GEOLOGICAL, GEOCHEMICAL and PROSPECTING REPORT

on the

JIM CLAIMS

Record #'s 8578, 8579, 9907 and 9908

MANSON CREEK, BRITISH COLUMBIA

Omenica Mining Division

N.T.S. 93N/9 & 10

Latitude 55°44'N Longitude 124°39'W

BY: Gregory G. Crowe, M.Sc., P.Geol.

October, 1989

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SUMMARY

Precious metal mineralization in the Manson Creek area is spatially associated with the Manson Creek Fault zone; a 65 km long, up to 1000m wide, complex series of anastomosing splays hosting carbonatized and silicified ultramafics, volcanics and sediments. Numerous gold bearing quartz veins and quartz-carbonate alteration zones are developed along or occur marginal to the fault.

The Jim claims are located along the Manson Creek Fault and lie northwest of the town of Manson Creek. Precious metal occurrences have been documented within the boundaries of the property.

The claims cover the Farrell showing, a high grade quartz vein system that has returned values to 0.551 oz/t Au over a 3.0m width. Previous sampling has defined gold soil anomalies over 400m along regional strike to the southeast.

This showing and gossanous cliffs located across the Germansen River, 85m - 100m to the west-northwest, returned gold values to 5038 ppb Au - 41.1 ppm Ag and 19845 ppb Au - 14.3 ppm Ag respectively.

A newly discovered adit, 1.1 km southeast of the Farrell trenches, had no recorded sampling. Quartz veins within the adit yielded up to 741 ppb Au and anomalous copper, lead and zinc. Soil sampling in the area revealed a weak to moderate, northwest trending gold anomaly.

Many of the showings in the Manson Creek area have undergone only precursory examinations. Occurrences that have been examined in more detail have never been fully evaluated. Potential exists for the discovery of additional high grade quartz systems and extensive, lower grade, larger tonnage style precious metal bearing alteration zones.

INTRODUCTION

The Jim claim group lies along the Manson Creek Fault. This fault trends northwesterly, is steep dipping and consists of a complicated series of anastomosing splays, characterized by carbonatized and silicified ultramafics, mafic volcanics and deep water sediments. Movement is interpreted to be strike slip and the width varies from a few hundred metres to over 1,000 metres.

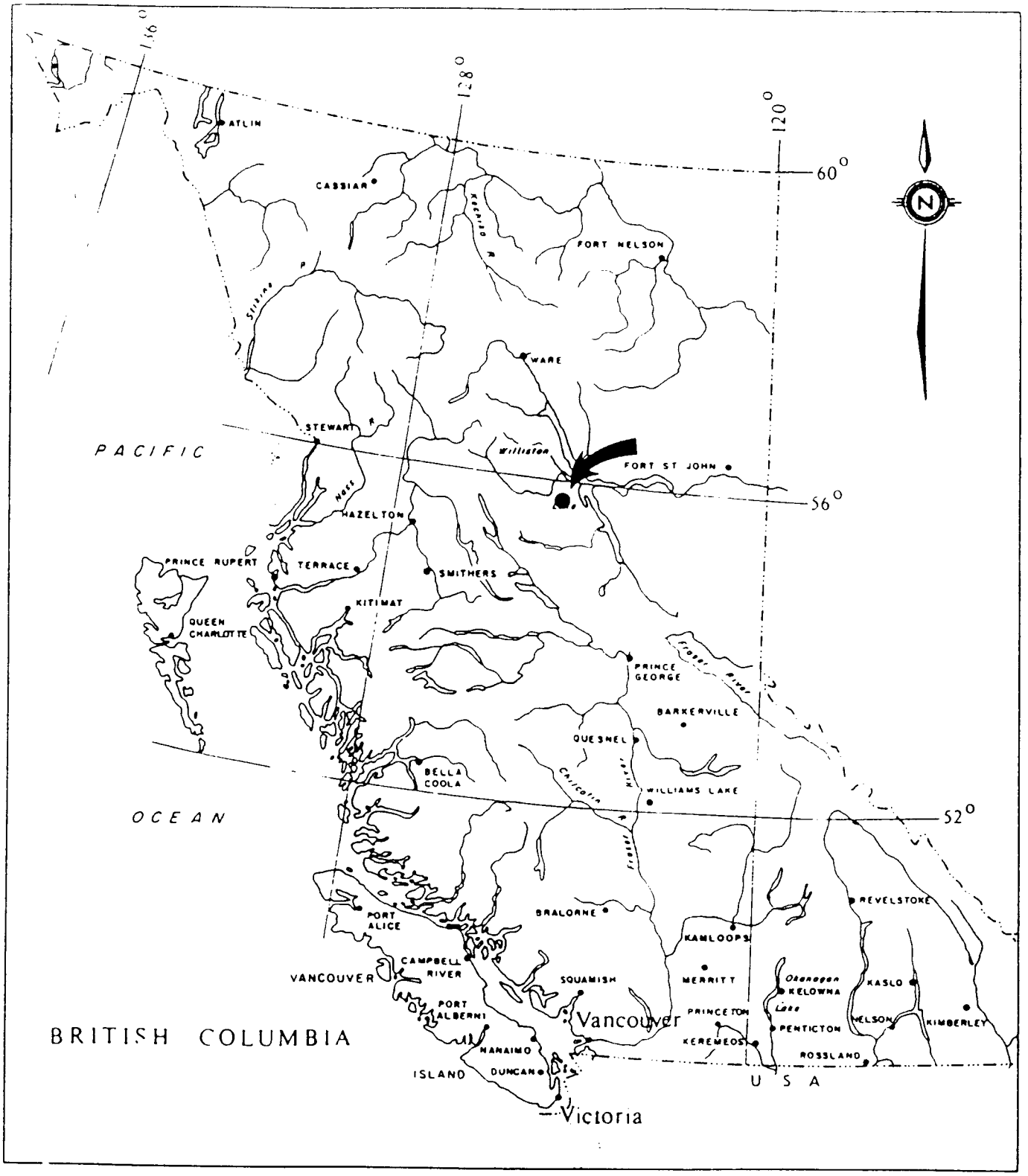
The fault is host to numerous precious metal vein occurrences, one of which lies within (Farrell showing) the Jim 4 claim. Quartz stockwork mineralization, hosted by extensive silica-carbonate alteration, occurs southwest of the property (QCM claims - Central Zone). A prolonged history of placer mining has also been documented along all major creeks draining the Manson Creek Fault.

Between July 8, 1989 and July 13, 1989 work was carried out on the Jim 1-4 mineral claims. The Farrell showing was examined and several samples were collected. This quartz bearing structure was followed to the west-northwest and sampled on the western bank of the Germansen River. A newly discovered adit was located 1.1 km southeast of the Farrell showing. Quartz veins within the adit were sampled and a small gridded area around the adit was soil sampled. Most of the roads within the property were examined and several samples of quartz veining and/or alteration material were collected.

PROPERTY, LOCATION AND ACCESS

The Jim claims are located along Germansen River and are centered approximately 12 km northwest of Manson Creek. The property comprises 64 contiguous units (Figures 1 and 2). J. Forbes and R. Cann are the registered owners.

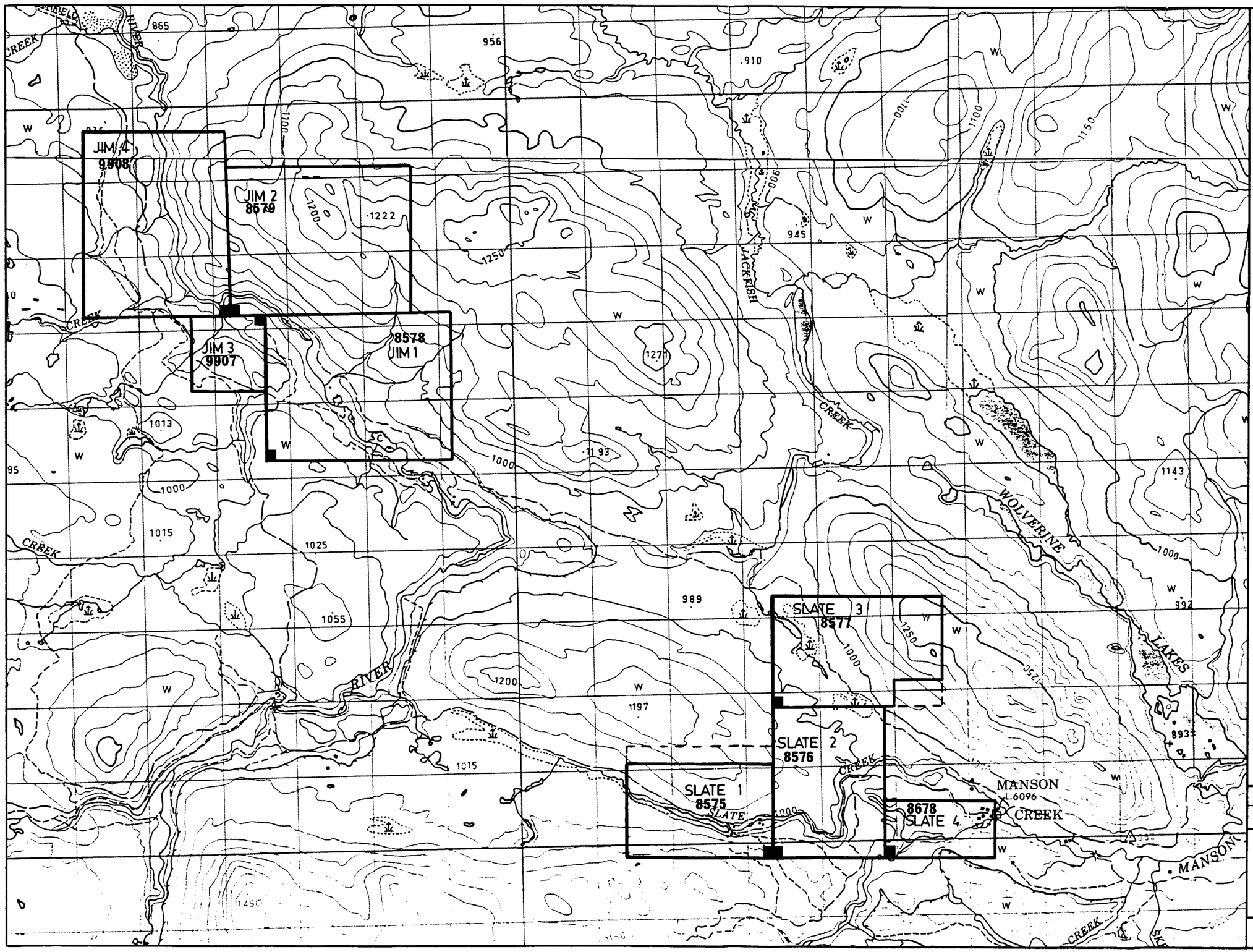
Claim Name	Units	Record #	Expiry
Jim 1	20	8578	July 17, 1990
Jim 2	20	8579	July 17, 1990
Jim 3	4	9907	Oct. 29, 1990
Jim 4	20	9908	Oct. 30, 1990



0 100 200 300 km

LOCATION MAP

DATE	SCALE	NTS	DRWG NO.
1989	1 7500,000		1



CLAIM MAP

Figure 2

Manson Creek lies approximately 230 km north-northwest of Prince George, B.C. Access to Manson Creek is best facilitated by a 225 km stretch of 2 wheel drive gravel road, north from Fort St. James. Alternate road access is provided by a network of well maintained logging roads, which join the Hart Highway (B.C. Highway No. 97) approximately 160 km north of Prince George and 30 km south of MacKenzie.

Float planes fly into the Manson Lakes and fixed wings service Germansen Landing, 27 km to the northwest of Manson Creek. Room, board and provisions can be obtained in both Manson Creek and Germansen Landing.

HISTORY

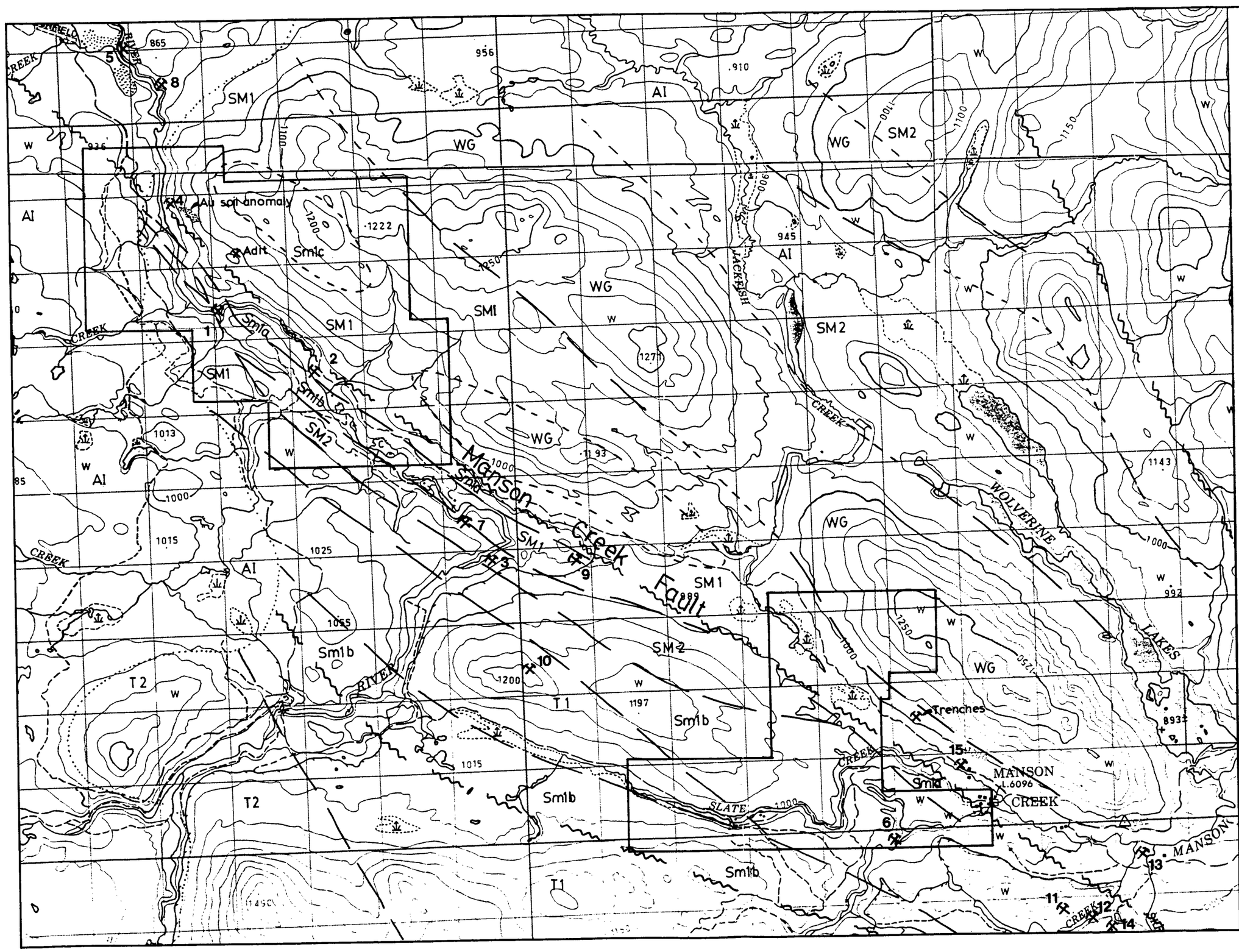
Placer gold was discovered on Germansen River, Manson River and their tributaries in 1870-71. Production was almost continuous from Germansen River and some 24,138 ounces of gold were recovered until 1949. Total recorded production from Slate Creek, Manson River and several tributary streams was an additional 12,815 ounces of gold.

Intensive prospecting within the Manson Creek - Germansen River camp led to the discovery of a number of lode gold - silver occurrences. Several of these showings, including the Farrell, Ah-Hoo Creek, Motherlode (Flagstaff), QCM, Discovery Bar, Sunset and Fairview, are distributed along or are proximal to the Manson Creek Fault (Figure 3).

Limited trenching and underground development was carried out on the Farrell showing (currently on the Jim 4 mineral claim-Figure 3) prior to 1949 (Armstrong and Thurber, 1949). A 0.7m sample assayed 0.8 oz/t Au and 1.6 oz/t Ag.

The Fairview showing, currently held by Chevron Minerals Ltd. (between the Slate 2, Slate 3 and Slate 4 mineral claims), was worked sporadically during the 1900's. Numerous overgrown trenches and pits can be found on the property (B.C.D.M. Assessment Report 16,602).

In 1972, the Ida Claims (currently the QCM Claims of Manson Creek Resources) were worked by Sullivan and Rogers of Toronto. Soil and rock geochemistry revealed significant gold anomalies (B.C.D.M. Assessment Report 4245). This was followed by IP and resistivity surveys, (B.C.D.M. Assessment Report 4246) before the ground was allowed to lapse. The area was re-staked in 1979 by Vital Mines of B.C., but the ground was again dropped.



Quaternary

- Al — Alluvium

Upper Triassic - Lower Jurassic
Takla Group

- T2 — Volcanic conglomerate and sandstones, lesser flows
- T1 — Argillite, lesser volcanic sediments

Upper Paleozoic - Triassic
Slide Mountain Group

- SM3 — Pillow basalts, volcanic breccia, chert
- SM2 — Siltstone, argillite, chert, minor flows
- SM1 — Graphitic argillite, chert, limestone, serpentinite, listwanite, felsic tuff
  - Sm1c — Felsic tuff
  - Sm1b — Phyllite, argillite, lesser limestone, chert
  - Sm1a — Serpentinite, talc-carbonate schist, listwanite

Upper Paleozoic - Triassic

- WG — Foliated hornblende, pyroxene gabbro

fault

contact

mineral occurrence

0.5 0 1.0 2.0

Kilometres

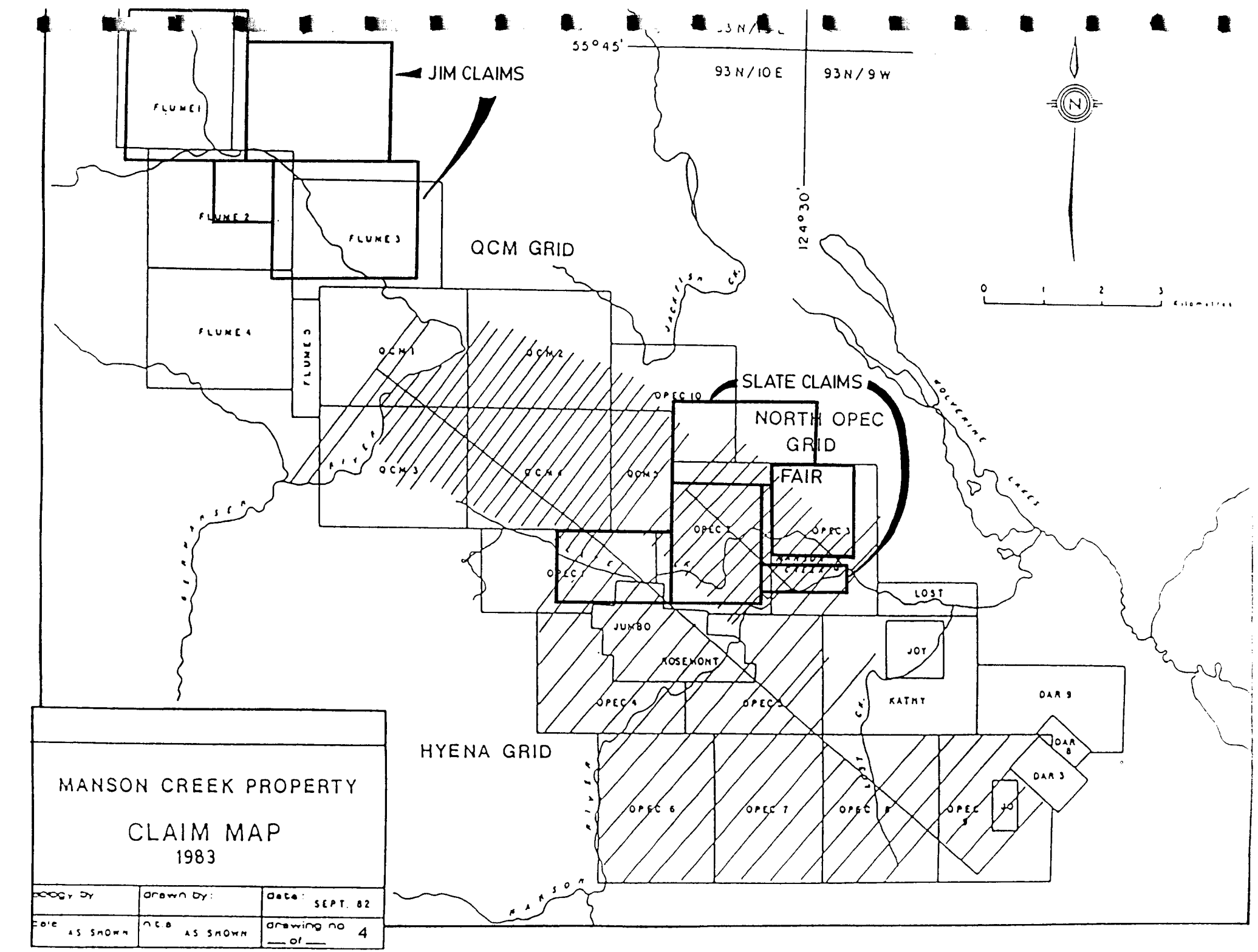
Geology & Mineral Occurrences

Figure 3

Golden Rule Resources Ltd. of Calgary operated the Opec (the Slate 1 to 4 claims cover the Opec 1, 2, 3 and 10) and Flume (the Jim 1 to 4 claims cover the Flume 1, 2, 3, 6, and 7) claims (Figure 4) in 1980. Geological, geochemical, magnetometer and VLF surveys were carried out along a 28 km grid on the Opec claims (B.C.D.M. Assessment Report 8956). Several polymetallic geochemical anomalies with coincident geophysical signatures were outlined. Grab samples collected from the Farrell and Fairview showing confirmed previous values (0.345 oz/t Au and 0.550 oz/t Au from the Farrell and 0.098 oz/t Au from the Fairview). Approximately 40 line km of grid controlled geological mapping, geochemical sampling and ground VLF/EM and magnetic geophysical surveying was carried out on the Flume claims (B.C.D.M. Assessment Report 8957). The grid was situated to test suspected major structures and quartz-carbonate alteration zones along the Germansen River.

In 1981, Golden Rule Resources Ltd. conducted geological, geochemical, magnetometer and VLF/EM surveys (B.C.D.M. Assessment Report 9944) over 31.3 km of grid on the QCM 1 to 5 mineral claims (located along the Manson Creek Fault between the Jim and Slate claims - see Figure 4). Two strong (to 2850 ppb Au) northwest trending soil gold anomalies 900m apart, each up to 3000m long and 50m to 300m wide, were found to be associated with silica-carbonate alteration zones. One anomaly contained an area of anomalous gold-in-rock values from 100 ppb Au to 3500 ppb Au. Trench sampling of the old Flagstaff-Motherlode occurrence returned values to 0.054 oz/t Au and 8.6 oz/t Ag. Outcrops along the north slope of Germansen River combined with VLF/EM suggest a strike length of approximately 400m for the Flagstaff-Motherlode zone.

Anaconda Canada Exploration Ltd. optioned the QCM and Opec claims from Golden Rule Resources Ltd. in 1982. In that year a total of 78.2 line km of grid were added to the existing grids on both claim groups (see Figure 4) and geological mapping, soil and rock sampling, VLF/EM and magnetometer surveys and trenching were carried out (B.D.C.M. Assessment Report 10746). Two extensive zones of intense ankerite-sericite-albite-quartz+/-pyrite alteration host anomalous gold values in rocks (up to 1200 ppb Au - Flag zone and up to 4200 ppb Au - Central zone). No soil anomaly was found to be associated with the Flag zone, but geology and IP suggest the alteration extends for up to 3,000m to the southeast. In 1983, 32 percussion (2424m), 3 diamond drill (422m) holes (Anaconda unpublished company report) and 4 reverse circulation (414m) holes (B.C.D.M. Assessment Report 11627) tested the Flag and Central zones . Five percussion holes across the Flag zone returned anomalous gold values between 50 and 167 ppb Au. The Central zone (130m by 300m) returned up to 0.169 oz/t Au over 1.5m in percussion holes, up to 0.070 oz/t Au over 3.0m in reverse circulation and up to 0.247 oz/t Au over 0.5m in



MANSON CREEK PROPERTY

CLAIM MAP
1983

geology by	drawn by:	date: SEPT. 82
scale AS SHOWN	N.T.S. AS SHOWN	drawing no 4 of ___

diamond drilling. One 76.5m percussion drill interval averaged 0.031 oz/t Au. The zone is open to the southeast along a soil geochemical anomaly. Anaconda favoured the model of an economic bulk tonnage, low grade deposit. Regional tungsten anomalies were outlined in the southern portion of the Opec claims.

The Flume claims were re-examined in 1983 by Manson Creek Resources Ltd. (B.C.D.M. Assessment Report 12,362). The program consisted of geological mapping, geochemical sampling and geophysical surveys over the Farrell showing, the Ah-Hoo Occurrence and over selected gold geochemical anomalies outlined in previous surveys. Several gold and silver soil geochemical anomalies were outlined in an area 400m by 250m and further investigations were recommended. Limited trenching and sampling around the Farrell adit returned up to 0.511 oz/t Au over 3.0m. Altered wallrock adjacent to the vein returned 0.184 oz/t Au over 1.0m.

A limited diamond drilling program (304.8m) was conducted in 1984 in order to evaluate the continuity and extent of the Farrell showing (B.C.D.M. Assessment 12,130). Three holes were drilled proximal to the showing and one hole was located along strike to the north. Results were discouraging and the interpretation was that the Farrell showing lacked vertical and lateral extent. The drill spacing and locations may not however, have been sufficient in order to adequately test this structure. Continued work on the remaining untested soil anomalies was recommended.

Chevron Minerals Ltd. staked the Fair claim, surrounding the Fairview showing, in 1987. A limited program consisting of geological mapping as well as soil and rock geochemical sampling was carried out (B.C.D.M. Assessment Report 16,602). A grab sample from the vein returned 0.524 oz/t Au. Exposures in the Fairview showing combined with old trenches and soil gold anomalies along the strike of the main quartz vein suggest the vein system has a possible extension of up to 850m.

REGIONAL GEOLOGY

The Manson Creek area lies within the allocthonous Intermontane Belt (Ferri and Melville, 1988 and 1989) consisting of Late Triassic to Early Jurassic Takla Group, Middle Paleozoic to Early Triassic Slide Mountain Group and possible Middle to Late Paleozoic Harper Ranch Group. These are intruded by the Early Cretaceous Germansen batholith and the Triassic to Cretaceous Hogem batholith.

The Harper Ranch Group comprises carbonate, epiclastics and mafic volcanics overlain by Slide Mountain Group deep water sedimentary, volcanic and igneous rocks. The Takla Group is an arc assemblage of subalkaline to cal-alkaline pyroclastic and epiclastic rocks with lesser mafic flows.

The most prominent structure in the area is the 65 kilometre long Manson Creek fault zone, which separates the Takla Group in the southwest from the Slide Mountain Group to the northeast. The fault trends northwesterly and varies from a few hundred meters to over a kilometre in width. Lenses of altered ultramafics occur along the zone and are clearly delineated by aeromagnetics. Strike slip motion is inferred by stretched fault-breccia clasts and phyllite clasts, slickensides and fibrous crystal growths. The sense and amount of motion has not been deduced. The Slate Creek lineament is probably a splay off the Manson fault.

MINERALIZATION

Most mineral prospects in the area are spatially distributed along the Manson Creek fault (see Figure 3 and Table 1). Exceptions to this include a few copper showings in the Takla volcanics (Ferri and Melville, 1989) and moblydenite, chalcopyrite and scheelite occurrences within and marginal to the Germansen batholith.

Precious metals have been noted in three modes of occurrence. These include:

1) Sulphide bearing quartz-carbonate veins along or within the Manson Creek fault zone.

2) Disseminated mineralization in altered rocks of the Takla and Slide Mountain groups.

3) Quartz-carbonate alteration zones, including listwaenite, developed along the fault.

Figure 3 illustrates the strong spatial association between precious metal showings and the Manson Creek fault. Two gold (Farrell and Ah-Hoo) and one asbestos showings occur within the boundaries of the Jim claims and one gold showing (Discovery Bar) is located on the Slate claims. Several other prospects (Fairview, Sunset, Discovery Bar, Kathy, Lost Creek and other unnamed showings) occur immediately along strike (northwest-southeast) from the Jim and Slate claims. These are described briefly in Table 1.

The Motherlode (Flagstaff) and QCM showings, formerly worked by Anaconda Canada Exploration Ltd., occur to the southwest of the Manson Creek fault. Gold is associated with disseminated pyrite, quartz vein stockwork, quartz veining or shears within silica-carbonate altered Takla volcaniclastics and/or Slide Mountain sediments. These alteration zones trend northwesterly, sub-parallel to the Manson Creek Fault, and may be associated with subsidiary splays off the main fault system.

Table 1

Mineral Occurrences

Map	Type	MINFILE Number	Name	Economic Minerals	Geological Description
1	Asbestos	093N 115	Germansen River	Chrysotile	Asbestos is found in varying amounts in a serpentinized ultramafic body near and within the Manson fault zone.
2	Ultramafic-hosted base and precious metals	093N 116	Ah-Hoo Creek	Pentlandite, platinum, gold	Mineralization disseminated in pyrrhotite-bearing serpentinized ultramafic bodies within and near the Manson fault zone.
3	"	093N 024	Motherlode (Flagstaff)	Azurite, malachite, gold, tetrahedrite, chalcopyrite	Mineralization occurs in a shear related to the Manson fault separating a quartz-carbonate-altered andesite(?) and a pyritiferous argillite(?) of the Slide Mountain Group.
4	"	093N 025	Farrell	Tetrahedrite, chalcopyrite, gold	Mineralization occurs in three quartz veins in quartz-carbonate-altered and sheared Slide Mountain rock (andesite?) within the Manson fault zone.
5	Vein-hosted base and precious metals	093N 026	Sunset	Chalcopyrite, gold, silver	A pyrite and chalcopyrite-bearing quartz vein approximately 3 metres wide follows the plane of schistosity in quartz-rich schists near the Manson fault zone.
6	"	093N 063	Discovery Bar	Galena, sphalerite, tetrahedrite	Numerous quartz stringers are sparsely mineralized in a 3.65-metre shear zone separating quartz-carbonate-altered schists and black phyllites of the Slide Mountain Group.
7	"	093N 130	Not named	Tetrahedrite, gold	"
8	"	093N 144	Not named	Chalcopyrite, gold, galena, tetrahedrite	Numerous folded and semi-continuous pyritiferous quartz veins containing varying amounts of mineralization hosted by a well-foliated and pyritiferous quartz-rich schist.
9	"	093N 145	Not named	Chalcopyrite, tetrahedrite	Mineralization occurs in several quartz veins in Slide Mountain volcanics and sediments.
10	Disseminated/stockwork precious metals	093N 198	QCM Claims	Gold	Gold occurs disseminated or in quartz vein stockwork within quartz-carbonate-altered Takla volcaniclastics near the Manson fault zone.
11	Vein-hosted molybdenum and tungsten	93N-078	Tait Tungsten	Scheelite	Scheelite is found in quartz stringers parallel to axial plane cleavage of folds within the Manson fault zone.
12	Vein-hosted precious and base metals	93N-030	Kathy (Joy, Troy)	Galena, tetrahedrite, sphalerite ± scheelite, bornite, chalcopyrite, gold, molybdenite	Mineralization occurs in quartz veins, fault breccia zones and hydrothermally altered rocks related to the Manson fault zone. Veins are hosted in limestones, argillites, ultramafics and chlorite schists of the Slide Mountain Group.
13	(Pb ± Ag, Au)	93N-117	Lost Creek	Galena ± silver, tetrahedrite, gold	Sulphide-bearing quartz veins in limestones, argillites, greenstones and cherts of the Slide Mountain Group within the Manson fault zone.
14	"	93N-136	Not named	"	"
15	(Au, Ag, Cu, W)	93N-023	Fairview	Tetrahedrite, gold, azurite, malachite, chalcopyrite (?)	A 0.5-metre-wide quartz vein is found in a shear zone bounded by quartz-carbonate-altered ultramafics and gabbros. It is traced for approximately 50 metres.

Significant gold concentrations have been documented at the Farrell (Jim claims) and Fairview (on strike from the Slate claims) showings. These vein type occurrences have undergone several examinations and are summarized below.

The Farrell showing consists of a northerly trending quartz-carbonate vein, varying in width from 0.5 to 5.0m. Associated gold soil anomalies with values greater than 160 ppb Au extend for 400m to the southeast, along regional strike from the Farrell trench. Mineralogy of the showing comprises tetrahedrite, chalcopyrite, azurite, malachite and native gold. The host rocks are talc schist and mafic volcanics, located 10m - 20m north of a serpentinized ultramafic. Trench sampling (B.C.D.M. Assessment Report 12,362) returned the following:

Across the vein

Sample width metres	oz/t Au	Avg. oz/t Au	oz/t Ag
0 - 1	0.046		0.44
1 - 2	0.038		0.38
2 - 3	0.950		0.54
3 - 4	0.274	0.511	0.84
4 - 5	0.308		0.22

Along the vein

Sample width metres	oz/t Au	Avg. oz/t Au	oz/t Ag
0 - 1	0.596	0.459	1.02
1 - 2	0.322		0.62
2 - 3	0.028		0.08

Eight 1.0m wide samples collected in 1984 (B.C.D.M. Assessment Report 12,130 and Ferri and Melville, 1989) returned values from 0.04 oz/t Au to 1.01 oz/t Au, confirming earlier sampling. A limited diamond drill program (304.8m in 4 holes) had discouraging results and the Farrell showing was interpreted to lack vertical and/or lateral continuity (B.C.D.M. Assessment Report 12,130). The drill spacing and locations may not however, have been sufficient in order to adequately test this structure. This would have been particularly important in the case of a plunge controlled body (see Mineralization Model section). Additional soil gold anomalies have yet to be tested and a recently discovered adit, located 1.1 km southeast of the Farrell trench (pers. comm. F. Ferri, 1988), has no record of being

sampled. The potential of this showing has not been exhausted. The Fairview showing, located to the south and east of the Slate claims, was worked by Chevron in 1987 (B.C.D.M. Assessment Report 16,602). A 1.0m wide, northwest trending, quartz vein with tetrahedrite, chalcopyrite and pyrite is exposed in trenches for 50m along strike. The vein occupies a silicified and slightly carbonatized fault zone separating gabbros to the northeast from ultramafics to the southwest. One grab sample from a trench returned 0.524 oz/t Au. Armstrong and Thurber (1949) reported values to 0.28 oz/t Au and 22.3 oz/t Ag. Chevron concluded that a possible extension of the vein was located in old trenches, 850m along strike to the northwest of the main showing, and recommended further evaluation of the property. The Slate claims lie immediately northwest of the strike continuity of this structure.

Quartz stockwork mineralization has been documented on the QCM claims, worked primarily by Anaconda Canada Exploration Ltd. in 1982 and 1983 (B.C.D.M. Assessment Reports 10746 and 11627). Slide Mountain group sediments, volcanics and ultramafics and Takla Group epiclastic rocks have been affected by quartz-carbonate alteration containing the assemblage albite-muscovite-quartz-ankerite-pyrite. Soil geochemistry located two anomalous gold zones, each approximately 3000m long by 50m to 300m wide, with gold values up to 2950 ppb Au (B.C.D.M. Assessment Report 8957 and Ferri and Melville, 1989). Anaconda delineated two zones, the Flag and Central. The larger Central zone is 200m by 300m and is open to the southeast, with gold in soils ranging from less than 10 ppb Au to 4200 ppb Au. Rocks around the Central zone returned up to 1800 ppb Au and 3700 ppb Au from two consecutive 1m chip trench samples (B.C.D.M. Assessment Report 10746). Later reverse circulation drilling (B.C.D.M. Assessment Report 11627) resulted in all four holes penetrating quartz-carbonate altered Takla Group volcanic sandstones with accompanying quartz veining. One 5m section averaged 0.06 oz/t Au, with a 1.0m interval of 0.10 oz/t Au. A percussion drill hole intersection of 76.5m averaged 0.031 oz/t Au, suggesting the potential for economic bulk tonnage, low grade gold mineralization (B.C.D.M. Assessment Report 10746 and Anaconda unpublished company report). Gold values appear to coincide with pyrite concentrations within the country rock and with quartz veinlets, suggesting stockwork mineralization (Ferri and Melville, 1989).

Quartz-carbonate altered basic volcanics and ultramafics (listwaenites) are developed along the Manson Creek Fault and its associated splays. Listwaenite alteration is characterized by disseminated and/or porphyroblastic ankerite and pyrite with accompanying sericitization and silicification of the host rocks. An example of the progressive alteration of mafic volcanics is exposed approximately 3 km north of the confluence of the South Germansen and Germansen rivers. Here chloritized mafic volcanics are progressively altered to mariposite-pyrite-muscovite-quartz-carbonate schist over 20m. The carbonate rock is strongly

foliated. Although no significant mineralization has been reported from these alteration zones along the Manson Creek Fault, Armstrong and Thurber (1949) reported values to 0.01 oz/t Au and 0.69 oz/t Ag. In addition, precious metals are found in sulphide bearing quartz-carbonate veins associated with listwaenites along the fault zone (Ferri and Melville, 1989).

PROPERTY GEOLOGY

The Jim claims are predominantly underlain by a northwest trending series of variably serpentinized ultramafics and mafic volcanics. As the Manson Creek Fault zone is approached the ultramafics become increasingly carbonate altered with the local development of listwaenite (quartz-carbonate-pyrite-fuchsite) and talc schist.

As noted on the Jim 1 and 4 claims (Figure 5) and along the Germansen River, these mafics and ultramafics are in fault contact with graphic schists and meta-siltsones. In the vicinity of the Farrell showing, a northwest trending zone of mafic volcanics, within the ultramafics, hosts chalcopyrite-tetrahedrite bearing quartz veining.

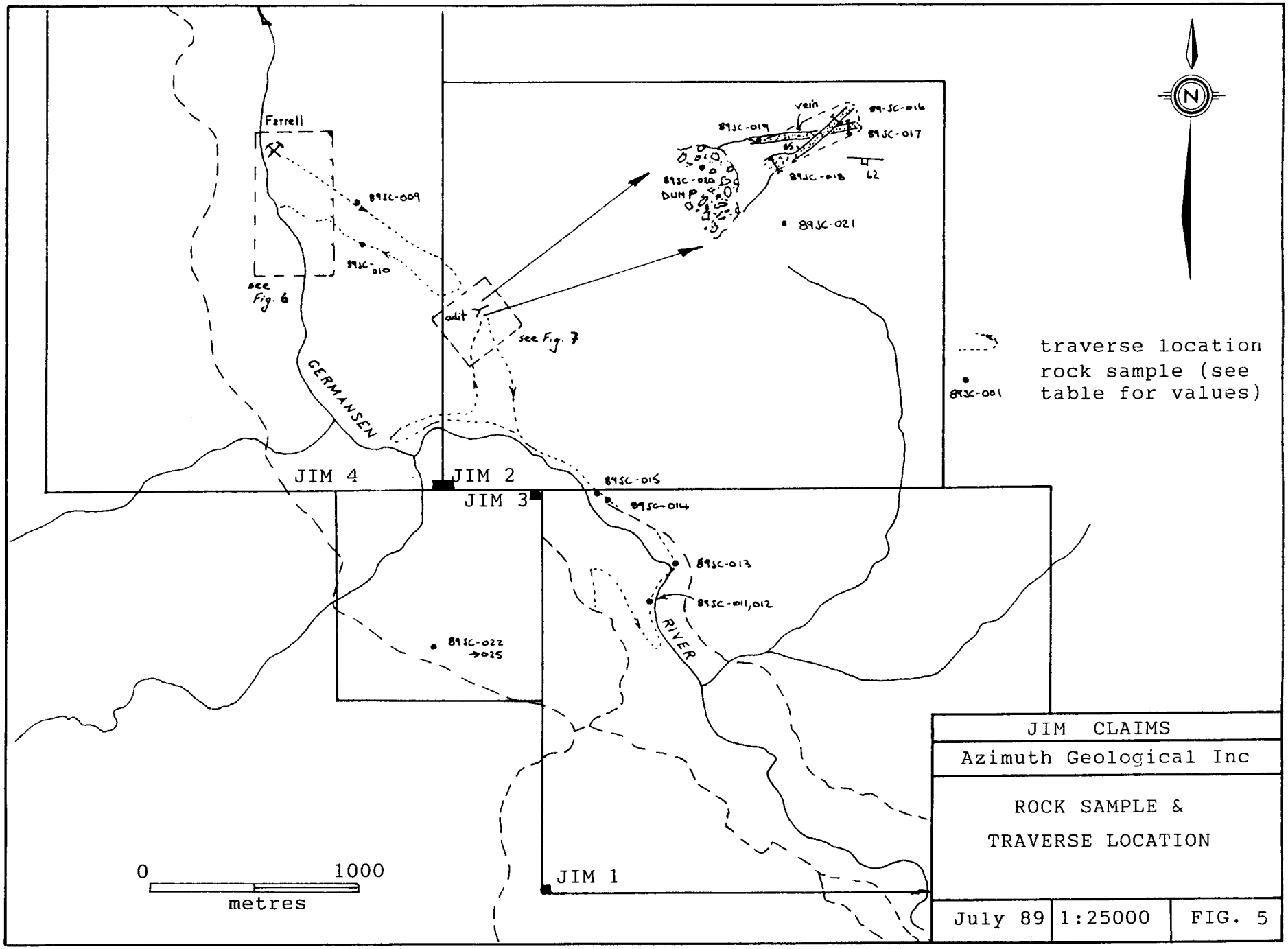
Geological mapping away from the Germansen River is restricted due to the paucity of outcrop. Exposures do indicate however, repeated belts of ultramafics, mafic volcanics and Slide Mountain Group meta-sediments.

ROCK GEOCHEMISTRY

A total of 26 samples were collected from various locations on the Jim claims. These samples are described in Table 2 and their locations are shown on Figures 5, 6 and 7.

The examination of the Farrell showing was limited, as most of the old workings were covered. One grab (89JC-003) collected from the dump of the main trench contained chalcopyrite, tetrahedrite, malachite and azurite and yielded 5038 ppb Au, 1624 ppm Cu and 41.1 ppm Ag.

Gossanous cliffs on the western bank of the Germansen River, 85m - 100m west-northwest of the Farrell showing, were examined. One grab (89JC-008) returned 19845 ppb Au and 14.3 ppm Ag from quartz-carbonate vein material hosting chalcopyrite and tetrahedrite. This sample was collected from talus interpreted to be representative of the overlying cliffs.


Farrell
89SC-009
89SC-010
see Fig. 6
adit
see Fig. 7
GERMANSEN
vein
89SC-019
89SC-016
89SC-017
89SC-020
DUMP
89SC-018
62
89SC-021
JIM 4
JIM 2
JIM 3
89SC-015
89SC-014
89SC-013
89SC-011,012
RIVER
89SC-022
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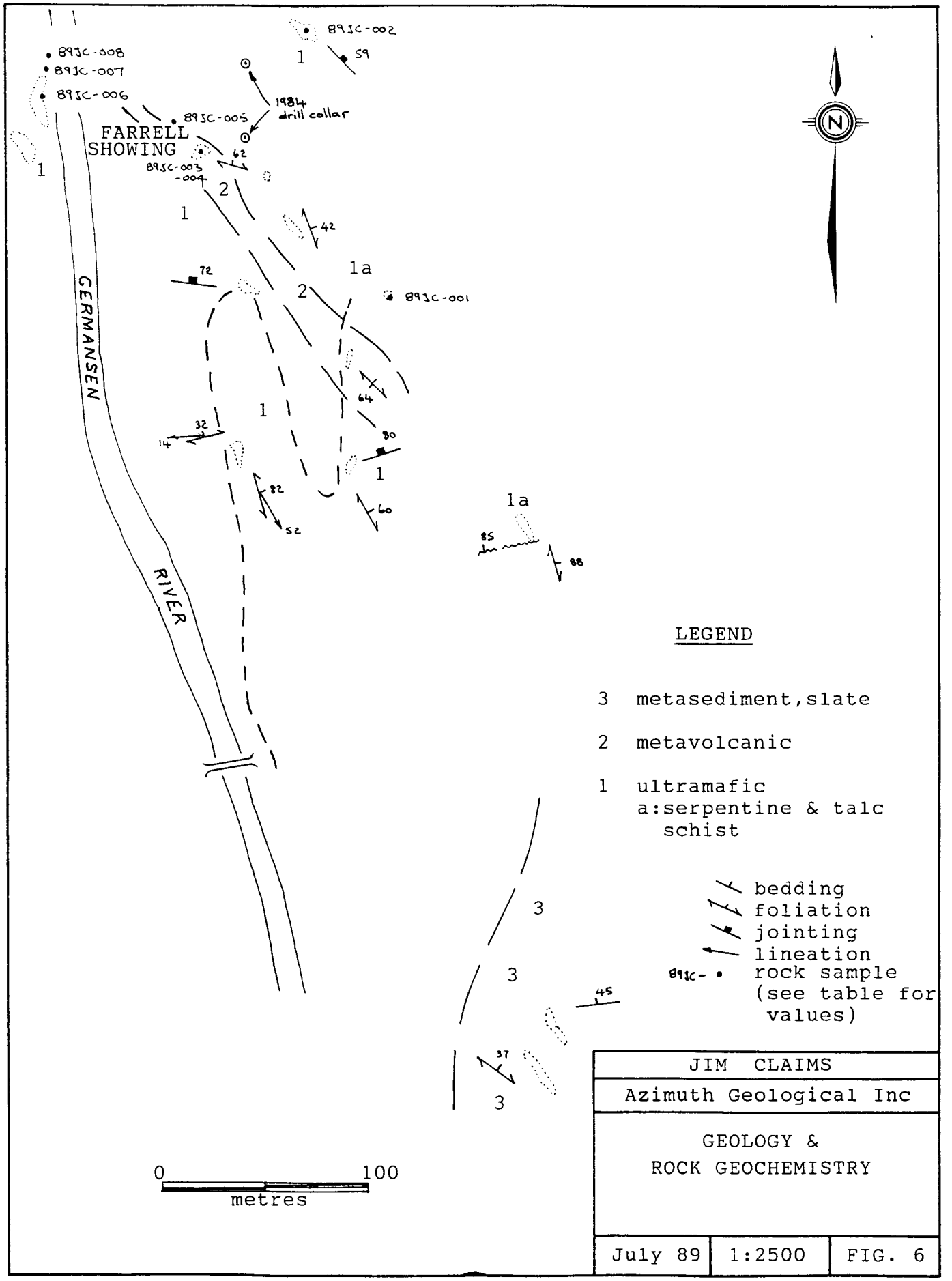
JIM 1
0
1000
metres
N
traverse location
89SC-001
rock sample (see table for values)
JIM CLAIMS
Azimuth Geological Inc
ROCK SAMPLE &
TRAVERSE LOCATION
July 89
1:25000
FIG. 5

Table 2
Rock Sample Descriptions

Sample	Description	Au ppb
89JC-001	Block, vuggy quartz carbonate veining cutting chloritized amphibolite, 10 - 15 cm, trace disseminated pyrite	1
89JC-002	Quartz - carbonate vein, no visible sulphide	3
89JC-003	Quartz - calcite vein, Farrell Showing, chalcopyrite, tetrahedrite, malachite, azurite in smokey and bull white quartz	5038
89JC-004	Quartz - calcite vein, Farrell Showing, limonitic patches, no visible sulphide	81
89JC-005	0.5m quartz vein cutting sheared ultra-mafic	192
89JC-006	Calcite and quartz veining in a 0.5m shear, cutting moderately serpentinized dunite, trace disseminated pyrite	9
89JC-007	Talus, quartz - calcite veining with chloritic inclusions, trace chalcopyrite	76
89JC-008	Talus, quartz - calcite veining, chalcopyrite and tetrahedrite	19845
89JC-009	Boulder, rust weathering, silicified and K altered rock, trace fuchsite and pyrite	11
89JC-010	Float, quartz veining, white, vuggy, limonitic coated fractures	42
89JC-011	Listwaenite, 1% disseminated pyrite	8
89JC-012	Listwaenite, 2 - 4% disseminated pyrite	21
89JC-013	Listwaenite - graphitic schist fault contact, trace sulphide	1

Sample	Description	Au ppb
89JC-014	Listwaenite, 1% disseminated pyrite	1
89JC-015	Silicified rock, vuggy quartz veining, 1% disseminated pyrite	2
89JC-016	Adit, 10 - 15cm chip, quartz vein, minor pyrite	6
89JC-017	Adit, 10cm chip, quartz vein, minor pyrite and unknown grey sulphide	357
89JC-018	Adit, silicified ultramafic, cross-cutting quartz veinlets	6
89JC-019	Adit, 30cm chip, quartz vein, limonite coated fractures	50
89JC-020	Dump, vuggy quartz veining, unknown grey sulphide as disseminations to 1%	2
89JC-021	Float, vuggy quartz to east of adit	741
89JC-022	Sub-crop, 1m quartz veining in ankeritized rock with trace pyrite	1
89JC-023	Sub-crop, chloritized and weakly carbonate altered mafic volcanic, cut by quartz - calcite veins, pyrite as patches and disseminations to 3%	8
89JC-025	Sub-crop, ankeritized rock cut by 1-2cm quartz veins, trace pyrite	3
89JC-025A	Sub-crop, chloritized volcanic, cut by 3-4cm banded quartz vein, trace chalcopyrite	12



LEGEND

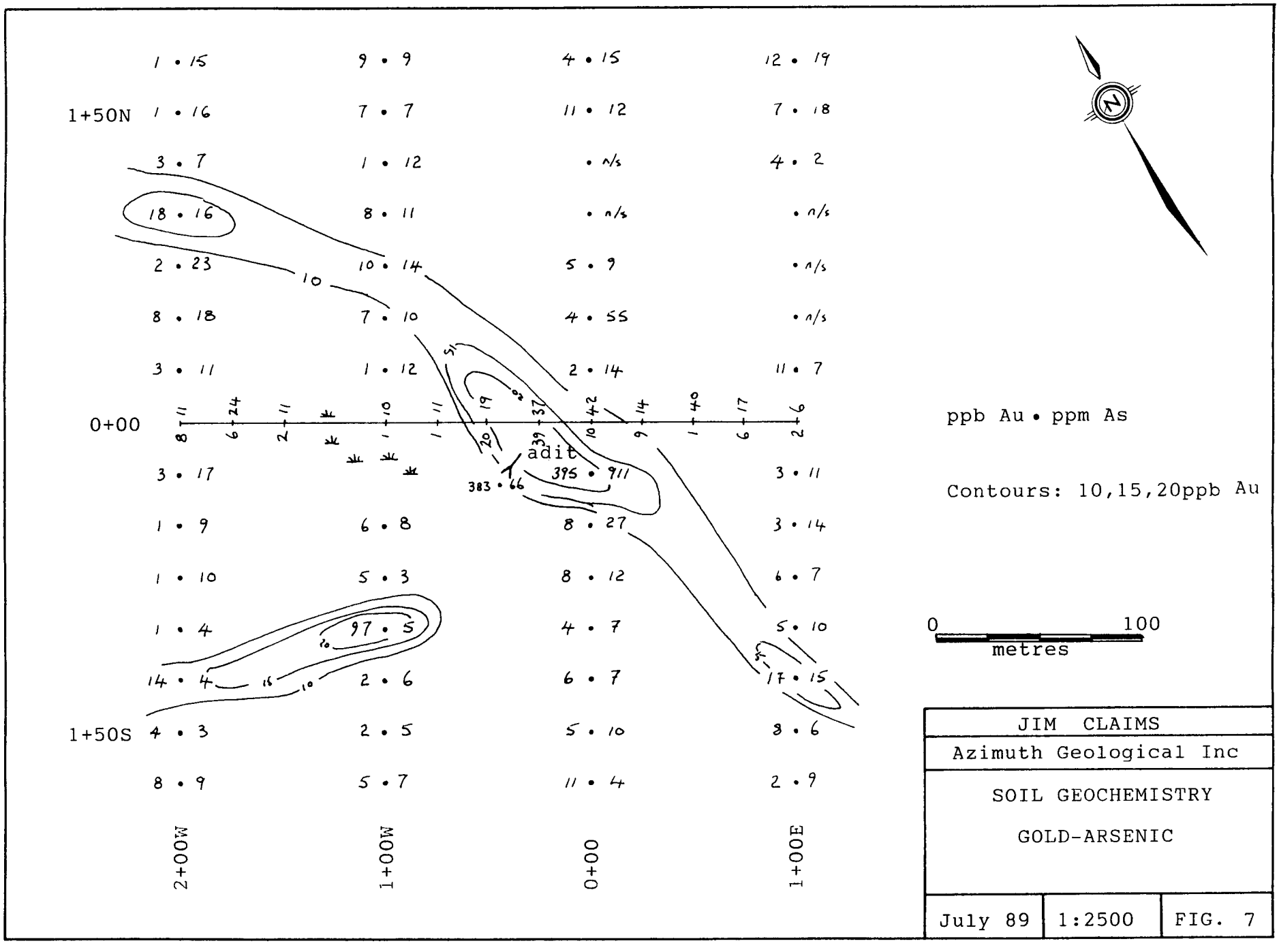
3 metasediment, slate

2 metavolcanic

1 ultramafic
a: serpentine & talc schist

bedding
foliation
jointing
lineation
89JC- • rock sample (see table for values)

JIM CLAIMS		
Azimuth Geological Inc		
GEOLOGY & ROCK GEOCHEMISTRY		
July 89	1:2500	FIG. 6


1+50N
0+00
1+50S
2+00W
1+00W
0+00
1+00E
adit
383 • 66
395 • 911
97 • 5
ppb Au • ppm As
Contours: 10,15,20ppb Au
0
100
metres
JIM CLAIMS
Azimuth Geological Inc
SOIL GEOCHEMISTRY
GOLD-ARSENIC
July 89
1:2500
FIG. 7

Quartz vein material collected several hundred metres to the southeast of the Farrell showing returned only weakly anomalous gold values to 42 ppb Au (89JC-010).

A recently discovered adit hosts quartz veining oriented at 225°/55°NW and 094°/62°S. Grab samples returned up to 357 ppb Au and 741 ppb Au (89JC-017 and 89JC-021 respectively).

Sub-crop of quartz - carbonate altered material has been recently exposed on the new logging road on the Jim 4 claim (Figure 5). Quartz veining and disseminated pyrite occur locally. Elevated copper values are associated with some of this material (89JC-022 - 025).

All rock samples collected were analyzed geochemically for gold and 30 element ICP at Acme Analytical Labs. Analytical Certificates are included in Appendix 2.

SOIL GEOCHEMISTRY

A soil grid was established in the vicinity of the newly discovered adit (Figures 5 and 7). A total of 65 soil samples were collected and analyzed geochemically for gold and 30 element ICP at Acme Analytical Labs. Analytical Certificates are included in Appendix 3.

All soil samples were collected from the B horizon. Depths ranged from 15 to 35 cm and averaged 20 cm.

A weak to moderate gold anomaly extends outward from the adit area, along the regional northwest trend. This anomaly may be significant as it corresponds with the trend of other anomalies seen in the vicinity of the Farrell showing.

CONCLUSIONS AND RECOMMENDATIONS

Lode gold mineralization has been documented in three modes of occurrence in the Manson Creek area. These include high grade quartz tensional veins, quartz stockwork hosted by extensive areas of quartz-carbonate alteration and quartz-carbonate alteration zones and listwaenites developed along the Manson Creek Fault. All are spatially related to the Manson Creek Fault and its splays. The strike slip fault zone has been traced for over 65 km along strike and varies in width from a few hundred meters to over a kilometre.

One significant high grade vein system lies within the Jim claims. The Farrell prospect has returned 0.511 oz/t over a width of 3.0m from a north trending quartz vein. Diamond drilling along this structure resulted in discouraging results, but the drill program may have been improperly designed for steeply plunging bodies, which would normally be developed in tensional environments associated with strike slip faulting. The north trending tension vein may be developed within a northwest striking shear.

Grab samples collected from the old workings confirmed high grade gold values (5038 ppb Au) to be associated with chalcopyrite and tetrahedrite bearing quartz veins. High gold values (19845 ppb Au) were found to be associated with similar vein material located across the Germansen River, 100m to the west-northwest.

Quartz float located several hundred meters southwest of the Farrell indicate the potential for additional mineralized quartz vein systems. A newly discovered adit hosting quartz veining with elevated gold values (357 ppb Au) may be one such example. A limited soil program revealed a northwest trending gold anomaly to be associated with this weakly mineralized system.

Grabs from quartz-carbonate altered sub-crop on the Jim 4 claim returned elevated copper values. Although the gold values are low, these alteration zones illustrate the potential for additional mineralized systems in areas of relatively poor exposure.

The Jim claims host one of the more important lode gold showings (Farrell) in the Manson Creek area. In addition, gold bearing samples collected during the recent program indicate mineralization may be more extensively developed along the entire Manson Creek Fault zone.

Further work is highly recommended on the Jim claims. Geological mapping and prospecting should be conducted along the length of the fault. Particular attention should be placed on float samples and recently uncovered road exposures. Detailed soil sampling should be undertaken and anomalies outlined by previous surveys should be closely examined. The Farrell showing should be re-evaluated in terms of hosting a steeply plunging vein system.

References

Armstrong, J.E. and Thurber, J.B., 1945, Manson Creek Map-Area, British Columbia, G.S.C. Paper 45-9.

Ferri, F. and Melville, D.M., 1988, Manson Creek Mapping Project, B.C.D.M. Geological Fieldwork, 1987, Paper 1988-1, pp 169-180.

Ferri, F. and Melville, D.M., 1989, Geology of the Germansen Landing Area, British Columbia, B.C.D.M. Geological Fieldwork, 1988, Paper 1989-1, pp 209-220.

B.C.D.M. Assessment Reports: 4245, 4246, 8956, 8957, 9944, 10746, 11627, 12130, 12362, 16602.

CERTIFICATE

I, GREGORY G. CROWE, of the city of Vancouver, British Columbia hereby certify that:

1) I am a consulting geologist with offices at 205 - 470 Granville St., Vancouver, B.C.

2) I hold a degree of Master of Science in Geology from the University of Calgary, November, 1091 and a Bachelor of Science in Geology from Carleton University in Ottawa, June, 1977.

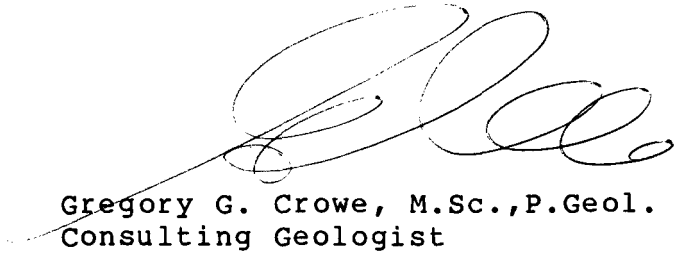
3) I am a member of the Association fo Professional Engineers, Geologists and Geophysicists of Alberta.

4) I am a fellow of the Geological association of Canada.

5) I have been employed in my profession for the past 15 years.

6) This report is based on a field examination conducted by me, between July 8 and July 13, 1989.

Dated on this 12th day of October, 1989 at Vancouver, B.C.



Gregory G. Crowe, M.Sc.,P.Geol.
Consulting Geologist

APPENDIX I

COSTS INCURRED

Costs Incurred
Jim Claims

Mob/Demob		$ 500.00
Geologist	6 @ 350/day	2,100.00
Assistant	4 @ 200/day	800.00
Food/Accom	10 @ 50/day	500.00
Truck Rental	5 @ 65/day	325.00
Fuel		150.00
Equipment		75.00
Geochemistry		
Rock	25 @ 17/sample	425.00
Soil	65 @ 15/sample	975.00
Shipping		50.00
Report		
Geologist	2 @ 350/day	700.00
Drafting		50.00
Secretary		75.00
Reproductions		50.00
	Total	**$ 6,775.00**

APPENDIX II

ROCK GEOCHEMISTRY

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 %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au** PPB
89-JC-001	1	8	7	56	.1	16	21	750	5.36	20	5	ND	1	95	1	2	2	177	2.95	.044	2	5	2.15	181	.16	7	2.56	.02	.01	1	1
89-JC-002	1	6	5	9	.1	6	2	660	.71	5	5	ND	1	265	1	2	2	22	20.78	.005	2	26	.43	17	.03	4	.39	.01	.01	1	3
89-JC-003	2	1624	2	30	41.1	9	1	192	.51	84	5	ND	1	26	3	50	2	3	2.71	.001	2	7	.06	12	.01	3	.04	.01	.01	1	5038
89-JC-004	2	20	2	2	.2	7	1	289	.30	33	5	ND	1	67	1	2	2	1	5.67	.001	2	7	.07	10	.01	5	.01	.01	.01	2	81
89-JC-005	1	31	4	5	.3	6	2	976	.56	119	5	ND	1	405	1	2	2	9	22.18	.002	2	22	.32	33	.01	5	.19	.01	.01	1	192
89-JC-006	1	17	10	34	.3	21	8	722	2.31	48	5	ND	1	306	1	2	2	30	12.81	.018	2	39	1.78	110	.01	2	.83	.01	.05	2	9
89-JC-007	1	38	2	29	.1	43	10	664	1.94	21	5	ND	1	179	1	2	2	60	11.45	.014	2	109	2.12	115	.04	3	1.00	.01	.02	1	76
89-JC-008	1	710	12	22	14.3	20	4	618	.86	66	5	ND	1	262	1	2	2	9	10.73	.003	2	18	1.01	29	.01	2	.20	.01	.01	1	19845
89-JC-009	1	18	4	13	.1	1185	54	368	3.34	39	5	ND	1	33	1	2	2	11	.62	.004	2	382	13.25	26	.01	4	.12	.01	.01	1	11
89-JC-010	1	6	2	2	.1	8	1	47	.26	5	5	ND	1	4	1	2	2	3	.13	.003	2	34	.04	8	.01	2	.02	.01	.01	1	42
89-JC-011	1	66	3	12	.1	349	22	584	1.74	12	5	ND	1	281	1	2	2	16	19.11	.017	2	236	4.68	66	.01	2	.04	.01	.01	1	8
89-JC-012	1	10	2	13	.2	905	43	268	3.41	30	5	ND	1	350	1	2	2	10	17.60	.004	2	562	6.79	54	.01	2	.05	.01	.01	1	21
89-JC-013	1	6	2	27	.1	805	42	442	3.04	51	5	ND	1	209	1	2	2	8	2.39	.005	2	201	13.82	122	.01	8	.02	.01	.01	1	1
89-JC-014	1	9	2	8	.1	1012	44	357	2.57	11	5	ND	1	29	1	2	3	8	.45	.004	2	269	15.40	386	.01	9	.02	.01	.01	1	1
89-JC-015	1	16	2	19	.1	96	13	583	2.37	28	5	ND	1	310	1	2	2	29	13.29	.003	2	56	7.32	458	.01	3	.10	.01	.01	1	2
89-JC-016	1	8	7	50	.1	60	26	772	4.15	50	5	ND	1	79	1	2	2	117	5.45	.011	2	118	2.65	213	.01	2	.28	.01	.02	1	6
89-JC-017	1	99	90	46	.1	34	20	742	3.21	30	5	ND	1	99	1	2	2	83	6.97	.003	2	55	3.14	33	.01	6	.24	.01	.01	1	357
89-JC-018	1	2	5	38	.1	45	17	602	2.99	13	5	ND	1	40	1	2	2	71	2.63	.005	2	79	3.10	272	.02	2	1.23	.01	.04	1	6
89-JC-019	1	3	65	11	.1	15	2	309	.98	26	5	ND	1	131	1	2	2	8	5.24	.007	2	5	2.62	32	.01	8	.03	.01	.01	1	50
89-JC-020	1	6	3	36	.1	28	13	738	2.74	20	5	ND	1	109	1	2	2	64	8.63	.007	2	45	3.27	61	.01	2	.37	.01	.01	1	2
89-JC-021	1	10	12	13	.1	14	3	320	1.06	7	5	ND	1	41	1	2	2	24	2.85	.003	2	8	1.42	11	.01	2	.06	.01	.01	1	741
89-JC-022	1	55	5	35	.1	10	8	576	2.80	18	5	ND	1	117	1	2	2	23	3.58	.056	5	25	1.17	13	.01	2	.53	.01	.06	1	1
89-JC-023	1	122	15	61	.1	42	29	595	5.22	33	5	ND	1	84	1	2	2	96	3.88	.050	4	110	1.75	27	.01	2	2.49	.01	.09	1	9
89-JC-025	1	88	2	57	.1	9	14	924	4.55	14	5	ND	1	291	1	2	2	40	8.87	.060	5	3	1.55	30	.01	15	.28	.01	.11	1	3
89-JC-025A	1	171	2	41	.1	7	10	822	2.21	5	5	ND	1	221	1	2	2	53	12.33	.035	3	5	1.34	11	.08	4	1.47	.01	.01	2	12
STD C/AU-R	17	58	43	133	6.5	68	30	957	3.96	44	21	7	36	49	19	14	21	60	.45	.095	39	56	.92	178	.07	35	1.87	.06	.13	12	520

/ - ASSAY REQUIRED FOR CORRECT RESULT -

APPENDIX III

SOIL GEOCHEMISTRY

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 %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	AU** PPB
JCL 2+00W 1+75N	1	38	10	71	.1	78	15	295	4.07	15	5	ND	3	16	1	2	2	85	.47	.033	11	87	.92	138	.10	3	2.33	.01	.03	1	1
JCL 2+00W 1+50N	1	35	8	95	.1	73	22	1156	4.58	16	5	ND	1	18	1	2	2	100	.50	.066	9	69	.83	373	.04	2	1.93	.01	.06	1	1
JCL 2+00W 1+25N	1	9	7	46	.1	38	14	465	2.83	7	5	ND	1	16	1	2	2	82	.54	.028	6	52	.72	252	.09	2	1.48	.01	.02	1	3
JCL 2+00W 1+00N	1	44	2	49	.1	80	17	425	4.35	16	5	ND	1	16	1	2	2	109	.58	.022	5	92	1.28	233	.11	3	2.20	.01	.03	1	18
JCL 2+00W 0+75N	1	22	2	54	.1	49	16	421	4.45	23	5	ND	1	16	1	3	2	104	.47	.024	6	71	.98	225	.09	3	1.80	.01	.04	1	2
JCL 2+00W 0+50N	1	35	9	52	.1	42	19	821	4.37	18	5	ND	1	16	1	2	2	121	.49	.024	5	53	.73	410	.06	2	1.92	.01	.05	1	8
JCL 2+00W 0+25N	1	20	2	27	.1	151	18	281	2.99	11	5	ND	1	16	1	2	2	78	.60	.011	4	128	1.57	197	.10	2	1.73	.01	.02	1	3
JCL 2+00W 0+25S	1	15	2	54	.1	121	15	339	2.67	17	5	ND	1	25	1	3	2	72	.76	.047	7	99	1.91	197	.11	4	1.73	.01	.03	1	3
JCL 2+00W 0+50S	1	29	12	69	.1	312	20	504	3.07	9	5	ND	1	21	1	3	3	67	.57	.026	7	142	2.50	174	.10	6	1.82	.01	.03	1	1
JCL 2+00W 0+75S	1	15	2	44	.1	164	24	405	3.37	10	5	ND	1	17	1	2	2	82	.61	.020	6	124	2.06	219	.12	4	1.68	.01	.02	1	1
JCL 2+00W 1+00S	1	6	7	41	.1	128	24	404	2.74	4	5	ND	1	17	1	2	2	63	.65	.049	5	102	1.32	91	.11	4	1.29	.01	.04	1	1
STD C/AU-S	19	57	39	132	6.7	67	30	1021	3.89	43	22	7	36	47	18	15	20	60	.46	.096	38	52	.91	183	.07	35	1.95	.06	.13	12	51

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 %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	AU** PPB
JCL 2+00W 1+25S	1	11	8	37	.1	122	18	245	3.17	4	5	ND	1	20	1	2	2	80	.82	.040	6	107	1.39	75	.13	4	1.86	.01	.03	1	14
JCL 2+00W 1+50S	1	8	10	43	.1	92	19	279	3.04	3	5	ND	1	21	1	2	2	79	.79	.048	6	116	1.03	123	.13	3	1.90	.01	.03	2	4
JCL 2+00W 1+75S	1	17	7	53	.1	94	18	273	3.52	9	5	ND	1	18	1	2	2	86	.66	.073	6	152	1.51	137	.13	2	2.36	.01	.03	1	9
JCL 1+00W 1+75N	1	15	16	43	.1	48	12	270	2.98	9	5	ND	1	26	1	2	2	35	.82	.034	6	73	.92	180	.12	5	1.63	.01	.05	1	9
JCL 1+00W 1+50N	1	16	8	40	.1	60	14	320	3.20	7	5	ND	1	24	1	2	2	91	.75	.030	6	78	1.00	184	.14	2	1.93	.01	.03	1	7
JCL 1+00W 1+25N	1	21	10	57	.1	80	15	315	3.66	12	5	ND	1	21	1	2	2	83	.74	.095	7	89	1.14	142	.12	3	1.86	.01	.05	1	1
JCL 1+00W 1+00N	1	60	9	64	.1	83	24	620	5.47	11	5	ND	1	31	1	5	2	117	.83	.037	6	107	1.33	165	.10	11	2.19	.01	.04	1	5
JCL 1+00W 0+75N	1	64	8	84	.1	77	26	823	5.60	14	5	ND	1	24	1	6	2	131	.65	.043	7	98	1.13	358	.06	2	2.38	.01	.04	1	10
JCL 1+00W 0+50N	1	16	6	119	.1	79	20	599	3.32	10	5	ND	1	25	1	2	2	83	.66	.046	7	78	.97	223	.11	8	1.72	.01	.04	1	7
JCL 1+00W 0+25N	1	25	4	65	.1	96	19	497	3.31	12	5	ND	1	23	1	2	2	92	.76	.053	6	97	1.57	231	.11	5	1.98	.01	.04	1	1
JCL 1+00W 0+00S	1	8	10	65	.1	72	13	324	2.66	8	5	ND	1	24	1	2	2	76	.79	.049	7	81	1.08	124	.13	2	1.56	.01	.04	1	6
JCL 1+00W 0+75S	1	5	8	70	.1	66	13	392	2.56	3	5	ND	1	25	1	2	2	72	.73	.096	7	73	.79	135	.12	3	1.62	.01	.03	1	5
JCL 1+00W 1+00S	1	19	9	75	.1	113	12	295	2.78	5	5	ND	2	26	1	2	2	80	.89	.033	8	72	1.14	117	.15	9	2.07	.01	.04	1	97
JCL 1+00W 1+25S	1	5	10	65	.1	88	14	237	2.91	6	5	ND	1	25	1	2	2	86	.92	.035	7	86	.99	101	.15	2	1.58	.01	.03	1	2
JCL 1+00W 1+50S	1	16	9	50	.1	144	19	327	3.44	5	5	ND	1	24	1	2	2	84	.90	.083	7	120	1.82	122	.14	4	2.20	.01	.03	1	2
JCL 1+00W 1+75S	1	15	7	43	.1	107	18	513	3.15	7	5	ND	1	23	1	2	2	76	.91	.050	6	104	1.15	111	.15	3	1.81	.01	.04	3	5
JCL 0+00W 1+75N	1	27	7	56	.1	74	18	404	3.94	15	5	ND	2	35	1	2	2	79	1.00	.020	9	84	1.10	274	.10	3	2.36	.01	.04	1	4
JCL 0+00W 1+50N	1	10	10	53	.1	47	14	289	3.74	12	5	ND	2	27	1	2	2	101	.69	.027	7	72	.81	247	.10	5	1.79	.01	.03	1	11
JCL 0+00W 0+75N	1	20	4	102	.1	53	22	1611	3.92	9	5	ND	1	21	1	2	2	95	.94	.088	5	86	.98	339	.13	4	1.79	.01	.07	1	5
JCL 0+00W 0+50N	1	36	16	57	.1	62	25	399	5.19	55	5	ND	1	36	1	2	2	97	.63	.019	7	83	.85	292	.04	2	2.36	.01	.04	1	4
JCL 0+00W 0+25N	1	67	14	73	.1	60	37	1443	5.37	14	5	ND	1	20	1	2	2	125	1.04	.055	3	93	1.63	780	.09	2	3.56	.01	.05	1	2
JCL 0+00W 0+25S	1	94	18	66	.1	57	36	1067	3.76	911	5	ND	1	37	1	26	2	98	.47	.031	4	58	.33	1197	.01	2	2.72	.01	.07	1	395
JCL 0+00W 0+50S	1	30	12	66	.1	87	26	966	5.58	27	5	ND	1	23	1	5	2	154	.55	.026	6	85	.94	299	.07	4	2.18	.01	.05	1	6
JCL 0+00W 0+75S	1	14	6	51	.1	131	25	452	4.19	12	5	ND	1	23	1	2	2	93	.70	.026	7	132	1.41	201	.13	6	2.00	.01	.05	1	8
JCL 0+00W 1+00S	1	11	8	57	.1	89	15	319	3.20	7	5	ND	1	27	1	2	2	80	.74	.030	8	99	1.21	161	.15	3	2.03	.01	.03	1	4
JCL 0+00W 1+25S	1	21	5	51	.1	171	19	559	3.16	7	5	ND	1	38	1	2	2	74	1.07	.031	6	115	1.53	180	.13	7	1.80	.01	.03	1	6
JCL 0+00W 1+50S	1	23	11	88	.1	91	16	413	3.24	10	5	ND	1	25	1	2	2	84	.89	.094	8	94	1.16	155	.14	4	1.85	.01	.04	1	5
JCL 0+00W 1+75S	1	16	5	60	.1	119	16	318	3.05	4	5	ND	1	23	1	2	2	76	.79	.069	7	104	1.47	86	.15	8	1.84	.01	.03	2	11
JCL 1+00E 1+75N	1	21	13	70	.1	68	16	369	3.82	19	5	ND	2	23	1	2	2	82	.68	.060	10	85	.97	151	.11	3	1.78	.01	.08	1	12
JCL 1+00E 1+50N	1	28	9	74	.1	85	19	561	3.54	18	5	ND	2	25	1	2	2	76	.72	.064	9	94	1.07	202	.12	2	1.82	.01	.05	2	7
JCL 1+00E 1+25N	2	20	6	15	.1	22	3	469	.17	2	5	ND	1	259	1	2	3	7	7.84	.073	2	9	.54	147	.01	15	.11	.01	.03	2	4
JCL 1+00E 0+25N	1	13	10	89	.1	49	16	1305	3.14	7	5	ND	1	26	1	2	2	77	.85	.094	5	77	.76	243	.12	3	1.71	.01	.04	1	11
JCL 1+00E 0+00	1	8	5	59	.1	68	19	607	3.22	6	5	ND	1	23	1	2	2	78	.72	.054	7	112	1.08	148	.17	2	1.94	.01	.06	1	2
JCL 1+00E 0+25S	1	9	9	41	.1	62	16	455	3.30	11	5	ND	1	24	1	2	3	89	.74	.017	7	83	.94	175	.15	4	1.99	.01	.06	1	3
JCL 1+00E 0+50S	1	36	13	127	.1	154	35	2270	4.84	14	5	ND	1	24	1	2	2	104	.91	.056	6	131	1.24	268	.17	4	2.78	.01	.05	1	3
JCL 1+00E 0+75S	1	23	15	119	.1	113	29	1281	5.09	7	5	ND	2	18	1	2	2	118	.67	.047	7	110	1.23	268	.16	5	3.02	.01	.07	1	6
STD C/AU-S	19	58	42	132	6.8	69	31	1027	3.94	41	21	7	37	48	19	15	21	58	.47	.096	39	55	.92	174	.07	36	1.99	.06	.13	13	51

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 %	La PPM	Cr PPM	Mg %	Ba PPM	Ti %	B PPM	Al %	Na %	K %	W PPM	Au** PPB
JCL 1+00E 1+00S	1	15	8	39	.2	76	14	331	3.17	10	5	ND	1	20	1	2	2	91	.56	.016	7	92	1.13	210	.10	2	1.70	.01	.03	1	5
JCL 1+00E 1+25S	1	19	6	45	.4	350	59	1483	4.62	15	5	ND	1	21	1	5	2	62	.54	.038	5	259	3.96	313	.06	12	1.71	.01	.05	2	17
JCL 1+00E 1+50S	1	8	5	49	.2	98	16	366	2.85	6	5	ND	1	22	1	2	2	72	.57	.028	8	100	1.52	180	.12	3	1.70	.01	.03	1	8
JCL 1+00E 1+75S	1	56	6	23	.4	208	12	758	1.91	9	5	ND	1	132	1	2	2	36	3.14	.064	5	76	.97	297	.04	4	1.06	.01	.02	1	2
JC BL 2+00W	1	29	8	39	.1	230	23	374	3.47	11	5	ND	1	25	1	2	2	89	.72	.017	6	143	2.02	229	.13	4	2.25	.01	.02	1	8
JC BL 1+75W	1	32	8	44	.2	201	25	297	3.49	24	5	ND	2	21	1	3	2	84	.54	.024	7	158	2.14	248	.11	5	1.95	.01	.03	1	6
JC BL 1+50W	1	28	7	36	.1	173	24	328	3.09	11	5	ND	1	23	1	2	2	77	.77	.015	5	178	2.72	454	.13	5	2.22	.01	.01	1	2
JC BL 1+00W	1	16	5	78	.1	121	19	368	3.01	10	5	ND	1	26	1	2	2	82	.73	.019	7	102	1.35	195	.13	3	1.90	.01	.04	1	1
JC BL 0+75W	1	18	6	56	.1	91	20	475	3.46	11	5	ND	2	24	1	3	2	91	.70	.028	7	108	1.64	232	.13	3	2.03	.01	.04	1	1
JC BL 0+50W	1	66	9	56	.3	112	28	535	5.13	19	5	ND	2	22	1	5	2	115	.61	.022	6	106	1.44	304	.08	2	2.25	.01	.04	1	20
JC BL 0+25W	1	50	19	89	.3	64	28	1919	6.48	37	5	ND	2	24	1	10	2	165	.70	.047	5	72	.70	494	.05	2	2.02	.01	.08	1	39
JC BL 0+00	1	60	11	68	.5	67	26	1401	5.93	42	5	ND	1	26	1	2	2	103	.53	.037	6	69	1.02	499	.05	3	2.72	.01	.06	1	10
JC BL 0+25E	1	18	3	51	.3	52	18	513	4.10	14	5	ND	1	26	1	2	2	105	.63	.015	6	84	1.32	247	.10	2	2.59	.01	.03	1	9
JC BL 0+50E	1	47	8	79	.4	91	28	1826	5.66	40	5	ND	2	32	1	3	2	104	.65	.044	7	148	1.51	311	.06	2	3.01	.01	.06	1	1
JC BL 0+75E	1	19	9	54	.1	64	20	664	4.19	17	5	ND	2	23	1	2	2	109	.63	.020	7	90	1.21	213	.15	2	2.48	.01	.05	1	6
JCL ADIT	1	69	34	89	.3	90	36	1310	9.21	66	5	ND	2	18	1	11	2	196	.48	.029	5	131	1.19	241	.03	2	2.16	.01	.05	1	383
STD C/AU-S	18	57	43	132	7.1	67	29	929	3.79	41	23	7	36	47	17	15	20	58	.44	.093	38	55	.95	175	.07	33	1.89	.06	.14	12	53