

GEOLOGICAL AND GEOCHEMICAL

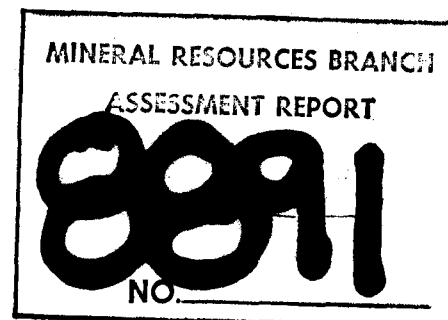
REPORT

- on the -

NAD CLAIMS

Clinton Mining Division  
British Columbia

- for -



BARRIER REEF RESOURCES LTD.,  
#904-675 West Hastings Street,  
VANCOUVER, B.C. V6B 1N2.

Covering: Nad #5 (20 units); Nad #6 (20 units);  
Nad #7 (20 units); Nad #8 (20 units).

Work Performed: June 15, 1980 to January 22, 1981.

Location: (1).  $51^{\circ}16' N$ ;  $123^{\circ}15' W$ .  
(2). NTS Maps 92 0/3 and 92 0/6.  
(3). 110 km. NW of Lillooet, B. C.

PREPARED BY:

KERR, DAWSON AND ASSOCIATES LTD.,  
#1-219 Victoria Street,  
KAMLOOPS, B.C.

J. M. Dawson, P.Eng.,  
January 22, 1981.

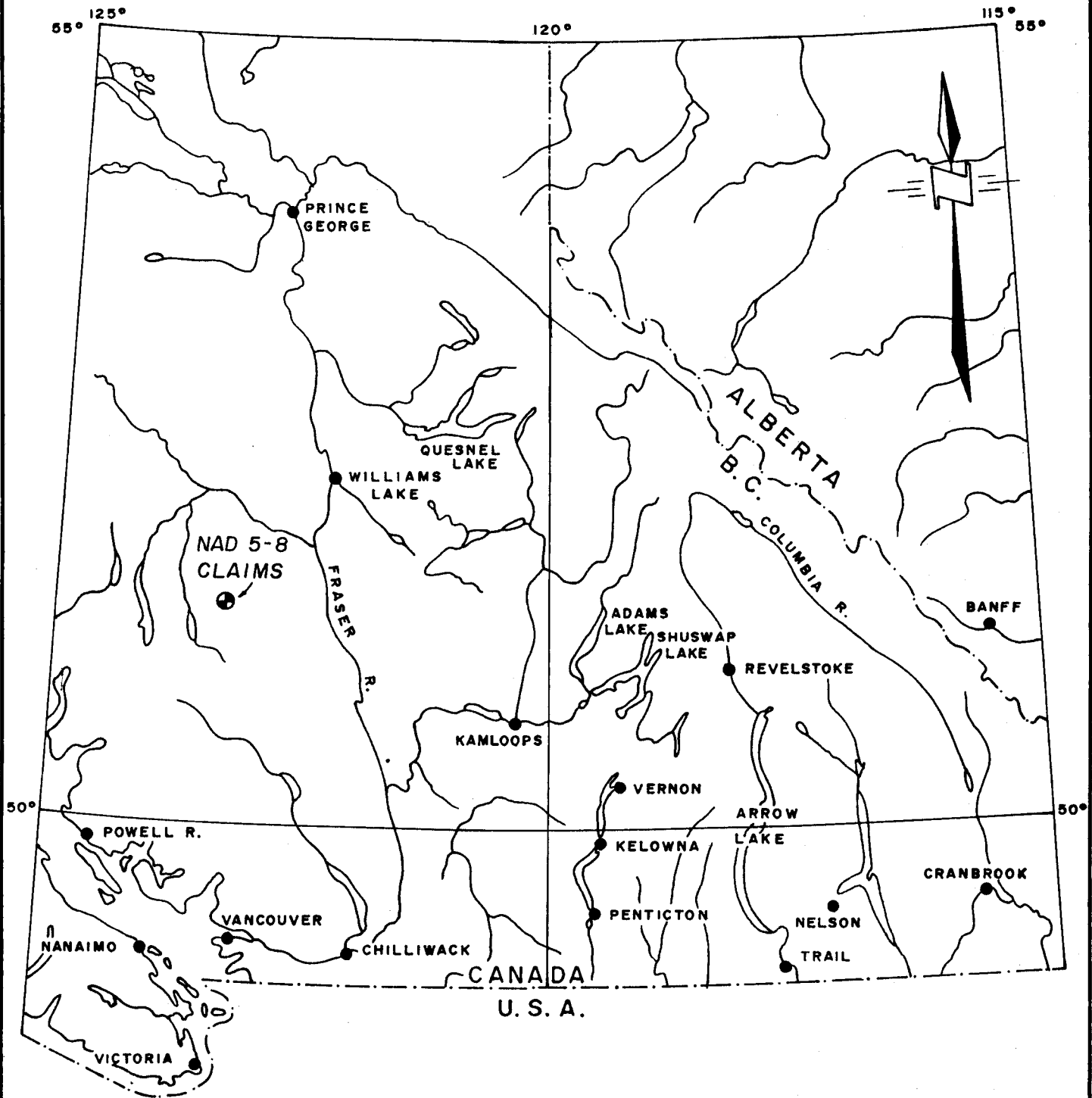
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APPENDIX D:

- Maps

- Figure #231C - 1 - Location Map
- Figure #231C - 2 - Claim Map
- Figure #231C - 3 - Geology Map
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- Figure #231C - 6 - Copper in Soils
- Figure #231C - 7 - Molybdenum in Soils



<b>BARRIER REEF RESOURCES LTD.</b>	
<b>LOCATION MAP</b>	
<b>NAD 5-8 CLAIMS</b>	
<b>CLINTON MINING DIVISION, B.C.</b>	
Date: Jan. 1981.	Scale: 1" = 64 Miles
Dwn by: W. G.	Dwg no. 231 C-1

## INTRODUCTION

This report describes a preliminary exploration programme on part of the Nad claim block, Clinton Mining Division, British Columbia.

In 1979, a regional geochemical silt sampling programme detected several co-incident gold-arsenic anomalies. A large block of claims was staked in March, 1980. Subsequently, the source of the anomalous values was delineated and geological and geochemical surveys were performed there.

The results of these surveys are detailed on a series of maps accompanying this report.

SUMMARY AND CONCLUSIONS

- (1). The Nad #5 - #8 claims consist of 80 contiguous metric units near the north end of the Nad claim block. The property is located in moderate terrain in the Yalakom River district of southern British Columbia. Access is by helicopter although a road exists within 10 km. of the claims.
- (2). The claims were located as the result of anomalies obtained during a regional silt sampling programme carried out by Barrier Reef Resources Ltd. in 1979. There is no record or evidence of any previous work on the property.
- (3). The claims are underlain by late Mesozoic sedimentary and volcanic rocks. A swarm of feldspar-porphyry dikes or barely unroofed stock cuts a central band of detrital sedimentary rocks and may be older than the adjacent Kingsvale volcanics.
- (4). Traces of chalcopyrite and molybdenite were noted near the northwest end of band of sediments and

dikes. At least 2 narrow quartz veins carry minor pyrite, arsenopyrite and stibnite and return low assays in gold.

- (5). Geochemical results outline a large, co-incident, copper, molybdenum, gold and arsenic anomaly. This anomaly outlines a zone about 2,000 meters long by as much as 1,400 meters wide. This would seem to indicate the presence of a porphyry system similar to those at the Poison Mountain and Fish Lake properties. Further work is recommended to more fully evaluate the potential of the Nad claims.

PROPERTY

This report covers only a portion of the Nad claim block (see figure #231C-2). Specifically four contiguous metric claims totalling 80 units are covered as follows:

<u>Claim Name</u>	<u>Record No.</u>	<u>Tag No.</u>	<u>Expiry Date</u>
Nad #5	662	58324	April 21/81
Nad #6	663	58325	April 21/81
Nad #7	664	58326	April 21/81
Nad #8	665	58327	April 21/81

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



LOCATION AND ACCESS

The subject claims are located in south-central British Columbia, approximately 110 km. northwest of the town of Lillooet, B. C. Approximate geographic center of the claims is at  $51^{\circ}16'$  north latitude and  $123^{\circ}15'$  west longitude.

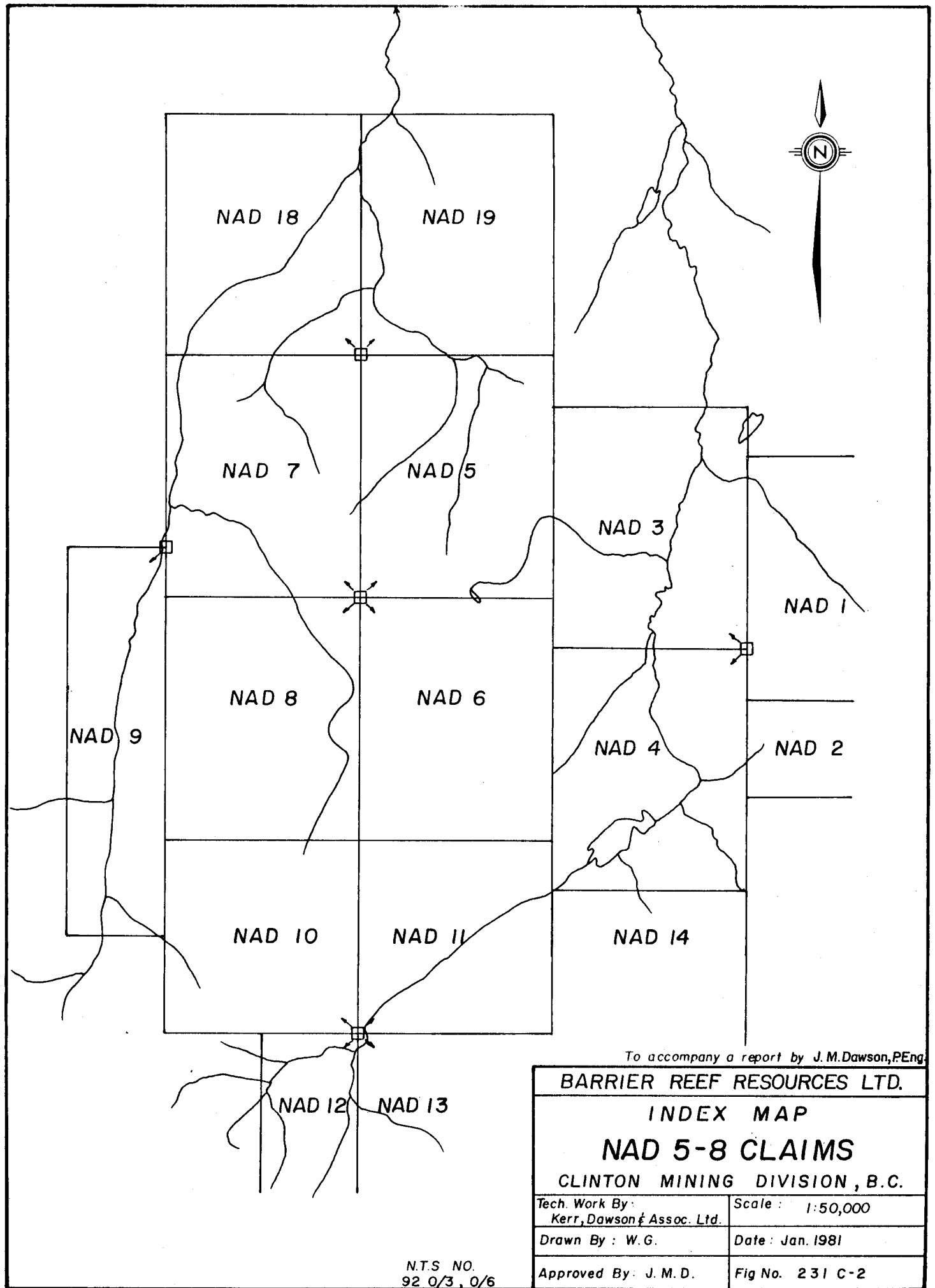
Access to the property is by helicopter from either Lillooet, Goldbridge or Williams Lake. Presently, roads exist within 20 km. to the southeast (Relay Creek) and about 10 km. to the north (West Nadila Creek). It would not be difficult to extend the road south from West Nadila Creek to the claim area.

PHYSIOGRAPHIC AND VEGETATION

The subject claims cover a rectangular block of ground which rises from the Chilcotin plateau to the edge of the Coast Range. The northern half of the block covers parts of a prominent northwest-trending ridge which slopes off gradually to the northeast. A number of fault controlled streams cut this northeasterly slope. The southern half of the block consists mostly of a very gently northeast sloping plateau which represents a remnant of Tertiary plateau basalt.

Elevations vary from about 6,200 feet a.s.l. at the northeast corner of the claims, up to more than 7,900 feet near the southwest corner.

Treeline in this region is about 6,500 feet a.s.l. so the bulk of the property is bare. Small areas near the northern boundary of the claims are covered by scrubby alpine spruce and balsam.



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

**BARRIER REEF RESOURCES LTD.**

**INDEX MAP**

**NAD 5-8 CLAIMS**

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

Tech. Work By: Kerr, Dawson & Assoc. Ltd.	Scale: 1:50,000
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Drawn By: W.G.	Date: Jan. 1981
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Approved By: J.M.D.	Fig No. 231 C-2
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N.T.S. NO.  
92 0/3, 0/6

PREVIOUS WORK

A regional geochemical silting programme in 1979 detected a number of stream anomalous in gold and arsenic draining the area covered by the Nad #5-#8 claims. This area was staked by Barrier Reef Resources Ltd. in March, 1980.

There is no record of any previous work on this ground.

CURRENT PROGRAMME

In June, 1980, detailed follow-up silt sampling prospecting and rock geochemistry confirmed and further delineated the anomalous area first outlined by regional reconnaissance silting in 1979. In August, 1980, approximately 45 km. of picket grid was laid out. Soil samples were collected at 50 meter intervals on lines spaced 200 meters apart. In addition, rock geochemical samples were taken of most rock types and particularly of altered zones where mineralization was suspected. The entire grid area was prospected in detail and geologically mapped at a scale of 1:5,000.

GEOLOGY

The claims are underlain by a sequence of late Mesozoic sedimentary rocks cut by a feldspar porphyry stock or dike swarm. Late Cretaceous sedimentary and volcanic rocks of the Kingsvale Group are in fault contact with or unconformably overlie the older rocks. Miocene plateau basalts mantle the southern half of the subject claims. The main structural fabric has a westnorthwesterly trend.

The oldest rocks exposed are correlated with the Taylor Creek group of Lower Cretaceous age. They consist of greenish gray to black siltstone, argillite and graywacke with lesser amounts of poorly sorted volcanic conglomerate and breccia. This unit forms a central, north-northwesterly trending band cut by numerous dikes of feldspar porphyry. Many areas of the Taylor Creek sequence are thermally altered to hornfels in the vicinity of the dikes.

The feldspar porphyry dikes are oriented parallel to the band of Taylor Creek rocks but seem to cut across strike at a small angle. The intrusive bodies are probably part of a barely unroofed stock. In places, they form discrete bodies up to 300 meters wide; however, frequently

they are much narrower or contain abundant screens and partly digested xenoliths of hornfelsed sediments.

The feldspar porphyry bodies are usually light grey in colour and consist of a matrix of light grey felsitic material with frequent fine needles of hornblende. Rounded phenocrysts of potash feldspar up to 1 cm. in diameter are randomly scattered through this finer grained material.

Some areas of the felspar prophyry and adjacent hornfels weather to a dark brown colour due to oxidation of contained pyrite. A few outcrops of irregular, vein-like masses of calcite or ankerite are found in ?shear zones adjacent to feldspar porphyry intrusions.

Northeast of the band of Taylor Creek sediments and contained feldspar porphyry intrusions is an area of grey-green to red-brown volcanic wacke and conglomerate with minor intercalated andesite flows and tuffs. This rock unit is considered to be part of the Kingsvale group of Upper Cretaceous age. This sequence is in fault contact with or unconformably overlies Taylor Creek rocks. There are no feldspar porphyry intrusions found within the outcrop area of this unit, though they occur nearby,

cutting Taylor Creek sediments.

The southern half of the claims is covered by virtually flat-lying basalt flows. These vary from a few meters to as much as 60 meters in thickness. Dikes of this basaltic material are found cutting Kingsvale rocks in several places.



### MINERALIZATION

Fine grained disseminated pyrite is commonly found in hornfelsed Taylor Creek sediments and adjacent feldspar porphyry intrusions, particularly in the south-central part of Nad #7 claim. Minor disseminated chalcopyrite and molybdenite is found in three locations in this same general area.

At least 2 discrete, narrow quartz veins 20 to 50 cm. wide are found cutting the zone of Taylor Creek hornfelsed sediments and feldspar porphyry intrusions. They strike northeasterly and dip steeply to vertical. Only a couple of outcrops can be seen as this area consists mostly of frost heaved felsenmeer. However, boulder trains of these and ? other veins can be fairly easily traced. The vein material consists of typical vuggy, epithermal quartz with minor fine grained pyrite, lesser arsenopyrite and some areas of heavy, coarse stibnite. A trace of cinnabar was noted in one piece of float. Grab samples of this vein material assayed from less than 100 PPB to more than 2,000 PPB (2 grammes) gold. Similarly some of these samples reported high arsenic values though not necessarily those which were anomalous or high in gold (see figure #231C-3).

At one location on the boundary of Nad #5 and Nad #6 an outcrop of feldspar porphyry contained a number of narrow (.5 to 2 cm) veinlets with traces of pyrite. A selected sample of this vein material returned 1,900 PPB Au and 710 PPM Cu.

Some pyritic zones in various rock types contain high arsenic values but no appreciable gold. For instance, an area of disseminated pyrite in Kingsvale volcanics near the northeast corner of Nad #7, (JDR-11) reported 2,500 PPM As, 1,000 PPM Sb, but only 10 PPB Au.

GEOCHEMISTRY

After initial detailed silt sampling defined the main area of interest on the Nad #5-#8 claims, a detailed grid was laid out and soil samples collected at 50 meter intervals on lines spaced 200 meters apart.

Although these samples are referred to as soils, they are in large part talus fines or finely broken rock flour. There are no well defined soil horizons in this typically alpine terrain although some of the samples in the lower, more gentle terrain appeared to be typical "B" horizon material.

A total of 861 soil samples were collected from the grid area. Sample stations were marked by lath and flagging with the appropriate grid co-ordinates. After collection, samples were stored and shipped in waterproof, kraft envelopes.

These samples were analysed for gold, arsenic, copper and molybdenum in the Vancouver laboratories of Bondar-Clegg and Company. For gold, extraction was attained using fire assay and hot aqua regia with analysis by atomic absorption spectrophotometry. For arsenic, extraction was accomplished with perchloric-nitric acid

with analysis by colorimetry. For copper and molybdenum, extraction was by hot lefort aqua regia with analysis by atomic absorption.

Statistical analyses for all four metals were performed similarly 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 1:5,000 scale basemaps of the claims and definitely anomalous, probably anomalous and possibly anomalous areas were outlined.

The results outline roughly coincident anomalous areas for all four metals (See figures #231C-4,5,6,7). The anomaly is about 2,200 meters long (NNW-SSE) by 700 meters wide (Au, Mo) to about 1,500 meters wide (Cu, As).

The anomalous area lies entirely within the outcrop area of the Taylor Creek sediments and associated feldspar porphyry dikes.

### EXPLORATION POTENTIAL

Prospecting and rock geochemistry has outlined 2 or more narrow epithermal quartz veins with anomalous to low grade values in gold. Gold values may also be related to quartz stockwork zones in and near sheared and fractured feldspar porphyry dikes.

However, the coincidence of anomalous values in all four metals indicates to the writer that there is present a copper-molybdenum-gold porphyry system similar to the Poison Mountain and Fish Lake properties.

Further exploration to fully test this potential is certainly warranted.

RECOMMENDATIONS

- (1). It is recommended that 15 km. of induced polarization surveying should be carried out.
- (2). A budget of \$29,000.00 as outlined in the December 1, 1980, Memo of A.F. Reeve to Taseko Project participants, should be allocated for this work.

Respectfully Submitted by:

KERR, DAWSON AND ASSOCIATES LTD.,



*James M. Dawson*  
James M. Dawson, P. Eng.,  
GEOLOGIST

KAMLOOPS, B. C.  
January 22, 1981.

APPENDIX A

PERSONNEL

PERSONNEL

J. M. Dawson, P. Eng.	Geologist	- June 18, 21, August 20,21,22, August 25,26,27 October 23,24,27, October 28,29,30 November 7,8 January 18,19,20	- 2 days - 6 days - 6 days - 2 days - 3 days
			<u>19 days</u>
W. Gruenwald, B. Sc.	Geologist	- June 18,19 October 20 January 19,20 January 21	- 2 days - 1 day - 2 days -1/2 day
			<u>5 1/2 days</u>
R. Henderson	Fieldman	- June 18	- 1 day
M. Dawson	Field Supervisor	- June 18	- 1 day
J. Delin	Fieldman	- August 1-12	- 12 days
B. Baker	Fieldman	- August 1-12	- 12 days
B. Jardine	Field Supervisor	= August 1-12	- 12 days



APPENDIX B

STATEMENT OF EXPENDITURES

STATEMENT OF EXPENDITURES

(1). PERSONNEL:

J. M. Dawson, P. Eng., 19 days @ \$200.00/day . . . . .	\$ 3,800.00	
W. Gruenwald, B. Sc., 5 1/2 days @ \$150.00/day . . . . .	825.00	
R. Henderson, 1 day @ \$115.00/day . . . . .	115.00	
M. Dawson, 1 day @ \$115.00/day . . . . .	115.00	
J. Delin, 12 days @ \$115.00/day . . . . .	1,380.00	
B. Baker, 12 days @ \$115.00/day . . . . .	1,380.00	
B. Jardine, 12 days @ \$115.00/day . . . . .	<u>1,380.00</u>	\$ 8,995.00

(2). EXPENSES AND DISBURSEMENTS:

(a). Helicopter Charter: 16.5 hrs. @ \$380.00/hour . . . . .	\$ 6,270.00	
(b). Geochemical Analyses . . . . .	3,835.00	
(c). Room and Board: 52 Man days @ \$25.00/man/day . . . . .	1,300.00	
(d). Truck Rental: 17 days @ \$30.00/day      \$510.00 840 mi. @ 30¢/mile <u>252.00</u> . . . . .	762.00	
(e). Miscellaneous field equipment, maps, sample bags, lath, flagging, etc. . . . .	437.65	
(f). Xerox, blue prints, base maps, telephone, freight, secretarial, etc. . . . .	<u>390.30</u>	<u>14,994.95</u>
TOTAL COSTS . . . . .		<u><u>\$23,989.95</u></u>

APPENDIX C

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 #1, 219 Victoria 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 by profession for 17 years.
- (3). I am the author of this report which is based on an exploration programme carried out on the Nad #5 - #8 claims under my supervision.

KERR, DAWSON AND ASSOCIATES LTD.,

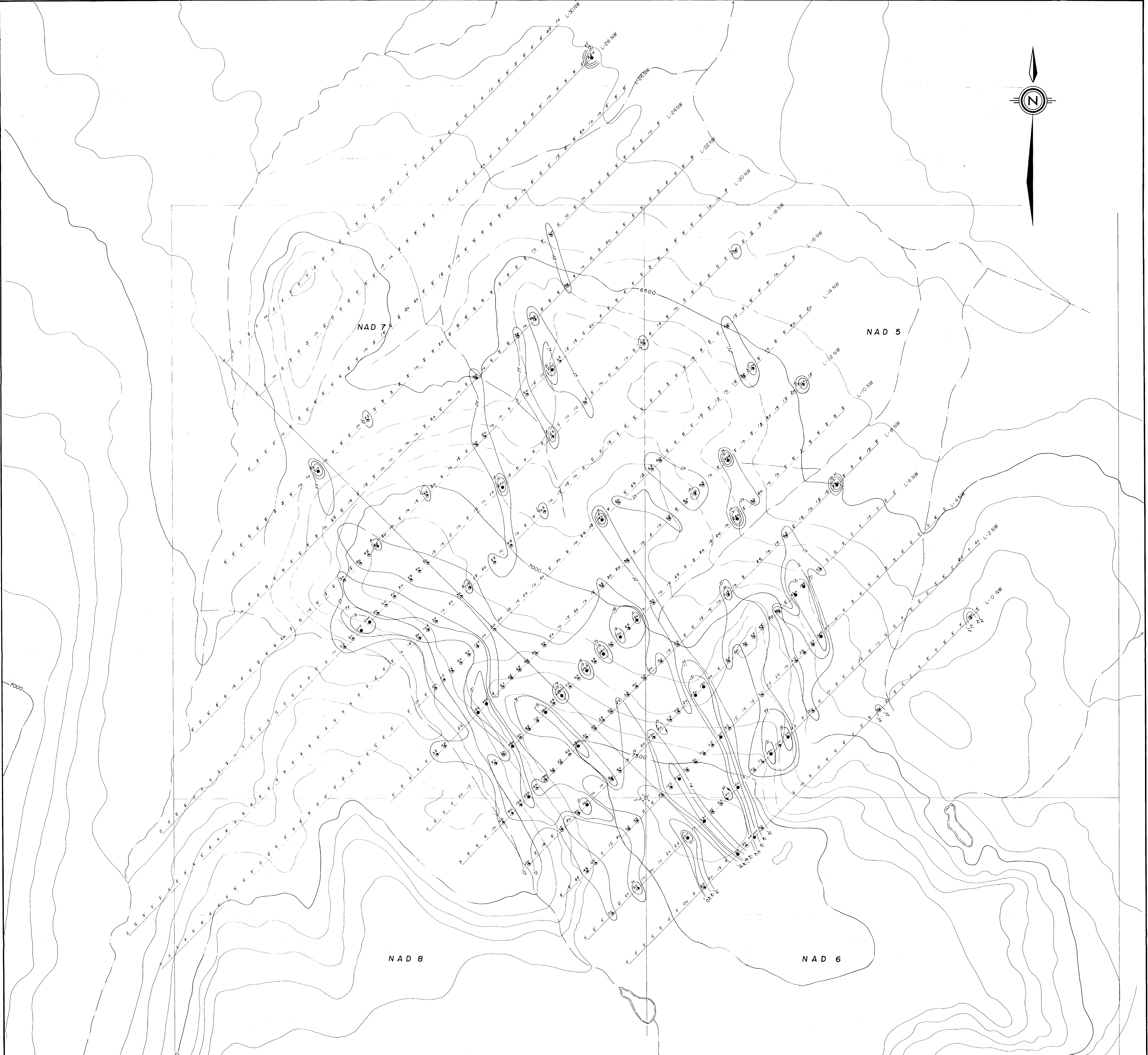
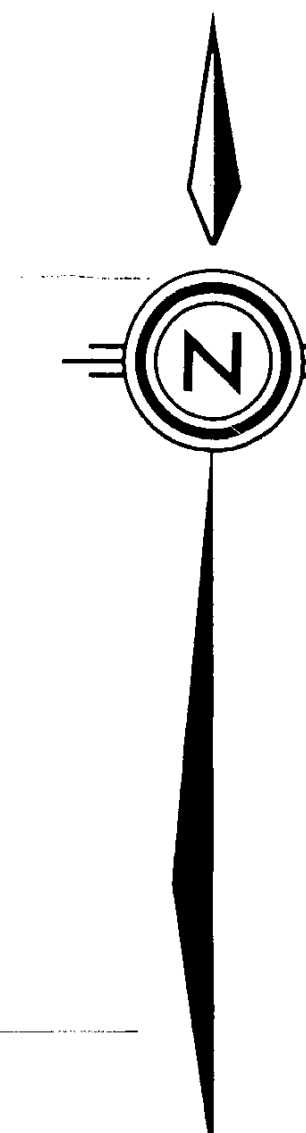


*James M. Dawson*  
James M. Dawson, M. Sc., P. Eng.,  
GEOLOGIST

Kamloops, B. C.  
January 22, 1981.







NAD 7

NAD 5

NAD 8

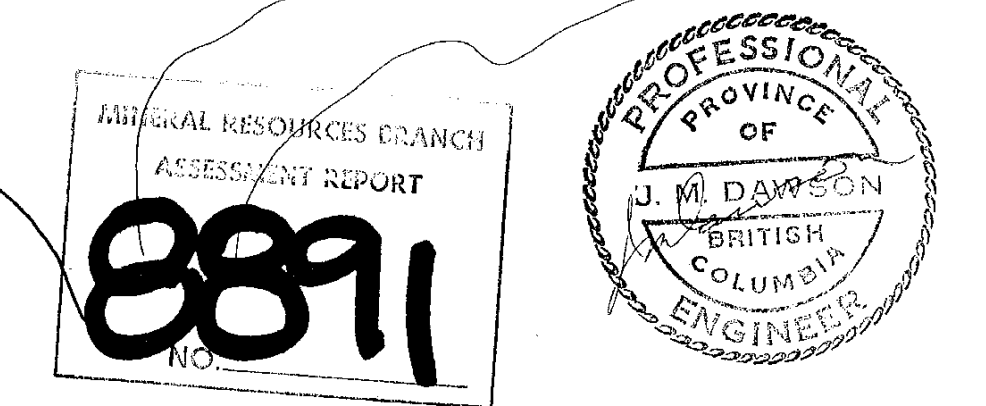
NAD 6

- LEGEND -

- 7000 TOPOGRAPHIC CONTOUR IN FEET (A.S.L.)
- CREEK
- LAKE
- CLAIM POST (LEGAL CORNER)
- GRID LINE WITH SOIL VALUES FOR COPPER, MOLYBDENUM AND ARSENIC IN PARTS PER MILLION (PPM), GOLD EXPRESSED IN PARTS PER BILLION (PPB)

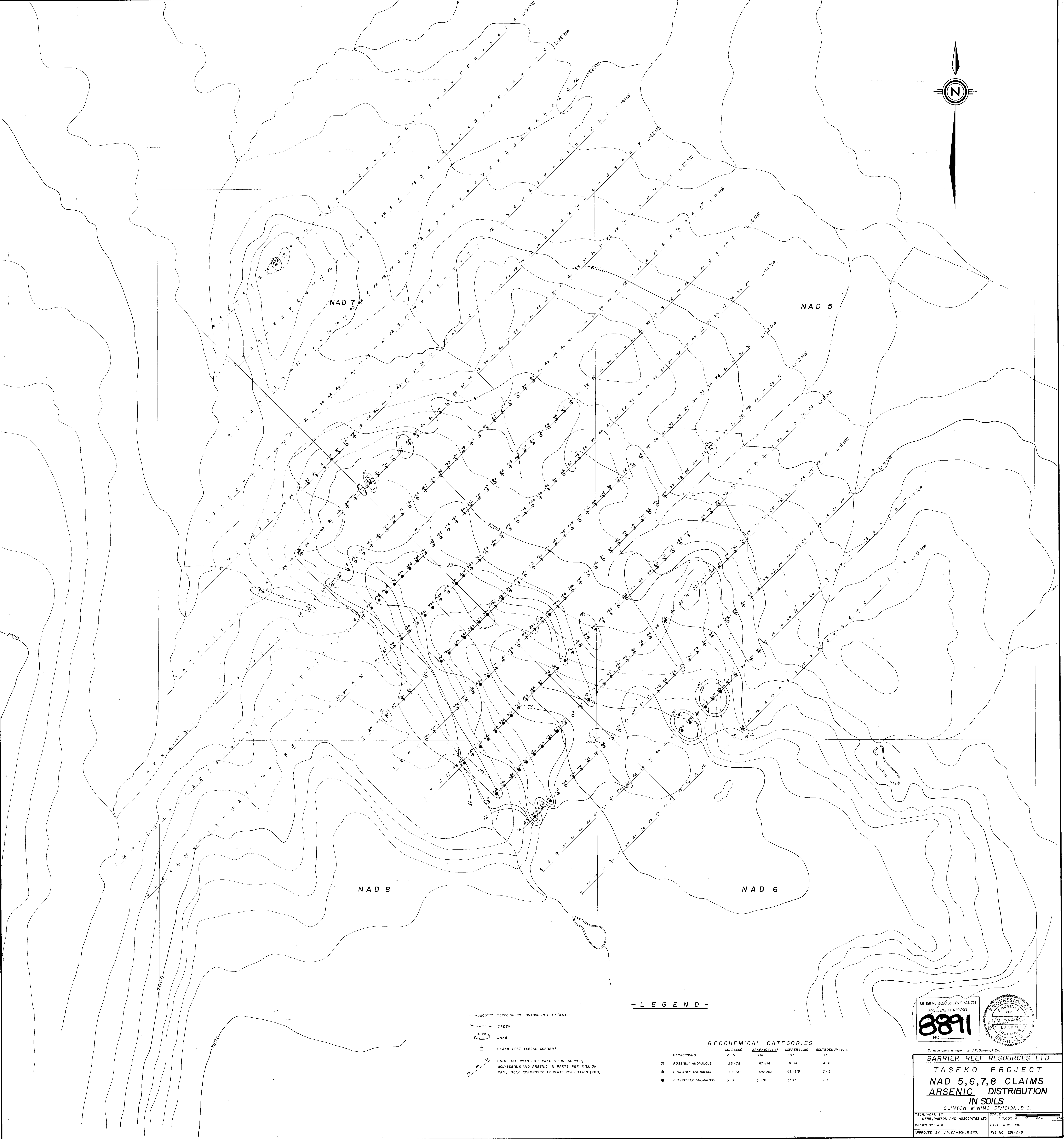
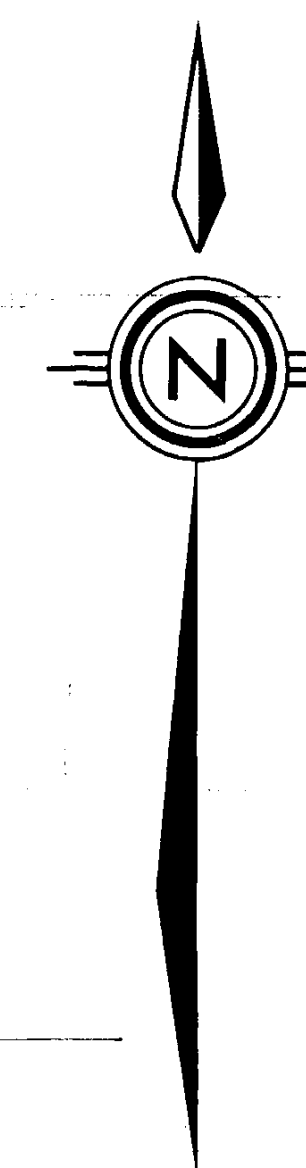
GEOCHEMICAL CATEGORIES

	SOILS (ppm)	ARSENIC (ppm)	COPPER (ppm)	MOLYBDENUM (ppm)
BACKGROUND	< 25	< 66	< 67	< 3
POSSIBLY ANOMALOUS	25-79	67-174	68-141	4-6
PROBABLY ANOMALOUS	79-131	175-292	142-215	7-9
DEFINITELY ANOMALOUS	> 131	> 292	> 215	> 9



To accompany 12/2007 by J.M. Dawson, P. Eng.  
**BARRIER REEF RESOURCES LTD.**  
**TASEKO PROJECT**  
**NAD 5,6,7,8 CLAIMS**  
**GOLD DISTRIBUTION**  
**IN SOILS**  
 CLINTON MINING DIVISION, B.C.  
 TECH. WORK BY: KERR, DAWSON AND ASSOCIATES LTD. SCALE: 1:5,000 0 50 100 200  
 DRAWN BY: W.G. DATE: NOV 1990.  
 APPROVED BY: J.M. DAWSON, P. ENG. FIG. NO. 231-C-4





- 7000 — TOPOGRAPHIC CONTOUR IN FEET (A.S.L.)
- CREEK
- LAKE
- CLAIM POST (LEGAL CORNER)
- GRID LINE WITH SOIL VALUES FOR COPPER, MOLYBDENUM AND ARSENIC IN PARTS PER MILLION (PPM); GOLD EXPRESSED IN PARTS PER BILLION (PPB)

- LEGEND -

**GEOCHEMICAL CATEGORIES**

	GOLD (ppb)	ARSENIC (ppm)	COPPER (ppm)	MOLYBDENUM (ppm)
BACKGROUND	< 25	< 66	< 67	< 3
○ POSSIBLY ANOMALOUS	25 - 78	67 - 174	68 - 141	4 - 6
● PROBABLY ANOMALOUS	79 - 131	175 - 282	142 - 215	7 - 9
● DEFINITELY ANOMALOUS	> 131	> 282	> 215	> 9

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**8891**  
NO.

PROFESSIONAL  
OF  
J.M. DAWSON  
BRITISH  
COLUMBIA  
ENGINEERS

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

**BARRIER REEF RESOURCES LTD.**

**TASEKO PROJECT**

**NAD 5, 6, 7, 8 CLAIMS**

**ARSENIC DISTRIBUTION**

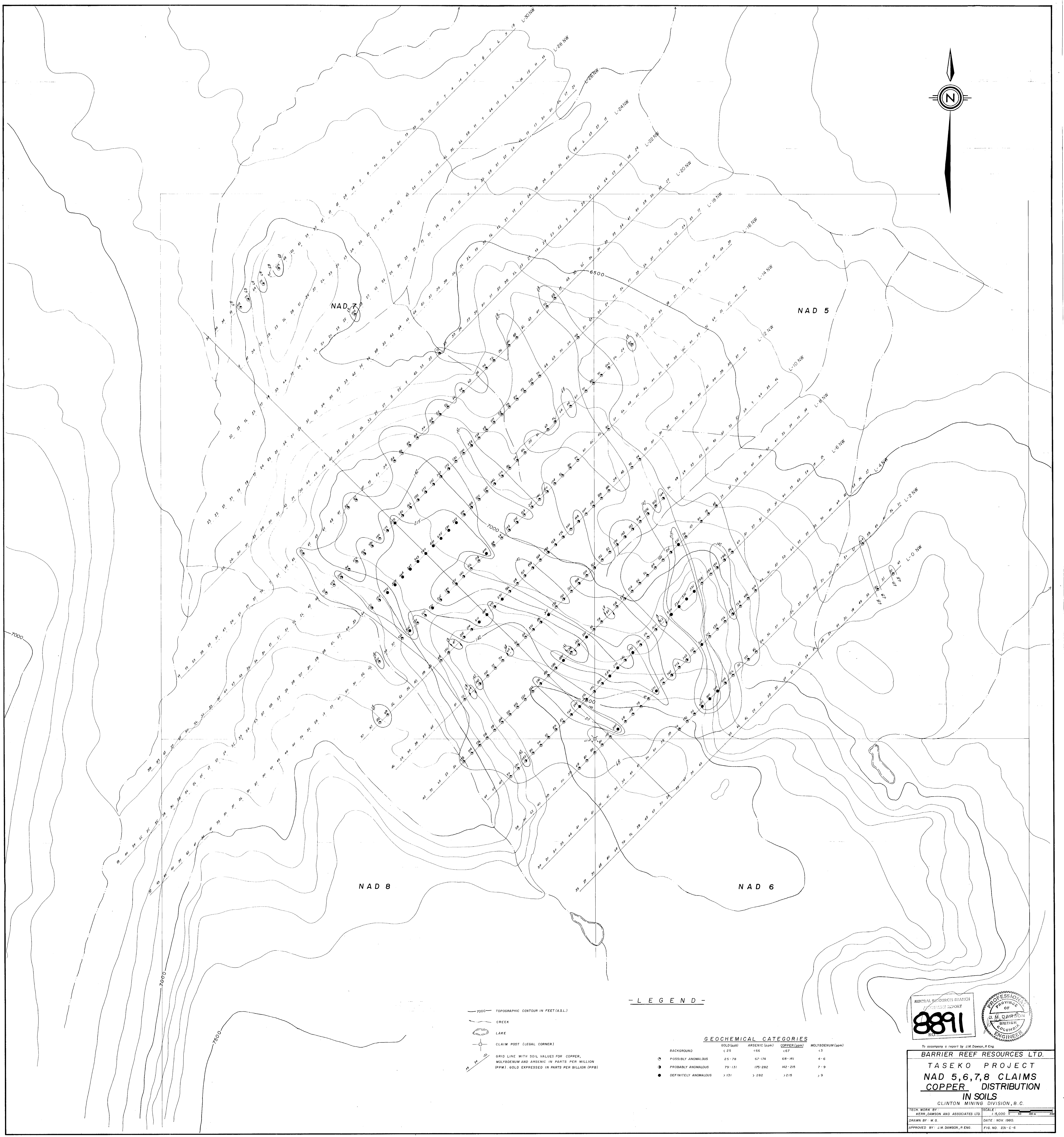
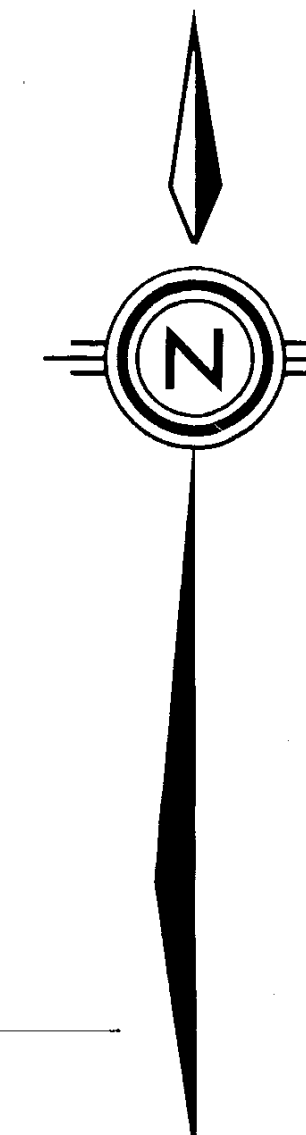
**IN SOILS**

CLINTON MINING DIVISION, B.C.

TECH. WORK BY: KERR, DAWSON AND ASSOCIATES LTD.  
DRAWN BY: W.G.

SCALE: 1:5,000  
DATE: NOV. 1980  
FIG. NO. 231-C-5





NAD 7

NAD 5

NAD 8

NAD 6

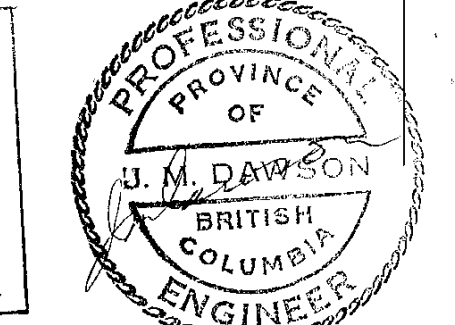
- LEGEND -

- 7000 TOPOGRAPHIC CONTOUR IN FEET (A.S.L.)
- CREEK
- LAKE
- CLAIM POST (LEGAL CORNER)
- GRID LINE WITH SOIL VALUES FOR COPPER, MOLYBDENUM AND ARSENIC IN PARTS PER MILLION (PPM). GOLD EXPRESSED IN PARTS PER BILLION (PPB)

GEOCHEMICAL CATEGORIES

	GOLD (ppb)	ARSENIC (ppm)	COPPER (ppm)	MOLYBDENUM (ppm)
BACKGROUND	< 25	< 66	< 67	< 3
POSSIBLY ANOMALOUS	25-78	67-174	68-141	4-6
PROBABLY ANOMALOUS	79-131	175-282	142-215	7-9
DEFINITELY ANOMALOUS	> 131	> 282	> 215	> 9

MINERAL RESOURCES BRANCH  
ASSESSMENT REPORT  
**8891**  
NO.

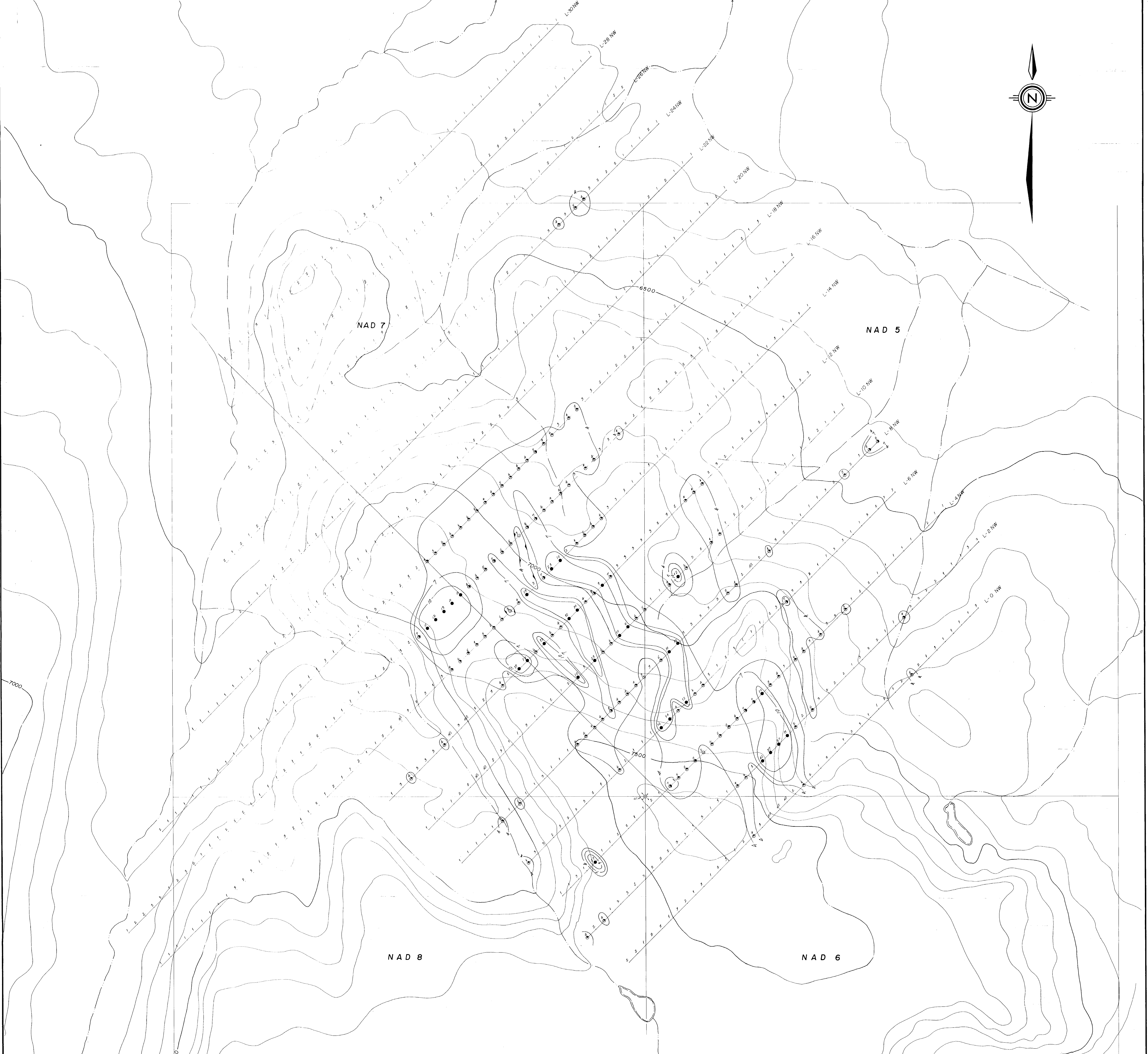
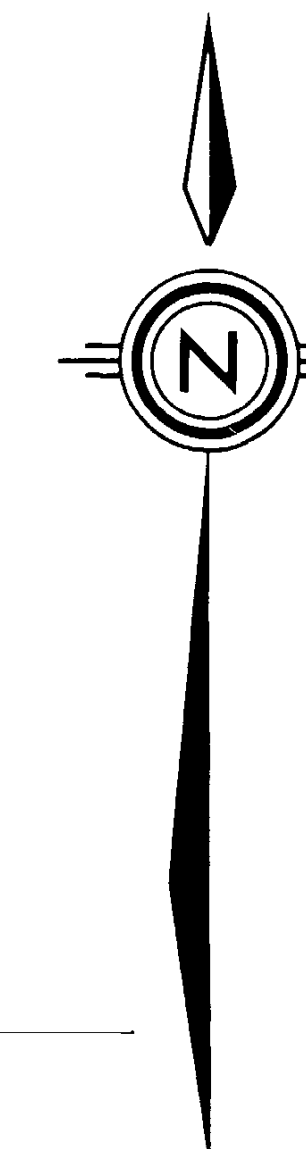


To accompany a report by J.M. Dawson, P. Eng.

**BARRIER REEF RESOURCES LTD.**  
**TASEKO PROJECT**  
**NAD 5,6,7,8 CLAIMS**  
**COPPER DISTRIBUTION**  
**IN SOILS**  
CLINTON MINING DIVISION, B.C.

TECH. WORK BY: KERR, DAWSON AND ASSOCIATES LTD. SCALE: 1:5,000  
DRAWN BY: W.G. DATE: NOV. 1983  
APPROVED BY: J.M. DAWSON, P. ENG. FIG. NO. 231-C-6



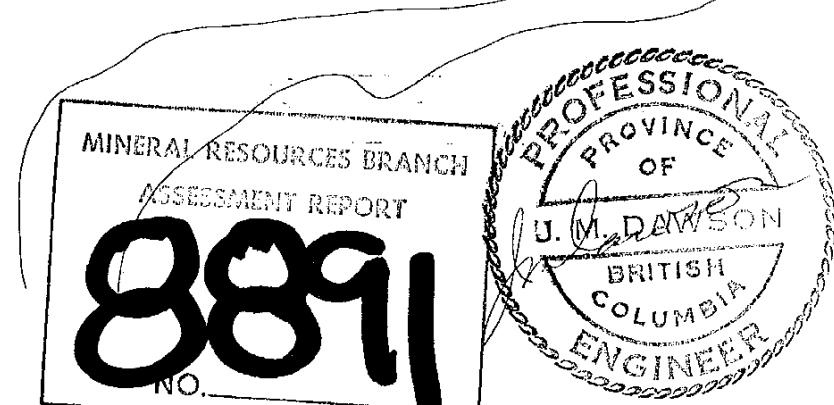


- LEGEND -

- 7000 TOPOGRAPHIC CONTOUR IN FEET (A.S.L.)
- CREEK
- LAKE
- CLAIM POST (LEGAL CORNER)
- GRID LINE WITH SOIL VALUES FOR COPPER, MOLYBDENUM AND ARSENIC IN PARTS PER MILLION (PPM), GOLD EXPRESSED IN PARTS PER BILLION (PPB)

GEOCHEMICAL CATEGORIES

	GOLD (ppb)	ARSENIC (ppm)	COPPER (ppm)	MOLYBDENUM (ppm)
BACKGROUND	< 25	< 66	< 67	< 5
POSSIBLY ANOMALOUS	25-78	67-174	68-141	4-6
PROBABLY ANOMALOUS	79-131	175-282	142-215	7-9
DEFINITELY ANOMALOUS	> 131	> 282	> 215	> 9



To accompany a report by J.M. Dawson, P. Eng.  
**BARRIER REEF RESOURCES LTD.**  
**TASEKO PROJECT**  
**NAD 5,6,7,8 CLAIMS**  
**MOLYBDENUM DISTRIBUTION**  
**IN SOILS**  
CLINTON MINING DIVISION, B.C.  
TECH. WORK BY: KEMP, DAWSON AND ASSOCIATES LTD.  
DRAWN BY: W.S.  
APPROVED BY: J.M. DAWSON, P. ENG.  
SCALE: 1:5000  
DATE: NOV. 1980  
FIG. NO. 231-C-7