

81-# 1109 — 9876

GEOLOGICAL AND GEOCHEMICAL REPORT

- ON THE -

RELAY CREEK PROPERTY
CLINTON MINING DIVISION, BRITISH COLUMBIA

- FOR -

BARRIER REEF RESOURCES,

904 - 675 WEST HASTINGS ST.,

VANCOUVER, B. C. V6B 1N2

COVERING: RELAY #4 (20 UNITS), RELAY #5 (18 UNITS)
RELAY #6 (20 UNITS)

WORK PERFORMED: JULY 1, 1981 TO DECEMBER 15, 1981

LOCATION: (1). $51^{\circ}11'N$; $122^{\circ}56'W$
(2). NTS MAP 920/2W
(3). 90 KM NW OF LILLOOET, B. C.

PREPARED BY

KERR, DAWSON & ASSOCIATES LTD.

#6 Nicola Place, 310 Nicola Street
Kamloops, B.C.

J. M. DAWSON, P. ENG.

DECEMBER 15, 1981



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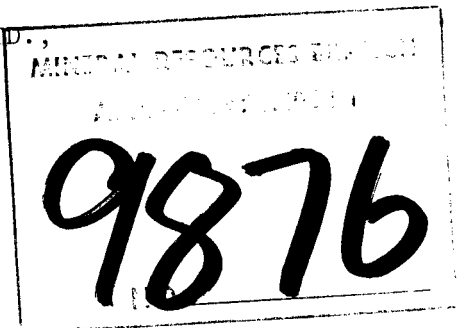


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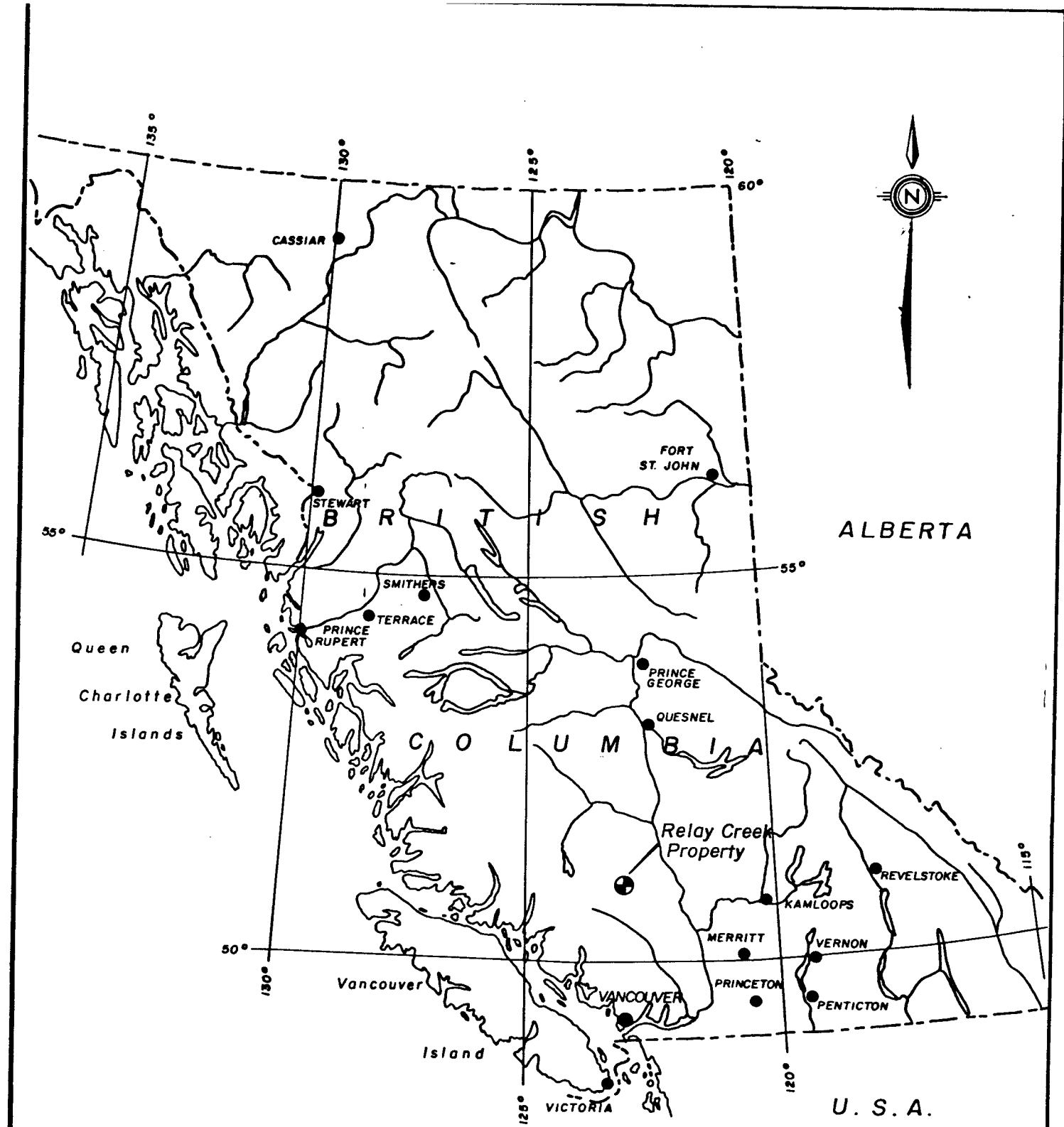
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BARRIER REEF RESOURCES LTD.	
LOCATION MAP RELAY CREEK PROPERTY	
LILLOOET & CLINTON MINING DIVISIONS BRITISH COLUMBIA	
Technical Work by: Kerr, Dawson & Assoc. Ltd.	Date : Jan. 1981
Scale : 1cm. = 87 km.	Dwg No. 231-B-1

Introduction;

This report describes a detailed exploration programme on the Relay claims, Clinton Mining Division, British Columbia.

Preliminary work on this property in 1980 outlined two areas of coincident, anomalous, gold-arsenic values.

The purpose of the present programme was to define and explain the gold anomalies.

Geological and geochemical surveys were performed and approximately 4 km. of access road was constructed. The results of this work are detailed on maps accompanying this report.

Summary and Conclusions:

1. The Relay Creek property consists of 7 contiguous metric claims, aggregating 118 units located in moderate to steep terrain in the Yalakom River district of southwestern British Columbia. Access is by unimproved dirt road from the Lillooet - Goldbridge highway via Tyaughton Lake and Relay Creek.
2. Previous work dates back to 1970 when the property was first staked by Home Oil and partners. Geological and geochemical surveys and limited diamond drilling was done during 1971 - 1973 on porphyry type copper-molybdenum occurrences. In 1979 the southern part of the property was acquired by Clear Mines and extensive geochemical and geophysical surveys were carried out. This work was not recorded and the claims lapsed in March, 1980. In 1979 and 1980 Barrier Reef Resources Ltd. staked the Dash and Relay claims and carried out reconnaissance and detailed geochemical surveys, geological mapping and road construction. In 1981 the Relay claims were abandoned and restaked and detailed geochemical soil and rock sampling was concentrated on the 'A' and 'B' gold-arsenic anomalies. Four km. of additional access road was constructed.
3. The property is underlain by late Mesozoic clastic sediments and lesser volcanics intruded by a swarm of 'Bendor' type feldspar porphyry sills. These sills are mostly confined to a central zone of Taylor Creek black clastic, approximately 1500 meters wide. This zone trends northwesterly and contains two major and several minor, linear, gold soil anomalies.
4. Gold-arsenic mineralization is believed to be primarily of two types: (a) relatively high grade (1 - 6 gms Au) values found principally in narrow, epithermal quartz veins and (b) much lower grade material (50 - 300 PPB Au) found associated with disseminated pyrite primarily in altered portions of feldspar porphyry dikes.

5. The setting of this mineralization is similar to that found at high levels in a typical epithermal system because of: (a) the high gold:silver ratio (b) high arsenic content and (c) extensive carbonate veining with relatively minor quartz. According to the model of Buchanan (see figure 231B-~~10~~₉) the optimum precious metal zone should be about 200 meters below this level.
6. The work thus far on the Relay Creek property indicates excellent potential for the development of both high grade vein type mineralization or low grade bulk tonnage values. Therefore additional exploration and drilling is required to fully test this potential.

Property:

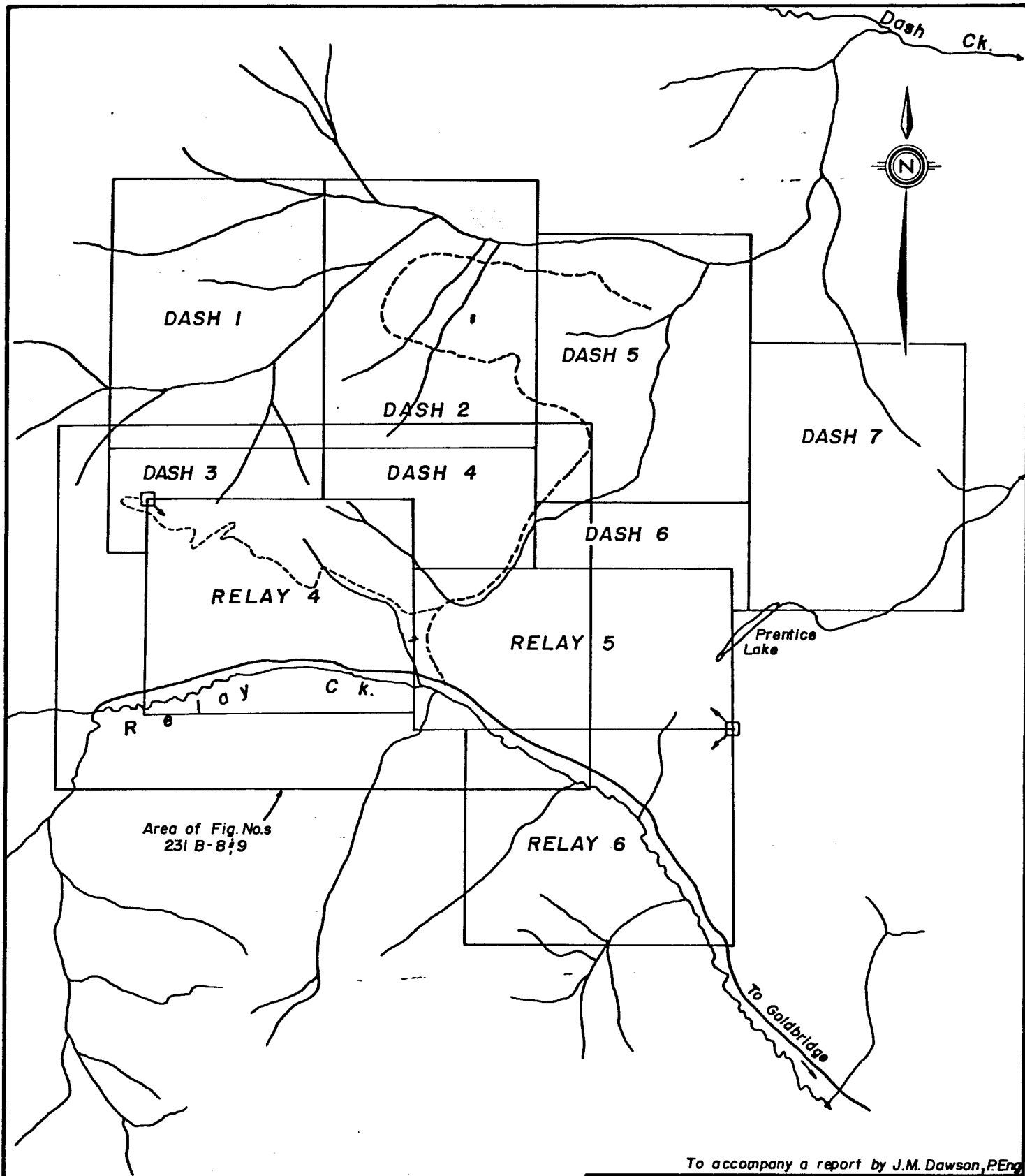
The Relay Creek property consists of 7 contiguous, metric claims aggregating 118 units as follows:

Relay "B" Group			
<u>Claim Name</u>	<u>Record No.</u>	<u>Tag No.</u>	<u>Expiry date</u>
Relay 4	1074	68607	July 23, 1982
Dash 1	376	47673	August 10, 1982
Dash 3	378	47676	August 10, 1984

Relay "C" Group			
Relay 5	1075	68608	July 23, 1982
Relay 6	1076	68609	July 23, 1982
Dash 2	377	47675	August 10, 1983
Dash 4	379	47677	August 10, 1984

The registered owner of these claims is Barrier Reef Resources Ltd.

Disposition of these claims is shown on figure 231B-2.



Relay Mountain

To accompany a report by J.M. Dawson, P.Eng.

BARRIER REEF RESOURCES LTD.

**CLAIM MAP
RELAY CREEK PROPERTY**

LILLOOET & CLINTON MINING DIVISIONS, B.C.

Tech. Work By: Kerr, Dawson & Assoc. Ltd. Scale: 1:50,000

Drawn By: W.G. Date: Jan. 1981

Approved By: J.M.D. Fig No. 231 B-2

N.T.S NO.

Location and Access:

The property is located in southwestern British Columbia about 40 km north of Goldbridge and approximately 90 km northwest of Lillooet. Approximate geographic center of the property is at $51^{\circ}11'N$ and $122^{\circ}56'W$.

Access is gained by road from the Lillooet - Goldbridge highway via the Tyaughton Lake road and the Relay Creek road. Road distance is about 60 km from Goldbridge and driving time is about 2 hours.

Recent cat roads have been constructed on the property so that access to all parts of the claim block is excellent.

Physiography and Vegetation;

The property now consists of a northwesterly-trending block which covers parts of the headwaters of Relay Creek and Dash Creek drainages as well as the upland divide area between them. Topography is steep to moderate but there are no areas which are not negotiable on foot. Elevations vary from more than 7700 feet a.s.l. on the crest of the ridge marking the divide down to about 5500 feet along the valleys of Relay and Dash Creeks.

Areas above 6500 feet a.s.l. are usually bare with grassy meadows in the lower areas and talus covered areas on steeper slopes, particularly the south facing slopes in the western half of the block. The lower areas are generally well treed with pine or on north facing slopes, a denser growth of mature pine, fir and spruce.

History:

Parts of the subject property were first staked in 1970 by Sheba Syndicate (Home Oil Ltd.) to cover a porphyry-type copper-molybdenum occurrence along Relay Creek. From 1971 to 1973 geological, geochemical and geophysical surveys were carried out. In 1974, four shallow diamond drill holes aggregating about 1500 feet, were bored.

The area now covered by the Relay claims was staked by Clear Mines Ltd. in 1979 and extensive exploration work including geological mapping, grid layout, geochemical soil sampling as well as magnetometer and induced polarization surveys was performed. This work was not recorded and the claims lapsed in the spring of 1980.

Barrier Reef Resources carried out regional geochemical exploration in the district in 1978 and 1979 and staked the Dash claims in August, 1979 and the Relay claims in April 1980.

Geochemical soil and silt sampling programmes were carried out on the Dash claims in 1979 and 1980 and on the Relay claims in 1980. Approximately 10 km. of access road was constructed from Relay Creek to Dash Creek during 1980.

The Original Relay claims (#1 - #3 inc.) were abandoned and restaked as Relay #4, 5 and 6 in July 1981.

The present programme consisted of grid layout on the Relay 'A' and 'B' anomalies, detailed soil and rock sampling as well as geological mapping of these anomalies and the construction of about 4 km. of access road.

Geology:

The property is underlain by clastic sediments and minor volcanics of the Taylor Creek and Kingsvale Groups intruded by a swarm of 'Bendor' type porphyry sills. There is a prominent northwest-trending, structural grain on the property along which bedding, faults, dikes and some veins are aligned.

The oldest rocks are correlated with the Lower Cretaceous, Taylor Creek Group. This unit is comprised of dark greenish gray graywacke, shale, siltstone and monomictic conglomerate and breccia. The coarser clastics consist of subrounded to angular fragments of andesite up to 50 cm. across. The graywacke horizons - by far the most common, consist of thick bedded poorly sorted layers with bedding only rarely seen. Regionally these rocks are relatively unaltered, however in the immediate vicinity of the sill swarms they are commonly converted to hornfels and locally siliceous skarn.

Northeast of and in fault contact with the Taylor Creek group is a sedimentary sequence belonging to the Upper Cretaceous Kingsvale Group. This package consists of a distinctive series of light brown, polymictic, moderately well sorted pebble conglomerate with intercalated sandy beds and lenses. These rocks strike northwesterly and dip steeply northeast.

Southwest of the outcrop area of Taylor Creek strata, a sequence of greenish andesitic flows and thick bedded tuffs lies in apparent conformity above the Taylor Creek. This sequence is tentatively correlated with the volcanic facies of the Kingsvale group, however it may be part of the Taylor Creek succession.

A swarm of "Bendor" type porphyry sills intrudes the Taylor Creek rocks and to a lesser extent the Kingsvale volcanic rocks, forming a northwesterly trending zone about 1500 meters wide. Within this zone the sills make up about 50% of the rock volume and vary from a few meters to more than 250 meters thick.

These bodies frequently pinch and swell or split into several narrow sills. To the northeast within the Kingsvale sedimentary facies only two narrow northeasterly trending, porphyry dikes were found.

The sills vary from feldspar porphyry to feldspar-hornblende porphyry depending on whether a significant amount of hornblende needles accompany the K-feldspar phenocrysts. On the whole these rocks seem compositionally similar, however they vary greatly in grain size. The most common type is a grey to orange brown rock having approximately 30% to 40% rounded feldspar phenocrysts in a greyish feldspathic matrix.

Locally many of these sills have undergone varying modes of alteration. This can vary from weak to advanced argillic alteration, moderate chloritization and weak to intense pyritization. An additional type of alteration not strictly confined to the intrusive rocks is a type of carbonitization. This usually manifests itself as linear zones of orange - brown colour rock intensely sheared and pervaded by numerous veins or stockworks of rusty weathering carbonate (ankerite?). Such zones may be as much as 30 meters wide and contain up to 50% carbonate. They can be intermittently traced for at least several hundred meters.

The bulk of the "Bendor" porphyry sills and carbonate alteration zones are present in the band of Taylor Creek sediments and preliminary evidence suggests that these rocks may form the core of a steeply dipping anticlinal structure. This fold trends northwesterly as do the bulk of the carbonate alteration zones and numerous narrow shear and gouge zones. A number of prominent linears - presumably through-going faults also share this orientation.

Mineralization:

Disseminated pyrite is common in parts of many of the feldspar porphyry dikes and hornfelsed adjacent sediments. This is particularly true in the southeast corner of Relay "A" grid and on the south side of Relay Creek (near the property boundary) where locally up to 10% - 15% disseminated pyrite may be found. This pyritic zone seems to form a halo around the low grade, copper-molybdenum occurrence found near the valley bottom west of the campsite (see 1980 Relay Report) and does not seem to be related to the gold-arsenic mineralization.

Locally disseminated pyrrhotite is common in hornfelsed Taylor Creek sediments. Two small areas of siliceous skarn locally contain up to 10% pyrite and pyrrhotite with traces of chalcopyrite.

Arsenopyrite was noted as scattered tiny, fine grained, patches in narrow quartz veins near the northwest corner of Relay 'A' grid. Some of the very fine grained, disseminated pyrite noted in local areas of some of the porphyry sills may be in part arsenopyrite.

A large number of rock geochemical samples were taken in an attempt to discover the source of the gold-arsenic mineralization. With regard to this mineralization a number of conclusions can be drawn:

- (a). The extensive carbonate zones while they may be sometimes weakly anomalous, do not contain any areas of higher grade, gold-bearing material.
- (b). Higher grade values seem to be confined to narrow (4-20cm) quartz veins or gouge zones with quartz veinlets in which arsenopyrite is sometimes found.
- (c). There are some areas (of unknown dimensions) of pyritic wallrock, primarily feldspar porphyry, which carry very low grade (50 - 300 PPB) gold values.

- (d). Silver values are uniformly low and arsenic geochemical "highs" directly correlate with gold geochemical highs. This suggests that the gold values occur in a very high level, epithermal system (Buchanan, 1981).

Geochemistry:

Contour soil sampling during 1980 outlined two main areas of coincident, anomalous gold-arsenic.

To better define and evaluate these anomalies, both areas were gridded with east-west baselines and north-south crosslines at 100 meter intervals (see figure 231B-9). Soil or talus fines samples were collected at 50 meter stations along each crossline. A total of 840 samples were collected, 502 from 'A' grid (western) and 338 from 'B' (eastern) grid. Sample stations were marked by wooden pickets inscribed with the appropriate grid co-ordinates.

After collection samples were stored and shipped in water-proof kraft envelopes.

In this alpine terrain, there are no well-defined soil horizons although material gathered from relatively flat areas at the lower elevations looked to be typical red-brown 'B' horizon material. Most material collected from higher elevations in particular on the western grid, would have to be classified as talus fines material.

Soil samples were analysed for gold only in the Vancouver laboratories of Acme Analytical Ltd. Laboratory methodology involved fire assay extraction with analysis by atomic absorption.

A statistical analysis of the data was performed by calculating the mean and standard deviation and classifying the data into the following categories:

Background	-	0 - Mean
Possibly Anomalous	-	Mean - (Mean + 1 Std. Dev.)
Probably Anomalous	-	(Mean + 1 Std. Dev.) - (Mean + 2 Std. Dev.)
Definitely Anomalous	-	> (Mean + 2 Std. Dev.)

The values were plotted on a 1:5000 scale basemap and the appropriate categories of anomalous values were outlined (see figure 231B-9).

The results outline two main northwesterly trending anomalous areas separated by approximately 2000 meters (east-west). However the data also suggests that there may be several weaker, but parallel or en echelon anomalous zones lying between them.

The western or 'A' anomaly is the largest and strongest, being about 1500 meters long (NW - SE) by about 500 meters wide. Within this zone there are several areas varying from 50 meters square to 150 meters square where soil values average better than 1000 PPB gold and results as high as 4800 PPB have been obtained.

The eastern or 'B' anomaly is smaller, weaker and appears to have a more equidimensional shape, however this may be caused in part by mechanical dispersion. The core area of this anomaly trends northwesterly, is about 500 meters long by about 100 meters wide and averages about 400 PPB gold.

Between these two anomalous areas there are a number of smaller and weaker anomalous areas which appear to have the same orientation as the two main zones. It is believed that these represent smaller or more poorly exposed mineralized zones similar to those producing the main anomalies.

D, BUT LOW ER, HIGH A_s,
 CO₃⁺⁺⁺
 SiO₂⁻

As, Sb, Hg
 Au ~ 20
 O₂⁺⁺⁺
 1
 253

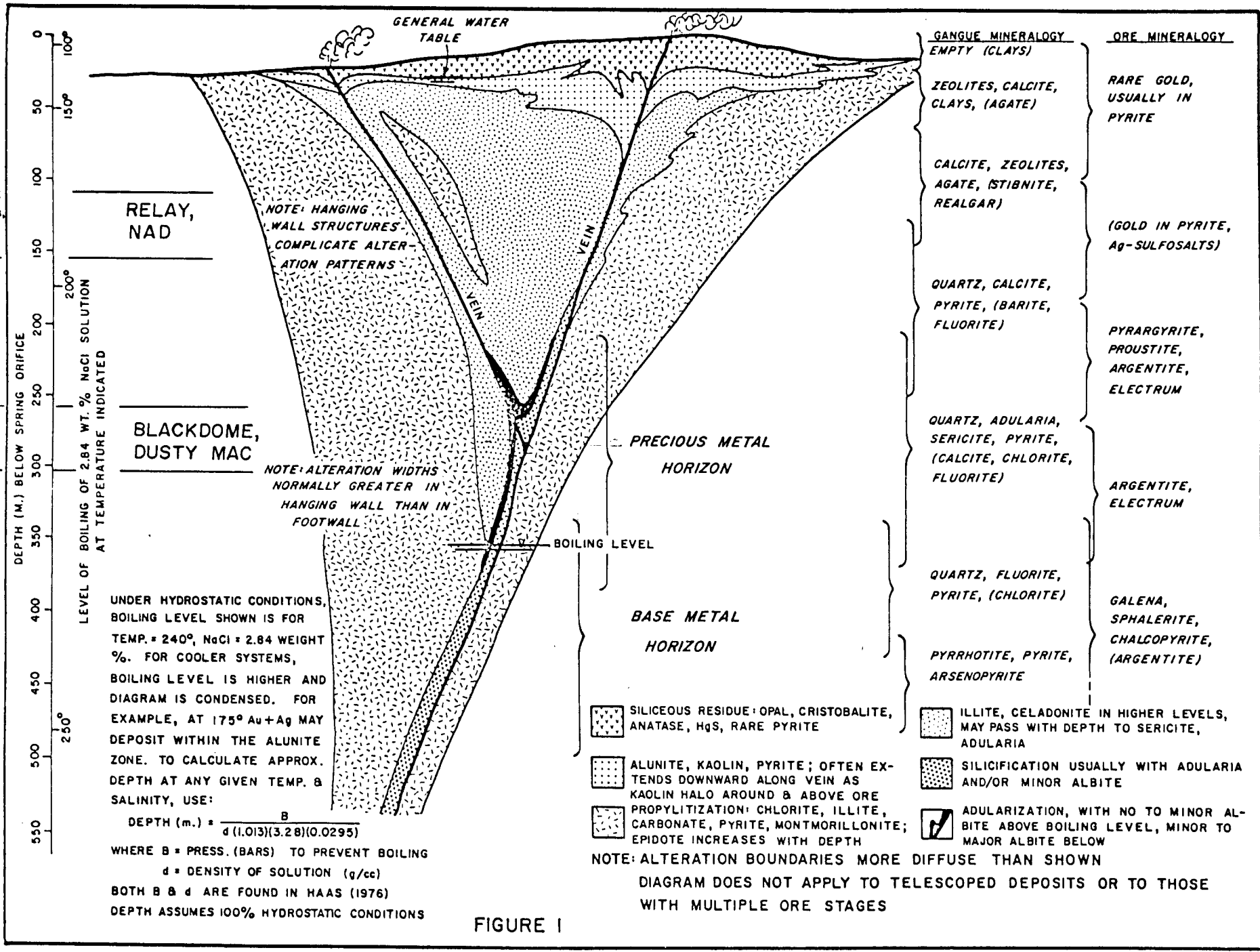


FIGURE 1

Exploration Potential:

Mapping, prospecting and rock sampling seems to indicate that higher gold values (1 to 6 gms) are confined to a number of narrow quartz veins. Larger areas of low grade (50 - 300 PPB) pyritic rock (chiefly in some of the porphyry dikes) contribute significantly to the areas of anomalous soils. The size and grade of these "low grade" zones has not been outlined and indeed there may be some areas of higher grade disseminated mineralization currently unrecognized.

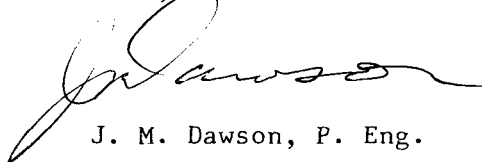
Although a case can be made for residual concentration to produce the large areas of anomalous "soils" encountered on the subject property it is difficult to conceive of the two types of mineralization recognized contributing solely to such large areas of +1000 PPB material.

Obviously there is significant potential here for outlining a bulk tonnage gold deposit if a significant cluster of the quartz veins can be found within a "low grade" mineralized zone where the average tenor was in the area of from .5 to 1.0 grammes per tonne.

Further detailed exploration is required to fully evaluate this potential.

respectfully submitted:

KERR, DAWSON AND ASSOCIATES LTD.,



J. M. Dawson, P. Eng.

GEOLOGIST

Kamloops, B. C.

December 15, 1981

APPENDIX A

Description of Rock Geochemical Samples

DESCRIPTIONS OF ROCK GEOCHEMICAL SAMPLES (ASPINALL)

RELAY CLAIMS

<u>SAMPLE #</u>		<u>Au</u> <u>(PPB)</u>	<u>As</u> <u>(PPM)</u>
R - 1	Cherty volcanic breccia - fragments are primarily cemented by calcite.	5	30
R - 2	Cherty volcanic breccia; cemented by calcite - frequent calcite veining.	5	26
R - 3	Black argillite; veined by calcite.	5	120
R - 4	Light buff gray chert; veined by calcite.	5	38
R - 5	Chert breccia with calcite stringers.	5	25
R - 6	Chert with calcite veinlets.	5	93
R - 7	Chert with calcite veinlets.	5	40
R - 8	Tuffaceous mudstone with calcite veinlets.	5	18
R - 9	Argillite breccia.	5	40
R - 10	Reddish chert with calcite veinlets.	10	175
R - 11	Calcareous tuff with frequent calcite veining.	5	41
R - 12	Calcareous graywacke.	5	17
R - 14,	Slate with frequent calcite veinlets.	80	74
R - 15	Feldspar porphyry with thin calcite veinlets - no visible sulphides.	5	29

continued

DESCRIPTIONS OF ROCK GEOCHEMICAL SAMPLES (ASPINALL) (continued)

RELAY CLAIMS

<u>SAMPLE #</u>		<u>Au</u> <u>(PPB)</u>	<u>As</u> <u>(PPM)</u>
R - 16	Feldspar porphyry with minor quartz veining.	15	40
R - 17	Cherty limestone with some calcite veins.	5	58
R - 18	Cherty limestone with calcite veins.	25	36
R - 19	Chert conglomerate and grit with calcite veins.	5	12
R - 20	Calcareous chert with calcite veining.	5	92
R - 21	Calcite vein-breccia in fine grained conglomerate and grit.	5	34
R - 22	Calcite vein breccia in cherty limestone.	5	13
R - 23	Volcanic conglomerate with calcite veinlets.	5	15
R - 24	Greenish volcanic breccia and conglomerate with calcite breccia vein fillings.	5	10
R - 25	Fine grained felsite and quartz-feldspar porphyry.	180	54
R - 26	Silicified feldspar porphyry with (?) arsenopyrite.	50	43
R - 27	Silicified feldspar porphyry with (?) arsenopyrite.	15	8
R - 28	Silicified feldspar porphyry with minor pyrite and arsenopyrite.	5	35
R - 29	Gray siltstone with minor pyrite.	5	5

continued

DESCRIPTIONS OF ROCK GEOCHEMICAL SAMPLES (ASPINALL) (continued)

RELAY CLAIMS

<u>SAMPLE #</u>		<u>Au</u> <u>(PPB)</u>	<u>As</u> <u>(PPM)</u>
R - 30	Quartz-feldspar porphyry with minor (?) arsenopyrite.	220	24
R - 31	Cherty greenstone with pyrite.	160	32
R - 32	Cherty siltstone with pyrrhotite and arsenopyrite.	370	352
R - 33	Feldspar porphyry with arsenopyrite.	15	6
R - 34	Heavily gossanized feldspar porphyry boulder train.	180	37
R - 35	Feldspar porphyry with pyrrhotite and/or arsenopyrite.	25	5
R - 36	Feldspar porphyry with minor (?) pyrrhotite.	165	2
R - 37	Feldspar porphyry with minor pyrrhotite.	25	5
R - 38	Feldspar porphyry with minor sulphides - possibly arsenopyrite.	5	12
R - 39	Carbonate breccia filling with arsenopyrite or (?) stibnite; ferruginous yellow carbonate.	15	3679
R - 40	Breccia of graywacke and siltstone fragments - cemented and veined by calcite.	110	146
R - 41	Andesitic (?) volcanics with veinlets of carbonate.	5	25
R - 42	Silicified feldspar porphyry with arsenopyrite as (?) disseminated grains.	35	237
R - 43	Fine grained feldspar porphyry.	5	9

continued

DESCRIPTIONS OF ROCK GEOCHEMICAL SAMPLES (ASPINALL) (continued)

RELAY CLAIMS

SAMPLE #		Au (PPB)	As (PPM)
R - 44	Greenish gray tuffaceous siltstone.	5	50
R - 45	Breccia zone cemented by calcite and containing minor sulphides (?) pyrite.	5	148
R - 46	Feldspar porphyry with arsenopyrite.	35	8
R - 47	Fine grained gray siltstone.	25	56
R - 48	Fine grained feldspar porphyry with minor pyrite.	15	18
R - 49	Feldspar porphyry.	25	5
R - 50	Hornfelsed sediments with disseminated pyrrhotite.	5	16
R - 51	Feldspar porphyry with argillic alteration and minor disseminated pyrite.	5	4
R - 52	Feldspar porphyry with argillic alteration and minor disseminated pyrite.	5	11
R - 53	Feldspar porphyry with minor pyrite.	5	18
R - 54	Feldspar porphyry with minor quartz veinlets; limonite stained.	5	65
R - 55	Feldspar porphyry with minor disseminated pyrite.	75	186

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DESCRIPTION OF ROCK GEOCHEMICAL SAMPLES (continued)

RELAY CLAIMS

SAMPLE #		<u>Au</u> (PPB)	<u>Ag</u> (PPM)
S - 1	Grab sample of 8 cm wide rusty gouge zone at margin of feldspar porphyry dike; contains several narrow (5 mm) quartz stringers.	25	0.3
S - 2	Grab sample of brecciated and silicified feldspar porphyry with minor scattered fine grained pyrite.	20	0.2
S - 3	Narrow, orange-brown gouge zone in hornfels.	10	0.3
S - 4	Grab sample of skarny, calcareous graywacke with ~ 15% disseminated pyrite, pyrrhotite and minor chalcopyrite - zone is about one meter wide.	5	0.4
S - 5	Sample of quartz-carbonate vein about 12 cm. wide.	410	0.4
S - 6	Sample of 15 cm wide quartz-carbonate vein.	40	0.1
S - 7	Grab sample of shear zone with minor quartz-carbonate stringers; zone is 60 cm. wide.	10	0.1
S - 8	Grab sample of 20 cm. wide zone of sheared, vuggy quartz.	5	0.7
S - 9	Sample of 10 cm. wide zone of silicification in altered porphyry dike.	15	0.2
S - 10	Selected sample of 10 cm. zone of narrow quartz veinlets in feldspar porphyry.	5	0.2
S - 11	Selected sample of 3 cm. wide vuggy quartz vein.	95	0.3

DESCRIPTION OF ROCK GEOCHEMICAL SAMPLES (continued)

RELAY CLAIMS

SAMPLE #		<u>Au</u> (PPB)	<u>Ag</u> (PPM)
S - 12	Selected sample of 12 cm. wide zone of silicified and brecciated feldspar porphyry.	20	0.3
S - 13	Grab sample of blue-grey silicified feldspar porphyry containing minor disseminated pyrite and (?) pyrrhotite.	10	0.1
S - 14	Selected piece of vuggy calcite cemented vein breccia.	5	0.1
S - 15	Grab sample of 15 cm. wide calcite breccia zone.	40	0.1
S - 16	Chip sample across 2.2 meter wide zone of vuggy calcite veins and stockworks or breccias.	75	0.2
S - 17	Grab sample of 12 cm. wide vein of vuggy calcite with minor quartz and traces of ? pyrite.	105	0.5
S - 18	Grab sample of 7 cm. wide banded and vuggy quartz vein.	765	0.8
S - 19	Grab sample of zone about 30 cm. wide of altered, orange brown, porphyry breccia cemented by vuggy and coarse calcite.	45	0.2
S - 20	Grab sample of 5 cm. wide zone of narrow vuggy quartz stringers.	20	0.2
S - 21	Grab sample of 6 cm. wide quartz vein in hornfelsed sediments.	3900	0.7

DESCRIPTION OF ROCK GEOCHEMICAL SAMPLES (continued)

RELAY CLAIMS

SAMPLE #		Au (PPB)	Ag (PPM)
S - 22	Grab sample of 15 cm. wide gouge zone with calcite stringers.	1550	0.6
S - 23	Selected sample of quartz vein float with minor disseminated arsenopyrite.	435	0.2
S - 24	Grab sample from quartz vein rubble with a few visible, tiny grains of arsenopyrite.	2100	5.5
S - 25	Grab of rubble from weathered quartz-calcite vein; no visible sulphides.	1175	0.2
S - 26	Chip sample of narrow silicified zone (10-15 cm. wide) adjacent to prominent carbonate-limonite zone in altered feldspar porphyry.	105	0.5
S - 27	Orange - brown, altered feldspar - hornblende porphyry with very minor, disseminated pyrite.	11	0.2
S - 28	Greenish grey, chloritized feldspar porphyry with very minor, fine grained pyrrhotite.	11	<0.2
S - 29	Grey to orange brown, carbonated feldspar porphyry; thin stringers of ankerite, partly altered to limonite on weathered surface; no sulphides visible.	17	0.4
S - 30	Selected sample of argillized feldspar porphyry containing 2 cm. wide vein of dense cryptocrystalline quartz with traces of (?) arsenopyrite.	27	< 0.2

DESCRIPTION OF ROCK GEOCHEMICAL SAMPLES (continued)

RELAY CLAIMS

SAMPLE #		<u>Au</u> <u>(PPB)</u>	<u>Ag</u> <u>(PPM)</u>
S - 31	Selected pieces of bleached wall rock cut by 4 cm. wide quartz vein with scattered blebs of arsenopyrite and pyrite (sulphides less than 2% of rock volume); quartz vein makes up 70% of rock volume.	2000	7.2

APPENDIX B

Personnel

PERSONNEL

J. M. Dawson, P. Eng.	Geologist	Sept. 20, 21, 22, 25, 1981 Nov. 3, 6, 7, 1981 Dec. 8, 9, 1981	9 days
C. Aspinall, P. Eng.	Geologist	August 14 - 24, 1981	11 days
A. Garrard	Jr. Assistant	August 14 - 24, 1981	11 days
M. Dawson	Prospector	July 8, 18, 20, 22, 24, 1981	5 days
R. Henderson	Prospector	July 8, 18, 20, 21, -22, 24, 25, 26, 27, 28, 1981	10 days
R. Robinson	Jr. Assistant	July 18, 20, 21, 22, 24, -25, 26, 27, 28, 1981	9 days
J. Dalin	Prospector	July 8, 1981	1 day
B. Dawson	Jr. Assistant	July 8, 18, 20, 22, 24, 1981 September 4, - 27, 1981	29 days
P. Murphy	Prospector	July 8, 18, 20, 22, 24, -25, 26, 27, 1981	8 days
D. Adamson	Jr. Assistant	July 8, 18, 20, 22, 24, -25, 26, 27, 1981	8 days

APPENDIX C

Statement of Expenditures

COST STATEMENT

1. LABOUR:

J. M. Dawson, P. Eng.		
9 days @ \$250.00/day	\$2,250.00	
C. Aspinall, P. Eng.		
11 days @ \$250.00/day	2,750.00	
A. Garrard,		
14 days @ \$115.00/day	1,610.00	
M. Dawson,		
5 days @ \$145.00/day	725.00	
R. Henderson,		
10 days @ \$130.00/day	1,300.00	
R. Robinson,		
9 days @ \$115.00/day	1,035.00	
J. Dalin,		
1 day @ \$130.00/day	130.00	
B. Dawson,		
29 days @ \$115.00/dya	3,335.00	
P. Murphy,		
8 days @ \$130.00/day	1,040.00	
D. Adamson,		
8 days @ \$115.00/day	<u>920.00</u>	\$15,095.00

continued

Cost Statement (con't)

Forward, \$15,095.00

2. EXPENSES AND DISBURSEMENTS:

(a).	Helicopter Charter, -21.6 hrs @ \$412.00/hr.	\$8,899.20	
(b).	Assays and Geochemical Analysis	4,161.00	
(c).	Room and Board, -81 man days @ \$35.00/man/day	2,835.00	
(d).	Truck Rental, -46 days @ \$35.00/day	\$1,610.00	
	-2880 mi. @ 0.35/mi.	<u>1,008.00</u>	
		2,618.00	
(e).	Drafting	285.00	
(f).	Field equipment & supplies,	560.00	
(g).	Contract Road Construction,	18,753.00	
(h).	Telephone, Xerox, freight, Secretarial, blueprints, etc.	<u>536.40</u>	
			<u>38,647.60</u>
	TOTAL		<u>\$53,742.60</u>

APPENDIX D

Writer's Certificate

JAMES M. DAWSON, P. ENG.

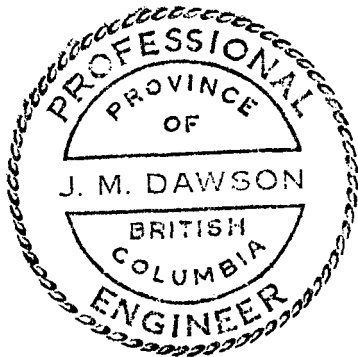
Geological Engineer

#1-219 VICTORIA STREET • KAMLOOPS, B.C. V2C 2A1 • TELEPHONE (604) 374-0544

Certificate

I, JAMES M. DAWSON OF KAMLOOPS, BRITISH COLUMBIA DO HEREBY CERTIFY THAT:

- (1). I am a geologist employed by Kerr, Dawson and Associates Ltd. of Suite 206, 310 Nicola Street, Kamloops, B. C.
- (2). I am a graduate of the Memorial University of Newfoundland, B. Sc. (1960), M. Sc. (1963), a fellow of the Geological Association of Canada and a Member of the Association of Professional Engineers of British Columbia. I have practised my profession for 18 years.
- (3). I am the author of this report which is based on an exploration programme carried out on the Relay Creek property under my direct supervision.



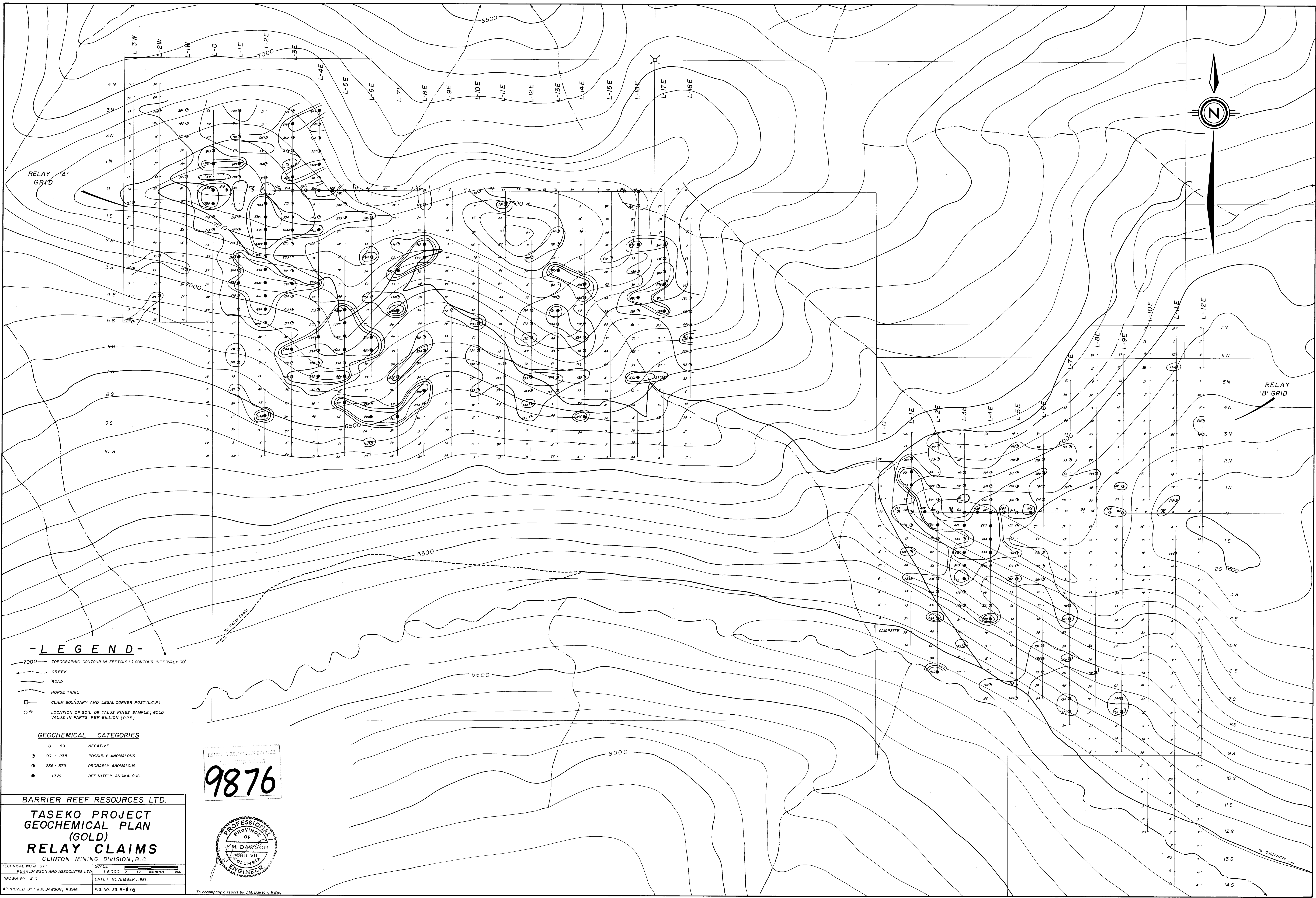
KERR, DAWSON AND ASSOCIATES LTD.,

A handwritten signature in cursive script, appearing to read 'J. M. Dawson', written in black ink.

J. M. Dawson, P. Eng.
GEOLOGIST

Kamloops, B. C.

December 10, 1981



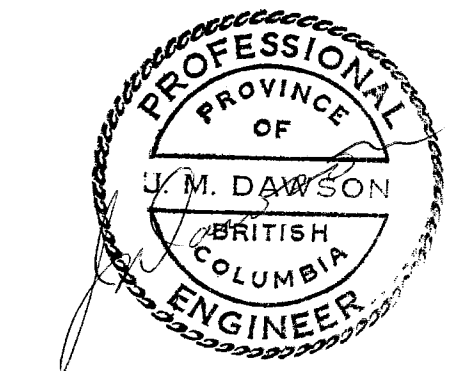
- LEGEND -

- 7000 TOPOGRAPHIC CONTOUR IN FEET (S.L.) CONTOUR INTERVAL = 100'
- CREEK
- ROAD
- HORSE TRAIL
- CLAIM BOUNDARY AND LEGAL CORNER POST (L.C.P.)
- LOCATION OF SOIL OR TALUS FINES SAMPLE, GOLD VALUE IN PARTS PER BILLION (PPB)

GEOCHEMICAL CATEGORIES

- - 89 NEGATIVE
- 90 - 235 POSSIBLY ANOMALOUS
- 236 - 379 PROBABLY ANOMALOUS
- >379 DEFINITELY ANOMALOUS

9876



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RELAY CLAIMS
CLINTON MINING DIVISION, B.C.**

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

SCALE: 1:5,000
DATE: NOVEMBER, 1981.
FIG. NO. 231-B-1/G

To accompany a report by J.M. Dawson, P.Eng.

