

**BAPTY RESEARCH LIMITED**

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LOG NO: 1219

RD.

ACTION:

FILE NO:

**A SUMMARY OF RECONNAISSANCE  
GEOLOGICAL MAPPING & ROCK CHIP SAMPLING  
COMPLETED ON THE**

**DRAGOON NO. 1 AND NO. 2  
MINERAL CLAIM**

**FORT STEELE MINING DIVISION  
82 G/13E**

**49° 54' North Latitude  
115° 29' West Longitude**

**Prepared for**

**SOUTH KOOTENAY GOLDFIELDS INC.**

**By**

**W. KIESMAN, GEOLOGIST**

**OCTOBER, 1989**

**GEOLOGICAL BRANCH  
ASSESSMENT REPORT**

**1989-A-19**

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**1.**

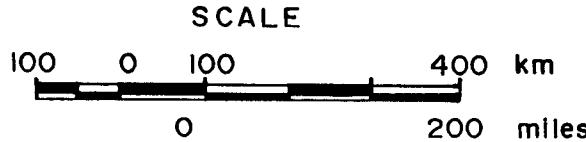
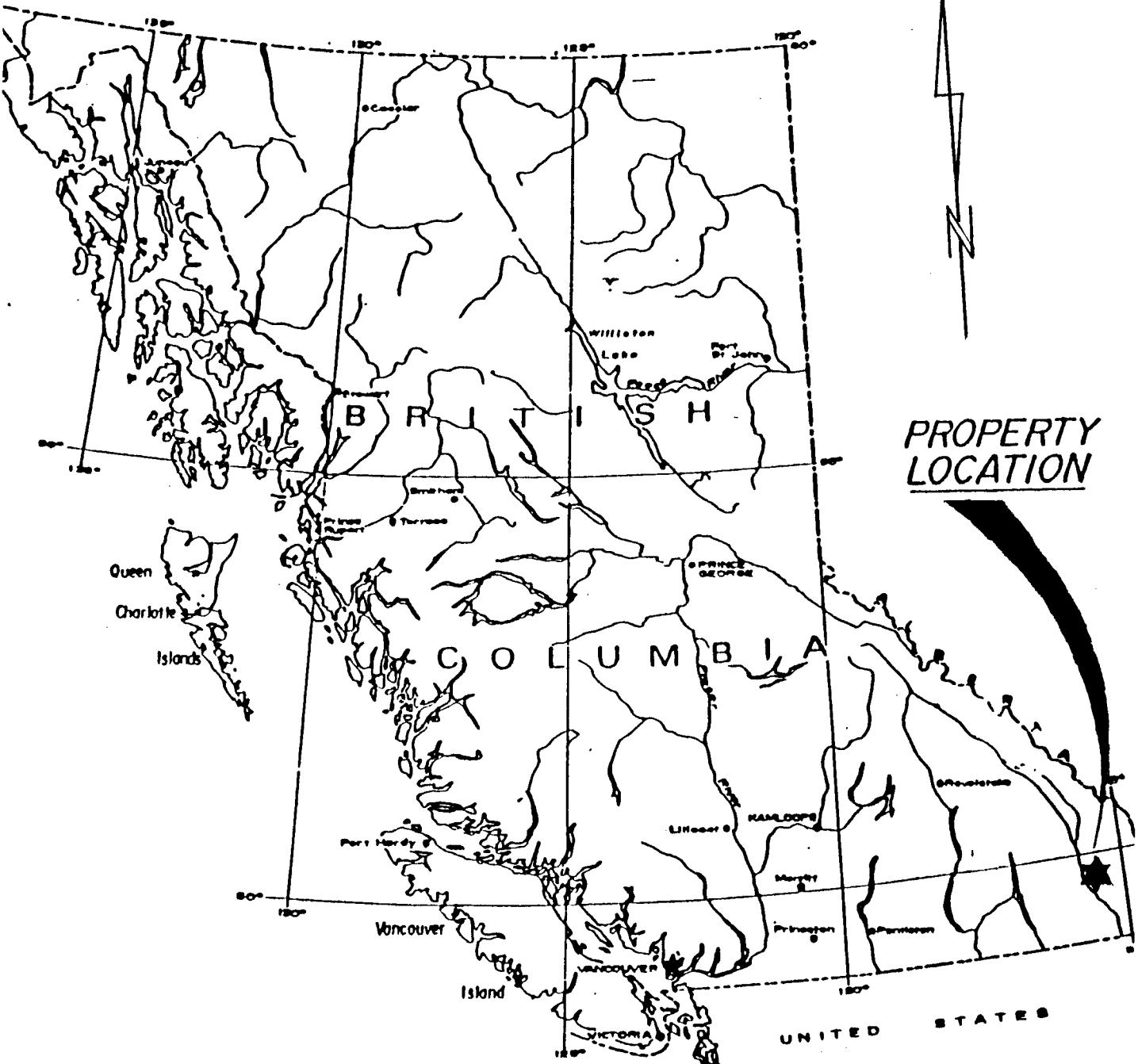
**1.00 INTRODUCTION**

The Dragoon No. 1 & 2 mineral claim is situated in the Fort Steele Mining Division and is centered approximately 45 air kilometers northeast of Cranbrook, in south eastern B.C. (Fig. 1).

South Kootenay Goldfields Inc. is the registered owner of Dragoon No. 1 & 2 mineral claims comprising a total of 32 units (Fig. 2).

The Dragoon No. 1 & 2 mineral claims are underlain by weakly deformed group of Upper Proterozoic and Lower Cambrian sediments and volcanics. These lithologies are intruded to the east by a Cretaceous monzonite stock.

During the period Sept. 4 - Sept. 27/89, a program of geological mapping, heavy mineral geochemistry and prospecting were conducted. In addition, 98 rock chip samples were taken during the course of the program. The objective of the program was to assess the potential of chalcopyrite - tetrahedrite replacement style mineralization found in Jubilee Formation limestones.



**SOUTH KOOTENAY GOLDFIELDS INC.**

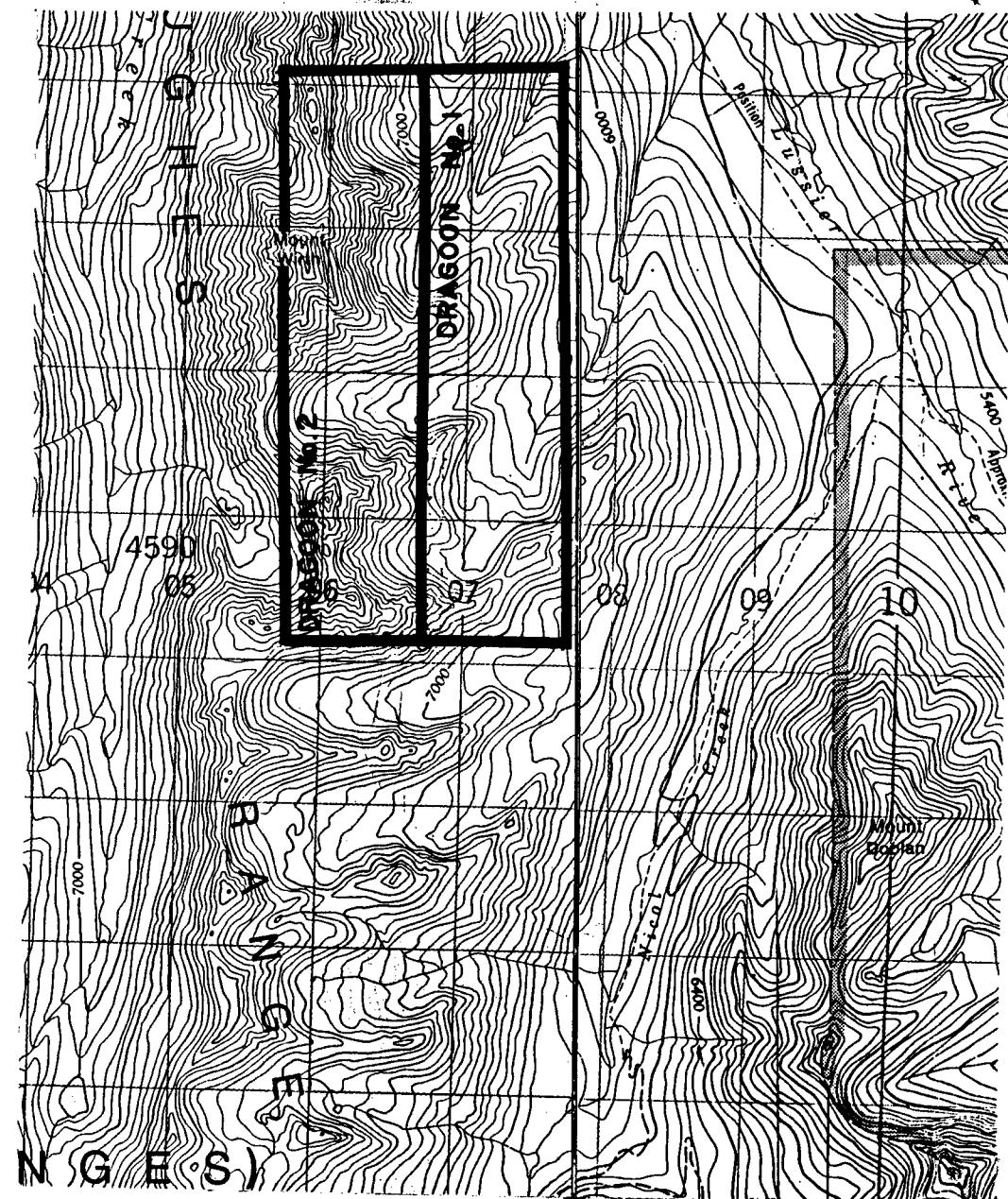
**LOCATION MAP**

**DRAGOON No.1 & 2 MINERAL CLAIMS**

N.T.S. : 82 G/13 E  
SCALE : 1:2,500,000  
M.D. : Ft. Steele  
FIG. : 1

DATE: Oct/89  
DRAWN: B.K.

15°30'



SCALE



CLAIM  
MAP

DAK GOON No. 1 & 2 MINERAL  
CLAIMS

S.T.S. 1826/13E//14W

SCALE: 1:50,000

DRA. : P. Steele

PIC. : 2

DATE: Oct/89  
DRAWN: B.K.

## 2.00 LOCATION AND ACCESS

The Dragoon No. 1 & 2 mineral claims are located in the Fort Steele Mining Division, 45 air kilometers northeast of Cranbrook, B.C. Cranbrook is a regional supply center found 510 air kilometers east of Vancouver, B.C.

These claims are geographically situated at  $115^{\circ} 29'$  West longitude and  $49^{\circ} 54'$  North latitude. Elevations range from 9,000 feet (2743 m) on the Mount Wirth summit to 5,500 feet (1676m) on the Lussier River valley bottom.

Road access to the Dragoon No. 1 & 2 mineral claims is via Highway 95A North from Cranbrook for 70 kilometers to the Highway 95A - White Swan Lake road junction. The White Swan Lake road is then traveled for 23 kilometers north east to the Lussier River road junction, then south for 23 kilometers, on the Lussier River road, the mineral claims eastern boundary can be accessed by rough logging roads at kilometer 50.5. From the logging road terminus good hiking/horse trails contour topography to the "Tiger" and "Poorman" mineral showings at higher elevations.

**3.00 PROPERTY AND OWNERSHIP**

The Dragoon No.1 & 2 mineral claims (Fig. 2), was staked by Ed Helgren in October, 1987. These claims were transferred by separate agreement to South Kootenay Goldfields Inc. Claim data is summarized as follows:

CLAIM NAME	NO. UNITS	RECORD NO.	MINING DISTRICT	RECORD DATE
Dragoon No. 1	16	3022	Ft. Steele	9/11/87
Dragoon No. 2	16	3023	Ft. Steele	9/11/87

#### 4.00 PHYSIOGRAPHY

The Dragoon No. 1 & 2 mineral claim has alpine and subalpine terrain with forests of balsam and fir to 6,500 feet (1981 m) elevation. On the mineral claims three large cirques, with intervening peaks, are floored at 7,000 feet (2134 m) elevation. The peaks which are the cirque headwalls form a prominent ridge line dominated by Mt. Wirth at 9,000 feet (2743 m) elevation.

These cirques represent Pleistocene hanging glacier sites which contributed ice to a larger glacial ice mass then located in the Lussier River valley. The Lussier River valley has extensive glacial overburden deposits with spurs between cirques truncated by movement of ice and water.

The transition between the alpine and subalpine is marked by krummholz and nearly continuous outcrop.

Castellated spires of weathered limestone resulting from the dissolution of limestone along preferred joints form picturesque vistas.

## 5.00 EXPLORATION HISTORY

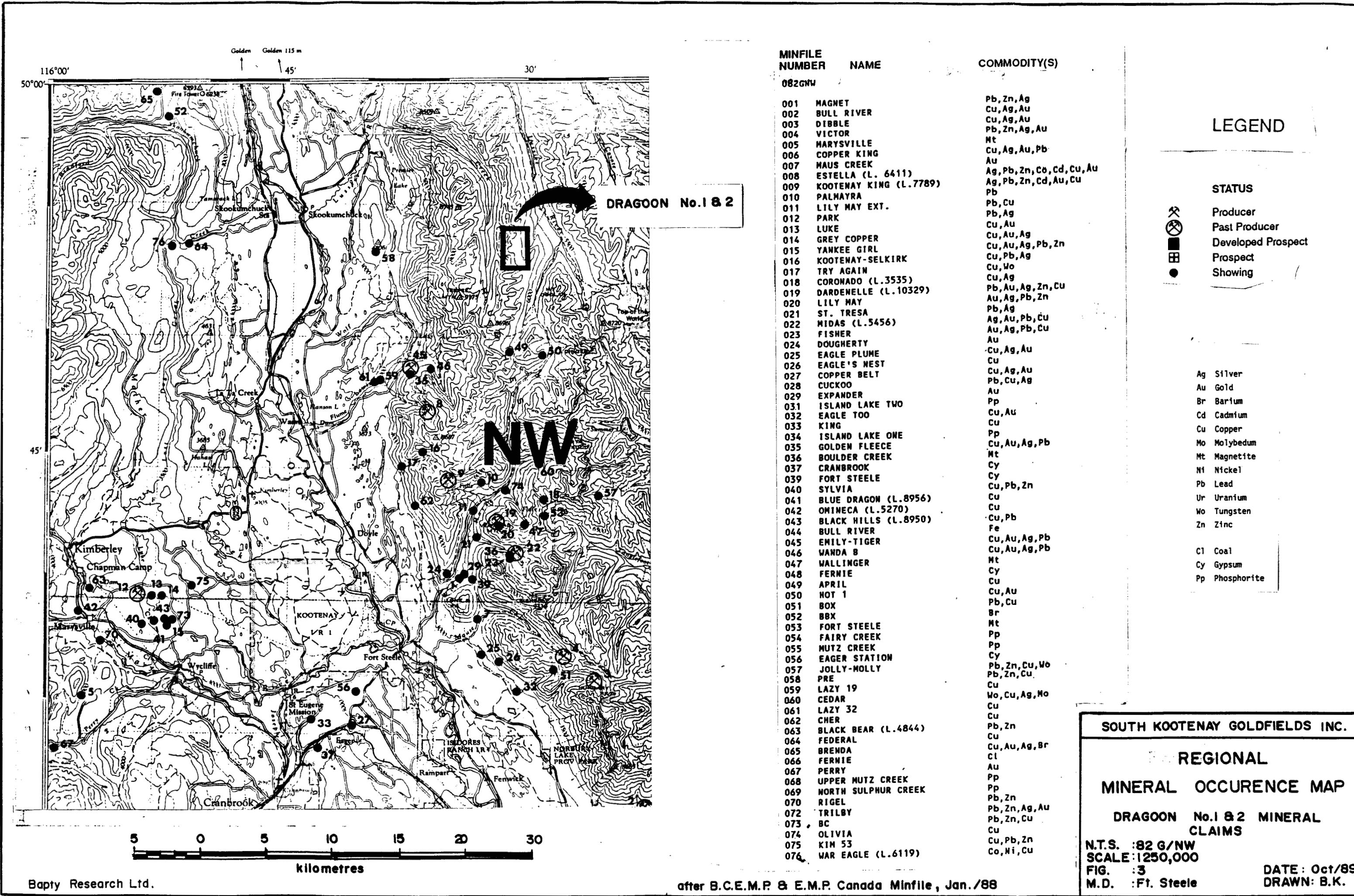
The discovery of rich placer gold on the Wild Horse River in 1864 resulted in a dramatic increase in prospecting and mining activity for the Cranbrook area (Rice, 1937).

The search, by prospecting, for the lode source of the placer gold found on the Wild Horse and Moyie Rivers contributed to the discovery of the Sullivan ore body by Pat Sullivan in 1892.

The St. Eugene mine was also discovered and located at this time forming the corner stone to Consolidated Mining and Smelting Co. now Cominco Ltd.

The community of Fort Steele at the junction of the Wild Horse River and Kootenay River formed the regional supply center with railway access completed in 1898.

Mineral showings discovered in the search for the lode source of the placer gold on the Wild Horse River resulted in a host of crown granted mineral claims be issued (Fig. 3). Occurrences of galena, chalcopyrite and tetrahedrite with associated precious metals were the development targets.



Thirty kilometers from Fort Steele just across the Wild Horse River divide a prospector named J. Larsen in the late 1890's located 8 claims which were given crown granted title called the Uncle Sam, Poorman, Silver Crown, Montana, Mountain View, Tiger, Iron Mask and B. & M.

The developments on the properties included collaring and sinking a shaft along with seven adits on three separate zones. Mineralization consisting of oxidized chalcopyrite and tetrahedrite with precious metal credits was the focus of the underground developments.

A wagon road was built from the properties to connect to existing Wild Horse River trails. Hand sorted shipments of high grade ore were made by J. Larsen, however by 1938 the crown granted claims had reverted back to the crown.

The Lussier River drainage in recent years has been the focus of gypsum exploration and development with Domtar Ltd. producing gypsum from their Lussier River operation.

## **6.00 REGIONAL GEOLOGY**

7.

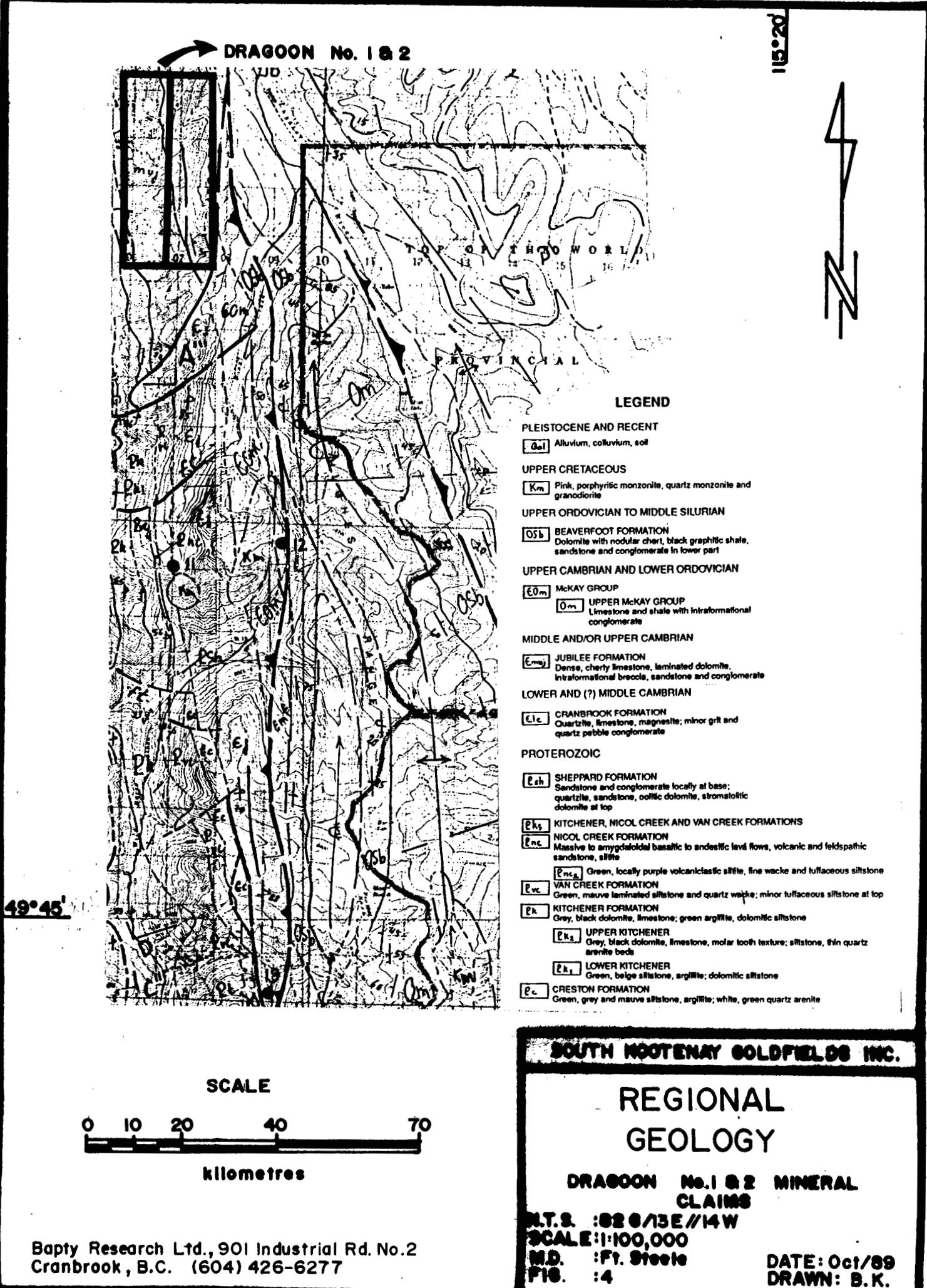
The regional geology consists of Proterozoic Purcell Supergroup sediments and volcanics folded and faulted with lower Paleozoic plat formal carbonates (Fig. 4). The Purcell Supergroup forms the dominant succession west of the Purcell Fault which follows a north westerly trend. Minor subsidiary listric faults segment and offset the Purcell Supergroup with variable displacement along certain faults (Hoy & Carter, 1988).

East of the Purcell Fault a dominantly lower Paleozoic carbonate succession forms broad syncline and anticlines with imbrication along northwesterly trending thrust faults. Considerable shortening of the carbonate section occurred in response to thrust faults rooted to a decollement surface at depth.

Cretaceous monzonites/granodiorites intrude the Purcell supergroup and lower Paleozoic successions (Hoy & Carter, 1988). Northerly trending small stocks outcrop from Summer Lake to north of Nicol Creek.

Sink holes east and west of the Lussier River forming linear clusters and are oriented in a northerly direction. These features are associated with the occurrence of gypsum at the Domtar Ltd. Lussier River operation.

Placer gold occurs with the Cranbrook map area with historical production on the Wild Horse and Moyie River. Deposits are found in poorly sorted Pleistocene conglomerates with pay streaks confined to the unconformity between underlying bedrock and the conglomerate.



## 7.00 PROPERTY GEOLOGY

The property geology of the Dragoon No. 1 & 2 consists of moderately dipping lower Cambrian Jubilee Formation limestone, with underlying conformable Proterozoic Sheppard and Nicol Creek Formations forming the western limb of the Lussier River Syncline (Fig. 5).

Stratigraphically the lower most Nicol Creek Formation consists of amygdaloidal andesitic to basaltic flows with arkosic interflow sediments. A sill with large amphibole phenocrysts up to 8 cm long and labradorite phenocrysts 2 cm across forms the base of the Nicol Creek section. The upper contact appears gradational with pillowed basalts which have pipe vesicles forming the contact with oxidized basaltic "clinkers". The amygdules are gradational to massive hornblende porphyritic flows and represent quenched flow tops with the amygdules interior replaced by calcite. This succession is not exposed on the Dragoon No. 1 & 2 but is interpreted to stratigraphically underlie the claims.

Overlying the Nicol Creek formation is a dominantly sedimentary succession consisting of maroon ripple marked quartzites, stromatolitic and oolite dolomites with pyritic sandstones forming the upper contact. This succession forms the Sheppard Formation and is well exposed in the head wall of the middle cirque. Well preserved stromatolites, showing internal algal structures represent the lower most stratigraphic carbonate unit within the entire stratigraphic succession.

Next upwards in the stratigraphic succession is the Jubilee Formation consisting of gray limestone with chert interbeds forming the prominent ridges and summits on the Dragoon No. 1 & 2 mineral claims. Evidence of disarticulated worm tubules? can be seen in hanging wall at the Poorman Shaft. Intense fracturing occurs along the lower contact with the Proterozoic Sheppard and upper contact with the Upper Cambrian MacKay Group. Preserved layering is visible in the massive Jubilee Formation limestone but is unrecognizable at its upper and lower contacts.

The Upper Cambrian MacKay Group lower member completes the stratigraphic sequence on the Dragoon No. 1 & 2 mineral claims. Tan colored siltstones and shales are interbedded with thinly bedded limestones. This unit is poorly exposed on the claims owing to its recessive nature however good sections are available on cut block logging roads east of the Dragoon No. 1 claim boundary. Also located east of the Dragoon No. 1 claim boundary are outcroppings of Cretaceous monzonite not plotted on OF. 1988 - 14 of Hoy and Carter. This particular stock is pink in color composed of medium grained potassium feldspar with perthitic micro textures developed within the feldspar phenocrysts. Quartz and mafic poor, this stock represents the terminus of a northerly trending linear arrangement of Cretaceous monzonite/granodiorite intrusions traceable 20km southwards to Summer Lake (Fig. 4).

#### 8.00 MINERALIZATION

At the Poorman shaft, elevation 8,000 feet (Fig. 5) the replacement nature of the mineralization is apparent at the shaft collar with sharp contacts with the hosting limestone. A width of 1.20 m was continuously chip sampled which produced an assay rock chip sample No. 93088, .122 opt. Au., .85 opt Ag. This exposure is found in the north wall of the shaft with south wall forming a similar exposure. Caved muck prevented an examination of the vertical extent of the chalcopyrite-tetrahedrite mineralization. Oxidation has produced spectacular textures which form in the boxworks produced by weathering. Brilliant colors of malachite and azurite form the exterior of the oxidized mineralization.

Similar textures are found at the Tiger showing (Fig. 5), where four adits were collared on the exposed dip slope of the Tiger showing. Grab samples from workings at 8130 ft. (2478 m) produced assay values (rock chip sample No. 19171,.156 opt. Au, 35.95 opt. Ag. Malachite and azurite are found as fracture hosted replacement style mineralization with iron rich material found only at higher elevations.

The malachite and azurite are found in a calcite rich gangue giving the mineralization a disseminated appearance.

Another occurrence of malachite of significance occurs in the Proterozoic Sheppard Formation.

Within an stromatolitic dolomite malachite disseminated throughout the matrix produced a 2.03% Cu assay from rock chip sample No. 19167 (Fig. 5).

Silicification is also found on the Dragoon No. 1 & 2 mineral claims. Massive white silica replacements with traces of malachite are found throughout the mineral claims.

South of the Tiger showing on the south wall of the Tiger cirque, quartz veins are exposed by erosion with included fragments of limestone altered to dolomite with unaltered interiors in larger fragments.

The "Tiger" and "Poorman" showings are separated by two kilometers with similarities in both style and type of mineralization. Malachite and azurite with oxidized tetrahedrite is suspected because of anomalous assays in antimony, arsenic and iron. The silver assays may be related to argentiferous tetrahedrite (freibergite) while the gold assays may be related to chalcopyrite which commonly form <1% of sampled rock.

#### **9.00 CONCLUSIONS**

The Dragoon No. 1 & 2 mineral claims has oxidized chalcopyrite - tetrahedrite mineralization, with anomalous precious metals forming replacement style occurrences along preferred fractures, traceable discontinuously for two kilometers of strike.

The source of copper - tetrahedrite mineralization may be derived from the underlying Proterozoic Sheppard and Nicol Formations leached by the thermal waters circulating around the Cretaceous monzonite intrusion found just east of the Dragoon No. 1 claim boundary.

These metal rich fluids in response to pH and eH conditions controlled in part by structure could result on the formation of chalcopyrite - tetrahedrite replacement style mineralizations found in Jubilee Formation limestone.

**10.00 RECOMMENDATIONS**

For the 1990 exploration program I recommend that:

1. prospecting and geological mapping for possible "Vein" extensions from Tiger and Poorman showings;
2. construction of 1.5 km of access road from the cutblock at 50.5 km, Lussier River road to the "Poorman" cabin site;
3. diamond drilling of the "Poorman" shaft zone with BQ helicopter supported drill.

W. Kiesman  
William Kiesman, Geologist

**APPENDIX I**

**BIBLIOGRAPHY**

## BIBLIOGRAPHY

- Hoy, T. and Carter, G., 1988, Open File Map, 1988-14.
- Ministry of Energy Mines & Petroleum, 1988, Regional Mineral Occurrence Map.
- Rice, H.M.A., 1937, Cranbrook Map-Area, B.C., G.S.C. Mem. 207.

**APPENDIX II**

**ANALYTICAL PROCEDURES**

**ACME ANALYTICAL LABORATORIES LTD.**

Assaying & Trace Analysis

852 E. Hastings St., Vancouver, B.C. V6A 1R6

Telephone: 253-3158

Acme Analytical continues to update with mass spectrographic analysis which is now operational. In general, mass spec offers detection limits which are at least 100 fold lower than ICP or flame AA. These detection limits are comparable to graphite furnace AA, but the mass spec can analyze up to 60 elements simultaneously.

Acme has pioneered low cost multi-element ICP analysis which has better detection and precision than AA. Mass spec will further expand the range of elements and isotopes available to mineral exploration programs.

**SPACE**

Total laboratory, sample preparation and sample storage has been expanded to 30,000 square feet, with purchase another building.

**EQUIPMENT**

1. Our ICP system has been expanded, and a fifth unit has been purchased which will allow us to determine up to 45 elements simultaneously.
2. AA spectrophotometers have been increased to 8.
3. Sample preparation, weighing and dissolution facilities have been increased.
4. A LECO Induction Furnace has been installed for determining Carbon and Sulfur simultaneously in geological and metallurgical samples.
5. An UAJ Laser Fluorometer from Scintrex is now used for determination of U in water to .01 ppb.
6. Two ICP mass spectographs.

**TECHNOLOGY**

1. Fire Assay for Ag, Au, Pt, Pd, Rh, Ru & Ir.; the precious metal bead can be analysed by gravimetric, AA, ICP or Mass spec.
2. ICP multi element packages for water, geochem and assay programs have been developed.
3. Lower detection limits for some elements have been achieved by graphite furnace AA.

**TECHNICAL ACHIEVEMENTS**

1. Background corrected Atomic Absorption analysis of Ag and Au since 1971.
2. Best proven precision, accuracy and price for MoS<sub>2</sub> assays in North America.
3. Pioneered geochemical analysis by ICP at or to better detection limits than AA, including Ag, As, U, Th and V.
4. First to offer Mass spectrographic scan analysis.

**PROVEN PERFORMANCE**

Our logistical and technical performance for our clients has been demonstrated on the Gambier, Capoose Lake, Trout Lake, Blackdome, Red Mountain, Carlin, Cirque, Minago River, Quesnel River, Terra Swede, Musto and other major projects. We are capable of handling up to 2500 samples per day.

**ACME ANALYTICAL LABORATORIES LTD.**

Assaying & Trace Analysis

852 E. Hastings St., Vancouver, B.C. V6A 1R6

Telephone: 253-3158

**GEOCHEMICAL ANALYSES - Rocks and Soils**

**Group I Digestion**

.50 gram sample is digested with 3 mls 3-1-2 HCl-HNO<sub>3</sub>-H<sub>2</sub>O at 95 deg.C for one hour and is diluted to 10 ml with water. This leach is near total for base metals, partial for rock forming elements and very slight for refractory elements. Solubility limits Ag, Pb, Sb, Bi, V for high grade samples.

**Group IA - Analysis by Atomic Absorption.**

Element	Detection	Element	Detection	Element	Detection
Antimony*	1 ppm	Copper	1 ppm	Molybdenum	1 ppm
Bismuth*	2 ppm	Iron	0.01%	Nickel	1 ppm
Cadmium*	0.1 ppm	Lead	2 ppm	Silver	0.1 ppm
Chromium	1 ppm	Lithium	2 ppm	Vanadium	2 ppm
Cobalt	1 ppm	Manganese	5 ppm	Zinc	2 ppm

First Element \$2.25 Subsequent Element \$1.00

**Group IB - Hydride generation of volatile elements and analysis by ICP. This technique is unsuitable for sample grading over 1% Hg or Cu.**

Element	Detection	First Element	All Elements
Arsenic	0.1 ppm		
Antimony	0.1 ppm		
Bismuth	0.1 ppm		
Germanium	0.3 ppm		
Selenium	0.3 ppm		
Tellurium	0.3 ppm		

**Group IC - Hg Detection limit = 5 ppb Price \$2.50**

Hg in the solutions are determined by cold vapour AA using a F & J scientific Hg assembly. The aliquots of the extract are added to a stannous chloride/hydrochloric acid solution. The reduced Hg is swept out of the solution and passed into the Hg cell where it is measured by AA.

**Group ID - ICP Analysis, same digestion**

Element	Detection
Ag	0.1 ppm
Cd,Cu,Cr,Cu,Mn,Mo,Ni,Sr,Zn	1 ppm
As,Au,Ba,Bi,La,Pb,Sb,Tl,V,W	2 ppm
U	5 ppm
Al,Ca,Fe,K,Mg,Na,P,Ti	0.01%
Any 2 elements	\$3.25
10 elements	\$4.50
All 30 elements	\$6.25

**Group IE - Analysis by ICP/MS**

Element	Detection
Ca,Cr	0.1 ppm
Au,Bi,Cd,Hg,In,Ir,Os,Re,Rh,Sb,Te,Th,Tl,U	0.1 ppm
All Elements	15.00 (minimum 20 samples per batch or \$15.00 surcharge)

**Hydro Geochemical Analysis**

Natural water for mineral exploration

26 element ICP - Na,Cu,Pb,In,Ag,Cu,Mn,Fe,As,Sr,Cd,V,Ca,P,  
Li,Cr,Mg,Tl,B,Al,Na,K,Ce,Be,Bi \$8.00

F by Specific Ion Electrode - detection 20 ppb \$3.75  
U by UAJ - detection .01 ppb .50  
pH .1 pH 1.50

\* Minimum 20 samples or \$5.00 surcharge for ICP or AA and \$15.00 surcharge for ICP/MS.  
All prices are in Canadian Dollars

**APPENDIX III**

**GEOCHEMICAL ANALYSES**

## GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR Mn Fe Sr Ca P La Cr Mg Ba Ti B W AND LIMITED FOR Na K AND Al. Au DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: ROCK Au\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

LOT 1

TIGER - Roemer.

DATE RECEIVED: SEP 6 1989 DATE REPORT MAILED: Sept 9/89 SIGNED BY..... D.TOK, C.LIONG, J.WANG; CERTIFIED B.C. ASSAYERS

Bapti Research Limited PROJECT T-P File # 89-3455

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	St PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P PPM	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na PPM	K %	W PPM	Au* PPB	
C 39036	1	12	8	5	.3	5	13	1400	2.53	12	5	ND	5	35	1	2	10	4	19.36	.018	7	3	5.05	100	.01	21	.07	.01	.04	1	1	- GILL
C 39037	11	34	736	10	2.6	17	8	36	4.49	546	5	ND	2	6	1	13	2	3	3.23	.002	2	4	1.87	12	.01	4	.10	.01	.05	1	44	
C 39038	4	11	44	7	.2	11	3	62	1.19	38	5	ND	3	41	1	2	2	3	.25	.014	4	8	.08	17	.01	5	.12	.01	.09	1	11	
C 39039	1	101	16	95	.6	187	30	322	5.06	12	7	ND	17	751	1	5	2	121	5.86	.494	83	432	6.06	1378	.13	11	2.82	.06	2.12	1	2	
C 39040	1	7	6	16	.1	6	2	992	2.16	8	5	ND	3	274	1	2	4	2	19.14	.013	6	6	2.09	89	.01	8	.07	.01	.05	1	2	
C 39041	9	150	236	31	1.5	57	35	63	24.38	1796	5	ND	5	6	2	14	2	6	1.74	.012	3	4	1.04	16	.01	2	.21	.01	.04	2	1	
C 39042	2	12	20	6	.2	6	2	68	3.36	1316	5	ND	3	12	1	3	2	2	9.44	.002	2	6	4.40	6	.01	4	.02	.01	.01	1	1	
C 39043	1	8	5	15	.1	19	11	344	2.74	107	5	ND	11	36	1	2	2	5	5.99	.033	21	10	1.65	17	.01	5	.29	.01	.19	1	1	
C 39044	2	8	5	2	.1	15	2	20	1.14	42	5	ND	6	4	1	2	2	2	.55	.049	6	7	.21	36	.01	13	.19	.01	.14	1	1	
C 39045	1	4	4	6	.1	4	2	667	1.65	4	5	ND	35	26	1	2	2	21	1.64	.031	65	4	.10	60	.01	27	.33	.03	.12	1	2	
C 39046	1	6	5	6	.1	5	5	880	3.47	2	5	ND	17	37	1	2	2	59	2.02	.126	69	5	.16	236	.01	2	.24	.03	.11	1	1	
C 39047	1	5	2	13	.1	9	1	151	.60	5	5	ND	3	52	1	2	2	11	23.14	.014	9	9	.68	91	.01	2	.28	.01	.03	1	1	
DJ-100	7	24	11	18	.1	36	12	148	3.94	24	5	ND	22	19	1	3	2	11	.25	.034	12	14	.18	36	.02	2	.69	.03	.30	1	1	
STD C/AU-R	18	61	39	132	6.8	67	29	1024	4.04	44	20	7	37	49	19	15	22	60	.53	.093	39	55	.93	178	.07	35	1.90	.06	.14	13	510	

## GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN FE SR CA P LA CR MG BA TI B W AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: OCT 2 1989 DATE REPORT MAILED: Oct 5/89 SIGNED BY...: D.TOE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

Bapt Research Limited File # 89-4019

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Ni PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	Sr PPM	Cd PPM	Sb PPM	Bi PPM	V PPM	Ca %	P PPM	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
B 56017	1	12	8	3	.2	23	6	53	1.98	8	5	ND	8	3	1	2	2	3	.09	.029	7	20	.04	18	.01	7	.25	.01	.19	2	8
B 56018	1	7	22	25	.4	1	1	65	.80	32	5	ND	2	45	1	10	2	7	18.72	.014	2	3	11.37	6	.01	2	.10	.01	.05	2	7
B 56019	1	1	45	33	.4	4	1	93	12.00	15	9	ND	4	23	3	17	2	99	13.74	.038	3	34	8.41	7	.01	7	.38	.01	.03	3	2
B 56020	2	10320✓	9046✓	607	257.2✓	5	1	28	1.45	2073	5	ND	1	1	34	3237✓	94	2	.08	.017	2	57	.01	7	.01	2	.03	.01	.02	6	185
B 56021	1	7375	468	1852	39.4✓	3	1	332	4.76	701	5	ND	3	15	48	1717✓	28	8	27.58	.014	2	7	3.67	17	.01	4	.05	.01	.02	12	800
B 56022	1	41	104	25	.8	1	1	115	.16	9	5	ND	3	26	1	15	2	1	25.65	.009	2	1	9.23	1	.01	10	.02	.01	.01	1	28
B 56023	1	18941✓	1541	921	258.7✓	3	1	91	.51	1259	5	ND	1	7	21	1630✓	41	9	1.92	.012	2	4	.89	3	.01	2	.02	.01	.01	6	179
B 56024	1	573	2376	66	48.5✓	3	1	12	.49	376	5	ND	1	1	4	1471✓	7	1	.37	.004	2	39	.13	3	.01	3	.02	.01	.02	2	19
B 56025	16	28202✓	2669	3317	110.9✓	43	5	26	47.80	1866	8	ND	3	1	10	1493✓	16	24	.07	.027	2	12	.22	26	.01	11	.11	.01	.01	19	1300
B 56026	1	198	37	37	.7	4	1	54	.56	23	5	ND	1	14	1	34	2	2	8.87	.005	2	39	4.81	1	.01	2	.01	.01	.01	2	1
B 56027	1	473	41	74	2.3	167	35	479	5.56	56	5	ND	3	78	1	38	2	26	5.28	.197	21	69	4.32	19	.01	24	.47	.01	.33	1	1
B 56051	1	7	9	241	.1	19	28	900	7.35	3	5	ND	1	33	1	2	2	40	2.16	.198	24	9	2.21	53	.07	8	2.06	.02	.18	1	1
B 56052	1	53	14	120	.2	43	38	611	7.69	9	5	ND	2	26	1	10	2	60	1.04	.196	16	16	4.86	102	.01	8	2.14	.01	.15	1	2
B 56053	1	105	11	56	.1	13	10	223	8.50	5	5	ND	1	71	1	2	2	37	.71	.195	18	7	.57	1378	.03	10	.75	.02	.25	1	2
B 56054	1	82	10	15	.1	3	4	1580	.66	2	5	ND	1	117	1	10	2	5	13.59	.010	4	3	.22	230	.01	2	.16	.01	.02	1	1
B 56055	1	13	33	25	.2	1	1	109	.14	4	5	ND	1	50	1	3	2	3	20.50	.008	2	1	12.33	7	.01	2	.02	.01	.02	1	1
B 56056	1	7	2	5	.1	3	1	66	.35	2	5	ND	2	45	1	2	2	4	20.11	.015	2	2	11.82	3	.01	22	.03	.01	.02	1	1
B 56057	1	5	3	8	.2	3	1	67	2.62	8	5	ND	3	42	1	2	2	7	19.34	.012	2	4	11.31	3	.01	5	.05	.01	.01	3	1
B 56058	1	7	2	3	.1	2	1	57	.24	8	5	ND	2	46	1	3	2	3	17.91	.008	2	2	9.97	1	.01	2	.01	.01	.01	1	12
B 56059	1	2	3	7	.2	4	1	64	2.35	10	5	ND	2	37	1	2	2	13	19.30	.016	2	9	10.78	2	.01	6	.09	.01	.02	2	1
B 56060	1	6	2	6	.1	3	1	93	.26	2	5	ND	2	27	1	4	2	1	19.80	.009	2	1	11.74	2	.01	14	.03	.01	.02	1	2
B 56061	1	3	234	134	.1	3	1	59	1.38	226	5	ND	2	41	1	28	2	6	18.62	.012	2	3	10.48	4	.01	2	.03	.01	.01	1	1
B 56062	1	12	76	89	.1	3	1	77	.54	91	5	ND	1	30	1	8	2	3	20.39	.012	2	5	12.23	2	.01	11	.03	.01	.01	1	1
B 56063	1	4	9	29	.1	3	1	79	.90	11	5	ND	5	46	1	3	2	6	18.87	.019	8	7	10.42	10	.01	15	.21	.01	.13	1	1
B 56064	1	1	10	52	.3	5	1	103	2.31	11	5	ND	4	38	1	3	2	12	19.33	.012	7	8	10.30	6	.01	14	.21	.01	.07	1	1
B 56065	1	5	34	90	.4	5	1	102	7.07	29	5	ND	3	28	2	8	2	77	17.13	.017	2	31	10.08	3	.01	3	.27	.01	.02	2	3
B 56066	1	16	85	540	3.0	19	2	16	59.98	1710	5	ND	5	6	3	227	3	166	.37	.052	3	100	.25	88	.01	11	.53	.01	.01	41	1
B 56067	1	10	249	73	.1	4	1	79	.24	18	5	ND	4	36	1	4	2	4	25.27	.011	2	2	9.24	1	.01	5	.02	.01	.01	1	1
STD C/AU-R	18	62	43	130	6.6	68	31	1017	3.91	42	18	8	37	47	19	15	20	60	.44	.098	38	52	.88	175	.05	35	1.81	.06	.14	12	510

✓ Assay in Progress.

Tiger-P.  
Helicopter Recon.  
(See Mag.)

## GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 1:1:1 HCL-HNO3-H2O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR MN Fe SR CA P LA CR NG BA Ti Zn V AND LIMITED FOR NA K AND AL. AU DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: ROCK AU\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

K. L. Dawson

DATE RECEIVED: SEP 12 1989 DATE REPORT MAILED: Sept 15, 1989 SIGNED BY.. A. Bapty, D. Tove, C. Liang, J. Wang; CERTIFIED B.C. ASSAYERS

Bapty Research Limited File # 89-3595

SAMPLE#	No	Cu	Pb	Zn	Ag	Wt	Co	Mn	Fe	As	U	Au	Th	Sr	Cd	Sb	Bi	V	Ca	P	Ta	Cr	Mg	Ba	Ti	B	Al	Na	K	V	Au*	
	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM		
3 93090	1	.40	.9	.19	.2	9	2	139	.56	4	5	ND	1	44	1	2	5	38	19.15	.016	2	28	10.95	5	.01	6	.07	.01	.01	1	.3	
3 93091	1	.14	.14	.52	.2	.19	4	106	5.26	.21	5	ND	1	18	1	2	2	30	13.06	.007	2	3	3.37	12	.01	1	.19	.01	.01	1	.3	
3 93092	2	.11	.7	.3	.1	3	2	10	1.22	.11	5	ND	5	7	1	2	2	5	.13	.067	7	17	.05	35	.01	13	.38	.01	.22	1	.2	
3 93093	1	.52	.4	.13	.2	5	2	290	2.29	5	5	ND	1	72	1	2	3	11	11.19	.023	2	2	5.56	3	.01	10	.13	.01	.08	1	.6	
3 93094	3	6605	9200	2665	5.3	9	9	357	40.84	2364	7	5	4	1	5	1213	57	11	.19	.010	4	14	.37	40	.01	2	.14	.01	.01	1	4880	
3 93095	1	3273	1240	177	60.0	1	1	380	.96	643	5	ND	-	1	32	4	244	9	4	13.37	.001	2	1	11.04	1	.01	3	.02	.01	.01	1	.34
3 93096	4	61299	23598	3398	235.5	4	1	124	1.60	9717	6	4	1	9	132	5980	21	2	.85	.006	2	23	.44	25	.01	2	.04	.01	.01	1	3810	
3 93097	6	77853	23929	4012	271.0	1	1	33	1.37	13317	7	1	1	107	120	1662	117	1	.51	.012	7	5	.18	79	.01	5	.09	.01	.01	1	2130	
3 93098	1	.399	.5791	.710	21.3	2	1	467	1.09	171	5	ND	1	32	11	607	2	8	13.28	.001	2	1	7.68	5	.01	4	.03	.01	.01	1	.500	
3 93099	4	74558	13224	44862	152.1	4	5	562	5.76	6954	5	2	1	33	367	2180	75	3	1.39	.010	30	1	1.14	9	.01	2	.03	.01	.01	1	1360	
3 93100	1	16075	11101	2633	266.4	1	1	1246	.39	1490	5	ND	1	43	38	738	2	6	17.30	.001	8	1	7.54	1	.01	2	.02	.01	.01	1	.610	
3 19169	9	33956	7150	4639	30.0	4	10	42	25.63	4689	8	4	1	66	3204	6	3	.19	.001	3	1	.02	3	.01	11	.16	.01	.01	1	3170		
3 19170	3	11077	19164	1990	100.2	3	1	1233	7.32	2096	5	ND	2	16	36	2487	26	11	28.65	.001	2	5	.56	61	.01	2	.05	.01	.01	1	.660	
3 19171	1	39999	1051	5172	504.5	13	12	549	3.93	1304	9	5	1	12	195	1858	314	19	3.40	.010	2	1	1.91	23	.01	2	.56	.01	.01	1	6430	
3 19172	1	99999	988	5938	512.3	13	9	986	4.68	2694	9	5	1	21	120	1515	616	24	6.02	.001	2	1	3.43	30	.01	3	.33	.01	.01	1	5440	
3 19173	1	12012	1316	1312	165.3	2	1	161	1.45	1040	5	ND	1	39	26	1130	57	1	19.10	.001	2	1	13.30	3	.01	2	.02	.01	.01	1	.340	
3 19174	1	.590	.366	.47	4.9	1	1	.85	3.16	.49	5	ND	1	29	2	33	2	72	19.40	.006	2	13	10.61	6	.01	3	.21	.01	.01	1	.23	
3 19175	6	14366	244	499	54.2	55	17	50	29.15	314	5	ND	1	2	3	118	54	6	.24	.007	1	6	.27	9	.01	5	.13	.01	.01	1	180	
3 19176	4	16280	452	1098	61.3	182	23	151	38.70	1098	5	ND	3	3	11	146	66	15	.61	.020	2	9	.46	16	.01	2	.16	.01	.01	1	710	
3 19177	1	.276	.73	.14	1.0	138	57	.377	1.97	.35	5	ND	1	32	1	23	2	20	3.53	.122	10	124	4.05	14	.01	12	.50	.01	.26	1	.7	
3 19178	55	372	1099	66	2.7	105	39	16	41.14	1701	8	ND	4	3	1	29	3	11	.22	.010	2	7	.21	8	.01	2	.14	.01	.01	1	.10	
3 19179	2	2410	46	73	3.6	9	1	28	1.32	.98	5	ND	1	2	2	30	12	1	1.02	.001	2	5	.37	1	.01	2	.02	.01	.01	1	.37	
STD C/AU-R	19	63	40	133	5.6	67	31	1012	4.12	43	18	7	38	50	19	15	24	60	.50	.093	39	55	.90	171	.07	35	2.00	.06	.14	13	490	

**GEOCHEMICAL ANALYSIS CERTIFICATE**

ICP - .500 GRAM SAMPLE IS DIGESTED WITH 3ML 3-1-2 HCl-HNO<sub>3</sub>-H<sub>2</sub>O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR Mn Fe Sr Ca P La Cr Mg Ba Ti B V AND LIMITED FOR Na K AND Al. Au DETECTION LIMIT BY ICP IS 3 PPM.  
 - SAMPLE TYPE: ROCK Au\* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: SEP 9 1989 DATE REPORT MAILED: Sept 14, 1989 SIGNED BY: D. TOTE, C. LKONG, J. WANG; CERTIFIED B.C. ASSAYERS

Bapt Research Limited File # 89-3568

SAMPLE#	Mo PPM	Cu PPM	Pb PPM	Zn PPM	Ag PPM	Mi PPM	Co PPM	Mn PPM	Fe %	As PPM	U PPM	Au PPM	Th PPM	St PPM	Cd PPM	Sb PPM	Bi PPM	V %	Ca PPM	P %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au* PPB
B 19165	1	223	402	39	.9	81	41	97	14.63	90	5	ND	8	20	1	6	2	17	.16	.266	2	15	.07	35	.01	5	.60	.01	.13	2	4
B 19166	2	26	2	7	.1	15	6	36	2.11	679	5	ND	4	11	1	2	2	4	.98	.245	5	6	.19	25	.01	16	.47	.01	.19	5	27
B 19167	3	19259	2	52	.1	31	15	183	3.40	26	5	ND	2	13	2	2	2	3	1.72	.062	4	12	.95	225	.01	2	.23	.01	.09	2	2
B 19168	1	22	2	9	.1	4	2	126	4.16	45	5	ND	2	22	1	2	3	26	1.60	.123	18	13	.61	131	.03	6	.34	.01	.23	4	2
C 39048	1	51	2	18	.1	20	11	891	7.20	5	5	ND	1	54	1	6	2	7	15.96	.116	8	9	4.83	12	.01	3	.17	.01	.08	3	4
C 39049	8	14528	430	448	118.6	58	30	80	42.39	2150	5	ND	1	2	5	286	26	5	.15	.012	2	3	.16	17	.01	6	.18	.01	.04	1	890
C 39050	1	18	2	7	.1	15	5	20	2.19	57	5	ND	5	12	1	2	3	3	.08	.077	10	5	.04	26	.01	6	.28	.01	.16	2	5
B 93080	6	35	359	9	4.3	53	12	25	6.07	1188	5	ND	1	1	1	8	2	1	.01	.002	2	4	.01	9	.01	5	.06	.01	.03	2	3
B 93081	4	16	10	2	.1	10	7	25	.31	46	5	ND	1	1	1	2	2	1	.01	.001	2	8	.01	5	.01	3	.01	.01	.01	2	9
B 93082	2	4	101	1	.7	6	1	14	.47	134	5	ND	1	1	1	7	2	1	.02	.002	6	4	.01	4	.01	19	.09	.01	.07	4	1
B 93083	1	10513	539	976	70.3	3	1	253	.55	1787	5	ND	1	21	20	1500	2	1	16.12	.003	2	1	9.27	1	.01	4	.01	.01	.01	1	1790
B 93084	1	27	4	25	.2	8	2	94	3.11	9	5	ND	1	35	1	24	2	14	18.31	.019	2	16	10.49	1	.01	12	.12	.01	.02	4	13
B 93085	20	1950	2970	2009	2.2	20	3	6	40.74	2229	5	2	1	1	8	415	11	15	.14	.011	2	13	.25	29	.01	2	.19	.01	.02	1	4740
B 93086	5	79	6	13	.1	101	31	494	4.75	7	5	ND	3	258	1	2	2	48	7.13	.281	53	92	4.31	118	.02	54	.98	.01	.40	3	18
B 93087	7	99999	✓ 930	4892	299.0	2	1	6	14.18	15218	5	11	1	2	48	4800	293	1	.09	.014	2	5	.03	13	.01	2	.03	.01	.01	10	10320
B 93088	14	10628	2190	1377	25.6	23	4	12	30.88	2222	5	2	1	1	10	897	27	51	.06	.006	2	17	.06	11	.01	7	.09	.01	.01	1	4380
B 93089	1	348	18	29	1.1	105	12	129	6.35	21	5	ND	1	13	1	8	2	41	2.00	.123	6	128	1.97	41	.17	4	1.93	.02	.72	8	25
STD C/AU-R	17	60	38	134	6.9	67	31	960	4.20	42	23	8	36	47	18	15	21	58	.48	.098	36	55	.88	175	.07	38	2.01	.06	.14	12	530

Regular Assay Suggested.

Assay data to come.

## GEOCHEMICAL ANALYSIS CERTIFICATE

ICP - .500 GRAM SAMPLE IS DIGESTED WITH INL 3-1-2 HCL-HNO<sub>3</sub>-H<sub>2</sub>O AT 95 DEG. C FOR ONE HOUR AND IS DILUTED TO 10 ML WITH WATER.  
 THIS LEACH IS PARTIAL FOR Mn Fe Sr Ca P La Cr Mg Ba Ti V AND LIMITED FOR Na K AND Al. Au DETECTION LIMIT BY ICP IS 3 PPM.

- SAMPLE TYPE: ROCK Au<sup>+</sup> ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: SEP 14 1988 DATE REPORT MAILED: Sept 19/89 SIGNED BY C.L. D.TOLE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

Bapty Research Limited File # 89-3679

SAMPLE#	No	Cu	Pb	Zn	Ag	Ni	Co	Mn	Fe	As	O	Au	Tb	Sr	Cd	Sb	Bi	V	Ca	P	La	Cr	Mg	Ba	Ti	B	Al	Na	K	V	Au <sup>+</sup>
	2PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM	PPM		
B 19180	1	1377	2	23	.5	151	125	112	14.89	19	5	ND	3	32	1	2	3	11	3.98	.173	6	.52	.73	10	.06	2	1.00	.01	.16	29	1
B 19181	113	315	1574	129	1.3	175	65	14	49.51	1799	5	ND	6	1	18	17	12	.11	.011	2	7	.14	.27	.01	2	.17	.01	.02	1	1	
B 19182	78	271	863	56	2.2	174	55	8	48.65	2670	5	ND	6	3	1	38	19	12	.12	.011	2	7	.16	.35	.01	2	.16	.01	.02	1	49
B 19183	22	235	256	27	3.1	66	14	21	7.19	1203	5	ND	1	2	1	25	2	4	.05	.004	2	21	.03	19	.01	2	.06	.01	.02	2	22
B 19184	5	63	30	7	.7	13	2	19	1.30	111	5	ND	1	1	1	17	2	2	.03	.003	2	6	.01	12	.01	18	.04	.01	.01	1	1
B 19185	21	23	14	3	.4	4	1	5	1.07	54	9	ND	3	43	1	2	2	9	.05	.071	13	30	.03	45	.01	17	.28	.01	.24	1	2
B 19186	3	17	11	5	.5	10	1	23	.41	21	5	ND	1	1	1	3	2	1	.06	.001	2	9	.01	13	.01	3	.02	.01	.01	1	2
B 19187	1	363	17	15	.2	32	5	38	.58	38	5	ND	1	1	1	2	2	1	.12	.001	2	13	.07	2	.01	5	.03	.01	.01	1	14
B 19188	2	1884	36	406	.7	96	10	36	3.10	112	5	ND	1	1	1	23	2	1	.91	.017	2	5	.02	9	.01	7	.40	.01	.01	1	3
B 19189	7475	161	11	14	.4	76	31	139	3.13	5	5	ND	2	263	1	2	6	7.73	.102	5	13	.35	40	.11	2	2.55	.05	.05	1	7	
B 19190	28	13	3	4	.2	9	1	29	.39	8	5	ND	1	1	1	2	2	1	.03	.005	2	7	.01	8	.01	2	.02	.01	.02	2	11
B 19191	108	5	1	2	.3	7	1	41	.33	5	5	ND	1	1	1	2	5	1	.10	.003	2	61	.02	3	.01	5	.04	.01	.01	2	15
B 19192	1	5	2	1	.2	9	1	29	.31	4	5	ND	1	1	1	2	2	1	.01	.001	2	9	.01	5	.01	6	.01	.01	.01	1	5
B 19193	4	6	2	1	.3	5	1	28	.30	4	5	ND	1	1	1	2	2	1	.01	.001	2	70	.01	1	.01	2	.01	.01	.01	3	14
B 19194	3	4	2	3	.3	6	1	30	.27	5	5	ND	2	1	1	3	2	1	.01	.001	2	6	.01	5	.01	2	.01	.01	.01	1	1
B 19195	2	4	3	1	.3	6	1	32	.26	3	5	ND	1	1	1	2	2	1	.01	.001	2	60	.01	1	.01	2	.01	.01	.01	0	9
B 19196	3	2	2	1	.2	9	1	24	.28	3	5	ND	1	1	1	2	2	1	.01	.002	2	7	.01	1	.01	10	.01	.01	.01	1	1
B 19197	2	4	2	1	.1	5	1	25	.25	3	5	ND	1	1	1	2	2	1	.01	.001	2	53	.01	6	.01	2	.01	.01	.01	2	7
B 19198	2	1	2	3	.2	8	1	25	.26	2	5	ND	2	1	1	2	2	1	.01	.001	2	6	.01	4	.01	2	.01	.01	.01	1	5
B 19199	1	127	23	9	1.6	187	16	35	1.62	25	5	ND	1	1	1	2	2	20	.42	.011	2	80	.02	6	.01	2	.02	.01	.01	1	1
B 19200	1	16	4	3	.4	11	1	40	.72	9	5	ND	1	9	1	2	2	12	1.84	.026	2	56	.91	1	.01	2	.02	.01	.01	2	1
B 56001	3	273	28	15	.4	3	16	106	3.21	10	5	ND	20	21	1	2	2	46	.29	.055	15	12	.29	40	.07	2	.44	.01	.11	2	3
B 56002	1	8	4	23	.2	2	5	1026	3.33	14	5	ND	1	136	1	2	2	11	24.11	.001	3	1	6.55	242	.01	4	.02	.01	.01	1	31
B 56003	36	922	10	140	5.1	14	28	1052	6.09	2	5	ND	1	45	1	2	2	9	1.10	.160	15	6	.72	564	.01	9	.49	.01	.25	1	29
B 56004	2	6	2	2	.2	5	1	96	.43	5	5	ND	1	6	1	2	2	1	.75	.001	2	6	.20	9	.01	3	.01	.01	.01	1	4
B 56005	1	11	2	2	.3	2	3	100	.55	8	5	ND	62	7	1	2	3	3	.63	.004	16	19	.23	11	.01	9	.23	.04	.07	1	7
B 56006	2	126	2	10	.1	7	7	306	2.34	11	5	ND	21	23	1	2	2	15	.20	.060	37	5	.03	592	.01	12	.27	.03	.12	1	1
B 56007	1	217	3	7	.2	3	12	415	2.47	6	5	ND	10	60	1	2	2	18	1.97	.054	73	11	.06	613	.01	3	.31	.03	.11	1	1
B 56008	2	5	2	3	.2	1	2	280	1.24	4	7	ND	23	11	1	2	2	9	1.94	.005	38	3	.04	260	.01	2	.15	.03	.07	1	3
STD C/AU-R	19	62	41	132	6.9	67	30	1024	4.11	42	21	8	39	49	19	15	21	50	.50	.093	40	55	.31	177	.07	36	1.90	.06	.12	13	49

Tiger

ACME ANALYTICAL LABORATORIES LTD. DATE RECEIVED: SEP 14 1989  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE (604) 253-3158 FAX (604) 253-1716 DATE REPORT MAILED: Sept. 20/89.

ASSAY CERTIFICATE

C - SAMPLE TYPE: Pulp AU - 10 GM REGULAR ASSAY.

SIGNED BY..... D.TOE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

Bapty Research Limited FILE # 89-3568R

SAMPLE#	CU %	PB %	ZN %	AG oz/t	AS %	AU oz/t
B 19167	2.03	-	-	-	-	-
C 39049	1.56	-	-	4.33	.29	-
B 93080	-	-	-	-	.13	-
B 93083	1.15	-	-	2.29	.20	.046
B 93085	.26	-	.31	-	.48	.123
B 93087	24.78	-	.57	62.39	1.89	.337
B 93088	1.23	.31	.25	.85	.58	.127

ACME ANALYTICAL LABORATORIES LTD.  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE (604) 253-3158 FAX (604) 253-1716

DATE RECEIVED: SEP 19 1989

Sept 27/89

DATE REPORT MAILED:

## ASSAY CERTIFICATE

- SAMPLE TYPE: Pulp  
AU\*\* AND AG\*\* BY FIRE ASSAY FROM 1/2 A.T.

SIGNED BY [Signature] D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

Bapty Research Limited FILE # 89-3595R

SAMPLE#	Cu %	Pb %	Zn %	Ag** OZ/T	Au** OZ/T	As %
B 93094	-	-	-	-	.142	-
B 93095	-	-	-	1.83	-	-
B 93096	6.17	10.14	-	42.23	.101	1.26
B 93097	6.63	63.20	-	55.42	.060	1.52
B 93099	8.08	34.96	5.82	40.14	.047	-
B 93100	1.72	.95	-	8.45	-	-
B 19169	2.80	-	-	3.06	.091	-
B 19170	1.16	2.26	-	3.03	-	-
B 19171	26.90	-	-	35.95	.156	-
B 19172	19.60	-	-	30.21	.148	-
B 19173	1.28	-	-	5.14	-	-
B 19175	1.40	-	-	1.71	-	-
B 19176	1.65	-	-	2.01	-	-

ACME ANALYTICAL LABORATORIES LTD.  
852 E. HASTINGS ST. VANCOUVER B.C. V6A 1R6  
PHONE (604) 253-3158 FAX (604) 253-1716

DATE RECEIVED: OCT 6 1989

DATE REPORT MAILED: Oct 12/89.

## ASSAY CERTIFICATE

SAMPLE TYPE: Pulp  
AU\*\* AND AG\*\* BY FIRE ASSAY FROM 1/2 A.T.

SIGNED BY..... C. Leong D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS

Bapty Research Limited FILE # 89-4019R

SAMPLE#	Cu %	Pb %	Ag** OZ/T	Sb %	Au** OZ/T
B 56020	.95	.87	9.69	.36	-
B 56021	-	-	1.19	.18	-
B 56023	1.69	-	8.85	.18	-
B 56024	-	-	1.46	.15	-
B 56025	2.73	-	3.76	.29	.033

**APPENDIX IV**

**ROCKCHIP SAMPLE DESCRIPTION FORMS**

**Geochemical Data Sheet - ROCK SAMPLING**

NTS 82 G/13

Sampler BILL KIESMAN  
Date SEPTEMBER, 1983

Project TIGER - POORMAN  
Property DRAGOON No. 1 + No. 2

Location Ref \_\_\_\_\_  
Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
					Rock Type	Alteration	Mineralization		Au	Ag	Cu	Pb	Zn	As
93080	5525850 607550	GRAB			CHERT	SILICEOUS REPLACEMENT	PYRITE	FOUND IN ALTERED LIME- STONE, DEFORMED BY FAULT MOVEMENT, CONTORTED PYRITIC CHERT INTERBEDS	3	4.3	35	359	9	.13
	7470(2276.9)													
93081	5525800 607450	"			"	"	"	"	9	0.1	16	10	2	.46
	7470(2276.9)													
93082	5525750 607550	"			"	"	"	"	1	0.7	4	101	1	.14
	7470(2276.9)													
93083	5525800 607300	"			LIMESTONE	FRACTURE REPLACEMENT	MALACHITE AZURITE CHALCOPYRITE	FLOAT, FOUND IN TALUS IN POORMAN CIRQUE, SOUTH SIDE, SEVERAL TRACES OF MALACHITE-AZURITE FOUND	.046	2.29	1.15	539	976	.20
	7360(2243.3)													
93084	5525650 607175	"			"	"	JASPER	FLOAT FOUND IN TALUS IN POORMAN CIRQUE, SOUTH SIDE JASPER REPLACES HAIRLIKE CRACKLE FRACTURES	13	0.2	27	4	25	9
	7470(2276.9)													
93085	5525625 607100	"			?	LIMONITE GEOTHITE	-	FLOAT, FOUND IN TALUS IN POORMAN CIRQUE, SOUTH SIDE "SPONGE" TEXTURE WITH VOIDS LINED WITH YELLOW BROWN LIMONITE	.123	2.2	.26	2970	.31	.48
	7450(2270.8)													
93086	5525625 607050	"			ANDESITE	CARBONATE	PYRITE	FLOAT, FOUND IN TALUS IN POORMAN CIRQUE, SOUTH SIDE CARBONATE KIENLETS WITH TRACES OF PYRITE IN ANDESITE	18	0.1	79	6	13	7
	7450(2270.8)													
93087	5526100 606400	"			-	LIMONITE GEOTHITE	MALACHITE AZURITE	POORMAN SHAFT, HIGH GRADE DUMP, MASSIVE GEOTHITE WITH "EYES" (VOIDS) FILLED WITH MALACHITE, BOTRYOIDAL, STALACTITES	.337	62.39	24.78	930	.57	1.89
	7460(2432.3)													
93088	5526100 606410	CONTINUOUS CHIP	1.20m		-	"	"	POORMAN SHAFT, NORTH WALL "SPONGE" IRON WITH MASSIVE GEOTHITE UNALTERED. OXIDATION RESPONSIBLE?	.127	.85	1.23	.31	.25	.58
	7460(2432.3)													
93089		GRAB			SKARN	SKARN	PYRRHOTITE	FLOAT, WEST SIDE LUSSIER ROAD KM 43.6	25	1.1	348	18	29	21
					LIMESTONE									

## Geochemical Data Sheet - ROCK SAMPLING

NTS 82G/13

Sampler BILL KIESMAN  
Date SEPTEMBER, 1989Project TIGER - POORMAN  
Property DRAGOON No. 1 & No. 2Location Ref \_\_\_\_\_  
Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization		Au	Ag	Cu	Pb	Zn	As
93090	5526750 606150	GRAB		LIMESTONE	?	-	FLOAT FOUND IN TALUS MIDDLE CIRQUE, WAXY GREEN MINERAL	8	0.2	40	9	19	4
	7290(22215)						SOFT FOUND AS BRECCIATED FRAGMENTS IN LIMESTONE MATRIX						
93091	5526400 606100	"		LIMESTONE	HEMATITE	-	IN SITU, MIDDLE CIRQUE, SOUTH WALL, HEMATITE BRECCIA	3	0.2	14	14	52	21
	8170(2490.2)						FOMS VERY LOCALIZED (6m x 5m) ALTERATION ZONE						
93092	5526350 606000	"		CONGLOMERATE	-	PYRITE	IN SITU, MIDDLE CIRQUE, SOUTH WALL, LOWER MOST GATEWAY FORMATION (PROTEROZOIC) THRUST FAULT UNION FORMITY.	2	0.1	11	7	3	11
	8100(2468.9)												
93093	5526500 605000	"		LIMESTONE	-	DISSEMINATED PYRITE CHALCOPYRITE?	IN SITU, MIDDLE CIRQUE, SOUTH WALL, GATEWAY, STREAMATOLITIC CARBONATES INTERBEDDED WITH MAROON RIPPLE MARKED QUARTZITE	6	0.2	52	4	13	5
	7770(2368.3)												
93094	5528300 606000	"		-	LIMONITE GEOTHITE	TIGER RIDGE	FLOAT, MIDDLE CIRQUE, NORTH WEST SIDE, TALUS RICH IN LIMONITE FLOAT "SPONGE" TEXTURE WITH LIMONITE LINING voids	.142	5.3	6605	9200	2665	2364
	8380(2554.2)												
93095	5528200 606000	"		LIMESTONE	FRACTURE REPLACEMENT	MALACHITE	FROST HEAVE, TIGER RIDGE APEX/CREST	34	1.83	3278	1240	377	643
	0220(2554.2)												
93096	5528250 606050	"		"	"	MALACHITE	FROST HEAVE, TIGER RIDGE DON JACKSON'S SAMPLE	.101	.104	6.17	67.20	3398	1.26
	8380(2554.2)												
93097	5528220 606075	"		-	-	MALACHITE GEOTHITE CALCITE	TIGER NO. 1 ADIT, HIGH GRADE FROM DUMP	.060	55A2	6.63	63.20	4012	1.52
	8340(2542.0)					TETRAHEDRITE							
93098	5528240 606120	"		LIMESTONE	FRACTURE REPLACEMENT	MALACHITE	TIGER NO. 2 ADIT, 1/6 SAMPLE, AT FACE, DISSEMINATED MALACHITE OVER C. 10m THICK, CARBONATE ALTERED TO "SANDY", GOUGE	500	22.9	899	2791	710	171
	0250(2514.6)												
93099	5528240 606120	"		"	"	"	TIGER NO. 2 ADIT, 1/6 SAMPLE AT 6.3m FROM FACE, C. 30 m THICK	.047	40.14	8.08	34.96	5.82	6954
	8150(2514.6)												

## Geochemical Data Sheet - ROCK SAMPLING

NTS 82 G/13

Sampler BILL KIESMAN  
Date SEPTEMBER, 1969Project TIGER - POORMAN  
Property DRAGOON No. 1 + No. 2Location Ref \_\_\_\_\_  
Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS				
					Rock Type	Alteration	Mineralization		Ag	Cu	Pb	Zn	As
93100	5528240 606120	GRAB			LIMESTONE	FRACTURE REPLACEMENT	MALACHITE	TIGER NO. 2 ADIT, ABOVE BROW, SURFACE VEIN TRACE 0.30m THICK X 5.0m LONG	610	8.45	1.72	.95	2633 1440
	8150(2414.6)				"	"	MALACHITE GEMSTONES	TIGER RIDGE, OPEN CUT HIGH GRADE					
19169	5528220 606150	"			"	"	"		.091	3.06	2.80	7150	4633 4689
	8150(2434.1)												
19170	5528220 606160	"			"	"	"	TIGER NO. 3 ADIT, HIGH GRADE DUMP	660	3.03	1.16	2.26	1990 2090
	8130(2478.0)												
19171	5528200 606200	"			"	"	MALACHITE	TIGER NO. 4 ADIT, COLLAPSED 15.7m FROM COLLAR, WEST WALL, 0.30m THICK	.156	35.95	26.90	1051	5172 4304
	8120(2474.9)												
19172	5528200 606200	"			"	"	MALACHITE	TIGER NO. 4 ADIT WINZE/ RAISE, 13.3m FROM COLLAR WINZE CORNER, 0.30m THICK 38° DIP	.148	30.21	19.40	988	5938 2694
	8120(2474.9)												
19173	5528180 606260	"			"	"	MALACHITE	WEST OF TIGER NO. 4 ADIT NAIRNOKI FRACTURE TRENDING 073/63NW	340	5.14	1.28	2516	1312 1040
	7880(2401.8)												
19174	5527940 606500	"			"	BRECCIA	HEMATITE	FLOAT, TIGER CIRQUE, NORTH WALL, HEMATITE ALONG BRECCIA INTERSTICES	24	4.9	590	866	47 49
	7180(2188.5)												
19175	5527850 606520	"			-	GEOCHLORITE HEMATITE	-	FLOAT, TIGER CIRQUE, WEST WALL, FOUND IN TALUS	380	1.71	1.40	244	499 814
	7180(2188.5)												
19176	5527680 606480	"			-	"	-	"	710	2.01	1.65	452	1098 1098
	7200(2144.6)												
19177	5527600 606620	"			VOLCANIC	CARBONATE	PYRITE MALACHITE	FLOAT, TIGER CIRQUE, SOUTH WALL, FOUND IN TALUS CARBONATE VEINLETS SURROUNDING PURPURHEDRITE FRAGMENTS	7	3.0	276	73	34 35
	7030(2142.7)												

## Geochemical Data Sheet - ROCK SAMPLING

NTS 82G/13

Sampler DON JACKSON  
Date SEPTEMBER, 1983Project TIGER - POORMAN  
Property DRAGOON No. 1 + No. 2Location Ref \_\_\_\_\_  
Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS				
				Rock Type	Alteration	Mineralization		Au	Ag	Cu	Pb	Zn As
56016	5524480 607900	GRAB		VEIN	QUARTZ	-	FLOAT, VEIN HOSTED IN LIMESTONE					
56017	5528300 605370	"		CONGLOMERATE	-	PIRITE	SHARPED FORMATION	8	0.2	12	8	3 8
56018	5528350 605580	"		SAND	-	-	CREEK DRAWING WESTERN SLOPES OF MT. WIRTIT	7	0.4	7	22	25 32
56019	5528240 605750	"		LIMESTONE	-	MARLBORO AZURITE	FLOAT, WESTERN SLOPES OF MT. WIRTIT, DIORITE CK	2	0.4	1	45	33 15
56020	5528260 605800	"		"	-	"	"	185	9.69	.45	.87	607 2073
56021	5528580 606660	"		"	"	"	FLOAT, NORTH OF TIGER CREEK	800	1.19	7375	468	1852 701
56022	5528600 606670	"		HEM " "	"	"	"	28	0.8	41	104	25 9
56023	5528650 606630	"		HEM "	"	"	"	179	0.85	1.69	1541	921 1259
56024	5528650 606590	"		LIMESTONE	"	"	"	19	1.46	573	2376	66 376
56025	5528650 606700	"		LIMESTONE CANTERBURY	"	"	"	.033	3.76	2.73	2669	3317 1946

## **Geochemical Data Sheet - ROCK SAMPLING**

Sampler DON JACKSON  
Date SEPTEMBER, 1999

Project TIGER - POORMAN  
Property DRAGOON No 1 + No 2

NTS 82G/13  
Location Ref \_\_\_\_\_  
Air Photo No \_\_\_\_\_

## **Geochemical Data Sheet - ROCK SAMPLING**

NTS 82 G/13

Sampler BILL KIESMAN  
Date SEPTEMBER, 1989

Project TIGER - POORMAN  
Property DRAGOON N. 1 + 2

**Location Ref** \_\_\_\_\_  
**Air Photo No** \_\_\_\_\_

## Geochemical Data Sheet - ROCK SAMPLING

Sampler BILL KIESMAN  
Date SEPTEMBER, 1989Project TIGER - POORMAN  
Property DRAGOON No 1 + 2NTS 82 G/13Location Ref \_\_\_\_\_  
Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
				Rock Type	Alteration	Mineralization		Au	Ag	Cu	Pb	Zn	As
56056	5625350 606550	GRAB		LIMESTONE				1	0.1	7	2	5	2
56057	"	"		"				1	0.2	5	3	8	8
56058	"	"		"				12	0.1	7	2	3	8
56059	"	"		"				1	0.2	2	3	7	10
56060	5525400 606750	"		"				2	0.1	6	2	6	2
56061	5527900 605900	"		"				1	0.1	3	234	134	226
56062	"	"		"				1	0.1	12	76	89	91
56063	"	"		"				1	0.1	4	9	29	11
56064	"	"		"				1	0.3	1	10	52	11
56065	"	"		"				3	0.4	5	34	90	29

## **Geochemical Data Sheet - ROCK SAMPLING**

NTS 82 G/13

Sampler BILL KIESMAN  
Date SEPTEMBER, 1989

Project TIGER - POORMAN  
Property DRAGOON No. 1 + No. 2

**Location Ref** \_\_\_\_\_  
**Air Photo No** \_\_\_\_\_

## **Geochemical Data Sheet - ROCK SAMPLING**

Sampler DON JACKSON  
Date SEPTEMBER, 1999

Project TIGER - POORMAN  
Property DRAGOON N.C. 1+2

NTS 82G/13

## Location Ref

## Air Photo No

## Geochemical Data Sheet - ROCK SAMPLING

NTS 82 G/13

Sampler BILL KIESMAN  
Date SEPTEMBER, 1983Project TIGER - POORMAN  
Property DRAGOON No. 1 + No. 2Location Ref \_\_\_\_\_  
Air Photo No \_\_\_\_\_

SAMPLE NO.	LOCATION	SAMPLE TYPE	Sample Width	True Width	DESCRIPTION			ADDITIONAL OBSERVATIONS	ASSAYS					
					Rock Type	Alteration	Mineralization		Au	Ag	Cu	Pb	Zn	As
19178	5527600 606820 7000 (2133.6)	GRAB			LIMONITE GOETHITE			IRON RICH, SPONGE-LIKE TEXTURE WITH Voids LINED WITH CARMEL BROWN LIMONITE FLOAT	10	2.7	372	1094	66	1701
19179	5527580 606900 7110(2167.1)	CONTINUOUS CHIP	0.60m		VEIN	QUARTZ VEIN	MALACHITE trace	AS 200/42SE, PINCHING AND SWELLING ALONG STRIKE, VISIBLE IN CLIFF EXPOSURE, 0.60m TO 1.0m MALACHITE (gr.) IN CRACKLED VEIN TEXTURE	37	8.6	2410	46	73	98
19180	5528300 609050 5390(1642.9)	GRAB			LIMESTONE	SKARN?	CHALCOPYRITE PYROPORE	FLOAT FOUND AT 50.5 KM ON LUSSIER RIVER ROAD, VERY LARGE FLOAT, 2m X 2m ACROSS, DENSE DIFFICULT TO BREAK, SILICEOUS?	1	0.5	1377	2	23	19
19181	5527400 606600 7450(2270.8)	CONTINUOUS CHIP	0.80m		LIMONITE GOETHITE			IN SITU, SOURCE OF 19178 FLOAT, IRON RICH SPONGE-LIKE	1	1.3	315	1574	129	1779
19182	" "		0.80m		"	"		TEXTURE WITH Voids LINED WITH CARMEL BROWN LIMONITE	49	2.2	271	869	66	2670
19183	"	GRAB			"	-	-	TRACES OF LIMONITE ALONG FRACTURES WITH POSSIBLE HEMATITE/JASPER FILLED BRECCIA INTERSTICES, HANGING WALL	23	3.1	235	256	27	1203
19184		GRAB			VEIN?	QUARTZ	MALACHITE trace	VEIN TEXTURES EXPOSED AS RADIATING ROSETTES WHICH ARE INTERGROWN, 0.50-5cm. ACROSS, DEFORMED VEIN 19179?	1	0.7	63	30	7	111
19185	5527430 606620 7420(7261.6)	"			LIMESTONE	BRECCIA	-	WEAKLY ALTERED, TRACES OF LIMONITE,	2	0.4	23	14	3	54
1	7460(2255.5)													
19186	5527450 606600 7400(2255.5)	"			VEIN?	QUARTZ	-	QUARTZ ROSETTES WITH TRACES OF MALACHITE, NOT SAMPLED MALACHITE DUE TO STEEPNESS OF TERRAIN	2	0.5	17	11	5	21
19187	5527200 606700 7390(2252.5)	"			LIMESTONE	BRECCIA	MALACHITE trace	FLOAT COBBLE SIZE ON SOUTH EAST-FACING SLOPE.	14	0.2	368	17	35	34
19188	"	"			"	"	"	SAME AS ABOVE	3	0.7	1884	36	406	112

**APPENDIX V**

**STATEMENT OF QUALIFICATIONS**

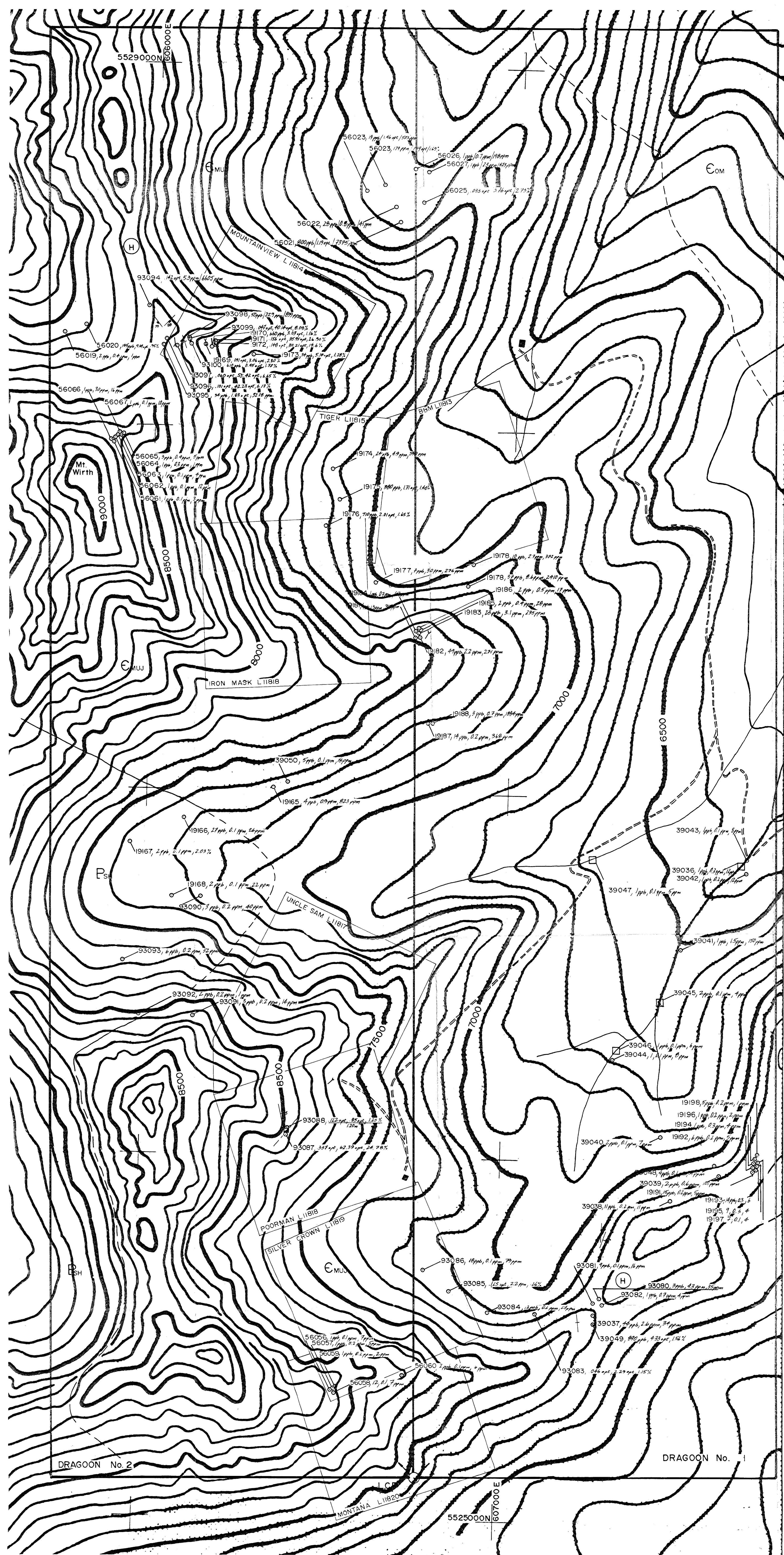
**STATEMENT OF QUALIFICATIONS**

I, William Donald Kiesman, of the City of Burnaby, in the Province of British Columbia, certify that:

1. I am a graduate of the University of Manitoba, Winnipeg, Manitoba with a Bachelor of Science obtained in 1980 and a diploma of Technology from the British Columbia Institute of Technology in Mining Technology in 1987.
2. I have practiced my profession continuously since graduation.
3. This report is based upon results generated from geological mapping and rock chip sampling program conducted on behalf of South Kootenay Goldfields Inc. during the period September 4 to September 27, 1989.
4. I hold indirect interest in this property through an employees' stock option to acquire 10,000 shares in Dragoon Resources Ltd. which has a 50% ownership in South Kootenay Goldfields Inc. I do not expect my interest to change as a result of endorsing or submitting this report.
5. South Kootenay Goldfields Inc. may include this report, or a summary thereof, in a prospectus or statement of material facts.

Dated at Cranbrook B.C., this 15 day of Dec 1989.

W. Kiesman  
William D. Kiesman, Geologist



## LEGEND

## MacKay Group

## Jubilee Formation

Dense, cherty limestone, laminated dolomite  
intraformational breccia, sandstone and  
conglomerate

## **Sheppard Formation**

Sandstone and conglomerate locally at top,  
dolomitic quartzite, oolitic dolomite,  
stromatolitic dolomite at base

## LIST OF SYMBOLS

-  Geological contact, defined, assumed

 Strike and dip

 Joint

 Vein trace

 Pack horse trail

 Adit, trench

 Shaft

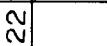
 Cabin

 Helicopter pad

 Reverted Crown grant

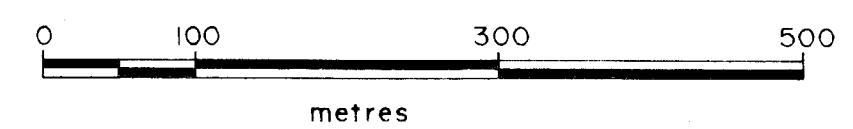
 L.C.P , claim boundary

 Rock chip sample location

 Heavy minerals sample location

 U.T.M. Coordinates

## SCALE



Contour Interval = .100 ft. (30.48m.)

# GEOLOGICAL BRANCH ASSESSMENT REPORT

19, 419

**SOUTH KOOTENAY GOLDFIELDS INC.**

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**PROPERTY GEOLOGY**

AND  
ROCK CHIP SAMPLE LOCATION MAP

DRAGOON No. 1 & 2 MINERAL CLAIMS  
BAPTY RESEARCH LTD.  
N.T.S. : 82 G/13  
SCALE: 1:5000  
M.D. : Ft. Steele  
E.C. : 5  
DATE : Oct/89  
DRAWN: D. K.