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92/L

Company		Project	003.53-12	Bearing		Sheet 1 of	Hole No. 74-1
Mining Division	Nanaimo	Property	Red Dog	Inclination	90°	Coordinates	
Geographic	Vancouver Island	Started	June 24, 1974				
Coordinates		Completed	June 30, 1974				
		Logged by:	G. Hawkins	Depth	628'	Altitude	900'

Footage	Core Rec	Rec			Cu	Mo	Sample No.	REMARKS
0-17								
0-37		72.5						Silicified tuff with heavey pyrophyllitisation. Dark grey when unaltered. 10% laumantite, serifite clay veining. 1% sulphides mostly cp. and some py. Very minor bornite in sporadic disseminations. Cp weathers to "pitch copper". Cp is dissemina ted whereas Py occupies juggy recrystalized holes of remnant material.
37-64		80						Very prominent pyrophyllitisation with fracture cleavage at 30° off core axis.
64-67		80						Core ground to gravel sand
67-73								Agglomerate breccia comple tely altered. Serecitized and fractur ed pyrophyllitised. Good bornite and cp 1% in disseminations.
73-79		66						Silicified, pyrophyllitised tuff. Shear 10° off core axis
79-88		80						Q.F.P. Remnant phenocrysts with complete clay alteration as well as pyrophyliite and sericite recryst. Volcanic phase.
88-94		80						More coarse porphyrytic feldspars of altered quarts feldspar porphyry dyke silicification and sericitisation vary with degree and complexity of shearing.

Sheet / of

Company _____ Project 003.53-12 Bearing _____ Sheet 2 of __ Hole No. 74-1

Mining Division Nanaimo / Vancouver Island — Property Red Dog — Inclination 90° — Coordinates _____

Geographic Coordinates _____ — Started June 24, 1974 — Completed June 30, 1974 — Logged by: G. Hawkins — Depth 628' — Altitude 900'

Footage	Core Rec	Rec			Cu	Mo	Samples	REMARKS
94-128		90						Finer grained volcanic phase with same degree of pyrophyllitization, sericite. The remnants are quartz, plag. The contacts are gradational. Fairly competent unit with similar slately cleavage at 30° off core axis. Cp minor and sporadic Py continues at 1%.
128-140		90						More leucocratic altered diorite porphyry with increased % of Py and less Cp (1% total) Coarse grained grading to fine grained
140-154								White gray clay altered and silicified, Cp and Py 2%, quarts eyes and remnant feldspar altered to clay. Ground core. Gray-brown fine grained phase very altered pyrophyllitised more broken and brecciated.
154-157		70						Highly clay altered breccia agglomerate, very ground core. Leucocratic with prominent quartz eye remnants. Decreased sulphides → 1%
								Small highly silicified zone for 2' then return to previous material.
157-183								Clastic volcanic pyrophyllite, altered.
183-189		90						Silicified tuff very hard steel blue gray. Minor azurite, malachite stain on fractures. Fracture bound serecite as well.

Sheet / of

Company _____ Project 003.53-12 Bearing _____ Sheet 3 of __ Hole No. 74-1

Mining Division Nanaimo / Vancouver Island Property Red Dog Inclination 90° Coordinates _____

Geographic Coordinates _____ Started June 24, 1974 _____ _____

Completed June 30, 1974 _____ _____

Logged by: G. Hawkins Depth 628' Altitude 900'

Footage	Core Rec	Rec			Cu	Mo	Sample No.	REMARKS
189-206		80						Brown (pyrophyllite) less competent silicified quartz feldspar porphyry. Fracture bound py very fine disseminated py and cp <.5%.
206-238		80						Dark less altered (but for sporadic lenses) Andesite tuff flow. Crystalline pyrite in occasional vein (1' spacing). Disseminated very fine grained (cp) Py 1-2%.
238-354		85	206	398			268-358: Sample N° 23976-23983	Very well mineralized silicified tuff breccia. The pyrite forms rims around the agglomerate fragments. 3-4% sulphides (pyrite). Pyrophyllite also in abundance.
354-398		40						Highly fractured well mineralized breccia. Poor recovery. Fractures at 45° off core axis. Pyrophyllite, serecite shears and gauge.
402-412		90						More solid less fractured quartz feldspar porphyry. Pyrophyllite alteration 10% decreasing to more quartz veining and mineralized shears. Finely disseminated py.

Sheet / of

Company _____ Project 003.53-12 Bearing _____ Sheet 4 of 5 Hole No. 74-1

Mining Division Nanaimo / Vancouver Island Property Red Dog Inclination 90° Coordinates _____

Geographic Coordinates _____ Started June 24, 1974 _____ _____

Completed June 30, 1974 _____ _____

Logged by: G. Hawkins Depth 628' Altitude 900'

Footage	Core Rec	Rec			Cu	Mo		REMARKS
402-412							Some of this	As well. Some "Pitch Copper". Total mineral ~~<10%~~ < 1%
412-442		30						Agglomerate breccia well fractured with siliceous remnants. Disseminated Py throughout.
442-449		45						Breccia agglomerate with increased pyrophyllite. Continued % of disseminated Py. Core is very crumbly and sandy.
449-458		20						Very silicified leucocratic bed with clay altered remnants. Possibly andesiteic flow. Very fine - disseminations of py.
458-466		40					four? B?	Very tight packed tuff or agglomerate. Silicified white. Prominent black veinlets with pyrite on contact racks in addition to disseminated py. Soft brown spots expected to be pyrophyllite sericite alteration. The more ground core would seem to be more veined and less altered hybrothermally.
66-467		45						Very light colored. Serecitized and silicified dyke (probably andesitic with CONTINUED NEXT PAGE

Sheet / of

Company _____ Project 003.53-12 Bearing _____ Sheet 5 of 5 Hole No. 74-1

Mining Division Nanaimo / Vancouver Island — Property Red Dog — Inclination 90° — Coordinates _____

Geographic Coordinates _____ — Started June 24, 1974 — Completed June 30, 1974 — Logged by: G. Hawkins — Depth 628' — Altitude 900'

Footage	Core Rec	Rec			Cu	Mo	SAMPLE No.	REMARKS
466-467								Black disseminations (perhaps secondary Mica) as well as Py disseminated throughout (This material is repeated from 472-475.)
467-628		50						This unit appears to be more uniformly altered and constructed. Remnant structure are evident tightly packed and are evenly distributed. The alteration is basically pyrophyllite with remnants having turned white in the gray brown matrix. Small siliceous zones are dispersed throughout and strengthen the core. i.e. 599-602. The recovery and degree of alteration tend to make attempts at identifying the rock quite difficult. The origin is definitely volcanic. Possibly an agglomerate tuff sequence, with the tuffs creating the siliceous competent layers. The recovery becomes poorer and to the bottom of the hole. The final 60' have been sludge assayed. A high percentage of pyrite is noted in the sludge.

Sheet / of

Company _____ Project Red Dog Bearing ~~60°~~ N Sheet 1 of _ Hole No. 74-2

Mining Division NANAIMO Property _____ Inclination 60° Coordinates _____

Geographic VANCOUVER ISLAND Started July 1, 1974 _____ _____

Coordinates _____ Completed July 4, 1974 _____ _____

Logged by: _____ Depth 580' Altitude 400'

Footage	Core Rec	Rec						REMARKS
0-42								
42-91	100						60' - 70' 24014	Mineralized quartz feldspar porphyry. 1-2% at 58' fault gauge, and brecciated QFP. Feldspars are bleached and clay altered in proximity of shears and faults. Coarse calcite veining. Py in disseminations and veins throughout 1%. Fault gauge 78-80 Fault gauge 81', 4" and 84½-85½ and 90-91 sugary silicification and pyrophyllite veining. 91' contact.
91-98	100							Fractured and veined volcanic andesite similar silicification and mineral near contact. Some brecciation and pyrophyllite (98').
98-198	100						105'-115' 24015'	Fractured andesite. Mineralization is more finely disseminated py with ~~equal~~ same % Quartz epidote alteration begins to become prominent Py comes in more coarse quartz Py veinlets. Increase in py and coarse veins at 115'. Coarse ~~tourmontite~~ tourmaline veining at 120'. Increase quartz epidote 132-146. 133 fault gauge. Shear at 20° off core axis. Vertical slickensides (relative to core). Increased silicification and some fault brecciation.
							148-158 24016	Soft dark speckles in core chlorite/serpentine. Increased py over the section.

Sheet 1 of 3

Company _____ Project 003.53-12 Bearing N Sheet 2 of 3 Hole No. 74-2

Mining Division Nanaimo / Vancouver Island Property Red Dog Inclination 60° Coordinates _____

Geographic Coordinates _____ Started July 1, 1974 _____ _____

Completed July 4, 1974 _____ _____

Logged by: G. Hawkins Depth 580' Altitude 1100'

Footage	Core Rec	Rec			Cu	Mo	Sample #	REMARKS
198-288	98							Lighter colored more altered material of the same volcanic origin.
								The increased fracturing and chbritization have added to the color
								change. Increased coarse laumontite. 209' fault gauge 6" 45° to
								core axis.
								220' Pyrophyllite in vein faces.
								227'-231' intense laumontite veining//to core parallel
								250' small massive lens of Py Po and Mag.
							268-278-24017	265' small 6" "
								274 small 2" "
288-350	98							Intense alterations and recrystalization through hydrothermal
								activity. Shearing and brecciation becoming more prominent. 30°
								off core axis.
							308-319-24018	317' massive magnetic sulphide lens. Continued quartz epidote,
								chlorite, laumontite alteration increased again at 323'-328'.
350-410	98							Volcanic clastics agglomerate-coarse tuff with same alteration as
								is found in 198-288. 406 massive sulphide lens.
410-458								Very siliceous tuff with more magnetite in veinlets as well as
								disseminated epidote and chlorite.

Company _____ Project 003.53-12 Bearing N Sheet 3 of 3 Hole No. 74-2

Mining Division Nanaimo Property Red Dog Inclination 60° Coordinates _____

Geographic Vancouver Island Started July 1, 1974 _____ _____

Coordinates _____ Completed July 4, 1974 _____ _____

Logged by: G. Hawkins Depth 580' Altitude 1100'

Footage	Core Rec	Rec			Cu	Mo	Sample No.	REMARKS
(410-458)							418-428-24019	430-438 Intense breccia and fault gauge
								438-439 Massive Magnetic sulphides
458-498	98							More increased veining with increased epidote. Chlorite and
								occasional calcite veinlet.
497-580	98							Highly silicified volcanic tuff with evenly disseminated Py Po
								and epidote. 2% very coarse serpentinization in places.
							516-526-24020	Magnetite fairly evenly distributed at <.5%.
								569-570 Small porphyritic quartz Feldspar dyke.
							570-580-24021	574-578 High degree of brecciation fault trace only 5% recovery.

Sheet 3 of 3

Company _____ Project 003.53-12 Bearing _____ Sheet 1 of 3 Hole No. 74-3

Mining Division Nanaimo / Vancouver Island Property Red Dog Inclination 90° Coordinates _____

Geographic Coordinates _____ Started July 6, 1974 _____ _____

Completed July 9, 1974 _____ _____

Logged by: G. Hawkins Depth 803' Altitude 950'

Footage	Core Rec	Rec	Cu	Mo	Sample No.	REMARKS
0-15						Casing.
15-113	95					Altered agglomerate. Well developed Py cubes in epidotized matrix.
					Thin section No. RD-1	Deep green color with large calcite laumontite eyes illustrating original texture. Secondary chlorite at 36' very vuggy calcic 3" shear zone 45° off core axis. Epidote alteration haloes around calcite filled vuggs.
						Silicification increases in areas as well as serpentinization. Other clay alteration could be minor pyrophyllite.
113-175-	95					Highly altered very soft gauge of fault zone with pyrophyllite.
					165-175-24023	Good brecciation evident in places.
175-186					175-185-24024	Silicified andesitic porphyry epidotized with minor mineralization. This material is expected to be a dyke causing the great degree of alteration in the host agglomerate.
186-290						Return to similar alteration of agglomerate at the beginning of the hole. This material is once again gradation ranging from well

Sheet / of

Company _____ Project 003.53-12 Bearing _____ Sheet 2 of 3 Hole No. 74-3

Mining Division Nanaimo / Vancouver Island Property Red Dog Inclination 90° Coordinates _____

Geographic Coordinates _____ Started July 6, 1974 _____ _____

Completed July 9, 1974 _____ _____

Logged by: G. Hawkins Depth 803' Altitude 950'

Footage	Core Rec	Rec			Cu	Mo	Sample #	REMARKS
(186-290)	95							sorted more fine grained material to coarse breccia agglomerate.
								Limonite is evident on the vuggs. Serpentinization has re-
								appeared.
								Shear gauge // to core axis at 215'. Good illustrations of agglo-
								merate breccia frags. Up to 1" N. diameter. Very minor cubic pyrite
								disseminations.
							270-280-24025	234-235 Volcanic dyke. (270' change to "B" rod)
290-410							290-300-24026 THIN SECTION RD-2	Same volcanic clastics with great percentage 20% pyrophyllite in
							335-345-24027	veinlets throughout core. Py mineralization continues.
							422-432-24028	400-410 fault zone breccia and gaugle
410-521							546-556-24029	Decreased pyrophyllite with increased epidote alteration. Agglomerate
								remnants visible.
								Fault 60° off core axis 435-36.
								Again gradational changes are evident as the clastics grade from
								inequigranular breccia agglom. To an equigranular finer grained,
								tuff.
							613-623-24030	430-460 fault and shear activity. Increased silicification from
								524-545 and continued again to 621', Shear 45° off core axis.

Sheet / of

Company _____ Project 003.53-12 Bearing _____ Sheet 3 of 3 Hole No. 74-3

Mining Division Nanaimo / Vancouver Island Property Red Dog Inclination 90° Coordinates _____

Geographic Coordinates _____ Started July 6, 1974 _____ _____

Completed July 9, 1974 _____ _____

Logged by: G. Hawkins Depth 803 Altitude 950'

Footage	Core Rec	Rec			Cu	Mo	Sample #	REMARKS
621-632	95							Quartz feldspar porphyry.
								Epidote alteration with quartz epidote veining.
							623-630-24031	~~Veining.~~ Very minor pyrite. Also visible CP. (Disseminated)
							632-642-24032	High epidote vuggy transitional contact zone.
630-633	95							
632-803	95							Silicified fine grained clastics
								651-656 shearzone 60° off core axis. Intense serpentine chlorite
							770-780-24033	epidote zone 659-670, shear zones 653-665 and 670-676.
							780-790-24034	Epidote siliceous tuff with decreasing silicification away from dyke and increased laumontite.
								750-803 stronger silicification and increased Py.

Sheet 1 of