

PRELIMINARY GEOLOGY AND NOBLE METAL GEOCHEMISTRY OF THE LUNAR CREEK MAFIC-ULTRAMAFIC COMPLEX

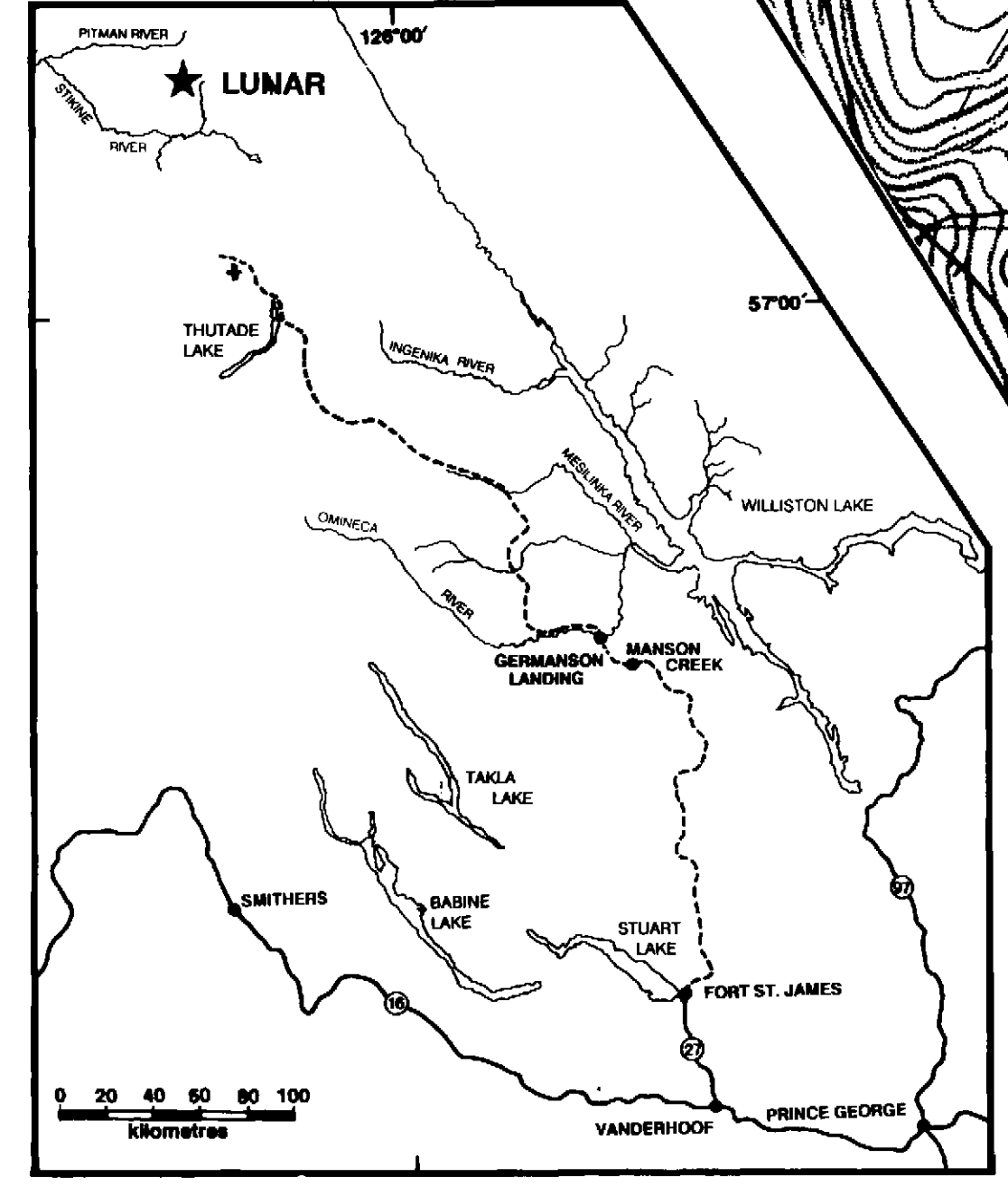
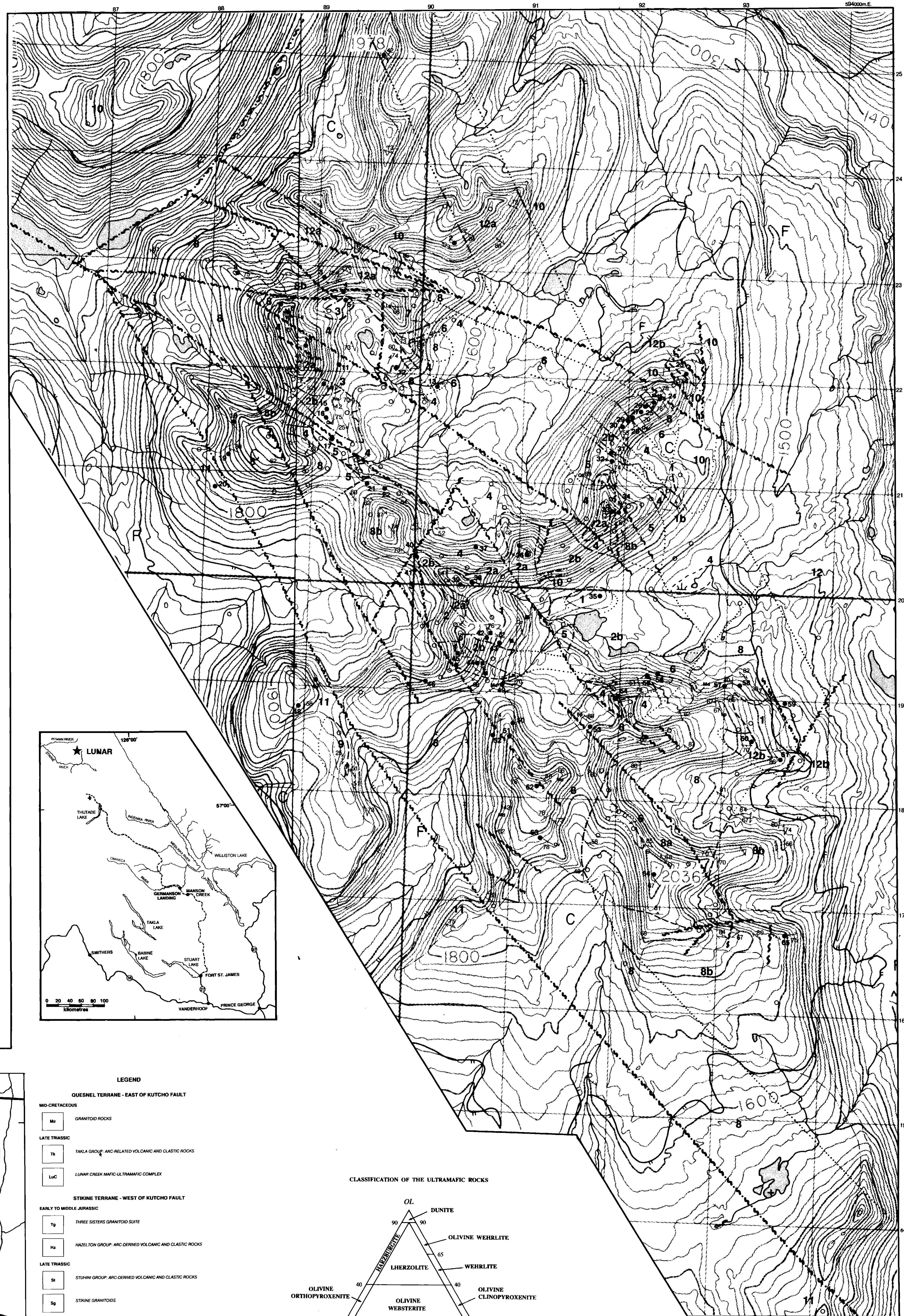
NTS 94E/13 AND 14
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SCALE 1:16 000

LEGEND

- INTRUSIVE ROCKS**
- GRANITOID ROCKS - EARLY JURASSIC (?)**
- 10 HORNBLENDE-BIOTITE QUARTZ MONZONITE, MONZONITE AND MONZODIORITE
- GRANITOID ROCKS - LATE TRIASSIC (?)**
- 9 HORNBLENDE MONZODIORITE - FOLIATED
- LUNAR CREEK MAFIC-ULTRAMAFIC COMPLEX - LATE TRIASSIC (?)**
- 8 DARK TO PALE GREY, MEDIUM TO COARSE GRAINED, PREDOMINANTLY HORNBLENDE GABBRO/DIORITE WITH SUBORDINATE CLINOPYROXENE, HORNBLENDE GABBRO/DIORITE, OLIVINE CLINOPYROXENITE, LEUCOGABBRO AND HORNBLENDE FELDSPAR QUARTZ PEGMATITE, MINOR CLINOPYROXENE, LEUCOGABBRO AND HORNBLENDE FELDSPAR QUARTZ PEGMATITE, FRASE OF LIMB 8
- 7 UNDIFFERENTIATED MEDIUM TO COARSE GRAINED, THICKLY LAYERED HORNBLENDE GABBRO/DIORITE, HORNBLENDE, CLINOPYROXENITE, CLINOPYROXENITE, HORNBLENDE-OLIVINE CLINOPYROXENITE AND OLIVINE CLINOPYROXENITE
- 6 DARK GREENISH GREY, MEDIUM TO COARSE GRAINED HORNBLENDE CLINOPYROXENITE, LOCALLY FELDSPATIC
- 5 DARK TO MEDIUM GREENISH GREY, MEDIUM TO COARSE GRAINED CLINOPYROXENITE, LOCALLY FELDSPATIC
- 4 DARK TO MEDIUM GREENISH GREY, MEDIUM TO COARSE GRAINED, PREDOMINANTLY OLIVINE CLINOPYROXENITE WITH SUBORDINATE CLINOPYROXENITE
- 3 LAYERED MAFIC UNITS: THINLY TO THICKLY STRATIFIED, MEDIUM TO COARSE GRAINED DUNITE, OLIVINE WEHLRITE, WEHLRITE AND OLIVINE CLINOPYROXENITE, CLINOPYROXENITE; 3a REPLACEMENT DUNITE, PERIDOTITE LOCALLY CROSSCUTS LAYERING
- 2 CHAOTIC MAFIC UNITS: DARK TO MEDIUM GREENISH GREY AND BUFF WEATHERING METTLED OUTCROPPES COMPRISING IRREGULAR BLOCS AND SCALERS OF MEDIUM GRAINED DUNITE, OLIVINE WEHLRITE, WEHLRITE AND OLIVINE CLINOPYROXENITE, CLINOPYROXENITE; 2a DUNITE TO WEHLRITE-RICH DOMAINS; 2b CLINOPYROXENITE-RICH DOMAINS
- 1 PALE BUFF WEATHERING, MEDIUM-GRAINED, WEAKLY SERPENTINIZED DUNITE CUT BY ABUNDANT OLIVINE CLINOPYROXENITE AND CLINOPYROXENITE DIKES; 1a CONTAINS MINOR CHROMITE SCALERS; 1b CONTAINS MINOR OLIVINE WEHLRITE
- STRATIFIED ROCKS**
- TAKLA GROUP - UPPER TRIASSIC**
- 12 MIDDLE GREENSCHIST TO LOWERMOST AMPHIBOLITE GRADE VOLCANIC, VOLCANICLASTIC, AND SEDIMENTARY ROCKS; 12a DARK GREY TO GREENISH GREY ANDITE AND FLAGGOLITE-PHYRIC ACTINOLITE SCHECT; 12b DARK GREY TO BLACK WELL-FOLIATED AMPHIBOLITE
- ASITKA GROUP (?) - MISSISSIPPIAN (IN PART)**
- 11 GREENSCHIST GRADE VOLCANIC, VOLCANICLASTIC, AND SEDIMENTARY ROCKS; BROWNISH GREY WEATHERING, THINLY BEDDED SANDY LIMESTONE, MEDIUM GREY CHERT, DARK GREY CHERT, QUARTZ ACTINOLITE SCHECT, HORNBLENDE, PLAGIOCLASE PORPHYRY, ACTINOLITE AND SAUSSURIZED LITHIC WACKE AND/OR FELDSPATIC TUFF

- SYMBOLS**
- Geological boundaries (defined or approximate, gradational, assumed) - - - - -
- Bedding attitude (inclined, vertical) 54
- Magmatic layering 56
- Schistosity or foliation attitude (inclined, vertical) 58
- Mineral lineation 60
- High-angle fault or shear zone (defined, inferred) 62
- Dike attitude (inclined, vertical) 64
- We, wehrlite; Cp, clinopyroxenite; Mz, hornblende-biotite monzonite/monzodiorite; Fp, feldspar porphyry; Md, hornblende microdiorite; Qt, quartz-feldspar leucogabbro; Lm, leuc-monzodiorite; Lg, leucodiorite/leucogabbro (Of, Lm and Lg may be differentiates of the gabbroic rocks; Mz is probably related to unit 10; and Fp and Md are of dubious affinity)
- Quartz vein orientations 77
- Other chromitite localities ●
- Geochemical sample site ●
- Field station ○
- Limit of major outcrop - - - - -



NOBLE METAL ABUNDANCES

LOCALITY	SAMPLE NUMBER	UTM GRID ZONE 9V	Pt	Pd	Rh	Au
		Northing Easting	(ppb)	(ppb)	(ppb)	(ppb)
DUNITE						
14	GN-89-9077A	6421870N 589260E	41	6	<2	10
14	GN-89-9077B	6421870N 589260E	62	7	<2	11
14	GN-89-9077E	6421870N 589260E	343	10	<2	<1
35	GN-89-9096	6419960N 591800E	173	3	12	3
39	GN-89-9060	6420010N 590450E	41	4	<2	4
42*	GN-89-7116B*	6419520N 590450E	1017	26	<2	<1
43	GN-89-9100B	6429480N 590350E	14	4	<2	<1
44	GN-89-9101	6419280N 590650E	18	3	<2	<1
OLIVINE WEHLRITE						
5	GN-89-9075B	6422695N 584275E	9	3	<2	9
14	GN-89-9077E	6421870N 589260E	15	<2	<2	4
15	GN-89-9070B	6421620N 589300E	135	4	4	2
45	GN-89-7073A	6419250N 590440E	9	24	<2	47
WEHLRITE						
31	GN-89-9077D	6421870N 589260E	60	12	<2	11
31	GN-89-9065	6421330N 591860E	65	3	<2	<1
36	GN-89-9080A	6420340N 591090E	29	3	<2	4
OLIVINE CLINOPYROXENITE						
10	GN-89-9077	6422240N 589900E	13	<2	<2	5
11	GN-89-9076	6422060N 588225E	136	8	4	<1
15	GN-89-9070B	6421620N 589300E	57	9	<2	12
15	GN-89-9070A	6421620N 589300E	21	<2	<2	11
37	GN-89-9064	6420385N 590590E	111	12	7	6
46	GN-89-7076A	6419085N 590150E	3	<2	<2	4
55	GN-89-8117B	6421310N 592290E	12	8	<2	3
CLINOPYROXENITE						
29	GN-89-9084	6421620N 592000E	28	5	<2	<1
30	GN-89-9080	6421570N 591950E	26	4	<2	<1
33	GN-89-9082	6420760N 591890E	31	11	<2	3
59	GN-89-9113A	6418990N 593600E	55	3	<2	175
FELDSPATHIC CLINOPYROXENITE						
12	GN-89-9074B	6422060N 589950E	8	6	<2	2
41	GN-89-9058	6420150N 590010E	11	13	<2	3
HORNBLLENDE CLINOPYROXENITE						
13	GN-89-7092	6421890N 590180E	27	3	<2	94
25	GN-89-9087	6421800N 592170E	41	4	<2	3
28	GN-89-9085	6421620N 592040E	40	6	<2	3
40	GN-89-9056	6420250N 590010E	19	18	<2	4
FELDSPATHIC HORNBLENDE CLINOPYROXENITE						
52	GN-89-9059	6418930N 590810E	7	12	<2	123
56	GN-89-8118	6419240N 592400E	15	16	<2	5
62	GN-89-7111	6418110N 591270E	34	63	<2	8
FELDSPATHIC CLINOPYROXENE HORNBLENDE						
27	GN-89-9068	6421710N 592120E	10	6	<2	12
CLINOPYROXENE-HORNBLLENDE GABBRO						
8	GN-89-8110	6422890N 588240E	8	17	<2	64
49	GN-89-7097	6419070N 590808E	3	<2	<2	216
51	GN-89-7107	6418590N 590990E	3	<2	<2	12
GABBRO						
4	GN-89-9073C	6422780N 584240E	12	3	<2	10
24	GN-89-9090	6421850N 592300E	17	89	<2	8
52	GN-89-7056A	6418930N 593610E	<1	<2	<2	2
57	GN-89-8103	6418990N 591990E	8	16	<2	9
54	GN-89-9107	6419130N 593020E	<1	2	<2	8
58	GN-89-9119	6419250N 593020E	15	8	<2	2
58	GN-89-9119	6419250N 593020E	10	8	<2	81
LEUCOGABBRO						
7	GN-89-6107	6422600N 589670E	13	5	<2	373
34	GN-89-8084	642760N 591940E	13	53	<2	10
51	GN-89-9106	6418590N 590990E	2	<2	<2	<1
LEUCODIORITE/LEUCOGABBRO DIKE						
6	GN-89-6078	6422530N 588725E	2	<2	<2	3
21	GN-89-9049	6420930N 589680E	<1	<2	<2	442
22	GN-89-8046	6420890N 589640E	31	4	<2	17
FOLIATED GABBRO/DIORITE						
17	GN-89-8043	6421340N 589330E	3	<2	<2	64
21	GN-89-9049A	6420830N 589680E	8	7	<2	6
23	GN-89-9048B	6420830N 592650E	9	8	<2	9
65	GN-89-6149	6416780N 593670E	9	9	<2	9
MONZONITE						
2	GN-89-6094B	6423280N 590290E	<1	<2	<2	3
19	GN-89-8075	6421180N 588210E	2	<2	<2	18
26	GN-89-9069	6421780N 592160E	3	<2	<2	11
64	GN-89-7120	6417320N 592400E	5	<2	<2	4
TAKLA GROUP ROCKS						
1	GN-89-9090	6425050N 590550E	<1	<2	<2	4
23	GN-89-9064	6422300N 592550E	<1	4	<2	5
60	GN-89-9121	6418460N 593300E	10	5	<2	35
61	GN-89-9115	6418610N 593590E	4	<2	<2	37
ASITKA GROUP ROCKS						
20	GN-89-8073	6420000N 588100E	<1	3	<2	20
47	GN-89-7085	6419060N 589115E	<1	<2	<2	133
48	GN-89-6124	6418790N 589060E	<1	<2	<2	15
HORNBLLENDE MICRODIORITE/MICROGABBRO DIKE						
9	GN-89-8080	6422510N 587290E	6	9	<2	4
18	GN-89-9077	6421490N 589250E	<1	<2	<2	55
38	GN-89-9063	6420030N 590550E	6	<2	<2	142
50	GN-89-9105	6418720N 591010E	<1	<2	<2	43
53	GN-89-6112A	6418700N 591730E	<1	<2	<2	5
53	GN-89-6117A	6421310N 592290E	4	6	<2	4
PLAGIOCLASE PORPHYRY DIKE						
30	GN-89-9066C	6421570N 591950E	<1	<2	<2	8
30	GN-89-9066A	6421570N 591950E	<1	<2	<2	31
36	GN-89-9060B	6420340N 591090E	2	<2	<2	<1
53	GN-89-6112B	6418700N 591730E	4	17	<2	21
LEUCOGABBRO DIKE						
26	GN-89-9069B	6421780N 592160E	<1	3	<2	14
QUARTZ VEIN						
3	GN-89-6099	6422900N 589075E	2	<2	<2	17
16	GN-89-9069A	6421550N 589290E	3	<2	<2	3
16	GN-89-9069B	6421550N 589290E	2	<2	<2	<1
21	GN-89-8045B	6420930N 589680E	3	<2	<2	5
32	GN-89-9055A	6421250N 591890E	2	<2	<2	11
51	GN-89-9106C	6418590N 590990E	2	<2	<2	3
63	GN-89-7112	6417630N 591310E	2	3	<2	8

* Chromiferous dunite
Noble metals were preconcentrated by fire assay using 30g splits of rock powder (200 mesh) and analyzed by inductively-coupled plasma emission spectroscopy by Acme Analytical Laboratories, Vancouver.
Detection limits: Pt and Au 1 ppb; Pd and Rh 2 ppb.

