

DDH D-74-1

015771

75% recovery (most core loss above 83')  
esp 47-78' 52%

32 - 129 very fine grained basal

very lt greenish gray to lt gray  
siliceous rocks thinly <sup>on scale of fault</sup> interbedded  
with softer fine grained darker  
greenish to greenish gray rocks  
probably containing <sup>fine</sup> diopside and  
with a variable content of  
calcite ranging from <sup>very soft</sup> impure  
to green fine marble to calcite  
are moderately hard to very hard  
diopside - quartz horizons, lesser  
amounts of earthy light green  
rocks probably a variety of  
calc silicate horizons and friable  
medium to dark green rock  
which is carbonate rich and  
may be a serpentine or chlorite  
<sup>sheared and reathered</sup>  
bearing calc-silicate rock.

80' - 129' almost all quartz  
calc sils with locally good  
mineralization esp in interval  
94' - 114' - heavy siliceous  
assemblage locally where  
well mineralized

need description  
of mineralization

From 129' to 142' core is dominated  
by lt grey to off white ~~off~~ silic  
rocks with short up to 2'  
sections of med to lt grey  
6- med gr pure <sup>calcite</sup> marble and  
this interval is less well mineralized  
than green calc sil rich units.

142-157' grey green to lt green  
to lt grey mixed siliceous and  
calc silicate rocks with carbonate  
rich greenish diopside bearing rocks.  
Local med to dark green serpentine?  
bearing calc sils - these rocks  
are highly fractured and are  
fissile with serpentine? on fracture.  
many represent late stage altn.  
of the already altered diopside  
calc silicates - This section is  
more mineralized than that above  
and below lacking in calc silicates  
most mineralization occurs in  
interval 144'-149' and consists  
mostly of coarse irregular <sup>black</sup> sphalerite  
blobs smaller finer irregular blobs

8'6 po + cpy and small  
masses of galena. Some sphal  
& po. mineralization is weakly  
banded with banding at  
about 20° to core axis

159 - 193

generally 1/4 - med grey fine  
grained siliceous rocks  
with minor <sup>small masses of carb</sup> dissem <sup>sp</sup> and  
local cpy and more general  
po + carb <sup>± cpy & sphal</sup> veinlets - also short  
sections of med grey to  
lt grey fg calcite marble  
and short lt greenish  
calc silicate sections - generally  
poorly mineralized throughout.

193 - 216 1/2

Section with same rocks as  
above but richer in the green  
earthy fg. <sup>320</sup> <sup>Pacific Rainproof</sup> poorly mineralized calc  
silicate rock and associated

darker green highly friable  
rocks.

210-213 gorgy crusty fault zone

216  $\frac{1}{2}$  - 217

mostly bleached off white to  
light grey siliceous rocks

banding  
at 20-30° locally with a few %  
to 10% local remnants of med grey  
sil rx.

short calc sil sections into

239-243 dk green med gr well min.

256-257 lt green Eg

262-262/8 "

med grey unbleached sil rx  
are becoming more obvious  
with depth.

212 - 254  $\frac{1}{2}$  290%

mixed section as above but  
with more calc silicate rock  
ranging from light green poorly  
mineralized to dark green

coarser well mineralized rocks -  
most of siliceous rocks are  
bleached and some speckled  
too - only minor grey  
unbleached rx.

284  $\frac{1}{2}$

mostly bleached to grey to  
off-white siliceous rocks  
with local remnants of

Speckled  
to dissonance  
locally  
where  
bleaching  
most  
intense.

medium grey to cherty  
grey siliceous rock

287  $\frac{1}{2}$  - 288  $\frac{1}{2}$  med-dk green  
calc sil<sup>2</sup> on good sphal

epx

292 - 294 mostly d. Ho  
but not so well  
mineralized

319  $\frac{1}{2}$  - 320 rusty fault

gouge  
unwelded at 326 at a 20°

328  $\frac{1}{2}$  - 330 calc sil locally  
well mineralized mostly  
probly. 14-med green

332 - 334 300 L Pacific Rainproof  
3rd core - mostly  
just rubble

341-352 mixed scitum ~~bed~~  
~~mostly~~ of calc silicate  
and - grey to greenish  
grey (sil) rock with numerous  
thin veinlets at various  
(\$5) minor poly py throughout  
as (dissem) blebs and on  
Fracts local sphul of galena

8" ~~to~~ inches calc sil with  
good sphul py cpy

374-376 minor calc sil  
and highly veiniferous<sup>#</sup>  
sil rock with dk green  
serp? on Fracts  
poorly mineralized

379-392<sup>2</sup>

mostly limy and  
calc silicate rocks with  
short sections of  
flusky high grade Zns.  
and some cpy some of

the best of which fills a crackle  
breccia with a small fault with  
po smeared on tilt plane but  
by zone only 8" thick  
best min 379-381 384-385 389-392

(377 3/4 - 401  
It goes mainly min  
calc sil

392 1/2 - 397 3/4 mostly about  
1/2 a foot of gray to red  
white v. by sil rx with  
some speckled po rx.

minor py gal epoxy sphal  
on steep fract

401 - 404 incompletely alt  
sil rx as above and  
as usual with steep  
fract control of bleaching  
mostly along 45-90°  
fract - minor mineral  
on fract

404 - 408 409 - 410

calc sils with sections

2 P. 400 320 L Pacific Rainproof calcite  
a little gal on fract but

not much mineralization.  
Between 431's is an and  
alt grey sil rx. ~~with local~~  
~~large than usual po~~  
~~speckles~~

410-416 alt d remnant  
grey sil rx with local  
large than usual po  
speckles - some steep  
fractures with py + gal.  
and some with po gal  
depy but low grade  
throughout.

probable

416-435 fault zone healed  
over by coarse flesh  
colored to white calcite  
which locally includes  
small & highly altered  
fragments of country  
rock. No mineralization  
but for a little malachite  
which of this interval  
could be described as  
calcite cemented.

cracklike breccia as there  
are locally large remnants  
of country rock (breccia with  
calc. veinlets)

435-447

weakly altered v. g.  
gray siliceous rx  
locally cherty - banding  
up to 10-30' to core  
a few very short  
greenish (drop + g + t?)  
sections with minor  
spinel and a  
few ps veinlets  
on the sil rx -  
sil rx mostly barren

447-468 467 $\frac{1}{2}$

mostly calc silicate rx  
and limy rx

From 450-460 rocks  
are relatively dark  
greenish (have

serpentine covered shear  
surfaces and locally  
good ZnS <sup>copy with rays</sup> in short  
crack breccias associated  
with faults - several  
siliceous sections mostly  
barren some with diss. po  
copy a little sphal in veinlets

467 $\frac{1}{2}$  - 471

coarse white to flesh colored  
calcite with euhedral quartz  
and carb cemented breccia.  
Minor euhedral copy in  
zone - ~~2' core loss near~~

~~478~~ a few highly alb &  
6-65 <sup>rays</sup> - minor  
malachite but no other min

471 - 472 $\frac{1}{2}$

light grey sil rock with minor  
blebby po copy + sphal

472 $\frac{1}{2}$  - 480 $\frac{1}{2}$

carb zone as above

2' core loss near 478'

481 $\frac{1}{2}$  - 532'

mostly mud to dark  
grey arg sil rock locally  
cherty. and light  
grey altered versions  
of same rock

484' banding at 30°

495' " " 0-30°

519 " " 30°

527  
529 mostly barren <sup>25°</sup><sub>40°</sub>

little fract bored po copy  
in trace amounts in  
darker grey rocks and  
same plus minor  
less po copy in more  
altered varieties

<sup>with</sup>  
minor calcite breccia  
zones at 483' (6")

485 $\frac{1}{2}$  - 487 and 490'  
6"

lk grey rocks predominate  
510' - 530 $\frac{1}{2}$ ' Pacific Rainproof

533-533 a few short scale  
Hgreen  
sil sections some with  
flashy sphal cpy replacement  
mineraliz and some fract  
bound po cpy & sphal in  
bounding sil it grey <sup>alt</sup> rocks

543-554

mostly it grey & to med  
grey alt sil & alt sil  
vbg rocks - several  
sharp rusty fract -  
some po with carb  
on fract - fract in  
dker grey rx have black  
halos.

554-596

mixed section of  
it to med green  
calc silicates and  
less alt and med  
grey sil rocks  
calc sils particularly well  
min with Zn & tpy replacements.

554'-556' & 582-587' <sup>good</sup>

with less blobby replac to v. alt tpy  
min else where in section

where  
min  
very high  
of scale  
over  
short  
sections  
calc sils  
and  
and  
min  
rocks  
appears

below 587 core is barren  
and seems to be changing  
some <sup>med</sup> grey fine marble -  
med grey sil ex and very light  
green grt calc deep calc  
sil with no mineraliz

598-763

barren section of  
med to dark grey  
limestone - org & well bedded  
1st limy argillite and  
very med non limy graphitic  
argillite. Gradational  
with above rocks from  
598 - 599 where color  
becomes gradually darker,  
many calcite veins  
and some veins throughout  
Some with py  
bedding dips mostly  
20-40' and there are  
numerous open minor  
folds - near 740' bedding  
runs down core for few  
feet

9445	9391
9453	9430
9455	9393
9451	9456
9454	9394
9428	9392
9457	9432
9414	9444
9435	9452
9412	9441
943(9)?	9458
9449	
9440	
9401	
9409	
9434	

# Hole #2

0-8 overburden

5-21 <sup>~100% Remy med gr silt</sup> mostly a greenish gray calc silicate and it green carbonaceous rich rocks above 18' heavily mineralized with po sphal cpy gal - over a few inches replacement by po is nearly complete. Flashy sphal tepy where core is light & colored and calc rich - min 18-21 is on cpyts in the calc silicates. mostly 69

21-43 a med gray hard siliceous rocks some with a slight purplish tinge and short sections of light green calc silicate rocks - locally good min 12 in or 35' 527' where it is mostly a fracture bound & it has irregular blebs occur through replacement. 320 L Pacific

overall the section is low grade - locally greenish coloration suggestive of calc silicate mineralogy seems to be controlled by structures and mineralization in some of the calc silicates is strongly Fract controlled.

43-74

mostly calc silicates and minor lt grey alt fg sil rocks - locally good mineralization mostly in calc silicates but no strong continuous section. Interesting banded lt green and pinkish grey calc silicate near 71.

74-90

mostly medium grey

eg sil rocks with some  
alteration (bleaching) along  
fractures minor calc silicates.  
Upper and lower contacts  
seem to be gradational  
as if through a increase  
in alteration, a little  
po ± sphal ± epy on vein  
but not much.

10 - 145

light green siltstone fine  
and grainy calc silicate  
rocks and bleached H  
grey vfg siliceous rocks.  
These two rock types seem  
to grade into each other  
through fracture bound  
alteration. From 96' to  
102' this alter can  
be clearly seen "advancing"

on the banded sil rocks along  
banding from fractures.

this unit is about 70%  
grey calc sil rocks and 30%  
grey bleached or unbleached  
sil ex. Form 93-94'

is full quartz with min.  
calcite and chlorite and  
5" very ~~hard~~ <sup>good</sup> aspy + galena  
adjacent to it

scattered blebs of sphal  
and aspy + galena in  
calc sils but not much  
substantial above about 125'  
some bleached or grey sil ex  
have dissem of speckles.

Below 125' the better developed  
(ie grainer and coarser) calc  
sil units have flashy blebs  
of sphal aspy + galena  
in short weakly banded  
high grade replacements.

112' banding at ~480

102' " " " ~200

145 - 185

Same rocks as above but in proportions of about 50/50 (contact arbitrary) consists of 2'3" of calc sil then similar amount of bleached if grey sil rx with banding brought out by other mud remnants of vbg mid grey sil rx - some speckled po in more bleached sil rx but not much.

Calc sil - siliceous rock contacts are sharper here - there is some gradation but only on scale of few inches. It goes from coarse calc sils have po remnants in them. Some with darker green shales. better thin sections are

155 $\frac{1}{2}$  - 158 $\frac{1}{2}$

banded  
1+ brown  
rocks.)

fract banded and  
replacements from  
increase in these

few " near 161'

163 - 164 $\frac{1}{2}$

as above ↑ but heavier  
replacements locally

174 $\frac{1}{2}$  - 179

as above (1st one)

166 $\frac{1}{2}$  landing at 60°

163 " 20°

153 " 30°

182 " 20°

174' " 25°

185' - 227'

mostly light grey to off  
white banded bleached

of siliceous rocks - a few  
calc sil pebbles near 189'

200 - 203 <sup>good rep.</sup> 219 $\frac{1}{2}$  - 220 $\frac{1}{2}$

207 - 208 $\frac{1}{2}$

very low grade though it  
although calc sil layers  
have some cement and  
replacement blebs 200 ps  
cpy

some remnants of an  
 bleached very fine grained  
 to cherty midgray sil rocks.  
 sil rocks very barren  
 with exception of a  
 few <sup>steep</sup> sulphur bearing veins  
 some with idocrase - most  
 veins have only py or  
 sulphide

209'	banding at 45°
214	60°
202'	45°
196	45°
225'	30°

227 - 294 (arbitrary contact)  
 mixed light to med green  
 siliceous calc silicates some  
 carbonate bearing and  
 v. off white to ~~off~~ light  
 grey siliceous rocks. calc  
 sils have short sections  
 of high grade zns py  
 gal with po and or py  
 in banded <sup>to be bled</sup> replacements

and lesser amounts on fractures.

as ~~at~~

227½ - 229 ) 226 - 227  
238½ - 240½ ) 247 - 251  
254½ - 258

few " near 260' & 261' 260½'  
sils generally barren but have sparse fract bound  
po and of the or phos and minor fissure po.  
minor aspy

below 268' (arb) there is less  
sugrose calc silicate rock and  
more siliceous rock and  
in particular more on  
bleached and grey remnants.  
The place of the <sup>sugrose</sup> calc sils  
seems to be taken by  
very fine grained hard  
light greenish grey siliceous  
rocks (with fine drop?)  
These are best to fract  
bound 265 po epy & gnl and  
~~the~~ envelope <sup>rel</sup> short sugrose calc  
sil units with better developed  
mineralization or the blobby  
replacement and heavily fract  
bound types.

From 285-290 is very intense  
fracture bound mineralization  
which grades into almost  
complete replacement by very  
fine grained silicates of the  
vtg siliceous host - there is  
sarcose calc sil nearby but  
here it is not these rocks  
that are being replaced,  
could be quite a high grade  
section as min is vtg looks  
like lops of gal in  
some but most looks to  
be po. This zone is  
surrounded by less intense  
fracture bound min, in  
both sil and calc sil units  
that is more typical of  
min in this belt.

294 - (arbitrary contact)

mostly vtg light to med  
gray siliceous rocks with  
many fractures carrying po  
and having L Pacific Rainforest  
most relatively steep. selv.

these rocks are mostly  
heavily bleached and  
rextallized. locally they  
grade into Swiss schists  
rocks and into similar  
rocks with a slight  
greenish coloration but  
short of that of the  
good calc silicates. bleaching  
and rextal controlled  
by steep fractures ( $70-80^\circ$ )  
some filled by qtz carb  
+ dolomite and some po py  
ep and gal but not much.  
Despite intense alteration  
there is little mineralization  
in this section

between about 363 and  
385 the rocks are more  
coarsely rextallized than  
usual and more fractured  
in places.  $\beta$  sphal ep  
gal occur on fracture  
esp in least half  
of section

the breccia at 378' -  
379½' and at 365' with  
cracks by elsewhere.

lots of carbonate on  
fractures in this section,  
locally core is rusty  
but only 1' core loss between  
368' & 373', short sections  
of ~~white~~ milky opal  
occur locally some well  
min with po opal  
opal but others have  
milky opal not common  
in hole.

below 385' are mostly  
fg sil ex as above with  
some fract bound  
sulfide but very low  
grade overall. Most sil  
ex are lt grey and black  
esp near sharp fract.  
Some short calc sil  
layers with bleby replacement  
2nd po/po py 200 Pacific Rainproof py marginal

at 394' 413' 420' 428'  
433' 434' 436' 438 $\frac{1}{2}$ -439 $\frac{1}{2}$   
442-443

449-462' core rx are  
little bleached mud grey  
veg sil rx

429'	band at	30°
429'		45°
445'		48°
450		45°
460		45°

462-~~462~~ 576 $\frac{1}{2}$

mixed calc silicate  
with grey sil rock  
but mostly siliceous  
rocks - Calc sil best  
developed at

at 463-464, 467-469 $\frac{1}{2}$  most sil  
sp  
at 473-474, 475-480 a little po  
sp  
487<sup>411</sup> 492-493

7th copy 505-507 copy 2nd 515-519 copy sph. 519-520

523 1/2 - 524 'sph' copy

531-537 540 'sph' copy po

551-554 2nd copy po (good)

561 1/2 - 563 564-565 and near 565 1/2 all with a little sphal

po/copy

most min in calc sil ex band as 666 - band rep - lesser fract

with a lesser amount dis

or in veins in sil ex

Bleaching is quite strong

in this section with

only minor grey remnants

3rd decrease below ~ 540

Slightly

609-658

med grey sil ex locally bleached to grey to off white

615 - 300 band mostly 620 L Pacific Ridge in veins and near 620

carb rich calc Sil sections  
at 627' 630-633 623'  
with bluish sphat & cpy but  
not much. a few po veinlets  
in the Sil rx.

belongs above ↗

582-609

light grey to greenish grey v. gy  
Sil rx and subordinate  
calc silicates - some remnant  
med grey v. gy sil rx. More bleached  
rx have diss po & cpy but  
not a general condition. cpy  
is noticeably more abundant here  
in fract and abrasion and  
with <sup>flashy</sup> sphat in <sup>successive</sup> calc sil sections  
at 592-596  $\frac{1}{2}$  & 605-606'  
(586-609  $\frac{1}{2}$  is good cu sect)

586  $\frac{1}{2}$  - 582  
zone.

rusty toughy Ewlt

# Hole 3

0-4 OB

4-203'

eg siliceous &

mixed scale silicate  
and carbonate rich  
rocks

bleaching becomes  
progressively more  
intense down hole  
becoming widespread  
by 100'

Rocks mostly un-  
mineralized above  
100'

below that iron  
mostly restricted to  
calc sil layers with  
sil x between relatively  
barren except for  
great bound and minor  
1133 100' to cpy

best min CS sections are

127' few "flashy" sphal  
with pyrite!

130-135' blebs of sphal  
py po epy and a  
little aspy but low grade  
throughout

150-152' bleby to basal rep po sph epy  
a little py  
near 160' minor sphal po epy

166' few "flashy" sphal.

173-174' po sphal + minor  
epy bleby rep.

178-179' po sphal epy bleby  
rep.

184-187' bleby rep - lesser  
Fract basal po sphal epy  
193-196 - ditto

bleaching seems to be  
lying out below 190'

182'	banding at	20°
164'	"	" 20°
128		30°
85'		30°
49'		40°