320 LX Pacific Rainproof

X 7201

0 - 57 O-B

57 - 58(?) Diorite (= chloritic greenstone not foliated. Possible float

58 - 64½ GRAPHITIC PHYLLITE, BLACK SOFT WITH PUNKY ZONES, TAN SANDY ZONES TO ¼" ‖ S_2. @ 62 - 63, 64 - 64½

SOME SECTIONS LOOK LIKE COAL

S_2 60° from horiz @ 61' weakly developed

P_y 2 - 3% disseminated ~~on S_2~~?

Fract controlled

015740

64½ - 66 Porph chloritic tuff. No S_2.

66 - 71 Porph chl. tuff soft, punky probably sheared. Shear is vertical dip ~ ‖ to axis of core

71 - 77 chloritic andesitic tuff foliation ~80° FROM HORIZ @ 76'

P_y ~ 1%

77 - 84½ GRAPH. PHYLLITE, DK GY - BK HIGHLY FISSILE. FRAGS LOOK LIKE DRILL CUTTINGS.

84½ - 155 BANDED DK GY CHL TUFF & BLACK GRAPH PHYLLITE

Py 2-3% MAINLY FRACT CONTRO

100 - 112 ~ 2' core BLACK PUNKY GRAPH PHYLL

112 - 120 ~1' core - MAINLY TUFF

123 - 124 PUNKY TUFF & PHYLL

124 - 125 GRAPH PHYLL, PUNKY

S_1(?) Color Banding & Foliation 60° dip.

125 - 128 Gy chl phyll w/ 10% Bio phyll.

128 - 136 ~ 0.8' CORE GRAPH PHYLLITE

136 - 155 Black punky brokenup GRAPH. PHYLL. ~ 2' core recovery

155 - 192 CHL ANDESITIC TUFF BRECCIA ZONE, FRACT. & RECEMENTED BY SiO_2 + CO_3

171½ - 172½ punky

192-193 - Qtz - CO_3 Band(Vein

193-197 Biotite Phyllite

S_2 & Comp. Bands 20° DIP

Fract & Recem w/ SiO_2, Fract Post Sulf

Py ~ 1% to 2 zones of 5-10%
over 1-2" zones

Biophyll shows increasing
rhythmic banding w/ increasing
amounts of chl. phyl near
bottom of interval

197-198 Chl. Andesitic Tuff

198 - 198½ Bio Phyl.
upper & lower contacts
sharp.
S_2 10 - 15° DIP
Py ~ 3% Frac cont & Dissem

198½ - 231 Chl Andesitic Tuff
w Random zones of
Chl Bio Andes. zones.
200 - 202 Fract & SiO_2 CO_3 Cem
as Fract Fill

202 - 203 SiO_2 - CO_3 ZONE W BROKEN W/ CHL ALONG FRACT.

203 - 208 CHL. AND. TUFF

208 - 213 CHL - BIO AND. TUFF FRACT & SiO_2 - CO_3 FRACT FILL

213 - 226½ CHL AND. TUFF

226 - 231 CHL BIO TUFF BRECCIATED & SiO_2 - CO_3 FRACT FILL. PY IN ZONE ~ 2%

231 - 246 GRAPHITIC BIO PHYLLITE BLACK W/ MINOR AMOUNTS OF GY CHL - BIO PHYLLITE.

231 - 232 SOFT

239 - 239½ SOFT FOLIATED S_2 & COMP BANDS ~ 20° DIP

Py VAR TO 5 - 10% MAINLY DISSEM & FINE FRACT, Py CLOTS ALSO WITH WHITER QUTZY "CLOTS" ~ LOOK SIMILAR HAVE CHARACTERISTICS OF PHENO - CRYSTS

246 - 330 CHL. ANDES. TUFF

IN SOME ZONES BLACK BIO(?) CLOTS IN TUFF ¼" diam

py ~ 1% or less.

S_2 ? 30° @ 280

BRECCIATED - FRACT. ZONES

FRACT. PATTERN IS RANDOM

284 - 290 Fract Fill SiO_2 - CO_3

305 - 306

309 - 317

318 - 321 SiO_2 - CO_3 (ankerite?)

Fill zones in chl andes. tuff

330 - 340 CHL. ANDES TUFF

ROCK HAS "SPOTTED" APPEARANCE CAUSED BY DISCONTINUOUS ZONES OF BIO(?) ∥ TO FOLIATION

S_1? S_2? 50° DIP @ 340

py ~ 1% OR LESS, DISSEM

FREQ. MORE COMMON W/ BIO (?) [DARK] BANDS.

340 - 341 $SiO_2 - CO_3$ ZONE (VEIN??)
341 - 365 CHL ANDES TUFF

S_2 DIP 40°-45° @ 362
Py - trace amts > 1%

365 - 380 GRAPH(?) BIO PHYLLITE
TO BANDED BIO CHL PHYLLITE
UPPER CONTACT GRADATIONAL

S_1 20° DIP COMP. BAND
S_2 55-60° @ 371 11/16 fract

Py MAINLY FRACT FILL ASSOC
W SiO_2 BANDS ≅ 3%

FRACT FILL BOTH SiO_2 & CO_3
BANDS ARE PRESENT

380 - 410 CHL ANDES. TUFF
SHARP TOP CONTACT
GRADES TO GR. BIO PHYLL
FRACT FILL = $CaCO_3$
Py to amounts < 1%

S(?) FRAT & SHEAR 55° DIP

410 - 426 GRAPH BIO PHYLL
w/ CO_3 stringers as fract fill

S_2(?) var 40 - 50°
this also ∥ to fract.
py <1% = more like trace
amounts. Larger amounts
in fract w/ SiO_2(?) & CO_3

426 - 522½ CHL ANDES. TUFF
w/ BIO CHL ANDES TUFF ZONE @
450 - 453

S_2(?) 50° DIP @ 461
also ∥ to CO_3-SiO_2 stringers & Fract fill
40° @ 484

Py << 1%, tr amounts

522½ - 545 GRAPH. BIO PHYL —
w/ SiO_2 · CO_3 stringers as
fract fill.
BRECCIATED - SOFT PUNKY 522 - 522½

S_2(?) 60° @ 529'

COMP BAND (Bio CHL PHYLL - Bio PHYLL) 60°

py << 1%, tr amounts

GRADES TO CHL ANDES PHYLL.

C

545 - 637 CHL ANDES TUFF

565 - 572 Banded w/ GRAPH Bio Andes TUFF

SHARP DISTINCT CONTACTS

$CaCO_3$ + SiO_2 + CO_3 (Ank?) stringers present

SHEAR ZONE 70° DIP 558 - 561

S_2(?) & Comp Bands 45°

598 - 604 $CaCO_3$ RICH ZONE.

Py 2 - 3% DISSEM MAINLY

612 - 612½ $CaCO_3$ CEM BXA ZONE

637 - 657 GRAPH Bio PHYLL

S_2(?) & Comp Bands dip 60°

Py ~ 3% || S_2 & in Fract

648 - 649 SiO_2 CO_3 VEN TYPE FILL

320 LX Pacific Rainprool

657 - 683 CHL ANDES TUFF

MINOR AMT OF SiO_2 CO_3 STRING

S_2(?) 40°

Py tr to <1%

683 - 706½ GRAPH BIO PHYLL

MUCH CRENULATION FOLDING $CaCO_3$ STRINGER

S_2(?) 30° @ 697

S_1 COMP Band 60° @ 693

Py 5-10% 686½ - 690

in BXATED(?) ZONE W SiO_2 & MINOR CO_3 CEMENT

706½ - 709½ PUNKY GRAPH BXA

POORLY CEMENTED, DARK BLAC

709½ - 710 NO SULF NOTED

GRAPH BIO PHYLL - BROKEN BXA

FRAGS ALSO PRESENT

FeOx ON FRACT SURF

320 LX Pacific Rainpro

INTERVAL	Ft core	
147 - 154	0.2	
154 - 164	6.5	
164 - 167	1.9	
167 - 171½	3.2	
171½ - 172½	1.0	
172½ - 176½	3.0	
176½ - 178½	1.8	
178½ - 183	4.3	
183 - 186½	3.8	
186½ - 187	1.1	
187 - 189	1.7	
189 - 190	0.1	core re drilled
190 - 191	0.7	
191 - 192	0.4	
192 - 193	1.1	
193 - 197	4.5	
197 - 202	5.0	
202 - 205	3.5	
205 - 208	2.8	
208 - 213	2.5	
213 - 218	4.4	
218 - 222	4.3	
222 - 226½	4.6	
226½ - 228	1.3	

320 LX Pacific Rainproof

p 5 × 7201

Interval		Ft Core		
228	- 231	1.8		
231	- 233	2.1		
233	- 236½	2.0		
236½	- 241½	4.2		
241½	- 243	1.0		
243	- 245	2.0		
245	- 248	2.3		
248	- 256½	4.1		
256½	- 259	4.2		
259	- 266½	7.6		
266½	- 271	4.8		
271	- 278	7.3		
278	- 281	3.0		
281	- 284	2.2		
284	- 288	4.0		
288	- 292	3.9		
292	- 294	2.1		
294	- 299½	5.9		
299½	- 301	2.1		
301	- 306	4.5		
306	- 309	2.4		
309	- 322	12.9		
322	328	6.4		
328	330	1.8		
330	335	5.0		

INTERVAL		FT CORE
335	340	5.2
340	345	4.8
345	347	1.1
347	350	2.5
350	355	4.8
355	356 1/2	1.4
356 1/2	363	6.6
363	366 1/2	3.6
366 1/2	379	12.7
379	387	8.9
387	393	5.9
393	397	4.0
397	400 1/2	2.7
400 1/2	405	4.7
405	410 1/2	5.3
410 1/2	415	2.4
415	427 (?)	7.5
427	433	0.6
433	434 1/2	0.8
434 1/2	440	5.2
440	444 1/2	4.1
444 1/2	447 1/2	3.4
447 1/2	450 1/2	3.2
450 1/2	453 1/2	3.0
453 1/2	456	3.0
456	458	2.1
458	467	8.5
467	474	7.0
474	477 1/2	5.7

P 4
320 LX Pacific Rainpool

X 7291

		320 LX Pacific Rainproof		
477 1/2	487	6.9		
487	496 1/2	7.8		
496 1/2	500 1/2	3.7		
500 1/2	504	3.7		
504	507	2.8		
507	509 1/2	2.6		
509 1/2	511 1/2	1.5		
511 1/2	514	2.1		
514	515	1.7		
515	517	1.2		
517	520	~~1.2~~ 1.9		
520	522 1/2	~~1.6~~ 1.3		
522 1/2	524	~~1.4~~ 1.7		
524	526 1/2	1.1		
526 1/2	529	2.4		
529	534	4.3		
534	536 1/2	2.4		
536 1/2	540	2.1		
540	542	1.3		
542	545	1.6		
545	547	2.2		
547	549	2.0		
549	551	1.9		
551	553 1/2 (?)	1.9		
553 1/2	557	1.7		

		320 LX Pacific Rainproof		
557	565	6.3		
565	567½	2.9		
567½	570	1.7		
570	572	1.2		
572	574	2.2		
574	576	1.9		
576	580	3.8		
580	583	3.0		
583	586½	3.6		
586½	590	3.4		
590	593	3.1		
593	603	9.5		
603	610	7.3		
610	615	5.2		
615	624	7.6		
624	631	7.6		
631	635	1.0		
635	636	0.7		
636	643	4.4		
643	645½	0.6		
645½	647	1.0		
647	654	1.3		
654	657	1.0		
657	657½	0.3		

X 7201

708 - 712 ½ NO CORE. ONE 3/4" PIECE OF QTZ VEIN IN GRAPH PHYLLITE

712½ - 723 N 1" REC. OF QTZITE IN BIO PHYLLITE

723 - 724 0.7' CORE

727 - 733 GRAPH BIO PHYLLITE
BLACK, HIGHLY FRACT W/ SiO_2 CO_3 IN FRACT FILL
S_1(?) horiz (0° dip from horiz)

733 - 736½ PUNKY BIO - CHL PHYLLITE
N 4% Py
NO ATTITUDES

736½ - 762½ Bio GRAPH PHYLLITE to BIO PHYL
GRAPH CONTENT DECREASED FROM UPPER PART ie N 720 - 730'
N 1-2% Py in sect. W/py assoc W $Si O_2$ - CO_3 bands and blebs

762½ - 775½ CHLORITIC TUFF
FOLIATED TOWARDS 775
S_2 - 25°

775½ - 780 QTZITE
UPPER CONTACT W/CHL PHYLLITE BRECCIATED TR CPY W/ UPPER CONTACT

780 - 791 CHL. PHYLLITE
BRECCIATED BUT ONLY SLIGHT DISTURBING OF S_2 - 40°
QTZ VEINS CUT S_2 & LATER

X 7201

708 - 712½ NO CORE. ONE 3/4" PIECE OF QTZ VEIN IN GRAPH PHYLLITE

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BLACK, HIGHLY FRACT W/ SiO_2 CO_3 IN FRACT FILL
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BRECCIATED BUT ONLY SLIGHT DISTURBING OF S_2 - 40°
QTZ VEINS CUT S_2 ; LATER

X7201

791 - 803 CHL - AMPH GREENSTONE - DIORITE.

2-3% Py

ROCK BRECCIATED W SiO_2 ALONG ⅛". FRAC. FRACTURE PATTERN APPARENTLY RANDOM

TD 863'

X 7201

#1 GRAPH PHYLL w/ ~1% PY 745'

$\frac{151.3 g}{60.0}$ = 2.52

#2 Greenstone @ 800'

$\frac{140.1 g}{45.0 ml}$ = 3.11

#3 479' tuff 479

$\frac{202.7 g}{55 ml}$ 3.68 ?

$\frac{226}{75}$ ml REPEAT 3.01

#4 782' Bx'd Chl tuff

$\frac{181 g}{67}$ 2.70

#5 Qtzte 779'

$\frac{159.7}{58}$ = 2.75

#6 Chl Tuff 785

$\frac{66.6 g}{22 ml}$ 3.02

X 7201

#15 ✓ ch Tuff w 2-3% py 405'

223.1 g / 79 ml = 2.82 ✓

#14 ✓ Tuff w/ minor (5%) 38' graph

265.5 g / 93 ml = 2.85 ✓

#15 ✓ Tuff 1-2% py 565' ✓

346.3 g / 118 g = 2.93

#16 ✓ Tuff minor 1% py 219 ✓

241.7 g / 88 ml = 2.75

#17 ✓ Tuff qtzte bx 164'

271.5 g / 95 ml = 2.86

x 1201

#7 ✓ Amph 2-3% py 793'

$\frac{135.4\text{ g}}{45\text{ ml}}$ = (3.00) ✓

#8 ✓ Graph bio phyll 748½

$\frac{91.3\text{ g}}{39\text{ ml}}$ (2.34) ✓

#9 ✓ Graph phyl Bv q 723½

$\frac{86.9\text{ g}}{31.\text{ ml}}$ (2.80) ✓

#10 ✓ Bx amph 797 ~2% py ✓

$\frac{208.8\text{ g}}{75\text{ ml}}$ (2.78) ✓

#11 ✓ Chl phyll @ 720

$\frac{99.9\text{ g}}{37\text{ ml}}$ (2.7) ✓

#12 ✓ Tuff

$\frac{91.3\text{ g}}{33\text{ ml}}$ 770 (2.77) ✓

X7201

#18 ✓ Taff Bx9 306'

$$\frac{223.9\ g}{80\ ml}$$ 2.80

#19 ✓ Tuff Chl Bio 670

$$\frac{183.45\ g}{65\ ml}$$ 2.82

#20 ✓ Andes Tuff 440'

$$\frac{336.0}{120}$$ 2.8

#21

tuff w qtz-te 590
Bands

$$\frac{279.4\ g}{98\ ml}$$ 2.85

320 LX Pacific Rainpool

194 - 215 Gn - Gy fine gr
Amphibolite tr cpy
Sulf. to 2-3% cpy po
@ ~77 211½ for ½".
Brecciated (?) @ 210 - 211

215 - 229 Med gr. Amph
Gn Gy. tr cpy

229 - 243 Med - fine gr AMPHIBOLITE

BRECCIATED 241 - 243
tr. FeOx on Fract.

243 - 253 MED GRAIN DK GY
AMPH.
~1% tr coarse gr. Po & tr cpy

253 - 282
Banded (Foliated) fine gr
Amph - chl. amph. (grades to white &
green banded "tuff" @ 258 ½
No sulfides noted.
Chl sheat @ 258 ½
Fo 50°, @ 257

Fo 25-30 @ 269'

30 - 50 @ 271

Becomes darker gy to black near contact

tr Mg.

282 40c - Black - dk gy Bio phyll.
- Bio chl phyllite
to qtzfic zones in bio phyll
Upper contact appears to be almost gradational. Contact picked on change from fine uniform homogeneous - dark aphanitic rock & compositionally banded rock.

@ 282 S_1 comp band - 20°
S_2 Fol - 60° ⊥ to S_1
S_2 40° from horiz @ 282

S_1 Qtz Comp band - 50 @ 288

tr py on S_2 = ll S_1

320 LX Pacific Rainproof

72 R-1

6 Sept 1972
U.J.

0 - 10 OVERBURDEN

10 - 30½ MED GRAIN AMPHIBOLITE
DGy Gn.
tr cpy, tr pg all < 0.01.

30⅞ - 142 MED - FINE GRAIN DK GY GN AMPHIBOLITE.
Sections Chloritic
Foliated 74 - ~~75~~ 89 F = 35-40
SHEAR (Chl gouge 76 - 76½) F = 35° Dip
Foliation shows up by mineralogical banding
Chl Shear 86 - 86½
Chl filled ⅛" fract 91 - 95

142 - 152½ Med - Fine Gr Amph
Chloritic Gn Gy. 1" qtz stringers @ 148
" " @ 150

152½ - 167 Gy Gn Med - Fine gr Amph. tr cpy

167 - 185 Gn Gy Amph. Chloritic tr cpy

185 - 194 Med grain Gn Gy Amph.

320 LX Pacific Rainpool

S_2 30° 35-40°

1" qtz fill @ 306

~~326~~ 315

S_1 (S_0?) comp band 30°

S_2 for 40° ⊥ to S_1

S_1 @ 334 10°

S_2 = S_1 353 15°

335' S_1 S_2 5°

337-337.2 Cl band

342.5-342.6

355' S_1 22°

367' S_1 20

S_2 10 strike ⊥ to S_2

400' S_1 Bio parting in qtz vein 10°

320 LX Pacific Rainprool

282 - 310 Dk Mod gg high qtz

~~301~~ -

310 - 345 ~~Mod~~ Dk gg - mostly bio phyllite

345 - 389 Mod - Dk gg

389 - 400 Mod gg qtzitic bio sandst

		72 R-1		P 2	
95-105			10.6		
	111½		6.3		
	122		10.7		
	132		10.6		
	142		10.4		
	152½		10.4		
	163		10.0		
	172 (??)		10.2		
	179		6.0		
	189		10.4		
	196½		7.5		
	206½		10.1		
	210½		4.2		
	220½		10.4		
	230½		9.0		
	239		10.3		
	243 243½		4.0 2.1		
	253		3.4		
	254½		1.3		
	256		1.5		
	257½		1.8		
	259½		1.5		
	260½		1.3		
	262		1.2		

	72	R1	Ft core recovered	P-3	
262	263½		1.5		
	265		1.7		
	267½		3.0		
	268½		0.3		
	270		1.7		
	271		1.2		
	274		3.6		
	276		2.0		
	279		3.0		
	284		10.3		
	294		6.9		
	301		3.7		
	304		3.7		
	309½		1.3		
	314		5.1		
	320		6.3		
	325½		6.2		
	328½		2.7		
	333		4.3		
	335½		2.0		
	337		1.8		
	340½		3.5		
	345½		4.3		
	355½		9.8		
		320 LX Pacific Rainproof			

Interval		ft Rec.
355½	- 358	1.4
	368	10.0
	376½	8.5
	380½	4.2
	385	4.1
	389½	4.2
	396½	6.2
	400	3.4