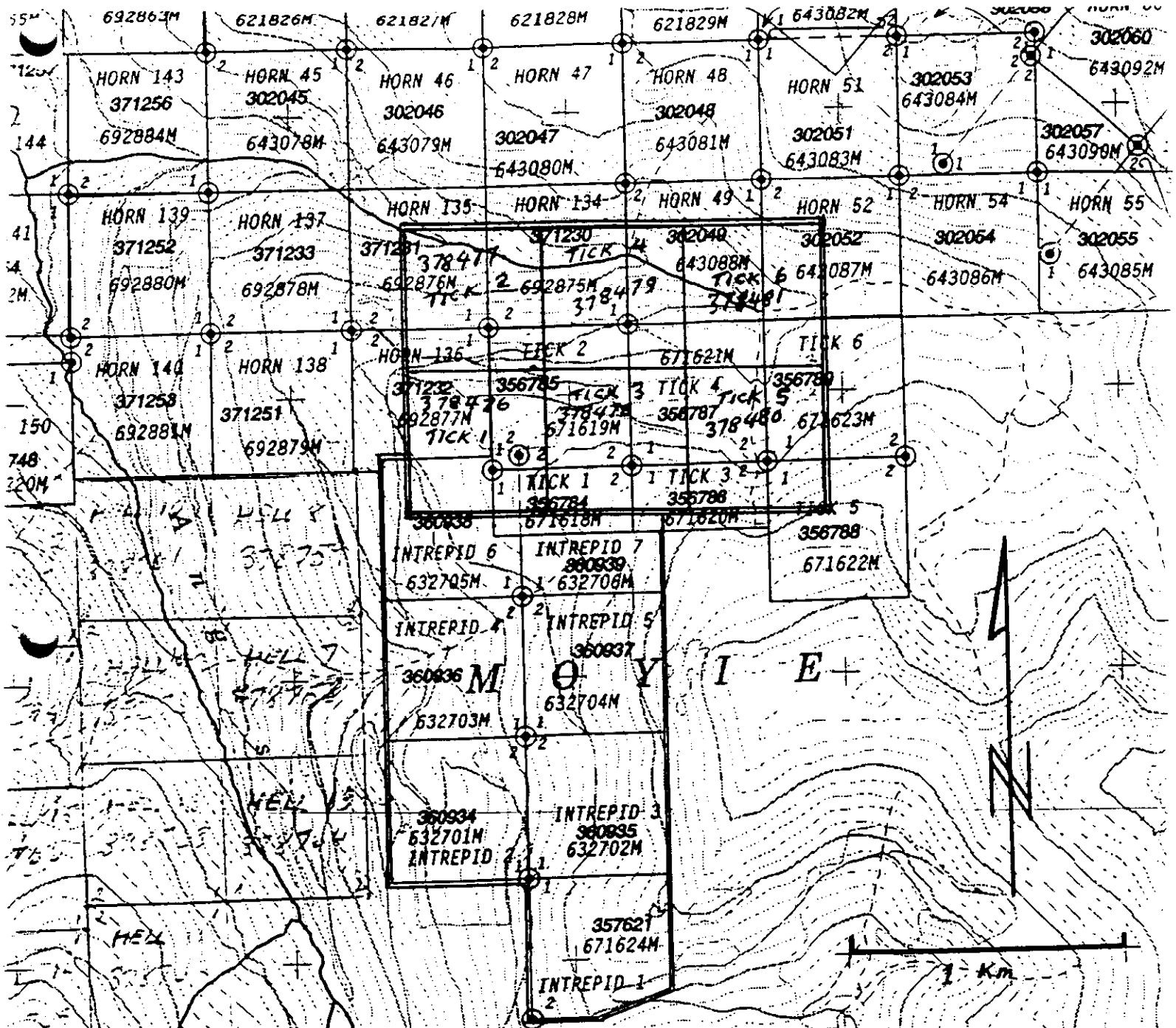


Figure 2.  
INTREPID & TICK CLAIMS  
CLAIM MAP  
Scale 1:20,000 82 F. 060

Mary fault which is probably offset by the Hum fault is a wide zone of altered sedimentary rock and quartz veining. The sediments are phyllitic and silicified. South of the St. Mary fault, the two formations identified young to the east with middle Creston rocks overlain by Kitchener Fm rocks. On the claims, this contact is a fault which hosts the Leader vein. Probably the extension of the Hum fault, the shear exposed at the Leader separates fractured, broken middle Creston rocks which are dominantly quartzites from very altered white and green skarny rocks of the Kitchener. The shear and vein dip east and form a ductile/brittle boundary. The altered rocks of the Kitchener appear plastically deformed in part.

The Angus Creek stock immediately west of the Leader structure is a leucocratic, non-porphyrific to locally porphyritic granodiorite. It is medium crystalline with white feldspars and little alteration in exposures. 10 to 15% biotite + hornblende are present. Minor magnetite can be found within. Overall the stock has a north trend axis but the contact with the Creston Fm can be quite irregular. Kitchener xenoliths are noted. On the west the intrusive is intensely altered/weathered, apparently a deuteritic type of alteration with the composition unchanged. This results in a very friable rock. Dykes are found around the stock and have associated quartz veining and minor mineralization.

Two government airborne magnetic surveys have covered the area. The stock is reflected as a modest magnetic anomaly which is common for Cretaceous stocks in the district. It is likely the stock is positioned relative to the intersection of the St. Mary and Hum faults. It appears relatively unaffected by any deformation that the sediments have been subjected to related primarily to faulting.

The Leader vein is localized along the faulted contact of the fractured Creston Fm. and altered Kitchener Fm. This shear varies in width but appears 2 to 4 metres wide and dips east at 68 to 80 degrees at Leader. A visit and reference to the work of others indicates the quartz vein can be traced for over 600 metres and varies from 15cm to 1 metre in thickness. Sampling ranges from 0.02 to 4.8 oz/t gold.

Presumably close to the base of the Kitchener Fm., the rocks adjacent to the Leader shear zone (Hum) are quite highly altered with a prominent streakiness/lamination which is quartz-biotite-muscovite-epidote partings with narrow amphibolitic segregations. This rock type is enigmatic because in varying forms it extends for kilometres to the south. It appears to be largely controlled by the north-northeast striking faults and granitic intrusions visible at surface or implied to occur at depth(?) along a north-northeast trend.

#### **4.00 Prospecting Report**

Two man days of prospecting were completed on and adjoining the Tick claims during the mid-fall of 2002. Prospecting was conducted east of the Leader min-file occurrence along the edge of a strong north-trending magnetic anomaly. The magnetic anomaly is associated with a granite intrusion which is exposed north and west of the Leader. The Leader is hosted by siltstone and carbonates of the Purcell Super Group Kitchener Formation.

The siltstones and carbonates in the area prospected are skarned and silicified. A few narrow quartz (vein) zones are found along the eastern boundary of the magnetic anomaly, along with the veins there are also some granite dikes. The dikes are altered with limonite along fractures and often contain some narrow quartz veining.

Ten rock samples were collected along the magnetic anomaly boundary during prospecting. The samples Sk-01 through Sk-10 are stored at the Vine complex outside of Cranbrook. These samples may be sent for analysis in the spring of 2003.

**Sample descriptions:**

Sk-01 15cm quartz-carbonate vein with a northeast trend. Some vugs with rare limonite cubes.

Sk-02 Subcrop granite dike material – vuggy with narrow quartz veins and some limonite.

Sk-03 Narrow 30cm granite dike with some quartz veins – have vugs with carbonate and limonite.

Sk-04 through Sk-6 Narrow quartz vein with rare galena, chalcopyrite – vuggy with some limonite – veins in silicified siltstone.

Sk-07 Quartz vein with vugs and limonite, weak manganese stain.

Sk-08 Quartz vein in 1 metre granite dyke – with abundant limonite.

Sk-09 Altered 30cm granite dyke; some micro veining- limonite and manganese along fractures.

Sk-10 Quartz carbonate vein 20cm with northeast trend; some vugs, rare limonite.

**Conclusions:** Bedrock exposure is limited but it does seem granite dykes and quartz veining are associated with the eastern boundary of the magnetic anomaly. The magnetic anomaly boundary is parallel to the Leader structure and may represent a structure along the western granite contact. Samples Sk-04,05,06 are narrow quartz veins (NE trend) with some galena, chalcopyrite mineralization. This style of mineralization at the Leader showing also hosts gold. Soil sampling should be done over the boundary area with follow-up trenching if warranted.

**5.00 Conclusions and Recommendations**

The Intrepid and Tick claims cover a potentially significant source for gold because of the interplay of four elements considered important locally and in a regional context. These are : the presence of gold with some base metals; the intersection area for several major faults; the presence of a granodiorite stock; and the establishment of a linear skarn zone adjacent to the intrusion and along structure.

Additional mapping and an expanded soil grid should be completed to assess the property more fully. More any significant gold potential, exploration has to look beyond the Leader setting and more voluminous possibilities.



**6.00 Statement of Expenditures**

Geologist time mapping, drafting, compiling report	\$ 700.00
Truck support charges – 4x4	\$ 100.00
Prospector – field time and report	\$ 400.00
4x4 Truck use	\$ 100.00
Total cost	>\$1300.00

**7.00 Author's Qualifications**

I, Douglas Anderson, Consulting Geological Engineer, have my office at 3205 6<sup>th</sup>. St. South in Cranbrook, B.C., V1C 6K1.

I graduated from the University of British Columbia in 1969 with a Bachelor of Applied Science in Geological Engineering.

I have practiced my profession since 1969, predominantly with one large mining company, in a number of capacities all over Western Canada.

I am a Registered Professional Engineer and member of the Association of Professional Engineers and Geoscientists of B.C., and I am authorized to use their seal which has been affixed to this report.

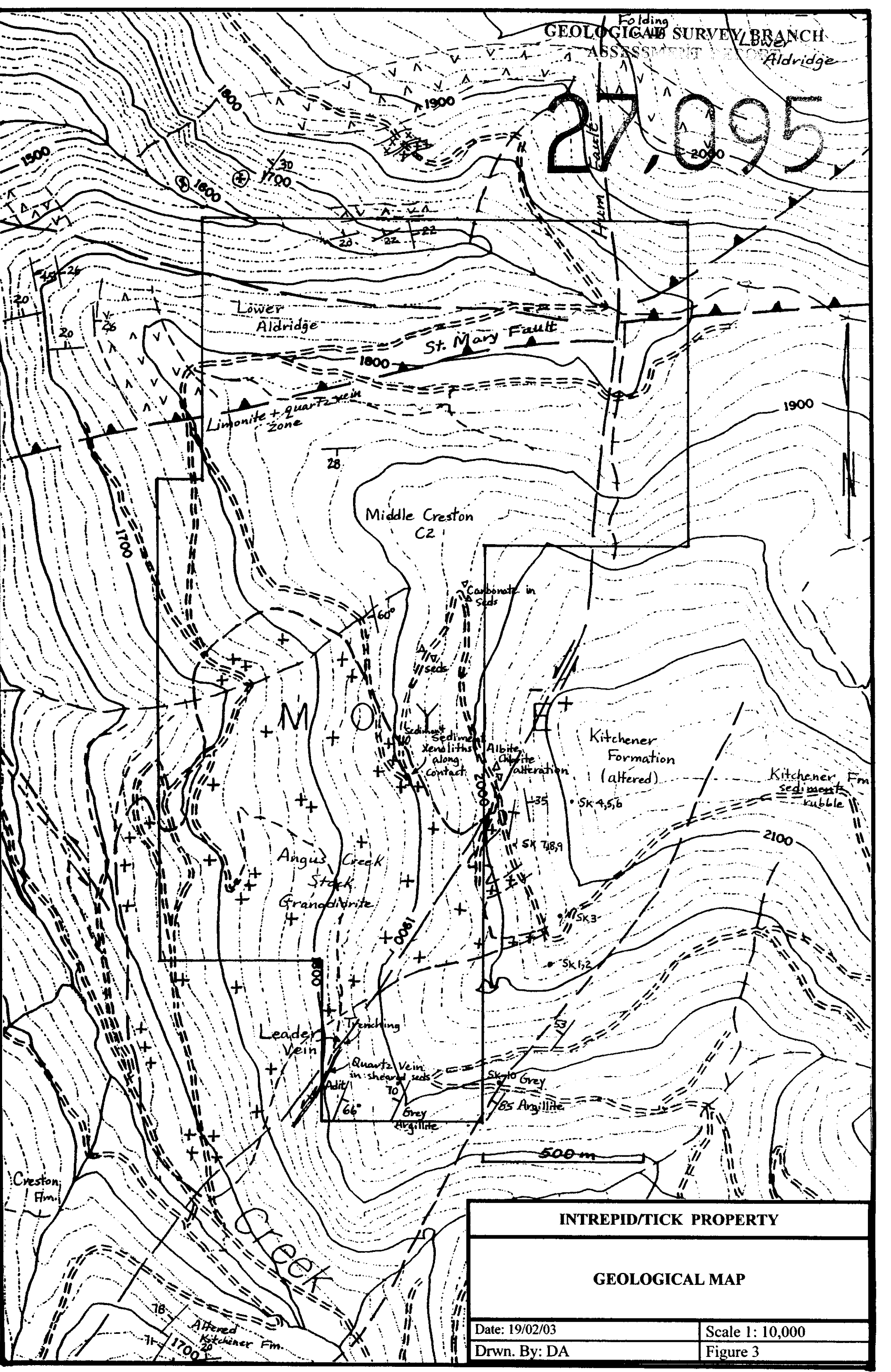
I am also a Fellow of the Geological Association of Canada.

Dated this 10<sup>th</sup> day April, 2001



Douglas Anderson, P.Eng., B.A.Sc., FGAC  
Consulting Geological Engineer

27,095



**INTREPID/TICK PROPERTY**

**GEOLOGICAL MAP**

Date: 19/02/03  
Drwn. By: DA

Scale 1: 10,000  
Figure 3