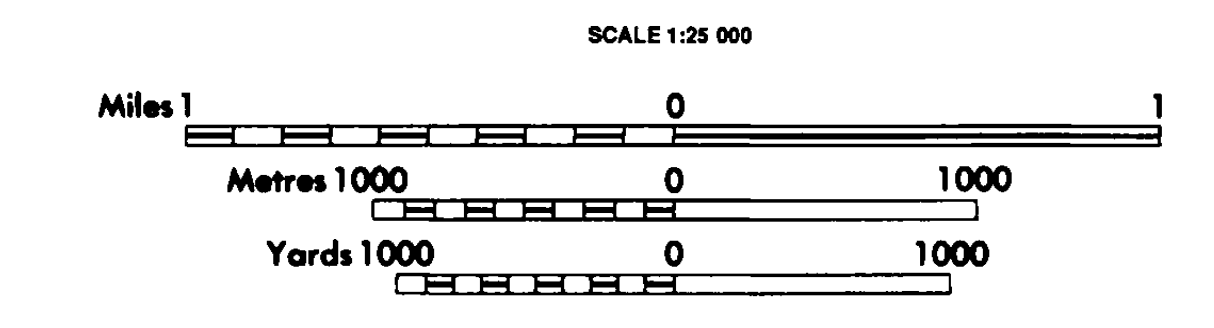


OPEN FILE MAP 1989 - 6
GEOLOGY AND MINERAL OCCURRENCES IN THE HEDLEY GOLD CAMP, SOUTHERN BRITISH COLUMBIA
NTS 92H/8E, 82E/5W
By G.E. Ray and G.L. Dawson
Assisted by I. Webster, M. MacLean, M. Mills and M. Fournier
RELEASED FEBRUARY 1988



LEGEND

QUATERNARY
□ Areas of extensive till cover

TERTIARY
18 18a, sandstone; 18b, basalt flow

EROSIONAL UNCONFORMITY

UNCERTAIN AGE
17 MINOR INTRUSIONS: 17a, granite to quartz monzonite; 17b, andesite; 17c, diorite; 17d, basalt; 17e, granodiorite; 17f, felsitic (qtz, hornblende) porphyry

EARLY CRETACEOUS
16 QUARTZ PORPHYRY: 16, quartz eye rhyolitic intrusion
15 VERDE CREEK STOCK: 15, granite to microgranite

INTRUSIVE CONTACT
14 SPENCES BRIDGE GROUP: 14a, dacite flows and minor tuffs; 14b, 14c, 14d, dacite gneissite with laminae
13 POSSIBLE SPENCES BRIDGE GROUP: 13a, quartz-felsitic crystal dacite ash and lapilli tuff; 13b, dacite dust tuff, minor argillite and pebble conglomerate; 13c, maroon coloured dacite lapilli tuff with laminae; 13d, felsitic crystal andesite ash and lapilli tuff

CONTACT UNCERTAIN

LATE JURASSIC
12 OSPREY LAKE BATHOLITH: 12a, pink, equigranular to feldspar porphyritic, quartz monzonite to granite; 12b, marginal phase granodiorite to diorite to mafic gabbro

EARLY JURASSIC
11 MOUNT RIORAN STOCK: 11a, equigranular granodiorite; 11b, hornblende porphyritic granodiorite
10 BROMLEY BATHOLITH: 10a, granodiorite to quartz monzonite; 10b, diorite to quartz diorite
9 CAHILL CREEK PLUTON: 9a, granodiorite to quartz monzonite; 9b, diorite to quartz diorite; 9c, aplite
8 HEDLEY INTRUSIONS: 8a, hornblende porphyritic diorite (<50% mafics); 8b, equigranular diorite (<50% mafics); 8c, mafic diorite and/or gabbro (>50% mafics); 8d, quartz diorite

INTRUSIVE CONTACT
NICOLA GROUP

LATE TRIASSIC
7 WHISTLE CREEK FORMATION: 7a, andesite ash tuff; 7b, tuffaceous siltstone; 7c, andesite lapilli tuff; 7d, andesite tuff-breccia; 7e, basaltic ash tuff; 7f, thin limestone beds; 7g, argillite; 7h, limestone boulder conglomerate (Osgoodville conglomerate)
6 STEWART MOUNTAIN FORMATION (Western Facies): 6a, argillite; 6b, siltstone ± thin limestone beds; 6c, limestone and/or marble; 6d, andesite ash tuff
5 HEDLEY FORMATION (Central Facies): 5a, siltstone ± limestone and/or marble beds ± tuff; 5b, argillite ± limestone and/or marble beds ± tuff; 5c, limestone and/or marble; 5d, andesite ash tuff; 5e, tuffaceous siltstone; 5f, polymictic pebble conglomerate
4 FRENCH MINE FORMATION (Eastern Facies): 4a, limestone and marble; 4b, limestone conglomerate and breccia; 4c, chert pebble conglomerate

MIDDLE TO LATE TRIASSIC
3 PEACHLAND CREEK FORMATION: 3a, basaltic ash tuff; 3b, basaltic tuff with quartz fragments; 3c, basaltic tuff with marble blocks; 3d, chert pebble conglomerate

UNCERTAIN AGE
2 2a, andesite tuff (possible Whistle Creek Formation); 2b, basaltic tuff (possible Peachland Creek Formation); 2c, limestone, marble and minor chert pebble conglomerate; 2d, limestone conglomerate; 2e, chert pebble conglomerate; 2f, massive garnette skarn; (2c, 2d, 2e, and 2f possible French Mine Formation)

CONTACT OCCUPIED BY THE CAHILL CREEK PLUTON

PALEOZOIC AND TRIASSIC
1 APEX MOUNTAIN COMPLEX: 1a, siltstone; 1b, argillite; 1c, greenstone; 1d, andesite ash tuff; 1e, limestone and/or marble; 1f, chert; 1g, gabbro; 1h, conglomerate

SYMBOLS

Geological Contact: Defined, assumed
Bedding, Top Known: Inclined, overturned
Bedding, Top Unknown: Inclined, vertical
Schistosity: Inclined, vertical
Axial Trace of Fold: Anticline
Syncline
Axial Plane of Minor Fold: Inclined
Plunge of Minor Fold Axis
Fault: Approximate

Mineralized outcrop (pyrite, arsenopyrite, chalcopyrite, magnetite, pyrrhotite, scheelite, molybdenite) Py, As, Cu, Pb, Fe, Mo

Location of mineral property (listed in Table 1)

Microfossil locality with sample number (listed in Table 2)

Massive, nonbedded or unfoliated outcrop

Topographical Contour (100-foot interval)

ADJOINING MAPSHEET B

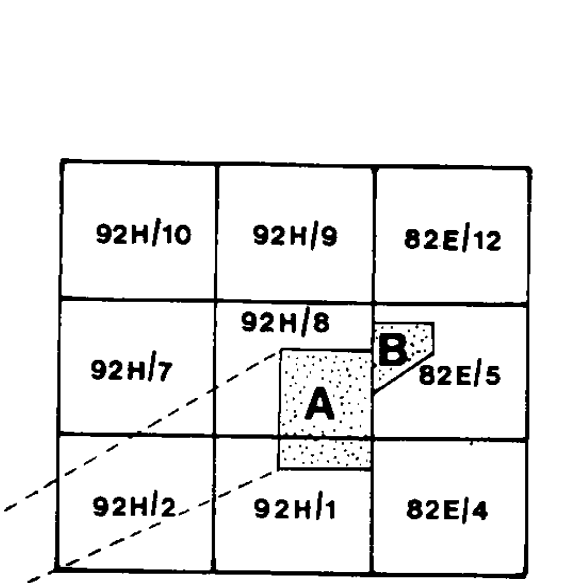
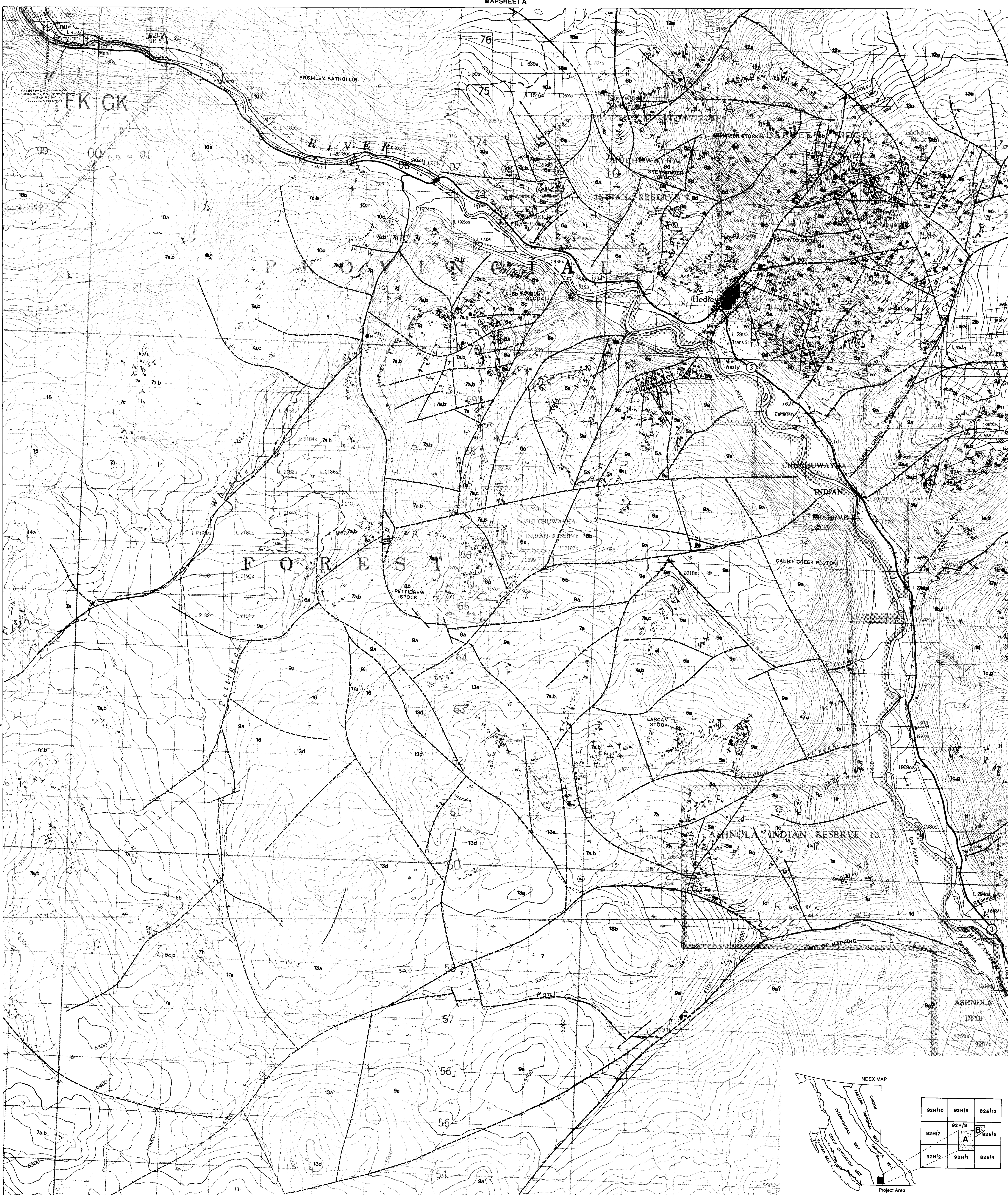


TABLE 1 - MINERAL PROPERTIES

Property No. On Map	Property Name and Element	MINFILE Number	Property Name and Element	MINFILE Number
1	Toronto, Chalmers (Au, Ag)	92H/8E: 65	Hed (Au, Zn)	92H/8E: 138
2	Isle, Lake (S, Ag, Pb)	61	Silverton (Au)	119
3	Florence (Au)	61	Pitney 2 (Au, Ag)	49
4	Red Mountain (Au)	82	Gold (Au, Zn, Cu, Ag, Pb)	11
5	Carly (Au, Ag, Cu, As)	64	Good Hope (Au, Cu, W, Mo, As, Bi)	60
6	Nicola Plateau (Au, As, Bi, Co, Cu, Te)	64	French Canyon (Au, Ag, Cu, W, Mo, As, Bi)	60
7	Ag, W, Te	38	W. (Au, Ag)	59
8	Duffin (Au, Ag, Cu)	63	W. (Au, Ag)	59
9	Hedley Arsenopyrite, Pyrite (Au, As, Cu, Co, W)	66	Mission, First (Au, Ag, Cu, Zn, As, Sb, Bi)	52
10	Massicot Fraction (Au, Ag, As, Bi, Co, Cu, Te, W)	36	Don (Au, Ag)	110
11	Sunshine (Au, Ag, As, Bi, Co, Cu, Te)	37	Good Hope (Au, Ag, Cu, W, Mo, As, Bi)	60
12	Building (Au, As, Bi, Co, Cu, Te, Zn)	47	French Canyon (Au, Ag, As, Sb, Bi)	60
13	Pitney 1 (Au)	47	Palanca (Cu, W)	101
14	Hedley, Palanca (Au, As)	144	Good Hope (Au, Ag, Cu, W, Mo, As, Bi)	60
15	Kingston (Au, Cu)	62	JJ (Cu)	114
16	Rich, Hedley (Au)	62	Good Hope (Au, Ag, Cu, W, Mo, As, Bi)	60
17	Barbery, Maple Leaf (As, Cu, Zn)	108	Tough Ores 4 (Au, Cu, W)	142

TABLE 2 - MICROFOSSIL AGES

Sample No. On Map	Lithology	Fossil Type	Preliminary Ages	GSC Location No.
1	1 m thick limestone bed	C	Probably Early Norian	C-103725
2	finely bedded limestone	C	Early Norian	C-103722
3	0.5 m thick limestone bed	C	Early Norian	-
4	0.6 m diameter limestone clast within limestone boulder conglomerate (clast contains eroid striae)	C	Carnian	-
5	chert pebble within limestone boulder conglomerate	RT	Permian	-
6	limestone clast within limestone boulder conglomerate	C	Late Carnian or Early Norian	-
7	limestone clast within limestone boulder conglomerate (clast contains brachiopod fossils)	C	Early Norian	C-103724
8	thin limestone bed	C	Late Norian	C-103725
9	thin limestone bed	C	Late Carnian or Early Norian	C-103722
10	0.2 - 0.6 m thick limestone	C	Middle or Late Norian	-
11	thin limestone bed	C	Late Carnian or Early Norian	C-103726

Conditions identified by M.J. Ouhart, GSC, Vancouver: British Columbia (Personal Communication, 1985, 1986)
Radiotarians identified by F. Corde, Laboratoire de Stratigraphie, Paris, France (Personal Communication, 1985)

Note: For a detailed description of the geology, mineralization and skarn alteration in this map sheet see G.E. Ray, G.L. Dawson and R. Simpson, British Columbia Ministry of Energy, Mines and Petroleum Resources, Geological Filework 1987, A Summary of Field Activities and Current Research, Paper 1987-1 (Report Number 1987-1).

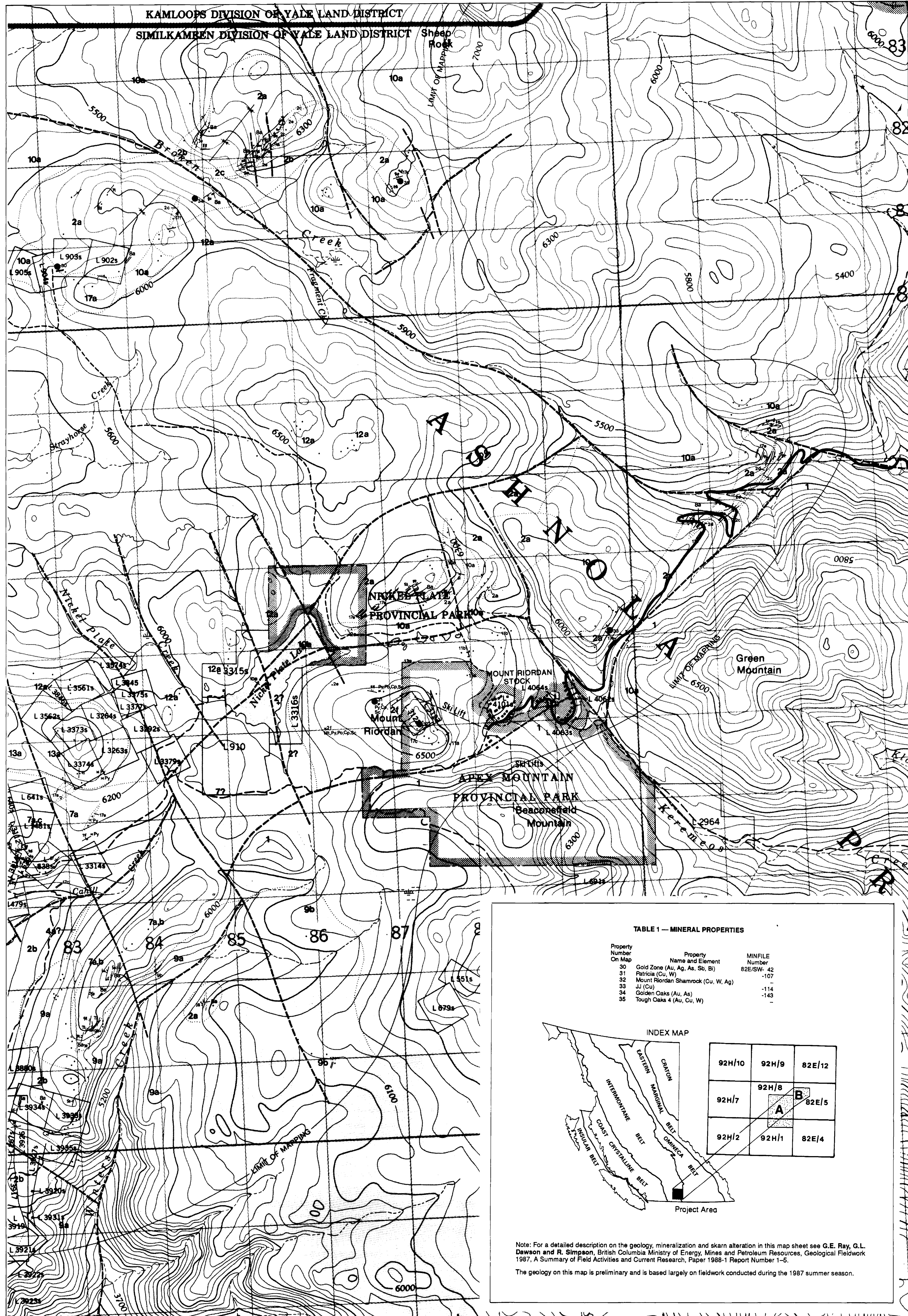
The geology on this map is preliminary and is based largely on fieldwork conducted during the 1986 and 1987 summer seasons.

Details on the Hedley Intrusions: Nickel Plate - Stewart Mountain area from C. Cassell (1910), H.S. Boston (1940) and J.W. Lee (1951); Barbery Mine area from M.R. Sanford (1986, Personal Communication); Larcant Creek area from S.G. McAllister and L.A. Dick (1987, Personal Communication).

*LOCATED ON MAPSHEET B

THIS PROJECT IS A CONTRIBUTION TO THE CANADA/BRITISH COLUMBIA MINERAL DEVELOPMENT AGREEMENT, 1985-1990

KAMLOOPS DIVISION OF YALE LAND DISTRICT
SIMILKAMEN DIVISION OF YALE LAND DISTRICT



ADJOINS MAPSHEET A



Province of British Columbia
Ministry of Energy, Mines and Petroleum Resources

OPEN FILE MAP 1988 - 6

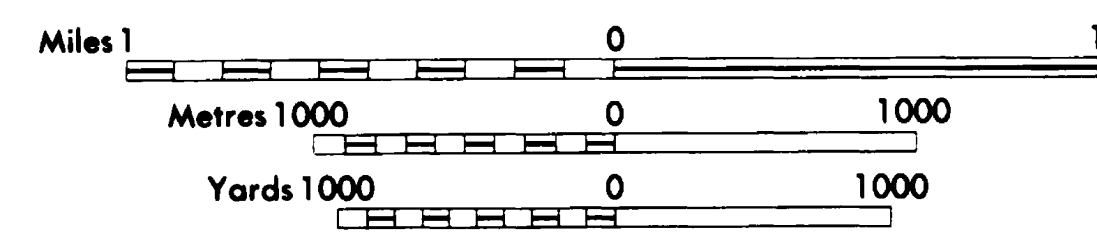
GEOLOGY AND MINERAL OCCURRENCES IN THE HEDLEY GOLD CAMP, SOUTHERN BRITISH COLUMBIA

NTS 92H/8E; 82E/5W

By G.E. Ray and G.L. Dawson
Assisted by I. Webster, M. MacLean, M. Mills and M. Fournier

RELEASED FEBRUARY 1988

SCALE 1:25 000



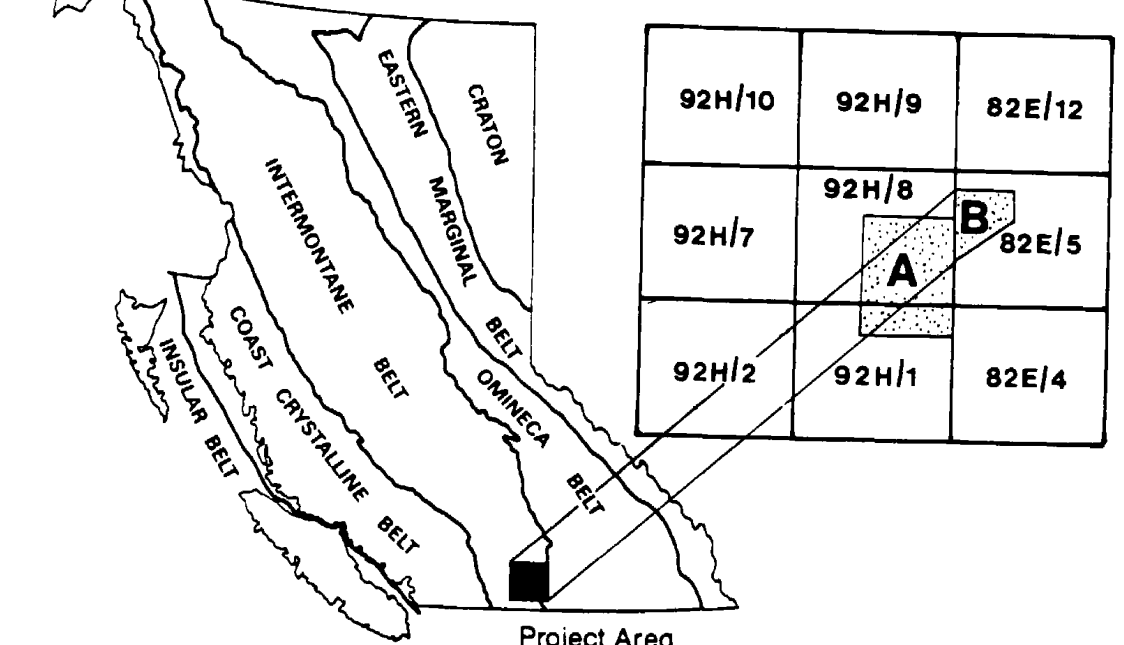
LEGEND

- QUATERNARY**
- Areas of extensive till cover
- TERTIARY**
- 18a, sandstone; 18b, basalt flows
- EROSIONAL UNCONFORMITY**
- UNCERTAIN AGE**
- 17 MINOR INTRUSIONS: 17a, granite to quartz monzonite; 17b, andesite; 17c, diorite; 17d, basalt; 17e, granodiorite; 17f, feldspar (± quartz, hornblende) porphyry
- EARLY CRETACEOUS**
- 16 QUARTZ PORPHYRY: 16, quartz eye rhyolitic intrusion
 - 15 VERDE CREEK STOCK: 15, granite to microgranite
- INTRUSIVE CONTACT**
- 14 SPENCES BRIDGE GROUP: 14a, dacite flows and minor tuffs; 14b, lahar; 14c, dacite ignimbrite with fiamme
 - 13 POSSIBLE SPENCES BRIDGE GROUP: 13a, quartz-feldspar crystal dacite ash and lapilli tuff; 13b, dacite dust tuff, minor argillite and pebble conglomerate; 13c, maroon coloured dacite lapilli tuff with fiamme; 13d, feldspar crystal andesite ash and lapilli tuff
- CONTACT UNCERTAIN**
- LATE JURASSIC**
- 12 OSPREY LAKE BATHOLITH: 12a, pink, equigranular to feldspar porphyritic, quartz monzonite to granite; 12b, marginal phase granodiorite to diorite to mafic gabbro
- EARLY JURASSIC**
- 11 MOUNT RIORDAN STOCK: 11a, equigranular granodiorite; 11b, hornblende porphyritic granodiorite
 - 10 BROMLEY BATHOLITH: 10a, granodiorite to quartz monzodiorite; 10b, diorite to quartz diorite
 - 9 CAHILL CREEK PLUTON: 9a, granodiorite to quartz monzodiorite; 9b, diorite to quartz diorite; 9c, apite
 - 8 HEDLEY INTRUSIONS: 8a, hornblende porphyritic diorite (<50% mafics); 8b, equigranular diorite (<50% mafics); 8c, mafic diorite and/or gabbro (>50% mafics); 8d, quartz diorite
- INTRUSIVE CONTACT**
- NICOLA GROUP**
- LATE TRIASSIC**
- 7 WHISTLE CREEK FORMATION: 7a, andesite ash tuff; 7b, tuffaceous siltstone; 7c, andesite lapilli tuff; 7d, andesite tuff-breccia; 7e, basaltic ash tuff; 7f, thin limestone beds; 7g, argillite; 7h, limestone boulder conglomerate (Copperfield conglomerate)
 - 6 STEMWINDER MOUNTAIN FORMATION (Western Facies): 6a, argillite ± thin limestone beds; 6b, siltstone ± thin limestone beds; 6c, limestone and/or marble; 6d, andesite ash tuff
 - 5 HEDLEY FORMATION (Central Facies): 5a, siltstone ± limestone and/or marble beds ± tuff; 5b, argillite ± limestone and/or marble beds ± tuff; 5c, limestone and/or marble; 5d, andesite ash tuff; 5e, tuffaceous siltstone; 5f, polymictic pebble conglomerate
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- CONTACT OCCUPIED BY THE CAHILL CREEK PLUTON**
- PALEOZOIC AND TRIASSIC**
- 1 APEX MOUNTAIN COMPLEX: 1a, siltstone; 1b, argillite; 1c, greenstone; 1d, andesite ash tuff; 1e, limestone and/or marble; 1f, chert; 1g, gabbro; 1h, conglomerate
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 - Axial Plane of Minor Fold: Inclined
 - Plunge of Minor Fold Axis
 - Fault: Approximate
 - Mineralized outcrop (pyrite, arsenopyrite, chalcopyrite, magnetite, pyrrhotite, scheelite, molybdenite) Py, As, Cp, Mt, Po, Sc, Mo
 - Location of mineral property (listed in Table 1)
 - Microfossil locality with sample number (listed in Table 2)
 - Massive, nonbedded or unfoliated outcrop
 - Topographical Contour (100-foot interval)

TABLE 1 - MINERAL PROPERTIES

Property Number On Map	Property Name and Element	MINFILE Number
30	Gold Zone (Au, Ag, As, Sb, Bi)	82E/SW, 42
31	Patricia (Cu, W)	-107
32	Mount Riordan Shamrock (Cu, W, Ag)	-114
33	JJ (Cu)	-143
34	Golden Oaks (Au, As)	-143
35	Tough Oaks 4 (Au, Cu, W)	-

INDEX MAP



Note: For a detailed description on the geology, mineralization and skarn alteration in this map sheet see G.E. Ray, G.L. Dawson and R. Simpson, British Columbia Ministry of Energy, Mines and Petroleum Resources, Geological Fieldwork 1987, A Summary of Field Activities and Current Research, Paper 1988-1 Report Number 1-5.
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