Scale

Colour Plot & Dips

0

Drill Hole Record

896528

Cominco

JMA: Retain

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North	106, 971.86 East		True Brg.	250° 00'	Logged by	RFN
Objective				% Recov.	90.0%	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.45	1500'	Rim 69-21	

Footage From	To	Description	Sample No.	Length	Analysis					
		SUMMARY OF GEOLOGY								
0	97	OVERBURDEN								
97	1103	BETHSAIDA QUARTZ DIORITE Alteration as follows:								
		97 - 116 Slight to Moderate Kaolinization (argillic) qtz-sericite poor.								
		97 - 103 Oxidized Zone - Malachite present.								
		116 - 175 Intense Kaolinization qtz-sericite poor.								
		175 - 280 Slight to occasionally Moderate Kaolinization qtz-sericite generally poor.								
		241 - 261 Intense Kaolinization								
		280 - 441 Moderate to Intense Kaolinization qtz-sericite Moderate development.	579-746		candy	shape				
		441 - 518 Slight to Moderate Kaolinization qtz-Sericite poor.								
		518 - 709 Fresh to occasionally slight Kaolinization qtz-sericite very poor.								
		545 - 579 Moderate Kaolinization qtz-sericite poor.								
		709 - 746 Intense Kaolinization qtz-sericite Moderate to Well developed.								
		746 - 912 Slight to Moderate Kaolinization qtz-sericite poor to occasionally Moderate.								
		912 - 991 Intense Kaolinization qtz-sericite mostly Moderate.								
		991 - 1103 Slight to Moderate Kaol. qtz-sericite poor.								
1103	1202	PORPHYRY DYKE ("porphyritic" phase of Bethsaida)								
1202	1500	BETHSAIDA QUARTZ DIORITE Alteration as follows:								

211-9437—H.P.

Drill Hole Record

Colour Plot & Dips

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North	106, 971.86 East		True Brg.	250° 00'	Logged by	RFW
Objective				% Recov.	90.0%	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.45	1500'	Rim 69-21	2

Footage From	To	Description	Sample No.	Length	Analysis
		SUMMARY OF GEOLOGY (continued)			
		1202 - 1500 Moderate Kaolinization patches of Intense 1326 - 1365			
		1430 - 1448			
		1202 - 1365 Poor to Moderate Sericite - qtz development			
		1365 - 1500 Poor qtz - sericite			
1500		END OF HOLE			

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Scale

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	N Q	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North 106, 971.86 East			True Brg.	250° 00'	Logged by	RFN
Objective				% Recov.	90.0%	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.43	1500'	Rim 69-21	

Footage From	Footage To	Description	Sample No.	Length	Analysis

Footage From	Footage To	Length	% Cu	% Mo
97	210	113'	0.31	0.0024
210	270	60'	0.25	0.0015
270	440	170'	0.40	0.0019
440	490	50'	0.21	0.0012
490	580	90'	0.46	0.0031
580	720	140'	0.23	0.0015
720	960	240'	0.32	0.0021
960 -	1170	210'	0.14	0.0026
1170	1370	200'	0.21	0.0030
1370	1500	130'	0.12	0.0051

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Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North		106, 971.86 East	True Brg.	250° 00'	Logged by	RFN
Objective				% Recov.	90.0%	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250°00'	-55°	4040.43	1500'	Rim 69-21	1

Footage From To

Description

Sample No.	Footage From	Footage To	% Cu	% Mo	Sample No.	Footage From	Footage To	% Cu	% Mo	Sample No.	Footage From	Footage To	% Cu	% Mo
28392	97	100	.33	.0010	33414	310	320	.25	.0002	33436	530	540	.62	.0009
28393	100	110	.28	.0014	33415	320	330	.47	.0003	33437	540	550	.28	.0005
28394	110	120	.22	.0054	33416	330	340	.53	.0005	33438	550	560	.47	.0015
28395	120	130	.31	.0025	33417	340	350	.25	.0003	33439	560	570	.20	.0007
28396	130	140	.60	.0073	33418	350	360	.20	.0015	33440	570	580	.49	.0200
28397	140	150	.18	.0003	33419	360	370	.75	.0017	33441	580	590	.15	.0022
28398	150	160	.49	.0016	33420	370	380	.57	.0023	33442	590	600	.16	.0004
28399	160	170	.19	.0007	33421	380	390	.27	.0056	33443	600	610	.37	.0009
28400	170	180	.23	.0015	33422	390	400	.29	.0028	33444	610	620	.20	.0005
33401	180	190	.21	.0015	33423	400	410	.47	.0094	33445	620	630	.41	.0019
33402	190	200	.23	.0027	33424	410	420	.26	.0008	33446	630	640	.24	.0017
33403	200	210	.40	.0024	33425	420	430	.43	.0011	33447	640	650	.31	.0015
33404	210	220	.23	.0024	33426	430	440	.37	.0014	33448	650	660	.18	.0012
33405	220	230	.18	.0023	33427	440	450	.19	.0020	33449	660	670	.24	.0030
33406	230	240	.25	.0008	33428	450	460	.23	.0012	33450	670	680	.13	.0009
33407	240	250	.29	.0024	33429	460	470	.10	.0012	33251	680	690	.21	.0008
33408	250	260	.32	.0006	33430	470	480	.23	.0008	33252	690	700	.21	.0010
33409	260	270	.23	.0006	33431	480	490	.28	.0007	33253	700	710	.17	.0011
33410	270	280	.43	.0006	33432	490	500	.43	.0016	33254	710	720	.19	.0040
33411	280	290	.57	.0023	33433	500	510	.56	.0013	33255	720	730	.51	.0008
33412	290	300	.44	.0004	33434	510	520	.72	.0009	33256	730	740	.22	.0010
33413	300	310	.31	.0013	33435	520	530	.33	.0006	33257	740	750	.36	.0010

Sample No. Length

Analysis

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Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60
Co-ordinates	100, 461.89 North 106, 971.86 East			True Brg.	250° 00'
Objective				% Recov.	90.0%

Hor. Comp.

Vert. Comp.

Logged by RFN

Date October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250°00'	-55°	4040.43	1500'	Rim 69-21	2

Footage From To

Description

Sample No.	Footage From	Footage To	%Cu	% Mo	Sample No.	Footage From	Footage To	%Cu	% Mo	Sample No.	Footage From	Footage To	%Cu	% Mo	Sample No.	Length	Analysis Sample No.	Footage From	Footage To	%Cu	%Mo
33258	750	760	.29	.0026	33280	970	980	.22	.0012	31502	1190	1200	.14	.0065	31524		1410	1420	.10	.0009
33259	760	770	.30	.0011	33281	980	990	.13	.0018	31503	1200	1210	.25	.0062	31525		1420	1430	.04	.0005
33260	770	780	.53	.0024	33282	990	1000	.06	.0036	31504	1210	1220	.11	.0013	31526		1430	1440	.16	.0042
33261	780	790	.29	.0009	33283	1000	1010	.14	.0014	31505	1220	1230	.18	.0007	31527		1440	1450	.16	.0190
33262	790	800	.23	.0005	33284	1010	1020	.06	.0027	31506	1230	1240	.19	.0021	31528		1450	1460	.12	.0033
33263	800	810	.35	.0091	33285	1020	1030	.13	.0025	31507	1240	1250	.16	.0020	31529		1460	1470	.29	.0029
33264	810	820	.30	.0028	33286	1030	1040	.13	.0035	31508	1250	1260	.14	.0022	31530		1470	1480	.08	.0015
33265	820	830	.20	.0017	33287	1040	1050	.23	.0018	31509	1260	1270	.24	.0017	31531		1480	1490	.02	.0014
33266	830	840	.31	.0012	33288	1050	1060	.24	.0025	31510	1270	1280	.15	.0013	31532		1490	1500	.04	.0018
33267	840	850	.24	.0067	33289	1060	1070	.16	.0059	31511	1280	1290	.10	.0018						
33268	850	860	.27	.0012	33290	1070	1080	.09	.0032	31512	1290	1300	.08	.0007						
33269	860	870	.30	.0004	33291	1080	1090	.07	.0013	31513	1300	1310	.25	.0024						
33270	870	880	.14	.0044	33292	1090	1100	.15	.0023	31514	1310	1320	.19	.0016						
33271	880	890	.28	.0020	33293	1100	1110	.03	.0005	31515	1320	1330	.39	.0065						
33272	890	900	.36	.0008	33294	1110	1120	.12	.0007	31516	1330	1340	.17	.0004						
33273	900	910	.27	.0013	33295	1120	1130	.10	.0048	31517	1340	1350	.25	.0012						
33274	910	920	.14	.0013	33296	1130	1140	.22	.0015	31518	1350	1360	.48	.0055						
33275	920	930	.36	.0050	33297	1140	1150	.24	.0019	31519	1360	1370	.23	.0006						
33276	930	940	.41	.0017	33298	1150	1160	.12	.0037	31520	1370	1380	.09	.0029						
33277	940	950	.60	.0005	33299	1160	1170	.16	.0073	31521	1380	1390	.09	.0008						
33278	950	960	.35	.0009	33300	1170	1180	.34	.0100	31522	1390	1400	.15	.0013						
33279	960	970	.19	.0004	31501	1180	1190	.14	.0050	31523	1400	1410	.17	.0260						

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Colour Plot & Dips

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North 106, 971.86 East			True Brg.	250° 00'	Logged by	RFN
Objective				% Recov.	90.0%	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.43	1500'	Rim 69-21	1

Footage From	To	Description	Sample No.	Length	Analysis			Recovery	
0	97	OVERBURDEN						97-100	2.5
								100-110	9.5
97	0	BETHSAIDA QUARTZ DIORITE						110-120	8.5
								120-130	9
		97 - 108 Oxidized Zone - i.e. malachite present						130-140	4.5
		97 - 137 Limonite on fractures						140-150	9.5
								150-160	9
		97 - 116 Slight to occasional Moderate Kaolinization - mafics chloritic						160-170	7.5
		Qtz Veins uncommon - sericite poorly developed						170-180	9
								180-190	9.5
		116 - 175 Predominately Intense Kaolinization						190-200	9.0
		Patches of Slight to Moderate Kaol. as noted below.						200-210	9.5
		Qtz-Sericite generally poorly developed.						210-220	9
								220-230	9.5
		125½ - 126½ Pink aplitic dykelet @ 45°(?) mineralized						230-240	9.5
		135 - 136 Fragments of qtz Vein chalco - minor MoS_2						240-250	9
								250-260	8.5
		140 - 153 Mostly moderate Kaolinization local patches of slight						260-270	9
		and intense Kaol. grade remains poor.						270-280	9.5
		158 - 1" qtz Vein @ 50-50° bornite						280-290	10
		159½ 1" qtz Vein @ 30° chalco - bornite						290-300	10
		161 - 163 Emerald green sericite						300-310	10

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Drill Hole Record

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Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North	106, 971.86 East		True Brg.	250° 00'	Logged by	RFN
Objective				% Recov.	90.0%	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250°00'	-55°	4040.43	1500'	Rim 69-21	2

Footage From	To	Description	Sample No.	Length	Analysis			Recovery	
		166-167½ Shearing @ 20° gouge						310-320	9
		170 1" qtz Vein @ 30° minor chalco - bornite						320-330	10
		174 Minor emerald green sericite.						330-340	10
								340-350	2
		175 - 241 Slight to occasional moderate Kaolinization.						350-360	7.5
		Qtz. sericite poor (∴grade still poor)						360-370	9.5
		Ortho also along qtz-serc. fractures.						370-380	8
		Main attitude 40-50°						380-390	8.5
		185½ - 187 Pink aplitic dyke - mineralized (poor)						390-400	10
		@ 30(?)						400-410	8
		194½ Shear @ 60°						410-420	9
		200 Shearing - broken core						420-430	9
		204 1" qtz Vein @ low angle. bornite, minor chalco						430-440	9
		220 Shear @ 30° minor MoS_2						440-450	9.5
		223½ Minor emerald green sericite						450-460	9
		231-236 Intense Kaolinization (no change in grade)						460-470	9.5
		237 Minor emerald green sericite						470-480	7.5
		239 2½" qtz Vein @ 45° bornite-chalco						480-490	6
		241 - 261 Intense Kaolinization shearing throughout						490-500	9.5
		qtz-sericite poorly developed ∴ poor grade.						500-510	9
		241½ 6" gouge - shearing @ 40-50°						510-520	9.5
		1" qtz Vein - sheared @ 60°						520-530	9

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Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North	106, 971.86 East		True Brg.	250° 00'	Logged by	RFN
Objective				% Recov.	90.0%	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.43	1500'	Rim 69-21	3

Footage From	To	Description		Sample No.	Length	Analysis			Recovery	
		245	Shearing @ 45° - minor gouge						530-540	4
		246	Moly slips @ 35°						540 -550	7
		247½	Shear @ 60° 4" gouge						550-560	7.5
		250-251	Shearing @ 60° - gouge, broken core						560-570	9
		254½-255	Shearing @ 0-10° up to ¼" gouge						570-580	10
		260-261	Emerald green sericite						580-590	9.5
									590-600	9
		261 - 280	Same as (175-241) Sericite occasionally up to moderate development						600-610	10
			Main attitude now 10-30°						610-620	9.5
		262	½" qtz Vein @ 30° bornite - chalco						620-630	8
									630-640	9
		280 - 441	Moderate to intense Kaolinization						640-650	9
			Qtz Veining moderate 1/3 feet and sericite also moderate						650-660	8.5
			Grade usually fair, occas. to good. Bornite 2-3:1 over chalco						660-670	9
			Main attitude 0-30° Qtz Veins over ¼" as follows:						670-680	9
		281	1" qtz Vein @ 30° bornite, minor chalco.						680-690	9.5
		291	2" qtz Vein sheared @ 10° - bornite - chalco minor MoS_2						690-700	10
		292½	3/4" qtz Vein @ 30° bornite, chalco						700-710	9.5
		296	5" qtz Vein @ 30° minor bornite						710-720	7
		297	Shear @ 20° qtz-sericite, bornite						720-730	7
		298-301	¼" qtz Vein @ 0-5° abundant blebs of bornite						730-740	6.5
		308	Emerald green sericite						740-750	9

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Drill Hole Record

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Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60
Co-ordinates	100, 461.89 North 106, 971.86 East			True Brg.	250° 00'
Objective				% Recov.	90.0 %

Hor. Comp.

Vert. Comp.

Logged by RFN

Date October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.43	1500'	Rim 69-21	4

Footage From	To	Description	Sample No.	Length	Analysis			Recovery	
		309½ - 310 Emerald green sericite						750-760	9.5
		310-312½ Qtz Vein - shearing @ 0-15° in qtz. Chalco-bornite						760-770	9.5
		315-316 Shear @ 10° core broken						770-780	9
		320 Emerald green sericite						780-790	9
		324 ½" qtz Vein @ 30° bornite - chalco						790-800	10
		329 2 - 1" qtz Veins @ 30° bornite						800-810	10
		333 ½" qtz Vein @ 0° blebs of bornite (¼")						810-820	9
		337 ¼" qtz Vein @ 20° blebs of bornite						820-830	9
		341-351 1 Foot recovered tube didn't lock						830-840	10
		358½ 3/4" qtz Vein @ 60° bornite - chalco						840-850	9.5
		364-370 Mostly qtz - sericite (i.e. pervaisive sericite throughout BQD)						850-860	9.5
		disseminated bornite and chalco						860-870	10
		366 3" qtz Vein @ 80° large blebs of chalco						870-880	10
		373 6" emerald green and pervaisive sericite						880-890	9.5
		375 6" pervaisive sericite disseminated bornite						890-900	9.5
		378 Shear @ 60° 6" pervaisive sericite, ½" qtz Vein @ 60° bornite						900-910	8
		380 Shearing @ 60° 2" gouge						910-920	9.5
		391 3/4" qtz Vein @ 50° blebs of bornite						920-930	10
		399 2" qtz Vein @ 50° blebs of bornite, minor chalco						930-940	9
		402 Shear @ 60° 4" gouge						940-950	9.5
		402½ 1/10" Stringer of chalcopyrite @ 60°						950-960	9.5
		408 Minor emerald green sericite						960-970	9.5

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Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North 106, 971.86 East			True Brg.	250° 00'	Logged by	RFN
Objective				% Recov.	90.0%	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250°00'	-55°	4040.43	1500'	Rim 69-21	5

Footage From	To	Description		Sample No.	Length	Analysis			Recovery	
		410	Shearing @ 60°						970-980	9.5
		412-413	Shear @ 20° ½" gouge						980-990	9.5
		417	3/4" qtz Vein @ 60° chalco - minor bornite						990-1000	9
		418	½" qtz Vein @ 30° blebs of bornite						1000-1010	9.5
		425	1" qtz Vein @ 45° bornite - chalco						1010-1020	9.5
									1020-1030	9
		441 - 518	Slight to moderate Kaolinization						1030-1040	9
			Qtz Veins and Sericite development predominately poor						1040-1050	9
			Qtz Veining as noted below.						1050-1060	9.5
		445	1" patch of pink aplitic material						1060-1070	9
		448½	¼" qtz. Vein @ 45° bornite						1070-1080	9
		455	¼" qtz. Vein @ 60° bornite						1080-1090	9
		456	¼" qtz. Vein @ 60°						1090-1100	8
		457	¼" qtz Vein @ 60°						1100-1110	7.5
		463-469½	Lamprophyric dyke @ 70° - post mineral						1110-1120	8
			BQD adjacent is Vuggy for approx. 6"						1120-1130	8
			466 Shear @ 45° ½" gouge						1130-1140	9
		470-491	Mostly intense Kaolinization						1140-1150	7.5
			Qtz sericite poorly devloped						1150-1160	8.5
			490 Emerald green sericite						1160-1170	9
		491-496	BQD Very Vuggy flooded with silica and K-spar(?)						1170-1180	9
			Vugs seem to be developed mostly by destruction of the mafics qtz-sericite moderately developed						1180-1190	9.5

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No. Rim 69-21	
Commenced	October 4, 1969	Location		Tests at Tropari @ 1000'	Hor. Comp.
Completed	October 27, 1969	Core Size	NQ	Corr. Dip -60	Vert. Comp.
Co-ordinates	100, 461.89 North 106, 971.86 East			True Brg. 250° 00'	Logged by RFN
Objective				% Recov. 90.0%	Date October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.43	1500'	Rim 69-21	6

Footage From	To	Description	Sample No.	Length	Analysis			Recovery	
		494-495 Massive sericite. Vuggy bornite, chalco						1190-1200	9.5
	506-518	BQD Very Vuggy as per (491-496)						1200-1210	10
	518 - 545	BQD fresh to slight Kaol.						1210-1220	10
		(occas. qtz Vein as noted below) sericite very poor.						1220-1230	10
	521	½" qtz Vein @ 60° bornite - chalco						1230-1240	9.5
	532	1" qtz Vein @ 50° bornite, minor chalco						1240-1250	9
	544	½" qtz Vein @ 30° bornite, minor chalco						1250-1260	9.5
	545 - 579	Predmoninately moderate Kaolinization						1260-1270	10
		Qtz Veining poor, as noted below.						1270-1280	9.5
		Sericite poor except where noted.						1280-1290	10
	550-561	BQD is Very vuggy - flooded by silica and K-spar						1290-1300	10
	551	1" qtz Vein @ 30° bornite						1300-1310	10
	556	2" band of sericite @ 10-20° disseminated bornite, chalco						1310-1320	10
	565	½" qtz Vein @ 45° bornite						1320-1330	9.5
	566	1" qtz Vein @ 45° bornite						1330-1340	8
	570-575	Mostly emerald green sericite						1340-1350	9.5
	571	Shear @ 30° 2" gouge						1350-1360	9.5
	572½	Shear @ 30° 2" gouge						1360-1370	10
	573-574½	1½ foot quartz Vein @ 30° chalco, MoS_2						1370-1380	9.5
	579 - 709	Fresh to occasional slight Kaolinization						1380-1390	9.5
		Sericite very poor. Qtz Veining uncommon - as noted below							
		Ortho clase common along fractures to give core a candy stripe appearance.							

Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North 106, 971.86 East			True Brg.	250° 00'	Logged by	RFN
Objective				% Recov.	90.0%	Date	October 10-27/69

Claim | T Brg. 250° 00' | Collar Dip -55° | Elev. 4040.43 | Length 1500' | Hole No. Rim 69-21 | Sheet 7

Footage From	To	Description	Sample No.	Length	Analysis		Recovery	
		596 ½" qtz Vein @ 45° - bornite, minor chalco					1390-1400	9.5
		602 ½" qtz Vein @ 45° bornite					1400-1410	9.5
		605½ 2" band of sericite @ 50° disseminated bornite, hematite					1410-1420	10
		606 ½" qtz Vein @ 50° blebs of bornite					1420-1430	9.5
		613½ Shear @ 60° ¼" qtz Vein @ 50° bornite					1430-1440	10
		615½ Shear @ 50°					1440-1450	10
		616 Shear @ 45° Intense Kaolinization adjacent					1450-1460	9.5
		621 ¼" qtz Vein @ 45° - bornite					1460-1470	10
		622½ Fragments of approx. 2" qtz Vein bornite chalco					1470-1480	10
		Shearing @ 0-10°					1480-1490	7
		623-630 Mostly Intense Kaolinization					1490-1500	8
		624 Shear @ 20°						
		625 Shear @ 45° 2" gouge						
		626 ½" qtz Vein @ 50° bornite						
		627 Shear @ 30° qtz - sericite - bornite adjacent						
		629 1" qtz. Vein @ 25° bornite - minor chalco						
		630½ ¼" qtz Vein @ 50° bornite						
		631-632 Pink apletic dyke @ 30° - pre mineral						
		636½ ¼" qtz Vein @ 50° - chalco						
		640 Shear @ 20° sericite - chalco - bornite adjacent						
		640½ 1/5" chalco stringer @ 55°						
		641 1" qtz Vein @ 60° chalco, minor bornite						

Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North	106, 971.86 East		True Brg.	250° 00'	Logged by	RFN
Objective				% Recov.	90.0%	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.43	1500'	Rim 69-21	8

Footage From	To	Description	Sample No.	Length	Analysis					
		641-642½ Shearing @ 50°								
		642 - 1" qtz Vein @ 50° bornite, chalco								
		½" qtz Vein @ 30°								
		644-648 BOD flooded by K-spar and possibly Silica								
		Very Vuggy								
		645 ¼" qtz. Vein @ 50° bornite - chalco								
		650 1½" qtz Vein @ 50° ½" Sericite border bornite, chalco								
		657-659½ Pink aplitic dyke @ 50-60° - pre-mineral								
		660 ¼" qtz Vein @ 45° bornite								
		663-664 Numerous qtz - sericite Veinlets @ 45° - bornite - chalco								
		665 Small shear @ 20°								
		672 Shear @ 60° Intense Kaol. adjacent								
		674 ½" qtz Vein @ 40° bornite minor chalco								
		¼" qtz Vein @ 40° bornite minor chalco								
		675-690 Mostly intense Kaolinization								
		Increase in amount of ortho along fractures.								
		677 Shear @ 30° 1" gouge								
		679 ½" band qtz-sericite @ 45° bornite - hematite								
		683 ½" qtz Vein @ 30° bornite, chalco								
		683½ Hematite on sericite fractures								
		685 ½" qtz-sericite Vein @ 30° chalco - hematite								
		686 ½" qtz sericite Vein @ 20° chalco - hematite								
		Shear @ 50°								

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Colour Plot & Dips

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North	106, 971.86 East		True Brg.	250° 00'	Logged by	RFN
Objective				% Recov.	90.0%	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250°00'	-55°	4040.43	1500'	Rim 69-21	9

Footage From	To	Description	Sample No.	Length	Analysis					
		686½ ½" qtz-sericite Vein @ 20° chalco - hematite								
		687 ½" qtz-sericite Vein @ 15° chalco - hematite								
		688 3" sericite band @ 30-40° chalco - hematite								
		695 2" sericite band @ 30° - chalco - shear @ 20-25°								
		698 Shear @ 50°								
		703 Shear @ 30° Intense Kaol. adjacent								
		709-710 Pink aplitic dyke @ 30° pre-mineral								
		710 - 746 Predominately Intense Kaolinization of the plagioclase patches of moderate								
		alteration.								
		Sericite and qtz Veining moderate to occasionally well developed.								
		Ortho also along Veins and fractures giving the core a candy-striped appearance.								
		Main attitude @ 45° also 30°								
		710 1" qtz Vein @ 60° blebs of bornite								
		711½-715 ½' recovery fragments of qtz Vein bornite								
		Possible attitude @ 10°								
		715 1½" qtz Vein @ 30° minor chalco, bornite								
		730 1/10" stringer of bornite @ 30°								
		734 3/4" qtz Vein @ 30° bornite								
		739-740 Vuggy ortho clase								
		741 ½" qtz Vein @ 45° bornite.								
		743 1/10' chalco stringer @ 15° also thin stringer of chalco @ 30°								

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Colour Plot & Dips

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North	106, 971.86 East		True Brg.	250°00'	Logged by	RFN
Objective				% Recov.	90.0 %	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.43	1500'	Rim 69-21	10

Footage From	To	Description	Sample No.	Length	Analysis					
		745 ½" qtz Vein @ 20°								
		746 - 912 Predominately slight to moderate Kaolinization								
		Intense Kaolinization locally around some Veins and sericite fracs.								
		Qtz veins uncommon. Sericite poor to occasionally fair								
		Grade generally poor - local patches of fair to good.								
		ortho still borders qtz-sericite Veins and fracs.								
		772 1" qtz Vein @ 25° chalco - bornite								
		791 3/4" qtz Vein @ 20° bornite - chalco								
		793-805 Grade increase - sericite moderately developed								
		1 qtz Vein/2-3 feet. Intense Kaol. along Veins & fracs.								
		814 ½" qtz Vein @ 30° chalco								
		817 ½" qtz Vein @ 30° bornite - chalco								
		825 1" qtz Vein @ 30° bornite - chalco								
		830 Shear @ 50°								
		831 1" qtz - sericite Vein @ 35°								
		836 ¼" qtz Vein and 1" band of sericite @ 30°								
		838-850 Intense Kaolinization								
		839 - 3/4" qtz Vein @ 30° chalco - minor bornite								
		840 Shear @ 80° ½" gouge								
		841 Shear @ 80°								
		846 Shear @ 70-80° 5" gouge								

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North 106, 971.86 East			True Brg.	250° 00'	Logged by	RFN
Objective				% Recov.	90.0%	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.43	1500'	Rim 69-21	11

Footage From	To	Description	Sample No.	Length	Analysis
		848 - Shear @ 60°			
		2½" qtz Vein @ 40-50° chalco - MoS_2			
		856 ¼" qtz Vein @ 30° 2" sericite border - bornite, minor chalco			
		857 ½" qtz Vein @ 50° bornite - chalco			
		862 ½" qtz Vein @ 30° bornite			
		863 1" qtz - sericite @ 15° - bornite, minor chalco. Intense Kaol. adjacent			
		865 1" qtz - sericite @ 15° - bornite, minor hematite. Intense Kaol. adjacent.			
		870 ½" qtz Vein @ 60° bornite			
		871 ½" qtz Vein @ 60° MoS_2			
		871½ 2" qtz-sericite @ 30° chalco			
		885 1" qtz Vein @ 20° 1" Sericite borders - blebs of chalco in the qtz.			
		Bornite in the sericite.			
		888-895 Intense Kaolinization			
		888-890 Shearing @ 0-10°			
		891 qtz - sericite @ 20° - chalco			
		892 ½" qtz Vein @ 70°			
		892½ qtz - sericite @ 30° bornite chalco			
		893 3/4" qtz Vein @ 20° chalco			
		897 ½" qtz Vein, 1" sericite @ 45° bornite, chalco			
		898 ½" qtz Vein @ 10°-20° bornite, chalco			
		901 ½" qtz Vein @ 60 bornite			
		902 ½" qtz Vein @ 60° bornite			

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North 106, 971.86 East			True Brg.	250° 00'	Logged by	RFN
Objective				% Recov.	90.0 %	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.43	1500'	Rim 69-21	12

Footage From	To	Description	Sample No.	Length	Analysis
		904 Shear @ 60° ¼" gouge			
		908-909 Shearing @ 10° and 45° up to ¼" gouge. Some intense Kaol. adjacent.			
		909 1" qtz Vein @ 30° minor bornite, chalco			
		912 Shear @ 20°			
		912 - 991 Predominately intense Kaolinization			
		Qtz Veins 1/2-3 feet			
		Sericite development predominately moderate - Variable to poor and intense			
		Bornite 2-3:1 over chalco			
		Main attitudes 40-60, also 30°			
		Ortho bordering qtz-sericite Veins and fracs.			
		912½ 2" qtz Vein @ 30° blebs bornite - chalco			
		913 1" qtz Vein @ 40° blebs of chalco			
		921 Shear @ 30° emerald green sericite adjacent			
		925 ½" qtz Vein @ 40° bornite chalco			
		926-928 Tan aplitic dyke @ 35°(?) pre-mineral			
		926½ ½" qtz Vein @ 40° blebs of chalco			
		928 1" qtz Vein @ 35° Very irregular borders - barren (Very minor chalco)			
		929-946 Shearing			
		929 6" qtz Vein @ 20°(?) chalco minor MoS_2			
		929½ Shear @ 20° 6" gouge - 2" qtz Vein @ 20° minor chalco			
		931 1" qtz Vein @ 20°			

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Colour Plot & Dips

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North	106, 971.86 East		True Brg.	250° 00'	Logged by	RFN
Objective				% Recov.	90.0%	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.43	1500'	Rim 69-21	13

Footage From	To	Description		Sample No.	Length	Analysis					
		933	1 foot pink aplitic dyke @ 40° pre-mineral								
		934-937	Shearing @ 0-10° also 45° mostly gouge or broken rock								
		942	3" qtz Vein @ 30° bornite								
		943-948	Pervaisive sericite								
		944	Shearing @ 45°								
		~~944~~ 954	Shear @ 60° ½" gouge								
		959	Small Shear @ 50°								
		963	Increase in ortho present along fracs and on Veins (10-15%)								
		971	½" qtz Vein @ 60° - chalco								
		976	1" qtz Vein @ 40-45° chalco								
		980	1" qtz Vein @ 45° - shear @ 90° cutting across the Vein								
		982-986	Shearing @ 0-10° up to ½" gouge. Also shears @ 40°								
		988-992	Small Shears @ 30° and 60°								
		991 - 1103	Slight to moderateKaolinization. Small, local patches of Intense, qtz Veining								
			and sericite poor, ortho abundant along fracs. and Veins (locally up to 10-15%)								
		1007	Small shear @ 0°								
		1011-1013	Shear @ 0-10°								
		1017	Shear @ 45° ½" gouge								
		1035	Shear @ 20° ½" gouge								
		1036	Shear @ 20° ½" gouge								

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Colour Plot & Dips

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North	106, 971.86 East		True Brg.	250° 00'	Logged by	RFN
Objective				% Recov.	90.0%	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.43	1500'	Rim 69-21	14

Footage From	To	Description	Sample No.	Length	Analysis					
		1044 Shears @ 45°, 60° qtz-sericite along shear @ 45° - bornite, chalco								
		1052 1¼" qtz Vein @ 45° 1-2" sericite borders, bornite.								
		1054 Shear @ 60-70° up to 1" gouge								
		1056 6" concentration of mafics (beotite) up to 20°								
		Specs of hematite also present								
		1058 ½" qtz Vein @ 50° chalco - bornite								
		1059 Shear @ 60°(?) ½" gouge								
		1070½ Small shears @ 45°, 60°								
		1091 Shear @ 45° ½" gouge - 1" qtz Vein with sheared contacts - chalco								
		1092½ Shear @ 70° ½" gouge								
		1103 - 1202 Porphyrydyke (porphyritic Bethsaida)								
		Plagioclase phenocrysts pink (hematized) to Intensly Kaolinized, qtz Veining -								
		Sericite very poor to poor.								
		1113, 1115 Shears @ 45° up to ¼" gouge								
		1122 Shear @ 60-70° ¼" gouge								
		1129 1" qtz sericite Vein @ 0° bornite - chalco								
		1134 ½" qtz Vein @ 60° bornite - chalco								
		1133-1180 Orthoclase and/or hematized plagioclase (10-25%)								
		1138 3/4" qtz Vein @ 40° bornite								
		1142½ ¼" qtz Vein @ 45°								

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North 106, 971.86 East			True Brg.	250° 00'	Logged by	RFN
Objective				% Recov.	90.0%	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.43	1500'	Rim 69-21	15

Footage From	To	Description	Sample No.	Length	Analysis					
		1145 ½" qtz Vein @ 45° - bornite								
		1147 2 - ¼" qtz Veins @ 30° - intersect each other - bornite								
		1148 ¼" qtz Vein @ 20° - bornite								
		1151 ½" qtz Vein @ 45° minor bornite								
		1153 ½" qtz Vein @ 45° bornite								
		1157 Shear @ 70° - minor gouge								
		1157-1158 Shear @ ~~70°~~ 0-10°								
		1161½ ½ - qtz Vein @ 60° bornite								
		1162-1165 Shearing @ 45-60° up to 1" gouge								
		1173 ½" qtz Vein @ 20° - bornite								
		1174 ½" qtz Vein @ 20-30° - bornite - chalco								
		1176 ½" qtz Vein @ 20° bornite								
		1180 2 - ¼" qtz Veins @ 45° bornite - chalco								
		1184 ½" qtz Vein @ 60° - large blebs of bornite								
		1185,1186 ¼" qtz Veins @ 45° bornite								
		1188½ Small Shear @ 45°								
		1190½ ¼" qtz Vein @ 60° bornite - chalco								
		1193 Shear @ 60°								
		1197 ¼" qtz Vein @ 60° - bornite - chalco								
		1202 Porphyrydyke - B QD contact @ 60° - Sheared								

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21		
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'	Hor. Comp.	
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60	Vert. Comp.	
Co-ordinates	100, 461.89 North	106, 971.86 East		True Brg.	250° 00'	Logged by	RFN
Objective				% Recov.	90.0%	Date	October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.43	1500'	Rim 69-21	16

Footage From	To	Description	Sample No.	Length	Analysis
		1202 - 1326 Bethsaida quartz diorite			
		Moderate to occasionally intense Kaolinization of plags.			
		Qtz - sericite poor to fair occasionally to moderate			
		Ortho also common along Veins and fracs. - usually Salmon pink in color			
		Bornite 2-3:1 over chalcopyrite			
		Up to 5 sericite fractures/foot ¼ to 1" wide			
		Qtz Veining 1/5 feet with up to ½" sericite borders			
		1235-1248 Intense Kaol.			
		1255-1260 Intense Kaol.			
		1302-1313 Intense Kaol.			
		1303 - Shear @ 60°			
		1306 - Shear @ 45° 6" gouge			
		1311-1312 Shear @ 60° gouge, broken core.			
		1324 ½" qtz Vein @ 45° sheared - MoS_2 chalco			
		1326-1365 Mostly Intense Kaolinization			
		Sericite moderate to occasionally well developed			
		There is 1 qtz Vein/2-3' core. (Moderate development) and they have up to 1"			
		sericite borders.			
		Bornite 2:1 over chalco			
		Main attitude 45-60°			
		1337 Shear @ 30° minor gouge			

Scale

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60
Co-ordinates	100, 461.89 North 106, 971.86 East			True Brg.	250° 00'
Objective				% Recov.	90.0%

Hor. Comp.

Vert. Comp.

Logged by RFN

Date October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.43	1500'	Rim 69-21	17

Footage From	Footage To	Description	Sample No.	Length	Analysis
		1341 Shear @ 80° ½" gouge			
		1342 Shear @ 50-60° 1" gouge			
		1344 1" qtz Vein @ 55° chalco blebs			
		1347 Shear @ 70° - ½" gouge			
		1350 Small Shear @ 45°			
		1354 3" qtz Vein @ 50° large blebs of chalco, MoS_2			
		1356-1357 Shearing @ 50-60° mostly gouge			
		1362½ Shear @ 75° 2" gouge			
		1365 - 1500 Moderate Kaolinization. Small local patches to Intense			
		Qtz - sericite poorly developed. Up to 3 serc fracs/foot - less than 1/4"			
		thick - 1 qtz Vein/8-10'			
		Ortho (often salmon pink) common along Veins and fracs. (10-15%)			
		1367 Shear @ 45° up to ¼" gouge			
		1373 Shear @ 70° ½" gouge			
		1382 Shear @ 80° - up to ¼" gouge			
		1392 ½" qtz Vein @ 20° chalco, MoS_2			
		1399-1401 Small blebs of sericite - chalco appear disseminated; small shear, band of			
		sericite @ 45°			
		1405 2-3" qtz Vein @ 20° - bottom sheared - chalco, MoS_2			
		1418-1420 Sericite moderate development. 5 fracs/foot.			
		1418½ Pink splitic material flooding BQD @ 45°			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-21
Commenced	October 4, 1969	Location		Tests at	Tropari @ 1000'
Completed	October 27, 1969	Core Size	NQ	Corr. Dip	-60
Co-ordinates	100, 461.89 North 106, 971.86 East			True Brg.	250° 00'
Objective				% Recov.	90.0%

Hor. Comp.

Vert. Comp.

Logged by RFN

Date October 10-27/69

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	250° 00'	-55°	4040.43	1500'	Rim 69-21	18

Footage From	To	Description	Sample No.	Length	Analysis
		1421 2 - 3" pink aplitic dykes @ 45°			
		1430-1448 Mostly intense Kaolinization and patchy emerald green sericite			
		Chacopyrite by far the most common sulphide.			
		1446-1447 Shearing @ 50° up to ½" gouge. Minor chalco, MoS_2 in qtz frags.			
		1447½ ¼" qtz Vein @ 60° MoS_2 and chalco stringers up to 1/10"			
		1453 6" pink aplitic dyke - @ 30°			
		1463 2" qtz Vein @ 50° minor chalco			
		1466 1" qtz Vein @ 50° minor chalco			
		1467-1468 Pink qplitic dyke @ 30°			
		1468 - ¼" stringer of chalco - qtz @ 20-30°			
		1469 Shear - @ steep angle to C/A 3" gouge			
		1471 Shear @ 60° ½" gouge			
		1495 Shear @ 70° 6" gouge			
1500		END OF HOLE			

211-9437—H.P.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Valley Cu.

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	RIM-69-22		
Commenced	November 17, 1969	Location	LAKE ZONE	Tests at	547'	1220	Hor. Comp. 765
Completed	November 28, 1969	Core Size	NQ	Corr. Dip	55°	66°	Vert. Comp. 1050
Co-ordinates	98,938.68 N; 107,224.78 E			True Brg.	351°	027°	Logged by RUB, RFN
Objective				% Recov.	95.6%		Date

azimuths unreliable
Tropari probably too close to drill rods.

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	235	- 47°	4171.17'	1250.5'	RIM-69-22	Summary

Footage From	To	Description	Sample No.	Length	Analysis
		SUMMARY OF GEOLOGY			
0	51	Overburden			
51	269	No oxidized zone in this hole as defined by the presence of malachite. Generally moderate to intense kaolinization and sericitization.			
269	533	Weak to moderate kaolinization. Moderate and locally intense sericitization. Very weak potassic alteration.			
533	688	Mostly moderate kaolinization. Sericitization moderate.			
688	827	Weak to moderate potassic alteration. Moderate to intense sericitization. Potassic alteration increasing in intensity with depth. "Candy stripes" occasionally fairly well developed.			
827	1048.5	Weak kaolinization. Generally weak sericitization. Potassic alteration moderate and intense.			
1048.5	1090	Bethsaida porphyry. Typical of the dyke bordering the orebody on west and south.			
1090	1250	Typical Bethsaida. Generally weak kaolinization. Weak to moderate sericitization. Gypsum stringers common. K-spar 20-25%.			
	1250	END OF HOLE			

211-9437—H.P.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	RIM-69-22
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length 1250.5' | Hole No. RIM-69-22 | Sheet Mineralization

Footage From	To	Description	Sample No.	Length	Analysis

SUMMARY OF MINERALIZATION

	% Cu	% Mo
51-460'	.53	.0027
460-710'	.43	.0027
710-830'	.31	.0033
830-1250'	.18	.0061

211-9437—H.P.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	RIM-69-22
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. Rim-69-22 | Sheet Assays 1

Footage From To | Description | Sample No. | Length | Analysis

Sample #	Footage From	To	% Cu	% Mo	Sample #	From	To	% Cu	% Mo	Sample #	Footage From	To	% Cu	% Mo
	0	51	Overburden		32312	250	260	.55	.0006	32333	460	470	.39	.0020
32192	51-	60	.55	.0040	13	260	270	1.00	.0044	34	470	480	.44	.0035
93	60	70	.42	.0037	14	270	280	.42	.0008	35	480	490	.40	.0010
94	70	80	.51	.0009	15	280	290	.41	.0008	36	490	500	.49	.0008
95	80	90	.47	.0006	16	290	300	.37	.0056	37	500	510	.59	.0004
96	90	100	1.10	.0027	17	300	310	.35	.0025	38	510	520	.30	.0010
97	100	110	.34	.0009	18	310	320	.45	.0013	39	520	530	.36	.0009
98	110	120	.56	.0049	19	320	330	.52	.0014	32340	530	540	.40	.0007
99	120	130	.78	.0012	20	330	340	.38	.0021	41	540	550	.47	.0006
32200	130	140	.48	.0059	21	340	350	.66	.0010	42	550	560	.35	.0006
32301	140	150	.61	.0016	22	350	360	.43	.0013	43	560	570	.39	.0008
2	150	160	.41	.0030	23	360	370	.68	.0036	44	570	580	.30	.0029
3	160	170	.39	.0033	24	370	380	.51	.0055	45	580	590	.36	.0020
4	170	180	.40	.0022	25	380	390	.43	.0034	46	590	600	.46	.0009
5	180	190	.62	.0008	26	390	400	.42	.0029	47	600	610	.53	.0008
6	190	200	.65	.0048	27	400	410	.40	.0013	48	610	620	.67	.0075
7	200	210	.65	.0016	28	410	420	.41	.0140	49	620	630	.40	.0016
8	210	220	.36	.0020	29	420	430	.60	.0017	32350	630	640	.36	.0040
9	220	230	.56	.0012	32330	430	440	.54	.0009	51	640	650	.35	.0016
10	230	240	.83	.0019	31	440	45o	.48	.0038	52	650	660	.33	.0024
11	240	250	.64	.0014	32	450	460	.59	.0038	53	660	670	.52	.0018

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	RIM-69-22
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. RIM-69-22 | Sheet Assays 2

Footage From To | Description | Sample No. | Length | Analysis

Sample #	Footage From	Footage To	% Cu	% Mo	Sample #	Footage From	Footage To	% Cu	% Mo	Sample #	Footage From	Footage To	% Cu	% Mo
32354	670	680	.42	.0180	35309	880	890	.36	.0016	35330	1090	1100	.18	.0150
55	680	690	.57	.0050	10	890	900	.27	.0041	31	1100	1110	.19	.0015
56	690	700	.34	.0009	11	900	910	.18	.0160	32	1110	1120	.25	.0037
57	700	710	.52	.0060	12	910	920	.14	.0023	33	1120	1130	.15	.0044
58	710	720	.29	.0012	13	920	930	.22	.0023	34	1130	1140	.25	.0042
59	720	730	.20	.0010	14	930	940	.14	.0006	35	1140	1150	.13	.0029
32360	730	740	.43	.0039	35325	940	950	.19	.0094	36	1150	1160	.16	.0063
61	740	750	.30	.0032	35315	950	960	.18	.0021	37	1160	1170	.19	.0052
62	750	760	.36	.0038	16	960	970	.11	.0031	38	1170	1180	.40	.0019
63	760	770	.22	.0031	17	970	980	.13	.0006	39	1180	1190	.09	.0330
64	770	780	.29	.0093	18	980	990	.18	.0045	40	1190-1200		.07	.0032
65	780	790	.36	.0017	19	990	1000	.14	.0033	41	1200	1210	.20	.0032
66	790	800	.29	.0032	20	1000	1010	.28	.0220	42	1210	1220	.10	.0081
35301	800	810	.28	.0059	21	1010	1020	.11	.0017	43	1220	1230	.11	.0077
2	810	820	.32	.0014	22	1020	1030	.12	.0012	44	1230	1240	.08	.0064
3	820	830	.33	.0015	23	1030	1040	.14	.0021	35345	1240	1250	.05	.0017
4	830	840	.16	.0011	24	1040	1050	.14	.0069					
5	840	850	.19	.0180	35326	1050	1060	.11	.0043					
6	850	860	.12	.0010	27	1060	1070	.34	.0160					
7	860	870	.19	.0023	28	1070	1080	.28	.0098					
8	870	880	.25	.0019	29	1080	1090	.23	.0089					

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	RIM-69-22
Commenced	November 17, 1969	Location	LAKE ZONE	Tests at	547' 1220
Completed	November 28, 1969	Core Size	NQ	Corr. Dip	55° 66°
Co-ordinates	98,938.68 N; 107,224.78 E			True Brg.	351° 027°
Objective				% Recov.	95.6%

Hor. Comp.	765
Vert. Comp.	1050
Logged by	RUB, RFN
Date	

Sheet 1

Claim	T Brg.	Collar Dip	Elev.	Length 1250.5'	Hole No. RIM-69-22

Footage From	To	Description	Sample No.	Length	Analysis
0	51	Overburden			
51	269	No oxidized zone in this hole as defined by the presence of malachite. (No limonite either)			
		Kaolinization, except in the first 20 feet, moderate to intense. Sericitization generally moderate to intense, but occasionally very intense over short intervals. Biotite generally altered to chlorite and or sericite. The section 74-121 illustrates well the direct relationship between good grade and the intensity of sericite alteration.			
		51-52 Emerald green sericite			
		53 Fault @ 30°. Gouge.			
		64-65,			
		70-72 Emeral green sericite common			
		73 Minor fault @ 70°			
		74 Very coarse grain cp in quartz vein			
		86-89 Fault @ 50°. Sericitic gouge.			
		91-94 Unusually well mineralized section consisting of about 70-80% sericite. 1-2% copper disseminated in this very porous material.			
		99-100 Exceptionally well mineralized quarts veins with blotchy cp.			
		113 Minor fault @ 70°			
		116 Dissem. moly in sericite with cp & Bn. Moly slip.			
		121 Very coarse grain cp & Bn in quartz vein @ 20°			

Recovery	
51-60	8.5
60-70	8.5
70-80	10
80-90	9.5
90-100	10
100-110	8.5
110-120	8.5
120-130	8.5
130-140	8.5
140-150	7
150-160	9
160-170	9
170-180	9
180-190	9
190-200	10
200-210	10
210-220	8.5
220-230	10
230-240	9
240-250	10

RUB

211-9437—H.P.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property VALLEY COPPER	District HIGHLAND VALLEY	Hole No. RIM-69-22	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length 1250.5' | Hole No. RIM-69-22 | Sheet 2

Footage From	To	Description	Sample No.	Length	Analysis					
		123-195 Bn < Cp. Very well mineralized section.					Recovery			
							250-260		10
		135 Moly slip at 40°					260-270		10
		150,152 Minor faults at 40°					270-280		10
		156 Minor fault at 20°					280-290		10
		164 Moly and cp in quartz vein					290-300		10
		192 Fault. Gouge recovered					300-310		10
		194 Emerald green sericite					310-320		10
		195 Minor fault at 40°					320-330		10
		203-204 3% copper in the form of blotchy Bn & cp in quartz vein					330-340		10
		216-231 "Mottled Bethsaida" or "salt and pepper" textured Bethsaida - both the same. Euhedral					340-350		10
		to subhedral quartz, euhedral plagioclase crystals in a fine grained groundmass.					350-360		10
		Scattered fine grained biotite. Core badly broken and the nature of the contacts					360-370		9
		is not apparent. The lower contact is obscured by sericite alteration, but no					370-380		10
		evidence of fault contact. Contact most likely an intrusive ore. This section is					380-390		10
		exceptionally well mineralized; about 0.8% Cu, mainly in the form of bn in quartz					390-400		9.5
		veins. Sericite alteration poorly developed but borders of veins are bleached.					400-410		10
		245 Hematite on fractures					410-420		10
		256-267 Emerald green sericite is the dominant alteration type.					420-430		10
		261 Minor fault. Massive cp in quartz vein. The dominant copper mineral in this					430-440		7
		section is cp (almost entirely cp), whereas above & below bn is dominant.					440-450		8
		263 Minor fault at 50°					450-460		9.5

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Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	RIM-69-22
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length 1250.5' | Hole No. RIM-69-22 | Sheet 3

Footage From	To	Description	Sample No.	Length	Analysis		Recovery			
269	- 533	Kaolinization generally weak to moderate, becoming weak towards 433'. A few sections of up to								
		a few feet of intense kaolinization. Sericitization moderate and locally intense. Very weak					460-470		10	
		potassic alteration expressed by Kspar to 330' and then weak 330-395'. Kspar generally concentrated					470-480		10	
		in the form of envelopes along quartz veins and sericitic fractures. Biotite generally altered					480-490		9	
		to chlorite and sericite. Quartz veins have well developed sericitic borders. Bulk of copper					490-500		9.5	
		occur as disseminations in quartz - sericite streaks. (These streaks are too irregular to be					500-510		7	
		called veins). Increase in grade whereever intensity of sericite alteration increases, e.g. 380-458'.					510-520		9.5	
							520-530		9	
		285 Emerald green sericite					530-540		9	
		286 Minor fault at 50°					540-550		10	
		287 Minor fault at 50°					550-560		9.5	
		295.5 Minor fault at 60°					560-570		9	
		339-345 Potassic alteration relatively intense. Kspar averages 10-15%.					570-580		9.5	
		342 Very massive cp in 2" quartz vein @ 70°					580-590		8	
		360 Emerald green sericite. Minor shear with carbonate stringer					590-600		9	
		365,375 Minor faults at 30° and 40°, respectively.					600-610		9.5	
		394 Minor fault at 50°					610-620		9.5	
		398 Minor fault at 60°					620-630		9.0	
		419 Very fine grained moly in quartz vein at 20°					630-640		8	
		427 Minor fault at 40°					640-650		8	
		432-438 Fault at 70°, up to 6" of gouge.					650-660		8.5	
		440 6" qtz vein at 60°, bn-chalco. Shear at 60°, 1/4" gouge					660-670		9	

Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	RIM-69-22
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length 1250.5' | Hole No. RIM-69-22 | Sheet 4

Footage From	To	Description	Sample No.	Length	Analysis					
		457 2" qtz vein at 20° - bn-chalco					Recovery			
		469 2" qtz vein at 60° -- chalco, minor bn					670-680		8.5	
		481 2" qtz vein at 60° -- bn - chalco					680-690		9	
		502 3" qtz vein at 20° -- chalco					690-700		9	
		509-511 Shearing at 60°, 20°, up to ½" gouge					700-710		9.5	
		513 Shear at 70°, ½" gouge					710-720		10	
		514 Shear at 60°, 1" gouge, broken core					720-730		10	
		517 Shear at 60°, 1" gouge					730-740		9	
							740-750		10	
533	688	Predominantly moderate kaolinization. Local patches to intense kaol. (up to 3'). Mafics variable					750-760		10	
		fresh to sericitic. Sericite mostly moderate development. 1 qtz vein/5 feet - well developed sericite borders.					760-770		10	
		Bn-chalco -- mostly in the sericite. Kspar poorly developed. 580' -- Kspar 50-10%					770-780		10	
							780-790		10	
		540 Veinlet of calcite at 60°					790-800		10	
		557 Small shear at 30°					800-810		9.5	
		567 Shearing at 60°					810-820		10	
		570-571 Shear at 0-10°, up to 1" gouge					820-830		10	
		594 Shear at 20°					830-840		10	
		588-590 Shearing at 60°, up to 1" gouge					840-850		10	
		592 Minor shear at 10°					850-860		10	
		596-619 Sericite well developed (in bands 2-4" wide), abundant disseminated chalco & bn.					860-870		10	
		Chalco > bn)					870-880		10	

211-9437—H.P.

Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	RIM-69-22
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length 1250.5' | Hole No. RIM-69-22 | Sheet 5

Footage From	To	Description	Sample No.	Length	Analysis					
		612 1" qtz vein at 10°, chalco-MoS_2					Recovery			
							880-890		10	
		625-646 Intense kaol., a few shears at 60° - up to 1/2" gouge. Minor emerald green sericite					890-900		9.5	
		patchy throughout. Mineralization mainly chalco.					900-910		10	
		647-661 Slight kaolinization, sericite poor					910-920		10	
		666 Shear at 60°, 1-2" gouge					920-930		9.5	
		672 Frag. of qtz vein. Chalco-bn > MoS_2					930-940		9	
		675 2" qtz vein at 60°, chalco-MoS_2					940-950		9.5	
		685 Minor emerald green sericite					950-960		9.5	
		687 Shear at 45°, 1" gouge					960-970		10	
688	- 827	Slight to moderate potassic alteration (up to 15% Kspar). Kspar increases with depth to 820'					970-980		10	
		where Kspar averages 35-40%. Moderate to intense sericite alteration (few patches of well					980-990		10	
		developed - up to 5-6" wide bands). Hematite common on fractures and as disseminations with					990-1000		10	
		sulphides. Potassic alteration exhibits envelopes in borders of veins. "Candy-stripes"					1000-1010		10	
		occasionally fairly well developed.					1010-1020		10	
							1020-1030		10	
		705-774 Bn-Cp. very uniform potassic and sericitic alteration.					1030-1040		10	
		709.5 Moly on fracture in quartz vein					1040-1050		10	
		729.5 Minor fault at 30°. Gouge.					1050-1060		10	
		735-736.5 Fault at 10-25°. Moly slips and gouge. Slickensided cp.					1060-1070		10	
		787 Minor fault at 80°					1070-1080		10	
		804 Moly on fracture at 0°					1080-1090		10	
		819 Emerald green sericite								

211-9437—H.P.

Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property VALLEY COPPER	District HIGHLAND VALLEY	Hole No. RIM-69-22	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length 1250.5' | Hole No. RIM-69-22 | Sheet 6

Footage From	To	Description	Sample No.	Length	Analysis		Recovery			
827 - 1048.5		Weak kaolinization. Generally weak sericitization. Bn << cp. Potassic alteration is dominant								
		alteration type. Kspar 15-20%. Kspar concentrated along fractures and in borders of quartz					1090-1100			10
		veins. The bulk of the section fits the term weak "candy-stripe development". Generally low					1100-1110			10
		grade in this section due to weak sericite development. Bn << cp.					1110-1120			10
							1120-1130			10
		848 Moly on fractures at 40°					1130-1140			10
		888 Rounded fragments of massive cp. Ground core.					1140-1150			10
		898 Minor fault at 25°					1150-1160			10
		932 Minor fault at 10°					1160-1170			10
		932.5 Minor pyrite on fracture					1170-1180			10
		971 Minor fault of unknown core angle. Minor gouge.					1180-1190			10
		986 Hematite on fracture.					1190-1200			10
		994 White gypsum on fracture					1200-1210			10
		999.5 Minor fault at 25°. Emerald green sericite.					1210-1220			10
		1004 Moly slip at 65°					1220-1230			10
		1005-1006 Fault at 30°					1230-1240			10
		1007 4" quartz vein, well mineralized with cp. Minor moly					1240-1250.5			10.5
		1012 Minor fault at 60°								
		1015-1048.5 M Gypsum veins become common and potassic alteration of the "candy-stripe" variety								
		begins to develop. Kaolinization still generally weak. Sericitization generally weak.								
		Kspar averages 5%. Bn << cp. The grade appears to drop off in this section as the								
		sericite development decreases.								

211-9437—H.P.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property VALLEY COPPER	District HIGHLAND VALLEY	Hole No. RIM-69-22	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length 1250.5' | Hole No. RIM-69-22 | Sheet 7

Footage From	To	Description	Sample No.	Length	Analysis
		1027 "Candy-stripes" (Kspar envelopes adjacent to minerlized quartz - sericite band well developed)			
1048.5	1090	Bethsaida Porphyry.			
		This rock type has been called "mottled Bethsaida" and "salt and pepper" textured Bethsaida. The rock type appears to fringe the orebody on the west and south. The rock is similar to typical Bethsaida in that it contains large quartz eyes and biotite only as the mafic mineral. However, the biotite in the porphyry is a fine grained, "non-book" variety, as opposed to the coarse grained euhedral biotite books of typical Bethsaida. The "disseminated" nature of the biotite gives it a "peppered" appearance. The feldspars occur as phenocrysts. The groundmass of the porphyry is green to pinkish depending on the degree of potassic alteration. The most potassic section of the core appear to be most well mineralized. Several variations from green groundmass to pink can be seen in a ten-foot section of core. The porphyry is well mineralized with disseminated cp in the sericite. Quartz veins also well mineralized. Gypsum common. Bn>> cp.			
		1063-1064 Very heavy concentration of bn in 1/4" quartz vein. 2-inch wide sericite bands.			
		1067-1068 70% sericite. High grade section: 2% copper.			
		1075 Heavy moly on fractures at 40°. Heavy associated cp in quartz vein.			
		1075-1084 Very heavy sericite alteration. Extremely mineralized section. This section - when compared to the sections above and below - illustrates quite well the direct relationship between grade and intensity of sericite alteration.			

211-9437—H.P.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property VALLEY COPPER	District HIGHLAND VALLEY	Hole No. RIM-69-22	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length 1250.5' | Hole No. RIM-69-22 | Sheet 8

Footage From	To	Description	Sample No.	Length	Analysis
1090	1250	Typical Bethsaida.			
		Generally weak kaolinization. Sericitization weak to moderate; ore very intense for sections			
		up to a few feet. Bn < cp. Kspar 20-25%. Gypsum stringers common.			
		1091.5 Moly on fractures			
		1093 Minor fault at 80°. Intense kaolinization			
		1095 Minor fault at 80°			
		1113,1115 Heavy concentration of cp in quartz vein at 40° and 15°, respectively. Heavy			
		cp in quartz vein at 10°. This vein cut by a gypsum filled fracture and offset.			
		1128 Very fine grained dissem. moly in quartz vein and on fracture.			
		1140 Very heavy concentration of bn and cp in quartz vein at 10°. Gypsum stringers cut the vein.			
		1149-1150 Emerald green sericite.			
		1158-1161 Extremely intense sericite alteration with heavy concentration of dissem. cp (1% cp).			
		Hematite frequently surrounds sulphide particles.			
		1166 Quite heavy bn & cp mineralization in quartz vein cut by gypsum stringers.			
		1169-1181 Intense sericitization along borders of quartz veins. Heavy dissem. cp and bn in the sericite.			
		1173 Massive gypsum in vein appears to cut sericite.			
		1183 Heavy concentration of moly on fractures in quartz vein			
		1199 Blotch of gypsum in quartz vein			
		1201-1202.5 Dyke of Bethsaida Porphyry as 1048.5-1090. Upper contact sharp at 50°			
		1203-1205 Heavy concentration of sericite with dissem. cp and lesser bornite.			
		1211 Emerald green sericite associated with shearing.			

211-9437—H.P.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property VALLEY COPPER	District HIGHLAND VALLEY	Hole No. RIM-69-22	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length 1250.5'	Hole No. RIM-69-22	Sheet 9

Footage From	To	Description	Sample No.	Length	Analysis					
		1212-1213 Dissem. cp in sections, intense sericitization.								
		1214.5-1219.5 Bethsaida Porphyry as above								
		1214.5-1217.5 Heavy concentration of dissem. moly in quartz veins at 0° and 90° to core.								
		1223-1227 Quite intense sericitization with dissem. cp. Emerald green sericite. Heavy concentration of moly along shear fractures at 0° to core.								
		1229 Massive bornite in quartz vein								
		1244 Emerald green sericite								
		1245 Minor fault at 45°. Gouge								
1250		END OF HOLE								

211-9437—H.P.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	Valley Copper	District	Highland Valley	Hole No.	69 - 23				
Commenced	November 28th, 1969	Location	Lake Zone	Tests at	600'	1213'	1800'	Hor. Comp.	
Completed	December 18th, 1969	Core Size	NQ	Corr. Dip	-45°	-41°	-53°	Vert. Comp.	
Co-ordinates	99,236.25 N; 106,277.97 E.			True Brg.	048°	048°	055°	Logged by	R. U. Bruaset R. F. Nichols
Objective				% Recov.	95.6			Date	December 18th 1969

NB: Dip at 1800' not reliable

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
		-43°	4,281.14	2,005'	69-23	1.

Footage From	To	Description	Sample No.	Length	Analysis
		SUMMARY OF GEOLOGY			
0 -	63	Overburden.			
63 -	145	Bethsaida; no well developed oxidized zone in this hole as defined by the presence of malachite; generally intense kaolinization; sericitization moderate; potassic alteration weak to non-existent.			
145 -	226	Weak to moderate kaolinization; sericitization moderate to intense; very weak potassic alteration; Kspar concentrated in borders of veins.			
226 -	281	Generally intense kaolinization; intense sericitization; potassic alteration characterized by Kspar envelopes adjacent to sericite borders of veins and fractures; generally weak potassic alteration.			
281 -	359	Intense sericitization and moderate potassic alteration; kaolinization generally weak to moderate; "candy stripe" texture well developed even though potassic alteration is only moderate.			
359 -	430	Generally weak to moderate kaolinization; generally intense sericitization; weak potassic alteration; Kspar salvages along vein borders.			
430 -	488	Generally intense kaolinization; moderate sericitization; apparently lower grade in this section than in 359 - 430 correlates with lower sericite in former.			

211-9437—H.P.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	Valley Copper	District		Hole No.	69 - 23
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. 69-23 | Sheet 2.

Footage From	To	Description	Sample No.	Length	Analysis					
488 -	635	Moderate to intense kaolinization and sericitization; potassic alteration as 430 - 488.								
635 -	690	Weak to moderate kaolinization; weak to moderate sericitization and potassic alteration.								
690 -	1,306	Generally intense kaolinization and moderate to intense sericitization; Kspar 5% - 15%; candy stripes.								
1,306 -	1,362	Sericitization moderate; kaolinization generally weak; weak to moderate potassic alteration repressed by Kspar.								
1,362 -	1,401	Generally moderate to intense sericitization; kaolinization weak; gypsum veins being to appear - "candy stripes".								
1,401 -	1,490	Generally intense kaolinization; intense sericitization; generally weak potassic alteration.								
1,490 -	1,654	Moderate to intense potassic alteration; potassic and sericitic alterations dominant; candy stripes; gypsum common.								
1,654 -	1,673	Weak to moderate sericitization; kaolinization very weak; very weak potassic								

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	Valley Copper	District	
Hole No.	69 - 23		
Commenced		Location	
Tests at		Hor. Comp.	
Completed		Core Size	
Corr. Dip		Vert. Comp.	
Co-ordinates		True Brg.	
Logged by			
Objective		% Recov.	
Date			

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. 69-23 | Sheet 3.

Footage From	To	Description	Sample No.	Length	Analysis
		alteration; very few gypsum stringers.			
1,673	1,685	Alteration similar to 1,654 - 1,673 except that kaolinization is very intense.			
1,685	1,702	Weak to moderate kaolinization; moderate to intense sericitization.			
1,702	1,836	Generally weak kaolinization; sericitization weak to moderate; gypsum stringers common; potassic alteration weak but Kspar forms envelopes along fractures.			
1,836	1,878	Intense sericitization in upper half of section and moderate in lower half; weak potassic alteration; Kspar salvages along borders of veins and fractures; gypsum common.			
1,878	2,005	Generally moderate to intense kaolinization; intense sericitization; moderate to intense potassic alteration; candy stripes well developed; gypsum common.			
2,005		End Hole 69 - 23.			

211-9437—H.P.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	Valley Copper	District		Hole No.	69 - 23
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Sheet 4.

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.
					69-23

Footage From	To	Description	Sample No.	Length	Analysis

SUMMARY OF MINERALIZATION

Footage	Length	% Cu	% Mo
63 - 100	37	0.28	0.0018
100 - 140	40	0.53	0.0053
140 - 200	60	0.30	0.0020
200 - 640	440	0.49	0.0049
640 - 690	50	0.37	
690 - 720	30	0.52	0.0020
720 - 830	110	0.35	
830 - 1,050	220	0.45	0.0036
1,050 - 2,005	955	0.55	0.0039
63 - 2,005	1,942	0.49	0.0040

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

VC

Property	Valley Copper	District	
Commenced		Location	
Completed		Core Size	
Co-ordinates			
Objective			

Hole No.	69 - 23		
Tests at		Hor. Comp.	
Corr. Dip		Vert. Comp.	
True Brg.		Logged by	
% Recov.		Date	

Claim | T Brg. | Collar Dip | Elev. | Length | Sheet 23. | Hole No. 69-23

Footage From	To	Description Sample No.	Footage	% Cu	% Mo	Sample No.	Footage	% Cu	% Mo	Sample No.	Length	Analysis					
		35402	63 - 70	0.19	0.0022	35424	280 - 290	0.51	0.0005								
		35403	70 - 80	0.42	0.0031	35425	290 - 300	0.85	0.0004								
		35409	80 - 90	0.18	0.0004	35426	300 - 310	0.37	0.0009								
		35404	90 - 100	0.31	0.0015	35427	310 - 320	0.41	0.0250								
		35405	100 - 110	0.56	0.0004	35428	320 - 330	0.41	0.0021								
		35406	110 - 120	0.46	0.0006	35429	330 - 340	0.47	0.0027								
		35407	120 - 130	0.50	0.0021	35430	340 - 350	0.35	0.0025								
		35408	130 - 140	0.60	0.0180	35431	350 - 360	0.51	0.0007								
		35410	140 - 150	0.18	0.0007	35432	360 - 370	0.22	0.0006								
		35411	150 - 160	0.24	0.0003	35433	370 - 380	0.26	0.0003								
		35412	160 - 170	0.50	0.0010	35434	380 - 390	0.46	0.0047								
		35413	170 - 180	0.34	0.0016	35435	390 - 400	0.48	0.0007								
		35414	180 - 190	0.29	0.0023	35436	400 - 410	0.59	0.0008								
		35415	190 - 200	0.26	0.0063	35437	410 - 420	0.34	0.0012								
		35416	200 - 210	0.49	0.0005	35438	420 - 430	0.50	0.0007								
		35417	210 - 220	0.35	0.0003	35439	430 - 440	0.46	0.0006								
		35418	220 - 230	0.45	0.0010	35440	440 - 450	0.87	0.0011								
		35419	230 - 240	0.77	0.0030	35441	450 - 460	0.22	0.0006								
		35420	240 - 250	0.65	0.0034	35442	460 - 470	0.33	0.0008								
		35421	250 - 260	0.53	0.0012	35443	470 - 480	0.47	0.0023								
		35422	260 - 270	0.52	0.0360	35444	480 - 490	0.45	0.0007								
		35423	270 - 280	0.35	0.0040	35445	490 - 500	0.51	0.0006								

Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	Valley Copper	District		Hole No.	69 - 23
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Sheet 24.

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. 69-23

Footage From	To	Description Sample No.	Footage	% Cu	% Mo	Sample No.	Footage	% Cu	% Mo	Sample No.	Length	Analysis
		35446	500 - 510	0.43	0.0037	35167	720 - 730	0.29	0.0004			
		35447	510 - 520	0.91	0.0093	35168	730 - 740	0.29	0.0004			
		35448	520 - 530	0.49	0.0011	35169	740 - 750	0.33	0.0009			
		35449	530 - 540	0.47	0.0027	35170	750 - 760	0.24	0.0008			
		35450	540 - 550	0.42	0.0410	35171	760 - 770	0.30	0.0004			
		35151	550 - 560	0.45	0.0023	35172	770 - 780	0.47	0.0100			
		35152	560 - 570	0.25	0.0028	35173	780 - 790	0.33	0.0010			
		35153	570 - 580	0.30	0.0006	35174	790 - 800	0.30	0.0038			
		35154	580 - 590	0.32	0.0027	35176	800 - 810	0.57	0.0013			
		35155	590 - 600	0.56	0.0100	35177	810 - 820	0.38	0.0019			
		35156	600 - 610	0.74	0.0070	35178	820 - 830	0.36	0.0020			
		35157	610 - 620	0.45	0.0026	35179	830 - 840	0.52	0.0026			
		35158	620 - 630	1.10	0.0250	35180	840 - 850	0.40	0.0010			
		35159	630 - 640	0.52	0.0030	35181	850 - 860	0.38	0.0029			
		35160	640 - 650	0.38	0.0056	35182	860 - 870	0.49	0.0043			
		35161	650 - 660	0.39	0.0021	35183	870 - 880	0.56	0.0006			
		35162	660 - 670	0.30	0.0003	35184	880 - 890	0.40	0.0019			
		35163	670 - 680	0.43	0.0012	35185	890 - 900	0.26	0.0037			
		35164	680 - 690	0.35	0.0009	35186	900 - 910	0.80	0.0025			
		35165	690 - 700	0.45	0.0011	35187	910 - 920	0.49	0.0041			
		35166	700 - 710	0.50	0.0020	35188	920 - 930	0.27	0.0005			
		35175	710 - 720	0.61	0.0016	35189	930 - 940	0.55	0.0075			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	Valley Copper	District		Hole No.	69 - 23
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Sheet 25.

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.
					69-23

Footage From	Footage To	Description Sample No.	Footage	% Cu	% Mo	Sample No.	Footage	% Cu	% Mo	Sample No.	Length	Analysis
		35190	940 - 950	0.32	0.0007	35237	1,160 - 1,170	0.71	0.0011			
		35191	950 - 960	0.39	0.0009	35238	1,170 - 1,180	0.44	0.0027			
		35192	960 - 970	0.62	0.0042	35239	1,180 - 1,190	0.66	0.0120			
		35193	970 - 980	0.57	0.0066	35240	1,190 - 1,200	0.62	0.0041			
		35194	980 - 990	0.41	0.0120	35241	1,200 - 1,210	0.64	0.0014			
		35195	990 - 1,000	0.34	0.0010	35242	1,210 - 1,220	0.54	0.0060			
		35196	1,000 - 1,010	0.38	0.0120	35243	1,220 - 1,230	0.51	0.0013			
		35197	1,010 - 1,020	0.53	0.0016	35244	1,230 - 1,240	0.53	0.0011			
		35198	1,020 - 1,030	0.48	0.0044	35245	1,240 - 1,250	0.47	0.0005			
		35199	1,030 - 1,040	0.38	0.0016	35246	1,250 - 1,260	0.62	0.0005			
		35200	1,040 - 1,050	0.26	0.0036	35247	1,260 - 1,270	0.57	0.0007			
		35226	1,050 - 1,060	0.50	0.0120	35248	1,270 - 1,280	0.54	0.0019			
		35227	1,060 - 1,070	0.54	0.0056	35249	1,280 - 1,290	1.30	0.0054			
		35228	1,070 - 1,080	0.82	0.0410	35250	1,290 - 1,300	0.48	0.0010			
		35229	1,080 - 1,090	0.58	0.0100	35601	1,300 - 1,310	0.85	0.0009			
		35230	1,090 - 1,100	0.43	0.0055	35602	1,310 - 1,320	0.76	0.0021			
		35231	1,100 - 1,110	0.29	0.0011	35603	1,320 - 1,330	0.43	0.0026			
		35232	1,110 - 1,120	0.65	0.0017	35604	1,330 - 1,340	0.33	0.0007			
		35233	1,120 - 1,130	0.57	0.0022	35605	1,340 - 1,350	0.52	0.0260			
		35234	1,130 - 1,140	0.38	0.0006	35606	1,350 - 1,360	0.60	0.0024			
		35235	1,140 - 1,150	0.35	0.0005	35607	1,360 - 1,370	0.46	0.0031			
		35236	1,150 - 1,160	0.57	0.0024	35608	1,370 - 1,380	0.54	0.0073			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	Valley Copper	District		Hole No.	69 - 23
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Sheet 26.

Hole No. 69-23

Claim | T Brg. | Collar Dip | Elev. | Length

Footage From To | Description

Sample No.	Footage	% Cu	% Mo	Sample No.	Footage	% Cu	% Mo	Sample No.	Length	Analysis
35609	1,380 - 1,390	0.97	0.0052	35631	1,600 - 1,610	0.42	0.0190			
35610	1,390 - 1,400	0.79	0.0020	35632	1,610 - 1,620	0.66	0.0016			
35611	1,400 - 1,410	0.67	0.0015	35633	1,620 - 1,630	0.27	0.0023			
35612	1,410 - 1,420	0.48	0.0036	35634	1,630 - 1,640	0.50	0.0009			
35613	1,420 - 1,430	0.81	0.0029	35635	1,640 - 1,650	0.54	0.0023			
35614	1,430 - 1,440	0.25	0.0006	35636	1,650 - 1,660	0.62	0.0034			
35615	1,440 - 1,450	0.40	0.0014	35637	1,660 - 1,670	0.26	0.0004			
35616	1,450 - 1,460	0.76	0.0220	35638	1,670 - 1,680	1.30	0.0180			
35617	1,460 - 1,470	0.57	0.0017	35639	1,680 - 1,690	0.50	0.0110			
35618	1,470 - 1,480	0.77	0.0076	35640	1,690 - 1,700	0.56	0.0070			
35619	1,480 - 1,490	0.48	0.0210	35641	1,700 - 1,710	0.47	0.0036			
35620	1,490 - 1,500	0.54	0.0021	35642	1,710 - 1,720	0.28	0.0010			
35621	1,500 - 1,510	0.58	0.0065	35643	1,720 - 1,730	0.21	0.0013			
35622	1,510 - 1,520	0.46	0.0013	35644	1,730 - 1,740	0.26	0.0003			
35623	1,520 - 1,530	0.53	0.0005	35645	1,740 - 1,750	0.64	0.0007			
35624	1,530 - 1,540	0.33	0.0014	35646	1,750 - 1,760	0.37	0.0056			
35625	1,540 - 1,550	0.60	0.0035	35647	1,760 - 1,770	0.21	0.0011			
35626	1,550 - 1,560	0.50	0.0005	35648	1,770 - 1,780	0.21	0.0007			
35627	1,560 - 1,570	0.45	0.0011	35649	1,780 - 1,790	0.58	0.0004			
35628	1,570 - 1,580	0.47	0.0005	35650	1,790 - 1,800	0.38	0.0006			
35629	1,580 - 1,590	0.34	0.0006	35736	1,800 - 1,810	0.50	0.0051			
35630	1,590 - 1,600	0.34	0.0005	35737	1,810 - 1,820	0.53	0.0023			

Scale

Colour Plot & Dips

Drill Hole Record

Cominco

Property Valley Copper	District	Hole No. 69 - 23	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. 69-23 | Sheet 27.

Footage From	To	Description Sample No.	Footage	% Cu	% Mo	Sample No.	Length	Analysis
		35738	1,820 - 1,830	0.42	0.0036			
		35739	1,830 - 1,840	0.91	0.0019			
		35740	1,840 - 1,850	0.98	0.0001			
		35741	1,850 - 1,860	0.64	0.0012			
		35742	1,860 - 1,870	0.45	0.0019			
		35743	1,870 - 1,880	0.56	0.0082			
		35744	1,880 - 1,890	0.56	0.0055			
		35745	1,890 - 1,900	0.64	0.0027			
		35746	1,900 - 1,910	0.60	0.0023			
		35747	1,910 - 1,920	0.55	0.0006			
		35748	1,920 - 1,930	0.70	0.0024			
		35749	1,930 - 1,940	0.60	0.0005			
		35750	1,940 - 1,950	0.37	0.0010			
		35916	1,950 - 1,960	0.60	0.0250			
		35917	1,960 - 1,970	0.66	0.0031			
		35918	1,970 - 1,980	0.79	0.0013			
		35919	1,980 - 1,990	0.55	0.0033			
		35920	1,990 - 2,005	0.36	0.0010			

RUB:RFN:jr
Vancouver Office
February 10th, 1970

211-9437—H.P.

Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	Valley Copper	District		Hole No.	69 - 23
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Sheet 5.

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. 69-23

Footage From	To	Description	Sample No.	Length	Analysis					Recovery
0 -	63	Overburden				63	-	70		7.0
						70	-	80		6.5
		Bethsaida; no well developed oxidized zone in this hole as defined by the presence				80	-	90		8.5
		of malachite, only minute amounts of malachite present.				90	-	100		7.0
						100	-	110		7.5
63 -	145	Bethsaida; generally intense kaolinization; sericitization moderate but locally				110	-	120		9.0
		intense; biotite generally altered to chlorite and sericite in sections of most				120	-	130		9.0
		intense alteration but generally fresh to weakly altered elsewhere; potassic al-				130	-	140		8.5
		teration weak to nonexistent; bornite > chalcopyrite.				140	-	150		7.5
		63 - 87 limonitic fractures common; the odd speck of malachite 63 -				150	-	160		8.0
		68; the bulk of copper is sulphide copper with trace carbon-				160	-	170		4.5
		ate copper; generally weak kaolinization in this section;				170	-	180		8.5
		hematite common.				180	-	190		10.0
		70 - 72 fault at 30°; gouge.				190	-	200		10.0
		103 heavy concentrate of bornite in 6" sericite band.				200	-	210		9.5
		124 - 230 emerald green sericite dominant alteration material				210	-	220		10.0
		130 minor disseminated molybdenum in quartz vein at 30°.				220	-	230		10.0
		132.5 fault at 35°; slickensided molybdenum gouge.				230	-	240		9.0
		137 - 145 fault at 35°; gougy, fragile core.				240	-	250		8.5
						250	-	260		10.0
145 -	226	Weak to moderate kaolinization with locally intense sections of a few inches; bulk				260	-	270		8.5
		of copper mineralization in this section is disseminated in the sericite;				270	-	280		9.5

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Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	Valley Copper	District		Hole No.	69 - 23
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Sheet 6.

Hole No. 69-23

Footage From	To	Description	Sample No.	Length	Claim	T Brg.	Collar Dip	Elev.	Length	Analysis	Recovery
		sericitization moderate to intense; bornite > chalcopyrite; very weak potassic al-				280	-	290			9.0
		teration; Kspar is concentrated in borders of veins.				290	-	300			10.0
		146.5 emerald green sericite.				300	-	310			8.5
		158 - 164 fault at 30°; very coarse grained bornite in some fragments				310	-	320			8.0
		of ground quartz.				320	-	330			9.0
		178 emerald green sericite.				330	-	340			7.0
		192 - 206 emerald green sericite common; chalcopyrite appears to be the				340	-	350			10.0
		most abundant copper mineral.				350	-	360			9.0
		194 minor fault at 20°; slickensides.				360	-	370			10.0
		202 minor fault at 40°.				370	-	380			10.0
		212 emerald green sericite.				380	-	390			9.5
		215 emerald green sericite; minor slip at 40°.				390	-	400			10.0
		223.5 minor slip at 35°.				400	-	410			10.0
						410	-	420			10.0
226	- 281	Generally intense kaolinization; intense sericitization; biotite generally altered				420	-	430			9.5
		to chlorite and sericite; potassic alteration characterized by Kspar envelopes ad-				430	-	440			10.0
		jacent to sericite borders of veins and fractures; weak potassic alteration;				440	-	450			10.0
		marked increase in grade as sericite becomes more abundant; bornite >> chalcopyrite.				450	-	460			10.0
		238 minor fault.				460	-	470			10.0
		240 - 245 emerald green sericite.				470	-	480			10.0
		241 - 243.5 fault at 35°.				480	-	490			10.0
		249 - 250 faulting at 0° to core.				490	-	500			9.5

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Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	Valley Copper	District		Hole No.	69 - 23
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Sheet 7.

Hole No. 69-23

Footage From	To	Description	Sample No.	Length	Claim	T Brg.	Collar Dip	Elev.	Length
		260 - 264 well mineralized quartz vein with bornite = chalcopyrite;							
		fine-grained molybdenum in shear fractures; 2½' core reco-							
		vered.							
		264 fault at 20°; molybdenum on fractures.							
		268 disseminated molybdenum in quartz vein at 20°.							
		269 - 273 emerald green sericite common.							
		274.5 practically barren quartz vein cuts sericite band.							
281 -	359	Intense sericitization with moderate potassic alteration; Kspar frequently forms							
		well developed envelopes on borders of sericite bands; kaolinization generally							
		weak to moderate but locally intense; "candy stripe" texture is apparent even							
		though the Kspar content of the core is low; good mineralization in this section							
		corresponds with high sericite content; disseminated bornite in the sericite is							
		the dominant form of copper mineralization; specks of hematite commonly associ-							
		ated with the sulphides.							
		298 very coarse-grained bornite in quartz vein at 35°.							
		306 - 307 emerald green sericite.							
		315 very heavy concentration of molybdenum on fractures of							
		sheared quartz vein.							
		319 - 322 fault at 50°; gouge							
		333 - 335 faults at 35° - 60°.							

Analysis		Recovery
500	- 510	10.0
510	- 520	10.0
520	- 530	10.0
530	- 540	9.0
540	- 550	10.0
550	- 560	9.0
560	- 570	10.0
570	- 580	10.0
580	- 590	10.0
590	- 600	10.0
600	- 610	10.0
610	- 620	10.0
620	- 630	10.0
630	- 640	10.0
640	- 650	10.0
650	- 660	10.0
660	- 670	9.0
670	- 680	4.5
680	- 690	10.0
690	- 700	10.0
700	- 710	9.0
710	- 720	9.5

Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	Valley Copper	District		Hole No.	69 - 23
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Sheet 8.

Hole No. 69-23

Footage From	To	Description	Sample No.	Length	Claim	T Brg.	Collar Dip	Elev.	Length	Analysis	Recovery
359 -	430	Generally weak to moderate kaolinization; generally intense sericitization; weak									
		potassic alteration with Kspar occurring as salvages along vein borders and frac-									
		tures; biotite generally fresh excepting areas of intense sericite alteration such									
		as within the zones of alteration of veins; this section is relatively uniformly									
		well mineralized; 2½ - 3 sericitic fractures or veins per foot on the average;									
		bornite >> chalcopyrite; uniform alteration.									
		359 - 378 sericitization moderate; lower grade material in this section									
		corresponds with a lower sericite content.									
		425 barren quartz vein.									
430 -	488	Generally intense kaolinization; plagioclase soft to knife and frequently to fin-									
		gernail; bulk of biotite altered to chlorite and sericite; moderate sericitiza-									
		tion; apparently lower grade in this section than in 359 - 430 is consistent with									
		a lower intensity of sericitization; bornite >> chalcopyrite; the character of po-									
		tassic alteration as 359 - 430.									
		430 - 468 kaolinization range from weak to intense over distances of a									
		few feet.									
		468 - 483 emerald green sericite noted for a total core length of 4'.									
		482 shearing at 15° to core.									
488 -	635	Generally moderate to intense kaolinization and sericitization; potassic altera-									
		tion as in 430 - 488; abundant disseminated bornite in the sericite and coarser									

720	-	730	10.0
730	-	740	10.0
740	-	750	9.5
750	-	760	9.5
760	-	770	9.5
770	-	780	9.5
780	-	790	9.0
790	-	800	10.0
800	-	810	9.5
810	-	820	9.0
820	-	830	9.0
830	-	840	9.0
840	-	850	8.0
850	-	860	9.0
860	-	870	9.0
870	-	880	9.0
880	-	890	9.0
890	-	900	10.0
900	-	910	9.5
910	-	920	10.0
920	-	930	9.0
930	-	940	9.0

Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	Valley Copper	District		Hole No.	69 - 23
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Sheet 9.

Hole No. 69-23

Claim | T Brg. | Collar Dip | Elev. | Length

Footage From	To	Description	Sample No.	Length	Analysis	Recovery
		grained bornite in quartz veins; bulk of copper occurs as (bornite > chalcopyrite)			940 - 950	9.0
		disseminations in the sericite; hematite frequently surrounds bornite grains in			950 - 960	10.0
		the sericite; bulk of biotite altered to chlorite and sericite.			960 - 970	9.5
488	508	generally weak kaolinization; very well mineralized section;			970 - 980	9.5
		coarse bornite in quartz veins.			980 - 990	9.5
538	539	fault at 30°; associated emerald green sericite.			990 - 1,000	9.5
540	543	unusually heavy concentration of molybdenum on fractures in			1,000 - 1,010	9.5
		sheared quartz; quite heavy concentration of chalcopyrite			1,010 - 1,020	9.5
		also.			1,020 - 1,030	10.0
544		emerald green sericite well developed.			1,030 - 1,040	9.5
559	560	emerald green sericite well developed.			1,040 - 1,050	9.5
560		heavy concentrations of chalcopyrite in 1/2" quartz vein at			1,050 - 1,060	10.0
		40°.			1,060 - 1,070	8.0
563	564	emerald green sericite; minor fault at 20°.			1,070 - 1,080	10.0
573		emerald green sericite; minor fault at 20°; gouge.			1,080 - 1,090	10.0
573	595	generally weak kaolinization; moderate sericite alteration;			1,090 - 1,100	10.0
		weak potassic alteration.			1,100 - 1,110	10.0
592		minor fault at 65°; slickensides.			1,110 - 1,120	9.5
597	598.5	very heavy concentration of molybdenum on quartz veinlets and			1,120 - 1,130	10.0
		along fractures; associated chalcopyrite; sericitic gouge.			1,130 - 1,140	10.0
601	606	emerald green sericite well developed.			1,140 - 1,150	10.0
602		minor fault at 15°; slickensided sulphides in contact of 1"			1,150 - 1,160	10.0

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Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	Valley Copper	District		Hole No.	69 - 23
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Sheet 10.0

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.
					69-23

Footage From	To	Description	Sample No.	Length	Analysis	Recovery
		quartz vein.			1,160 - 1,170	10.0
	607 - 609	fault at 10° - 15° parallels contact of quartz vein contain-			1,170 - 1,180	9.0
		ing blotches of chalcopyrite; slickensided sulphides.			1,180 - 1,190	8.5
	609 - 625	emerald green sericite common.			1,190 - 1,200	10.0
	613	minor fine-grained disseminated molybdenum of quartz vein;			1,200 - 1,210	10.0
		chalcopyrite.			1,210 - 1,220	10.0
	620	minor fault at 35°; fine-grained disseminated molybdenum in			1,220 - 1,230	9.5
		sheared quartz vein.			1,230 - 1,240	10.0
	625	molybdenum slip at 0°.			1,240 - 1,250	10.0
	626 - 632	extremely intensely sericitized section about 60% sericite;			1,250 - 1,260	10.0
		heavy disseminated bornite.			1,260 - 1,270	10.0
	632.5	emerald green sericite.			1,270 - 1,280	8.5
	633	minor fault at 35° - 45°; gouge and slickensides sulphates.			1,280 - 1,290	9.0
					1,290 - 1,300	8.0
635 -	690	Generally weak to moderate kaolinization; weak to moderate sericite alteration;			1,300 - 1,310	10.0
		weak potassic alteration; Kspar forms salvages along borders of veins and frac-			1,310 - 1,320	10.0
		tures, gives core a weak stripy appearance which is not sufficiently well devel-			1,320 - 1,330	9.5
		oped for the term "candy stripes"; bornite = chalcopyrite; intensity of alteration			1,330 - 1,340	10.0
		of the mafics range from weak to intense depending in a very general way on local			1,340 - 1,350	10.0
		intensity of other alteration types.			1,350 - 1,360	10.0
	642.5	heavy concentration of molybdenum in 1" quartz vein at 55°.			1,360 - 1,370	10.0
	643	molybdenum in 1/4" quartz vein at 65°.			1,370 - 1,380	10.0

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Colour Plot & Dips

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Drill Hole Record

Cominco

Property	Valley Copper	District		Hole No.	69 - 23
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Sheet 11.

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.
					69-23

Footage From	To	Description	Sample No.	Length	Analysis	Recovery
		657 minor fault at 70°.			1,380 - 1,390	9.5
		687 minor fault at 50°.			1,390 - 1,400	10.0
					1,400 - 1,410	10.0
690	1,227	Generally intense kaolinization; moderate to intense sericitization; bornite			1,410 - 1,420	9.0
		chalcopyrite; Kspar variable, 5% - 15% and in some sections a vague candy stripe			1,420 - 1,430	9.0
		appearance is present; quartz vein every 2' - 3', main altitude 60°.			1,430 - 1,440	10.0
		692 - 694 fault at 50°.			1,440 - 1,450	10.0
		693 - 698 very heavy sericite alteration with abundant disseminated			1,450 - 1,460	10.0
		bornite.			1,460 - 1,470	10.0
		700 - 702 fault at 0° - 15°.			1,470 - 1,480	10.0
		705 shear at 20°; minor gouge.			1,480 - 1,490	10.0
		721 - 722 emerald green sericite; mostly chalcopyrite.			1,490 - 1,500	10.0
		725 - 734 weak to moderate kaolinization.			1,500 - 1,510	10.0
		739 6" band of emerald green sericite 50°; shear also 50°; 1"			1,510 - 1,520	10.0
		gouge.			1,520 - 1,530	10.0
		741 6" quartz vein at 80°; minor bornite.			1,530 - 1,540	10.0
		754 shear at 60°; 2" gouge.			1,540 - 1,550	10.0
		759.5 shear at 60°.			1,550 - 1,560	10.0
		764 emerald green sericite.			1,560 - 1,570	10.0
		765 shear at 20°.			1,570 - 1,580	10.0
		772 shear at 60°; 3" gouge.			1,580 - 1,590	10.0
		777 - 779 shearing at 60°; up to 2" gouge; emerald green sericite.			1,590 - 1,600	10.0

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Drill Hole Record

Cominco

Property	Valley Copper	District		Hole No.	69 - 23
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Sheet 12.

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.
					69-23

Footage From	To	Description	Sample No.	Length	Analysis	Recovery
	784	emerald green sericite.			1,600 - 1,610	10.0
	787	shearing at 60°; gouge; broken core.			1,610 - 1,620	10.0
	790	shear at 10°; minor gouge.			1,620 - 1,630	10.0
	791	shear at 0° - 10°; emerald green sericite.			1,630 - 1,640	9.0
795	798	patchy emerald green sericite.			1,640 - 1,650	10.0
	804	5" quartz vein at 45°; abundant bornite, chalcopyrite.			1,650 - 1,660	10.0
808	812	patchy emerald green sericite.			1,660 - 1,670	10.0
	811	6" quartz vein at 50°; patchy chalcopyrite.			1,670 - 1,680	9.0
	818	2" quartz vein at 0° - 10°; bornite.			1,680 - 1,690	10.0
	827	1" quartz vein at 0° - 10°; also 1" quartz vein at 45°,			1,690 - 1,700	9.5
		intersecting.			1,700 - 1,710	10.0
	839	emerald green sericite.			1,710 - 1,720	10.0
	863	shear at 5°.			1,720 - 1,730	10.0
	865	shear at 30°.			1,730 - 1,740	10.0
	876	shear at 30°; 1/2" gouge.			1,740 - 1,750	10.0
878	884	patchy emerald green sericite.			1,750 - 1,760	10.0
	885	1" quartz vein at 60°; chalcopyrite.			1,760 - 1,770	10.0
	887	3" quartz vein at 60°; chalcopyrite.			1,770 - 1,780	10.0
	900	4" quartz vein at 60°; bornite, chalcopyrite, MoS_2.			1,780 - 1,790	10.0
905	910	mostly pervasive sericite, quartz; disseminated bornite.			1,790 - 1,800	10.0
	914	8" quartz vein at 60°; mostly hematite.			1,800 - 1,810	10.0
	915	shear at 60°, 1" gouge; also up to 1/4" gouge 0° - 10°.			1,810 - 1,820	10.0

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Drill Hole Record

Cominco

Property	Valley Copper	District		Hole No.	69 - 23
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
					69-23	13.

Footage From	To	Description	Sample No.	Length	Analysis	Recovery
934	936	shearing at 0° - 10°.			1,820 - 1,830	10.0
946	975	kaolinization generally low to moderate; sericite up to moderate development.			1,830 - 1,840	9.5
					1,840 - 1,850	10.0
977		shearing at 60°; also 3" quartz vein at 60°.			1,850 - 1,860	9.0
986		shear at 45°; 1/4" gouge.			1,860 - 1,870	10.0
989		shear at 30°; 1/4" gouge.			1,870 - 1,880	10.0
991		shear at 45°; 1/4" gouge.			1,880 - 1,890	10.0
995		shear at 20°; minor gouge.			1,890 - 1,900	9.5
1,005.5	1,006	shear at 45°; up to 1" gouge.			1,900 - 1,910	10.0
1,014		4" quartz vein at 60°;			1,910 - 1,920	10.0
1,019		8" pervasive sericite, bornite.			1,920 - 1,930	10.0
1,020		2" quartz vein at 60°; 4" massive sericite; bornite.			1,930 - 1,940	10.0
1,029		5" quartz vein at 35°; bornite.			1,940 - 1,950	10.0
1,047		4" quartz vein at 45°; large blebs bornite, chalcopyrite.			1,950 - 1,960	10.0
1,052		3" quartz vein at 45°; minor bornite; pervasive sericite adcent to bornite.			1,960 - 1,970	10.0
					1,970 - 1,980	9.5
1,054		3" quartz vein at 40°; bornite.			1,980 - 1,990	9.5
1,067	1,068	fault; gouge.			1,990 - 2,000	9.5
1,075		heavy concentration of molybdenum in 6" quartz vein at 50°;			2,000 - 2,005	5.0
		very intense sericitization for 1" above and below vein.				
1,080		1/4" seam of massive chalcopyrite.				
1,089		very coarse-grained bornite and chalcopyrite in 1-1/2"				

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Drill Hole Record

Cominco

Property	Valley Copper	District	
Commenced		Location	
Completed		Core Size	
Co-ordinates			
Objective			

Hole No.	69 - 23		
Tests at		Hor. Comp.	
Corr. Dip		Vert. Comp.	
True Brg.		Logged by	
% Recov.		Date	

Sheet 14.

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.
					69-23

Footage From	To	Description	Sample No.	Length	Analysis
		quartz vein at 15°.			
	1,114 - 1,141	unusually coarse books of biotite common; very intense sericitization.			
	1,131 - 1,141	candy stripes quite well developed.			
	1,144	fine-grained disseminated molybdenum in sericite.			
	1,155 - 1,158	candy stripes well developed.			
	1,162 - 1,168	emerald green sericite common.			
	1,166	minor fault at 10°; slickensided sulphides.			
	1,167	massive chalcopyrite in quartz vein.			
	1,169	minor fault.			
	1,182	heavy concentration of disseminated molybdenum in 2" sericitic band.			
	1,187	disseminated molybdenum in sericite.			
	1,187 - 1,226	bornite > chalcopyrite; intense sericitization.			
	1,189	1/4" seam of massive chalcopyrite and bornite.			
	1,219 - 1,221	fault at 25°; gouge.			
1,227 - 1,306		Intense sericitization and kaolinization; weak potassic alteration; bornite >> chalcopyrite; coarsest grain sulphides occur in quartz veins but the bulk of sulphides occur disseminated in the sericitic borders of veins and in sericite fractures; extremely well mineralized section; this section shows the direct relationship between grade and the intensity of sericite alteration; alteration of			

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Drill Hole Record

Cominco

Property	Valley Copper	District		Hole No.	69 - 23
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. 69-23 | Sheet 15.

Footage From	To	Description	Sample No.	Length	Analysis
		biotite is inconcistent, fresh and chloritized co-exist side by side.			
		1,229 minor shear at 25°; slickensided sulphides.			
		1,232.5 emerald green sericite.			
		1,247 minor fault at 20°.			
		1,252 emerald green sericite.			
		1,275 slickensided upon fracture at 30°; shearing conformable with contact of 1/2" quartz vein.			
		1,282 - 1,285 fault at 15°; gouge and slickensides.			
		1,284 - 1,285 quite coarse grained chalcopyrite in sheared quartz vein.			
		1,291 - 1,292 minor fault.			
		1,302 minor fault at 35°.			
		1,302.5 - 1,303.5 abundant bornite in vein at 20°.			
1,306	1,362	Sericitization moderate; kaolinization generally weak (plagioclase hard to knife); weak to moderate potassic alteration expressed by Kspar to 50%; bornite > chalcopyrite, apparently somewhat lower grade material in this section corresponds with a lower frequency of sericitic fractures and generally weaker alteration; biotite generally fresh; alteration quite uniform for core lengths of 10' or more.			
		1,321 - 1,322 emerald green sericite common.			
		1,344 molybdenum on fracture at 45°.			
1,362	1,401	Generally moderate to intense sericitization; kaolinization weak; gypsum veins			

211-9437—H.P.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	Valley Copper	District	Hole No.	69 - 23	
Commenced		Location	Tests at		Hor. Comp.
Completed		Core Size	Corr. Dip		Vert. Comp.
Co-ordinates			True Brg.		Logged by
Objective			% Recov.		Date

Sheet 16.

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.
					69-23

Footage From	To	Description	Sample No.	Length	Analysis
		begin to appear; this material qualified for the term "candy stripe", which is caused by a striping effect imparted to the core as a result of sericitic and potassic alteration parallel to quartz veins; Kspar forms envelopes along the borders of veins.			
		1,362 - 1,394 bornite > chalcopyrite; copper occurs as disseminations in sericitic borders of veins; gypsum veinlets cut mineralization (e.g. 1,363); weak chloritization of biotite and weak kaolinization of plagioclase.			
1,401	1,490	Generally intense kaolinization; plagioclase soft to knife; intense sericitization; generally weak potassic alteration; bornite >> chalcopyrite.			
		1,414 minor fault at 80°.			
		1,420 molybdenum and chalcopyrite on fractures in quartz vein 80°.			
		1,422 - 1,423 heavy dissemination of bornite in intensely sericitized section.			
		1,430 fault at 30°; heavy chalcopyrite with minor molybdenum and pyrite in 2" quartz vein and associated sericite.			
		1,431 - 1,440 weak kaolinization.			
		1,439 - 1,440 emerald green sericite; chalcopyrite and molybdenum associated with a fracture.			
		1,443 heavy molybdenum in fractures in quartz vein.			
		1,444 minor fault at 30°; emerald green sericite.			

211-9437—H.P.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	Valley Copper	District	
Hole No.	69 - 23		
Commenced		Location	
Tests at		Hor. Comp.	
Completed		Core Size	
Corr. Dip		Vert. Comp.	
Co-ordinates		True Brg.	
Logged by			
Objective		% Recov.	
Date			

Sheet 17.

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.
					69-23

Footage From	To	Description	Sample No.	Length	Analysis
		1,455 - 1,456 fault; heavy molybdenum along 8" slickenslided surface at 10°;			
		heavy associated chalcopyrite in sheared quartz vein.			
		1,458 minor fault at 40°.			
		1,470 minor fault at 30°; gouge.			
		1,471 - 1,472 fault at 40°; slickensided molybdenum.			
		1,475 - 1,477 very heavy bornite in quartz vein at 30°.			
		1,478 minor fault at 40°.			
		1,484 very coarse bornite in 2" quartz vein.			
		1,490 minor fault at 60°; molybdenum on fracture in quartz vein.			
1,490	1,654	Moderate to intense potassic alteration; potassic and sericitic alterations again			
		dominant; candy stripes; Kspar salvages occur in borders of veins and in sericite			
		fractures; gypsum stringers common; kaolinization generally intense except where			
		otherwise indicated; short sections of a few feet of weak kaolinization; gypsum is			
		conspicuous by its presence in this section and its absence in the section 1,401 -			
		1,490, the presence in one section and not in the other suggesting a possible ge-			
		netic relationship to potassic alteration; the gypsum may be an alteration product			
		of anhydrite, the latter being a common alteration mineral in the potassic zone of			
		alteration of porphyry copper deposits; bornite ≫ chalcopyrite.			
		1,494 - 1,500 fault shear fractures at 0°, 10°; gouge.			
		1,522 emerald green sericite.			
		1,522 - 1,614 candy stripes well developed; generally weak to moderate			

211-9437—H.P.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	Valley Copper	District	
Hole No.	69 - 23		
Commenced		Location	
Tests at		Hor. Comp.	
Completed		Core Size	
Corr. Dip		Vert. Comp.	
Co-ordinates		True Brg.	
Logged by			
Objective		% Recov.	
Date			

Sheet 18.

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. 69-23

Footage From	To	Description	Sample No.	Length	Analysis
		kaolinization, in moderate kaolinization the plagioclase is dark green; gypsum definitely post-ore here since gypsum cuts quartz veins and sericitic fractures; alteration very uniform.			
		1,532 gypsum vein cuts section of massive sericite containing disseminated bornite.			
		1,546 very heavy bornite in quartz vein; minor molybdenum.			
		1,558 extremely coarse-grained bornite in 1" quartz vein.			
		1,575 - 1,577 emerald green sericite common.			
		1,578 - 1,579 fault at 20° - 25°; emerald green sericite.			
		1,603 emerald green sericite.			
		1,606.5 emerald green sericite.			
		1,607 - 1,609 fault at 35°; gouge and havey molybdenum in sheared quartz vein.			
1,614	1,654	Moderate to intense sericitization; weak kaolinization; moderate potassic alteration; candy stripes well developed; gypsum stringers common; the bulk of mineralization occurs in veins 0° - 15° to core; very coarse-grained sulphides occur in these veins.			
		1,621 - 1,622 candy stripes very well developed.			
		1,627 emerald green sericite.			
1,654	1,673	Weak to moderate sericitization; kaolinization very weak, also potassic alteration;			

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Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property Valley Copper	District	Hole No. 69 - 23	
Commenced	Location	Tests at	Hor. Comp.
Completed	Core Size	Corr. Dip	Vert. Comp.
Co-ordinates		True Brg.	Logged by
Objective		% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Sheet 19. | Hole No. 69-23

Footage From	To	Description	Sample No.	Length	Analysis
		bornite >> chalcopyrite; grade in this section poorer than in the immediately preceding section, possibly due to lower sericite content in this one; very few gypsum stringers present - this is again suggestive of some genetic relationship between gypsum and Kspar.			
1,673	1,685	Alteration similar to 1,654 - 1,673 except that kaolinization is intense (soft to knife); this alteration may be due to faulting; very weak potassic alteration.			
		1,675 fault at 25°; slickensided chalcopyrite, minor molybdenum.			
		1,675 - 1,676 quite massive chalcopyrite in 6" quartz vein conformable to fault at 1,676; heavy molybdenum also 6" of 8% copper and 1-1/2% MoS_2; this coarse-grained chalcopyrite and associated molybdenum shows strong structural control by shearing of quartz; this type of mineralization is fairly widespread in the orebody but differs greatly from the bornite - chalcopyrite associated with narrow quartz veins and sericite.			
		1,678 - 1,684 fault; much gouge and fragile core; core angles generally 0°; emerald green sericite common.			
1,685	1,702	Weak to moderate kaolinization; moderate to intense sericitization; scattered grains of Kspar; minor dissemination chalcopyrite in the weakly sericitized core; bornite << chalcopyrite; mafics altered to chlorite and sericite in sections of most intense alteration.			

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Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	Valley Copper	District	
Commenced		Location	
Completed		Core Size	
Co-ordinates			
Objective			

Hole No.	69 - 23		
Tests at		Hor. Comp.	
Corr. Dip		Vert. Comp.	
True Brg.		Logged by	
% Recov.		Date	

Sheet 20.

Hole No. 69-23

Claim | T Brg. | Collar Dip | Elev. | Length

Footage From	To	Description	Sample No.	Length	Analysis
		1,698 minor fault at 30°.			
		1,701 minor fault at 30°.			
1,702	- 1,836	Generally weak kaolinization; plagioclase hard to knife; sericitization weak to			
		moderate; Kspar < 5%; bornite > chalcopyrite; copper sulphides occur as dissemina-			
		tions in sericite; gypsum stringers common and frequently cut mineralization (e.g.			
		1,738); mafics unaffected to weakly chloritized in section of weak alteration but			
		alter to chlorite and sericite near centres of mineralization such as sericitic			
		fractures; potassic alteration weak but Kspar forms envelopes along fractures;			
		Kspar 5%; alteration is very uniform and the core is very hard.			
		1,742 very coarse-grained chalcopyrite and bornite in 3/4" quartz			
		vein.			
		1,743.5 porphrytic dyke at 15°; this dyke is pre-ore since a quartz-			
		sericite fracture cuts it; the zone of alteration relative to			
		the fracture is 3/4" thick in the country rock but about 1/4"			
		thick in the dyke - apparently the dyke was much less suscep-			
		tible to alteration than the Bethsaida country rock; the dyke			
		consists of quartz eyes up to 1/4" in diameter and feldspar			
		phenocrysts which are set in a pink ampharitic slightly			
		sugary textures ground mass, about 50% phenocrysts; this dyke			
		quite similar to one at 968 in 68 - 2; neither of the two			
		dykes very similar to the so-called "Bethsaida porphyry" that			

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Scale

Colour Plot & Dips

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Drill Hole Record

Cominco

Property	Valley Copper	District	Hole No.	69 - 23	
Commenced		Location	Tests at		Hor. Comp.
Completed		Core Size	Corr. Dip		Vert. Comp.
Co-ordinates			True Brg.		Logged by
Objective			% Recov.		Date

Sheet 21.

Hole No. 69-23

Footage From	To	Description	Sample No.	Length	Claim	T Brg.	Collar Dip	Elev.	Length	Analysis
		occurs along the western and southern margins of the orebody.								
	1,745 - 1,765	intense sericitization; moderate potassic alteration; bornite≫chalcopyrite; weak kaolinization; gypsum common.								
	1,756	minor shear at 45°.								
	1,765	fragments of massive chalcopyrite in sericite.								
	1,767	3/4" dyke as 1,743.5; relation to mineralization same.								
	1,773	1" dyke as 1,743.5; relation to mineralization same.								
	1,787.5 - 1,793	intense potassic alteration.								
	1,791.5 - 1,792.5	minor shear at 60°; gougy fractures.								
	1,802 - 1,836	intense sericitization - the grade picks up in this section; bornite chalcopyrite.								
	1,812	minor shear at 60°.								
	1,820	very coarse-grained bornite and chalcopyrite in 3/4" quartz vein; the mineralization exhibits good control by microfractures in the quartz.								
1,836 - 1,878		Intense sericitization in the upper half of the section, moderate below; weak potassic alteration with Kspar salvages along borders of veins and fractures; bornite chalcopyrite; abundant disseminated bornite and chalcopyrite in sericite; gypsum common.								
	1,842	minor fault at 45°.								
	1,842	1-1/2" x 1/2" blotch of massive bornite in quartz vein.								

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Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	Valley Copper	District	
Hole No.	69 - 23		
Commenced		Location	
Tests at		Hor. Comp.	
Completed		Core Size	
Corr. Dip		Vert. Comp.	
Co-ordinates		True Brg.	
Logged by			
Objective		% Recov.	
Date			

Sheet 22.

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No. 69-23

Footage From	To	Description	Sample No.	Length	Analysis
		1,863.5 minor fault at 40°.			
		1,867 minor fault at 20°.			
		1,873 - 1,874 minor faults at 55°, 35° respectively.			
1,878	- 2,005	Generally moderate to intense kaolinization; intense sericitization; moderate to intense potassic alteration, candy stripes well developed; alteration quite uniform; gypsum veins commonly cut mineralized quartz veins and their sericitic borders (e.g. 1,883); Kspar averages 15%, greater amounts of Kspar and/or practically massive sericite frequently replace the rock for core lengths up to 1'.			
		1,889 minor fault at 35°.			
		1,917 heavy concentration of bornite in quartz vein.			
		1,928 minor fault at 35°; gouge and slickensides.			
		1,930 - 1,931 emerald green sericite; minor fault at 50°.			
		1,933 - 1,935 very heavy bornite and chalcopyrite in quartz vein and associated sericite.			
		1,941 - 1,942 minor fault at 38°; heavy molybdenum and chalcopyrite in sheared quartz vein.			
		1,977 fault at 45°.			
		1,994.5 fine-grained molybdenum in contact of quartz vein.			
2,005		End Hole 69 - 23.			

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Valley Copper

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	RIM 69-24		
Commenced	November 30, 1969	Location	Lake Zone	Tests at	691'	950'	Hor. Comp. 717
Completed	December 12, 1969	Core Size	NQ	Corr. Dip	-34°	-46°	Vert. Comp. 712'
Co-ordinates	98,010.83 N; 108,094.75 E		(*unreliable)	True Brg.	*230°	089°	Logged by RFN, RUB
Objective	To intersect quartz-rich core			% Recov.	93.8%		Date December 12, 1969

Azimuths from Tropari tests unreliable because Tropari too close to rods.

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
	045°	-45°	4,174.82'	1007'	Rim 69-24	Summary

Footage From	Footage To	Description	Sample No.	Length	Analysis
		SUMMARY OF GEOLOGY			
0	134	OVERBURDEN			
134	268	OXIDIZED ZONE (Defined as the interval in which malachite occurs)			
		134-170 Malachite comprises up to 1/2 of copper mineralization			
		170-268 Small amounts of malachite			
268	380	Slight to moderate kaolinization, weak sericitization. Potassic alteration expressed by 10-15% Kspar.			
380	1007	Predominantly weak kaolinization and weak sericitization. 5-10% Kspar.			
		530-666.5 Barren quartz veins, typical of the quartz rich core common. The barren quartz veins lack sericitic borders and have stockwork characteristics, i.e. occurring in rather random attitudes and cross-cutting each other. This section considered a transitional zone to the quartz-rich core since there are several sections of fair mineralization - i.e. sections of relatively well developed sericite.			
		666.5-1007 Quartz-rich core. Weak kaolinization and chloritization. Weak potassic alteration. Generally less well mineralized than 530-666.5			
1007		END OF HOLE			

211-9437—H

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-24
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length 1007' | Hole No. Rim 69-24 | Sheet Mineralizat

Footage From To | Description | Sample No. | Length | Analysis

SUMMARY OF MINERALIZATION

Length	Footage From	Footage To	% Cu	% Mo
146'	134	280	.61	.0011
220'	280	500	.46	.0021
220'	500	720	.32	.0035
120'	720	840	.22	.0023
167'	840	1007	.13	.0035
873'	134	1007	.36	.0026

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Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	Rim 69-24
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. Rim 69-24 | Sheet Assays 1

Footage From To | Description | Sample No. | Length | Analysis

Sample #	Footage From	Footage To	% Cu	% Mo	Sample #	Footage From	Footage To	% Cu	% Mo	Sample #	Footage From	Footage To	% Cu	% Mo
35501	134	140	.56	.0013	35522	340	350	.66	.0009	35543	550	560	.26	.0009
	140	150	.57	.0013		350	360	.42	.0014		560	570	.36	.0003
	150	160	.40	.0010		360	370	.31	.0021		570	580	.42	.0002
	160	170	.74	.0011		370	380	.46	.0015		580	590	.36	.0007
	170	180	.49	.0010		380	390	.60	.0007		590	600	.28	.0027
	180	190	.58	.0006		390	400	.45	.0020		600	610	.79	.0230
	190	200	.58	.0010		400	410	.53	.0050		610	620	.35	.0110
	200	210	.56	.0011		410	420	.52	.0040	35550	620	630	.23	.0013
	210	220	.72	.0009		420	430	.45	.0049	35951	630	640	.26	.0021
	220	230	.76	.0003		430	440	.47	.0018		640	650	.33	.0010
	230	240	.67	.0009		440	450	.42	.0003		650	660	.24	.0043
	240	250	.70	.0016		450	460	.40	.0007		660	670	.31	.0011
	250	260	.76	.0003		460	470	.34	.0013		670	680	.30	.0022
	260	270	.47	.0002		470	480	.34	.0071		680	690	.23	.0014
	270	280	.66	.0034		480	490	.44	.0057		690	700	.20	.0032
	280	290	.49	.0008		490	500	.38	.0011		700	710	.33	.0052
	290	300	.54	.0003		500	510	.28	.0003		710	720	.31	.0082
	300	310	.61	.0010		510	520	.34	.0022		720	730	.28	.0031
	310	320	.39	.0028		520	530	.34	.0039		730	740	.19	.0034
	320	330	.40	.0007		530	540	.28	.0002		740	750	.25	.0024
	330	340	.50	.0009		540	550	.23	.0012		750	760	.20	.0016

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Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY
Hole No.	RIM 69-24		
Commenced		Location	
Tests at		Hor. Comp.	
Completed		Core Size	
Corr. Dip		Vert. Comp.	
Co-ordinates		True Brg.	
Logged by			
Objective		% Recov.	
Date			

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. Rim 69-24 | Sheet Assays 2

Footage From To | Description | Sample No. | Length | Analysis

Sample #	Footage From	Footage To	% Cu	% Mo	Sample #	Footage From	Footage To	% Cu	% Mo
35964	760	770	.13	.0009	35985	970	980	.09	.0030
	770	780	.22	.0018		980	990	.11	.0021
	780	790	.21	.0012		990	1000	.12	.0025
	790	800	.22	.0019	35988	1000	1007	.06	.0021
	800	810	.14	.0015					
	810	820	.27	.0055					
	820	830	.27	.0018					
	830	840	.22	.0021					
	840	850	.12	.0021					
	850	860	.18	.0028					
	860	870	.19	.0140					
	870	880	.14	.0027					
	880	890	.09	.0018					
	890	900	.19	.0032					
	900	910	.08	.0021					
	910	920	.11	.0016					
	920	930	.09	.0036					
	930	940	.10	.0085					
	940	950	.33	.0015					
	950	960	.16	.0031					
	960	970	.13	.0035					

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Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	RIM 69-24
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. Rim 69-24 | Sheet 1

Footage From	To	Description	Sample No.	Length	Analysis
0	134	OVERBURDEN			
134	268	BETHSAIDA QUARTZ DIORITE			
		Predominantly only slightly kaolinized. Mafics fresh to chloritic. Sericite development			
		generally poor. Few small areas to moderate. Mineralized qtz veins uncommon. Kspar poor, up to 5%.			
		134-262 OXIDIZED ZONE			
		134-170 Malachite up to 1/2 of copper mineralization present, also bornite and chalco.			
		Limonite and pyrolusite on fractures			
		170-262 Malachite present but only small part of total copper.			
		148 1" qtz vein at 0°, bn - malachite			
		150 Shear - 3" gouge			
		157-[illegible] Shear at 60°, 6" gouge			
		163-167 Fault at 30°, mostly gouge			
		168 1 foot massive sericite, disseminated bornite			
		198 2" aplitic dykelet at 20°			
		207-212 Pink aplitic dyke at 10°			
		210 Well mineralized q.v., bn-chalco, malachite			
		250 Few small barren quartz veins			
268	380	Slight to moderate kaolinization. Mafics variable fresh to sericitic. Sericite generally poorly			
		developed. Bornite-hematite often on hairline fracs. Qtz veining poor - 1/5 feet. Kspar up			
		to 10%, occasionally to 15%			

Recovery	
134-140	5
140-150	9
150-160	7.5
160-170	8
170-180	9
180-190	9
190-200	9.5
200-210	10
210-220	9.5
220-230	10
230-240	9
240-250	10
250-260	9
260-270	9
270-280	9
280-290	9
290-300	8
300-310	8.5
310-320	5
320-330	8.5
330-340	9

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Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	RIM 69-24
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Sheet 2

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.
					Rim 69-24

Footage From	To	Description		Sample No.	Length	Analysis		Recovery		
268 - 380		273	-Shear at 30°, 1/2" gouge							
cont'd		281-282	Sericite well developed - abundant bornite					340-350		9.5
		285	2" qtz vein at 60°, dissem. bn.					350-360		10
		301-304	1" band of magnetite at 10°, some bn-chalco					360-370		10
		306	Shear at 30°, 1/2" gouge. Pervasive sericite adjacent bn-chalco					370-380		10
		338	6" qtz sericite well developed bn					380-390		9.5
		339.5	Shear at 35°, 1/2" gouge					390-400		9
		349	1/2" q.v. at 20°, 2" sericite borders, abundant bn-chalco					400-410		9
		350	Shear at 45°, up to 1" gouge. 1" q.v. at 45°, large blebs of chalco, MoS_2					410-420		10
		369	2" q.v. at 45°, minor bn-chalco					420-430		10
								430-440		9.5
380 - 1007		Mostly slight kaolinization. Sericite poor, occasionally to moderate. Kspar poor to mod. (5-10%).						440-450		10
		Mineralized qtz veins uncommon. bn < chalco and is mainly in the thin sericite stringers, also along						450-460		9.5
		the occasional hairline frac. and in a few q.v.'s. A few scattered barren qtz stringers also present.						460-470		8.5
								470-480		7
		386 - 390	Mostly moderate sericite development					480-490		9.5
		399	1" q.v. at 50°, bn					490-500		10
		404	1" q.v. at 50°, bn					500-510		9
		420	Pink aplitic dykelet at 0°					510-520		9.5
		428	Band of mafics (biotite)					520-530		1
		441	Mafics up to 30% (books of biotite)					530-540		9
		451-457	Kspar up to 15%					540-550		10

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Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	RIM 69-24
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim | T Brg. | Collar Dip | Elev. | Length | Hole No. Rim 69-24 | Sheet 3

Footage From	To	Description	Sample No.	Length	Analysis
380 - 1007		465 Mafic up to 30% (books of Biotite)			
cont'd		465-504 Kaolinization up to moderate			
		473 Minor shear at 10°			
		488-490 Emerald green sericite			
		489.5 Shear at 10°			
		530-601 This section similar to the quartz-rich core in that the grade is poor and barren quartz veins are common. The barren quartz veins lack sericitic borders and frequently cut each other. The barren quartz veins are similar to stock works in character. Cp > bn. The bulk of copper mineralization in the section occur as disseminations in sericite that occur along fractures. Although the grade is poor, sulphides are still quite widespread in the core.			
		562-565 Sericitization moderate. This section relatively Kspar-rich			
		554 Emerald green sericite			
		567 Minor fault at 10°. Emerald green sericite.			
		574 1/2" crustification of chlorite along fracture.			
		579 Abundant bornite in quartz - sericite mass			
		599.5-601 Intense sericitization. Dissem. cp.			
		601-666.5 Barren quartz veins common - as 530-601, but the grade appears to be slightly better in this section of slightly more intense sericitization. Sericitization weak to moderate.			
		602-609 Well mineralized section. Cp and minor moly. Moderate to intense sericitization.			

Recovery	
550-560	10
560-570	10
570-580	10
580-590	9
590-600	9.5
600-610	10
610-620	10
620-630	10
630-640	10
640-650	10
650-660	10
660-670	10
670-680	10
680-690	10
690-700	10
700-710	10
710-720	10
720-730	10
730-740	10
740-750	10
750-760	10

211-9437—H.P.

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	RIM 69-24
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Sheet 4

Hole No. Rim 69-24

Footage From	To	Description	Sample No.	Length	Claim	T Brg.	Collar Dip	Elev.	Length
380 - 1007		658 Dissem. moly in sericite							
cont'd		663-664 Dissem bn in sericite							
		666.5-1007 The hole is definitely in the quartz-rich core. Barren quartz veins of stockwork-							
		like character common. Generally very weak kaolinization, and weak chloritization.							
		The biotite occurs typically as coarse euhedral books. Bn > cp, but the grade							
		is poor. Mineralization, wherever present, associated with sericite and quartz							
		veins. Generally weak potassic alteration. Kspar typically occurs as scattered							
		grains throughout the rock rather than as selvages along veins and fractures.							
		677 Emerald green sericite							
		701 Massive chlorite in vuggy quartz vein							
		713, 720 Barren quartz veins cut mineralized sericite							
		731 Emerald green sericite. Minor moly in sericitic border of 1/4" quartz vein							
		734-785 Potassic alteration pervasive and the dominant alteration type. 5% Kspar.							
		Bn < cp. Relatively abundant bn in sericitic fractures.							
		748-749 Emerald green sericite							
		775 Relatively heavy concentration of cp in 2-inch sericite band							
		785-800 Kspar averages 15-20%, potassic alteration much more intense than the average.							
1		796, 797 Minor faults at 50° and 15°, respectively.							
		814 Heavy cp and bn in quartz and sericite							
		818-839 Generally intense kaolinization. This section relatively well mineralized.							
		Sericitization more intense than average.							

Analysis

Recovery

760-770	10
770-780	10
780-790	10
790-800	10
800-810	10
810-820	8
820-830	9.5
830-840	10
840-850	10
850-860	8.5
860-870	10
870-880	
880-890	10
890-900	9.5
900-910	10
910-920	9.5
920-930	9.5
930-940	8
940-950	10
950-960	9.5
960-970	10

Scale

Colour Plot & Dips

0

Drill Hole Record

Cominco

Property	VALLEY COPPER	District	HIGHLAND VALLEY	Hole No.	RIM 69-24
Commenced		Location		Tests at	Hor. Comp.
Completed		Core Size		Corr. Dip	Vert. Comp.
Co-ordinates				True Brg.	Logged by
Objective				% Recov.	Date

Claim	T Brg.	Collar Dip	Elev.	Length	Hole No.	Sheet
					Rim 69-24	5

Footage From	To	Description		Sample No.	Length	Analysis					
380 - 1007		824	Minor fault at 40°					Recovery			
cont'd		826	Minor fault at 50°					970-980			10
		837	Minor fault at 30°					980-990			10
		839-1007	Dominant alteration types in addition to silicification, are chloritization of					990-1000			10
			biotite. Bn < cp.					1000-1007			2
		846	Minor fault at 15°								
		858	Moly on fracture at 30°								
		872	Dissem cp in 2" sericitic streak								
		877	Minor fault at 35°, gouge								
		898	Dissem. cp, moly in quartz								
		914	Emerald green sericite								
		934	Minor moly along fracture cutting quartz vein								
		945-946	Very intense sericitization. Dissem. cp and bn in the sericite								
		966	Minor fault at 35°								
		980	Minor fault at 30°								
1007		END OF HOLE									

211-9437—H.P.