

GEOLOGICAL BRANCH
GEOCHEMICAL AND GEOLOGICAL REPORT ASSESSMENT REPORT

- on the -

CAY PROPERTY

LILLOOET MINING DIVISION, BRITISH COLUMBIA

12,281

- for -

W.A. COOK

BOX 398

LILLOOET, B.C. VOK 1V0

COVERING: CAY #1-#5, MEL #1 CLAIMS (104 units)

WORK PERFORMED: September 21, 22, 1983.

LOCATION: (1) 34 km. southwest of Lillooet, B.C.
(2) NTS Map No.s 92J/8W, 92J/9W
(3) Latitude $-50^{\circ} 29.7'$ North
Longitude $-122^{\circ} 17.9'$ West

Prepared by:

KERR, DAWSON & ASSOCIATES LTD.

#206 - 310 Nicola Street,
Kamloops, B.C. V2C 2P5

W. GRUENWALD, B. SC.

February 15, 1984.

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INTRODUCTION

In March 1983, the Cay #1-#5 claims were staked around the Mel #1 claim, situated near the headwaters of Melvin Creek, approximately 34 kilometers southwest of Lillooet, B.C. The Mel #1 claim and the Cay #1-#5 claims are collectively known as the Cay property.

The Mel #1 claim covers molybdenite mineralization discovered in 1981 by Kerr, Dawson and Associates Ltd., during the follow-up to a regional sampling programme for Denison Mines Ltd. At that time anomalous gold/silver values were indicated at the western boundary of the Mel #1 claim.

Incorporated within the claim group is an area previously covered by several claims known as the Blue Rock claims, and further west a group of small silver bearing occurrences known as the Twin Lake showing.

In September 1983, a programme of sampling and mapping was carried out by the writer and two prospectors to investigate the aforementioned gold/silver anomalies, mineral occurrences and newly acquired ground.

The results of the present and past programmes are described in this report and the appended maps and geochemical data.

SUMMARY

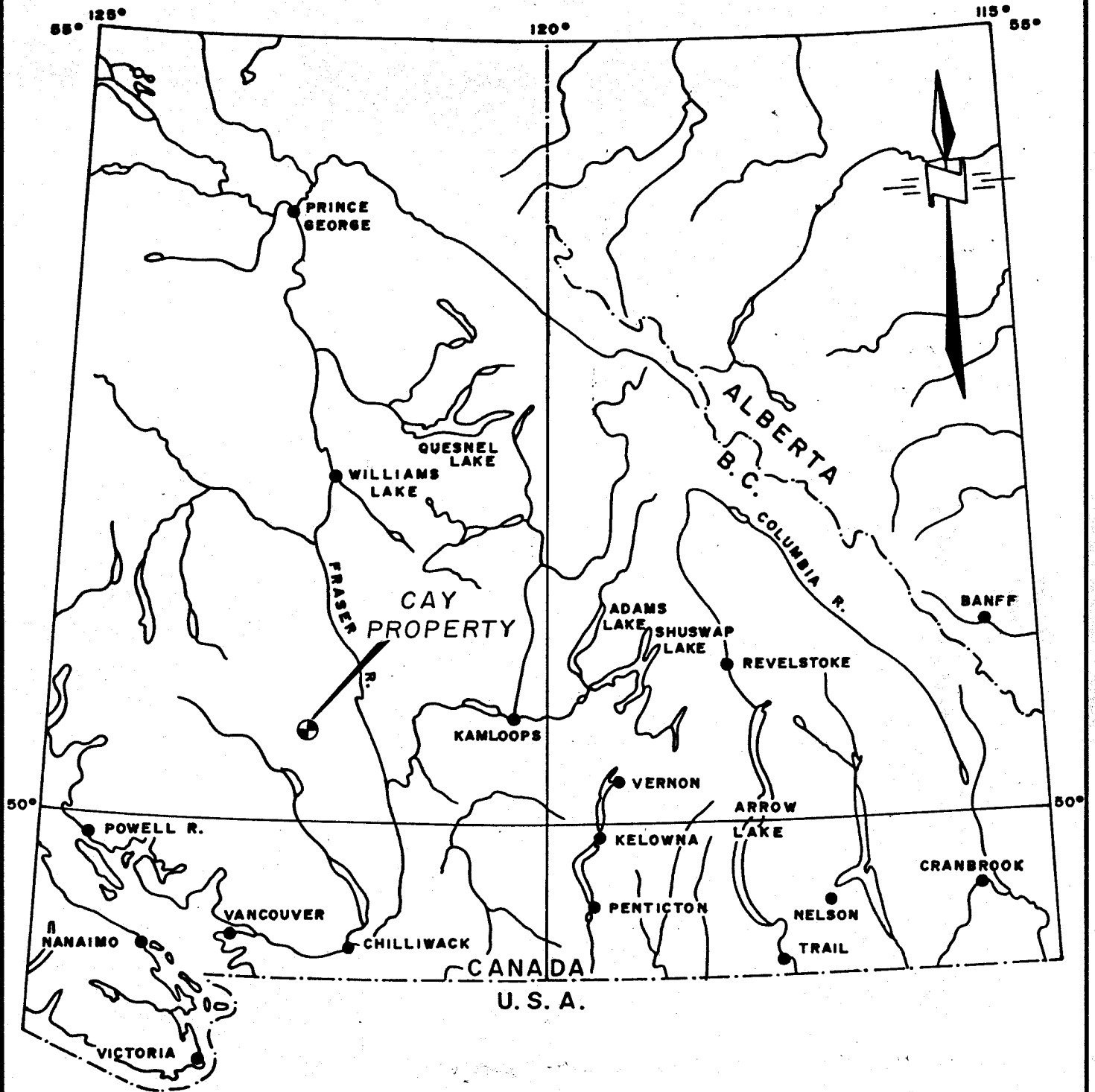
1). The Cay property consists of six contiguous claims totalling 104 units. The claims are situated in the Coast Mountains approximately 34 kilometers southwest of Lillooet, B.C. Access to the property is by helicopter.

2). The claim area is underlain by a lower Mesozoic sequence of metasedimentary and metavolcanic rocks. Intruding and semi conformable with these rocks are one or more Mesozoic ultrabasic (serpentine) bodies. The rocks in the southern portion of the property are intruded by a small pluton of upper Mesozoic to Tertiary biotite granodiorite and slightly later and smaller feldspar porphyritic granodiorite intrusion. Found scattered over several areas of the property are numerous quartz veins.

3). Sampling and mapping in the 1981 programme revealed disseminated molybdenite and iron sulphides in a satellitic granodiorite intrusion. Anomalous arsenic and precious metal values were indicated near a prominent vein system, along scattered portions of the main intrusive contact and within the molybdenite bearing granodiorite intrusion. Follow-up mapping and sampling in 1983 revealed three distinct areas of intense veining that follow a distinct northeasterly structural trend. Some veins carry traces of pyrite, tetrahedrite and arsenopyrite. Anomalous precious metal values are found to be associated with two of the three major vein systems, and one of these shows the evidence of an altered and weakly mineralized, epithermal quartz stockwork. A float sample containing semi-massive pyrite and sphalerite found within metavolcanic terrain assayed 10% zinc and minor silver.

The largest group of anomalous precious metal values was encountered in soil and rock samples that cover a portion of a large serpentine body and its contact in the Twin Lake area. Part of this anomaly is directly related to the silver bearing occurrences in the area while the remainder may represent possible southeastward extensions of similar mineralization. Sporadic anomalous gold and silver values also appear to be associated with isolated veins, intrusive contact zones and small mineralized pods within ultrabasic terrain.

In general, there is a good coincidence between anomalous precious metal values and a high degree of coincidence between anomalous arsenic and anomalous gold values.



W. A. COOK	
LOCATION MAP	
CAY PROPERTY	
LILLOOET MINING DIVISION, B. C.	
Date: January, 1984.	Scale: 1" = 64 Miles
Dwn by: W. G.	Dwg no. 234-1

LOCATION AND ACCESS

The Cay property is situated at the headwaters of Melvin, Haylmore and Lost Valley Creeks, approximately 34 kilometers southwest of Lillooet, B.C.

The geographic co-ordinates for the center of the property are $50^{\circ} 29.7'$ north latitude and $122^{\circ} 17.9'$ west longitude on N.T.S. Sheet No.s 92J/8W, 9W.

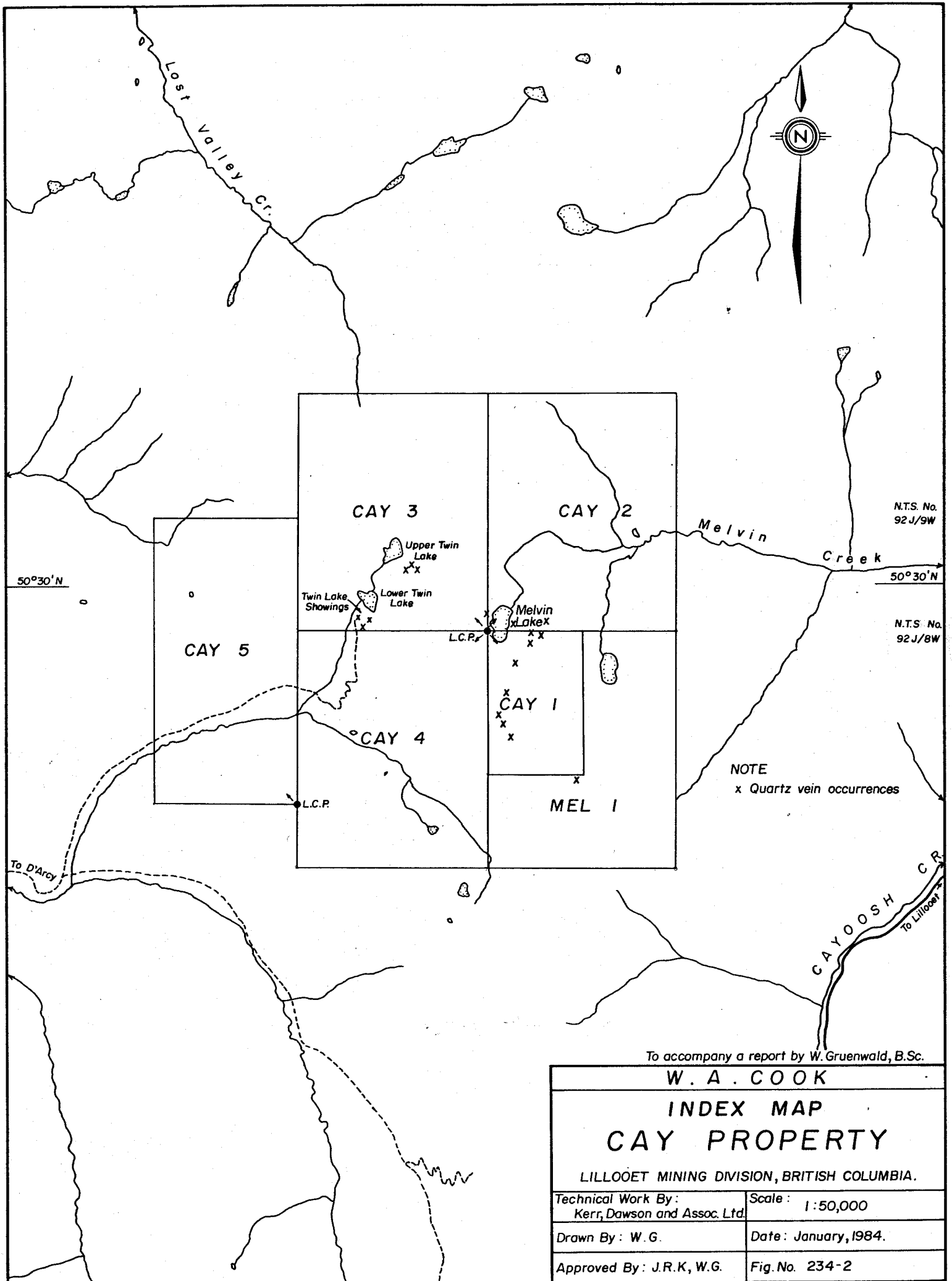
The best means of access, at present, is by helicopter from Lillooet, B.C. An old road extending from D'Arcy up Haylmore Creek to the Twin Lakes property is, at present, not drivable.

PHYSIOGRAPHY AND VEGETATION

The Cay property is situated within the rugged terrain of the Coast Mountains. Topographic relief over the property is 1143 meters, ranging from 1387 m.(4550') in the southwest corner of Cay #5 to 2530 m.(8300') in northeast corner of Cay #3. The areas presently of interest, however, are found between the 1980 m.(6500') and the 2440 m.(8000') elevations.

Slopes vary from gentle to steep. Locally precipitous slopes are found near the heads of some of the cirques and along some of the valley walls. The creek valleys within the claim area are all of glacial origin with steep walls and moderately gentle valley floors.

Vegetation above the 1980 m.(6500') elevation is sparse, consisting of stunted balsam and spruce and alpine grasses and related ground cover. Below the 1980 m. elevation the vegetation is comprised of sparse to moderately dense subalpine stands of spruce, balsam and pine trees.



N.T.S. No. 92J/9W

N.T.S. No. 92J/8W

NOTE
x Quartz vein occurrences

To accompany a report by W. Gruenwald, B.Sc.

W. A. COOK	
INDEX MAP	
CAY PROPERTY	
LILLOËT MINING DIVISION, BRITISH COLUMBIA.	
Technical Work By: Kerr, Dawson and Assoc. Ltd.	Scale: 1:50,000
Drawn By: W.G.	Date: January, 1984.
Approved By: J.R.K, W.G.	Fig. No. 234-2

PROPERTY

The Cay property is comprised of 6 contiguous claims totalling 104 units (2,600 hectares). Details of the claims are as follows:

<u>Claim Name</u>	<u>Record No.</u>	<u>No. of Units</u>	<u>Mining Division</u>	<u>Record Date</u>	<u>Expiry Date</u>
Mel #1	1522	20	Lillooet	Sept.12/80	Sept.12/84
Cay #1	2394	6	Lillooet	Apr. 14/83	Apr. 14/84
Cay #2	2395	20	Lillooet	Apr. 14/83	Apr. 14/84
Cay #3	2396	20	Lillooet	Apr. 14/83	Apr. 14/84
Cay #4	2397	20	Lillooet	Apr. 14/83	Apr. 14/84
Cay #5	2398	18	Lillooet	Apr. 14/83	Apr. 14/84

The registered owner of Mel #1 is John R. Kerr of Kamloops, B.C. The Cay #1 to Cay #5 claims are registered in the name of W.A. Cook of Lillooet, B.C. (33 1/3%), John Sidney Foley, Kamloops, B.C. (33 1/3%) and Karl Alfred Cederberg, Kamloops, B.C. (33 1/3%).

PREVIOUS EXPLORATION

The earliest record of work having been carried out on the Cay property is reported in the annual Minister of Mines Report for 1935. Work consisting of hand trenching was carried out on the "Twin Lake" silver occurrences and several vein localities along the southeasterly trending ridge, extending toward the present Mel #1 claim.

In 1962, Barkley Valley Mines Ltd., constructed a cat road from D'Arcy and up Haylmore Creek to the mineral occurrences immediately below lower Twin Lake (see figure 234-2). In addition, some trenching and stripping was carried out. The same company, in 1963, drilled four diamond drill holes totalling 200' and drove a 50' adit. The most recent work was reportedly done in 1968, when Barkley Valley Mines Ltd. drilled three diamond drill holes totalling 105 feet.

Assessment records indicate that minor physical work was carried out on the Blue Rock claims. This small group of claims which covered the numerous quartz veins in the Melvin Lake area lapsed in January 1983. The acquisition of the Cay claims, in April 1983, has since covered this area.

Regional silt sampling by Kerr, Dawson & Associates (for Denison Mines Ltd.), in the summer of 1980, led to the discovery of anomalous molybdenum values at the head of a tributary of Melvin Creek and the subsequent staking of the Mel #1-#5 claims.

Prospecting and follow-up sampling in 1981 revealed molybdenite mineralization associated with a small granitic intrusive. It was also during the 1981 programme that anomalous gold and silver values were encountered near a series of quartz veins on the western boundary of the Mel #1 claim.

In 1982, the Mel #2-#5 claims lapsed and Mel #1 was transferred by Denison Mines to J.R. Kerr of Kamloops, B.C.

The present claim group was acquired in April of 1983 to cover the silver occurrences in the Twin Lake area and the possible extension of the previously mentioned anomalous gold/silver values. The writers examination of the property in September 1983, has been the most recent work carried out thus far on the property.

GEOLOGY

Mapping by the Geological Survey of Canada (Map 13-1973) indicates that the Cay property is underlain by metamorphosed sediments and volcanics of the Mesozoic Bridge River Group. At least two granodiorite plutons are shown to intrude these rocks approximately six kilometers north and east of the Cay property.

On a local scale, the geology of the Cay property is considerably more complex with several rock types being indicated.

The most widespread and oldest rock unit is the Bridge River Group (Unit 1, 1a -Fig. 234-3). The most notable components of this unit are gray, brown to black phyllites intercalated with argillites, chert, quartzite and minor metaconglomerate. Massive horizons of dark green andesitic metavolcanics intercalated with the metasediments are present south and west of Melvin Lake. Textural evidence as to the origin of these metavolcanics is often lacking however, it is believed that much of this sequence was originally intermediate flows and tuffs. Coarse fragmental metavolcanics in the area northwest of upper Twin Lake indicates that at least part of the volcanic sequence was comprised of agglomeritic rocks.

Alteration within the Bridge River Group rocks is most notable in the metavolcanics, where the principal alteration minerals are chlorite, epidote and calcite. Limonitic weathering is locally associated with weakly pyritic metavolcanics and pyritic-siliceous interbeds, the latter being quite evident in the southern portion of the Cay #3 claim area.

Foliation and bedding attitudes within the unit 1 rocks are quite variable no doubt due to the effects of regional deformation and intrusive activity. Schistosity northeast and east of the granodiorite intrusive strikes northerly and dips 30° to 50° easterly. The intercalated metasediments/metavolcanics in the southern portion of Cay #3 show a very distinct schistosity (bedding?) that strikes east-southeast and dips 50° to 60° northerly.

Trending northwesterly through the Cay property are several bodies of orange-red weathering serpentine. G.S.C. mapping of similar nearby ultrabasics indicates a slightly younger Mesozoic age than the Bridge River Group rocks. The largest such body (100-200 m. wide) on the Cay property is found to extend from the southwest portion of Cay #3 to the north-central portion of Cay #4 indicating a length in excess of 2.0 km. This ultrabasic body is best observed in the lower Twin Lake area where it is observed to dip 50° northerly. Several other serpentine bodies are found at the north end of lower Twin Lake and southwest to southeast of Melvin Lake. All of the serpentine bodies observed to date appear to be semi-conformable to the regional schistosity and were probably all emplaced at the same time. Alteration within the serpentine bodies generally consists of the formation of small zones of talc, carbonate and quartz-calcite \pm mariposite stringers.

Underlying much of the southern portion of the Mel #1 and Cay #4 claims is a small pluton of granitic rock (Unit 2). The pluton is roughly oblong in shape with its long axis measuring at least 2.5 kilometers in length (NE-SW). Its width (SE-NW) ranges from 1.0 to 1.5 kilometers. Though not mapped by the G.S.C. it is believed similar to granitic intrusives found

several kilometers to the north. Potassium/argon dating places the age of these intrusions in the early Tertiary to late Cretaceous period. The intrusive on the property consists of a pale brown to gray, medium to coarse grained biotite granodiorite. Alteration is generally absent, however locally weak sericitization and/or chloritization are observed near quartz vein borders and contact zones. Jointing is the only observed structural feature within the biotite granodiorite. The attitude of the granodiorite contact is for the most part quite steep ($> 45^{\circ}$).

Found along the northeast edge of the biotite granodiorite body is rock unit (2a) described as a pale greenish-gray locally buff to white, fine to medium grained feldspar porphyritic granodiorite. Mapping to date indicates that this intrusive is elongated in a north-northwesterly direction and measures 500 \pm meters long and 100 to 150 meters wide. This granitic body is characterized by the presence of scattered flakes of secondary biotite, chloritic alteration of many of the mafic minerals and weak to intense kaolinization of the feldspars. Finely disseminated iron and molybdenum sulphides are also a distinct feature of this rock unit. This rock unit appears to be a distinct and separate intrusion that was emplaced after the intrusion of the main biotite granodiorite mass (unit 2).

Found scattered in several areas of the property are a number of narrow (2-3 m.), brown, fine grained "basaltic" dykes. These dykes transect all of the aforementioned rock types and are thus of very recent age. All of these dykes observed strike roughly northwesterly and dip from 45° to 50° to the north.

Quartz veining is both a widespread and locally common feature of the Cay property. Three major areas of quartz veining are of interest and described as follows (see figure 234-3):

- (1). On the peak and the ridge to the southeast on the west boundary of Cay 1.
 - veins found to extend from peak area to the granodiorite intrusion to the southeast.
 - veins vary from <10 cm. to over 4 meters in width, often pinch and swell considerably.
 - many of the veins especially the larger ones commonly have vugs containing well developed quartz crystals.
 - local wall rock silicification.
 - strike measurements vary from 038° to 080° (NE to ENE).
 - dips range from 15° to 80° , however most are steep to the north or northwest.
 - a number of veins displayed slickensides on their contacts with the metasediments indicating recent fault activity.

- (2). The ridge east of Melvin Lake.
 - veins found primarily as distinct fracture fillings in metasediments, from <10cm to 35 cm in width.
 - several of the larger veins (2-3 m) wide do not appear to be the same type as above.
 - veins are only occasionally "vuggy".
 - veins in the CR-17 to CR-20 area strike from 040° to 080° , (NE to ENE).
 - dips range from 72° to 90° -when not vertical dips are generally to the southeast.
 - vein at CR-15 (2^{+} m.wide) can be traced to the northwest toward vein exposure observed on shore of Melvin Lake.

(3). North facing slope southeast of Upper Twin Lake (Cay #3 claim).

- veins occur as a "swarm" of parallel fracture fillings in limonitic metasediments.
- "vein swarm" found over a 100⁺ m. area.
- strike of fracture/vein system is 036^o (NE), dip is 90^o [±].
- veins vary from <0.5 cm. to 20⁺ cm. wide, often with drusy cavities.
- wallrock is often pale yellowish, oxidized, bleached and sericitized.
- good possibility for a stockwork system in this area.

Other vein occurrences are found scattered over all parts of the property and have been observed to cut all rock types mentioned previously. Several small pods/veins containing quartz-carbonate [±] mariposite were observed within the serpentine body immediately south of lower Twin Lake. These zones which are probably related to local shears strike northeasterly and dip steeply. Signs of hand trenching and blasting at one of these occurrences suggest that this may be part of the Twin Lake silver occurrence.

Geological mapping carried out to date suggests that a distinct northeasterly structural trend exists on the Cay property. The fact that all of the major fracture/vein systems strike northeasterly, that some vein contacts show signs of faulting (slickensides) and that the two largest serpentine bodies appear to be displaced lends support to this hypothesis.

MINERALIZATION

The rocks of unit 1 invariably contain minor amounts of finely disseminated pyrite and/or pyrrhotite. Several interbeds of highly limonitic, siliceous rock (quartzites) were observed in the Twin Lakes area, especially west of Upper Twin Lake. These rocks sometimes contained up to 3% fine grained pyrite. Rock geochemical samples however, were negative for precious metals. A small highly limonitic zone in metavolcanics southeast of Upper Twin Lake (sample CR-28) contains up to 5-6% finely disseminated pyrite. Interestingly, a piece of metavolcanic float (CR-29) found immediately below the above limonitic zone contained semi-massive, bedded, fine grained pyrite and sphalerite. Analysis of this piece of float returned a value of 10%⁺ Zn and minor silver.

The biotite granodiorite pluton (unit 2) is devoid of any mineralization with the exception of several narrow veins in joints carrying minor amounts of galena and pyrite. The feldspar porphyritic granodiorite is well mineralized with 1% to 5% finely disseminated sulphides. These in order of abundance are pyrite, pyrrhotite, molybdenite and arsenopyrite. The mineralization within this rock unit is described in detail in an assessment report by the writer dated October 31, 1981 and is thus left out of this discussion.

The serpentine, with the exception of minor clots of magnetite is barren. Small shear related pods/veins of quartz-carbonate ⁺ mariposite observed below Lower Twin Lake contain minor amounts of tetrahedrite. These and similar tetrahedrite bearing zones located at the lower contact of the serpentine body are collectively described as the Twin Lake showing. Limited time during the present programme did not allow for a detailed investigation of this occurrence.

A large majority of the numerous quartz veins on the property are totally barren. Pyrite is the most common mineral observed in veins however, small amounts of arsenopyrite, tetrahedrite, galena and malachite have been noted. The veins on the ridge near the west boundary of Cay #1 were generally barren however, a few contained traces of tetrahedrite, galena and malachite. The veins east of Melvin Lake were all devoid of mineralization except for minor pyrite.

By far the most interesting vein occurrences are found southeast of Upper Twin Lake. Described previously as a "vein swarm" in limonitic metasediments, these veins appear to have hydrothermally altered the surrounding rock. Fine to medium grained pyrite is found in both the wallrock and the veins themselves. Arsenopyrite has been observed in many of the veins as discrete clots usually near the borders of the veins. Some talus fragments from this area display a distinct stockwork appearance with numerous crosscutting veinlets in a rock that is bleached, sericitized and locally pyritized.

GEOCHEMISTRY

A total of 151 soil, 6 silt and 30 rock samples were collected during the 1983 programme. All samples were labelled and shipped to Acme Analytical Laboratories Ltd. for gold and silver analysis. After drying the soil and silt samples were sieved to obtain a -100 mesh fraction. Rock samples were crushed to the appropriate mesh size. All samples were analyzed as follows:

<u>Element</u>	<u>Digestion</u>	<u>Determination</u>
Silver	A 0.5 gm. sample is digested in hot nitric and hydrochloric acid.	Atomic Absorption
Gold	A 10 gm. sample is ignited and then digested in hot aqua regia.	Atomic Absorption

The results for silver are expressed in parts per million (ppm) and gold is expressed in parts per billion (ppb). The detection limits for silver and gold are 0.1 ppm and 5 ppb respectively. All values have been plotted on accompanying base maps at a scale of 1:10,000 (1 cm.=100 meters). (See figure no.s 234-4,5).

Alpine soil, poorly developed horizons,
approx. B horizon fines, relatively shallow.

A statistical analysis of the gold and silver soil geochemical values was carried out with the following categories being derived:

	<u>Gold (ppb)</u>	<u>Silver (ppm)</u>
Mean (\bar{x})	6.5	0.6
Standard deviation(s)	4.4	0.4
Background (negative)	<6.5	<0.6
Possibly anomalous	6.5-10.9	0.6-1.0
Probably anomalous	11->15	1.1-1.4
Definitely anomalous	>15	>1.4

Plotted in addition to the sampling of the present programme are those samples that were highly anomalous in gold, silver and arsenic from the 1981 programme. In applying the above geochemical categories to the metal values, the following observations and conclusions were made:

Gold (see fig. 234-4):

- range in values from 5 ppb (background) to 2400 ppb (1981 soil sampling).
- generally a good coincidence between gold and silver anomalies.
- anomalous gold values associated with:
 - i) veins on ridgetop near western boundary of Cay 1/ Mel 1, value of 120 ppb attained in rock sample CR-03 also associated with value of 93.0 ppm silver (highest value obtained to date).
 - ii) contour traverse from sample CS-30 to CS-45 which coincides with the broader scale silver anomaly along the serpentine/metasediment contact.
 - iii) vein swarm area southeast of upper Twin Lake.
- ridge east and southeast of Melvin Lake (vein system) did not produce any significant number of anomalous gold values.
- no anomalous gold values indicated within the granitic intrusive (unit 2), however the contact zone and intrusive unit 2a produced several anomalous areas.
- good coincidence between gold and the 1981 anomalous arsenic samples.

Silver (see fig. 234-5):

- range in values from 0.1 ppm (background) to 93.0 ppm (rock sample CR-03).
- most abundant anomalous silver values associated with:
 - i) contour traverse from CS-21 to CS-50 which coincides with the serpentine/metasediment contact, the main serpentine body and the Twin Lake silver occurrence area.
 - ii) veins on ridgetop near western boundary of Cay 1/ Mel 1 (highest soil value -8.5 ppm; highest rock value -93.0 ppm)
 - iii) vein swarm area southeast of upper Twin Lake.
 - iv) southern portion of Cay 4 - possibly related to pluton contact.
 - v) south central portion of Mel 1 - related to granitic contact (unit 2) and intrusive unit 2a.
- ridge east and southeast of Melvin Lake was generally negative except for a 7.7 ppm value in a quartz vein (CR-16).
- few anomalous silver values associated with granitic intrusives (unit 2, 2a).
- >60% of silver anomalies are coincident with gold anomalies.
- zinc bearing float (CR-29) was not extremely anomalous (5.3 ppm Ag).
- vein sample CR-30, west of Melvin Lake gave a value of 4.9 ppm Ag over a 7 meter width (should be investigated further).

CONCLUSIONS AND RECOMMENDATIONS

The results of the work carried out to date on the Cay property are encouraging. Geological mapping has delineated several structurally controlled vein systems. Two of these vein systems contain traces of sulphides. Assays of vein material indicate silver values from 0.1 ppm (background) to 93.0 ppm (3.0 oz/ton Ag), and anomalous values in gold. In addition, one of these vein systems has the potential for a sizeable stockwork zone.

The anomalous silver/gold values in the Twin Lake area correlate well with the known silver bearing occurrences. The southeastward trend of these anomalous values ($\sim 1.0 \text{ km}^+$) may indicate a considerably larger area of mineralization than is presently known. Silver values up to 6.9 ppm in soil samples were encountered in the area. Rock samples taken from narrow ($< 1\text{m}$) weakly mineralized shears and pods in the Twin Lake showing area assayed up to 69.0 ppm or 2.2 oz/ton Ag.

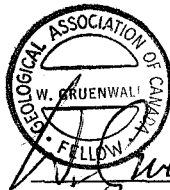
Further work in the areas outlined above is definitely warranted. The vein systems should be mapped and sampled in detail with emphasis being placed on the area with stockwork potential. The area of the Twin Lake showing and possible southeast extension should be mapped and sampled using detailed grid control. A magnetic/electromagnetic survey carried out in conjunction with the above grid work should be carried out to trace the serpentine contact and possible extensions of mineralized zones.

Detailed prospecting and sampling should be carried out to determine the source and size potential of the zinc mineralized float southeast of upper Twin Lake. In addition, anomalous gold and/or silver values should be investigated along the main intrusive contact, and within the molybdenum mineralized granodiorite. Isolated vein occurrences with anomalous precious metal values could also be followed up.

Any significant mineralization encountered or inferred by the sampling programmes should be followed up by trenching where feasible. Favourable results from trenching should then be tested at depth by diamond drilling.

Respectfully submitted:

KERR, DAWSON & ASSOCIATES LTD.,



W. Gruenwald
W. Gruenwald, B. Sc., Geologist.

Kamloops, B.C.

February 15, 1984.

APPENDIX A

GEOCHEMICAL RESULTS

&

ROCK SAMPLE DESCRIPTIONS

ACME ANALYTICAL LABORATORIES LTD.
852 E. HASTINGS, VANCOUVER B.C.
PH: 253-3158 TELEX: 04-53124

DATE RECEIVED SEPT 26 1983

DATE REPORTS MAILED Oct 4/83

GEOCHEMICAL ASSAY CERTIFICATE

A .500 GM SAMPLE IS DIGESTED WITH 3 ML OF 3:1:3 HCL TO HNO₃ TO H₂O AT 90 DEG.C. FOR 1 HOUR.
THE SAMPLE IS DILUTED TO 10 MLS WITH WATER. ELEMENTS ANALYSED BY AA : AG.
SAMPLE TYPE : P1-4 SOIL P5 SOIL & SILT P6 ROCK
AU* - 10 GM, IGNITED, HOT AQUA REGIA LEACH MIBK EXTRACTION, AA ANALYSIS.

ASSAYER W. J. Toy DEAN TOYE, CERTIFIED B.C. ASSAYER

KERR DAWSON PROJECT # 234 FILE # 83-2317 PAGE# 1

SAMPLE	AG PPM	AU* PPB
CS-1	.2	5
CS-2	.2	5
CS-3	.1	5
CS-4	.3	5
CS-5	.3	5
CS-6	.1	5
CS-7	.1	10
CS-8	.1	5
CS-9	.3	5
CS-10	.3	5
CS-11	.2	5
CS-12	.3	5
CS-13	.7	10
CS-14	.5	5
CS-15	.6	5
CS-16	.3	5
CS-17	.1	5
CS-18	1.3	5
CS-19	.4	5
CS-20	.1	5
CS-21	1.1	5
CS-22	3.2	15
CS-23	.7	5
CS-24	.7	5
CS-25	.4	5
CS-26	.6	5
CS-27	.3	5
CS-28	1.2	5
CS-29	1.3	5
CS-30	1.9	20
CS-31	.2	5
CS-32	.1	5
CS-33	2.5	10
CS-34	1.2	15
CS-35	.9	10
CS-36	.8	65
CS-37	.5	5

SAMPLE	AG PPM	AU* PPB
CS-38	1.2	5
CS-39	2.0	20
CS-40	.8	20
CS-41	6.9	15
CS-42	1.6	5
CS-43	1.4	5
CS-44	2.1	15
CS-45	.5	10
CS-46	.4	5
CS-47	1.2	5
CS-48	2.8	5
CS-49	1.2	5
CS-50	.7	5
CS-51	.2	5
CS-52	.3	5
CS-53	.4	5
CS-54	.5	5
CS-55	.3	5
CS-56	.1	5
CS-57	.2	5
CS-58	.1	5
CS-59	.4	5
CS-60	.2	5
CS-61	.1	5
CS-62	.1	5
CS-63	.1	5
CS-64	.1	5
CS-65	.3	5
CS-66	.2	10
CS-67	.3	5
CS-68	.4	5
CS-69	.1	5
CS-70	.1	5
CS-71	.4	10
CS-72	.4	5
CS-73	.2	5
CS-74	.1	5

SAMPLE	AG PPM	AU* FPB
CS-75	.6	5
CS-76	.4	5
CS-77	1.6	15
CS-78	2.2	75
CS-79	1.4	10
CS-80	1.0	5
CS-81	.7	5
CS-82	.5	5
CS-83	.5	5
CS-84	.6	5
CS-85	4.0	5
CS-86	.6	5
CS-87	.6	5
CS-88	.4	5
CS-89	.8	5
CS-90	.9	5
CS-91	.5	5
CS-92	.6	5
CS-93	.6	5
CS-94	.3	5
CS-95	1.1	5
CS-96	.7	5
CS-97	.6	5
CS-98	.5	5
CS-99	.3	5
CS-100	.5	5
CS-101	.6	5
CS-102	.4	5
CS-103	.3	5
CS-104	.3	5
CS-105	.3	5
CS-106	.4	5
CS-107	.4	5
CS-108	.8	5
CS-109	.7	5
CS-110	.3	5
CS-111	.3	5

SAMPLE	AG PPM	AU* PPB
CS-112	.9	5
CS-113	.4	5
CS-114	.4	5
CS-115	.5	5
CS-116	.6	5
CS-117	.5	5
CS-118	.5	5
CS-119	.5	5
CS-120	.5	5
CS-121	.4	5
CS-122	.4	5
CS-123	.5	5
CS-124	.5	5
CS-125	.5	5
CS-126	1.9	5
CS-127	.3	5
CS-128	.3	5
CS-129	.4	5
CS-130	1.9	15
CS-131	.5	5
CS-132	.6	5
CS-133	.7	5
CS-134	1.1	5
CS-135	.6	10
CWS-1	.5	5
CWS-2	1.2	40
CWS-3	.7	25
CWS-4	.8	5
CWS-6	1.3	5
CWS-7	1.6	10
CWS-8	3.0	15
CWS-9	.7	15
CWS-10	.6	5
CWS-11	.7	5
CWS-12	.7	5
CWS-13	.6	5

SAMPLE	AG PPM	AU* PPB
CWS-14	.5	5
CWS-15	.9	10
CWS-16	1.0	5
CWSL-1 SILT	.8	5
CWSL-2 SILT	.9	5
CWSL-3 SILT	.6	5
CWSL-4 SILT	.5	5
CWSL-5 SILT	.4	5
CWSL-6 SILT	.3	5

SAMPLE	AG PPM	AU* PPB
CR-1	2.1	5
CR-2	93.0	120
CR-3	.5	5
CR-4	5.7	5
CR-5	68.0	35
CR-6	3.3	5
CR-7	2.0	5
CR-8	18.8	70
CR-9	2.0	5
CR-10	.6	5
CR-11	.6	5
CR-12	.1	5
CR-13	.3	5
CR-14	2.1	30
CR-15	.3	5
CR-16	7.7	10
CR-17	.7	5
CR-18	.2	5
CR-19	.1	5
CR-20	1.5	5
CR-21	69.0	40
CR-22	22.6	10
CR-23	3.6	5
CR-24	.3	5
CR-25	.1	5
CR-26	.4	5
CR-27	.2	15
CR-28	1.5	5
CR-29	5.3	30
CR-30	4.9	5

Fb Zn
61 100,000

ROCK SAMPLE DESCRIPTIONS

<u>Sample No.</u>	<u>Description</u>	<u>Assay</u>	
		<u>Ag (ppm)</u>	<u>Au (ppb)</u>
CR-1	Gray, fine grained, coarsely porphyritic dyke ~ 2m. Weakly limonitic.	2.1	5
CR-2	Quartz vein float found in metavolcanic/metasedimentary terrain. Fine grained, gray metallic mineral noted.	93.0	120
CR-3	Vuggy and limonitic quartz vein. Chip sample across 1.2 m (true width)	.5	5
CR-4	Limonitic, locally very vuggy quartz vein. Chip sample across 1 m.	5.7	5
CR-5	Chip sample across 0.4 m. quartz vein containing minor galena and malachite.	68.0	35
CR-6	Chip sample (across 0.8 m) of pale gray silicified footwall rock of CR-5. Minor pyrite noted	3.3	5
CR-7	Chip sample across 1.5 m. of silicified metavolcanic	2.0	5
CR-8	Chip sample across 0.9 m. of quartz vein material and footwall fault gouge	18.8	70
CR-9	Random chip sample across 5 m. of silicified & variably veined metavolcanic	2.0	5
CR-10	Chip sample across 2.5 m. of quartz vein	.6	5
CR-11	Chip sample across 0.3 m. of rusty, vuggy quartz vein	.6	5
CR-12	Random chip sample of 2 m. wide felsic dyke	.1	5
CR-13	Random chip sample across 4 m. of moderately intense quartz "flooding" in metasedimentary rocks.	.3	5
CR-14	Chip sample across 0.35 m. siliceous "fault" zone. Minor fine grained arsenopyrite	2.1	30
CR-15	Random chip sample across 7 m. area containing one or several white quartz vein(s)	.3	5
CR-16	Chip sample across 2 m. quartz vein	7.7	10
CR-17	Chip sample across .3 m. rusty, locally crystalline quartz vein	.7	5
CR-18	Chip sample across 0.15 m. of quartz vein	0.2	5
CR-19	Chip sample across 0.1 m. of quartz vein	0.1	5

ROCK SAMPLE DESCRIPTIONS CON'T

<u>Sample No.</u>	<u>Description</u>	<u>Assay</u>	
		<u>Ag (ppm)</u>	<u>Au (ppb)</u>
CR-20	Random chip sample across 3 m. of quartz veins with wedges of phyllite.	1.5	5
CR-21	Sample across 0.8 m. of quartz [±] talc pod (vein?) in serpentine. Minor [±] 1% tetrahedrite.	69.0	40
CR-22	Chip sample across 0.6 m. of greenish quartz-carbonate vein	22.6	10
CR-23	Random chip sample over 3 m. of limonitic siliceous horizon (quartzite). Pyrite content 2-3%.	3.6	5
CR-24	Rock chip of very limonitic, weakly siliceous metasediment	.3	5
CR-25	Chip sample across 1.5 m. of limonitic, siliceous rock in metavolcanics	0.1	5
CR-26	Chip sample across 0.2 m. of dark brown fine grained carbonate rich layer within the above limonite/siliceous zone.	0.4	5
CR-27	Rock chip of weakly limonitic, drusy quartz with minor (1%) arsenopyrite	0.2	15
CR-28	Random chip sample of very limonitic pyritic zone in metavolcanics. Fine grained pyrite 5-6%	1.5	5
CR-29	Random chip sample of metavolcanic talus containing semi-massive, bedded, fine grained pyrite & sphalerite. Zn=100,000 ppm (10% Zn)	5.3	5
CR-30	Random chip sample across 7 m. of highly silicified zone in metasediments	4.9	5

APPENDIX B

PERSONNEL

PERSONNEL

Field: - W. Gruenwald, B. Sc.
Sept. 20, 21, 22, 23, 1983. 2.5 days

- Earl Cook
Sept. 21, 22, 23, 1983. 2.5 days

- Mel Cook
Sept. 21, 22, 23, 1983. 2.5 days

Office: - W. Gruenwald, B. Sc.
Sept. 19, 20, 1983.
Jan. 16, 23, 26, 27, 30, 31, 1984.
Feb. 2, 3, 6, 7, 8, 9, 10, 14, 15, 1984. 7 days

APPENDIX C

STATEMENT OF EXPENDITURES

COST STATEMENT

CAY PROPERTY

<u>Personnel:</u>	W. Gruenwald, B. Sc. 9 ½ days @ \$300./day	\$2,850.00
	Earl Cook, Prospector 2 ½ days @ \$200./day	500.00
	Mel Cook, Prospector 2 ½ days @ \$200./day	500.00

Expenses and Disbursements:

Geochemical Analyses: Acme Analytical Labs Ltd. (Invoice No. 83-2317)	1,194.60
Helicopter Charter Horizon Helicopters Ltd.	1,272.88
Truck Expenses, Kamloops to Lillooet, return 4 x 4 suburban (Sept. 19-22, 1983) 4 days @ \$45.00/day; 200 miles @ .45/mile	270.00
Room & Meals (Lillooet)	167.20
Field Equipment (purchases & rentals)	185.00
Miscellaneous Expenses: Sample shipping, enlargements, printing, xeroxing, secretarial telephone, report binding.	295.92

TOTAL	<u>\$7,235.60</u>
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APPENDIX D

REFERENCES

REFERENCES

- Roddick, J.A. &
Hutchison, W.W. 1973 G.S.C. Paper 73-17
- Kerr, J.R. 1980 Summary Report on the Lillooet
Regional Programme.
- B.C. Minister of Mines
Annual Reports 1935, 1962, 1963, 1967, 1968.
- Kitson, W. & Radford, G. August, 1981 - Field Notes & Report
by: DIHEDRAL EXPLORATION INC.
- Gruenwald, W. Oct. 30, 1981 - Geological and
Geochemical Report on the Mel #1
Claim, Lillooet Mining Division,
B.C.

APPENDIX E

WRITER'S CERTIFICATE

Werner GRUENWALD, B. Sc.

Geologist

#6 NICOLA PLACE, 310 NICOLA ST., KAMLOOPS, B.C. V2C 2P5 • TELEPHONE (604) 374-0544

CERTIFICATE

I, WERNER GRUENWALD, OF KAMLOOPS, BRITISH COLUMBIA, DO HEREBY CERTIFY THAT:

- (1). I am a geologist residing at 1294 Highridge Drive, Kamloops, British Columbia, and employed by Kerr, Dawson & Associates Ltd., of Suite #206 - 310 Nicola Street, Kamloops, B.C.
- (2). I am a graduate of the University of British Columbia, B. Sc. (1972), and a fellow of the Geological Association of Canada. I have practised my profession for 12 years.
- (3). I am the author of this report which describes the results of the geochemical and geological exploration programme on the Cay Property, Lillooet Mining Division, British Columbia.

KERR, DAWSON AND ASSOCIATES LTD.,



Werner Gruenwald

Werner Gruenwald, B. Sc.,
GEOLOGIST

KAMLOOPS, B.C.

February 15, 1984.

LEGEND

- 7000 TOPOGRAPHIC CONTOUR IN FEET (A.S.L.)
- CREEK, LAKE
- OLD CAT ROAD
- CLAIM BOUNDARY WITH LEGAL CORNER POST (L.C.P.)
- SOIL LOCATIONS (1981) WITH ANOMALOUS ARSENIC (As-PPM), SILVER (Ag-PPM), GOLD (Au-PPB)
- CR-27 ROCK SAMPLE LOCATION (1983)
- CS-40 SOIL/SILT SAMPLE LOCATION (1983)
- GEOLOGIC CONTACT (WITH DIP WHEN OBSERVED)
- BEDDING, SCHISTOSITY ATTITUDES: VERTICAL, INCLINED
- VEIN, FAULT (SHEAR): VERTICAL, INCLINED

LITHOLOGIES

- 3 ULTRABASIC ROCKS - REDDISH-SPAR WEATHERING SERPENTINE
- 2,2a BIOTITE GRANODIORITE, 2a FELDSPAR PORPHYRYIC GRANODIORITE
- 1,1a BRIDGE RIVER GROUP METASEDIMENTS - PHYLITE, ARGILLITE, CHERT, QUARTZITE, (1a) METAVOLCANICS - CHLORITIC TUFFS, FLOWS, AGGLOMERATES - LOCALLY EPIDOTIZED

W. A. COOK

COMPILATION PLAN
SHOWING: GEOLOGY & GEOCHEM ANOMALIES (1983)

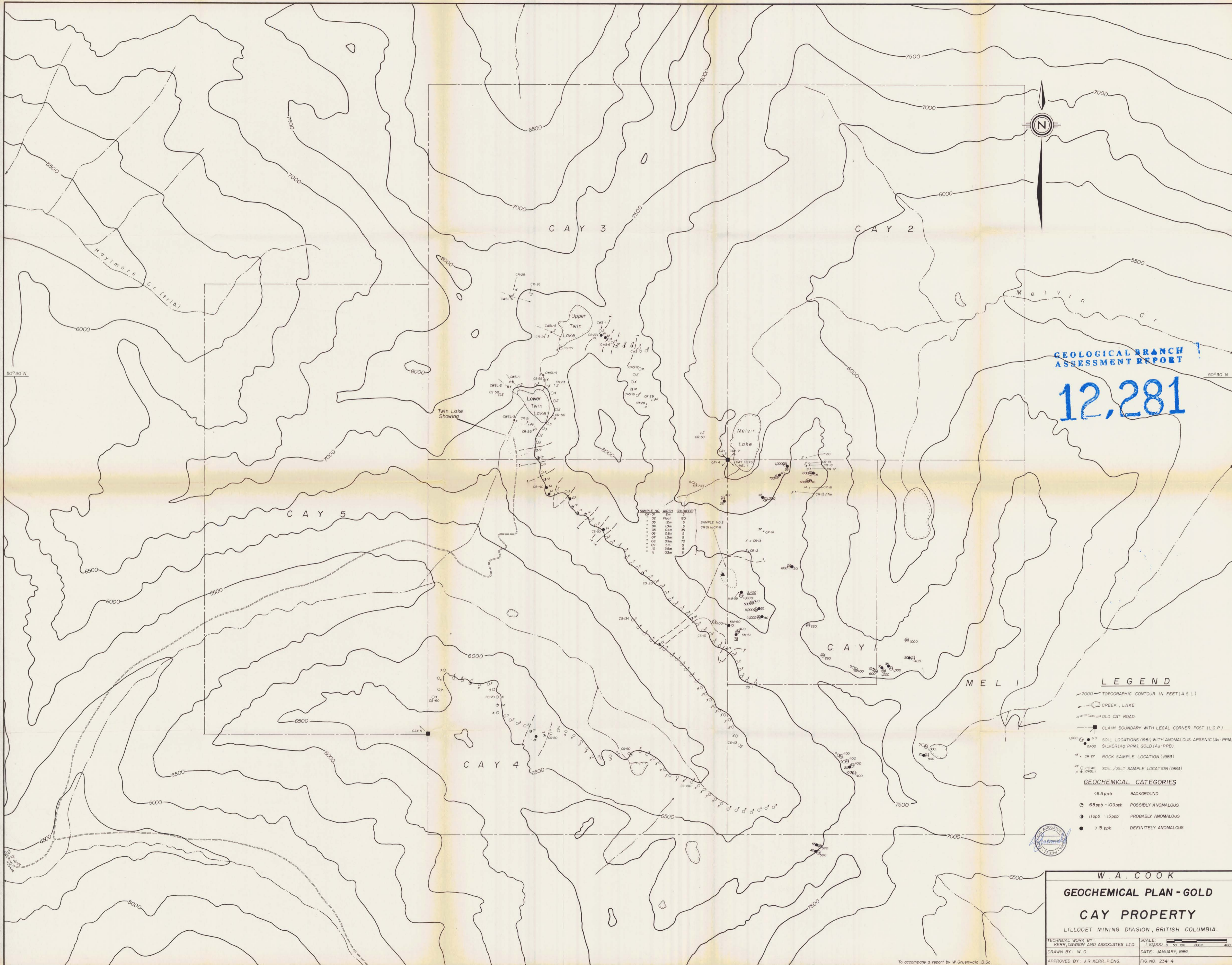
CAY PROPERTY

LILLOOET MINING DIVISION, BRITISH COLUMBIA.

TECHNICAL WORK BY: KERR, DAWSON AND ASSOCIATES LTD.
DRAWN BY: W. G.
APPROVED BY: J. R. KERR, P. ENG.

SCALE: 1:10,000
DATE: JANUARY, 1984
FIG NO. 234-3

NOTE:
GOLD ANOMALY (0.65ppb) FROM FIG. NO. 234-4
SILVER ANOMALY (0.6ppm) FROM FIG. NO. 234-5



GEOLOGICAL BRANCH
ASSESSMENT REPORT
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LEGEND

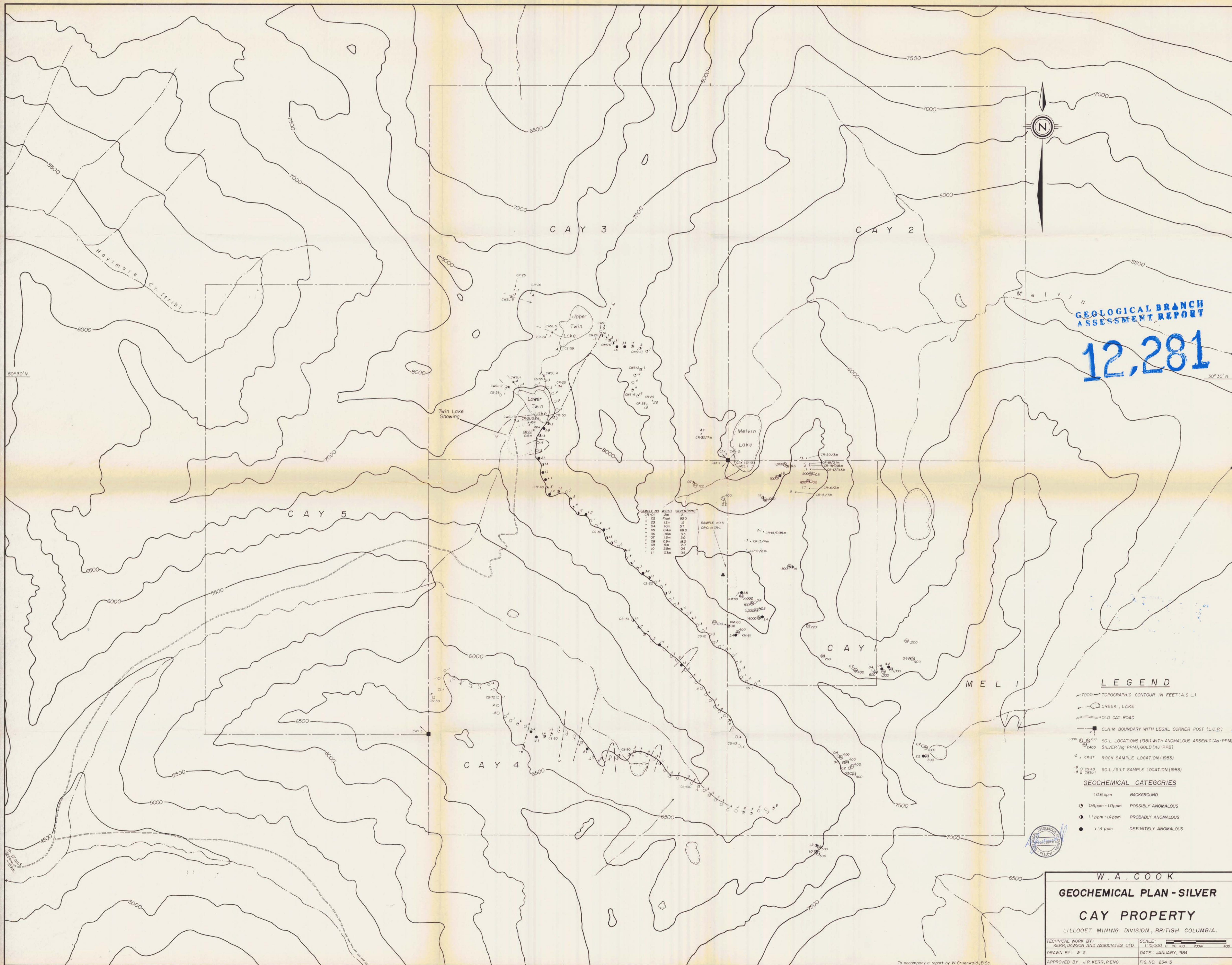
- 7000 TOPOGRAPHIC CONTOUR IN FEET (A.S.L.)
 - CREEK, LAKE
 - OLD CAT ROAD
 - CLAIM BOUNDARY WITH LEGAL CORNER POST (L.C.P.)
 - SOIL LOCATIONS (1981) WITH ANOMALOUS ARSENIC (As - PPM), SILVER (Ag - PPM), GOLD (Au - PPB)
 - ROCK SAMPLE LOCATION (1983)
 - SOIL/SILT SAMPLE LOCATION (1983)
- GEOCHEMICAL CATEGORIES**
- < 6.5 ppb BACKGROUND
 - 6.5 ppb - 10.9 ppb POSSIBLY ANOMALOUS
 - 11 ppb - 15 ppb PROBABLY ANOMALOUS
 - > 15 ppb DEFINITELY ANOMALOUS



W. A. COOK
GEOCHEMICAL PLAN - GOLD
CAY PROPERTY
 LILLOOET MINING DIVISION, BRITISH COLUMBIA.

TECHNICAL WORK BY KERR, DAWSON AND ASSOCIATES LTD. DRAWN BY: W. G. APPROVED BY: J. R. KERR, P. ENG.	SCALE: 1:10,000 DATE: JANUARY, 1984 FIG NO 234-4
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To accompany a report by W. Gruenwald, B.Sc.



GEOLOGICAL BRANCH
ASSESSMENT REPORT

12,281

LEGEND

- 7000 TOPOGRAPHIC CONTOUR IN FEET (A.S.L.)
 - CREEK, LAKE
 - OLD CAT ROAD
 - CLAIM BOUNDARY WITH LEGAL CORNER POST (L.C.P.)
 - SOIL LOCATIONS (1981) WITH ANOMALOUS ARSENIC (As - PPM), SILVER (Ag - PPM), GOLD (Au - PPB)
 - ROCK SAMPLE LOCATION (1983)
 - SOIL/SILT SAMPLE LOCATION (1983)
- GEOCHEMICAL CATEGORIES**
- < 0.6 ppm BACKGROUND
 - 0.6 ppm - 1.0 ppm POSSIBLY ANOMALOUS
 - 1.1 ppm - 1.4 ppm PROBABLY ANOMALOUS
 - > 1.4 ppm DEFINITELY ANOMALOUS

SAMPLE NO	DEPTH	SILVER (PPM)
CR-01	2m	21.0
CR-02	5m	21.0
CR-03	10m	21.0
CR-04	15m	21.0
CR-05	20m	21.0
CR-06	25m	21.0
CR-07	30m	21.0
CR-08	35m	21.0
CR-09	40m	21.0
CR-10	45m	21.0
CR-11	50m	21.0



W.A. COOK
GEOCHEMICAL PLAN - SILVER
CAY PROPERTY
LILLOOET MINING DIVISION, BRITISH COLUMBIA.

TECHNICAL WORK BY: KERR, DAWSON AND ASSOCIATES LTD.	SCALE: 1:10,000
DRAWN BY: W.G.	DATE: JANUARY, 1984
APPROVED BY: J.R. KERR, P.ENG.	FIG. NO. 234-5

To accompany a report by W. Gruenwald, B.Sc.