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NOTES ON THE PLATINUM BLONDE PROPERTY.
PLACER DEVELOPMENT LIMITED.

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THE PLATINUM BLONDE PROPERTY INVOLVES MOST OF THE ORIGINAL FRANKLIN CREEK MINING CAMP EXCEPT FOR THE UNION MINE. MAPPING OF THE PREPARED GRID WAS CARRIED OUT BY MYSELF AT 1:5000 SCALE BETWEEN JUNE 6TH AND JULY 28TH 1987 AND INVOLVED 40 DAYS FIELD WORK. THE PROBLEMS RELATED TO THE DEFICIENCIES OF THE BASE & TIE LINES AND FLAGGED GRID ARE WELL KNOWN. THEY INTRODUCE A MAJOR PROBLEM IN MAP ACCURACY AT THIS DETAILED SCALE. POSITION CANNOT BE GUARENTEED TO BE GREATER THAN 50m. HOPEFULLY MOST LOCATIONS ARE MUCH MORE ACCURATE THAN THAT. PLOTTING HAS GENERAL BE RELATED TO THE GRID FLAGGING EXCEPT WHERE THIS WAS OBVIOUSLY IN ERROR. OR WHERE MAJOR TOPOGRAPHIC FEATURES & THE GRID DIFFERED, IN WHICH CASE THE TOPOGRAPHY WAS USED.

THE FRANKLIN CAMP IS 70KM NORTH OF GRAND FORKS B.C. AND IS A REMNANT OF STRATIFIED ROCKS SURROUNDED BY PLUTONS. THE AREA HAS BEEN INVOLVED IN EXTENSIONAL TECTONIC IN THE TERTIARY, PROBABLY PRESERVING THE INLIER BUT GENERATING THE FAULT TROUGH FILL OF FANGLOMERATE AND COVER VOLCANICS.

THESE NOTES ARE MAINLY CONCERNED WITH FIELD DESCRIPTION OF THE ROCKS AND CRUDE STRATIGRAPHY EVIDENT DURING MAPPING. A PRELIMINARY MODEL IS PRESENTED FOR THE "AVERILL" ALKALIN COMPLEX. INFORMAL NAMES ARE GIVEN TO THE MANY PLUTONIC BODIES IN THE MAP AREA WITHOUT REGARD FOR STRATIGRAPHIC PROCEDURES. ALSO CLASSIFICATION OF IGNEOUS ROCKS DEPENDS ENTIRELY ON EARLIER DESCRIPTIONS AND HAND LENS EXAMINATION.

STRATIFIED ROCKS.

Stratified rocks in the Franklin Creek area consist of four units, an old highly deformed and thermally metamorphosed unit, the Franklin Group and three Eocene units, the Kettle River Formation a conglomerate and arkose, a related thin rhyolite porphyry flow or dome called informally the McKinley rhyolite, and probably actually part of the Kettle River, and a superior unit of trachytic flows, the Marron Formation.

The Franklin Group is the local basement and its structure and stratigraphy are only partially understood. The Kettle River Formation represents the product of extensional tectonics oriented north-south & with listric faulting. Eruption of the McKinley rhyolite appear to have been coeval and may result from the faulting. The Marron is not much younger and is a uniform group of alkaline & subalkaline lavas that have been tilted & mildly folded but scarcely deformed or altered.

Franklin (Anarchist) Group consists of a sequence of sedimentary and volcanic rocks that have been subjected to multiple deformations and fairly intense thermal and locally metasomatic metamorphism. The group consists of subequal proportions of volcanic and sedimentary rocks but many are difficult to classify because they intergrade between tuff, tuffite & lithic sandstones all of which have been hornfelsed.

The group is distributed widely in the area, principally in the southwest, southeast & Union Mine area & also in a small area north of Franklin Mountain.

The lithology consists principally of the following types:

1. Grey crystalline limestone
2. Grey to white chert-lithic granule to pebble conglomerate with some limestone clasts.
3. Dark grey to white bleached argillite & cherty argillite ~~& chert~~
4. White chert and cherty siltstone.
5. Lithic to arkosic a quartzose sandstone to quartzite
6. Green volcanic sandstone and tuffite.
7. Green Basic tuff and breccia.
8. ~~Dacite~~ Grey dacitic quartz bearing tuff & tuff breccia.
9. Non determinate fine grained green rocks of probable volcanic origin.

No stratigraphy has been worked out for the group at present but it possibly could be as there are some marker beds and not rare indications of bedding. Rocks of similar nature, including marker beds are widely distributed so that duplication by faulting and folding is most likely. If there was no duplication, ~~so~~ the group would need to be 2 or more Km thick. Suggestions of compressed

folding and imbricate faulting are common but no actual hinge zones were recognized. Small faults are very common on larger ones exist. In general all the Franklin Group rocks strike within 15° of north and dips mostly exceed 50 degrees. It is probable that with duplication the group is only 500 m to 1 km thick.

A gross section across the map area from west to east is as follows: rocks in the west tend to dip eastward at 50 to 90°, in the centre, Union Mine area dip vertically and in the east dip westward at 20 to 30 degrees. Hence a ~~an~~ geosynclinorium or synclinal fan fold are possible structural interpretations. The sequence from west to east over 3 km is as follows: Sandstones are overlain by a thick band of basic tuffs and then argillites west of Franklin Creek. From here to the Kettle River Formation onlap the sequence consists of tuff, then argillite with minor intercalated limestone, the thick Gloucester limestone member, argillite with minor limestone, sandstone tuff and heterolithic granule conglomerate, basic tuffite and sandstone, dacite tuff and tuff breccia and finally basic tuff and breccia. The sequence on the Union property is argillite and chert, sandstone and tuff, heterolithic granule conglomerate, sandstone & extensive tuff. At & east of Gloucester Creek the gently dipping sequence consists largely of intermediate and basic tuff and volcanics with several sandstone and chert horizons. All the volcanic units may be apparent as microdiorite. All units are cut by significant several crowded feldspar porphyry dykes.

The Franklin Group has yielded no fossils in the area. Limestone and chert have been collected for possible dating by conodonts. Elsewhere the Anarchist Group is regarded to be of Permian age. The bulk of the debris in the Kettle River Group is of Franklin Group origin.

The Kettle River Formation is a unit regionally distributed in the West Kootenays in local fault basins where it reflects local stratigraphic sources. In the Franklin area, the formation occurs in a band on the west of Franklin Mountain, overlying the Franklin Group, "Gloucester" Pluton and "Averill" Alkaline Complex. It is cut by dykelets of granite ~~porbla~~ possibly related to the "North Plateau" Pluton (G4) No pulaskite dykes are known to penetrate it & no recognizable cobbles of pulaskite were found. The formation elsewhere is early Eocene, no fossils were recognized during mapping but some fine arkose submitted for palynology.

The formation consists of two facies, a coarse fanglomerate and a finer arkose. In addition the McKinley rhyolite porphyry might be considered a member of the formation.

The fanglomerate is a polymic conglomerate of extremely poor sorting and rounding of clasts. The latter may be up to 1 x 0.5 m but normally the largest are 20 to 50 cm. in long dimension. Sub angular blocks, tetrahedral or platy shaped clasts are the rule with only rounding of projecting corners. The clasts are dominated by Franklin Group lithology but "Averill" rocks occur and the trachytic syenite provide most of the feldspar sand of the matrix. Some coarse plutonic rocks occur & one at least resembled closely the "Blue Point Mountain" granite (G3). The fanglomerate is normally unbedded but may have arkosic intercalations and rarely preferred orientation of clasts. In the latter case imbrication is not evident so that sedimentological evidence for source direction has not been found.

The arkoses are buff, ~~to~~ cream to light greenish grey in colour, most are coarse and relatively poorly bedded but siltstones do occur. ~~The~~ The sorting and rounding is like the fanglomerate, very poor, most grains are angular to sub angular. Bedding in some localities is good with parallel bed sets distinguished by clast size. Sedimentological features such as cross bedding - grading or channelling were not observed.
The composition of the arkoses is dominated by plagioclase and K feldspar, with plagioclase seemingly exceeding K-feldspar, each with about 30 %. Other minerals are more variable with quartz 10-25 %, lithic clasts 5-20 %, ferromagnesians 5-15 %.

The stratigraphy and thickness are also variable. Thickness of up to 150 metres are common in the north and south of the area but as little as 40 m. in the area north of the Maple Leaf property. Where it is thick, arkose is generally a minor part of the unit but even so it is common to have both basal & superior arkoses 10 m. to 25 metres thick.

The origin of the unit appears related to listric faulting with deposition into fault basins that held lakes. The well bedded arkose is unlikely to be anything but aqueously deposited.

an informal name for
McKinley Rhyolite is a ephemeral unit that occurs at the Top of the Kettle River Formation or in one instance intercalated near the top. ~~It occurs~~ In the map area it occurs on the ridge that ~~extends~~ south from 58+00N/55+00E. and also the inner at the northeast end of Mt. Franklin. ~~occurs~~ on line 67+00E near 56+00N. It occurs more widely ~~on~~ on Mt. McKinley ~~and Franklin Mtn~~.

The McKinley Rhyolite is an unusual unit that combines pyroclastic and sedimentary features. Most seems to be a rhyolite flow or breccia but in some areas it incorporates common fanglomerate sandstones. Much of the quartz and plagioclase of the Kettle River may have originated with the McKinley Rhyolite. The rhyolite is a crowded porphyry actually & consists of 10± clear corroded quartz, 20% white feldspar both up to 5mm in diameter with about 2% of small thin books of biotite, all in a chalky white matrix.

The thickness on the south ridge could be 50 m but on the north is at most 25 m thick and pinches out in a short distance. A thin bed in the north appears to be incorporated at the top of the fanglomerate & grades to arkose.

Marron Formation The Marron Formation is a widely distributed late Eocene alkaline to subalkaline formation in south central BC. ~~Chilcotin~~ In many areas it have a varied petrochemistry & stratigraphy In the map area it consists of a single rock type, probably in a number of superposed flows. The maximum thickness in the map area appears to be about 100 meters. It may be equivalent to the Kamloops Lake Member. The formation overlies the Kettle River either conformably or without major unconformity.

The formation is not cut by any recognized dykes & appears to be the youngest consolidated unit in the Area. In the type area at White Lake it is judged to be ~~late~~ Middle Eocene (37 m.y.).

Composition. The lava is consistently a sparse porphyry ~~medium~~ light purplish ~~green~~ grey, rarely greenish gray with up to 10% phenocrysts, more commonly 5%. consisting of feldspars or feldspar clots and green ferromagnesian minerals. The feldspars in some cases seem to be mantled possibly Kf on plagioclase. The ferromagnesian minerals have pyroxene shapes but not a very good cleavage. They are commonly corroded & or weathered to reddish brown. The plagioclase clots or crystals can be 5 mm, the ferromagnesian may be that long but usually much smaller The phenocrysts especially small mafic minerals may be aligned in a crude trachytic texture. They float in a aphanitic matrix. Rarely a few vesicles occur.

PLUTONIC ROCKS

Plutonic rocks of the Franklin Creek Area are more diverse in nature and age than regional studies have previously indicated. There appears to be parts of six distinctive plutons, two major dyke sequen suites and several small unclassified bodies. They range in age from probably Jurassic to probably late Eocene. They range in composition from calcalkaline granodiorite, granite & diorite to alkaline pyroxenite, monzogabbro-monzodiorite monzonite and pyroxene syenite. The alkaline sequence are clearly all closely related in age and origin. The calcalkaline have numerous plutons of similar nature but diverse age. The table lists the plutons, their common lithology and map symbols. In addition field estimates of mineralogy and composition and relative age are presented with apparent correlation where known. The relative age of plutons is judged solely by local geological criteria. Most of the calcalkaline plutons except the Gloucester seem to be younger than the Areuill Alkaline Complex. The latter provides relatively few clasts to the Kettle River conglomerates but a major part of the feldspar for matrix and for arkoses.

The origin of the granitic rocks is a larger problem than the local map area. The nature and geometry of the Areuill Alkaline Complex is however a local problem to which field data can make a contribution.

The Areuill Alkaline Complex is clearly a related sequence and a tentative model was developed from the geometry of the map plan and sections together with detailed geological relationships. These indicate an early mafic intrusion was vertically zoned in composition and texture. The root may have been ~~an~~ ultra mafic cummulate and graded upwards to a roof that spread sill-like composed of least mafic finest grained, porphyritic monzonites. This early zoned mafic body was intruded penicontemporaneously by a more felsic fine to medium grained trachytic pyroxene syenite that graded inwards to a coarse, slowly cooled, metasomatically altered core consisting of coarse trachytic syenite. Ultramafic rocks occurred as original deep cummulates and these were remobilized and injected with mafic rocks (schlieren monzogabbro) and injected masses at the borders of the syenite intrusions. They also occur as metasomatic envelopes to syenite dykes.

PLUTONS.

No.	Map Symbol	Informal Name	Main Composition	Age Relations.	Correlation.
1	G_1 G_{1a}	Gloucester Pluton	fine medium hornblende granodiorite fine grained phase	post Franklin Gr., pre Averill Alk. Cmp.	Nelson.?
2	[redacted]	Averill Alkaline Complex			
	Px	pyroxenite phase.	- course to fine pyroxenite, mica & feldspathic pyroxenite	post Gloucester Pluton - pre Monzonite, syenite	
	MG	co magnetic monzogabbro.	- fine medium grained monzogabbro & relatives.	post pyroxenite - pre-trachytic syenite.	
	MD	co magnetic monzodiorite.	- fine medium monodiorite.		
	M	co magnetic monzonite.	- fine slightly porphyritic monzonite.		
	cTS	co mag. course syenite	- ss & very cs. trachytic pyroxene syenite	post monzonite suite - pre West Fork pluton. Kettle R.	
	TS	co mag. fine & med. syenite.	- fine & medium trachytic pyroxene syenite		
3	G_2.	West Fork Pluton	- med. gr. hornblende granodiorite	post Averill Alk Complex - pre pulaskite.	
	G_{2a}	late phases	- fine-med. hypidiomorphic granite.		
	G_{2b}.		- fine allotriomorphic aplite.		
4.	G3	Bluejoint Mountain Pluton	- course quartzose pinkish granite	post Averill Alk. Complex - pre Kettle River	Valhalla?
	G3a	contact phases	- aplitic to fine grained sphene granite	post Averill. " "	
5	D1	Aldie Pluton	- fine medium hypidiomorphic diorite	post Averill Alk Complex - pre pulaskite	
6	G4	North Plateau Pluton	- fine medium granodiorite.	prob. post pulaskite -	
			HYPABYSSAL INTRUSIONS		
7	Pu(S)	Pulaskite, mafic syenite	- glomeroporphyritic K feldspar porphyry - holocrystalline pyroxene syenite	post West Fork Pluton pre North Plateau	Coryell?
8	GP	Grey porphyry.	- grey crowded plagioclase, biotite, qtz por.	- post Averill pre ~~Battle Lake~~ Kettle River Fm.	West Fork G2a?

Summary Field Descriptions, Intrusive Rocks

1. Gloucester Pluton - fine to medium grained, hypidiomorphic hornblende granodiorite - fairly commonly chloritized 15-20% hb, 15-20% quartz fine grained in matrix, 45% ? pc, 15% Kf in matrix. Slightly finer than West Fork granodiorite, 2mm average vs 3 to 4 mm. . fine grain phase on northeast border (G1a)

3. West Fork Pluton - medium grained (av. 3 to 4 mm - hb up to 7mm long) - hornblende granodiorite - usually fresh, composition granite phase 20% hb, 5% biotite, 15% quartz, 45% plag., 15% Kf - hypiomorphic texture. Aplitic & hypidiomorphic

4 Bluejoint Mtn Pluton - coarse (av. >5 mm), virtually allotriomorphic granite with large irregular grey quartz, mottled buff to grey weathering; Comp. 20-25% quartz, 5% biotite, 5% hornblende, 70% subequal plagioclase and K feld.
- Contract phases variable from aplitic granite to fine quartzose sphene bearing granite. (30% qtz, 4% hb, 3% bi, pl+Kf).

6 North Plateau Pluton - fine to medium (av ca 3mm) - fresh hornblende granodiorite, ~~gneiss~~ hypidiomorphic texture. 15-20% hb, 15-20% qtz of fine grain, 45% ? plag, 15% Kf in matrix.

5 Aldie Pluton - fine grained, (av. ca 1mm - max pc & hb lengths to 3 mm). Comp. - ~~20% hb, 5% bi, 15% qtz, 45% pc, 15% Kf~~ weakly foliated leuco diorite. - 1 to 3% hb, 75% zoned plag, < 5% qtz + accessories.

7 Pulaskite - resistant, buff weathering - purplish grey mafic syenite with ca 20% phenocrysts in a very fine grained aphanitic matrix. Glomero to radiating Kf clots with equigranular biotite books, green pyroxene; Kf > bi > diopside?, Kf > bi > px. . - prob related to Ceryell

8 Grey porphyry - spotted grey & white porphyry - 30% zoned plag laths to 2 mm, 5% biotite < 1 mm, rare 2-4 mm corroded quartz grains in dense glassy looking grey matrix. possible related to late granite of West Fork.

2. Averill Alkaline Complex.

PX – Variable from coarse monomineralic pyroxenite with crystals to 2 cm rare
cs. px^ite with 90% px 5±10 ±5% felds 0–2 % & amber foids (poss. olivine).
m.gr. – foliated px >95% px as aligned elongated prism ± 5% pc
mgr. micaceous pyroxenite – 3 mm ∅ mica. forming 10 to 100% of "altered" pyroxenite
* Composition of pyroxenes not known.

M/MD/MG. – a gradation sequence from gradational ~~border~~ phases.
description on basis of hand lens examination contradicts petrographic principles
for the classification should be based on composition of the feldspars or mafic minerals
largely undeterminable.. Hence it is based on mafic content

MG. >65% mafic. <90%.
MD. >35 " <65
M >15 <35

M. invariably fine grained 0.5 – 1 mm average ∅ – with 1 to 5% phenoxts of px & pc to 5 mm.
Common mafic comp 20% – rare bi – feldspars include plagioclase

MD. normally fine-medium grained 1-3mm av. ∅. – no phenoxts., 50% px. greenish black slight foliated fabric
contains some plagioclase. – may have px ~~altered~~ to bi or even contain 5% primary? bi. commonly be foliated

MG – normally med. grained 2-4 mm ∅. Schlieren of pyroxene can occur or large Kf oriented laths
– metasomatic envelopes to syenite veins occur of very fresh randomly oriented px. – alteration of px to bi. common

TS/CTS. – a gradational sequence with two main modes – fine to medium grained & coarse & very coarse
compositionally virtually identical, – foliated rocks grey to buff weathering & grey fresh
of 70±10% K feldspar laths (plates) with either interstitial pyroxene 20-30% (in coarse grained) or parallel
prisms in fine & medium, trace of biotite & magnetite – f.g laths <0.5 cm, m. 0.5-2 cm. >2 cs.
very cs. up to 8 cm long

Selected References.

- Drysdale, C.W. (1915). Geology of Franklin Mining Camp, BC. GSC, Memoir 56.
- Little, H.W., (1957). Kettle River (East Half.). ~~Prel Map 6-1957,~~ ~~Preliminary~~ GSC, Map 6-1957
- Chilcott, R.P. & Lisle, T.E. (1964) Report on Franklin Mining Camp; for Franklin Mines Ltd., BC Dept. of Mines & Petroleum Resources Assessment Rept. 637.
- Lisle, T.E. (1980). Geological Report on Spring Group; for Pearl Resources Ltd., BC EMPR. Assessment Report. No. 8126.

SP. NO.	LOCATION		UNIT	LITHOLOGY	NOTE BK.	PAGE
87ABJ101	44+95'	57+00E	T.	Marron volc trachyte	1	48b
102	42+60	"	T	trachyte.	1	48b
† 103	—				~~2~~	+
104	57+00N	59+00E	Fs.	skarny silicified volc sandstone.	2	16
105	54+80N	63+00E.	T	sparsely porphyritic trachyte.	2	6b
106	44+60N	"	dyke.	green spotted andesite? dyke.	2	7b
107	41+40N	"	Fv.	microdiorite, meta volc.	2	8
108	59+60N	45+00E	MG	fine to med. grained monzogabbro, 70% px scattered px poikolithes.	2	9
109	53+00N	"	CTS.	coarse trachytic pyroxene syenite	2	10
110	48+40N	"	Fs tuv	tuffite - volc. ss with angular xl clasts. with rounded ones.	2	10
111	31+20N	"	G. (isolated body).	mod. fresh hb granodiorite with inclusions	2	11
112	64+75N	43+00E	MG.	hybrid monzogabbro collected by Keith Everhart.	2	11b
113	~~40~~+20±N	52+40E	Kf	collection of pebs & small cobs from Kettle River conglomerate for shape etc.	2	12
114	36+60N	49+00E.	Kc	quartz sandy limestone lenses from heterolithic fine conglomerate.	2	13b
115	36+30N	48+35E	Fs	hornfelsic volcanic? sandstone.	2	13b
116	40+35N	46+15E.	Fs	lithic sandstone	2	14
117	71+00N	53+00E	M.	fine monzonite.	2	15
118	75+00N	~~53~~+60E	G4	weakly foliated grdi.	2	15b
119	62+90N	43+00E	Px	poikilitic pyroxenite	2	18
120	43+00N	"	Fl	grey recrystallized limestone	2	19b
121	50+00N	32+00E	G2	fresh hornblende granodiorite.	2	24
* 121	58+20N	29+00E	G2	" " "	2	24b
122	56+00N	"	Granite G_{2a}	big dyke of hypidiomorphic granite with corroded quartz xls	2	25
123	44+50N±	"	Pu	very fresh pulaskite dyke from West Fork of Franklin Cr.	2	25b
124	44+50±N	"	Granite G2b	aplitic sugary leuco granite " " " " "	2	25b
125	60+30N	33+00E	MD	foliated monzodiorite	2	27b
~~126~~		"				

* two specimen - one number † - no specimen.

SP No	LOCATION	UNIT	LITHOLOGY	NOTE BOOK	PAGE
				1	32
87AB76	47+80N 70+00E	Ka	pebbly arkose	1	32
77		Ka	rhythmite of fine/cs ark.	1	32
78	45+60N 71+00E	T ? Pe	qtz trachyte. to pulaskite?	1	33
79	64+40N 55+00E.	M	f monzonite	1	34
80	61+60N "	G1	optics in grdi.	1	34
81	56+60 A34.	Fr?	microdioritic skarn.	1	35
82	53+20N 55+60E	Fr	skarn, silic volc breccia?	1	35
83	A36 47+60N	Kf.	- fanglomerate clast frag. - T.S.	1	36
84	46+20N, 55+65E	Ka	Arkose. ?	1	36
85	43+20N 55+30E	T	- trachyte vesicular, grnish.	1	37
86	35+00N 56+00E ca.	R.	- massive rhyolite.	1	37b
87	31+40N 58+00E	Fa.	- very fine arkose.	1	37b
88	59+60N 49+00E.	Ts.	m trachytic syenite - quartzose contact. rock.?	1	38
89	A37. 52+20N. "	Px	fine pyroxenite cutting T. syenite?.	1	39
90	43+80N "	Fl.	grey limestone	1	40b
91	39+80N "	Fs.	- rusty w. fine volcss.	1	41
92	38+50N "	Fc	heterolithic ls. bearing fine cgl.	1	41
93	62+30N 47+00E.	TS.	leuco syenite border phase.		
94	30+50N 49+00E E	Fl.	sampling of width of ls. for conodonts.	1	42b
95	53+60N 47+00E	TS/M.	chilled TS dyke edge against fine monzonite	1	43b
96	42+60N "	Fc	cherty heterolithic conglomerate.	1	45
97	62+40N 57+00E.	G1.	fresh grdi. -20% hb, 20% qtz.	1	47
98	56+90N "	Fp	skarny crowded porphyry	1	47
99	50+00N 57+40.	dyke	dyke cutting. Kf.		
100	48+00N 57+00	Ka	pebbly arkose.		

SP NO	LOCATION		UNIT	LITHOLOGY	NOTE BK	PAGE
87AB 51	38+00 N	54+40 E	T	purply grey trachyte ~15% phenos, rare qtz or foid. Kf, qtz amph.	1	195
52	38+75 N	54+20 E	T	finely aph. trachytic porphyry - flow orientation.	1	195
53	36+90 N?	54+70 E	McKINLEY RHYOLITE	R - qtz bearing xl tuff - or flow.	1	20
54	35+80 N?	54+40 E?	Kf	- arkosic pebble bed,	1	20
55	35+00 N?	56+00 E?	R	- grey qtz-Kspar hb. phenoxtic rhyolite flow?	1	205
56	38+00 N	59+75 E	T	- glomeroporphyritic grey trachyte	1	205
57	"	63+00 E	Kf	- pebbly arkose	1	21
58	60+80 N	50+00 E	G1	- m. grdi. from near contact.	1	22
59	61+80 N	49+00 E	M.	- f monzonite - mer & cut by grdi?	1	22
60	61+20 N	48+00 E	MG.	- banded biotitic px to monzogabbro.	1	23
61	56+20 N	46+00 E	Px	- pxite with 10% feldspar to micaceous px. - tr cp mal./sy dyke(s)	1	226
62	56+00 N?	46+50 E?	GP.	- grey porphyry. rare qtz corroded phenos.	1	23
63	65+20 N	47+00 E	MD.	- monzodiorite, 40% mafics. (35 px, 5 bi) - f m grain -	1	29
64	71+80 N	"	G4	- northern body. grdi.	1	245
65	73+00 N	"	M.	- fine monzonite	1	245
66	74+80 N	46+00 E	CTS	- very cs. trachytic ~~pxenite~~ px. syenite, Kf to 7cm	1	245
67	64+40 N	48+00 E	TS.	- f m. trachytic syenite. 25% px 75% Kf?	1	256
68	64+90 N	41+00 E	Px	- pyroxenite with Kf laths	1	256
69	66+80 N	38+00 E	Px	- biotitic pyroxenite. ~10% feldspar.	1	27
70	43+00 N	51+00 E	Fp	- feldspar crowded porphyry	1	29
71	39+00 N	"	Fs	- fine vole sandstone	1	296
72	39+00 N	51+00 +	Fc	- heterolithic. chert pebble + ls. granule cgl.	1	30
73.	39+00 N	"	Fc	- gr. grn fine heterolithic vole granule cgl.	1	30
74	29+40 N	"	Fv	- hfs ic xl. tuff.	1	306
75	56+60 N	69+50 E	F?	- banded vole ss. ?	1	315

SP.No.	LOCATION	UNIT	LITHOLOGY	NOTE BK	PAGE
87 AB 26	A12 on line 46+00E	Grey porphyry?	Grey feldspar, qtz, hb.? porph. with dense grey matrix.	1	12
27	A15 -37+05N -43+66E	?	Cs. porphyritic qtz syenite?	1	12
28	A16	Fs	well banded silicified quartzite	1	12
29	A19. -41+00E 57+20N.	MDiorite	f to m. monzodiorite 20% px, 5% bi + Kf & pc	1	126
30	A20 62+20N 37+60E	GP.	Grey porphyry - 30% pc to 2mm ø, fine hb dense grey matrix	1	125
31	A21 65+70N 35+80E	Pyroxenite (Px)	- f.g. Pyroxenite tr. mal.	1	126.
32	A22 73+60N 32+00E	?G3	- quartzite to granitic gneiss	1	13
33	A23 73+80N 31+00E	G3?	- fresh hb. granodiorite - sphene bearing.	1	13
34	A24 65+80N 36+80E	Pu	- biscuit w., fine aphanitic Kf, px porphyry.	1	13
35	" " "	Pu	-chill facies of dyke. - purply grey Kf bearing aphanitic rk.	1	13
36	A25 ~~63+30N 33+20E~~	~~Fs~~. MD/MG.	- ~~breccia~~ ~~m.g. mafic monzodiorite to monzogabbro~~ ~~brecciated Cs. trachytic px syenite~~. f.g. ~~Monzonite~~.	1	14
37	63+00N 29+00E.	M.	- fine monzonite, 25% px + bi, Kf? pc.	1	15
38	" 32+75E	MD.	- med. monzodiorite 35% mafic - 2mm grain size.	1	15
39	" 39+25E	M Gabbro → Pyroxenite	- med. monzogabbro to pyroxenite 65% px, 10% bi, 25% felds., tr mal.	1	16
40	" 45+00E	MD.	- med to fine monzodiorite - 30% px, 20% bi? - 50% feld. tr-cp.	1	16
A1	" 48+50E	MD.	- monzodiorite 40% px. 10% bi. - 50 feld.	1	166
A2	" 51+00E	vein.?	- rusty Mt, py, bn ore. from trench	1	17
43	" 55+30E	G.?	- altered granodiorite?/alt. monz.?	1	175
44	" 66+00E	G1a	-fm. grained alt. hb grdi.	1	176
45	38+00N 43+75E	G. Mt. McKinley P.	silicified grdi. 20-25 hb+bi. 20% qtz, med. gr.	1	175
46	" 46+50E	Franklin Limestone	- recrystallized grey sugary limestone (Fl)	1	18
47	" 47+00E.	Fp.	- l. gr. crowded porphyry or xl. tuff.	1	185
48	" 47+75E	Fp.	brecciated crowded porphyry	1	185
49	" 50+80E	Fc.	- fine heterolithic conglomerate, qtz, chert, ls. granules to pebs.	1	19
50	" 51+25E	Fs.	- arkosic ~~hornfels~~.	1	19

SPECIMEN LIST

COLLECTED DURING MAPPING PLATINUM BLONDE PROPERTY
JUNE / JULY 1987. BY A. SUTHERLAND BROWN

SP. NO	LOCATION	UNIT	LITHOLOGY	NOTE BOOK	PAGE
87AB-1	A1 - 63+00N 53+00E	MONZ. (M.)	fine grained monzonite - scattered px, Felds. phenocrts.	1	3
2.	59+80 N "	GRDI-1 (G-1)	med. grey granodiorite.	1	3
3	56+00N "	Franklin Gr. (F.)	microdioritic skarn	1	3
4	55+20N "	PYROXENITE (Px)	coarse pyroxenite.	1	3
5	55 +30N "	Px. SYENITE (PTS)	trachytic fine, pyritic syenite	1	25
6	50 +40N "	Course trachytic Syenite - CTS.	- CS. trachytic syenite - laths to 3cm.	1	4
7	40 +50N "	KETTLE RIVER (Kf)	- Cobble frag from K.R. fanglomerate. - fine grdi?	1	5
8	32+20N "	FRANKLIN GR. (Fp)	fine porph. andesite? feld & hb. to 0.5mm	1	6
9	33+20N 54+00E	KETTLE RIVER Ka	- Course arkose - base of KR Fm.	1	6
10	50+00N 38+48E	WEST FORK PL. (G-2)	- m.g. hb grdi. - 17% hb.	1	7
11	" "	?	- gr. andesite dyke in grdi.	1	7
12	50+00N 47+00E	F.s	- volcanic sandstone?	1	7
13	49+00N 48+75E	T.S. (M)	- medium grained px. syenite, Trachytic Kf.	1	8
14	50+00N 56+50E	F.v	- rusty gr. volcanic hornfels, py & hem. from shallow pit.	1	8
15	50+00N 61+60	K f.	- pebbly fanglomerate	1	9
16	50+50N 62+00	MARRON TRACHYTE (T)	- maroon weathered, slightly amygdaloidal porphyry.	1	9
17	50+60N 62+00	T	- (a) biscuit w, l.gr. sparse px feldspar porphyry - (b) grpx + Kspar porphyry.	1	9
18	50+00N 64+60	T	- fresh trachyte.	1	9
19	50+00N 65+30	T	- highly vesicular trachyte.	1	9
20	" 65+75	Ka	- banded greenish arkose	1	10
21	A8xc west of beaver pond.	Kf.	- cob. of red granite from fanglomerate	1	11
22	A10. - SE permeter d.	Fa	- metaargillite, rusty w.	1	11b
23	" "	Fp	- crowded felds. porphyry - Franklin Gr hypabyssal. nk.	1	11b
24	A9 "	Pulaskite (Pu)	- biscuit w. aphanitic porphyry with glomero Kf?	1	11b
25	A11 - South slope	Fr.	- Lapilli tuff hornfels.	1	11b

SP No.	LOCATION		UNIT	LITHOLOGY	NOTE BOOK	PAGE
87AB·126	48+50N	33+00E	L.D.	lathy - fine to med. diorite - resembles monz somewhat.	2	28
127	41+40N	"	Fa or V	cherty tuff.	2	28b
128	54+80N	37+00E	G.	med gr. hornblende granodiorite.	2	30
129	49+00N	39+00E	LD.	lathy f. feldspathic diorite. cf 126.	2	31
130	48+00N	37+00E	G2a	leucogranite dyke. cf 122.	2	31
131	46+40N	"	LD	lathy f. feldspathic diorite. cf 126/129.	2	31
132	44+20N	"	F_{ss}?	obscure volcanic sandstone. hrfs.	2	32
134	56+20N	41+00E	M.	fine Monzonite metamorphosed (ep) by West Fork Grdi	2	33
133	56+18N	"	G2	med. gr. hornblende Granodiorite	2	33
135	40+60N	"	D1	fine-med. gr. hypidiomorphic diorite	2	34b
136 a&b	Franklin R. canyon S. of line 41+00		Fa	black pyritic chert/arg.	2	35
137	65+80N	37+00E	Px	foliated pyroxenite - large xl. deformed?	2	36
138a	66+80N	37+80E	M6.	m.g. Monzogabbro with schlieren of pyroxenite	2	36b
138b	"	"	M6/pink Sy.	m.g. monzogabbro " " cut by late pink syenite.	2	36b
138c	"	"	M6/Px	m.g. monzogabbro " " cut by pyroxenite	2	36b
138d	"	"	Ts & meta Px.	white trachytic syenite dykelet & envelop of metasomatic pyroxenite	2	36b
138e	"	"	meta Px	metasomatic pyroxenite of vein envelope	2	36b
139	80+80N	39+00E	G3	course granite of Blue Joint Mtn pluton	2	37b
140	77+00N	36+00E.	Px	pyroxenite cut by pegmatite of G3?	2	38
141	"	"	Px	"	2	38
142		37+00E.	M6	monzogabbro with large Kf (metasomatic?) laths.	2	36
143	74+00N	32+00E	G_3	aplitic (sphene bearing) fine allotriomorphic granite	2	40
144	69+80N	29+00E	MD.	epidotized Monzodiorite cut by G3 pegmatite veinlet.	2	40
145	"	"	MD	Monzodiorite converted in contact zone to gneiss	2	40
146	64+00N	63+00N	Fv	fine aphanitic andesitic volcanic breccia?	2	41
147	62+00N	67+00N	G1a	fine grained marginal phase granodiorite	2	41
148a	56+80N	67+00N	R/Kf	mixed pyroclastic rhyolite porphyry in fine fanglomerate.	2	41b
148b	"	"	R.	same but with spherulitic porph. rhyolite clast.	2	41b
149	46+30	"	MD/meta.	- large Kf porphyroblasts in monzodiorite.	2	42b
150	39+20	"	Fs.	- volcanic sandstone/tuffite with rounded clasts.	2	43b

SP No	LOCATION		UNIT	LITHOLOGY	NOTE BK	PAGE
87AB151	51+40N	7750E	TS	grey fine trachytic syenite	2	44
152	51+20N	81+00E	TS/s.	fine trachytic syenite cut by holocrystalline mafic syenite	2	44
153	53+60N	81+00E	MD	f-m monzodiorite with weak foliation	2	44½
154	51+10N	80+00E?	Px	micaceous pyroxenite from border of trachytic syenite	2	44½
155	60+80N	70+00E	Gia	fine grained, altered granodiorite	2	44½
156	24+40N	52+00E	Fv	light grey thinly bedded dacitic tuff.	3	11
157	48+80N	68+00E	T	trachyte.	2	49