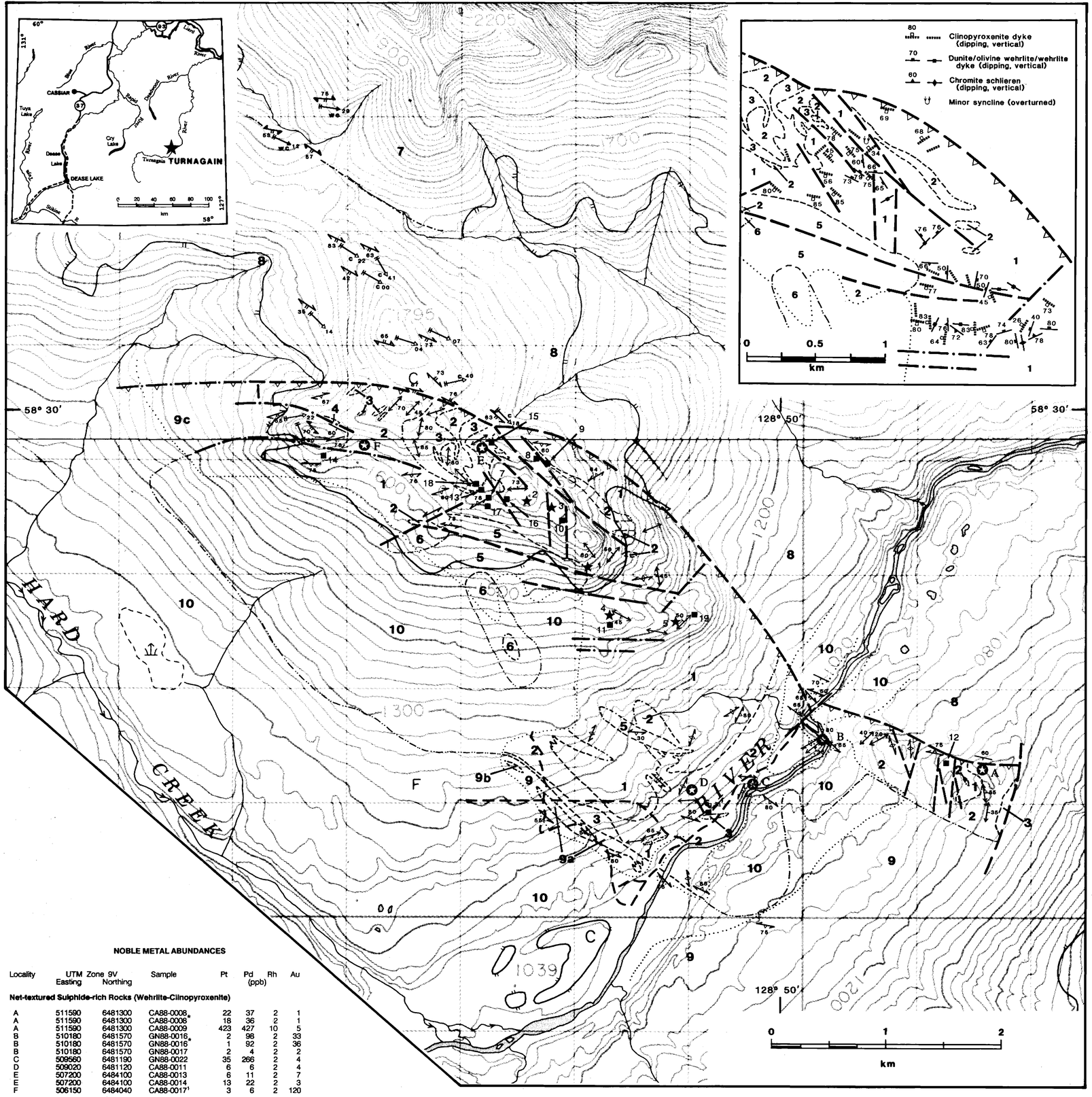

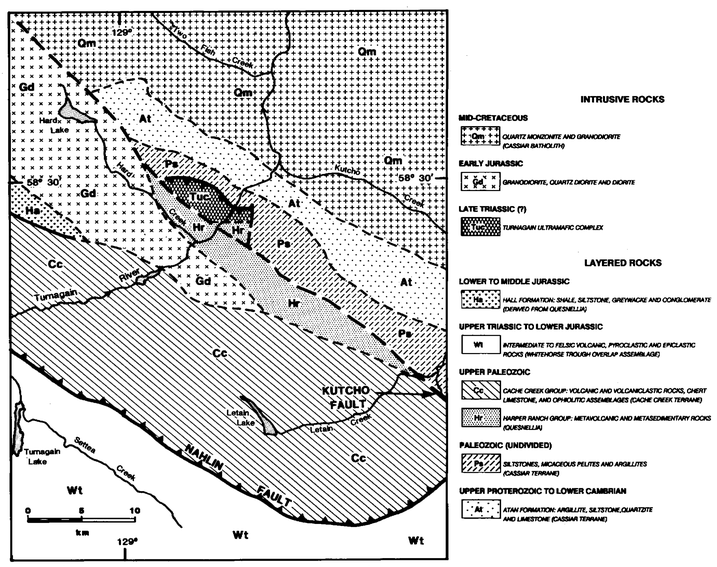

INTRUSIVE ROCKS

MID-CRETACEOUS

Qm — QUARTZ MONZONITE AND GRANODIORITE (CASSIAR BATHOLITH)

EARLY JURASSIC

Gd — GRANODIORITE, QUARTZ DIORITE AND DIORITE

LATE TRIASSIC (?)

Hr — TURNAGAIN ULTRAMAFIC COMPLEX

LAYERED ROCKS

LOWER TO MIDDLE JURASSIC

Ha — HALL FORMATION: SHALE, SILTSTONE, GREYWACKE AND CONGLOMERATE (DERIVED FROM QUESNELLIA)

UPPER TRIASSIC TO LOWER JURASSIC

Wt — INTERMEDIATE TO FELSIC VOLCANIC, PYROCLASTIC AND EPICLASTIC ROCKS (WHITEHORSE TROUGH OVERLAP ASSEMBLAGE)

UPPER PALEOZOIC

Cc — CACHE CREEK GROUP: VOLCANIC AND VOLCANICLASTIC ROCKS, CHERT LIMESTONE, AND OPHIOLITIC ASSEMBLAGES (CACHE CREEK TERRANE)

Hr — HARPER RANCH GROUP: METAVOLCANIC AND METASEDIMENTARY ROCKS (QUESNELLIA)

PALEOZOIC (UNDIVIDED)

Pe — SILTSTONES, MICACEOUS PELITES AND ARGILLITES (CASSIAR TERRANE)

UPPER PROTEROZOIC TO LOWER CAMBRIAN

At — ATAN FORMATION: ARGILLITE, SILTSTONE,QUARTZITE AND LIMESTONE (CASSIAR TERRANE)

NOBLE METAL ABUNDANCES

Locality	UTM Zone 9V Easting	Northing	Sample	Pt	Pd (ppb)	Rh	Au
Net-textured Sulphide-rich Rocks (Wehrlite-Clinopyroxenite)							
A	511590	6481300	CA88-0008	22	37	2	1
A	511590	6481300	CA88-0008*	18	36	2	1
A	511590	6481300	CA88-0009	423	427	10	5
B	510180	6481570	GN88-0016*	2	98	2	33
B	510180	6481570	GN88-0016	1	92	2	36
B	510180	6481570	GN88-0017	2	4	2	2
C	509560	6481190	GN88-0022	35	266	2	4
D	509020	6481120	CA88-0011	6	6	2	4
E	507200	6484100	CA88-0013	6	11	2	7
E	507200	6484100	CA88-0014	13	22	2	3
F	506150	6484040	CA88-0017[1]	3	6	2	120
Dunite with Chromitite Schlieren							
1	508100	6483070	GN88-0027	5	5	4	4
2	507590	6483660	GN88-0037	1	2	2	1
3	507800	6483600	GN88-0041	1	2	2	1
4	508300	6482660	GN88-0047	2	2	2	1
5	508880	6482600	GN88-0049	1	2	2	4
Dunite							
4	508300	6482660	GN88-0048*	1	2	2	3
4	508300	6482660	GN88-0048	1	2	2	1
9	507780	6483970	GN88-0033	2	7	2	2
15	507230	6484170	CA88-0024	45	52	2	2
16	507405	6483680	CA88-0025	14	25	2	1
17	507230	6483610	CA88-0026	1	4	2	4
Olivine Clinopyroxenite and Clinopyroxenite							
B	510180	6481570	GN88-0019	9	6	2	3
F	506150	6484150	CA88-0018	1	4	2	24
7	507250	6483690	GN88-0029	1	5	2	4
18	507130	6483800	CA88-0027	1	5	2	1
6	509180	6480920	GN88-0014	1	22	2	7
8	507680	6484000	GN88-0031	2	20	2	8
11	508310	6482590	GN88-0046	1	4	2	1
12	511260	6481370	CA88-0007	3	6	2	1
13	507180	6483750	CA88-0019	1	4	2	1
14	505800	6484040	CA88-0020	1	2	2	1
9	507780	6483970	GN88-0034	2	21	2	1
Wehrlite							
19	509060	6482680	GC88-0005[1]	1	2	2	1
10	507890	6483500	GN88-0042	2	2	2	2

* Duplicate sample analyzed.
[1] Talcose.
Sulphide showings: A, Cliff Zone; B, Discovery; C, Fishing Rocks; D, Horsetrail; E, Davis #1; F, Davis #2.
Noble metals were preconcentrated by fire assay using 30g splits of 200g of rock powder (-200 mesh) and analyzed by inductively-coupled plasma mass spectroscopy by Acme Analytical Laboratories, Vancouver.
Detection limits: Pt and Au 1 ppb; Pd and Rh 2 ppb.
Accuracy was checked by in-house standard FA-5X (Acme) which contains 100, 100, 20 and 100 ppb Pt, Pd, Rh and Au respectively, and gave on analysis an arithmetic mean (n=7) of 100 ppb Pt (range = 96-104); 99 ppb Pd (96-102); 21 ppb Rh (19-24); and 100 ppb Au (96-104).

Province of British Columbia — Ministry of Energy, Mines and Petroleum Resources
Energy, Mines and Resources Canada — Énergie, Mines et Ressources Canada

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MINERAL RESOURCE DIVISION
GEOLOGICAL SURVEY BRANCH

OPEN FILE 1989-18

GEOLOGY AND NOBLE METAL GEOCHEMISTRY OF THE TURNAGAIN ULTRAMAFIC COMPLEX

(modified after Clark, T., 1975. Geology of an ultramafic complex on the Turnagain River, northwestern British Columbia. Unpublished Ph.D. Thesis, Queen's University, Kingston, Ontario.)

NTS 104I/7 AND 10

G. T. NIXON, C. H. ASH, J. N. CONNELLY AND G. CASE

SCALE 1:16 000

LEGEND

LAYERED ROCKS

PLEISTOCENE TO RECENT

10 — *FLUVIAL AND GLACIAL DEPOSITS (SAND, SILT, GRAVEL, AND TILL)*

UPPER PALEOZOIC

9 — *HARPER RANCH GROUP: UNDIFFERENTIATED METASEDIMENTARY AND METAVOLCANIC ROCKS*
- **9a** mafic sill;
- **9b** granodiorite
- **9c** siltstone, greywacke and tuffaceous sandstone metamorphosed to upper greenschist facies

PALEOZOIC (UNDIVIDED)

8 — *GRAPHITIC SLATE AND PHYLLITE, MINOR SILTSTONE*

UPPER PROTEROZOIC TO LOWER CAMBRIAN

7 — *ATAN FORMATION: ARGILLITE, SILTSTONE, MINOR QUARTZITE AND LIMESTONE*

INTRUSIVE ROCKS

EARLY JURASSIC (?)

6 — *GRANODIORITE*

TURNAGAIN ULTRAMAFIC COMPLEX

LATE TRIASSIC (?)

5 — *SERPENTINITE*

4 — *HORNBLENDITE AND FELDSPATHIC HORNBLENDITE*

3 — *OLIVINE CLINOPYROXENITE(40-10% OLIVINE; 90-60% CLINOPYROXENE) AND CLINOPYROXENITE (10-0% OLIVINE; 100-90% CLINOPYROXENE)*

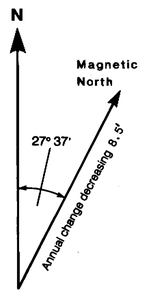
2 — *WEHRLITE (90-40% OLIVINE; 60-10% CLINOPYROXENE) WITH MINOR DUNITE, OLIVINE CLINOPYROXENITE, CLINOPYROXENITE AND HORNBLENDITE*

1 — *DUNITE (100-90% OLIVINE; 10-0% CLINOPYROXENE)*

SYMBOLS

- Geological boundaries (defined or approximate, assumed)
- Geological boundary inferred from aeromagnetic data
- Bedding (S_0) attitude (inclined, vertical)
- Igneous layering (strike, inclined, vertical)
- Schistosity or foliation attitude:
  - S_2 (transposed S_1)
  - F_2 axial plane
  - F_2 axial plane + S_2 foliation
  - relative age unknown (inclined, vertical)
- Lineation
  - F_2 minor fold axis (with crenulation)
  - Crenulation of S_0/S_1
- High-angle fault or shear zone (defined or approximate, inferred)
- Reverse or thrust fault (inferred, assumed)
- Limit of outcrop
- Geochemical sample site
  - Chromite locality
  - Sulphide showing

A Cliff Zone
B Discovery
C Fishing Rocks
D Horsetrail
E Davis #1
F Davis #2



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