

GEOLOGICAL, GEOCHEMICAL AND GEOPHYSICAL REPORT

on the

MONTE CHRISTO AND L FRACTION REVERTED CROWN GRANTS

and

MONTE AND CAP CLAIMS

Beaverdell Area
Greenwood Mining Division

82E-6E

(49°16' N. Lat., 119°00' W. Long.)

for

GRANT F. CROOKER
Box 404
Keremeos, B.C.
VOX 1N0
(Owner and Operator)

by

GRANT F. CROOKER, B.Sc., P.Geo.,
Consulting Geologist

**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

March 1992

22,282

LOG NO: 92 05 05 RD.
ACTION:
FILE NO:

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SUMMARY AND RECOMMENDATIONS

The Monte Christo property is located 25 kilometers south of Beaverdell and 22 kilometers north of Rock Creek in southern British Columbia. It is owned by Grant Crooker of Keremeos, B.C. and consists of two reverted Crown Grants, one modified grid claim and one two post claim covering twelve units. The property is located in the Greenwood Mining Division.

Mining activity has taken place in the area since 1859 when a placer gold rush occurred in the Rock Creek area. Hard rock mining began in the area in the late 1880's and such famous camps as Phoenix, Greenwood, Camp McKinney and Beaverdell were developed. Exploration has been carried out for both precious and base metals.

The previous soil and rock geochemical sampling by Allen (1981) on the Monte Christo Group gave positive results. A number of two or three station, gold, copper, lead and zinc soil geochemical anomalies were outlined. The base metal anomalies are significant in that the highest gold values from rock sampling at the workings are associated with the highest concentrations of copper, lead and zinc. The gold soil geochemical anomaly gave values of 752 and 868 ppb, which are highly anomalous.

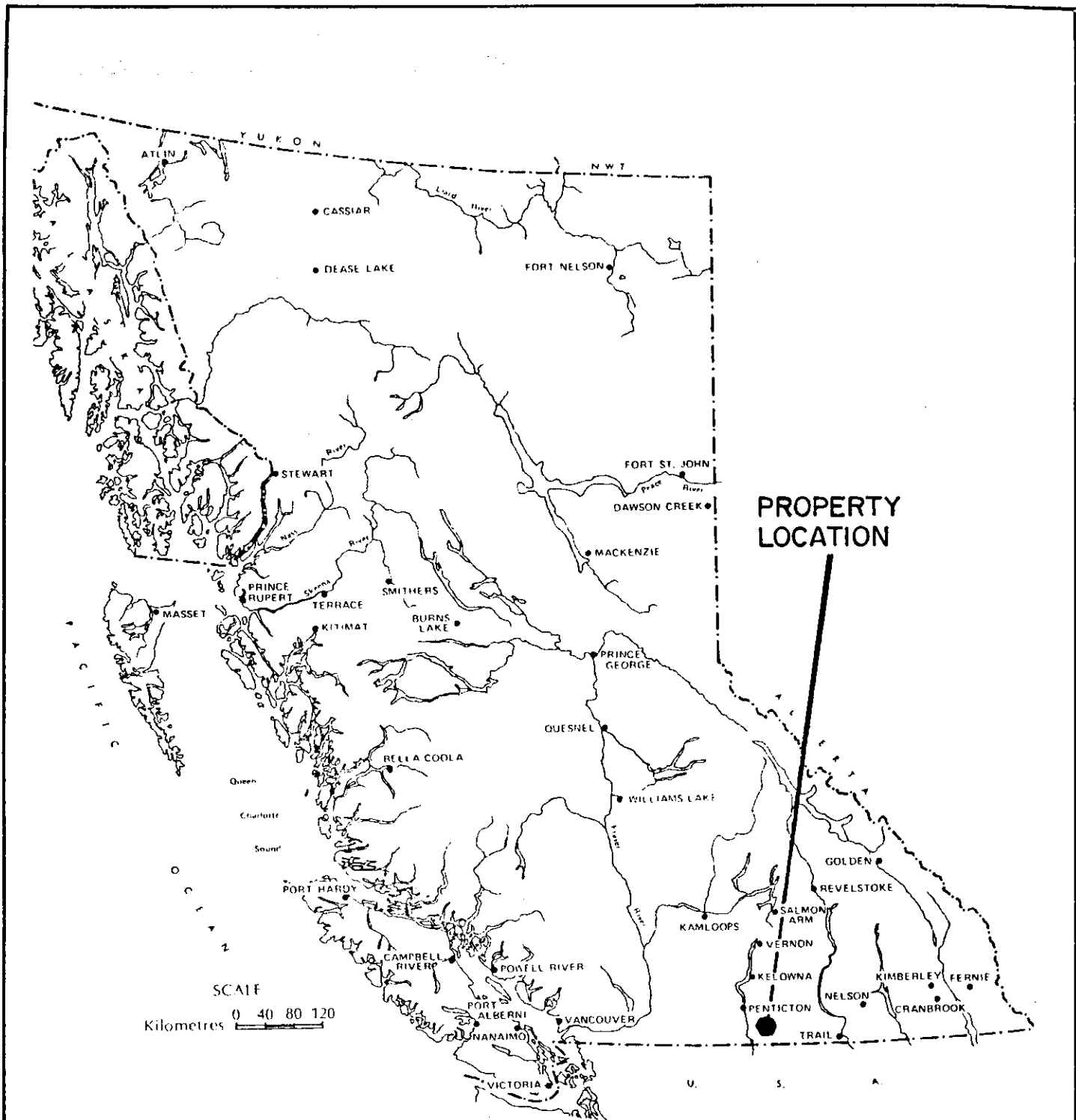
During 1990 a limited amount of exploration was carried out around the Monte Christo Workings. This consisted of prospecting, surveying, mapping, and soil and rock sampling. Sampling of the mineralized zones gave several high gold values (90M-1, 0.490 oz/ton gold, 90M-7 1.867 oz/ton gold). These samples were taken from an easterly trending vein exposed at the main adit. This narrow (0.10-0.20 meters) high grade vein occurs within a 0.50 to 1.0 meter wide zone of shearing and alteration but unfortunately has been faulted off within a 2.5 meter distance.

The 1991-1992 exploration program on the Monte Christo group consisted of establishing a grid, conducting a VLF-EM survey and a small soil geochemical survey and prospecting.

The VLF-EM survey did not delineate any conductors associated with the old workings or showings.

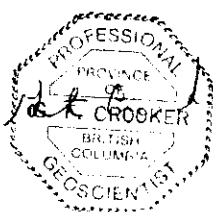
The detailed soil geochemical survey carried out around the two highly anomalous gold soil samples from 1981 gave mixed results. The 1992 values were significantly lower than the 1981 values, but four gold values were between 20 and 72 ppb.

The prospecting located several old workings and two showings. Quartz veins and silicified wall rock containing pyrite and lesser galena gave anomalous gold values.



**PROPERTY
LOCATION**

SCALE
Kilometres 0 40 80 120



GRANT F. CROCKER	
MONTE CRISTO GROUP	
LOCATION MAP	
N.T.S. 82 E- 6E	GREENWOOD M.D., B.C.
SCALE : AS SHOWN	DATE : MARCH 1992
DRAWN BY: G.C.	FIGURE Nº. 1


At the Cap Workings, a 15 to 50 centimeter wide quartz vein is exposed in two trenches over a length of 20 meters. The vein strikes approximately 030° and dips from 50° east to 50° west. Surface sampling of the quartz vein gave low gold values but dump samples from the caved adit gave anomalous gold values. Two samples of chlorite altered, silicified, pyrite and galena bearing wall rock gave 2080 and 6090 ppb (0.059 and 0.174 oz per ton) gold. One sample of rusty, pyrite and galena bearing quartz vein gave 4620 ppb (0.174 oz per ton) gold.

One dump sample taken at an old trench located at 10120E & 10250N gave a highly anomalous gold value of 33150 ppb (1.152 oz per ton) and an anomalous silver value of 116.3 ppm.

Recommendations are as follows:

- 1) The grid should be extended on the property to provide control for geophysical surveys.
- 2) Prospecting should be continued over the property to locate any additional showings or old workings.
- 3) The old workings and showings found by prospecting during this program should be trenched by hand or machine to properly evaluate them.

Respectively submitted,


Grant Crooker, B.Sc., P.Geo.,
Consulting Geologist

1.0 INTRODUCTION

1.1 GENERAL

Field work was carried out on the Monte Christo property from April 26, 1991 to March 26, 1992, by Grant Crooker, geologist, and Lee Mollison, field assistant.

The program consisted of establishing a grid over the southern portion of the property and carrying out a VLF-EM survey and prospecting. Surveying and rock sampling were also carried out around the Cap Workings.

1.2 LOCATION AND ACCESS

The property (Figure 1) is located approximately 25 kilometers south of Beaverdell and 22 kilometers north of Rock Creek in the Boundary area of southern British Columbia. The property lies at 49°15" north latitude and 119°00'30" west longitude (NTS 82E-6E).

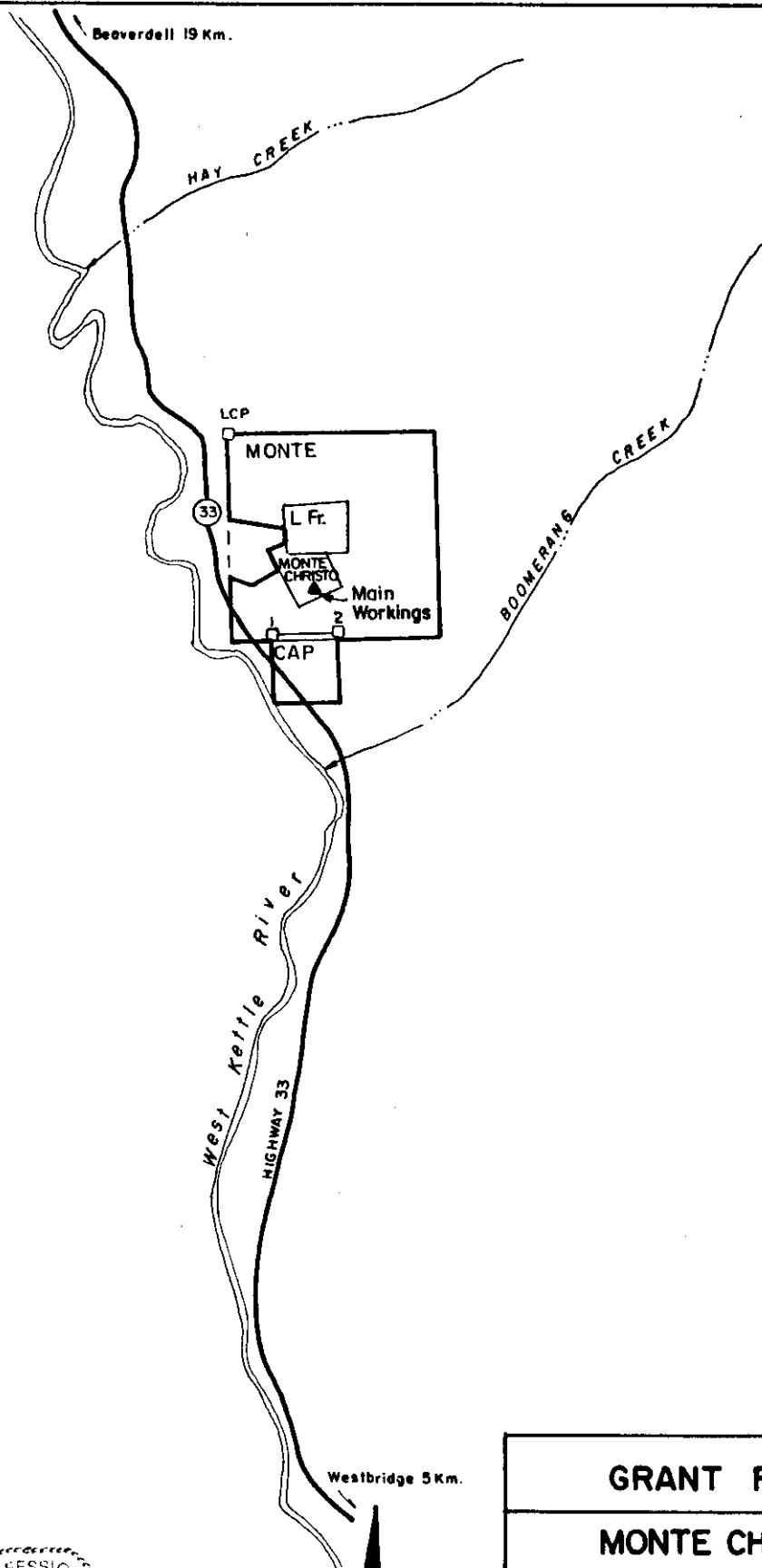
Access to the property is via Highway 33 which links Beaverdell and Rock Creek. The highway passes along the western boundary of the property approximately where the northern end of the secondary road passing through Rhone joins Highway 33.

A logging road accessing Hay Creek passes along the northern claim boundary of the Monte claim and gives access to the eastern portion of the property.

1.3 PHYSIOGRAPHY

The property is located in the Okanagan Highlands of southern British Columbia with elevation varying from 640 to 1280 meters above sea level. Topography is generally steep with a few level spots along Highway 33. Precipitous cliffs and talus slides occur at many locations on the property.

No major drainages flow through the property although the West Kettle River lies immediately east of Highway 33 near the western claim boundary.



GRANT F. CROOKER	
MONTE CHRISTO GROUP	
CLAIM MAP	
N.T.S. 82 E- 6E	GREENWOOD M.D., B.C.
SCALE : 1:50,000	DATE : MARCH 1992
DRAWN BY: G.C.	FIGURE Nº. 2

1.4 PROPERTY AND CLAIM STATUS

The Monte Christo and L Fraction reverted Crown Grants, and Monte and Cap claims (Figure 2) are owned by Grant Crooker of Box 404, Keremeos, B.C., VOX 1N0.

The claims cover 12 units and are located in the Greenwood Mining Division.

Claim	Units	Mining Division	Tenure No.	Record Date	Expiry Date
Monte Christo	1	Greenwood	215526	03/15/90	03/15/98
L Fraction	1	Greenwood	215527	03/15/90	03/15/98
Monte	9	Greenwood	216221	04/04/91	04/04/95*
Cap	1	Greenwood	216255	04/21/91	04/21/98*

*Upon acceptance of this report.

1.5 AREA AND PROPERTY HISTORY

The property is located in the Boundary District of southern British Columbia which has a very long and rich history of mining activity. Placer gold mining is reported to have started in the Rock Creek area in 1859 with the discovery of gold in Rock Creek and Boundary Creek. Production of gold from these and several other creeks in the area is believed to be between \$ 350,000 and \$ 400,000.

The Boundary district also has many famous mining camps including Camp McKinney, Greenwood, Phoenix and Beaverdell. Mining in these areas started in the late 1880's and continues to this day. Gold, silver, copper, lead and zinc have all been produced from the area.

The Highland-Bell Mine at Beaverdell has been in production from 1913 to 1990 when the mine closure was announced due to low silver prices. Production figures to 1984 included 15,555 ounces of gold and 32,457,348 ounces of silver from 965,864 tons of ore.

Three mineral occurrences are documented in the B.C. Ministry of Energy, Mines and Petroleum Resources Minfile in the vicinity of the Monte Christo Group. These are 82E-SW-061 (Enterprise, Theresa, Au), 82E-SW-062 (Colby, Ag, Au) and 82E-SW-063 (Boomerang, WS, Ag, Au). The three occurrences are each approximately 3 kilometers from the Monte Christo Group and are southwest, west and south respectively. All the occurrences appear to be underlain by granite and granodiorite and contain quartz veins varying in width from a few inches to 4 feet. Pyrite, galena and possibly other sulphides with significant gold and silver values occur within the quartz veins.

The Ohio reverted Crown Grant is located adjacent to the Monte Christo Group on the west. The Ohio is described in the B.C.M.M. Annual Reports for 1901, 1923 and 1929. A shaft, several winzes and several adits are reported to follow a north trending quartz vein up to 14 inches wide containing pyrite and chalcopyrite. Sampling by Allen (1980) gave low gold values in the range of 0.01 to 0.02 ounces per ton.

Several old workings are located on the Monte Christo reverted Crown Grant (Figure 2). The main adit is reported to be 19 meters long and several trenches occur near the adit. Sampling by Allen (1981) indicated up to 1.71 ounces per ton gold and 4.732 ounces per ton silver over 10 centimeters of quartz vein. Pyrite, chalcopyrite and bornite were reported in the quartz. Several other samples taken near the main adit also gave high gold values over narrow widths. Sampling of other workings gave low gold values in the order of 0.01 ounces per ton.

A soil geochemical survey was also carried out by Allen in 1981 with lines 50 meters apart and samples taken at 50 meter intervals along the lines. This survey outlined a number of small geochemical anomalies within and along the south boundary of the Monte Christo. They are two or three station anomalies containing copper, lead or zinc. Several of the anomalies are coincidental with two or all three elements. A two station gold anomaly occurs 200 meters south of the Monte Christo Workings. This anomaly appears to be significant as the values are 752 and 868 ppb Au.

During 1990 the present owner carried out a limited program of rock and soil geochemical sampling around the Monte Christo Workings. The rock sampling confirmed the high gold values within the vein system but the soil sampling did not indicate any extensions of the known vein system.

2.0 EXPLORATION PROCEDURE

The 1991-1992 exploration program consisted of establishing a grid over the southern portion of the property and carrying out a VLF-EM surveying, prospecting and a limited amount of soil geochemical sampling. The Cap showing was also surveyed, mapped and sampled.

GRID PARAMETERS

- baseline direction E-W along 10000N, picketed
- survey lines perpendicular to baseline
- survey station spacing 25 meters, slope corrected
- lines 10000E through 10400E
- declination $21\frac{1}{2}^{\circ}$
- survey total - 5.325 kilometers

GEOCHEMICAL SURVEY PARAMETERS

- survey line spacing 25 meters
- survey sample spacing 25 meters
- survey totals - 15 soil samples
 - 10 rock samples
- soil samples analyzed for Au
- rock samples analyzed for Au and 30 or 31 element ICP
- soil sample depth 5 to 15 centimeters
- soil samples taken from brown B horizon or C horizon in areas of talus

The 15 soil and 7 rock samples were sent to Min-En Labs, 705 west 15th Street, North Vancouver, B.C. for geochemical analysis. Laboratory techniques for geochemical analysis consists of preparing samples by drying at 95° C, and sieving to minus 80 mesh or grinding to minus 150 mesh. A gold analysis (aqua-regia digestion, atomic adsorption finish) was then carried out on the soil and rock samples with a 31 element ICP also carried out on the rock samples.

Three rock samples were sent to ACME Analytical Laboratories Ltd., 852 E. Hastings Street, Vancouver B.C. for geochemical analysis. Laboratory technique for geochemical analysis consists of preparing samples by drying at 60° C, and grinding to minus 100 mesh. A 30 element ICP analysis and gold (acid leach/AA finish) analysis were then carried out on the samples.

The rock and soil sample results were plotted on figures 3 and 4.

GEOPHYSICAL SURVEY PARAMETERS**VLF-EM SURVEY**

- survey line separation 100 meters
- survey station spacing 25 meters
- survey total - 4.925 kilometers
- transmitting station - Seattle - 24.8 KHz
- direction faced - northerly
- instrument - Geonics EM-16
- in phase (dip angle) and ou-of-phase (quadrature)
- components measured in percent at each station

The VLF-EM profiles and conductors were plotted on figure 5 and the data is listed in appendix IV.

3.0 GEOLOGY AND MINERALIZATION

3.1 GEOLOGY

The area of the Monte Christo group is mainly underlain by Middle Jurassic intrusive rocks of the Nelson Plutonic Group and Cretaceous and/or Jurassic intrusive rocks of the Okanagan Batholith.

Nelson Plutonic rocks are generally massive, moderately foliated, medium grey weathering, medium to coarse grained, equigranular, hornblende-biotite granodiorite, quartz diorite and granite. Okanagan Batholith rocks are massive, light grey weathering, medium to coarse grained, equigranular to porphyritic, unfoliated to weakly foliated, fresh biotite granodiorite and granite.

Portions of the area around the Monte Christo Group are also underlain by younger sedimentary and volcanic rocks. These vary from conglomerate and breccia to porphyritic andesite and are probably part of the Eocene Kettle River Formation.

3.2 MINERALIZATION

During the 1991-1992 program prospecting was carried out over the grid established on the Monte Christo Group (figure 3). A number of showings and old workings were found and ten rock samples were taken. Table I below gives the results of the rock sampling.

Sample No.	Width (m)	Au ppb	Ag ppm	Pb ppm	Description
91M-1	grab	2080	9.4	8718	alt wall rock, 4% py
91M-2	grab	4620	7.7	3390	qtz vein, 2% py, tr ga
91M-3	grab	6090	6.7	910	sil wall rock, 2% py, ga
91M-4	grab	56	1.0	107	qtz vein, rusty, tr py
91M-5	grab	134	0.4	22	granite, rusty, sil,
91M-6	grab	33150	116.3	24568	white qtz, 10% py, 2% ga
91M-7	grab	747	3.9	318	sil wall rock, 20% py, ga
91M-8	.40	1876	7.1	3334	qtz vein, tr py & ga
91M-9	.40	110	1.1	92	qtz vein, rusty
91M-10	.35	84	1.2	85	qtz vein

Table I - Rock Sampling, Monte Christo Group

Prospecting in March of 1992 located two small showings (figure 3). The first showing is located at 10400E & 10414N and consists of a one meter square outcrop of quartz vein hosted by a fine grained, silicious green granite. The quartz contains rusty fractures, sericite and minor boxworks and pyrite. No attitude or dimensions

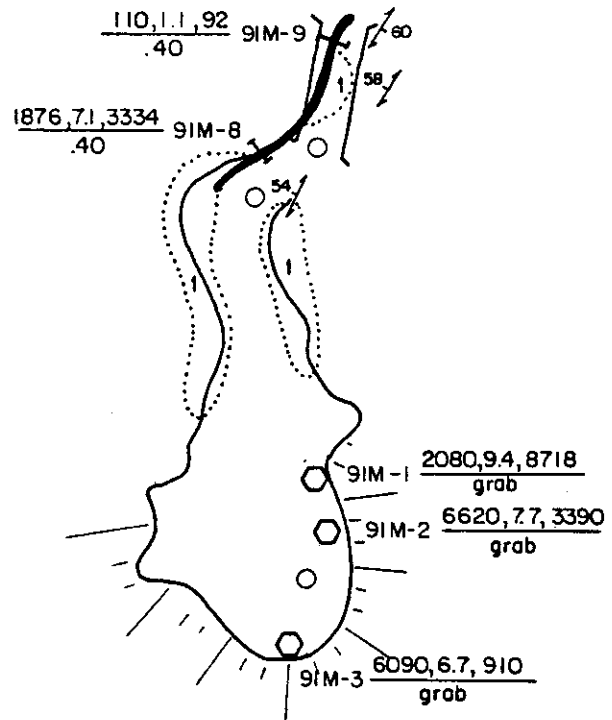
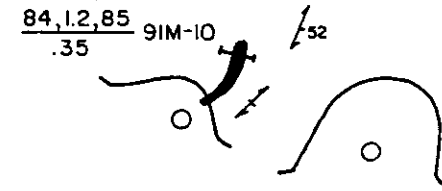
10,300 E

10,350 E

B.L. 10,000 N

9975 N

9950 N



LEGEND

- Granite
- Survey point
- Grid station
- Dump
- Trench
- Quartz vein
- Strike & dip of quartz vein
- Chip sample
- Bedrock sample
- | | | | |
|-------|-------------|------------|------------------------|
| 91M-9 | 110, 11, 92 | Sample No. | Au ppb, Ag ppm, Pb ppm |
| | 40 | | Width, m |
- py Pyrite
- ga Galena



GRANT F. CROOKER	
MONTE CHRISTO GROUP	
GEOLOGY	
CAP WORKINGS	
NTS. 82 E-6E	GREENWOOD M.D., B.C.
SCALE : 1:250	DATE : MARCH 1992
DRAWN BY : G.C.	FIGURE NO. 4

could be obtained on the vein due to talus material covering the area. A grab sample (91M-4) of the material was taken and it returned low precious and base metal values.

The second showing is located at 10200E & 10300N and consists of several 20 to 40 centimeter wide zones of rusty, silicified and sericite altered granite. Minor boxworks and limonite with pyrite occur within the zones which are of unknown dimensions. A grab sample (91M-5) of the material gave a weakly anomalous gold value of 134 ppb.

Prospecting in April of 1991 found the Cap Workings (figure 4) which consist of a number of small hand trenches and an adit. The workings are located at approximately 10320E & 9975N. A quartz vein varying from 15 to 50 centimeters wide is exposed above the portal of the adit, in a trench (A) above the adit and at a trench (B) 17 meters north of trench A. A fine grained, silicious green granite again hosts the quartz vein.

Above the adit the vein is 25 to 40 centimeters wide, strikes 027° and dips 54° west. Sample 91M-8 gave weakly anomalous gold and silver values of 1876 ppb (0.068 oz per ton) and 7.1 ppm respectively. Above and below the location of sample 91M-8 the quartz vein thins and steepens. Up to 5% pyrite and 1% galena occur within 2 to 5 centimeters of the hanging wall of the vein, with the remainder of the vein showing no sulphides.

The quartz vein is exposed for 2.5 meters at trench A. Here the vein varies from 15 to 40 centimeters wide and shows a very interesting change in attitude. It initially strikes 033° and dips 58° west, then shows a slight left lateral movement and "rolls over" to strike 036° and dip 60° east. The quartz vein at this point appears to be barren and sample 91M-9 gave low metal values.

At trench B the quartz vein is exposed for 1.5 meters and varies from 15 to 50 centimeters wide. It again shows an interesting change in attitude, initially striking 050° vertical, then changing to striking 020° and dipping 52° east. The quartz vein again appears barren and sample 91M-10 gave low metal values.

The portal of the adit is sloughed in so no information is available from within the adit. However three samples of dump material were taken which gave very interesting results. Samples 91M-1 and 91M-3 were strongly chlorite altered, moderately silicified wall rocks containing up to 5% pyrite and 1% galena. These samples gave highly anomalous gold values of 2080 and 6090 ppb (0.059 and 0.174 oz per ton) respectively. Sample 91M-2 was rusty, fractured white vein quartz with boxworks and 2% pyrite and ½% galena. This sample gave an anomalous gold value of 4620 ppb (0.132 oz per ton).

A second group of old workings is located at 10120E & 10250N. These workings consist of a 10 meter long, east-west trench or sloughed adit with several smaller trenches 10 meters east and 10 meters vertically above it. The smaller trenches show a 5 to 20 centimeter wide quartz vein and a 20 centimeter wide silicified zone. The quartz vein contains up to 2% pyrite and strikes 029° with a 50° dip to the west. The silicified zone contains traces of pyrite and strikes 007° with a 30° dip to the west. The rocks to the east of the silicified zone are weakly sheared over several meters.

No mineralization or outcrop is exposed at the larger trench although a considerable amount of mineralized quartz and wall rock were found on the dump. A sample (91M-6) of the quartz vein containing up to 20% boxworks, 10% pyrite and 3% galena gave highly anomalous gold and silver values of 33150 ppb (1.152 oz per ton) and 116.3 ppm respectively. A sample (91M-7) of weakly silicified, chlorite altered, pyritic wall rock gave a weakly anomalous gold value of 1876 ppb (0.068 oz per ton) gold.

4.0 GEOCHEMISTRY

4.1 SOIL SAMPLING

Fifteen soil samples were collected from three short lines around two sample sites surveyed by Allen in 1981 which gave 752 and 868 ppb gold. The lines were 25 meters apart with samples taken every 25 meters along the lines.

The samples were analyzed for gold and values ranged from 11 to 72 ppb. The 1992 soil sampling did not reproduce the high gold values of Allen in 1981 but four values were above 20 ppb and one was above 70 ppb.

The 1992 soil sampling was inconclusive in that it did not confirm the high values of Allen in 1981 but did give some weakly anomalous gold values in the range of 20 to 72 ppb.

5.0 GEOPHYSICS

5.1 VLF-EM SURVEY

The VLF-EM survey was carried out on lines 10000E through 10400E. The VLF-EM data exhibit short wavelengths and in-phase anomaly amplitude is weak. As the lines were ran along the steep hillside and not up and down them, the influence by topography is slight. No cultural effects were delineated by the survey.

The conductors delineated by the survey are weak and do not form any large conductor systems. They are east-west trending and are not associated with any of the structures on the property containing the base metal and precious metal values. No causes are evident at this time for any of the conductors.

6.0 CONCLUSIONS AND RECOMMENDATIONS

The 1991-1992 exploration program on the Monte Christo group consisted of establishing a grid, conducting a VLF-EM survey and a small soil geochemical survey and prospecting.

The VLF-EM survey did not delineate any conductors associated with the old workings or showings.

The detailed soil geochemical survey carried out around the two highly anomalous gold soil samples from 1981 gave mixed results. The 1992 values were significantly lower than the 1981 values, but four gold values were between 20 and 72 ppb.

The prospecting located several old workings and two showings. Quartz veins and silicified wall rock containing pyrite and lesser galena gave anomalous gold values.

At the Cap Workings, a 15 to 50 centimeter wide quartz vein is exposed in two trenches over a length of 20 meters. The vein strikes approximately 030° and dips from 50° east to 50° west. Surface sampling of the quartz vein gave low gold values but dump samples from the caved adit gave anomalous gold values. Two samples of chlorite altered, silicified, pyrite and galena bearing wall rock gave 2080 and 6090 ppb (0.059 and 0.174 oz per ton) gold. One sample of rusty, pyrite and galena bearing quartz vein gave 4620 ppb (0.174 oz per ton) gold.

One dump sample taken at an old trench located at 10120E & 10250N gave a highly anomalous gold value of 33150 ppb (1.152 oz per ton) and an anomalous silver value of 116.3 ppm.

Recommendations are as follows:

- 1) The grid should be extended on the property to provide control for geophysical surveys.
- 2) Prospecting should be continued over the property to locate any additional showings or old workings.
- 3) The old workings and showings found by prospecting during this program should be trenched by hand or machine to properly evaluate them.

Respectively submitted,


Grant Crooker, B.Sc., P. Geo.,
Consulting Geologist

7.0 REFERENCES

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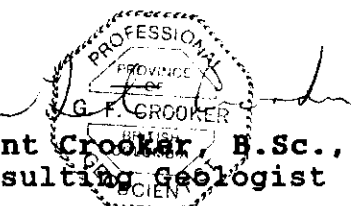
Tempelman-Kluit, D.J., (1989): Geological Map with Mineral Occurrences, Fossil Localities, Radiometric Ages and Gravity Field for Penticton Map Area (NTS 82 E), Southern British Columbia. GSC Open File 1969

8.0 CERTIFICATE OF QUALIFICATIONS

I, Grant F. Crooker, of Upper Bench Road, Keremeos, in the Province of British Columbia, hereby certify as follows:

1. That I graduated from the University of British Columbia in 1972 with a Bachelor of Science Degree in Geology.
2. That I have prospected and actively pursued geology prior to my graduation and have practised my profession since 1972.
3. That I am a member of the Canadian Institute of Mining and Metallurgy.
4. That I am a Fellow of the Geological Association of Canada.
5. That I am a Professional Geoscientist registered with the Association of Professional Engineers and Geoscientists of the Province of British Columbia.
6. That I am the owner of the Monte Christo, L Fraction, Cap and Monte mineral claims.

Dated this 30th day of April, 1992, at Keremeos, in the Province of British Columbia.


Grant Crooker, B.Sc., P.Geo.,
Consulting Geologist

Appendix I

CERTIFICATES OF ANALYSIS



GEOCHEMICAL ANALYSIS CERTIFICATE



Grant Cooker File # 91-2387 Page 1

Box 404, Keremeos BC V0X 1N0

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
91G-1	2012	47	2847	659	14.7	19	17	443	8.48	53	5	6	1	12	2.8	6	31	6	.11	.050	4	13	.08	59	.01	2	.25	.04	.07	1	44
91G-2	1358	33	592	369	4.7	12	16	519	7.02	49	5	4	1	11	1.9	7	9	9	.11	.055	3	7	.16	46	.01	2	.39	.03	.08	1	60
91G-3	50	442	12	33	.5	94	73	216	14.08	79	5	ND	4	6	.8	5	3	79	.06	.020	5	40	.73	29	.10	3	1.57	.02	.10	2	10
91M-1	15	90	8718	1558	9.4	9	9	521	3.29	87	5	ND	7	33	29.6	2	3	4	.75	.033	5	10	.18	48	.01	2	.59	.01	.30	1	2080
91M-2	7	52	3390	132	7.7	8	2	83	1.28	166	5	2	1	3	2.2	2	2	3	.04	.002	2	7	.03	14	.01	3	.12	.01	.04	1	4620
91M-3	11	95	910	616	6.7	10	3	578	1.67	111	5	6	3	32	10.3	2	2	3	.81	.016	2	10	.12	17	.01	3	.34	.01	.13	1	6090
91R-1	1	2	40	92	.1	2	1	339	.39	2	5	ND	3	11	.2	2	2	1	.05	.009	25	3	.01	41	.01	7	.38	.03	.22	1	18
91R-2	4	5	110	110	.2	4	2	1359	1.54	6	5	ND	5	7	.3	2	2	4	.06	.019	24	7	.01	102	.01	5	.29	.04	.15	1	44
91R-3	1	2	6	26	.1	1	1	21	.16	2	5	ND	9	8	.2	2	2	1	.05	.003	25	2	.01	17	.01	4	.32	.03	.12	1	1

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: P1 ROCK P2 CORE AU* ANALYSIS BY ACID LEACH/AA FROM 10 GM SAMPLE.

DATE RECEIVED: JUL 9 1991 DATE REPORT MAILED: *July 12/91* SIGNED BY: *C. Leong* .D.TOYE, C.LEONG, J.WANG; CERTIFIED B.C. ASSAYERS



**MINERAL
• ENVIRONMENTS
LABORATORIES**
(DIVISION OF ASSAYERS CORP.)

SPECIALISTS IN MINERAL ENVIRONMENTS
CHEMISTS • ASSAYERS • ANALYSTS • GEOCHEMISTS

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SMITHERS LAB.:
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SMITHERS, B.C. CANADA V0J 2N0
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Geochemical Analysis Certificate

2V-0171-SG1

Company: **GRANT CROOKER**
Project: MONTE CHRISTO P.O. #E011
Attn: GRANT CROOKER

Date: APR-07-92
Copy 1. GRANT CROOKER, KEREMEAS, B.C.

We hereby certify the following Geochemical Analysis of 15 SOIL samples submitted MAR-31-92 by GRANT CROOKER.

Sample Number	AU-FIRE PPB
L10420E+10250N	21
L10420E+10275N	11
L10420E+10300N	17
L10420E+10325N	72
L10420E+10350N	13
L10445E+10250N	12
L10445E+10275N	12
L10445E+10300N	17
L10445E+10325N	12
L10445E+10350N	11
L10470E+10250N	20
L10470E+10275N	13
L10470E+10300N	21
L10470E+10325N	17
L10470E+10350N	13

Certified by _____

Appendix II

ROCK SAMPLE DESCRIPTIONS

ROCK SAMPLE DESCRIPTIONS

Sample No.	Grid Coord.	Type	Description
91M-1	10320E 9960N	grab dump	-chlorite alt wall rock, calcite on fractures, weakly silicified, 2-5% py
91M-2	10320E 9960N	grab dump	-rusty white vein quartz, rusty fract & boxworks, 2% py, trace galena
91M-3	10320E 9960N	grab dump	-rusty, strongly silicified wall rock, chlorite alt, 1-2% py, trace ga
91M-4	10400E 10414N	grab	-rusty vein quartz, sericite, rusty fractures & boxworks, trace py
91M-5	10200E 10300N	grab	-granite with sericite alt, possibly silicification, rusty fractures
91M-6	10120E 10250N	grab dump	-rusty, white quartz vein, 20% boxworks 10% py, ½% ga
91M-7	10120E 10250N	grab dump	-green chlorite alt wall rock, moderate silicified, 20% py, tr ga in silicif
91M-8	10321E 9974N	.40 m	-white quartz vein, sulphides (py & ga) near hanging wall
91M-9	10323E 9977N	.40 m	-white ven quartz, rusty on hangingwall
91M-10	10335E 9994N	.35 m	-white quartz, no sulphides

Appendix III

GEOPHYSICAL EQUIPMENT SPECIFICATIONS

GEONICS LIMITED
VLF EM 16

Source of Primary Field VLF transmitting stations

Transmitting Stations Used: Any desired station frequency can be supplied with the instrument in the form of plug-in tuning units. Two tuning units can be plugged in at one time. A switch selects either station.

Operating Frequency Range: About 15-25 Hz.

Parameters Measured: 1- The vertical in-phase component (tangent of the tilt angle of the polarization ellipsoid).
 2- The vertical out-of-phase (quadrature) component (the short axis of the polarization ellipsoid compared to the long axis).

Method of Reading: In-phase from a mechanical inclinometer and quadrature from a calibrated dial. Nulling by audio tone

Scale Range: In-phase $\pm 150\%$; quadrature $\pm 40\%$

Readability: $\pm 1\%$

Operating Temperature Range: -40 to 50° C.

Operating Controls: ON-OFF switch, battery testing push button, station selector, switch, volume control, quadrature dial $\pm 40\%$, inclinometer $\pm 150\%$

Power Supply: 6 size AA alkaline cells ≈ 200 hrs.

Dimensions: 42 x 14 x 9 cm (16 x 5.5 x 3.5 in)

Weight: 1.6 kg. (3.5 lbs)

Instrument Supplied With: Monotonic speaker, carrying case, manual of operation, 3 station selector plug-in tuning units (additional frequencies are optional) set of batteries.

Manufacturer: Geonics Limited
 1745 Meyerside Drive/Unit 8
 Mississauga, Ontario
 L5T 1C5

Appendix IV

VLF-EM DATA

Grant Crooker Data Listing Line & Station + = northing/easting
 Area: Monte Christo Property - = southing/westing
 Grid: Monte File Name: montchri.xyz
 Date: March 1992, VLF-EM survey
 Instrument Type: Details
 Geonics EM-16 Facing northwesterly, Seattle
 Data Types #1 VLF-EM In-Phase Values, Seattle
 #2 VLF-EM Quadrature, Seattle

E/W	N/S		
Line #	Station	# 1.	# 2.
line 10400			
10400	9500	-2	3
10400	9525	-3	2
10400	9550	-4	4
10400	9575	-4	3
10400	9600	-3	4
10400	9625	-6	4
10400	9650	-8	4
10400	9675	-9	4
10400	9700	-11	2
10400	9725	-13	4
10400	9750	-10	5
10400	9775	-8	4
10400	9800	-5	5
10400	9825	-3	6
10400	9850	0	7
10400	9875	3	7
10400	9900	4	5
10400	9925	8	6
10400	9950	9	3
10400	9975	12	5
10400	10000	14	8
10400	10025	8	6
10400	10050	6	7
10400	10075	4	6
10400	10100	1	5
10400	10125	0	5
10400	10150	-2	4
10400	10175	-4	5
10400	10200	-5	6
10400	10225	-4	9
10400	10250	-4	12
10400	10275	-4	12
10400	10300	-3	14
10400	10325	0	16
10400	10350	0	16
10400	10375	0	15
10400	10400	-1	12
10400	10425	-3	10
10400	10450	-3	10
10400	10475	-5	8
10400	10500	-4	7

10400	10525	-4	5
10400	10550	-5	5
10400	10575	-5	5
10400	10600	-5	6
10400	10625	-5	4
10400	10650	-5	5
10400	10675	-9	2
10400	10700	-11	0
line 10300			
10300	9550	-4	11
10300	9575	-4	8
10300	9600	-4	7
10300	9625	-7	7
10300	9650	-10	6
10300	9675	-12	6
10300	9700	-9	8
10300	9725	-6	8
10300	9750	-2	6
10300	9775	-1	6
10300	9800	2	6
10300	9825	5	5
10300	9850	6	4
10300	9875	8	5
10300	9900	8	5
10300	9925	6	4
10300	9950	8	7
10300	9975	10	9
10300	10000	10	8
10300	10025	5	4
10300	10050	5	5
10300	10075	3	4
10300	10100	0	2
10300	10125	4	6
10300	10150	2	6
10300	10175	3	8
10300	10200	3	10
10300	10225	5	11
10300	10250	3	13
10300	10275	4	14
10300	10300	2	13
10300	10325	2	13
10300	10350	-1	11
10300	10375	-1	10
10300	10400	-3	7
10300	10425	-4	6
10300	10450	-4	4
10300	10475	-5	3
10300	10500	-5	3
10300	10525	-5	4
10300	10550	-4	4
10300	10575	-5	5
10300	10600	-5	4
10300	10625	-4	3
line 10200			

10200	9700	-2	14
10200	9725	-2	8
10200	9750	2	10
10200	9775	4	9
10200	9800	6	9
10200	9825	3	7
10200	9850	0	5
10200	9875	-1	5
10200	9900	0	3
10200	9925	2	7
10200	9950	4	8
10200	9975	5	8
10200	10000	8	10
10200	10025	6	11
10200	10050	6	11
10200	10075	6	10
10200	10100	5	11
10200	10125	4	8
10200	10150	3	9
10200	10175	3	11
10200	10200	8	12
10200	10225	8	14
10200	10250	7	13
10200	10275	6	9
10200	10300	5	8
10200	10325	0	4
10200	10350	-1	4
10200	10375	-2	3
10200	10400	-4	2
10200	10425	-6	3
10200	10450	-5	2
10200	10475	-7	1
10200	10500	-8	1
10200	10525	-7	2
10200	10550	-6	2
10200	10575	-7	0
10200	10600	-7	3
10200	10625	-4	4
10200	10650	-7	3
10200	10675	-8	-1
10200	10700	-10	0
line 10100			
10100	9825	-4	21
10100	9850	0	19
10100	9875	-2	-11
10100	9900	2	10
10100	9925	0	11
10100	9950	-1	10
10100	9975	0	9
10100	10000	2	7
10100	10025	-5	9
10100	10050	-7	8
10100	10075	-5	8
10100	10100	-3	8

10100	10125	-1	8
10100	10150	1	8
10100	10175	4	8
10100	10200	6	8
10100	10225	7	8
10100	10250	6	6
10100	10275	5	5
10100	10300	5	5
10100	10325	3	4
10100	10350	0	3
10100	10375	-4	2
10100	10400	-6	2
10100	10425	-6	3
10100	10450	-7	3
10100	10475	-6	4
10100	10500	-5	6
10100	10525	-7	4
10100	10550	-8	2
10100	10575	-9	2
10100	10600	-10	3
10100	10625	-8	4
10100	10650	-10	3
10100	10675	-11	2
10100	10700	-11	2
lin. e 10000			
10000	10000	-27	22
10000	10025	-14	8
10000	10050	-12	9
10000	10075	-8	8
10000	10100	-5	8
10000	10125	-2	7
10000	10150	-1	6
10000	10175	-2	5
10000	10200	1	7
10000	10225	2	8
10000	10250	3	7
10000	10275	5	6
10000	10300	5	6
10000	10325	1	5
10000	10350	0	5
10000	10375	-3	5
10000	10400	-4	4
10000	10425	-6	4
10000	10450	-6	3
10000	10475	-8	2
10000	10500	-10	2
10000	10525	-9	3
10000	10550	-8	3
10000	10575	-9	4
10000	10600	-8	4
10000	10625	-12	1
10000	10650	-12	0
10000	10675	-12	1
10000	10700	-11	0

Appendix V

COST STATEMENT

COST STATEMENT

SALARIES

- Grant Crooker, Geologist
April 26, 1991, March 22-26, 1992
6 days @ \$ 400.00/day \$ 2,400.00

- Lee Mollison, Field Assistant
March 23, 25, 1992
2 days @ \$ 200.00/day 400.00

MEALS AND ACCOMODATION

- Grant Crooker - 4 days @ \$ 60.00/day 240.00
- Lee Mollison - 2 days @ \$ 60.00/day 120.00

TRANSPORTATION

- Vehicle Rental (Ford 3/4 ton 4x4)
April 26, 1991, March 23-25, 1992
4 days @ \$ 60.00/day 240.00
- Gasoline 80.00

FREIGHT

10.54

SUPPLIES

- Hipchain thread, flagging, geochem bags, etc. 35.00

GEOCHEMICAL ANALYSIS

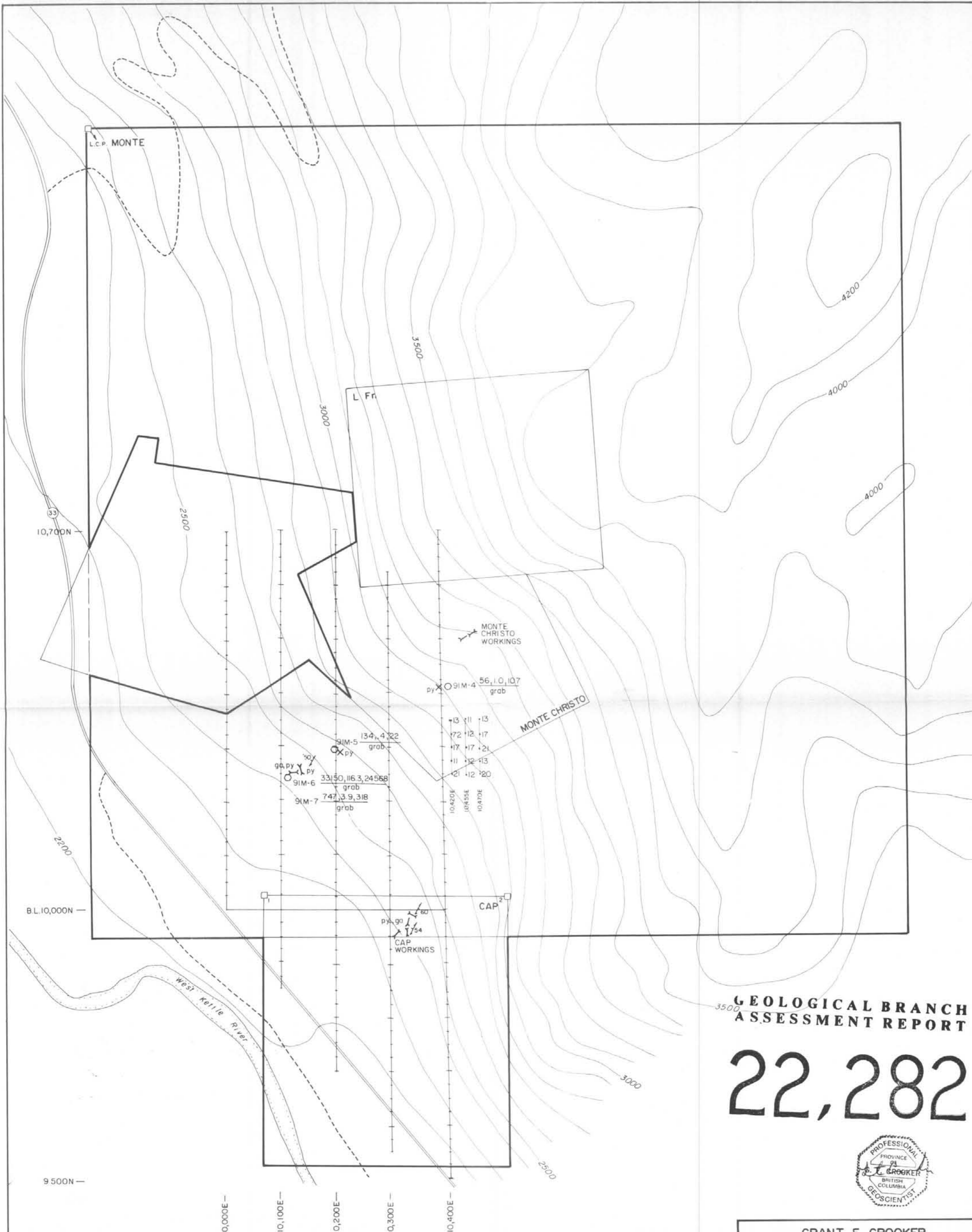
- 15 soil samples, Au @ \$ 6.42/sample 96.30
- 7 rock samples, 31 element ICP, Au
@ \$ 15.52/sample 108.64
- 3 rock samples, 30 element ICP, Au
@ \$ 13.64/sample 40.93

DRAUGHTING

175.00

PREPARATION OF REPORT

- Secretarial, reproduction, telephone,
office overhead etc. 250.00
- TOTAL** **\$ 4,196.40**



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

22,282



GRANT F. CROOKER
MONTE CHRISTO GROUP
GEOLOGY and
GEOCHEMISTRY

N.T.S. 82E-6E GREENWOOD M.D., B.C.
 0 100 200 300 METRES

SCALE 1:5000 DATE: MARCH 1992
 DRAWN BY: G.C. FIGURE NO. 3

LEGEND

- Grid station
- Highway, road
- Contour at 100' interval
- Adit
- Trench
- Showing
- Property outline
- Claim post - LCP legal corner post
 1 initial post
 2 final post

- Bedrock sample
 91M-4 56,10,107 grab Sample No Au ppb, Ag ppm, Pb ppm width
- Soil sample, Au ppb
 72
- Strike & dip of quartz vein
- Pyrite
 py
- Galena
 ga



**GEOLOGICAL BRANCH
ASSESSMENT REPORT**

22,282



GRANT F. CROOKER

**MONTE CRISTO GROUP
VLF-EM PROFILES
(Seattle)**

N.T.S. 82E-6E GREENWOOD M.D., B.C.
0 100 200 300 METRES

SCALE 1:5000 DATE: MARCH 1992
DRAWN BY: G.C. FIGURE NO. 5

LEGEND

- +— Grid station
- Highway, road
- 3000- Contour at 100' interval
- Adj. Trench
- X Showing
- Property outline
- Claim post - L.C.P. legal corner post
1 initial post
2 final post
- N.L.K., SEATTLE, WASHINGTON
24.8 KHz
- Anomalous inflection (In-phase)
- In-phase
- Quadrature
- VLF-EM conductor