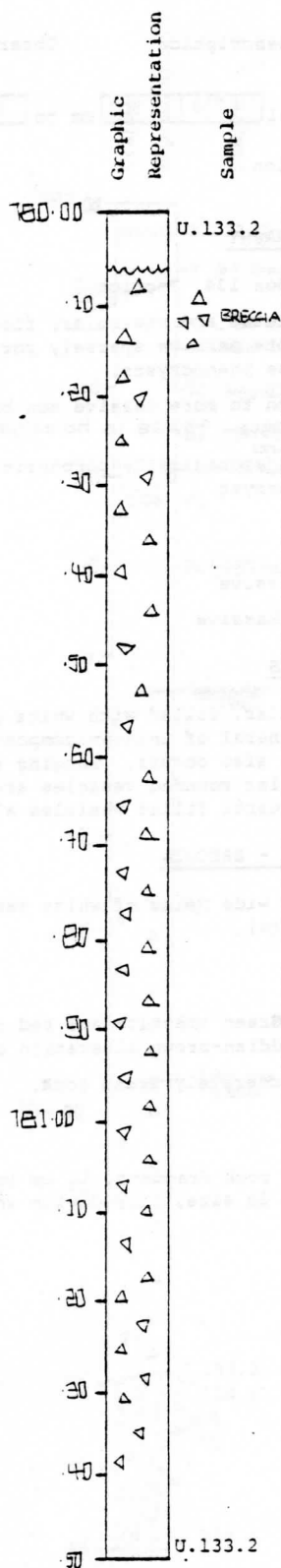


Visual Core Description

Observer .....JM.....

Depth Interval 78006 cm to 78153 cm

Box 134, Section 1

LITHOLOGY-PETROGRAPHY

Continuation of Box 133.

780.06 - 781.40 Breccia light gray to black, porphyritic and vesicular basalt fragments, with plagioclase phenocryst 2 mm - 3 mm long, rock highly altered throughout.

781.40 Transition to less brecciated basalts

STRUCTURE

780.06 - 781.40 Brecciated; breccia fragments show internal flow banding.

VESICLES/AMYGDALES

780.06 - 781.40 Vein like vesicles filled with white zeolites.

781.40 Irregular vesicles, filled with green smectite.

FRACTURES - VEINS - BRECCIA

780.06 - 781.40 Fracture, fresh hair-like fractures, possibly due to swelling clays.

ROCK ALTERATION

780.06 - 781.40 Groundmass altering to a brown clay and green smectite.

OTHER

Highly porous rock.

Visual Core Description

Observer J.M.

Depth Interval 

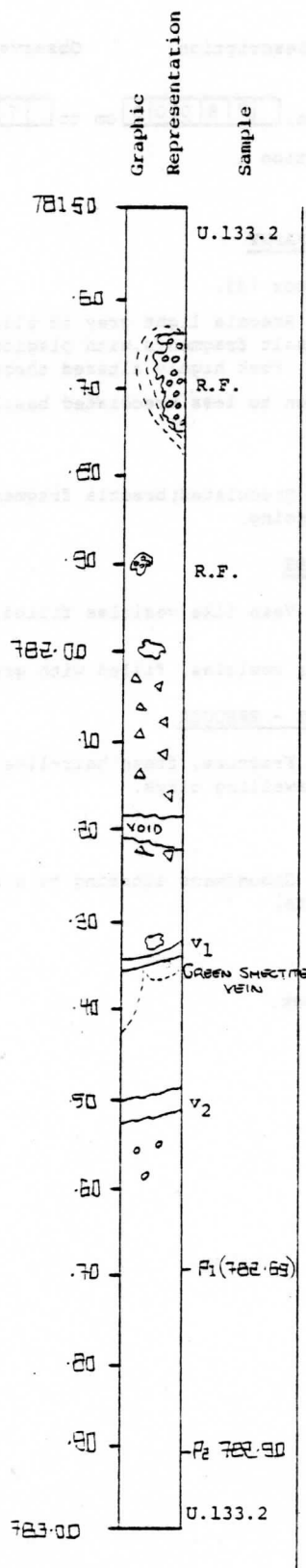
7	8	1	5	3
---	---	---	---	---

 cm to 

7	8	3	0	3
---	---	---	---	---

 cm

Box 134, Section 2

LITHOLOGY-PETROGRAPHY

Continuation of Box 134, Section 1

Light gray brecciated and vesicular, flow top breccia, grading into a more massive sparsely porphyritic basalt, 1-2 mm plagioclase phenocrysts.

782.28 Transition to more massive non brecciated basalt. Basalt below 782.28 is holocrystalline and very fine-grained sporadically porphyritic, 1 mm plagioclase phenocryst

STRUCTURE

Brecciated and massive

782.28 - 782.90 Massive

VESICLES/AMYGDALITES

Vesicles - irregular, <sup>shapes</sup> filled with white zeolites, rimmed by darker gray mineral of unknown composition. Minor amounts of pyrite also occurs. Ranging from 20 cm > 1 mm in size, the smaller rounded vesicles are filled with green smectite. Gray quartz filled vesicles also occurs.

FRACTURES - VEINS - BRECCIA

v<sub>1</sub> and v<sub>2</sub> = 20 cm wide veins of white massive unknown mineral, [? zeolite].

ROCK ALTERATION

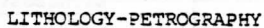
781.50 - 782.35 Green smectite and red clay on surface of fragments. Reddish-brown alteration of groundmass.

782.35 - 783.00 Moderately fresh rock.

OTHER

R.F. Vesiculated rock fragment, 11 cm long. Vesicles are 1 mm and less in size, filled with white (?) zeolite.

Box 134, Section 3



Fine-grained holocrystalline, with sporadic occurring plagioclase phenocrysts. Phenocrysts euhedral 1 mm - 2 mm in length.

Brecciated basaltic flow with porphyritic clast distinctly different from overlying basalt. Plagioclase phenocryst 1 mm long occurs in the flow breccia.

U.134.1 B. Brown, fine-to medium-grained sediments with  
5% plagioclase phenocrysts, phenocrysts are 1 mm in size.

U.134.1 C. Green, very-coarse grained breccia, with subrounded-subangular lithic fragments. Poorly sorted.



Light green altered  
groundmass flowing around  
clast.

Massive, questionable flow banding.

783.70 - 784.30 Brecciated.

U.134.1 Interbedded

v<sub>1</sub> vein, 1.5 cm, irregular green smectite lined and filled with white zeolite (?).

v<sub>2</sub> vein-like vesicle filled with white zeolite, 3 cm by 1 cm.

U.134.1 None

U.133.2 Hairline fractures and vesicles, 30° dip.

U.134.1 None

783.70 Groundmass shows reddish brown alteration

U.134.1 Groundmass in coarse-grained sediment, altered to a light green clay, different in color from clay described throughout upper portion of sections.

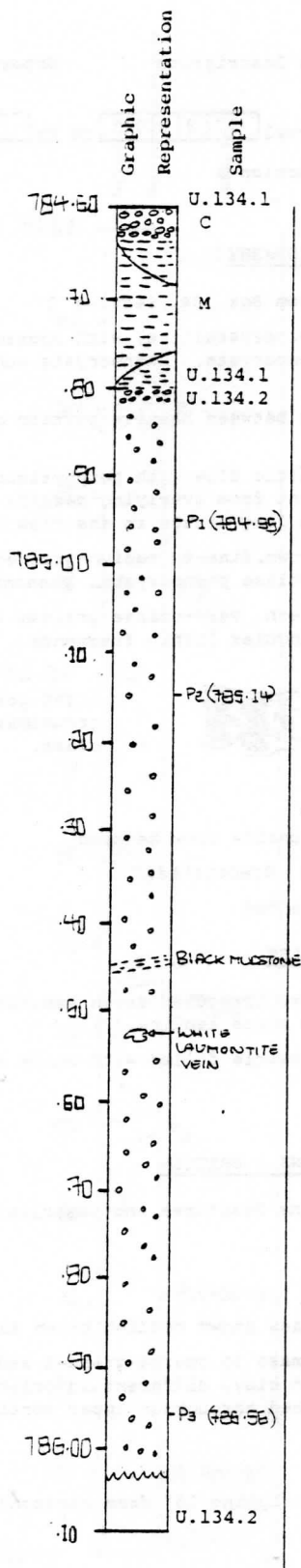
784.28 Contact dipping  $15^\circ$  from horizontal plane.

Visual Core Description

Observer ...JM.....

Depth Interval 78457 cm to 78603 cm

Box 134, Section 4

LITHOLOGY-PETROGRAPHY

C - Same as preceeding page but basaltic fragments, ranging from 3.5 cm - 1mm.

M - Very-fine grained, black mudstone, with fine lamallae.

U.134.2 Light gray fine grained, basalt flow with green blotchy appearance, due to abundance of smectite filled vesicles.

STRUCTURE

U.134.1 Bedding

U.134.2 Massive and amygdale

VESICLES/AMYGDALES

U.134.1 None

U.134.2 Vesicles - shape - rounded and irregular  
size - 1 mm - 5 mm  
filling - green smectite and white  
(?) zeolite, mostly green smectite.  
form 30% of rock

BANDING IN VESICLESFRACTURES - VEINS - BRECCIA

U.134.1 None

U.134.2 Irregular and fresh along with irregular vein-like vesicles filled with green smectite.

ROCK ALTERATION

U.134.1 None

U.134.2 Pervasive alteration of groundmass to green smectite.

OTHER

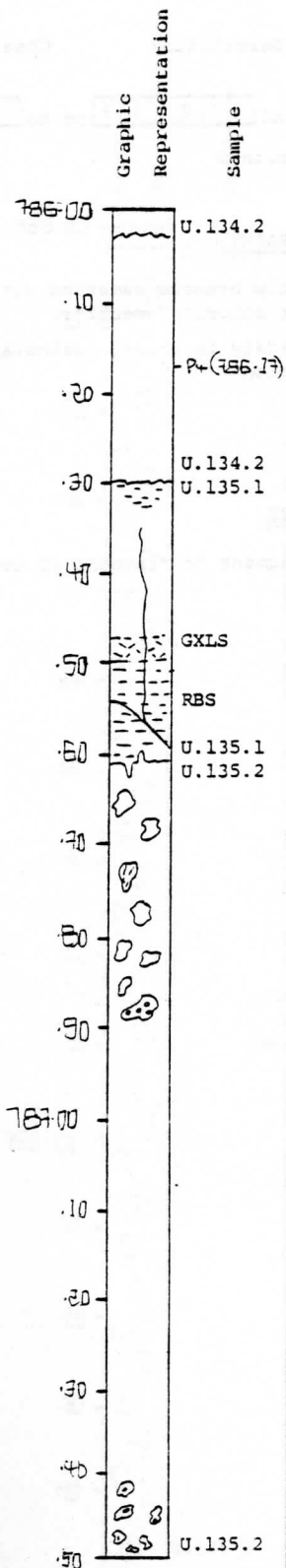
784.80 Contact, planar, dipping 5°

Visual Core Description

Observer JRD

Depth Interval 786.03 cm to 787.58 cm

Box 135, Section 1



#### LITHOLOGY-PETROGRAPHY

U. 134.2 Light gray, plagioclase phyric, vesicular basalt.

Phenocrysts are < 0.5 cm and not very abundant (~ 1%)

786.30 Minor baking of contact.

U. 135.1 Dark greenish-black sediment.

GXLS - green crystal rich sediment

RDS - reddish brown fine-grained seamount

U. 135.2 Scoraceous flow top breccia - with wide variety of basaltic fragment types cemented by matrix which is partly sedimentary in the upper .5 meter. Below that level fragments often display sutured contacts against one another or are filled with zeolites and calcite.

#### STRUCTURE

786.55 Minor fault, core angle to fracture ~ 35°

U. 135.2 None

#### VESICLES/AMYGDALES

U. 134.2 Amygdales are very irregular and mostly filled with chlorite/smectite, but others are partly filled with zeolite.

U. 135.1 None

U. 135.2 Abundance, highly variable in fragments - mineralogy fairly monotonous--calcite, laumontite, other zeolite? Chlorite/smectite. Amygdales are also filled with the same type of assemblage.

#### FRACTURES - VEINS - BRECCIA

U. 135.1 One fracture

U. 135.2 Open space in breccia has been filled by calcite and zeolite with minor chlorite/smectite. Many of the fragments contain up to 50% amygdales. Very few actual fractures, mostly breccia.

#### ROCK ALTERATION

U. 135.1 Chloritized - smectitic alteration

Visual Core Description

Observer ...JPD.....

Depth Interval 

7	8	7	5	3
---	---	---	---	---

 cm to 

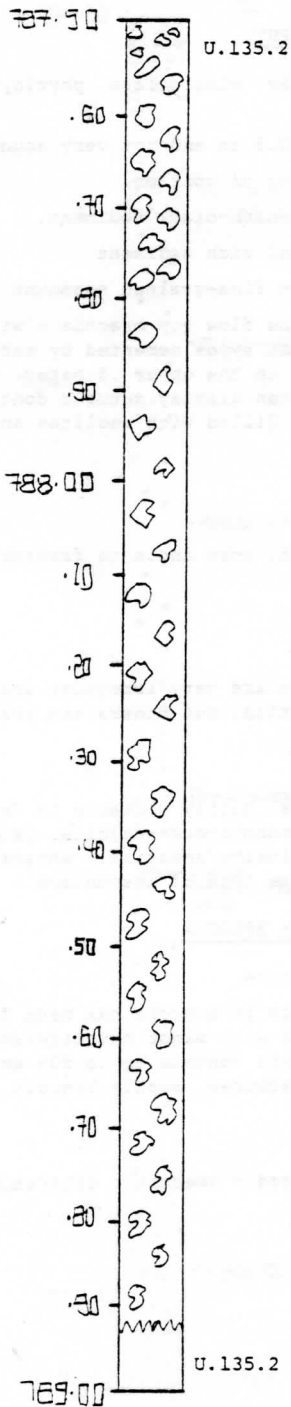
7	8	9	0	2
---	---	---	---	---

 cm

Box 135, Section 2

Graphic  
Representation

Sample

LITHOLOGY-PETROGRAPHY

Scoraceous flow top breccia cemented with calcite, laumontite, minor chlorite/smectite.

Fragments vary widely in color, vesicularity, size and degree of alteration

STRUCTURE

None

VESICLES/AMYGDALES

Variable from fragment to fragment (0 to 35% vesicularity).

Visual Core Description

Observer ...JRD.....

Depth Interval 

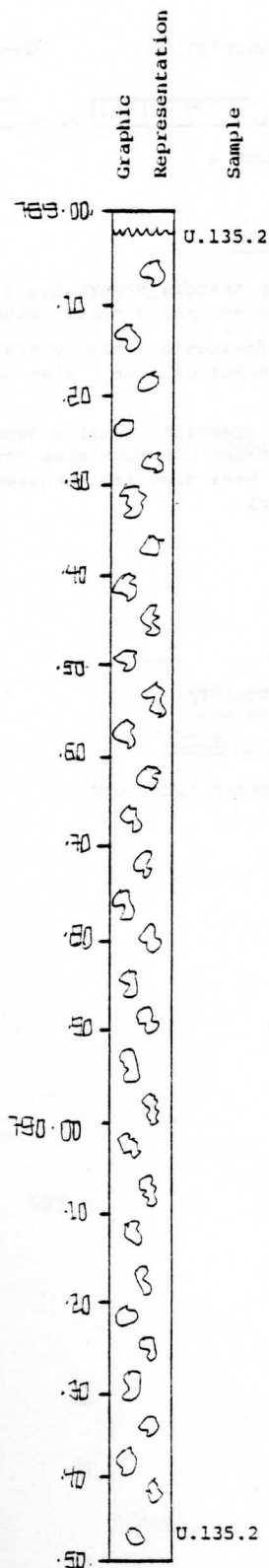
7	8	9	0	2
---	---	---	---	---

 cm to 

7	9	0	5	2
---	---	---	---	---

 cm

Box 135, Section 3

LITHOLOGY-PETROGRAPHY

Scoraceous flow top breccia - cemented with calcite, laumontite, minor chlorite/smectite.

Fragments vary widely in: color (green to reddish brown), vesicularity (0 to 35% by vol.), size (< 1 cm to ~ 10 cm, average size ~ 5-7 cm), alteration (some fragments are slightly eroded by drilling fluid and therefore are probably largely clay).

Visual Core Description

Observer .....JRD.....

Depth Interval 

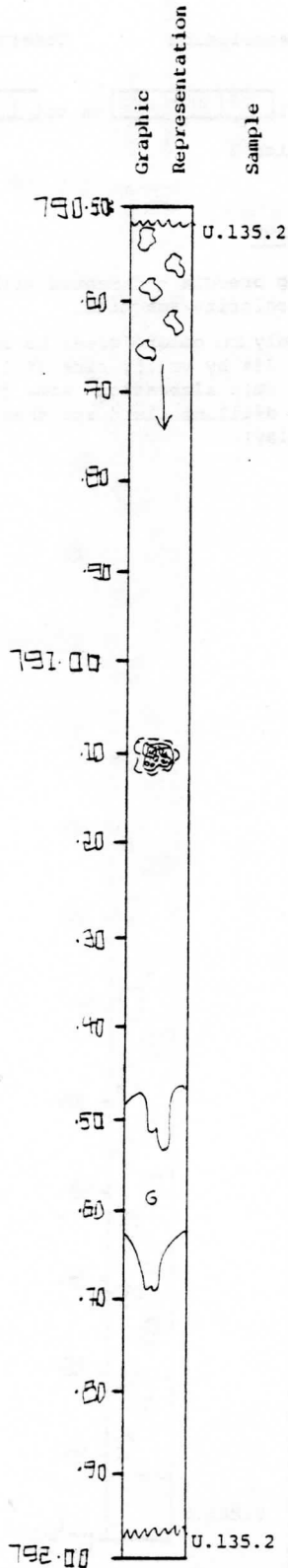
7	9	0	5	2
---	---	---	---	---

 cm to 

7	9	1	9	7
---	---	---	---	---

 cm

Box 135, Section 4



LITHOLOGY-PETROGRAPHY

Scoraceous flow top breccia - variable size, alteration, color, vesicularity and phenocrysts content.

791.10 Pumaceous fragments < highly vesicular - filled with zeolites and minor calcite. Also thoroughly oxidized.

791.50 Distinctly greenish, massive dense basalt-- although the brecciated top continues for the next section. The fragments from here down are enclosed in dense greenish gray aphyric.

STRUCTURE

None measureable

VESICLES/AMYGDALES

Described under lithology

FRACTURES - VEINS - BRECCIA

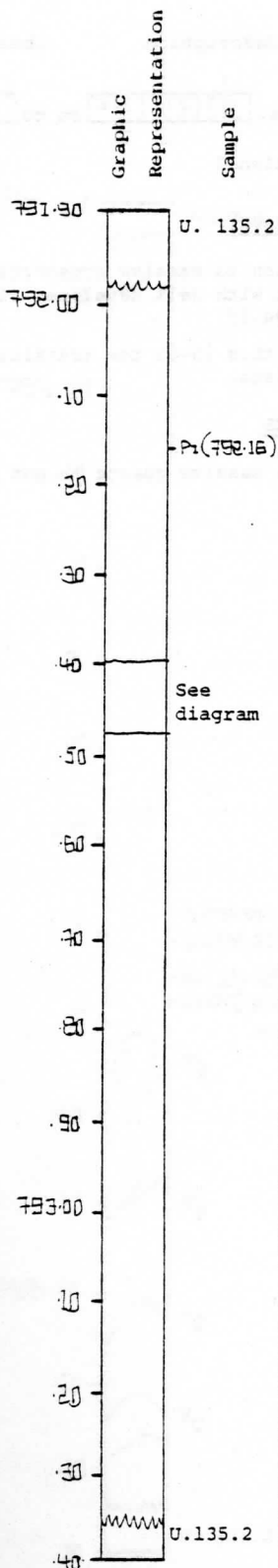
Breccia described under lithology

Visual Core Description

Observer JRD

Depth Interval 791.97 cm to 793.36 cm

Box 136, Section 1



# LITHOLOGY-PETROGRAPHY

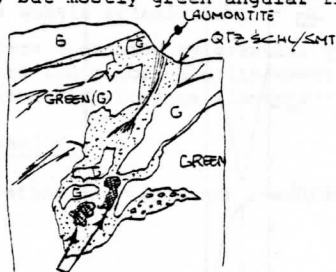
Continue transition from flow top breccia to massive interior - fragments of scoria are surrounded by much more dense lava. Proportion of massive lava increases with depth.

## FRACTURES - VEINS - BRECCIA

As unit becomes more dense - that is, the proportion of more massive lava increases, fracturing and brecciation are much more common.

The type of relationships shown in this sketch are common in the next 2.5 sections:

Complex crackle breccia and veining filled with laumontite, quartz and containing some reddish angular fragments, but mostly green angular fragments



REDDISH OXIDIZED FRAGS.

Many of these veinlets and cavities are lined with quartz and then filled with laumontite.

Visual Core Description

Observer JRD

Depth Interval 

7	9	3	3	6
---	---	---	---	---

 cm to 

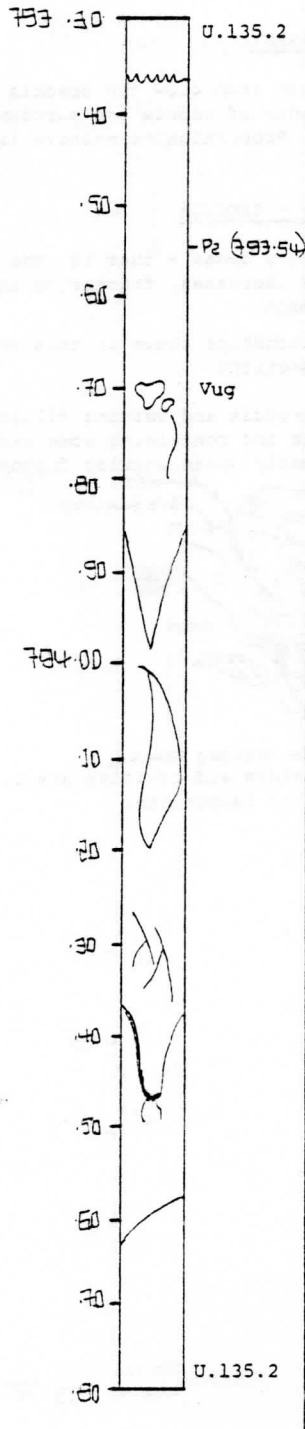
7	9	4	8	3
---	---	---	---	---

 cm

Box 136, Section 2

Graphic  
Representation

Sample



LITHOLOGY-PETROGRAPHY



Continue transition to massive green-gray, non vesicular, aphyric flow unit with well developed flow banding at depth of about 794.10.

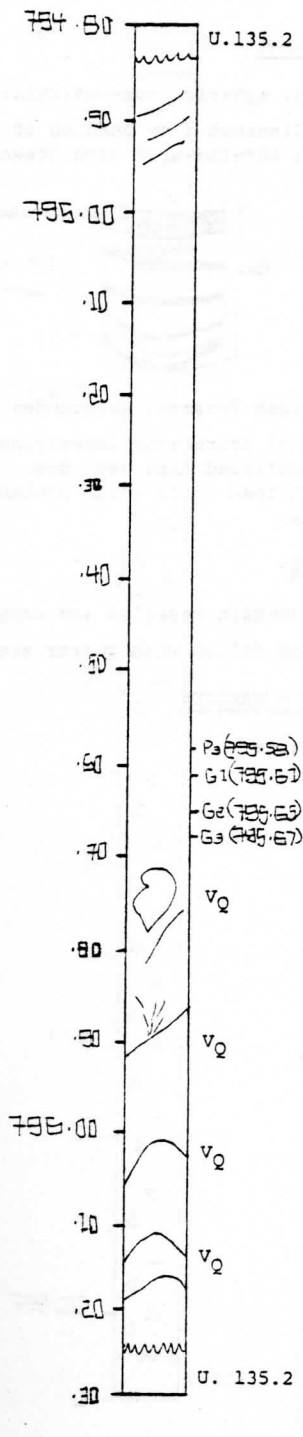
794.10 At about this level the transition is to massive interior is complete.

VESICLES/AMYGDALES

Vug - filled with massive quartz -- not euhedral crystals.

Box 136, Section 3

Graphic Representation	Sample
	



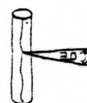
Massive green-gray, non vesicular aphyric flow unit with well developed flow banding which consists of light gray, 1 mm thick planar zones with homogeneous green-gray basalt between them. The planes tend to be discontinuous and somewhat irregular.

795.61 No pyrite

795.75 Infrequent occurrences of pyroxene phenocrysts.

## STRUCTURE

Core angle to fracture variable but  $\sim 15-20^\circ$



FRACTURES - VEINS - BRECCIA

795.30 Quartz has a very vitreous appearance although there is a subtle granularity.

V<sub>Q</sub> - veinlets dominated by granular quartz with minor zeolite and minor chlorite/smectite. Quartz has particularly vitreous almost 'greasy' appearance.

## ROCK ALTERATION

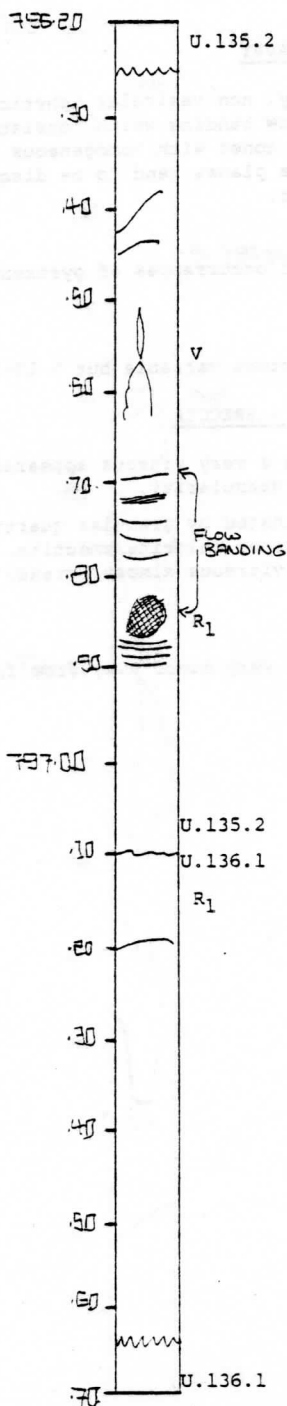
Rock alteration is very minor away from fractures.

Visual Core Description

Observer JRD

Depth Interval 79625 cm to 79764 cm

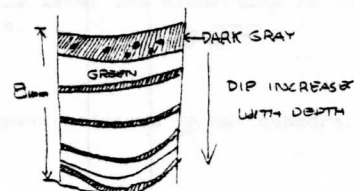
Box 136, Section 4



LITHOLOGY-PETROGRAPHY

Massive green-grey, aphyric, non-vesicular

796.65 - 796.85 Distinct flow banding of (~ 5 mm).  
Dark grey material interlayered with greenish, more typical crust.



R<sub>1</sub> - Reddish oxidized fragment surrounded with flow banding.

797.10 Beginning of scoraceous underlying flow top in this section is continued into next box. Surface very oxidized with open voids which probably was created by drilling fluids.

VESICLES/AMYGDALES

The darker bands contain vesicles and amygdales.

U.136.1 Open space filled with quartz zeolites.

FRACTURES - VEINS - BRECCIA

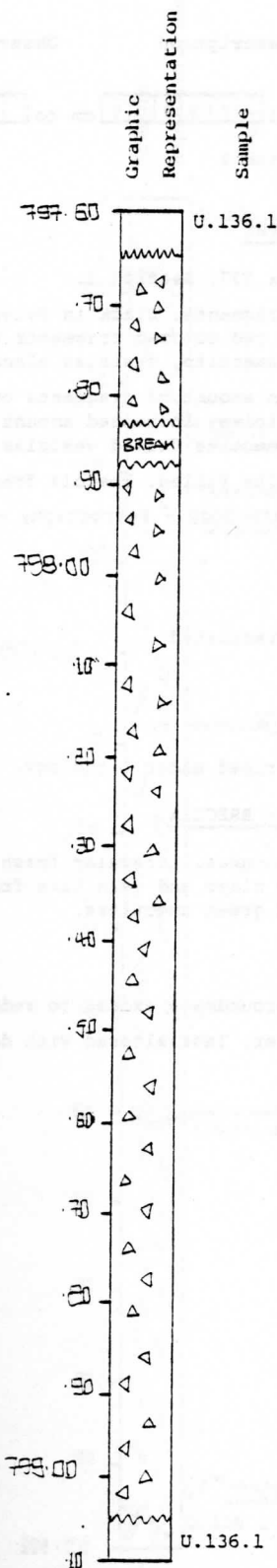
V - quartz rich veins

Visual Core Description

Observer JM

Depth Interval 797.64 cm to 799.05 cm

Box 137, Section 1

LITHOLOGY-PETROGRAPHY

Continuation of box 136, section 4.

Red colored, scouraceous, flow top breccia, coarse-grained, sporadic plagioclase phenocrysts.

797.80 - 799.10 Red colored, scouraceous breccia, fragments, black-light gray in color, angular-subangular vesiculated.

STRUCTURE

797.60 - 799.10 Scouraceous

VESICLES/AMYGDALES

797.60 - 797.85 Vesicles; open predominantly, size range from 2 cm - 1 mm.

797.85 - 799.10 Vesicles; irregular and elongated vesicles with white zeolite filling, and vein-like vesicles; green smectite rims some vesicles, size range 2 cm - 1 mm. Some large cavities filled with white zeolites and angular basalt fragments.

798.45

FRACTURES - VEINS - BRECCIA

797.60 - 798.20 Fractures rare - irregular.

798.20 - 799.10 Fractures increase in number - irregular.

ROCK ALTERATION

797.60 - 797.80 Highly oxidized to reddish brown clays.

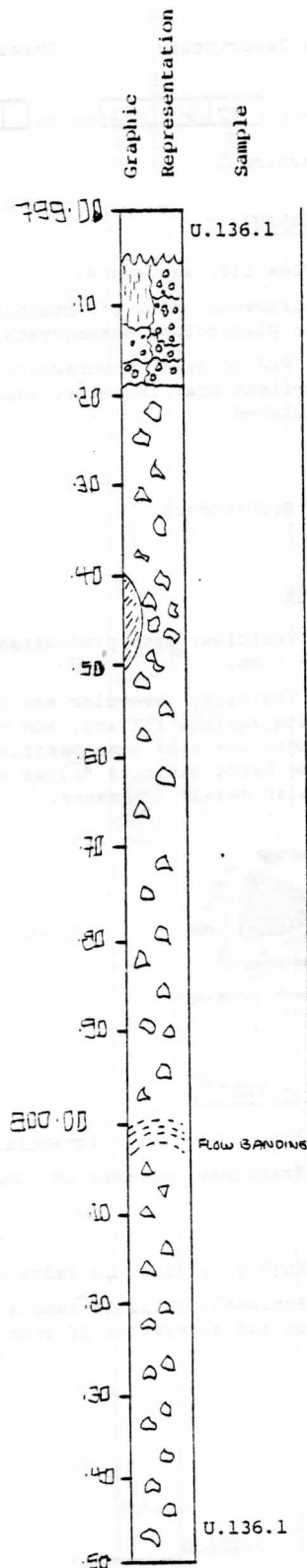
797.85 - 799.10 Extremely oxidized sample, extremely friable. Oxidation and alteration of rock decreases downward.

Visual Core Description

Observer J.M.

Depth Interval 79905 cm to 80055 cm

Box 137, Section 2

LITHOLOGY-PETROGRAPHY

Continuation of Box 137, Section 1.

Vesicular basalt fragments, black in color, filled with white zeolites and red colored fragments with vesicles filled with green smectite, vesicles elongated.

799.20 Decrease in amount of fragments containing white zeolite filled vesicles, increased amount of fragments containing green smectite filled vesicles.

799.40 White zeolite filled, breccia fragment.

799.50 - 800.55 Lithology - Petrography - similar to Box 137 Section 1.

STRUCTURE

799.00 - 800.50 Brecciated

799.40 Breccia

VESICLES/AMYGDALES

Vesicles were described under lithology.

FRACTURES - VEINS - BRECCIA

799.00 800.40 Fractures, irregular fresh fractures caused by swelling clays and vein like fractures containing white zeolites and green smectites.

ROCK ALTERATION

799.00 - 800.50 Groundmass oxides to reddish brown clays. Rock becomes fresher, less altered with depth.

Visual Core Description

Observer JM

Depth Interval 

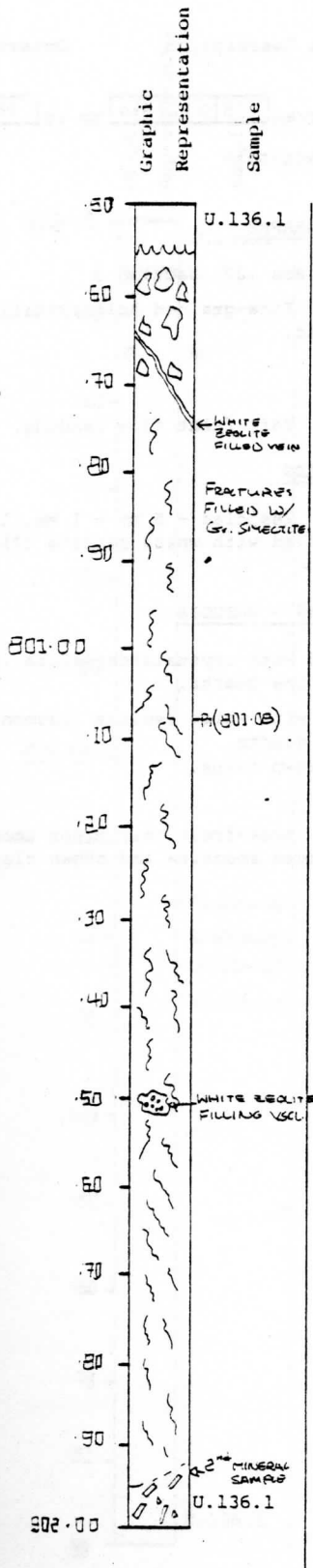
8	0	0	5	5
---	---	---	---	---

 cm to 

8	0	1	9	4
---	---	---	---	---

 cm

Box 137, Section 3

LITHOLOGY-PETROGRAPHY

Continuation of Box 137, Section 3

800.70 Transition from breccia to massive medium grained basalt flow.

800.80 - 801.80 Medium-grained - fine-grained basalt flow, holocrystalline, aphyric, light-gray color.

STRUCTURE

800.60 Brecciated

800.70 - 801.80 Massive, some flow banding (?)

VESICLES/AMYGDALES

800.70 - 801.70 Vesicles and veinlike vesicles filled with green smectite, oriented with 70° dip from horizontal.

FRACTURES - VEINS - BRECCIA

800.70 - 801.70 Veinlets filled with green smectite dipping 70° from horizontal.

801.90 Vein of quartz and zeolite (laumontite) quartz crystals euhedral, lining vein with laumontite growing on quartz lined vein. Quartz crystals 1 mm and less, laumontite 1 mm - 1.5 cm.

ROCK ALTERATION

Some alteration of groundmass to green smectite.

800.70 - 801.90 Moderately fresh, with some alteration of groundmass to green smectite.

Visual Core Description

Observer ..... J.M. ....

Depth Interval 

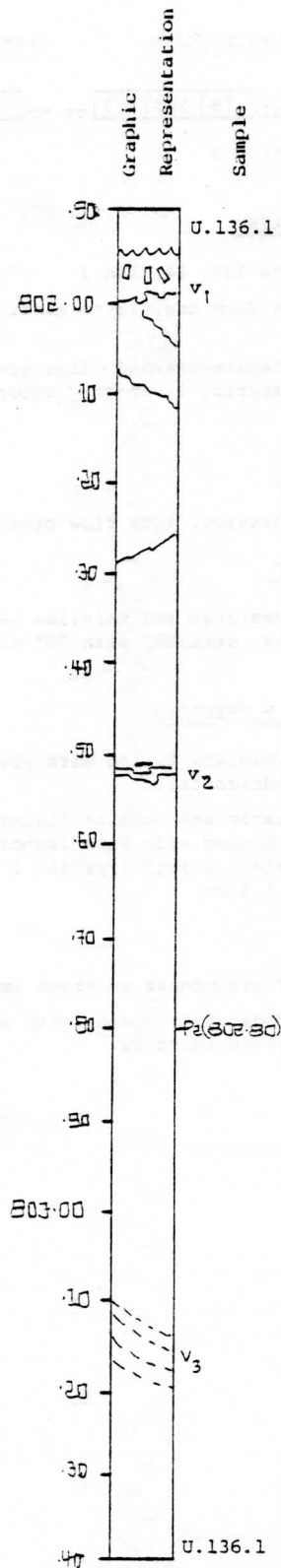
8	0	1	9	4
---	---	---	---	---

 cm to 

8	0	3	4	5
---	---	---	---	---

 cm

Box 137, Section 4

LITHOLOGY-PETROGRAPHY

Continuation of Box 137, Section 3

801.95 - 803.35 Fine-grained holocrystalline, aphyric, light gray basalt.

STRUCTURE

801.90 - 803.35 Very faint flow banding.

VESICLES/AMYGDALES

801.90 - 803.35 Vesicles - 5 mm - 1 mm, lined with green smectite and filled with white zeolite (?) or green smectite.

FRACTURES - VEINS - BRECCIA $v_1$  Vein, filled with crystalline zeolite (laumontite) and crystalline quartz. $v_2$  Vein filled with white zeolite (laumontite) and crystalline quartz..

V3 Reddish - brown veins.

ROCK ALTERATION

802.00 - 803.35 Rock-fresh only minor amount of groundmass alteration to green smectite and brown clay.

Visual Core Description

Observer .....JM.....

Depth Interval 

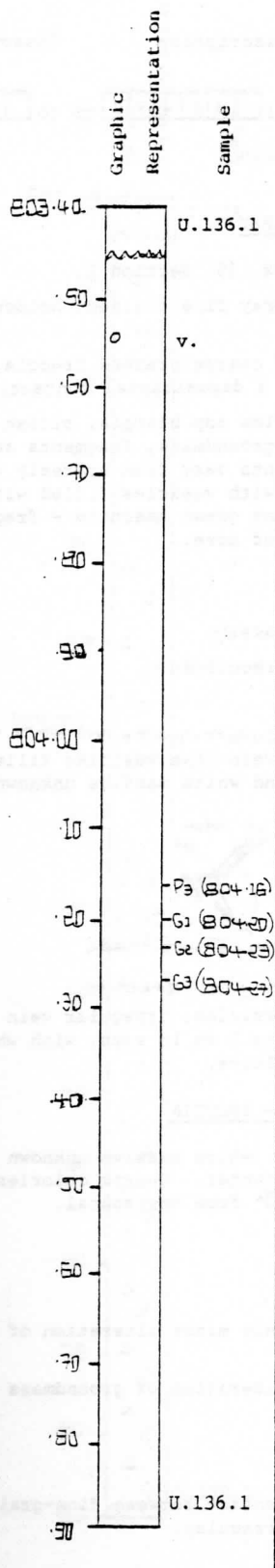
8	0	3	4	5
---	---	---	---	---

 cm to 

8	0	4	9	2
---	---	---	---	---

 cm

Box 138, Section 1

LITHOLOGY-PETROGRAPHY

Continuation of Box 137, Section 4

803.45 - 804.70 Fine to medium grained, dark gray-gray holocrystalline, sporadically porphyritic basaltic plagioclase phenocrysts  $\approx 1$  mm in size.

STRUCTURE

803.45 - 804.70 Massive

VESICLES/AMYGDALES

v. vesicle lined with bluish gray quartz (?), vesicles also lined and filled with green smectite, white fine grained unknown mineral. Range in size from 1 cm - > 1 mm.

FRACTURES - VEINS - BRECCIA

803.55 - 804.05 Rare

804.20 - 804.80 Minor in occurrence, some smectite and white (?) zeolite.

ROCK ALTERATION

803.45 - 804.10 Fresh, little alteration

804.40 - 804.80 Minor brownish red alteration of ground-mass.



Visual Core Description

Observer ...JM.....

Depth Interval 

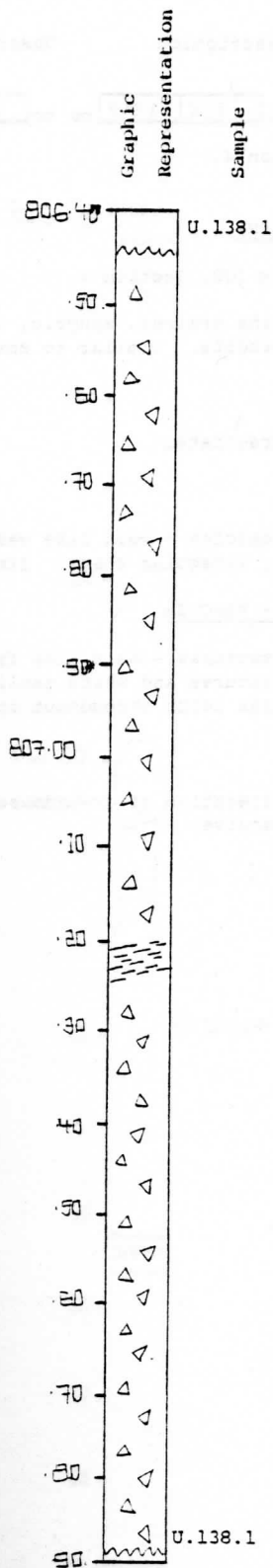
8	0	6	4	4
---	---	---	---	---

 cm to 

8	0	7	8	9
---	---	---	---	---

 cm

Box 138, Section 3



# LITHOLOGY-PETROGRAPHY

Continuation of Box 136, Section 2.

806.42 - 807.90 Bluish gray, flow top breccia, sparsely porphyritic with 1 mm phenocryst of plagioclase. Similar to Box 138, Section 2.

807.20 Sediment and depositional contact, the material below this point should have been a new unit, U.138.2, but since samples have been distributed the change was not made. (J.M. 8/27/78)

## STRUCTURE

806.42 - 807.90 Brecciated

## VESICLES/AMYGDALES

806.42 - 807.90 Vesicles - vein like vesicles, irregular shape, 1 cm - 1 mm, filled with white zeolite, calcite, laumontite.

## FRACTURES - VEINS - BRECCIA

806.42 - 807.90 Fractures - hair like fractures, irregular, both fresh and filled with white (?) zeolite.

## ROCK ALTERATION

806.42 - 807.90 Alteration of groundmass to reddish brown clays.

## OTHER

Note Quantity of green smectite seems to have decreased from overlying cores and boxes.

Visual Core Description

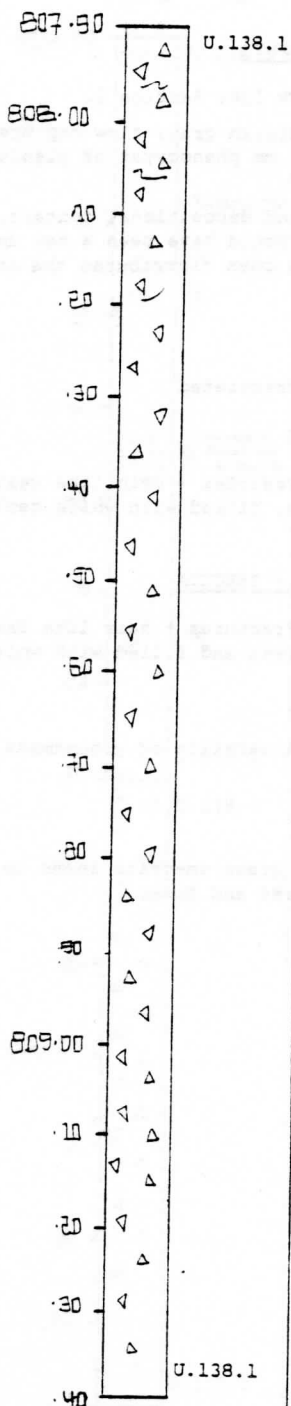
Observer JM

Depth Interval 80789 cm to 80943 cm

Box 138, Section 4.

Graphic  
Representation

Sample

LITHOLOGY-PETROGRAPHY

Continuation of Box 138, Section 4.

807.90 - 809.30 Fine grained, aphyric, light gray flow top breccia. Similar to Box 138, Section 3.

STRUCTURE

807.90 - 809.30 Brecciated

VESICLES/AMYGDALES

807.90 - 809.40 Vesicles - vein like vesicles filled with white zeolites (?), irregular shape. Similar to Box 3.

FRACTURES - VEINS - BRECCIA

807.90 - 809.40 Fractures - hair like fractures and veins, irregular fresh fractures and white zeolite filled fractures. Fractures occur throughout rock.

ROCK ALTERATION

807.90 - 809.30 Alteration of groundmass to reddish brown clays, but not extensive.

Visual Core Description

Observer ...JRD.....

Depth Interval 

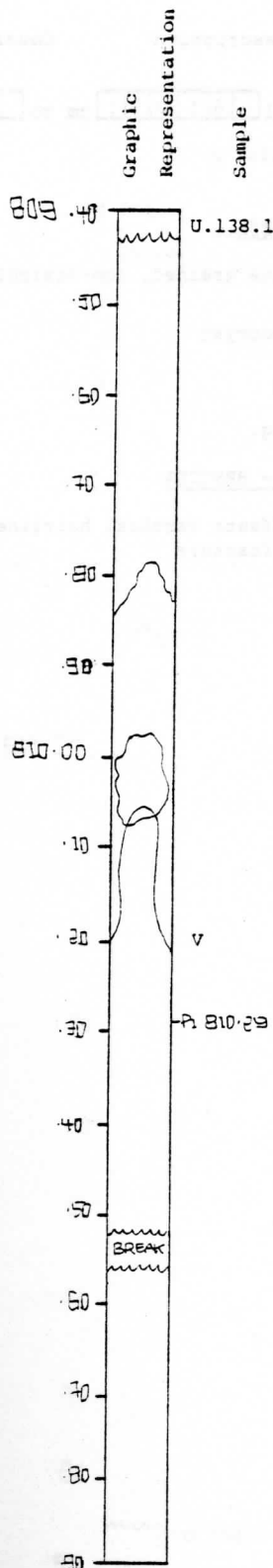
8	0	9	4	3
---	---	---	---	---

 cm to 

8	1	0	9	1
---	---	---	---	---

 cm

Box 139, Section 1



LITHOLOGY-PETROGRAPHY

Massive, sparingly porphyritic, fine-grained, non-vesicular, homogeneous, green gray basalt.

The vol.% phenocrysts is < .5% of rock - plagioclase.

810.00 Reddish clast ~ 12 - 14 cm across imbedded in massive flow. Oxidized pumice fragment filled with zeolites.

FRACTURES - VEINS - BRECCIA

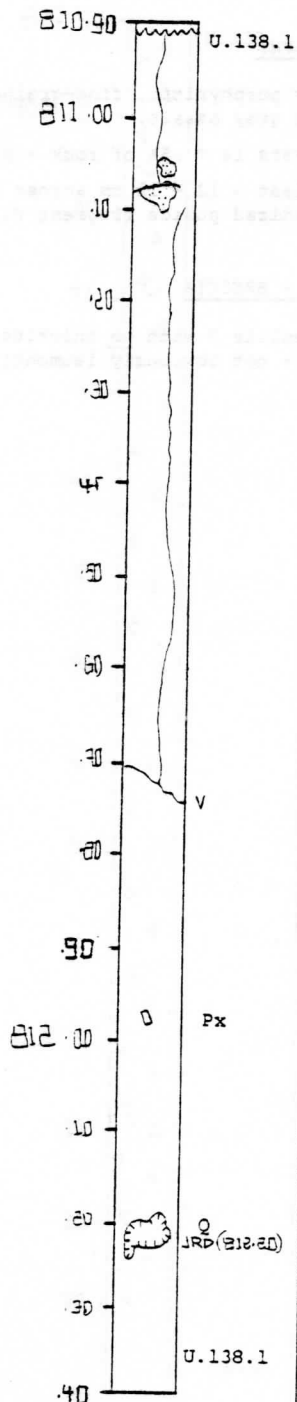
V - Veinlet of zeolite ? with no chlorite. Zeolite is very fine grained - not obviously laumontite.

Visual Core Description

Observer JRD

Depth Interval 81091 cm to 81245 cm

Box 139, Section 2



LITHOLOGY-PETROGRAPHY

Massive aphyric fine grained, non-vesicular homogeneous gray basalt.

Px - pyroxene phenocryst

VESICLES/AMYGDALES

Q Quartz lined vug.

FRACTURES - VEINS - BRECCIA

811.70 Veinlet offsets vertical hairline fracture/vein 35° core to angle fracture.

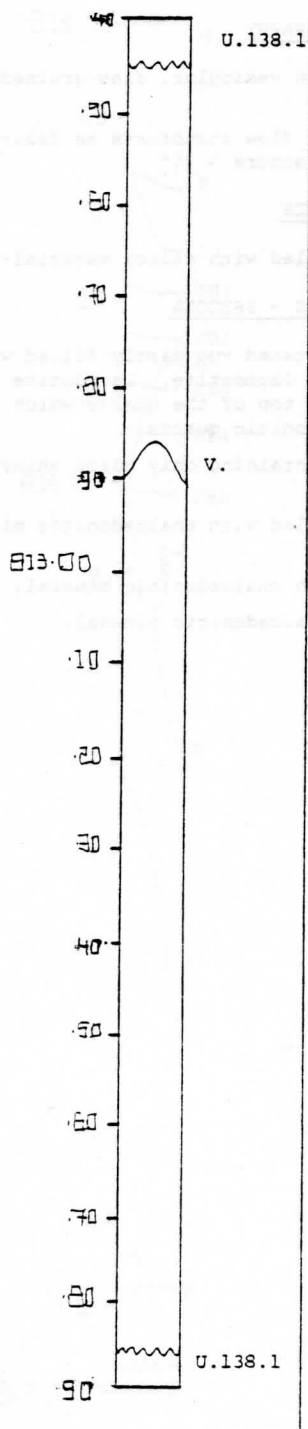
Visual Core Description

Observer JRD

Depth Interval 8 1 2 4 5 cm to 2 1 3 2 6 cm

Box 139, Section 3

Graphic  
Representation  
Sample



LITHOLOGY-PETROGRAPHY

Massive, greenish-gray, aphyric, non-vesicular, fine-grained, basalt.

Very homogeneous

STRUCTURE

None

VESICLES/AMYGDALES

None

FRACTURES - VEINS - BRECCIA

Very few

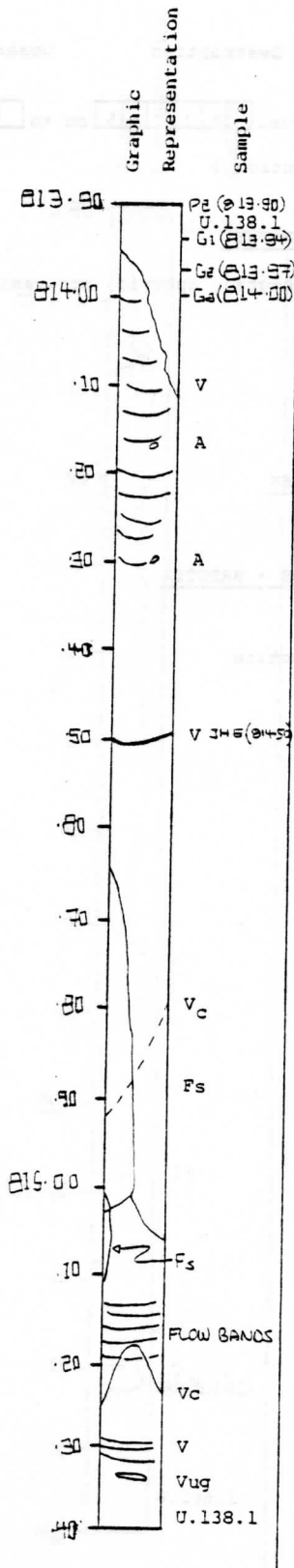
V. chlorite/smectite

Visual Core Description

Observer JRD

Depth Interval 81386 cm to 81545 cm

Box 139, Section 4



LITHOLOGY-PETROGRAPHY

Massive gray, non vesicular, fine-grained, aphyric, homogeneous basalt.

Finely developed flow structures as described above with core angle to fracture ~ 25°

VESICLES/AMYGDALES

A. Amygdale filled with silica material--chalcedony?

FRACTURES - VEINS - BRECCIA

V - Vein or flattened vug partly filled with quartz crystals and laumontite. Laumontite very clearly deposited on top of the quartz which grades downward into chalcedonic quartz.

Fs - Fracture containing only black shiny smectite/chlorite.

Vc - Veinlet filled with chalcedonic mineral . 3 mm wide.

Vc - Veinlet with chalcedonic mineral.

Vug Vug with chalcedonic mineral.

Visual Core Description

Observer ... JRD .....

Depth Interval 

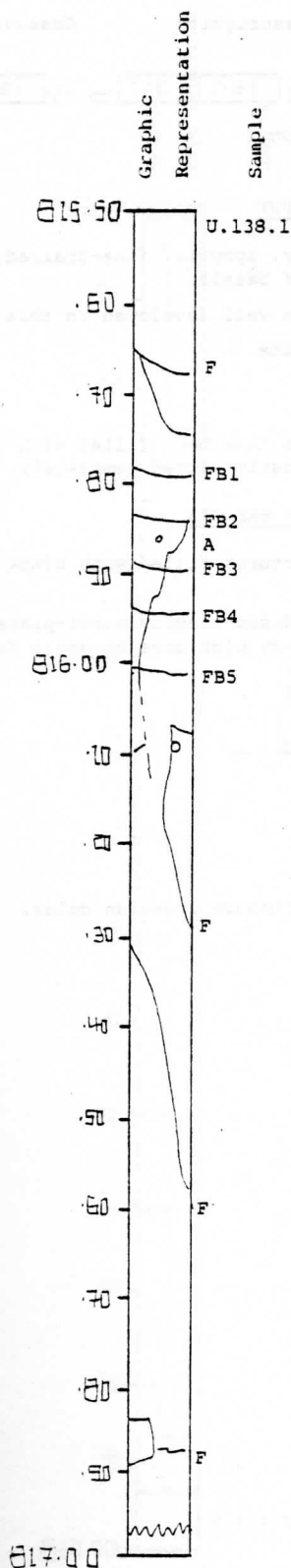
8	1	5	4	5
---	---	---	---	---

 cm to 

8	1	6	9	7
---	---	---	---	---

 cm

Box 140, Section 1



LITHOLOGY-PETROGRAPHY

Massive, fine-grained, sparingly amygdalur, flow-foliated, aphyric basalt.

FB - Various flow bands usually lighter colored than rock - dipping  $\sim 10^\circ$

Note: Shiny black chlorite/smectite is back.

VESICLES/AMYGDALES

A - Amygdales are widely distributed, small and not very common. They are filled with chlorite/smectite and some form of quartz which is not well crystalized. Quartz occupies the center of the vesicle if it is there at all.

F - Fractures containing basic shiny black smectite/chlorite. There are no zeolites in this section (816.20 - 816.90)

ROCK ALTERATION

Rock seems fresh.

Visual Core Description

Observer ....JRD.....

Depth Interval 

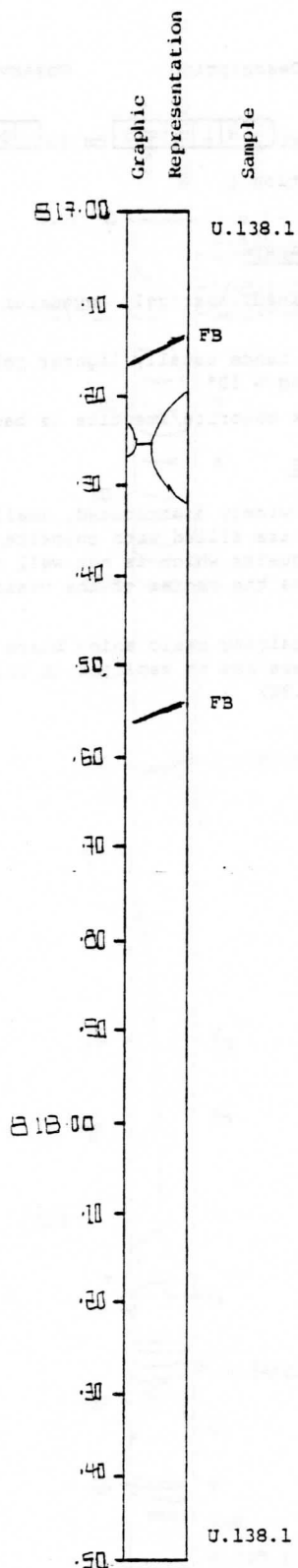
8	1	6	9	7
---	---	---	---	---

 cm to 

3	1	8	5	1
---	---	---	---	---

 cm

Box 140, Section 2



LITHOLOGY-PETROGRAPHY

Massive, green-gray, aphyric, fine-grained, homogeneous, sparingly vesicular basalt.

FB - Flow bands are well developed in this section.

No pyrite, no zeolite.

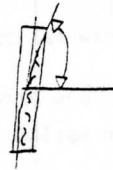
VESICLES/AMYGDALES

Some tiny vesicles have been filled with chlorite/smectite and are mostly closed completely.

FRACTURES - VEINS - BRECCIA

Minor hairline fractures filled with black shiny smectite/chlorite.

Many of these are discontinuous curvi-planar up to 3-5 cm long with very high core to angle fracture.



ROCK ALTERATION

Rock seems fresh although greenish color. No pyrite.

Visual Core Description

Observer JRD

Depth Interval 

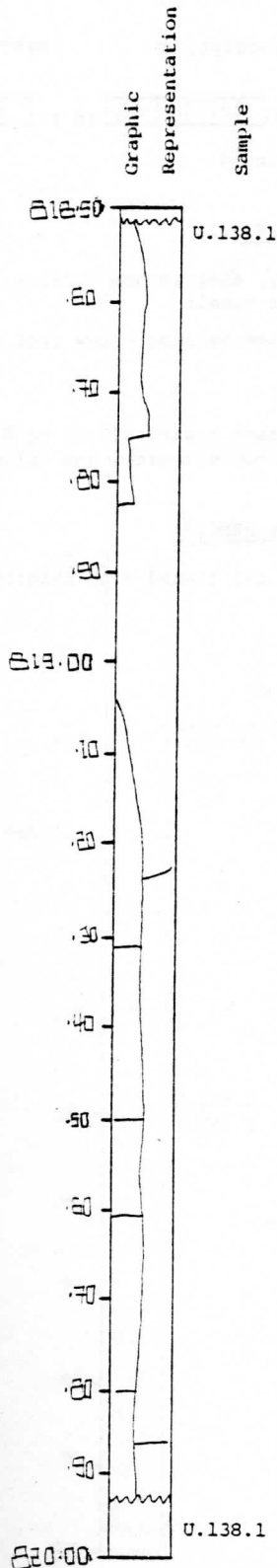
8	1	8	5	1
---	---	---	---	---

 cm to 

8	1	9	9	3
---	---	---	---	---

 cm

Box 140, Section 3



LITHOLOGY-PETROGRAPHY

Massive, green gray, aphyric, homogeneous, fine-grained, sparingly vesicular basalt.

No pyrite.

VESICLES/AMYGDALES

1 mm diameter vesicles constitute < 0.1% of the rock and are all filled with smectite/chlorite or minor chaledony?

FRACTURES - VEINS - BRECCIA

All fractures are coated with shiny black smectitic/chloritic material.

All are nearly hairline fractures. Abundance is less than 10/meter and many have a high core to angle fracture.

ROCK ALTERATION

Rock appears fresh but greenish cast must imply some pervasive chloritic/smectitic alteration.

Visual Core Description

Observer ... JM .....

Depth Interval 

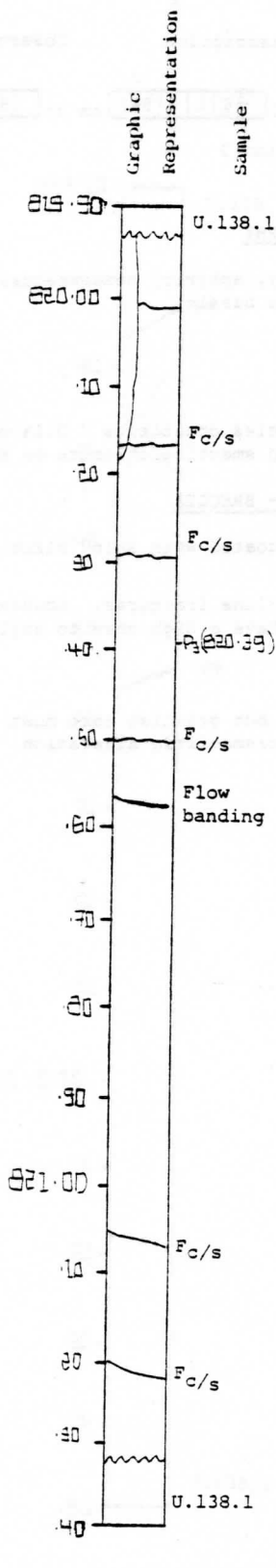
8	1	9	9	3
---	---	---	---	---

 cm to 

8	2	1	3	2
---	---	---	---	---

 cm

Box 140, Section 4



LITHOLOGY-PETROGRAPHY

Massive, green-gray, aphyric homogeneous, fine-grained sparingly vesicular basalt.

820.50 - 820.56 Flow banding - low core angle to fracture

VESICLES/AMYGDALES

Vesicles more abundant toward 820.70 to 821.00, i.e. up to ~ .5% of rock slightly elongated and filled with chlorite/smectite.

FRACTURES - VEINS - BRECCIA

Fc/s - Fractures all coated with chlorite/smectite.

Visual Core Description

Observer JM

Depth Interval 

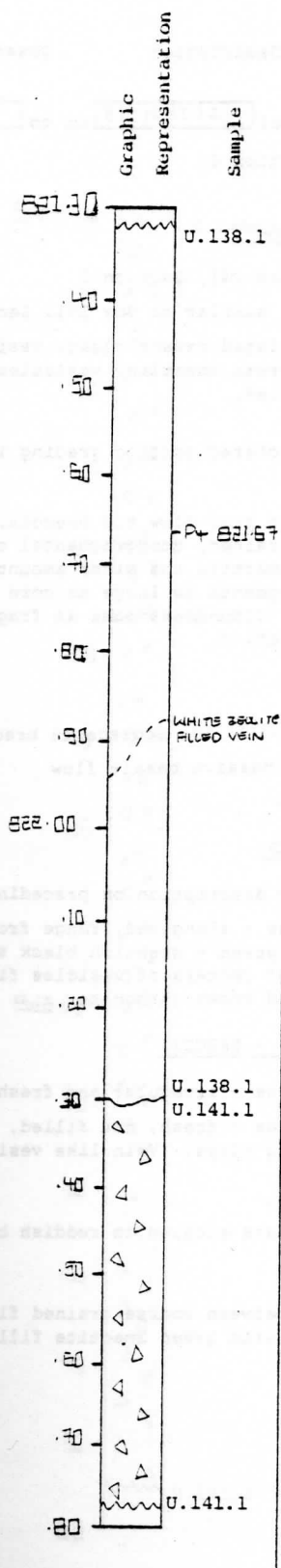
8	2	1	3	2
---	---	---	---	---

 cm to 

8	2	2	7	8
---	---	---	---	---

 cm

Box 141, Section 1

LITHOLOGY-PETROGRAPHY

Continuation of Box 140, Section 4.

U. 138.1 Fine-grained, holocrystalline, aphyric massive, sparsely vesicular. Lower portion from 821.90 - 822.30, massive, monofragmental breccia. Fragment texturally similar to groundmass.

U. 141.1 Flow top breccia, light gray color, fragments range 5 cm - 1 mm in size. Fragments both fine-grained, light gray, aphyric basalt and darker gray vesicular basalt. Ground mass reddish brown - light gray in color, poorly sorted, rounded - subrounded fragments.

STRUCTURE

U. 138.1 Massive

U. 141.1 Scouraceous breccia

VESICLES/AMYGDALES

U. 138.1 Vesicles; elongated, 1.5 cm - > 1 mm, filled with bluish-gray (?), unknown mineral and green smectite.

U. 141.1 Vesicles; vein like, filled with white (?) zeolites, vesicles in fragments have white zeolite filling.

FRACTURES - VEINS - BRECCIA

U. 138.1 Rare

U. 141.1 Rare

ROCK ALTERATION

U. 138.1 Fresh

U. 141.1 Groundmass altered to reddish brown clays

OTHER

822.30 Contact between fine-grained basalt and flow top breccia is irregular.

Visual Core Description

Observer J.M. ....

Depth Interval 

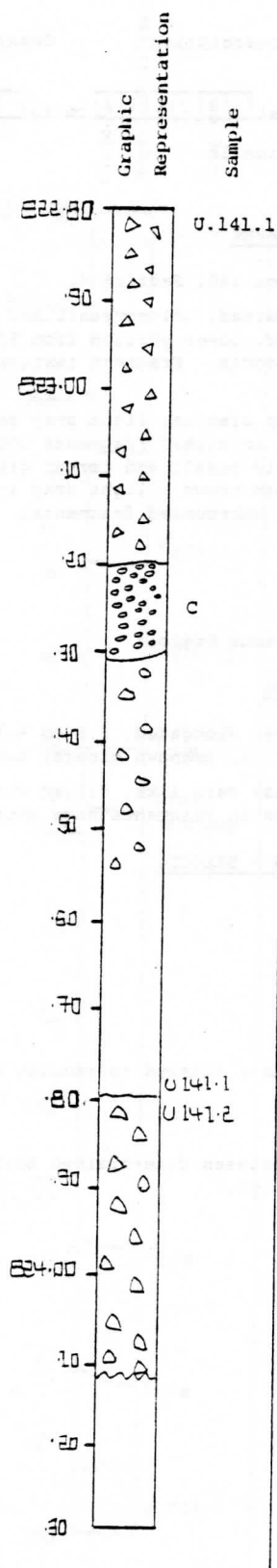
8	2	2	7	8
---	---	---	---	---

 cm to 

8	2	4	1	1
---	---	---	---	---

 cm

Box 141, Section 2

LITHOLOGY-PETROGRAPHY

Continuation of Box 141, Section 2

Flow top breccia, similar to Box 141, Section 2

C - Highly vesiculated basalt clast, vesicles are filled with green smectite, vesicles are 1.5 mm - .5 mm rounded vesicles.

823.40 Less brecciated portion grading into massive basalt flow.

U. 141.2 Greenish gray flow top breccia, with highly vesicular, fine-grained, monocragmatical clast, vesicles filled with dark green smectite and minor amounts of calcite and (?) zeolite. Fragments as large as core diameter and larger to 1 cm in size. Groundmass same as fragments, some alteration to black smectite.

STRUCTURE

U. 141.1 822.80 - 823.60 Scoriaceous breccia

823.60 - 823.80 Massive basalt flow

U. 141.2 Breccia

VESICLES/AMYGDALES

U. 141.1 Same as description on preceding page

U. 141.2 Vesicles - elongated, range from 1 mm - 1 cm, most filled with green - greenish black smectite. Rare occurrence of centers of vesicles filled with white zeolites and brown carbonate.

FRACTURES - VEINS - BRECCIA

U. 141.1 Fractures - irregular and fresh

U. 141.2 Fractures - fresh, not filled, irregular - may be due to swelling clays. Vein like vesicles similar.

ROCK ALTERATION

U. 141.1 Groundmass altered to reddish brown clays.

OTHER

823.79 Contact between coarse grained flow breccia and flow top breccia with green smectite filled vesicles.

Visual Core Description

Observer JM

Depth Interval 

8	2	4	1	1
---	---	---	---	---

 cm to 

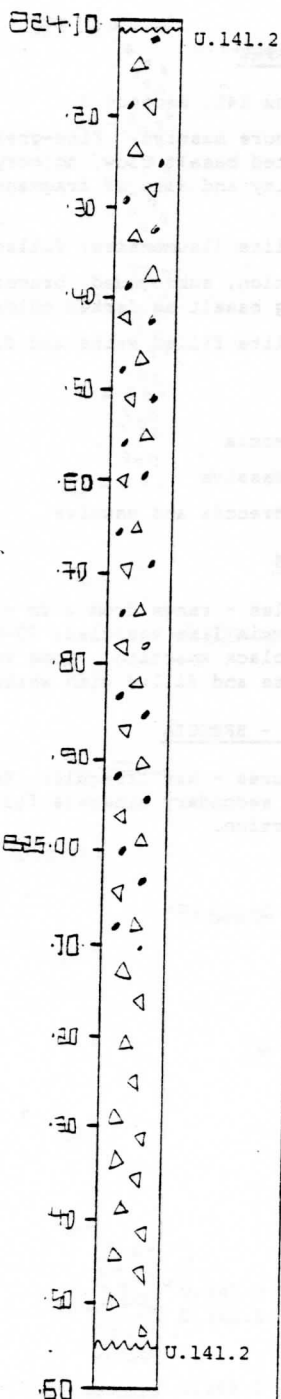
8	2	5	5	5
---	---	---	---	---

 cm

Box 141, Section 3

Graphic  
Representation

Sample

LITHOLOGY-PETROGRAPHY

Continuation of Box 141, Section 2.

Same as preceding description except for vesicles.

STRUCTURE

Brecciated

VESICLES/AMYGDALES

Large (4 cm - 3 mm) vein like vesicles of white zeolites (laumontite) present. Irregular shape, many lined by green smectite.

Dark colored symbols on core log are zeolite filled vesicles.

FRACTURES - VEINS - BRECCIA

Section 3, fractured throughout the length of core pervasively. Fractures are fresh and irregular, possibly due to swelling clays.

Visual Core Description

Observer JM

Depth Interval 

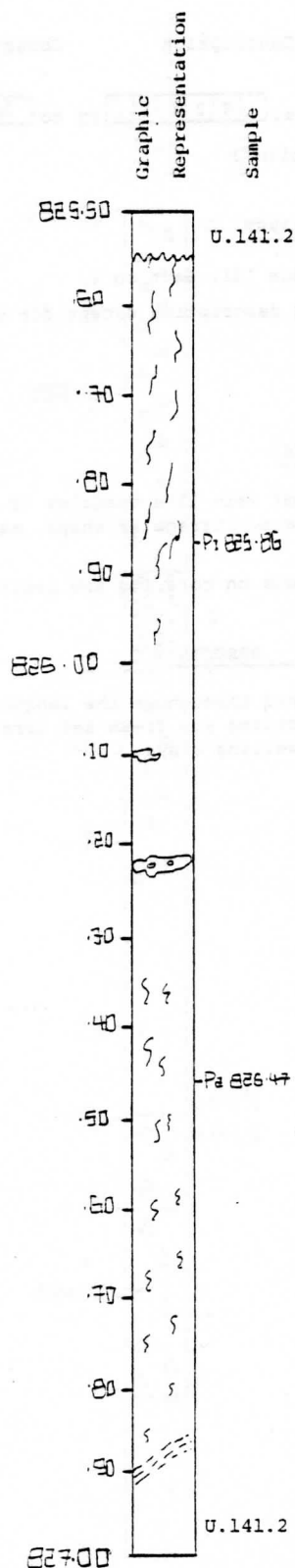
8	2	5	5
---	---	---	---

 cm to 

8	2	7	0	7
---	---	---	---	---

 cm

Box 141, Section 4.

LITHOLOGY-PETROGRAPHY

Continuation of Box 141, Section 3

Less brecciated, more massive. Fine-grained, moderately - highly vesiculated basalt flow, holocrystalline, aphyric, decrease in quantity and size of fragment. Bluish-green coloration.

826.10 White zeolite (laumontite) filled vug.

826.24 Red oxidation, subrounded, breccia, minor plagioclase, surrounding basalt as darker coloration.

826.90 White zeolite filled veins and fracture.

STRUCTURE

825.50-825.60 Breccia

825.60 - 826.24 Massive

826.24 - 827.00 Breccia and massive

VESICLES/AMYGDALES

Section 4 - Vesicles - range from 2 cm - 1 mm in size. Are elongated or vein like vesicles, 70-80% filled with green - greenish black smectite. Some vesicles are lined with green smectite and filled with white zeolite laumontite.

FRACTURES - VEINS - BRECCIA

Section 4 - Fractures - are irregular, fresh hair line fractures with no secondary minerals filling, and occur throughout the section.

Visual Core Description

Observer JM

Depth Interval 

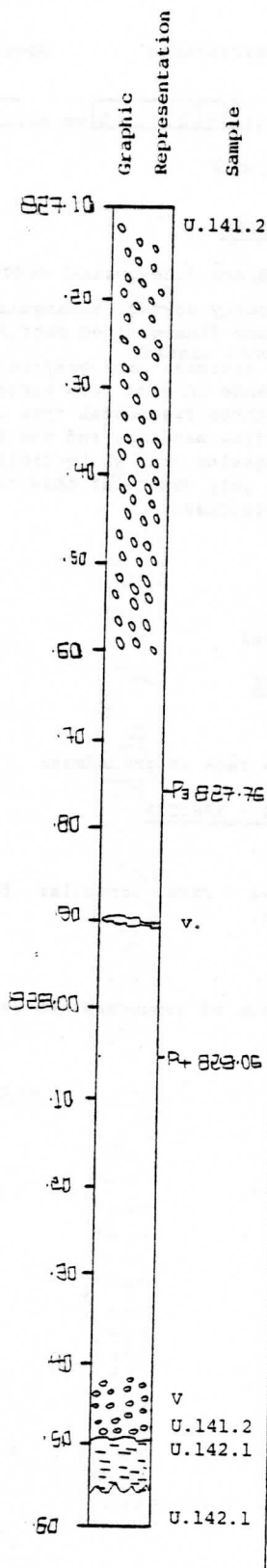
8	2	7	0	7
---	---	---	---	---

 cm to 

8	2	8	5	5
---	---	---	---	---

 cm

Box 142, Section 1



# LITHOLOGY-PETROGRAPHY

Continuation of Box 141, Section 4.

U. 141.2 Gray fine-grained, holocrystalline, aphyric, basalt, moderately vesicular

827.60 Transition from vesicular basalt to massive basalt

U. 142.1 Black very fine-grained mudstone. Soft.

## STRUCTURE

U. 141.2 Massive

U. 142.1 Massive

## VESICLES/AMYGDALES

U. 141.2 Vesicles - elongated and vein like, with plane of elongated vesicles dipping 35° from horizontal between 827.07 - 827.60. Vesicles have a decrease in smectite and a increase in white zeolite filling. Vesicles range in size from 2 cm - 2 mm. Smectite lines most vesicles, laumontite fills.

V - Last 10 cm of unit more vesicular, with 1 - 2 mm vesicles containing euhedral quartz crystals projecting into them. Also irregular vein like vesicles containing white zeolite (lumontite), some green smectite.

U. 142.1 None

## FRACTURES - VEINS - BRECCIA

Fractures - fresh, irregular fracture caused by swelling clays - are moderately abundant.

Veinlike vesicles and fractures filled with green smectite, minor amounts of zeolites - irregularly shaped.

v. - 3 cm wide, white zeolite (lumontite) filled fracture, green (?) smectite and basalt fragments in the fracture.

U. 142.1 None

## OTHER

828.70 Contact between basalt flow and sediments, irregular chilled.

Visual Core Description

Observer ..... JM

Depth Interval 

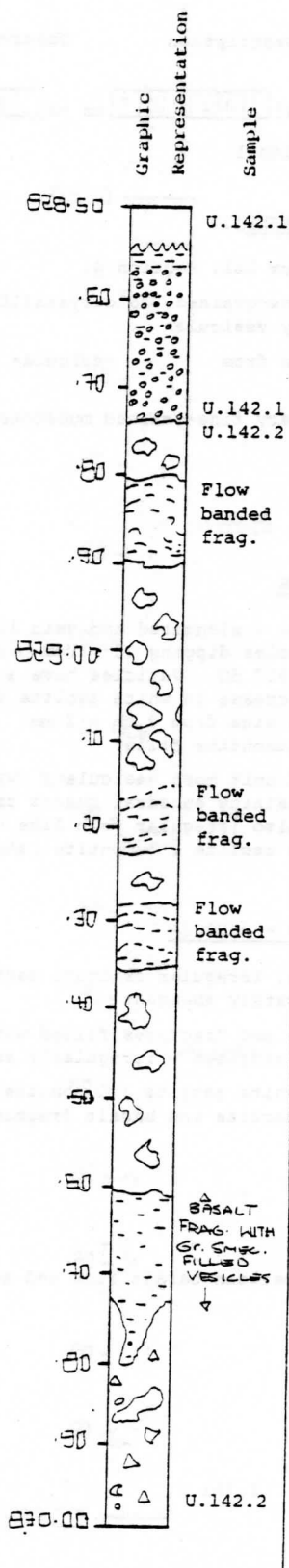
8	2	8	5	5
---	---	---	---	---

 cm to 

8	3	0	0	0
---	---	---	---	---

 cm

Box 142, Section 2

LITHOLOGY-PETROGRAPHY

828.55 - 828.57 Black fine-grained mudstone, soft.  
 828.57 - 828.72 Coarse-grained, poorly sorted, subangular-subrounded fragments in a black fine-grained matrix.  
 828.72 - Depositional contact  
 U.142.2 Flow top breccia, dark gray-reddish brown in color, fragment range in size from larger than core diameter - 2 mm, three fragmental type clast. One type shows relict (?) flow banding, and the others are either black vesicular basalts with white zeolite filled vesicles or light gray vesicular basalts with green smectite filled vesicles.

STRUCTURE

U.142.1 Bedded  
 U.142.2 Brecciated

VESICLES/AMYGDALES

U.142.1 None  
 U.142.2 Vesicles rare in groundmass

FRACTURES - VEINS - BRECCIA

U.142.1 None  
 U.142.2 Fractures - rare, irregular, fresh. May be due to swelling clays.

ROCK ALTERATION

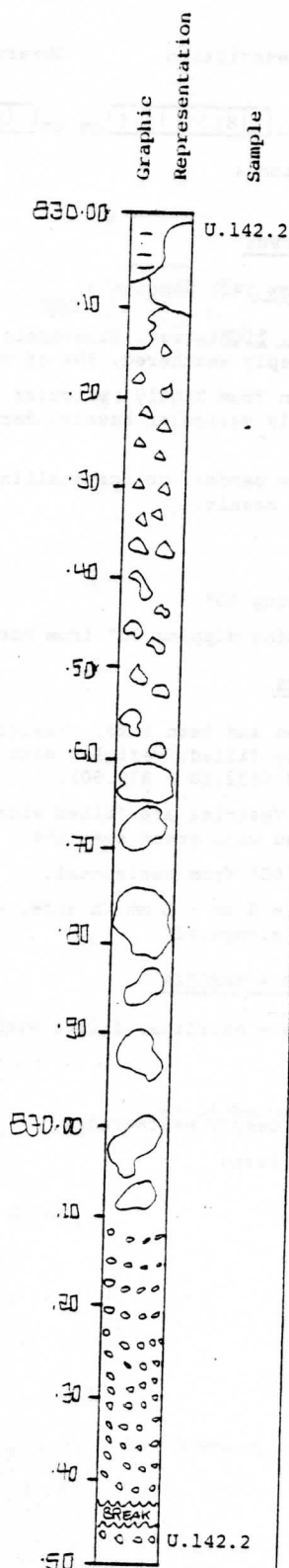
U.142.2 Alteration of groundmass to reddish brown clays.

Visual Core Description

Observer JM

Depth Interval 830.00 cm to 831.55 cm

Box 142, Section 3



# LITHOLOGY-PETROGRAPHY

Continuation of Box 142, Section 2.

830.00 - 831.50 Similar to previous description except flow banded fragments and black vesicle basalt fragments decreased in abundance compared to the green smectite vesicle basalts.

830.15 - 830.58 Light gray basalt with green smectite filled vesicles. Reddish-brown oxidized groundmass. Black vesicular basalts filled with white zeolites.

830.50 - 831.05 Light gray vesicular basalt fragment. Vesicles filled with green smectite.

831.10 Transition downward from brecciated polyfragmental to more massive highly vesiculed, monofragmental, light gray vesicular basalt.

831.50 Increased weathering.

## STRUCTURE

830.00 - 831.00 Brecciated

831.10 - 831.50 Elongated vesicles dipping 50°

## VESICLES/AMYGDALES

830.00 - 831.00 Vesicles rare in groundmass

831.10 - 831.50 Vesicles elongated increasing in abundance downward, 2 cm - 1 mm, majority filled with white zeolites or partially filled with euhedral quartz crystals. Green smectite lines in many of the vesicles but is not completely filling many.

## FRACTURES - VEINS - BRECCIA

830.00 - 831.10 Rare

831.10 - 831.50 Fractures - fresh, irregular - may be due to swelling clays.

## ROCK ALTERATION

830.00 - 830.80 Groundmass altered to reddish brown clays.

Visual Core Description

Observer ....JM.....

Depth Interval 

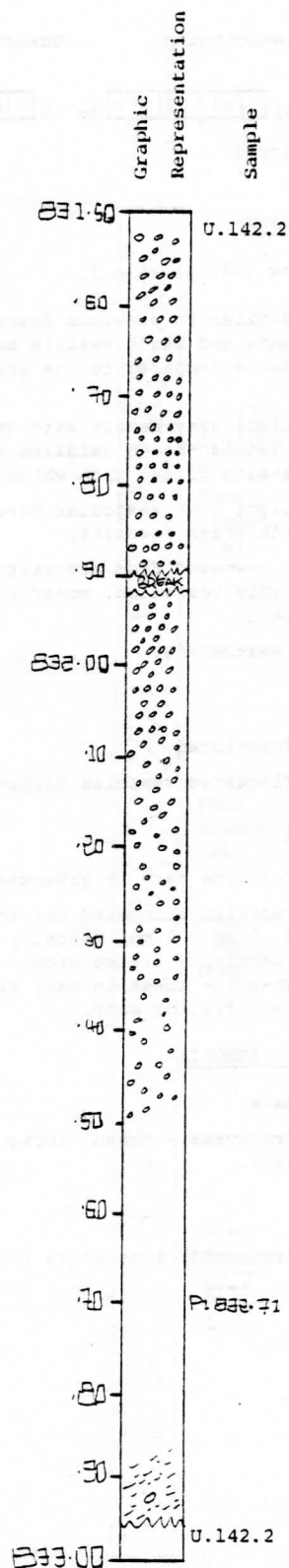
8	3	1	5	5
---	---	---	---	---

 cm to 

8	3	2	9	6
---	---	---	---	---

 cm

Box 142, Section 4

LITHOLOGY-PETROGRAPHY

Continuation of Box 142, Section 3.

Vesicular basalt, light gray, fine-grained holocrystalline  
70% vesicles, deeply weathered, 80% of vesicles filled.

832.60 Transition from highly vesicular light gray basalt  
to massive sparsely vesicular basalt, darker gray in  
color.

832.71 Gray, flow banded, holocrystalline, aphyric,  
very fine-grained basalt.

STRUCTURE

Vesiculated, dipping 60°

832.60 Flow banding dipping 30° from horizontal

VESICLES/AMYGDALES

Vesicles elongated and vein like. Vesicles with quartz  
are only partially filled, vesicles with white zeolites  
completely filled (832.10 - 832.60).

831.55 - 832.10 Vesicles are filled with white zeolites  
and some are lined with green smectite.

Vesicles dipping 60° from horizontal.

832.60 Vesicles - 3 cm - 2 mm in size, white laumontite  
filled vesicles, elongated.

FRACTURES - VEINS - BRECCIA

832.60 Fractures - hairline, filled with green smectite.

ROCK ALTERATION

831.50 - 831.90 Deeply weathered.

832.60 - 832.90 Fresh

Visual Core Description

Observer JM

Depth Interval 

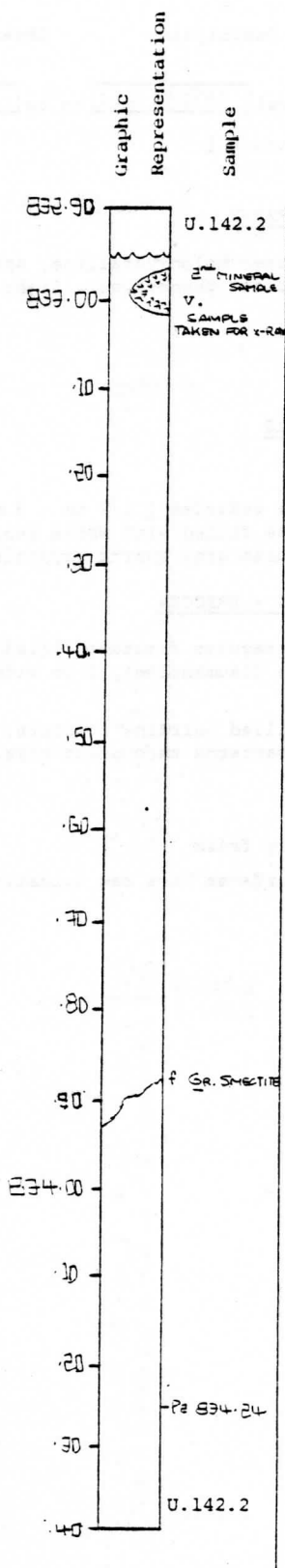
8	3	2	9	6
---	---	---	---	---

 cm to 

8	3	4	4	2
---	---	---	---	---

 cm

Box 143, Section 1

LITHOLOGY-PETROGRAPHY

Continuation of Box 142, Section 4

833.00 - 834.24 Holocrystalline, aphyric, gray, basalt, massive, very rare plagioclase phenocryst, 2 mm long.

STRUCTURE

833.00 - 833.20 Massive

833.45 - 834.30 Massive

834.30 Breccia

VESICLES/AMYGDALES

v. 6 cm vug filled with (?) quartz and tentatively identified phrenite. The phrenite is growing on a quartz covered surface.

833.20 Sparse vesicles, 5 mm - 1 mm, with green smectite lining them and bluish gray unknown mineral filling the vesicles.

834.30 Vein - irregular, 4 mm - less, vesicles filled with bluish gray quartz (?)

FRACTURES - VEINS - BRECCIA

833.10 - 834.15 Fracture - hairline filled with green smectite.

ROCK ALTERATION

833.00 - 834.40 Rock very fresh.

Visual Core Description

Observer ..... JM

Depth Interval 

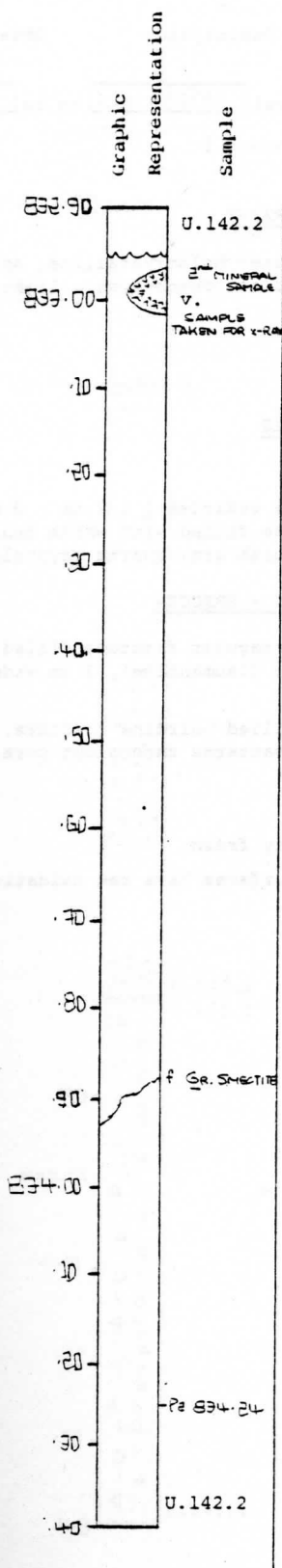
8	3	2	9	6
---	---	---	---	---

 cm to 

8	3	4	4	2
---	---	---	---	---

 cm

Box 143, Section 1

LITHOLOGY-PETROGRAPHY

Continuation of Box 142, Section 4

833.00 - 834.24 Holocrystalline, aphyric, gray, basalt, massive, very rare plagioclase phenocryst, 2 mm long.

STRUCTURE

833.00 - 833.20 Massive

833.45 - 834.30 Massive

834.30 Breccia

VESICLES/AMYGDALES

v. 6 cm vug filled with (?) quartz and tentatively identified phrenite. The phrenite is growing on a quartz covered surface.

833.20 Sparse vesicles, 5 mm - 1 mm, with green smectite lining them and bluish gray unknown mineral filling the vesicles.

834.30 Vein - irregular, 4 mm - less, vesicles filled with bluish gray quartz (?)

FRACTURES - VEINS - BRECCIA

833.10 - 834.15 Fracture - hairline filled with green smectite.

ROCK ALTERATION

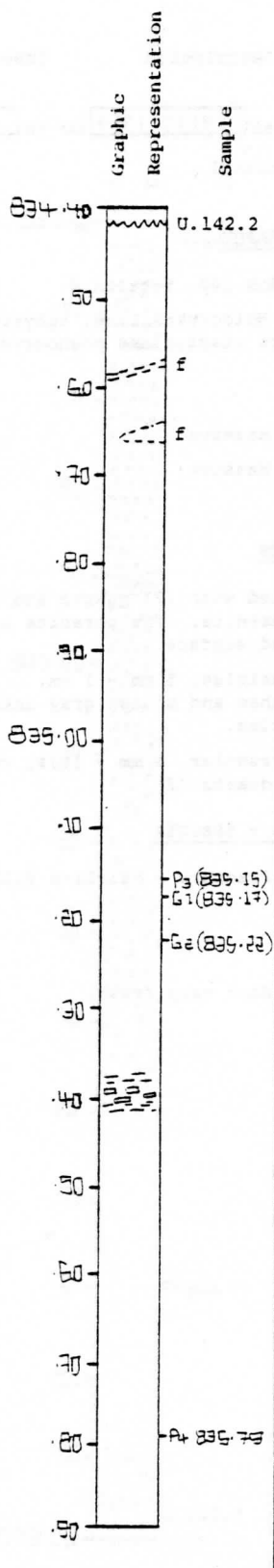
833.00 - 834.40 Rock very fresh.

Visual Core Description

Observer JM

Depth Interval 834.42 cm to 835.90 cm

Box 143, Section 2

LITHOLOGY-PETROGRAPHY

834.50 Fine-grained holocrystalline, sparsely porphyritic with 1 mm plagioclase phenocryst. Light gray coloration.

STRUCTURE

Massive

VESICLES/AMYGDALES

834.60 None

835.40 Vein like vesicles  $\frac{1}{2}$  cm - 3 mm, some rounded, elongated vesicles filled with white zeolite. Rounded vesicles have bluish gray quartz crystals.

FRACTURES - VEINS - BRECCIA

f. fracture - irregular fracture filled with white blade zeolite (laumontite), 3 cm wide vein, crystal 2 mm long.

Green smectite filled hairline fracture, occur throughout. Random fracture patterns throughout core.

ROCK ALTERATION

834.60 Moderately fresh

835.40 Broken surfaces have red oxidation stains.

Visual Core Description

Observer ..JM.....

Depth Interval 

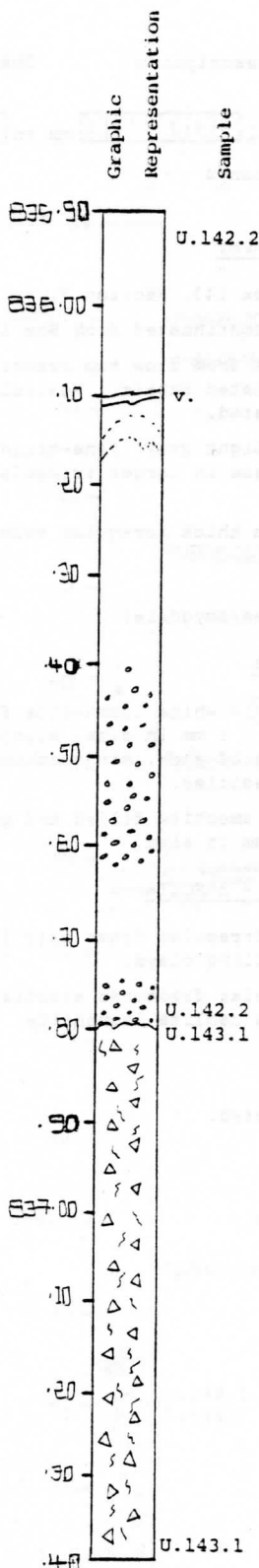
8	3	5	9	0
---	---	---	---	---

 cm to 

8	3	7	4	5
---	---	---	---	---

 cm

Box 143, Section 3



# LITHOLOGY-PETROGRAPHY

836.00 - 836.80 Fine-grained, holocrystalline, basalt massive, sparsely porphyritic with 1 mm plagioclase phenocryst, grading downward to a scouraceous bottom (from 836.40 - 836.80).

U. 836.80 Depositional contact.

U. 143.1 Flow top breccia, gray colored, subrounded fragments. Fragments both gray and reddish brown in color, 4 cm - 3 mm in size. Reddish brown fragments have 1-5 mm green smectite filled vesicles and green smectite lined cavities with white zeolite filling. Breccia poorly sorted. Groundmass has some reddish oxidation stains.

# STRUCTURE

835.90 - 836.40 Massive

836.40 - 836.80 Scouraceous

U. 143.1 Brecciated

# VESICLES/AMYGDALES

v. Vein lined with bluish gray quartz, and filled with bladed white zeolite (laumontite) and coarse sparry calcite. (836.10)

836.40 v. Vesicles, partially filled with white zeolite, green smectite and quartz. Vesicles 4 mm - 1 mm in size.

U. 143.1 Vesicle in groundmass, vein like vesicles filled with white zeolites. 2 mm width of vein - 1 mm.

# FRACTURES - VEINS - BRECCIA

836.10 - 836.80 Fracture - hairline with reddish brown alteration along.

U. 143.1 Fresh irregular fractures may be due to swelling clays in groundmass.

# ROCK ALTERATION

836.15 - 836.80 Reddish brown groundmass alteration

836.80 Contact irregular but sharp transition from overlying scouraceous bottom of Unit 142.2 to flow top breccia of Unit 143.1.

U. 143.1 Reddish brown alteration of groundmass.

Visual Core Description

Observer ....JM.....

Depth Interval 

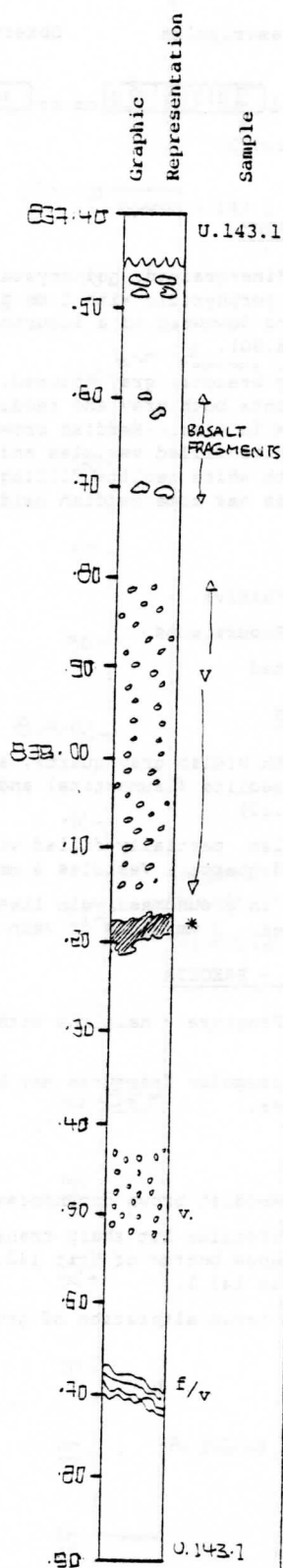
8	3	7	4	5
---	---	---	---	---

 cm to 

8	3	8	9	0
---	---	---	---	---

 cm

Box 143, Section 4

LITHOLOGY-PETROGRAPHY

Continuation of Box 143, Section 3.

Flow top breccia continued from Box 143. (837.45)

837.50 Transition from flow top breccia to more massive light gray vesiculated basalt. Vesicles predominantly rounded and elongated.

837.50 - 837.80 Light gray, fine-grained, aphyric, basalt with increase in larger irregular vesicles below 837.80.

\*838.17 Large 2 cm thick irregular vein or white laumantite

STRUCTURE

Massive - (vesicles/amygdale)

VESICLES/AMYGDALES

837.80 - 838.10 (V) - white laumantite filled vesicles, ranging from 2 cm - 1 mm in size, elongated and vein like, comprise 20% of rock, minor amounts of green smectite filled vesicles.

838.50 (V) - Green smectite filled and green smectite lined, rounded, 1 m - 4 mm in size.

FRACTURES - VEINS - BRECCIA

837.45 - 838.40 Irregular fresh hair line fractures. May be due to swelling clays.

838.70 (f/v) Irregular fractures associated with 2 cm wide vein of white zeolite laumantite.

ROCK ALTERATION

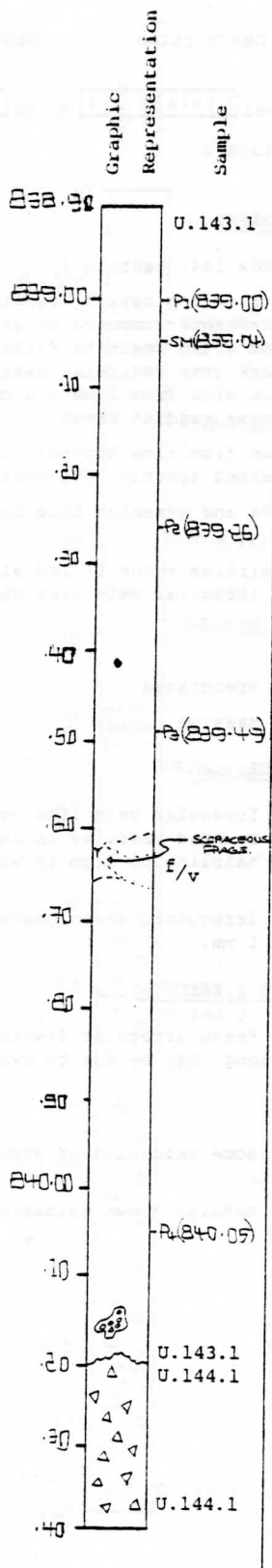
Rock deeply weathered.

Visual Core Description

Observer J.M.

Depth Interval 83890 cm to 84044 cm

Box 144, Section 1

LITHOLOGY-PETROGRAPHY

Continuation of Box 143, Section # 4.

U.143.1 Fine-grained, holocrystalline, aphyric, blotchy greenish-gray basalt.

839.65 Scoreaceous fragments.

840.15 Breccia fragments, vesicles filled with white zeolite.

U. 144.1 Flow top breccia, breccia fragments are dark gray basalt clast that are highly vesiculated. Clast range from 7 cm - 2 mm in size. Clast irregular and subrounded. Groundmass oxidized.

STRUCTURE

U. 143.1 Massive

U. 144.1 Brecciated

VESICLES/AMYGDALES

Vesicles, elongated, showing partially filled bottoms of cavities with white and gray unknown minerals and quartz crystals growing on top of vesicles and earlier deposited unknown mineral.

(839.42)



Vesicles range in size from 1.5 cm - 1 mm. Vesicles comprise 5-10% of rock from 838.90 - 840.20.

840.00 2 mm and less, green smectite filled vesicles.

U. 144.1 Vesicles and vein like fractures in clast are filled with white zeolites and minor amounts of smectite.

FRACTURES - VEINS - BRECCIA

839.65 F/v 7 mm - 1 mm wide white unknown zeolite filled vein, zeolite is white and massive habit. Veins irregular and disjointed. Minor hairline fractures due to swelling clays.

U. 144.1 Fresh irregular fractures, may be due to swelling clays.

ROCK ALTERATION

U. 143.1 Rock moderately fresh, only minor amounts of reddish brown oxidation stains.

U. 144.1 Red oxidation staining of some of the groundmass.

Visual Core Description

Observer ...JM.....

Depth Interval 

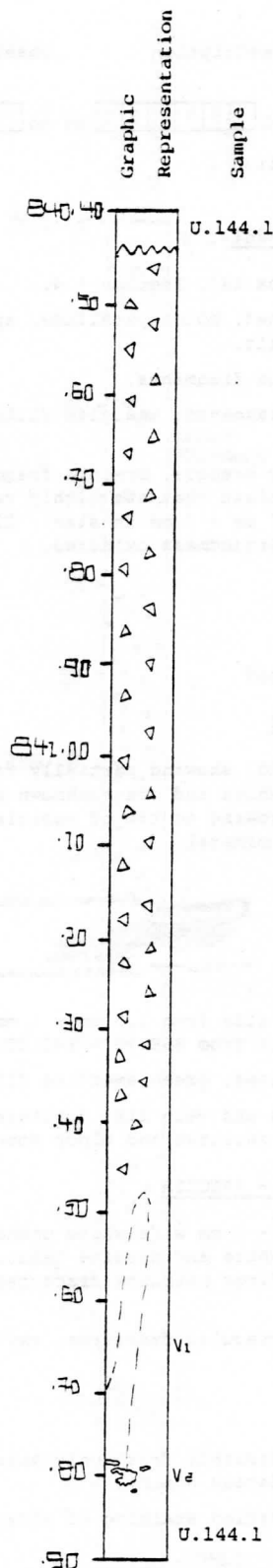
8	4	0	4	4
---	---	---	---	---

 cm to 

8	4	1	9	0
---	---	---	---	---

 cm

Box 144, Section 2

LITHOLOGY-PETROGRAPHY

Continuation of Box 144, Section 1.

840.40 - 841.40 Flow top basalt breccia, dark gray-gray in color, fragments composed of gray, aphyric nonvesiculated and green smectite filled vesicular basalts. Also dark gray vesicular basalts clast. Fragments range in size from 1 mm - 4 cm, and are sub-rounded. Groundmass reddish brown.

841.45 Transition from flow top breccia to more massive basalt. Fine-grained aphyric, 20% vesicles.

V1 841.62 Laumontite and greenish blue smectite, hairline veins.

V2 841.80 2 cm - hairline veins filled with white zeolite and calcite, and irregular vein like vesicles.

STRUCTURE

840.40 - 841.40 Brecciated

841.45 - 841.90 Massive

VESICLES/AMYGDALES

840.40 - 841.40 Irregular vein like vesicles in groundmass and smaller rounded vesicles in basalt fragments. Veins range from hairline to 1 cm in width, filled with white smectite.

841.65 - 841.90 Irregular, green smectite filled vesicles, 3 mm - 1 mm.

FRACTURES - VEINS - BRECCIA

840.40 - 841.90 Fresh irregular fractures with no mineralization along, may be due to swelling clays.

ROCK ALTERATION

840.40 - 841.40 Some oxidation of groundmass to reddish brown color.

841.45 - 841.90 Reddish brown oxidation along fracture.

842.81 Contact between brecciated base of Unit 144.1 and reddish brown flow top breccia.

Visual Core Description

Observer ... JM .....

Depth Interval 

8	4	3	3	5
---	---	---	---	---

 cm to 

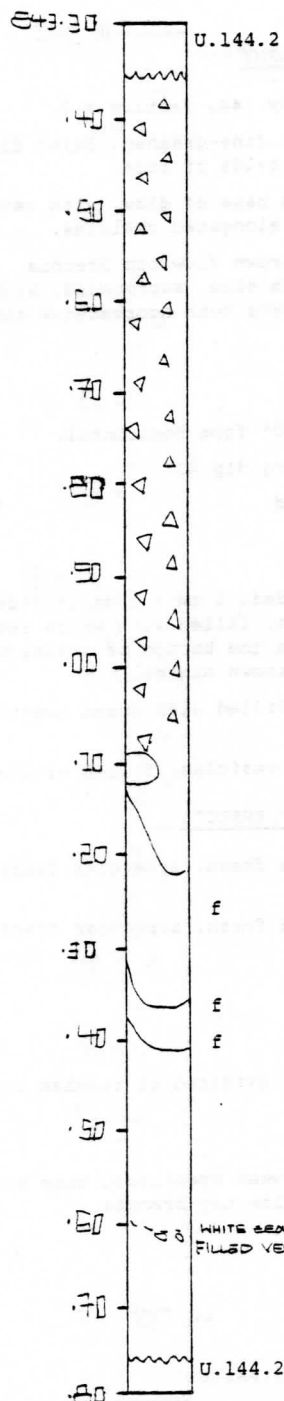
8	4	4	7	7
---	---	---	---	---

 cm

Box 144, Section 4

Graphic  
Representation

Sample

LITHOLOGY-PETROGRAPHY

Continuation of Box 144, Section 4

843.35 - 844.20 Similar description to U.144.2. Box 144, Section 3 fragments larger than core to 1 mm in size, density of fragments packing arrangement decreases with depth.

844.20 - 844.80 Gradational transition from flow top breccia to massive basalt flow.

STRUCTURE

843.30 - 844.20 Brecciated

844.20 - 844.80 Massive

VESICLES/AMYGDALES

Vesicles - irregular vein-like vesicles in groundmass, with white zeolite filling. Vesicles in clast are both rounded and vein-like with white zeolite fillings and minor amounts of green smectite.

FRACTURES - VEINS - BRECCIA

843.30 - 844.20 Rare, fractures, fresh and irregular, may be due to swelling clays.

f. Fracture set dipping 75° from horizontal, fractures simple and planar.

ROCK ALTERATION

843.30 - 844.80 Groundmass oxidized to reddish brown color.

Visual Core Description

Observer ... ILG .....Depth Interval 

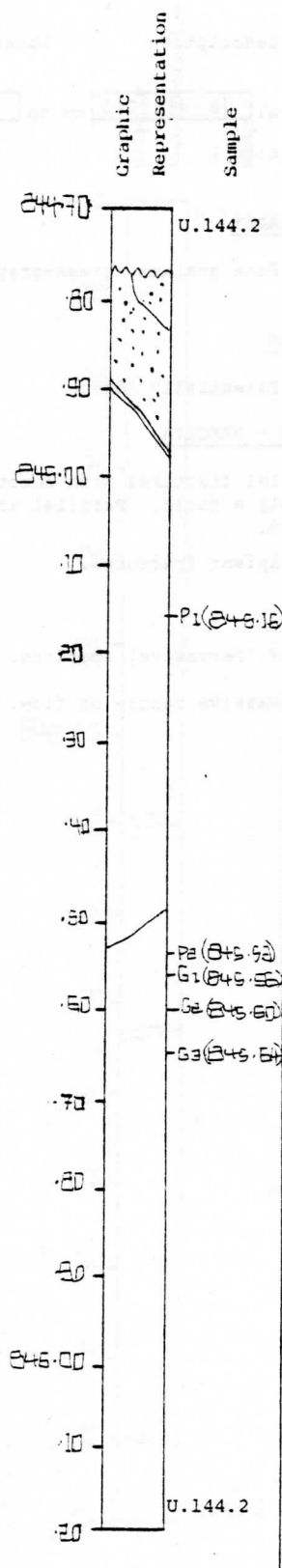
8	4	4	7	7
---	---	---	---	---

 cm to 

8	4	6	2	0
---	---	---	---	---

 cm

Box 145, Section 1

LITHOLOGY-PETROGRAPHY

Gray aphyric amygdaloidal basalt.

844.95 Sharp contact? fault, filled with zeolite and smectite. Brecciated?

845.10 - 846.20 Fine-grained green-gray, aphyric basalt.

STRUCTURE

Isotropic

VESICLES/AMYGDALES

844.70 Green smectite filled amygdales ~ 2 mm diameter.

844.95 - 846.20 Essentially none.

FRACTURES - VEINS - BRECCIA

844.80 Smectite on fracture.

845.50 Very fine fracture with smectite and zeolite.

ROCK ALTERATION

845.00 Pyrite on fracture. Grains about 1 mm diameter.

OTHER

844.70 - 846.20 Massive centre of flow.

Visual Core Description

Observer ... ILG.....

Depth Interval 

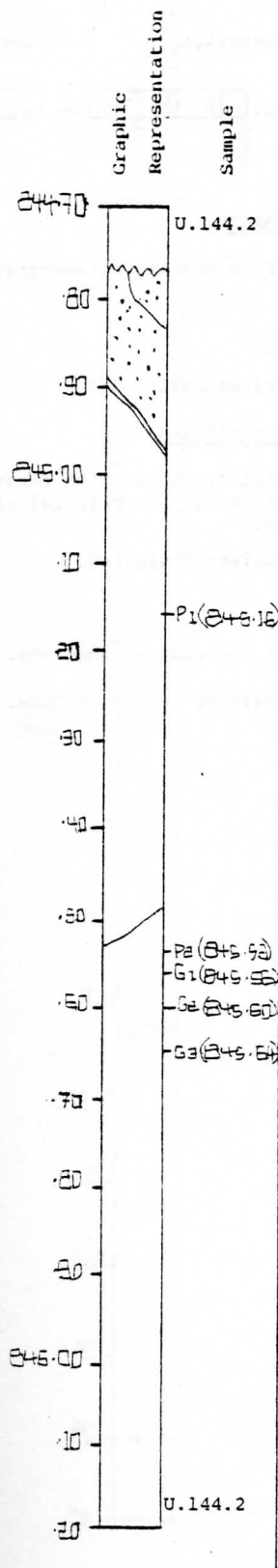
8	4	4	7	7
---	---	---	---	---

 cm to 

8	4	6	2	0
---	---	---	---	---

 cm

Box 145, Section 1



LITHOLOGY-PETROGRAPHY

Gray aphyric amygdaloidal basalt.

844.95 Sharp contact? fault, filled with zeolite and smectite. Brecciated?

845.10 - 846.20 Fine-grained green-gray, aphyric basalt.

STRUCTURE

Isotropic

VESICLES/AMYGDALES

844.70 Green smectite filled amygdales ~ 2 mm diameter.

844.95 - 846.20 Essentially none.

FRACTURES - VEINS - BRECCIA

844.80 Smectite on fracture.

845.50 Very fine fracture with smectite and zeolite.

ROCK ALTERATION

845.00 Pyrite on fracture. Grains about 1 mm diameter.

OTHER

844.70 - 846.20 Massive centre of flow.

Visual Core Description

Observer .... ILG.....

Depth Interval 

8	4	6	2	0
---	---	---	---	---

 cm to 

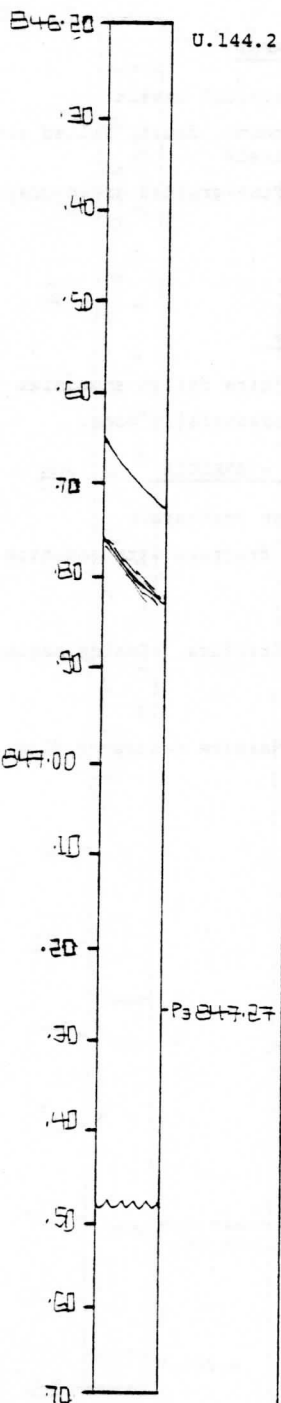
8	4	7	4	8
---	---	---	---	---

 cm

Box 145, Section 2

Graphic  
Representation

Sample

LITHOLOGY-PETROGRAPHY

846.20 - 847.50 Fine grained, green-gray, aphyric basalt.

VESICLES/AMYGDALES

846.20 - 847.70 Essentially none.

FRACTURES - VEINS - BRECCIA

846.70 Two parallel fractures with smectite and zeolites. Probably a fault. Parallel to fault in Section 1, box 145.

847.20 A few incipient fractures.

ROCK ALTERATION

846.70 No pyrite? Pervasive, smectite.

846.20 - 847.70 Massive centre of flow.

Visual Core Description

Observer ... ILG

Depth Interval 

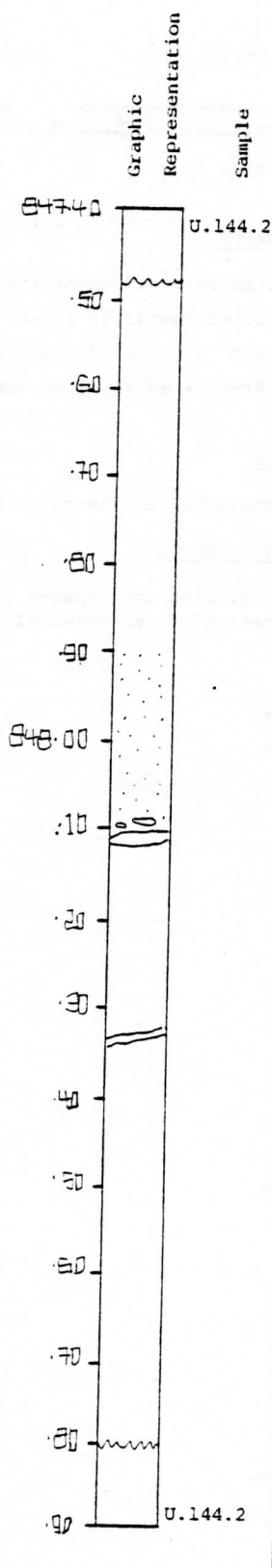
8	4	7	4	8
---	---	---	---	---

 cm to 

8	4	8	8	0
---	---	---	---	---

 cm

Box 145, Section 3.



LITHOLOGY-PETROGRAPHY

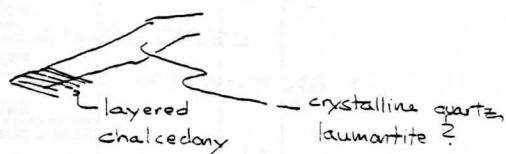
847.40 - 848.90 Fine grained grey-green, aphyric basalt.

848.25 Vein

848.32 Bladed crystals of laumontite?

STRUCTURE

848.12 Large cavity or vein



VESICLES/AMYGDALES

847.90 Small smectite filled amygdales (1 - 3 mm)

848.05 Small quartz lined amygdales.

ROCK ALTERATION

No pyrite

848.40 Increasing amounts haematite alteration.

Visual Core Description

Observer ... ILG .....

Depth Interval 

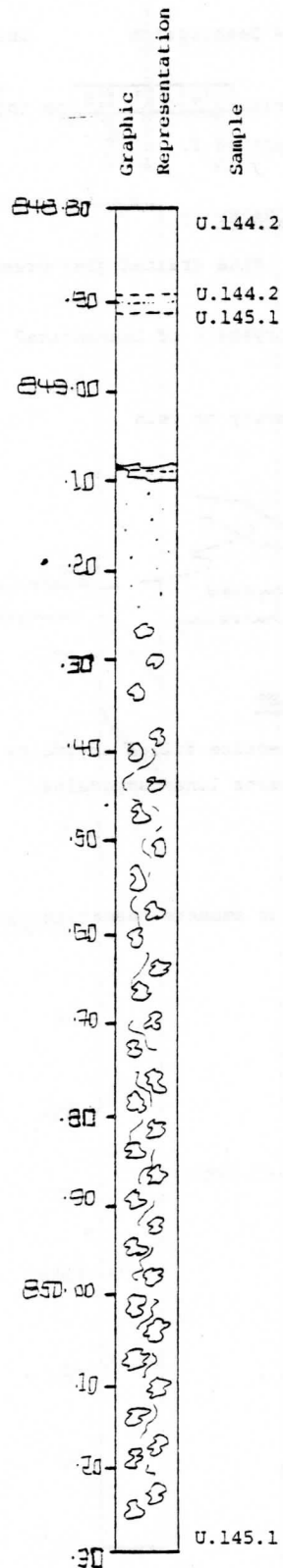
8	4	8	8	0
---	---	---	---	---

 cm to 

8	5	0	3	5
---	---	---	---	---

 cm

Box 145, Section 4.

LITHOLOGY-PETROGRAPHY

- 848.90 Well defined oxidized haematite layer.
- 849.08 Weakly defined haematite layer. V. irregular.
- 849.20 Smectite and 'zeolite' filled vesicles.
- 849.30 - 850.25 Brecciated flow top fragments up to 5 cm in diameter.

VESICLES/AMYGDALES

- 849.60 Some amygdaloidal fragments in breccia.

FRACTURES - VEINS - BRECCIA

- 849.80 'Zeolite' filling, open spaces in breccia and possible replacement of finer material.

ROCK ALTERATION

- 849.90 Haematite
- 849.00 Haematite

Visual Core Description

Observer ....CP.....

Depth Interval 

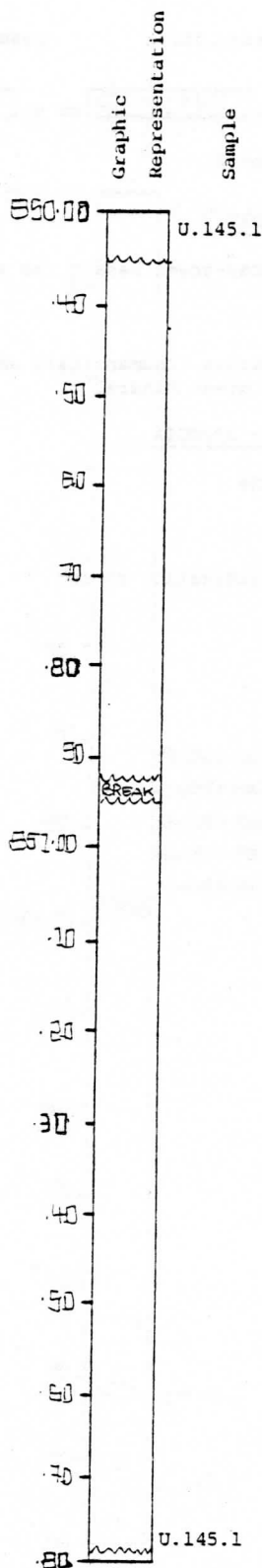
8	5	0	3	5
---	---	---	---	---

 cm to 

8	5	1	7	9
---	---	---	---	---

 cm

Box 146, Section 1



LITHOLOGY-PETROGRAPHY

Breccia (scoreaceous flow top), heterogeneous fragments, clay (expanding) and zeolite filling.

850.55 Porous

851.60 Grey-green, fine-grained, aphyric

VESICLES/AMYGDALES

851.60 Filled with zeolite and bright green mineral

FRACTURES - VEINS - BRECCIA

851.50 Veins filled with zeolite.

ROCK ALTERATION

851.55 Oxidization on fractures and in vesicles.