

Long Valley Coring Project, Inyo County, California, 1998—
Preliminary Stratigraphy and Images of Recovered Core





Long Valley Coring Project, 1998— Preliminary Stratigraphy and Images of Recovered Core

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**U.S. DEPARTMENT OF THE INTERIOR
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ABSTRACT

Phase III of the Long Valley Exploratory Well, the Long Valley Coring Project, obtained continuous core between the depths of 7180 and 9831 ft (2188 to 2996 meters) during the summer of 1998. This CD-ROM contains a compendium of information designed to facilitate post-drilling research focussed on the study of the core. Included are a preliminary stratigraphic column compiled primarily from field observations and a general description of well lithology for the Phase III drilling interval. Also included are high-resolution digital photographs of every core box (10 feet per box) as well as scanned images of pieces of recovered core. The user can easily move from the stratigraphic column to corresponding core box photographs for any depth. From there, compressed, "unrolled" images of the individual core pieces (core scans) can be accessed. Those interested in higher resolution core scans can go to archive CDs stored at a number of locations specified herein. All core is stored at the USGS Core Research Center in Denver, Colorado where it is available to researchers following the protocol described in this report. Preliminary examination of core images provided by this and the archive CDs should assist researchers in narrowing their choices when requesting core splits.

THE LONG VALLEY EXPLORATORY WELL

Long Valley Exploratory Well (LVEW) is situated on the resurgent dome of Long Valley Caldera, at the boundary of the Sierra Nevada and the Basin and Range Province in eastern California (Figure 1). Long Valley Caldera was created by a catastrophic, voluminous eruption of high-silica rhyolite, approximately 760,000 years ago. Since that time, minor volcanic activity in the area has recurred every few hundred years and major volcanic episodes associated with the caldera magma system occur at a frequency of about every 200,000 years (Bailey, 1989). LVEW was drilled to assess the potential of a deep geothermal resource beneath the resurgent dome, help improve assessments of volcanic risk from major or minor volcanic eruptions emanating from the central caldera, and provide a "hole of opportunity" for testing drilling instruments and technology (Figure 2).

LVEW began in 1989 as an engineering and scientific research well for the U.S. Department of Energy's Magma Energy Program. Original plans called for drilling to a total depth of 18,000 feet to be accomplished in four phases. Phase I was completed in 1989 to a depth of 2650 feet. In 1991, Phase II deepened the hole to 7200 feet, with emphasis on exploring the geothermal energy potential of a deep magmatic source. Data from Phase II suggested that downhole temperatures, which reached 100 °C at the bottom of the well, were too cool for geothermal development (Sass and others, 1991), although,

mineralogical evidence suggested that, in the past, the temperatures had been as high as 350 °C for the same depth (McConnell and others, 1997).

The Long Valley Coring Project (LVCP), operated during July through September 1998, was the third phase of drilling at LVEW. This phase deepened the existing hole from 7200 feet to a final depth of 9831 feet. Unlike the previous two phases of drilling in which core was recovered only at specific intervals, LVCP recovered continuous core throughout the entire section. LVCP was initiated to obtain additional information on magmatic processes both past and present in the caldera. It was envisioned that by deepening the pre-existing borehole it would be possible to gain information about the presence of small magmatic intrusions, the brittle-ductile transition above the inferred magma body, the nature of the temperature gradient, and perhaps the presence of a magma chamber or neogranite. In addition, drilling was expected to provide more details about geothermal energy potential, volcanic hazards and the stratigraphy of Long Valley Caldera, as well as to field-test a newly developed hybrid drilling unit (Sass and others, 1998).

To achieve these goals, LVCP was slated to deepen the existing hole to a depth between 11,500 and 13,000 feet. However, unexpected delays and short bit runs, attributed to thick layers of metaquartzite and minor engineering problems with the hybrid drilling unit, decreased daily recovered footage and cost precious drilling time and money. The final depth achieved was 9831 feet. Nevertheless, the retrieval of over 2500 feet of continuous core provided geologists with a wealth of new data and material for further research efforts.

LVEW STRATIGRAPHY

During Phases I and II, LVEW passed through the volcanic caldera fill and into the metamorphosed intrusions and metasedimentary basement rock. LVCP continued to drill through a thick sequence of metasedimentary rocks (Figure 3). The metamorphic material is correlative with the Mt Morrison roof pendant which is intruded by Sierra Nevada granites to the west and south of the drillsite. Specifically, graphitic, banded metapelites, metaquartzites, calcareous sandstones, and calc-silicate rocks most resembles the sequence of metamorphic rocks that make up the nearby Ordovician Mt. Aggie Formation (McConnell and others, 1998). Metamorphic patterns in the recovered core are indicative of several episodes of deformation suggesting that multiple processes of metamorphism were active, either simultaneously or sequentially, in the area. Indeed, an increase in contact metamorphic grade in the deepest portion of the core suggests that drilling approached the contact aureole of an intrusive body. Possible sources include Cretaceous age Sierra Nevada granite or neogranite representing the chilled margin from the Long Valley Caldera magma chamber.

LVCP drilling intersected several igneous intrusions in the metamorphic rocks. Their chemistry and alteration vary greatly, suggesting intrusion at different times or multiple episodes of emplacement and magmatic activity in the caldera. Several intrusions are petrographically similar to hypabyssal sills in the overlying volcanic fill found during the earlier phases of drilling. Their cumulative thickness and presence is suggested to account for much of the elevation of the resurgent dome (McConnell and others, 1995). These intrusions may ultimately provide information about the underlying magma chamber.

The presence or absence of geothermal potential should be reflected in changes of temperature with depth. Temperature's in LVEW are unexpectedly low (Figure 4). The last kilometer in the well is isothermal and the bottomhole temperature remains just above 100 °C. Despite these anomalously low temperatures, the core provides abundant evidence of deep hot water circulation. Thick zones of hydrothermal alteration and open veins of pristine crystals of hydrothermal minerals, such as quartz, epidote, chlorite, sulfide minerals, and blade calcite at depths of 8500-8550 and 9100 feet, suggest that vigorous hot water circulation was present in the recent past.

In addition to locally stretched and ductilely deformed metasedimentary rocks, the core contains lithologic and structural evidence of recent faulting. Faulting is indicated by fresh fault gouge, open vein brecciation, and open fractures. Two sections show the most significant evidence for recent faulting. Thick fault gouges occur between 8630 and 8910, presumably indicating the largest and most active faults. A deeper sequence stretches from approximately 9420 to 9800 feet, repeating the package of faulted rocks many times; suggesting an active extensional fault zone. This depth coincides with the calculated hypocenters of the Long Valley Caldera seismic swarm from September 1997 to January 1998 (oral communication, Steve Hickman). This intriguing evidence for young and contemporaneous faulting may allow for interpretations of the state of stress in the area of the resurgent dome.

Future plans for the wellsite include continued temperature logging and the emplacement of a package of instruments including seismometers and flow meters to increase the monitoring capabilities of the Long Valley Observatory. A series of add-on science research projects are also underway including detailing geochemistry of fluid inclusions within the hydrothermal minerals, Alpha recoil track age determinations of volcanic rocks, and geophysical modeling of the thermal regime of the caldera.

All of these findings and their implications will be reported at length in future papers. The purpose of this CD-ROM is to introduce the stratigraphy of LVEW from 7178 to 9831 feet and to present images of all recovered core.

SYSTEM REQUIREMENTS

Minimum system requirements:

This CD-ROM (OF99_158) was produced in accordance with the ISO 9660 Level 2 standard and Apple Computer's¹ hierarchical file system (HFS) standard.

The data and text on this CD-ROM require either a Macintosh¹ or compatible computer, an IBM² or compatible personal computer, or a UNIX workstation, all equipped with a CD-ROM drive. The Macintosh should have a 68030 or higher processor (PowerPC recommended), 8 megabytes RAM (64 MB recommended), Apple System Software version 7.1.2 or later (8.1 or later recommended), and a 13-inch color monitor that can display 256 colors (16.7 million colors recommended). The PC should have an 80386 or higher processor (Pentium³ recommended), Microsoft Windows⁴ 3.1 or higher (Windows 95, 98, or NT recommended), 8 megabytes RAM (64 MB recommended), and a VGA color monitor that can display 256 colors (16.7 million colors recommended). Macintosh, PCs, and UNIX computers should have Adobe Acrobat⁵ Reader 3.0 or higher (3.01 and 4.0 included on this disc for Macintosh and PC) or other software that can translate PDF files and an application that will view JPG files. For more information about viewing JPG files, see the section below on opening JPG files.

To get started:

On a Macintosh, double-click on the CD-ROM icon and double-click on the file 1_README.TXT. On a PC system with Windows, open Notepad or a word-processing application, change to the CD-ROM device, and open the file 1_README.TXT. On a UNIX work station, mount the CD. If you are unsure about the process of mounting CDs on the work station, see your system administrator for instructions. Once the CD is mounted, use your preferred ASCII text editor or web browser to open the file 1_README.TXT.

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CD STRUCTURE

This CD contains core box photographs, core scans, and a preliminary stratigraphic column of LVEW Phase III. The core box photographs were taken with a Kodak digital still camera and downloaded onto the Long Valley Coring Project computer system. The core scans were produced using a DMT CoreScan[®]. This apparatus rolls a piece of core along its long axis while collecting a continuous digital image, thus producing a planar image of the outer surface of the core.

The optimal way to view the images on this CD is through the PDF file using Adobe Acrobat Reader, supplied on the CD. Navigation through the PDF file should begin with the stratigraphic column. The column is shown on 6 pages with 440 feet on each page. On the left side of the column are the depth intervals and on the right are a series of box numbers and brackets which designate the section of core contained in each box. To zoom in on the stratigraphic column, choose the magnifying glass tool and click over the desired section. To zoom out, choose "zoom out" under the tool section of the menu bar. To view a box photo, use the hand tool and click on the desired box number which is highlighted blue, the document will automatically go to the corresponding box photo page. To view a core scan, use the hand tool to choose from the series of core scans listed underneath the box photo which are also highlighted blue. Clicking on a core scan number will launch a viewer application that will allow you to view the JPG image.

An alternative method of viewing the images is to open the image files directly from the directory structure on the CD. The first level of the directory structure is based on depth. Each directory spans 50-foot intervals. Inside each depth directory are two sub-directories: "BOX_PHOT" for the box photos and "CORE_SCA" for the core scans. Within the box photo subdirectory are JPG images of each core box. Within the core scan subdirectory are subdirectories for each core run (increasing numerical sequence of recovered core) and within these are the JPG images of the core scans. The condition of some of the core runs was such that they were unscannable. The subdirectories representing these runs therefore contain only an explanatory file called "NO_DATA.TXT". Because the core scans and box photos do not always coincide with the exact 50-foot interval assigned to the directories, these core scans and box photos are included in adjacent directories. Please note that depths were measured from the floor of the drill rig Kelly bushing, which was 30 feet above the actual surface of the ground.

OPENING JPG FILES

Most computer systems can open JPG files using existing software (e.g. drawing programs or a web browser). Following are instructions for configuring Window, Macintosh, or UNIX systems to open JPG files.

Windows users:

Double-click the JPG file and select the application from the choices displayed. If a viewing application does not automatically launch, use the process outlined below.

Open Windows Explorer, select "View", select "Folder Options", select the "File Types" tab, and scroll down and see if "JPEG Image" is present. If so, select "Edit..." from Edit File Type, select "Edit" again, select "Application used to perform action", select "Browse", and navigate to the application of your choice. Web browsers such as Netscape Navigator/Communicator or Microsoft Internet Explorer will work or you can use drawing or image processing applications such as Adobe Photoshop, or Photoworks Darkroom.

If "JPEG Image" is not present in the "File Types tab", select "New Type..." and fill in the dialog box. "Description of type" is "JPEG Image", "Associated extension" is ".jpg", "Content Type" is "image/jpg", "Default Extension for Content Type" is ".jpg". For the

“Actions” window, select the “New...” button. Under “Action” enter “open”, under “Application used to perform action” select “Browse”, and navigate to the application of your choice.

Macintosh users:

Double-click the JPG file and select the application from the choices displayed. Alternatively, you can simply “drop launch” the file. JPG files can also be opened from within applications that can view JPEG’s such as Netscape Navigator, Microsoft Internet Explorer, Adobe Photoshop, Aaron Giles’ JPEGView, Kevin Mitchell’s GIFConverter, Storm Software’s EasyPhoto. In these, as in other Macintosh applications, files are opened by selecting File, Open, navigating to the file to be opened, and clicking Open.

UNIX users:

Double-click the JPG file. This will automatically open the preferred JPG viewer on your UNIX work station.

READING INSTRUCTIONS -

Understanding Core Box and Core Scan Nomenclature

LVEW Core Box 340
Depth Interval 8735.9'-8743.6'



Core Scans included in this box
(listed by piece going downhole):

[235C092A](#)
[236A010A](#)
[236A030A](#)

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

Above is a sample box photo page from the PDF file. Above the box photo is the core box number and corresponding depth interval. Depth increases to the right and down through the rows. The core pieces for which there are core scans are linked and highlighted in blue below the core box.

Core scans have 8-character names. The first three characters indicate the core run number. The fourth character indicates a set of pieces that naturally fit together, starting with A. The fifth and sixth characters are subpiece numbers within the set. The eighth character describes the condition of the core piece as follows:

- A-Artificial. Pieces longer than two feet were artificially cut in order to fit into a core box. These pieces were later fit back together to be scanned, and a “0” was placed as the seventh character. Some pieces were longer than the core box *and* longer than the three foot bed of the core scanner. These pieces needed to be scanned separately because they did not fit in the core scanner. In this case, the separate scans had seventh character designators beginning with 1 and increasing as needed.
- E-extra. This usually reflects core picked up from a previous run.
- R-rolled. This designates pieces of core recovered during a run that have been damaged by the drilling and thus the exact depth cannot be determined.

CORE REQUEST PROTOCOL

All of the core from LVEW is stored at the USGS Core Research Center (CRC) at the Federal Center in Denver, Colorado. The CRC staff is severely limited, so we strongly urge that researchers begin core selection with examination of the core box photographs and core scan images contained herein, and then proceed (if necessary) to study of the high-resolution images on the Archive CDs. Archive CDs are located at the CRC (Denver, CO), Sandia National Laboratories (Albuquerque, NM), DOSECC Inc. (Salt Lake City, UT), USGS Library (Menlo Park, CA), and the Data Clearing House, International Continental Scientific Drilling Program (Potsdam, Germany). For full addresses see list below.

After a researcher has narrowed down his/her choices through examination of core images, a request to examine specific core should be sent to: Thomas C. Michalski, Director, USGS Core Research Center (see address list below).

A mutually acceptable schedule will then be agreed upon for a visit to the CRC. At the same time, a proposal detailing the approximate number and lengths of core, the research plan for the core, and a schedule for return of the pieces not destroyed should be forwarded to:

LVEW Core Allocation Panel, c/o Vicki S. McConnell, Oregon Department of Geology and Mineral Industries (see address list below).

CRC Staff will, as time and other commitments permit, assist with sampling of cores. However, it may be necessary, when large numbers of splits are required and/or deadlines are tight, for PIs to pay for additional help.

Financial arrangements for slabbing, plugging, or specialized machining of large batches of core will need to be made with CRC approved contractors.

Archive CD locations and core repository

Thomas C. Michalski, Director, USGS Core Research Center
PO Box 25046, Denver Federal Center, MS 975
Denver, CO, 80225-0046
email: tmichalski@usgs.gov
phone: 303-202-4852
fax: 303-202-4856.

LVEW Core Allocation Panel, c/o Vicki S. McConnell
Oregon Department of Geology and Mineral Industries
1831 First Street
Baker City, OR 97184-3442
email: Vicki.McConnell@state.or.us
phone: 541-523-3133
fax: 541-523-5992.

Sandia National Laboratories
c/o John T. Finger
Albuquerque, NM 87185-1033
email: jtfinge@sandia.gov
phone: 505-844-8089
fax: 505-844-3952

OR

c/o Ronald D. Jacobson
Albuquerque, NM 87185-1033
email: rdjacob@sandia.gov
phone: 505-844-0938
fax: 505-844-3952

International Continental Scientific Drilling Program
c/o Ronald Conze, Information Manager of Operational Support Group ICDP
Telegraphenberg, D-14473 Potsdam
email: conze@gfz-potsdam.de
phone: +49 (0) 331 288 1513
fax +49 (0) 331 288 1502/1512

DOSECC INC
c/o Dennis Nielson, Energy and Geoscience Institute
University of Utah, 423 Wakara Way
Salt Lake City, UT 84108
email: dnielson@egi.utah.edu
phone: 801-585-6855
fax: 801-585-3540

USGS – Library
c/o Nancy Blair
345 Middlefield Road, MS 955
Menlo Park, CA 94025
email: nblair@igsmglib01.wr.usgs.gov
phone: 650-329-5029
reference desk: 650-329-5027

ACKNOWLEDGEMENTS

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REFERENCES CITED

- Bailey, R.A., 1998, oral communication.
- Bailey, R.A., 1989, Geologic map of Long Valley Caldera, Mono-Inyo volcanic chain, and vicinity, Eastern California, USGS Miscellaneous Investigations Series Map I-1933.
- Hickman, S.H., 1998, oral communication.
- McConnell, V.S., Shearer, C.K., Eichelberger, J.C., Keskinen, M.J., Layer, P.W., and Papike, J.J., 1995, Rhyolite intrusions in the intracaldera Bishop Tuff, Long Valley Caldera, California, *Journal of Volcanology and Geothermal Research*, v. 67, p. 42-60.
- McConnell, V.S., Valley, J.V., and Eichelberger, J.C., 1997, Oxygen isotope compositions of intracaldera rocks: hydrothermal history of the Long Valley Caldera, California, *Journal Volcanology and Geothermal Resources*, v. 76, p. 83-109.
- McConnell, V.S., Roach, A.L., Sackett, P.C., and Sass, J.H., 1989, Long Valley Caldera revealed: A glimpse beneath a Quaternary caldera, *EOS, Transactions, American Geophysical Union*, v. 79, no. 36, p. 429-432.
- Sass, J.H., Jacobson, R., and Sorey, M.L., 1991, Implications of thermal observations in the Long Valley Exploratory Well, *EOS, Transactions, American Geophysical Union*, v. 72, p. 505.
- Sass, J.H., Finger, J.T., and McConnell, V.S., 1998, The Long Valley Coring Project, *Geothermal Resources Council Bulletin*, v. 27, p. 43-50.

FIGURES

Long Valley Caldera

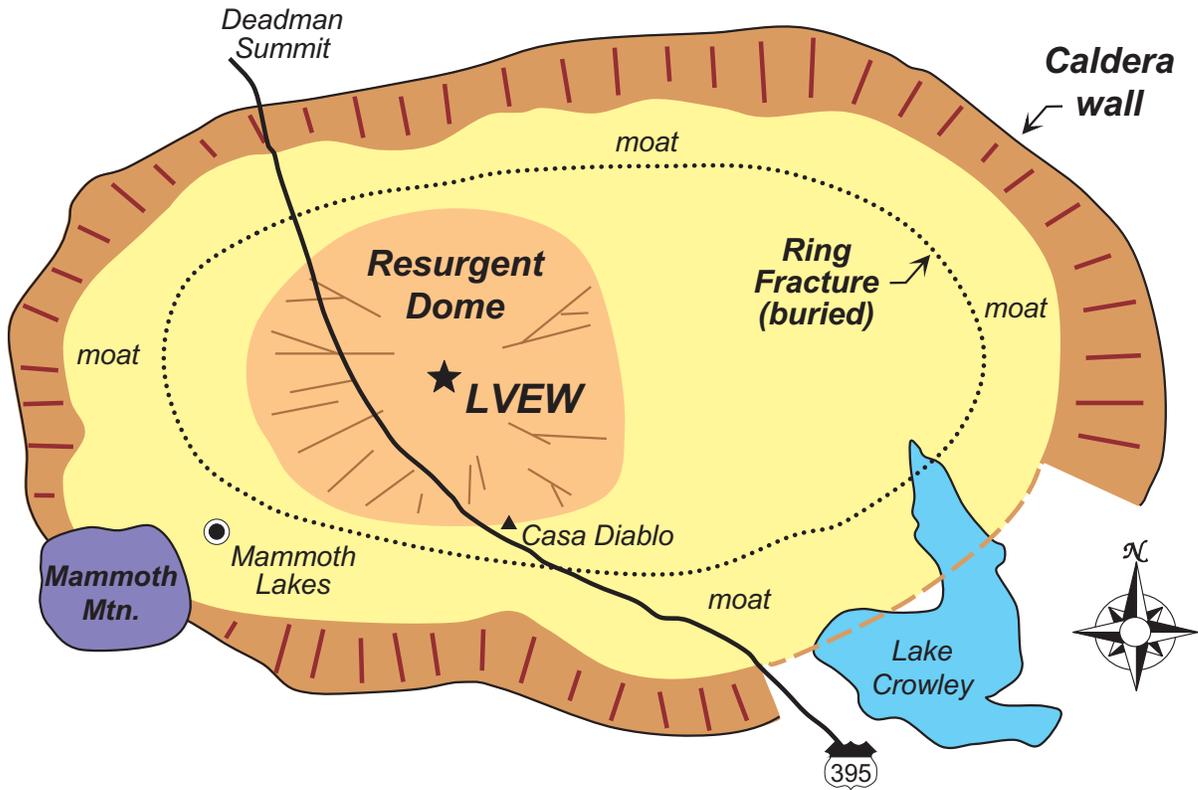


Figure 1. Generalized map of the Long Valley Caldera, California, showing the resurgent dome, Long Valley Exploratory Well, and significant post-caldera-collapse volcanic areas.

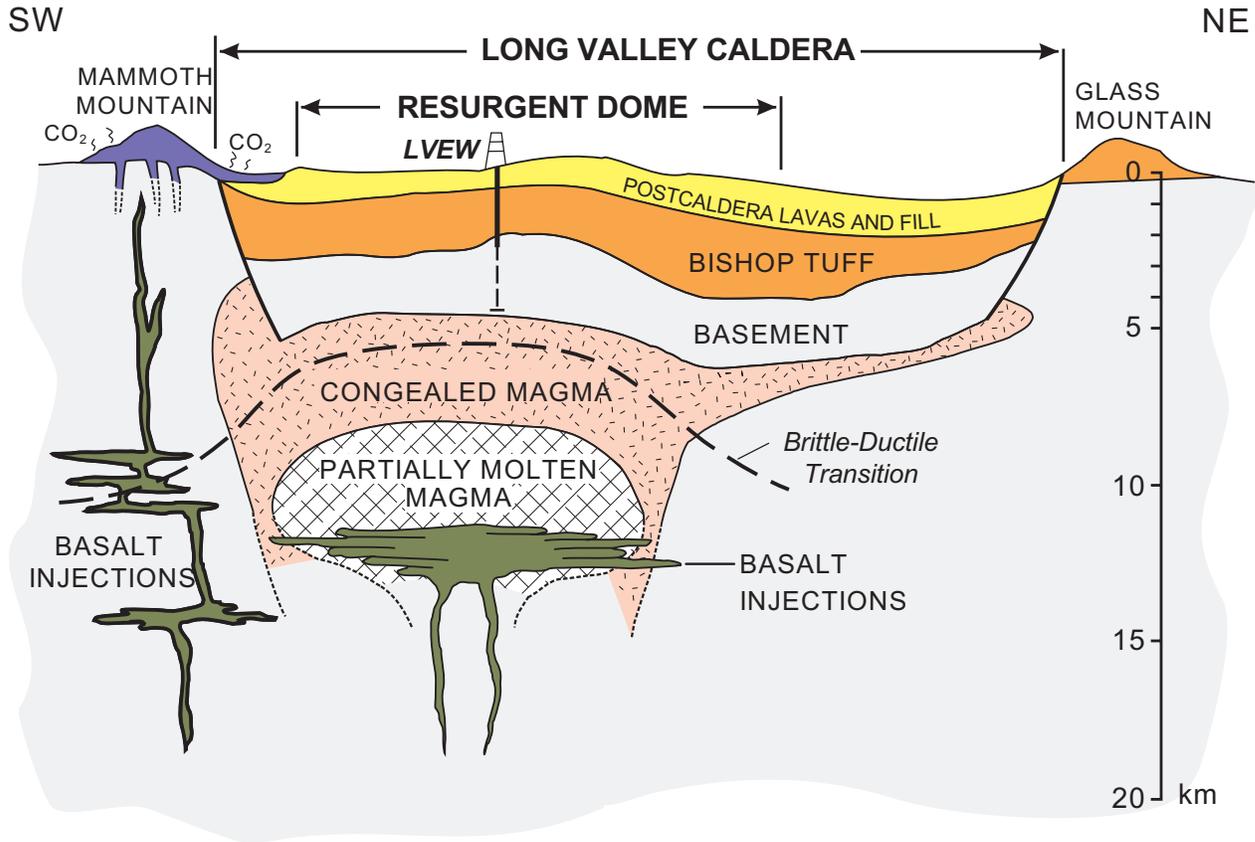


Figure 2. Cross-section from southwest-to-northeast across the caldera complex (R.A. Bailey, oral communication, 1998). The working hypothesis for the presence of recurring volcanic activity associated with the caldera is that mafic injections occur periodically resulting in convective overturn of the rhyolitic magma chamber causing near surface intrusions and volcanic activity. The intrusions then drive periodic hydrothermal fluxes possibly originating in the basement rocks and then traveling laterally through the caldera volcanic fill.

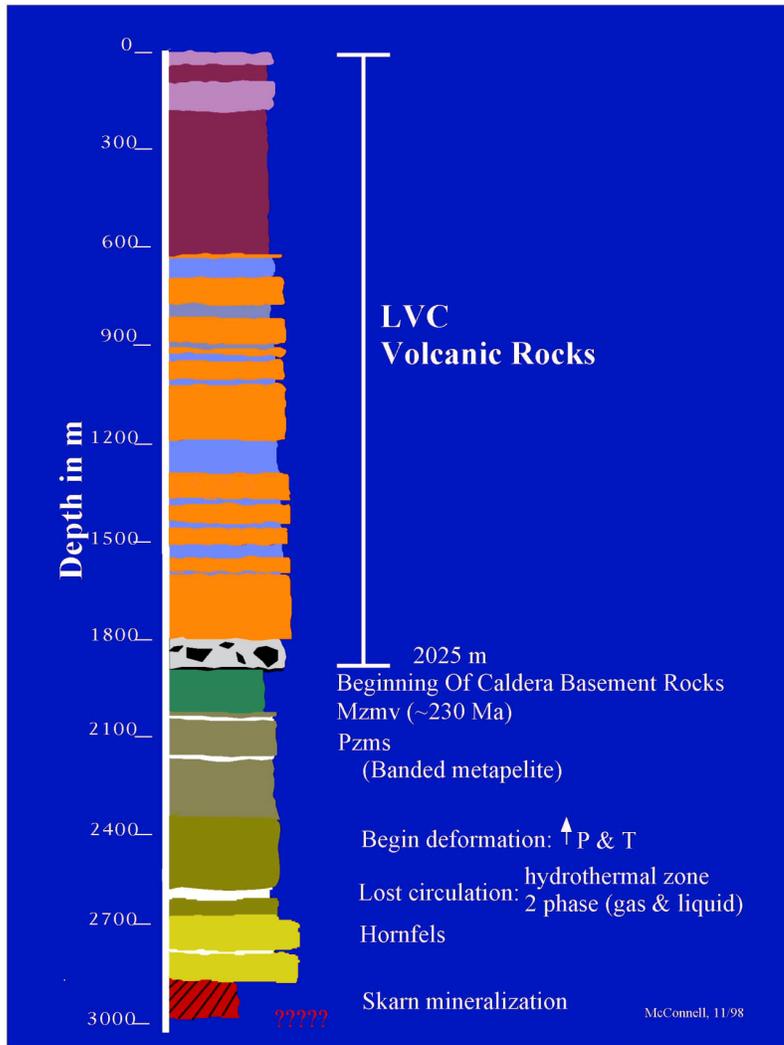


Figure 3. Generalized stratigraphy of the entire Long Valley Exploratory Well. Phases I and II passed through the post-caldera rhyolite flows and domes of the Early Rhyolite unit (purple) and the intra-caldera ashflow fill of the Bishop Tuff (orange). Intruded into the intra-caldera Bishop Tuff are numerous hypabyssal Early Rhyolite granophyric rocks (blue). The basement to the caldera consists of metavolcanic (Mzmv) and metasedimentary rocks (Pzms). The banded metapelites, hornfels, and metaquartzites (white), and calc-silicate rocks are correlated to the Mt. Morrison roof pendant in the nearby Sierra Nevada. Phase III (Long Valley Coring Project) reaches from 7200 to 9831 feet.

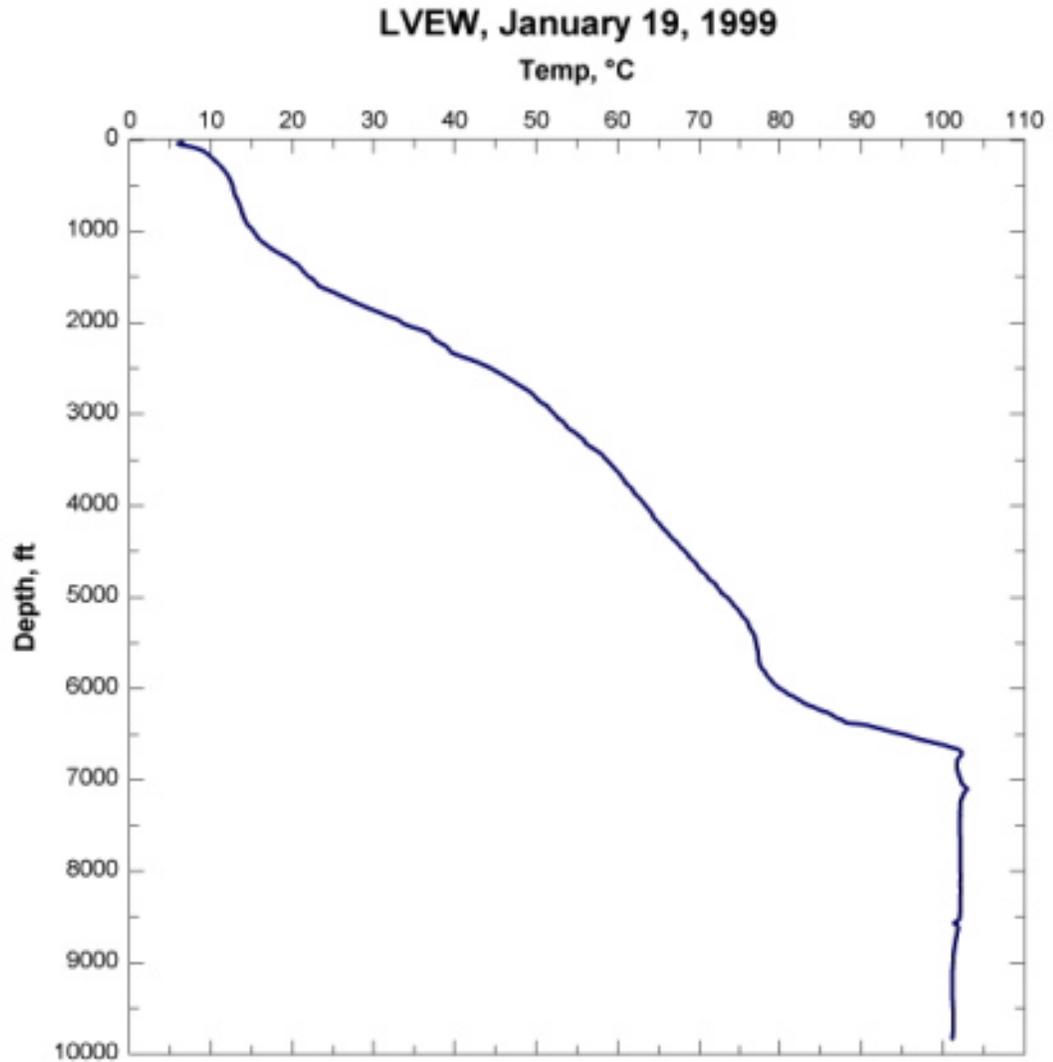
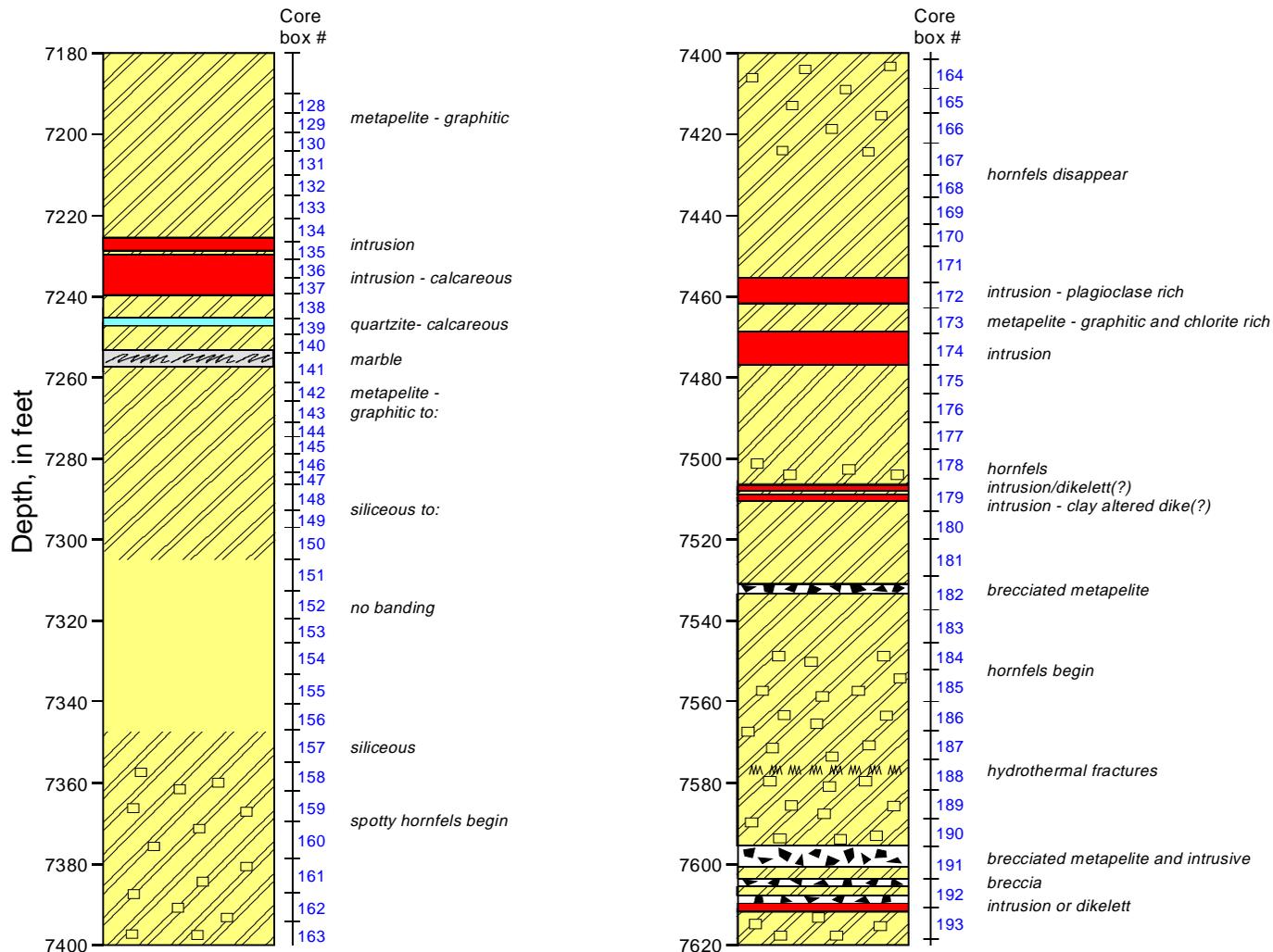
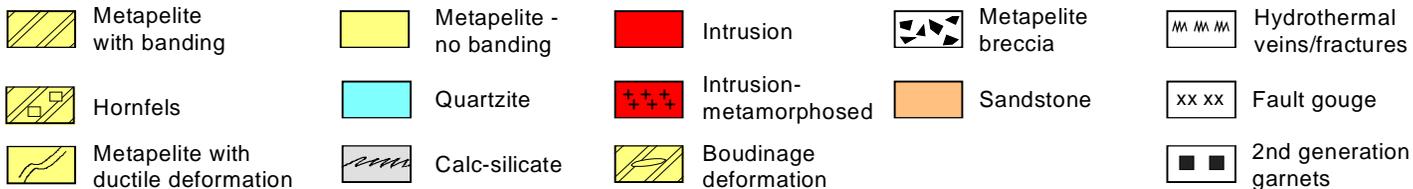


Figure 4. Temperature profile for LVEW from data collected by Ron Jacobson, Sandia National Laboratories. Note the relatively normal geothermal gradient to approximately 6500 feet. Temperatures then become essentially isothermal to the bottom of the well.

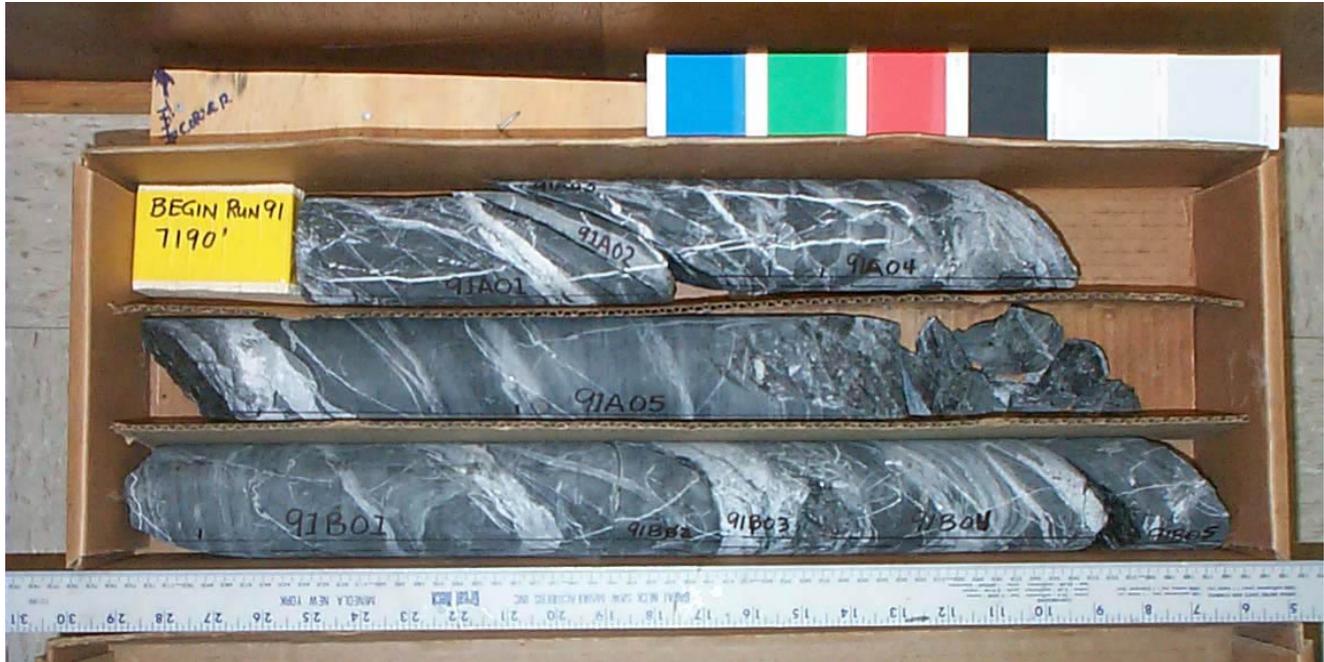
Stratigraphic Column for LVEW Phase III, page 1



Explanation



LVEW Core Box 128
Depth Interval 7190.0'-7194.8'



Core Scans included in this box
(listed by piece going downhole):

091A0100
091A0400
091A0500
091B0100
091B0400
091B0500

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 129

Depth Interval 7194.8'-7199.7'

Box Photo Missing

Core Scans included in this box
(listed by piece going downhole):

091B0600

091B0900

091B1100

091B1200

091B1300

091B1400

091B1500

091B1600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 130
Depth Interval 7199.7'-7204.0'



Core Scans included in this box
(listed by piece going downhole):

092A0100
092B0500
092D0100
092D0400

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 131
Depth Interval 7204.0'-7210.0



Core Scans included in this box
(listed by piece going downhole):

093A0300
093C0100
093C0200
093C0300

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 132
Depth Interval 7210.0'-7215.0'



Core Scans included in this box
(listed by piece going downhole):

093C0400
094B0300
094C0100
094E0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 133
Depth Interval 7215.0'-7220.5'



Core Scans included in this box
(listed by piece going downhole):

096A0200
096A0300
096A0400
096A0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 134
Depth Interval 7220.5'-7226.3'



Core Scans included in this box
(listed by piece going downhole):

096A0600
096A0800
096A1000
096A1100
096A1200
096A1600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 135
Depth Interval 7226.3'-7230.7'



Core Scans included in this box
(listed by piece going downhole):

096A1800
096A2000
096A2100
096A2200
097A0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 136
Depth Interval 7230.7'-7235.6'



Core Scans included in this box
(listed by piece going downhole):

097A020A
097B0100
097B0200
097B0300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 137
Depth Interval 7235.6'-7239.5'



Core Scans included in this box
(listed by piece going downhole):

097B1000
097B1200
097B1300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 138
Depth Interval 7239.5'-7245.7'



Core Scans included in this box
(listed by piece going downhole):

098C0200
098D0100
099B0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 139
Depth Interval 7245.7'-7249.5'

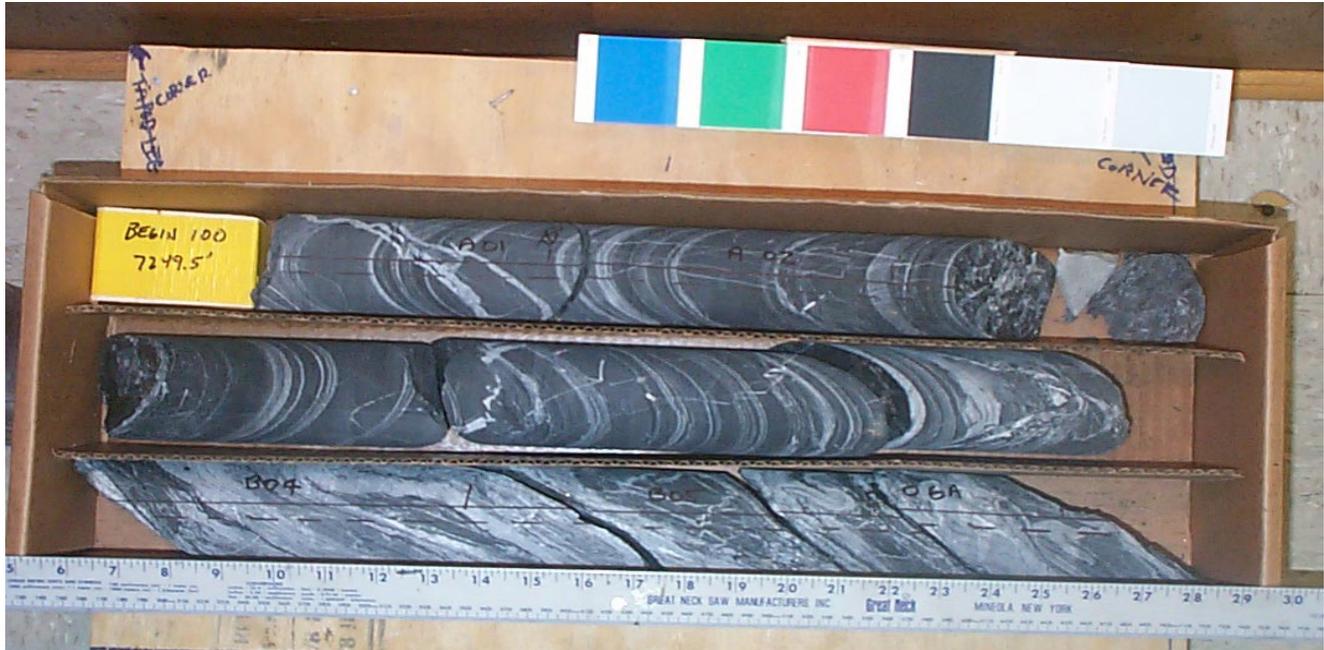


Core Scans included in this box
(listed by piece going downhole):

099D0100
099E0300
099E0400
099E0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 140
Depth Interval 7249.5'-7254.0'



Core Scans included in this box
(listed by piece going downhole):

100A0100
100A0200
100B0100
100B0200
100B0300
100B0400
100B0500
100B060A

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 141
Depth Interval 7254.0'-7261.0'



Core Scans included in this box
(listed by piece going downhole):

100B0700

101B0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 142
Depth Interval 7261.0'-7265.9'



Core Scans included in this box
(listed by piece going downhole):

101B0300
101B040A
101B0500
101B070A
101B0800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 143
Depth Interval 7265.9'-7271.1'



Core Scans included in this box
(listed by piece going downhole):

101B0900
101B100A
101B1100
101B1500

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 144
Depth Interval 7271.1'-7274.5'



Core Scans included in this box
(listed by piece going downhole):

102A010E
102A020E
102A030E
102C0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 145
Depth Interval 7274.5'-7278.8'



Core Scans included in this box
(listed by piece going downhole):

102C0200
102C0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 146
Depth Interval 7278.8'-7283.5'



Core Scans included in this box
(listed by piece going downhole):

102C0400
102C050A
102C060A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 147
Depth Interval 7283.5'-7286.2'



Core Scans included in this box
(listed by piece going downhole):

102C06A
102C0700
102C0800
103A0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 148
Depth Interval 7286.2'-7292.7'

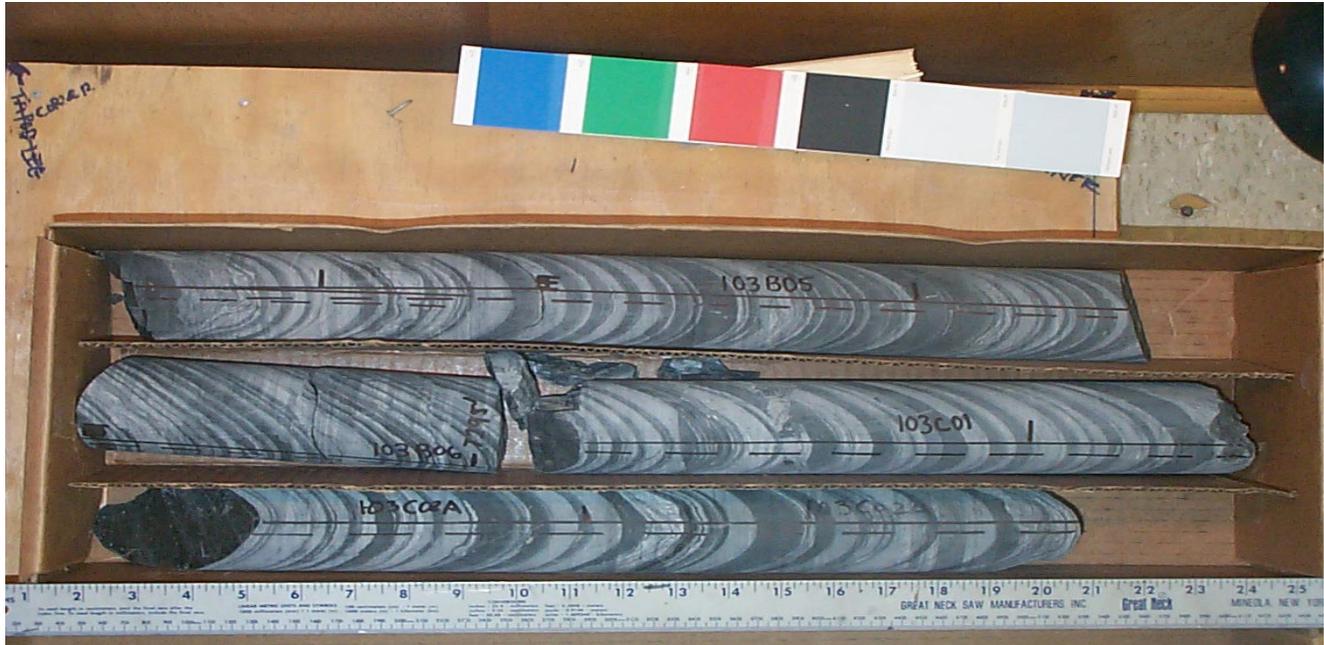


Core Scans included in this box
(listed by piece going downhole):

103A0200
103B0200
103B0300
103B0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 149
Depth Interval 7292.7'-7297.8'



Core Scans included in this box
(listed by piece going downhole):

103B0500
103B0600
103C0100
103C020A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 150
Depth Interval 7297.8'-7304.7'



Core Scans included in this box
(listed by piece going downhole):

103C020A
103C0400
103C0500
103C0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 151
Depth Interval 7304.7'-7312.6'

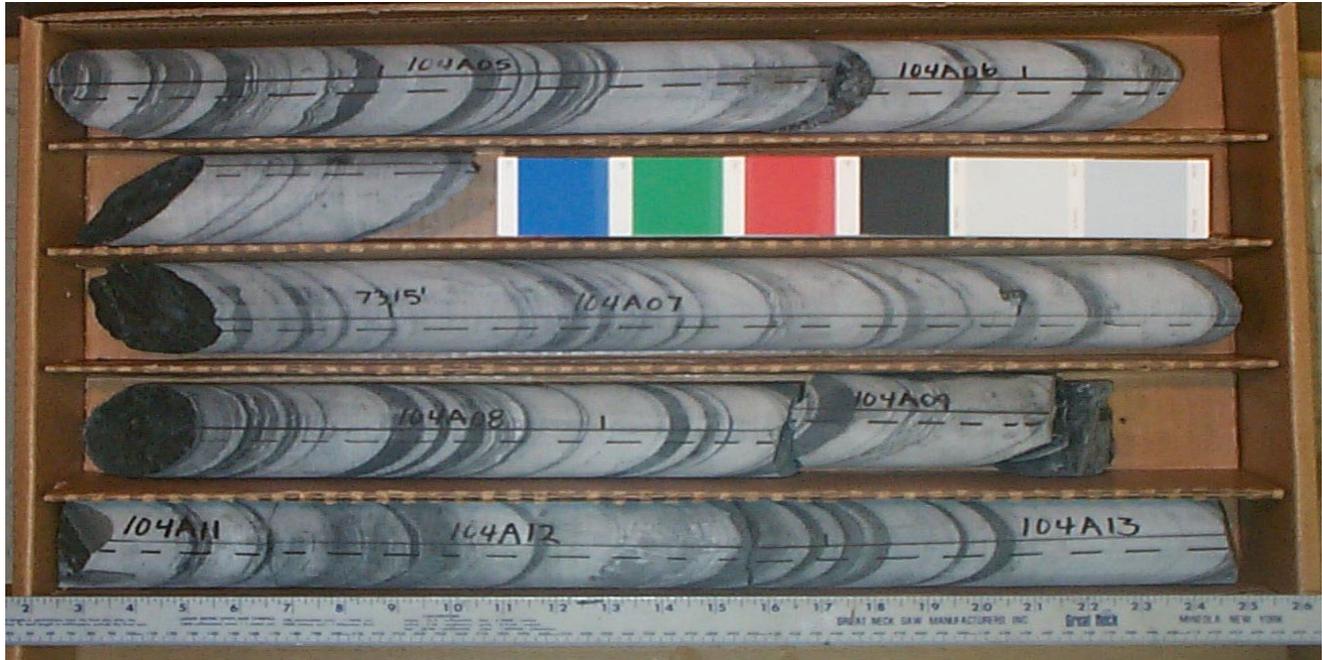


Core Scans included in this box
(listed by piece going downhole):

104A0100
104A0200
104A0300
104A040A

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 152
Depth Interval 7312.6'-7319.6'



Core Scans included in this box
(listed by piece going downhole):

104A0500
104A0600
104A070A
104A0800
104A0900
104A1100
104A1200
104A1300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 153
Depth Interval 7319.6'-7325.3'



Core Scans included in this box
(listed by piece going downhole):

104A140A
104A1500
104B0100
104B0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 154
Depth Interval 7325.3'-7333.0'



Core Scans included in this box
(listed by piece going downhole):

104B0300
105A0100
105A020A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 155
Depth Interval 7333.0'-7340.5'



Core Scans included in this box
(listed by piece going downhole):

105A090A

105A1000

105A120A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 156
Depth Interval 7340.5'-7346.9'



Core Scans included in this box
(listed by piece going downhole):

105C050A
106A010A
106A020A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 157
Depth Interval 7346.9'-7354.7'



Core Scans included in this box
(listed by piece going downhole):

106A0300
106A0400
106A060A
106A0700
106A0900
106A1000
106A1200
106A1500
106A160A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 158
Depth Interval 7354.7'-7361.9'

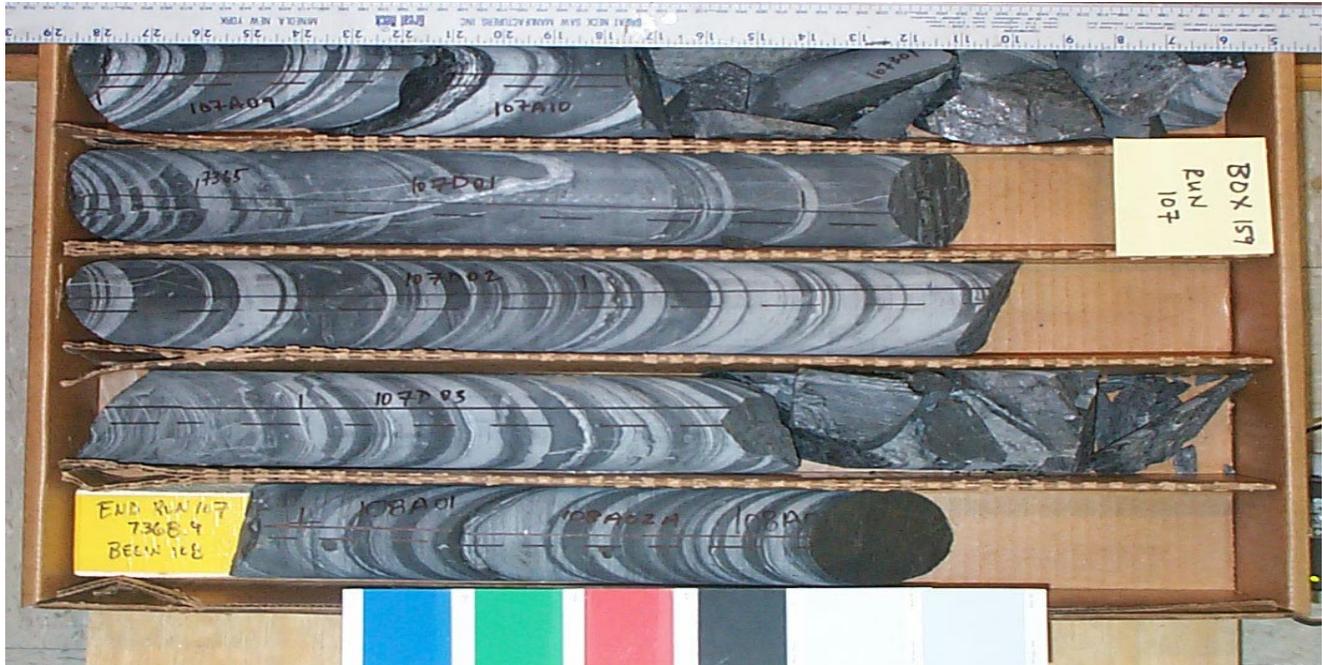


Core Scans included in this box
(listed by piece going downhole):

106A160A
106A1700
106A1800
106A1900
107A0100
107A050A
107A0600
107A0800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 159
Depth Interval 7361.9'-7369.8'



Core Scans included in this box
(listed by piece going downhole):

107A0900
107A1000
107D0100
107D0200
107D0300
108A0100
108A0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 160
Depth Interval 7369.8'-7378.6'

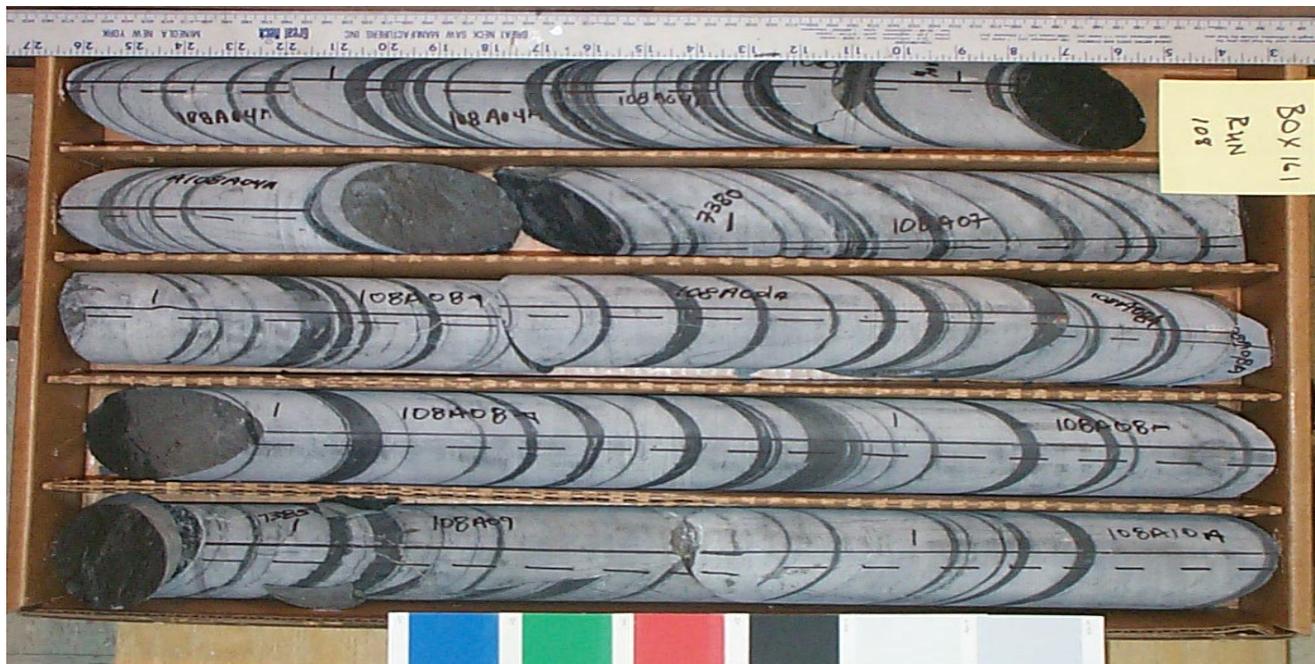


Core Scans included in this box
(listed by piece going downhole):

108A0200
108A031A
108A032A
108A040A

See the “reading instructions” section of the introduction for help interpreting ore box photos and core piece nomenclature

LVEW Core Box 161
Depth Interval 7378.6'-7387.0'



Core Scans included in this box
(listed by piece going downhole):

108A040A
108A0700
108A080A
108A090A
108A1000

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 162
Depth Interval 7387.0'-7394.0'



Core Scans included in this box
(listed by piece going downhole):

108A1000
108A1100
108A1300
108A1400
109A011A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 163
Depth Interval 7394.0'-7401.6'



Core Scans included in this box
(listed by piece going downhole):

109A012A
109A0300
109A040A
109A0600
109A081A
109A082A
109A1000
109A1100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 164
Depth Interval 7401.6'-7408.4'



Core Scans included in this box
(listed by piece going downhole):

109A121A

109A122A

109A123A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 165
Depth Interval 7408.4'-7414.7'



Core Scans included in this box
(listed by piece going downhole):

109A123A
109A1300
110A0100
110A020A
110A031A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 166
Depth Interval 7414.7'-7422.1'



Core Scans included in this box
(listed by piece going downhole):

110A031A

110A032A

110A040A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 167
Depth Interval 7422.1'-7430.0'



Core Scans included in this box
(listed by piece going downhole):

110A070A
110A080A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 168
Depth Interval 7430.0'-7435.6'



Core Scans included in this box
(listed by piece going downhole):

111A010A
111A021A
111A022A
111A023A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 169
Depth Interval 7435.6'-7442.1'



Core Scans included in this box
(listed by piece going downhole):

111A022A
111A023A
111A031A
111A032A
111A040A
111A0500
111A1100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 170
Depth Interval 7442.1'-7447.5'



Core Scans included in this box
(listed by piece going downhole):

112A0100
112A0200
112B0100
112B0200
112B0300

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 171
Depth Interval 7447.5'-7456.3'



Core Scans included in this box
(listed by piece going downhole):

112B0400
112B0600
112B0700
112B0800
112B0900
112B1000
112B1100
112B1300
112B1700

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 172
Depth Interval 7456.3'-7463.1'



Core Scans included in this box
(listed by piece going downhole):

112B1800
112B1900
112B2000
112B2100
112B2200
112B2300
112B2400
114A010A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 173
Depth Interval 7463.1'-7469.3'



Core Scans included in this box
(listed by piece going downhole):

114A010A
114A0200
114A0300
114A0500
114A0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 174
Depth Interval 7469.3'-7476.8'



Core Scans included in this box
(listed by piece going downhole):

114B0300
114B0500
114B061A
114B062A
114B071A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 175
Depth Interval 7476.8'-7484.1'



Core Scans included in this box
(listed by piece going downhole):

114B072A
115A0100
115A0200
115A0300
115A0600
115A0800
115A0900
115A1000
115A1200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 176
Depth Interval 7484.1'-7490.9'



Core Scans included in this box
(listed by piece going downhole):

115A1400
115A1500
115A1600
115A1700
115A1800
115A200A
115A2100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 177
Depth Interval 7490.9'-7497.7'

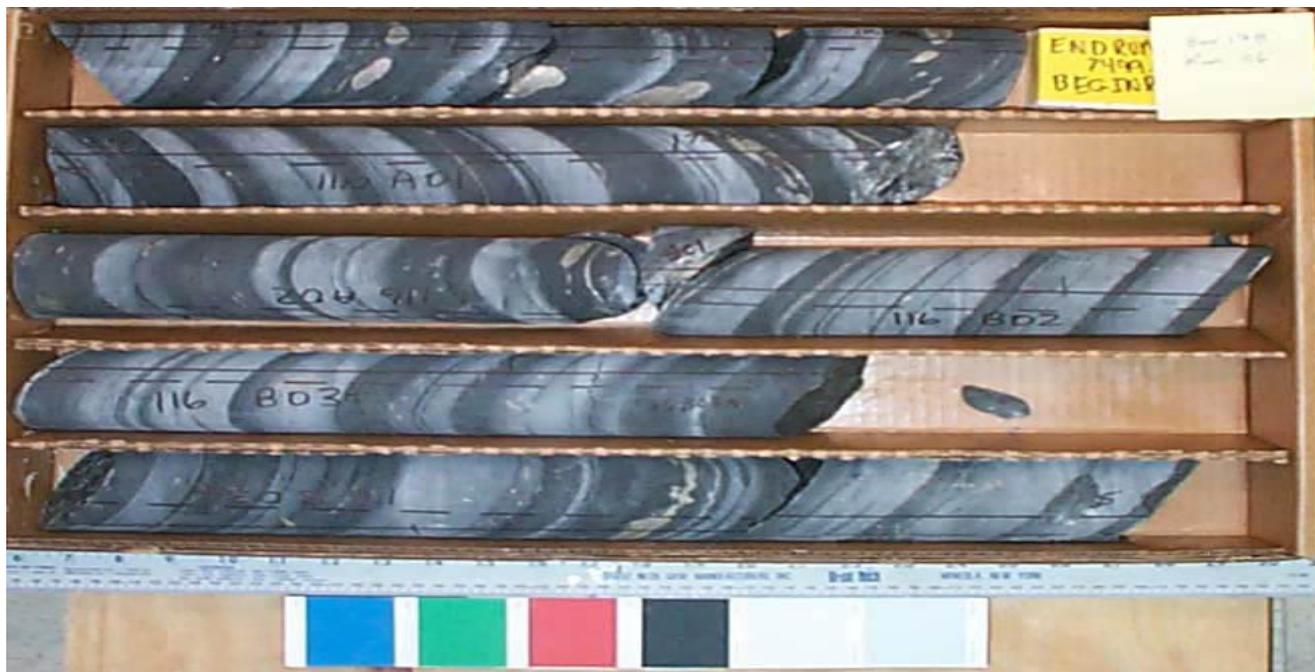


Core Scans included in this box
(listed by piece going downhole):

115A2200
115A231A
115A232A
115A241A
115A242A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 178
Depth Interval 7497.7'-7505.0'



Core Scans included in this box
(listed by piece going downhole):

115A241A
115A242A
115A2500
116A0100
116A0200
116B0200
116B031A
116B032A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 179
Depth Interval 7505.0'-7513.0'



Core Scans included in this box
(listed by piece going downhole):

116B0600
116C0200
116C0300
116C0400
116C0600
116C0900
116C1100
116C1200
116C1300
116C1400
116C1500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 180
Depth Interval 7513.0'-7520.0'



Core Scans included in this box
(listed by piece going downhole):

116C1600
116D0100
116F0100
117A0100
117A0200
117A0300
117A0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 181
Depth Interval 7520.0'-7529.0'



Core Scans included in this box
(listed by piece going downhole):

117A0500
117A0600
117A0700
117A0800
117A0900
117B0100
117B0200
118A0100
118A0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 182
Depth Interval 7529.0'-7537.5'



Core Scans included in this box
(listed by piece going downhole):

118A0500
118A0600
118C0200
118E0200
118E0300
118E0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 183
Depth Interval 7537.5'-7545.7'



Core Scans included in this box
(listed by piece going downhole):

118E0900
118E1000
118E1200
118E1300
119A0200
119A0500
120A0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 184
Depth Interval 7545.7'-7552.2'



Core Scans included in this box
(listed by piece going downhole):

120A0200
120A0400
120A0500
120A0600
120A0700
120A0800
120A0900
120A101A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 185
Depth Interval 7552.2'-7560.0'



Core Scans included in this box
(listed by piece going downhole):

120A101A
120A102A
120A1100
120A120A
120A1300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 186
Depth Interval 7560.0'-7567.0'



Core Scans included in this box
(listed by piece going downhole):

121A0100
121A0200
121A031A
121A032A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 187
Depth Interval 7567.0'-7574.1'



Core Scans included in this box
(listed by piece going downhole):

121A040A
121A050A
121A060A
121A071A
121A072A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 188
Depth Interval 7574.1'-7581.7'



Core Scans included in this box
(listed by piece going downhole):

121A0800
121A0900
122B041A
122B042A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 189
Depth Interval 7581.7'-7588.7'

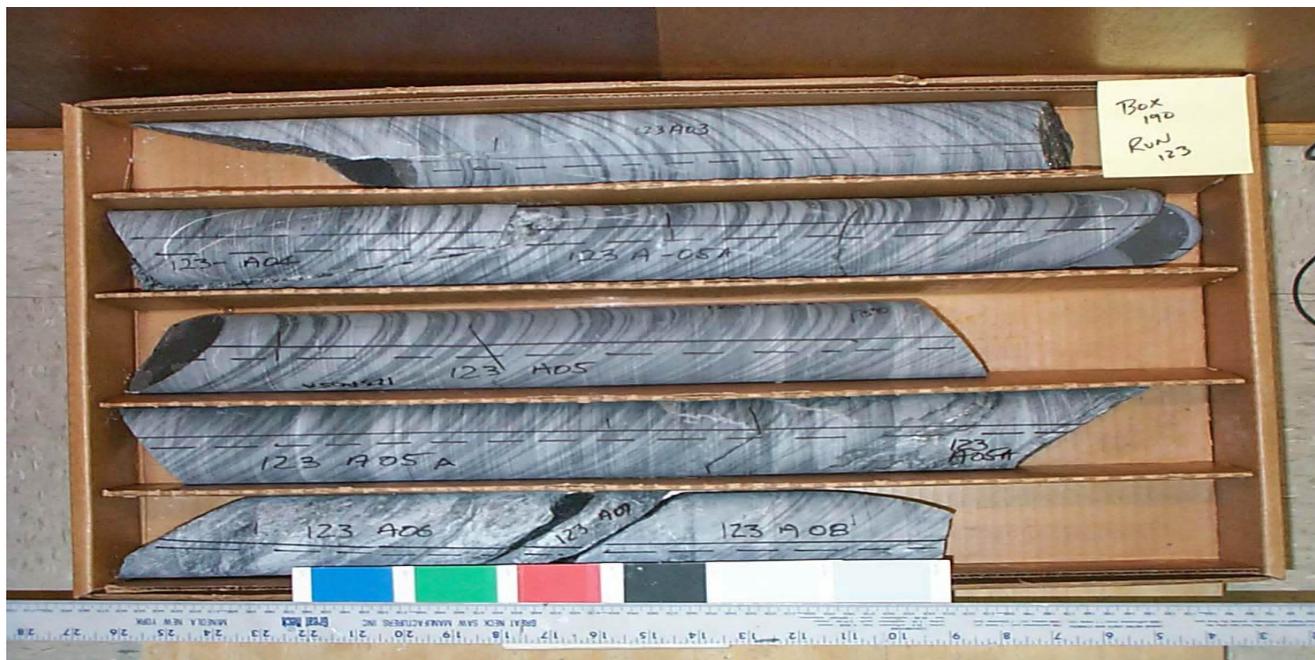


Core Scans included in this box
(listed by piece going downhole):

122B042A
122B0600
122B070A
122B0800
122B0900
122B1000
122B1100
123A0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 190
Depth Interval 7588.7'-7595.7'



Core Scans included in this box
(listed by piece going downhole):

123A0300
123A051A
123A052A
123A053A
123A0600
123A0800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 191
Depth Interval 7595.7'-7603.8'



Core Scans included in this box
(listed by piece going downhole):

123A0900
123A1000
123A1200
123A1300
124A0100
124A0200
124C0100
124C0200
124C0800
124C0900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 192
Depth Interval 7603.8'-7610.6'



Core Scans included in this box
(listed by piece going downhole):

124C1000
124C1100
124C1200
124E0100
124E0300
124E0400
125B0300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 193
Depth Interval 7610.6'-7618.4'

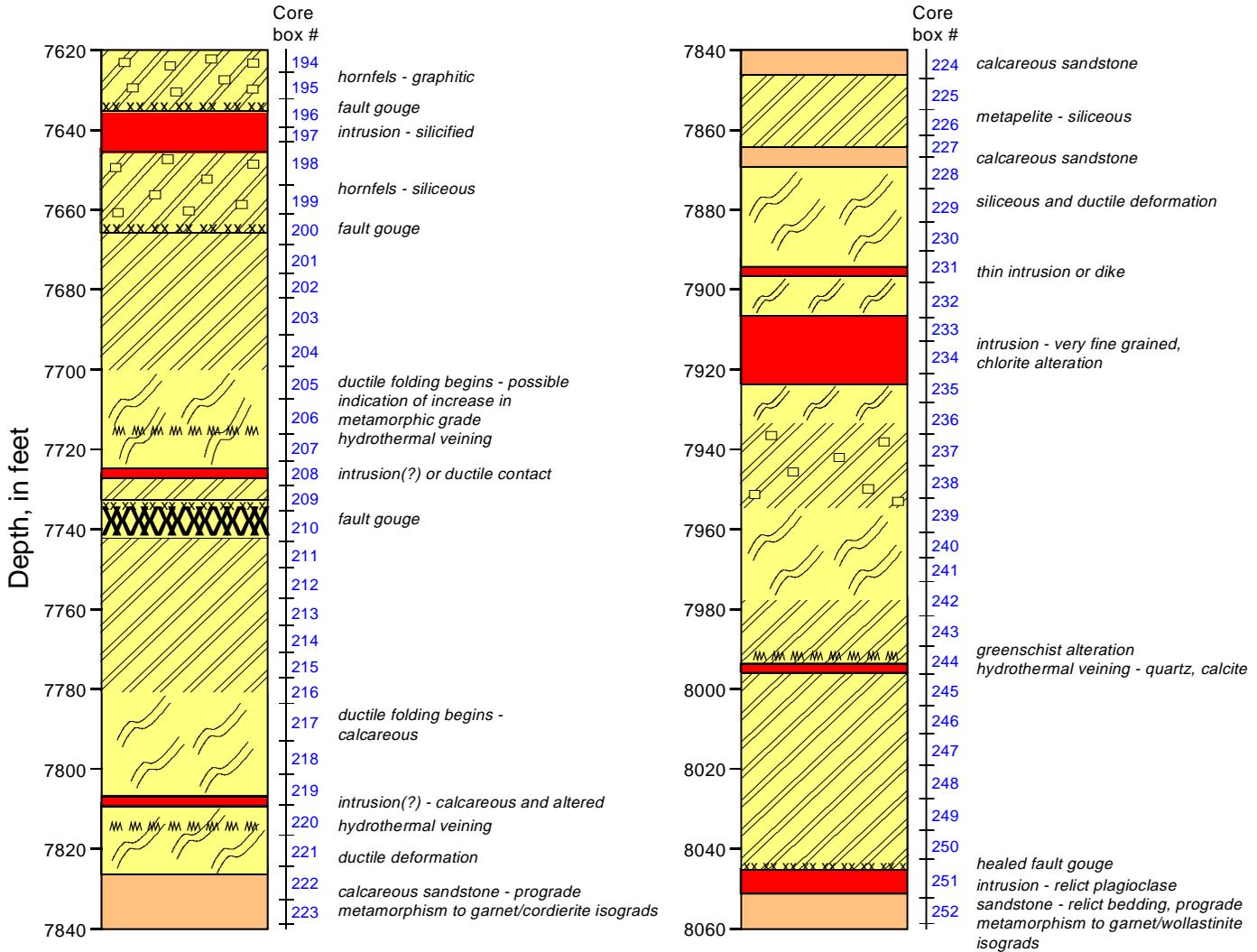


Core Scans included in this box
(listed by piece going downhole):

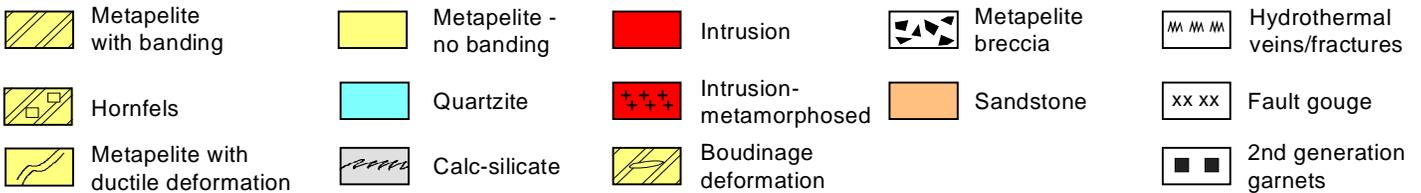
125B0600
125B0800
125B0900
125B1000
125B1100
125B1200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

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Explanation



LVEW Core Box 194
Depth Interval 7618.4'-7625.4'



Core Scans included in this box
(listed by piece going downhole):

126A0100
126A0200
126D0100
126D0200
126D0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 195
Depth Interval 7625.4'-7632.2'



Core Scans included in this box
(listed by piece going downhole):

126D1000
126D1400
126D1500
126D1600
126D1700
126D1800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 196
Depth Interval 7632.2'-7639.4'



Core Scans included in this box
(listed by piece going downhole):

127A0200
127A0300
127A0600
127A070A

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 197
Depth Interval 7639.4'-7642.7'



Core Scans included in this box
(listed by piece going downhole):

127C0100
127C021A
127C022A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 198

Depth Interval 7642.7'-7653.8'

Box Photo Missing

Core Scans included in this box
(listed by piece going downhole):

128A011A

128A012A

128A020A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 199
Depth Interval 7653.8'-7660.8'



Core Scans included in this box
(listed by piece going downhole):

128D0100
128D0300
129B0100
129B0200
129B030A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 200
Depth Interval 7660.8'-7668.4'



Core Scans included in this box
(listed by piece going downhole):

129B030A
129B0400
129B0500
129B0900
129C0400
130B0100
130B0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 201

Depth Interval 7668.4'-7676.0'

Box Photo Missing

Core Scans included in this box
(listed by piece going downhole):

130B0300

130B040A

130B0500

130B0700

130B0800

130B0900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 202
Depth Interval 7676.0'-7682.0'



Core Scans included in this box
(listed by piece going downhole):

130B1100
130B151A
130B152A
130B1600
130B1700
131A0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 203
Depth Interval 7682.0'-7691.5'



Core Scans included in this box
(listed by piece going downhole):

131F0100
131F020A
131F030A
131F0400
131F051A
131F052A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 204
Depth Interval 7691.5'-7699.5'



Core Scans included in this box
(listed by piece going downhole):

131F051A
131F052A
132A0200
132A0300
132A0400
132A0500
132A0900
132A1100
132A1200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 205
Depth Interval 7699.5'-7707.3'



Core Scans included in this box
(listed by piece going downhole):

132A1400
132A150A
132A1600
132A1700
132A1800
133A0200
133A0400
133A0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 206
Depth Interval 7707.3'-7716.0'



Core Scans included in this box
(listed by piece going downhole):

133A0600
133A0700
133A0900
133A1000
133A1100
133A130A
133A1400
133A1500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 207
Depth Interval 7716.0'-7722.6'



Core Scans included in this box
(listed by piece going downhole):

134A0100
134A0300
134A0400
134A0500
134A101A
134A102A
135A0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 208
Depth Interval 7722.6'-7729.0'



Core Scans included in this box
(listed by piece going downhole):

135A0200
135B0200
135B030A
135B0400
135B0600
135B0700
135B0800
135B0900
135B1000

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 209
Depth Interval 7729.0'-7735.3'



Core Scans included in this box
(listed by piece going downhole):

137A0100
137A0200
137A0300
137A0400
137A0500
137A0700
137A0900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 210
Depth Interval 7735.3'-7743.0'



Core Scans included in this box
(listed by piece going downhole):

137A1000
137A1100
137A1200
137A1300
137A1400
137A1900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 211
Depth Interval 7743.0'-7749.8'



Core Scans included in this box
(listed by piece going downhole):

138B0200
138C0200
138C030A
138C0400
138C0700
138C090A
138C100A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 212
Depth Interval 7749.8'-7757.2'

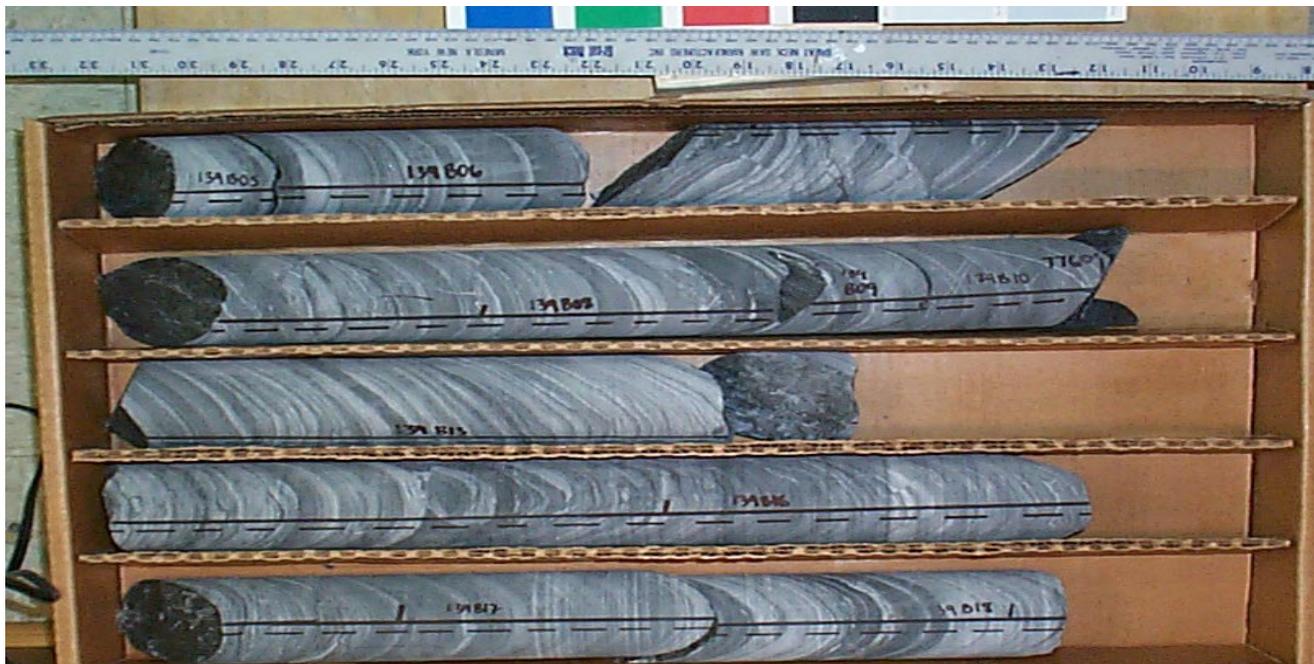


Core Scans included in this box
(listed by piece going downhole):

138C100A
138C1200
138C1400
138C1700
138C1900
139A0100
139B0100
139B0200
139B0300
139B0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 213
Depth Interval 7757.2'-7764.1'



Core Scans included in this box
(listed by piece going downhole):

139B0600
139B0700
139B0800
139B1000
139B1300
139B1600
139B1700
139B1800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 214
Depth Interval 7764.1'-7770.8'



Core Scans included in this box
(listed by piece going downhole):

139B1900
139B2000
140A020A
140A0300
140A0400
140A0500
140A0600
140A0700

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 215

Depth Interval 7770.8'-7777.2'

Missing Core Box

Core Scans included in this box
(listed by piece going downhole):

140A0800

141A0800

141A0900

141A1500

141A1600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 216
Depth Interval 7777.2'-7783.8'



Core Scans included in this box
(listed by piece going downhole):

141A1700
141A1900
141A2100
142A0100
142A020A
142A0300
142A0400
142B0100
142B0200
142B0300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 217
Depth Interval 7783.8'-7793.1'

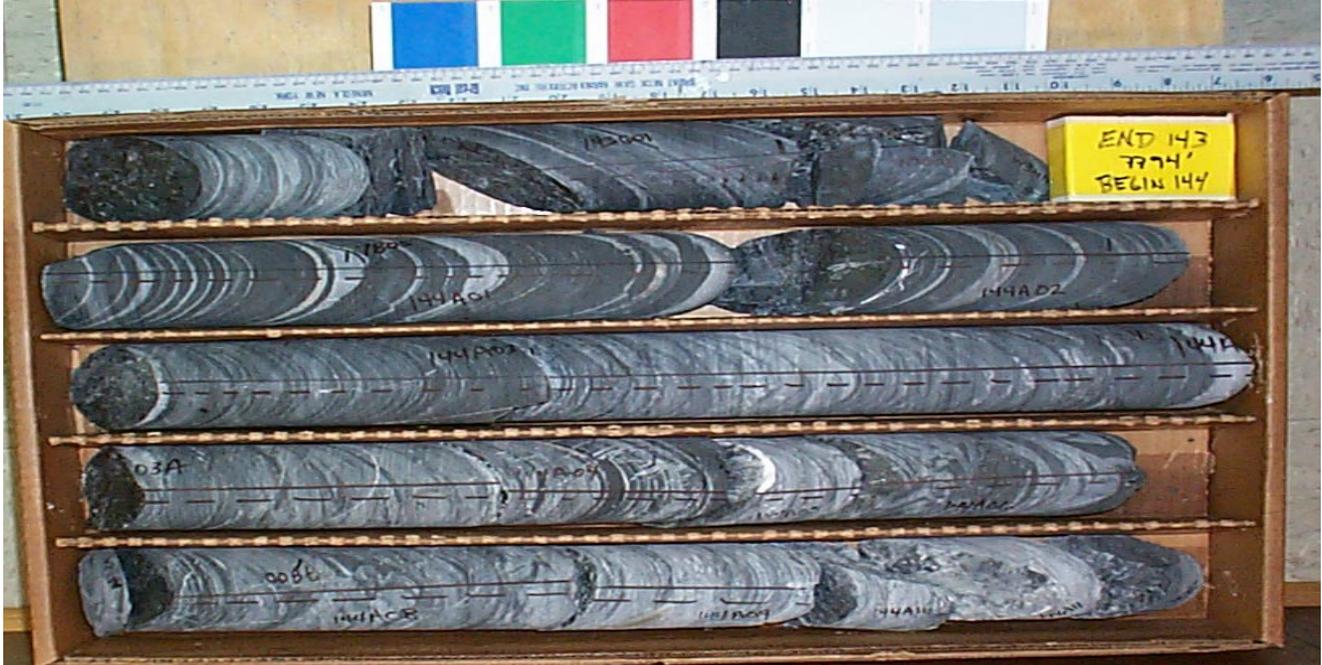


Core Scans included in this box
(listed by piece going downhole):

142B0400
142C0100
143A070A
143B0100
143C0100
143C0200
143E0100
143E0200

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 218
Depth Interval 7793.1'-7801.4'



Core Scans included in this box
(listed by piece going downhole):

143F0500
143G0100
144A0100
144A031A
144A032A
144A033A
144A0400
144A0600
144A0800
144A0900

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 219
Depth Interval 7801.4'-7808.8'



Core Scans included in this box
(listed by piece going downhole):

144A1300
144B0200
144B0300
144B0400
144B0500
145A0100
145A0500
145A0800
145A1100
145A1200
145A1300
145A1500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 220
Depth Interval 7808.8'-7816.5'



Core Scans included in this box
(listed by piece going downhole):

145A1700
146A0100
146A0200
146A031A
146A032A
146A033A
146A0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 221
Depth Interval 7816.5'-7824.1'



Core Scans included in this box
(listed by piece going downhole):

146A0500
146A060A
146A0700
146A0900
146A1000
146A1100
146A1200
146A1400
146A150A
146A1600
146A1700
146A1800
146A1900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 222
Depth Interval 7824.1'-7832.3'



Core Scans included in this box
(listed by piece going downhole):

146A2000
146A2100
146A2200
146A2300
147A0100
147A021A
147A022A
147A0300
147A0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 223
Depth Interval 7832.3'-7838.8'



Core Scans included in this box
(listed by piece going downhole):

147A0700
147A0900
147A1000
147A1100
147A1200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 224
Depth Interval 7838.8'-7847.2'



Core Scans included in this box
(listed by piece going downhole):

147C0700
147C081A
147C082A
147C083A
147C1000

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 225
Depth Interval 7847.2'-7854.8'



Core Scans included in this box
(listed by piece going downhole):

148A0100
148A0200
148C0400
148C0500
148C0600
148C0700
148C0800
148C0900
148C1000

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 226
Depth Interval 7854.8'-7861.4'



Core Scans included in this box
(listed by piece going downhole):

148C1100
148C1200
148C1800
149A0100
149A0200
149A0300
149A0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 227
Depth Interval 7861.4'-7866.8'



Core Scans included in this box
(listed by piece going downhole):

150B011A

150B012A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 228
Depth Interval 7866.8'-7874.7'



Core Scans included in this box
(listed by piece going downhole):

150B0200
150B0300
150B0400
150B0500
150B0800
150B110A
150B1300
150B1400
151A010A
151A0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 229
Depth Interval 7874.7'-7883.0'



Core Scans included in this box
(listed by piece going downhole):

151A0300
151A0400
151A0500
151A0600
151A0800
151A1000
151A1100
151A1200
151A1300
151A1400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 230
Depth Interval 7883.0'-7890.2'



Core Scans included in this box
(listed by piece going downhole):

152B020A
152B040A
152B0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 231
Depth Interval 7890.2'-7898.2'

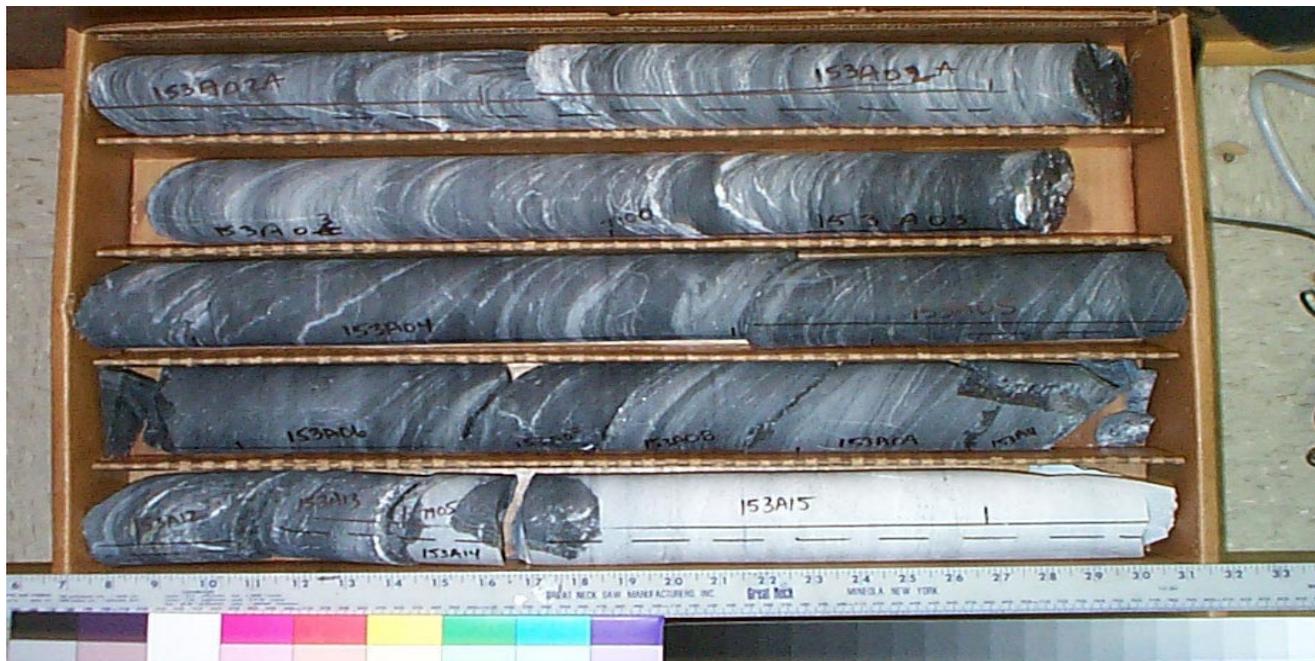


Core Scans included in this box
(listed by piece going downhole):

152B0700
152B0800
152D0100
152D0200
152D0300
152D0400
152D0500
153A0100
153A020A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 232
Depth Interval 7898.2'-7907.0'



Core Scans included in this box
(listed by piece going downhole):

153A020A
153A0300
153A0400
153A0500
153A0600
153A0700
153A0800
153A0900
153A1200
153A1300
153A1500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 233
Depth Interval 7907.0'-7912.9'



Core Scans included in this box
(listed by piece going downhole):

154B0100
154D0400
154D0800
154D0900
154D1000
154D1200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 234
Depth Interval 7912.9'-7920.7'



Core Scans included in this box
(listed by piece going downhole):

154D1300
154D1600
155A0100
155A0200
155A0400
155C0200
155C0300
155C0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 235
Depth Interval 7920.7'-7928.2'



Core Scans included in this box
(listed by piece going downhole):

155C0500
155C0600
155C0700
155C0800
155C0900
155D0200
155D0300

155D0400
155D0500
156A0100
156A0200
156A0300
156A0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 236
Depth Interval 7928.2'-7936.2'



Core Scans included in this box
(listed by piece going downhole):

156A0600
156A0900
156A1000
156A1200
156A130A
156A1400
156A1500
156A1800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 237
Depth Interval 7936.2'-7944.0'



Core Scans included in this box
(listed by piece going downhole):

156A1900
156A2000
156A2100
157A0100
157A0200
157A0400
157A0500
157A0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 238
Depth Interval 7944.0'-7952.2'



Core Scans included in this box
(listed by piece going downhole):

157A0700
157A1000
157A1200
157A1400
157A1500
157A170A
158A0100
158A0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 239
Depth Interval 7952.2'-7960.3'



Core Scans included in this box
(listed by piece going downhole):

158A0500
158A0600
158A0800
158A0900
158A1000
158C0100
158C0200
158C0300
158C0400
158C0500
158C061A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 240
Depth Interval 7960.3'-7967.3'



Core Scans included in this box
(listed by piece going downhole):

158C062A
158C0700
158C0800
159A0100
159A0300
159A0400
159A0500
159A0600

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 241
Depth Interval 7967.3'-7973.4'

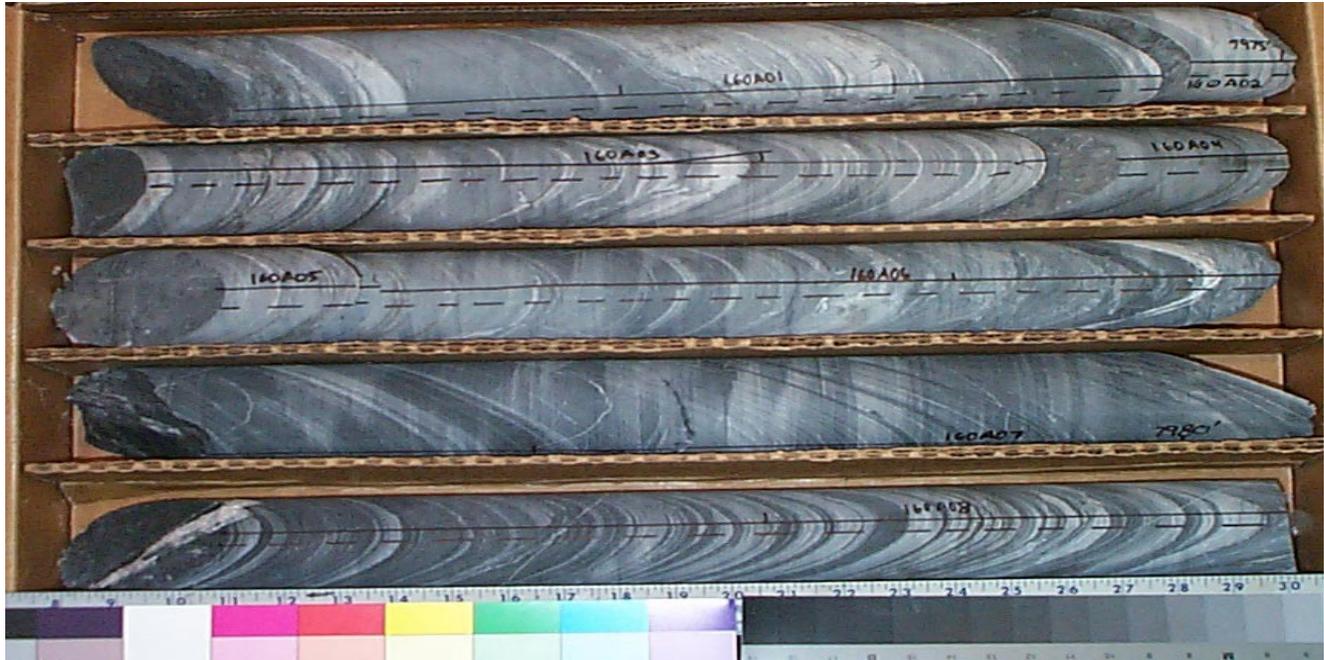


Core Scans included in this box
(listed by piece going downhole):

159A0700
159A0800
159A0900
159A1100
159A1200
159A1300
159A1400
159A1500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 242
Depth Interval 7973.4'-7981.9'



Core Scans included in this box
(listed by piece going downhole):

160A0100
160A0300
160A0400
160A061A
160A062A
160A0700
160A0800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 243
Depth Interval 7981.9'-7989.5'



Core Scans included in this box
(listed by piece going downhole):

160A0900
160A1000
160A1100
160A1200
161A0100
161A0200
161A0500
161A0700
161A091A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 244
Depth Interval 7989.5'-7996.2'



Core Scans included in this box
(listed by piece going downhole):

161A091A
161A092A
161A1000

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 245
Depth Interval 7996.2'-8004.1'



Core Scans included in this box
(listed by piece going downhole):

161A1200
162A011A
162A012A
162A020A
162A0300
162A0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 246
Depth Interval 8004.1'-8011.0'

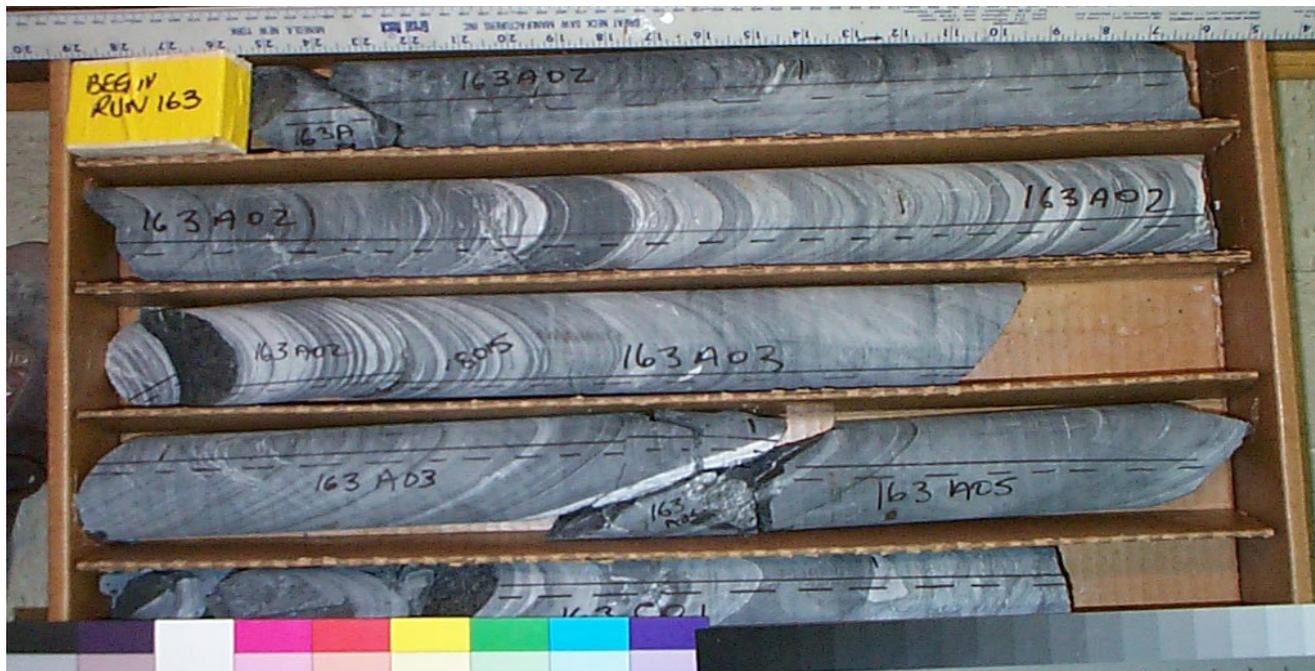


Core Scans included in this box
(listed by piece going downhole):

162A050A
162A0600
162A0700
162A0800
162A0900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 247
Depth Interval 8011.0'-8019.2'



Core Scans included in this box
(listed by piece going downhole):

163A021A
163A022A
163A0500
163C0100

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 248
Depth Interval 8019.2'-8027.5'



Core Scans included in this box
(listed by piece going downhole):

163C0200
163C0300
163C041A
163C042A
163C0500
163C061A
163C062A
163C0700

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 249
Depth Interval 8027.5'-8035.5'



Core Scans included in this box
(listed by piece going downhole):

163C0800
164A0100
164A0200
164A031A
164A032A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 250
Depth Interval 8035.5'-8042.5'



Core Scans included in this box
(listed by piece going downhole):

164A032A
164A0400
164A0500
164C0300
164C0400
165A0100
165A041A
165A042A
165A0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 251
Depth Interval 8042.5'-8052.1'



Core Scans included in this box
(listed by piece going downhole):

165C0100
165C0200
165C0300
165D0200
165F0100
165F0200
165F0300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 252
Depth Interval 8052.1'-8058.5'

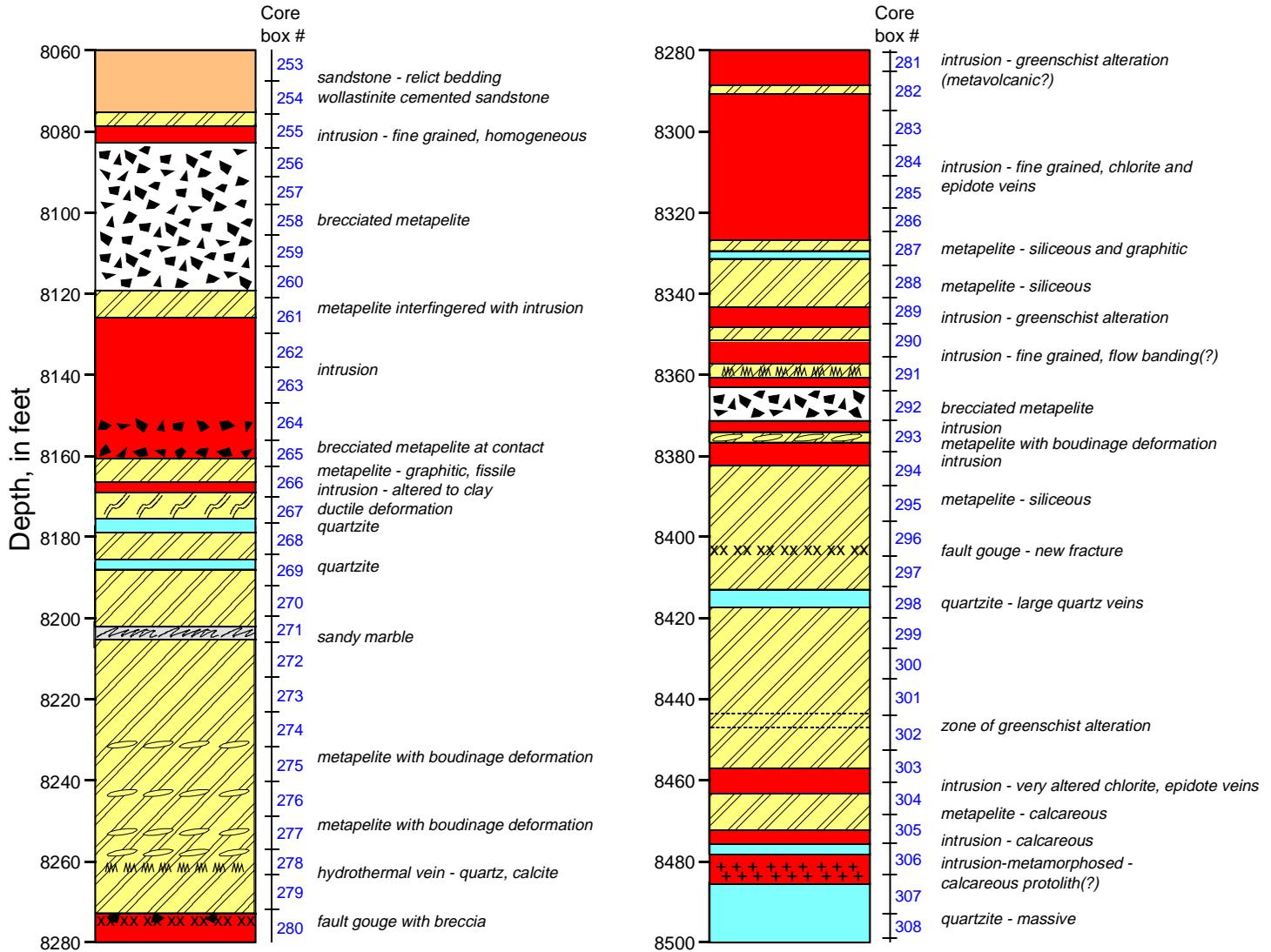


Core Scans included in this box
(listed by piece going downhole):

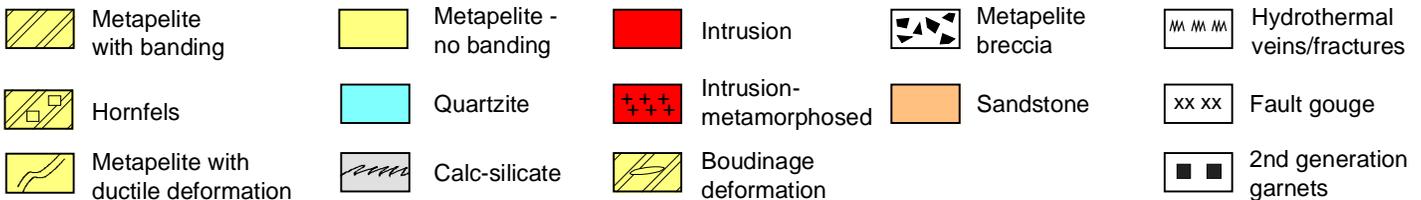
165F0400
165F0500
165F0700
165F0800
165F0900
165F1000
166A0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

Stratigraphic Column for LVEW Phase III, page 3



Explanation



LVEW Core Box 253
Depth Interval 8058.5'-8067.4'



Core Scans included in this box
(listed by piece going downhole):

166A021A
166A022A
166A0600
166A0700
166A0900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 254
Depth Interval 8067.4'-8075.6'



Core Scans included in this box
(listed by piece going downhole):

166A1000
166A1100
166A1300
166A1400
166A1500
166A1600
166A1700
166A1800
166A1900
166A200A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 255
Depth Interval 8075.6'-8084.0'



Core Scans included in this box
(listed by piece going downhole):

166A200A
166A2100
167A011A
167A012A
167A0200
167A0300
167A041A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 256
Depth Interval 8084.0'-8091.0'



Core Scans included in this box
(listed by piece going downhole):

167A042A
167A0500
167C0100
167C0200
167C0300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 257
Depth Interval 8091.0'-8098.0'



Core Scans included in this box
(listed by piece going downhole):

167C0400
167C0500
167C0600
167C071A
167C072A
167C0800
167C0900

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 258
Depth Interval 8098.0'-8105.6'

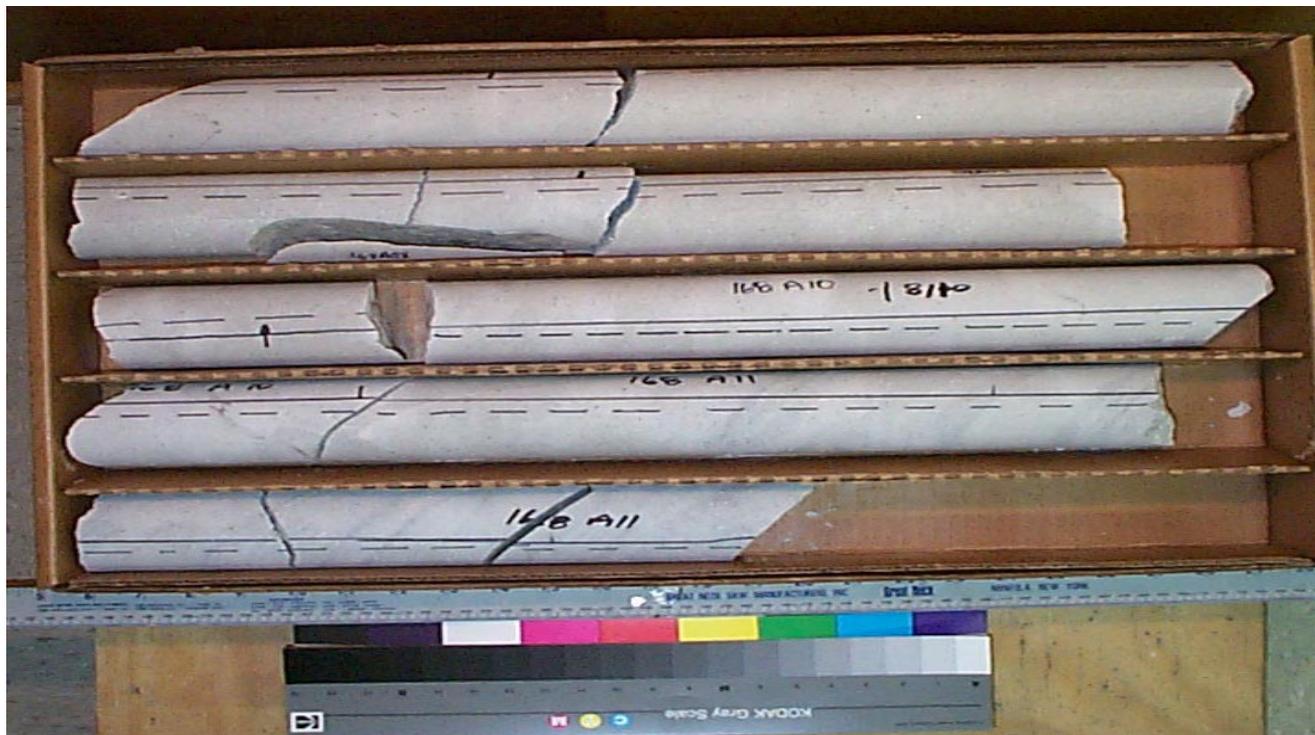


Core Scans included in this box
(listed by piece going downhole):

168A010A
168A020A
168A030A
168A0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 259
Depth Interval 8105.6'-8113.3'



Core Scans included in this box
(listed by piece going downhole):

168A070A
168A0900
168A1000
168A1100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 260
Depth Interval 8113.3'-8120.7'



Core Scans included in this box
(listed by piece going downhole):

168A1200
168A131A
168A132A
168A1400
168A1500
168A1600
169A0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 261
Depth Interval 8120.7'-8129.8'



Core Scans included in this box
(listed by piece going downhole):

169A0400
169A050A
169A0600
169A0700
169A0800
169A1000
169A1100
169A1200
169A130A
169A140A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 262
Depth Interval 8129.8'-8138.0'



Core Scans included in this box
(listed by piece going downhole):

169A151A
169A152A
169A160A
169A1700

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 263
Depth Interval 8138.0'-8146.8'



Core Scans included in this box
(listed by piece going downhole):

170A011A

170A012A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 264
Depth Interval 8146.8'-8156.0'



Core Scans included in this box
(listed by piece going downhole):

170A012A
170C0100
170C020A
170C0300
170C040A
170C0500
170C0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 265
Depth Interval 8156.0'-8162.6'



Core Scans included in this box
(listed by piece going downhole):

170F0100
170G0100
171D0200
171D0300
172A0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 266
Depth Interval 8162.6'-8170.1'



Core Scans included in this box
(listed by piece going downhole):

172C0100
172C0400
172C0500
172C0600
172C0700
172C0900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 267
Depth Interval 8170.1'-8176.4'

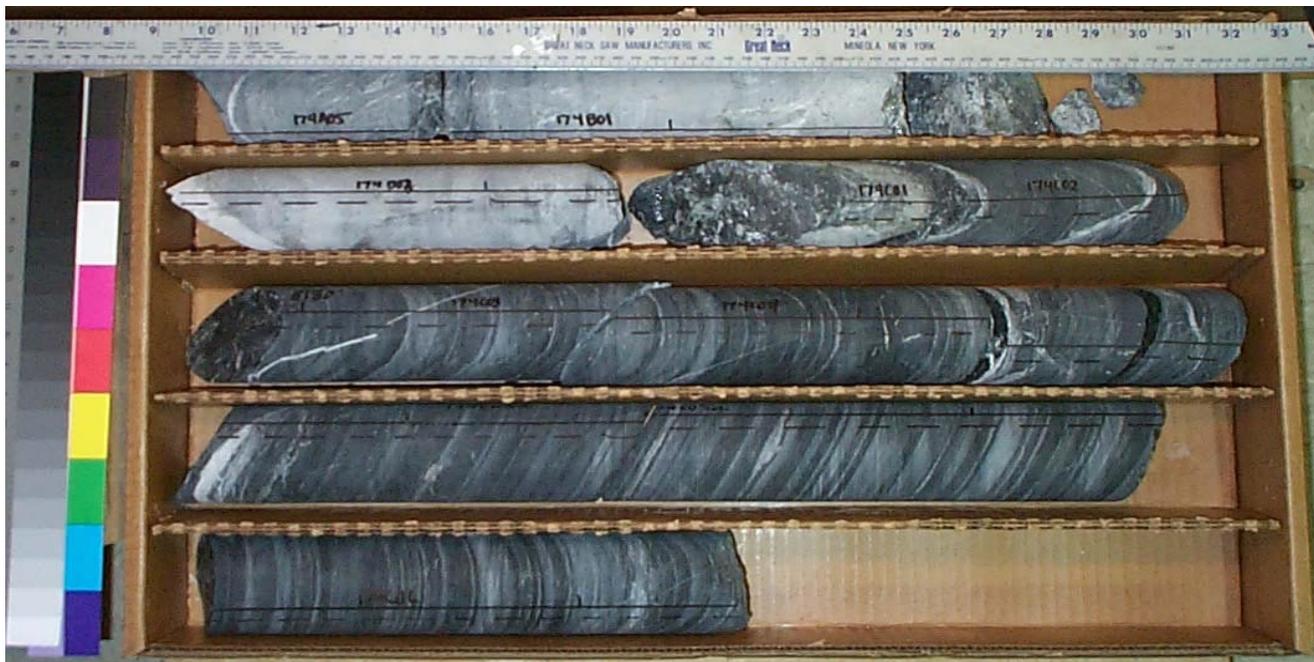


Core Scans included in this box
(listed by piece going downhole):

172C100A
174A0100
174A0300
174A0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 268
Depth Interval 8176.4'-8184.3'



Core Scans included in this box
(listed by piece going downhole):

174A0500
174B0100
174B0300
174C0200
174C0300
174C0400
174C050A
174C0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 269
Depth Interval 8184.3'-8192.0'



Core Scans included in this box
(listed by piece going downhole):

174D0100
174D0200
174D0400
174D0500
174D0600
174D0700
174D0800
174D0900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 270

Depth Interval 8192.0'-8199.9'

Missing Core Box

Core Scans included in this box
(listed by piece going downhole):

175A010A

175A0200

175A0300

175A0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 271
Depth Interval 8199.9'-8206.0'

Missing Core Box

Core Scans included in this box
(listed by piece going downhole):

175A050A

175A0800

175A0900

175A1000

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 272
Depth Interval 8206.0'-8214.5'

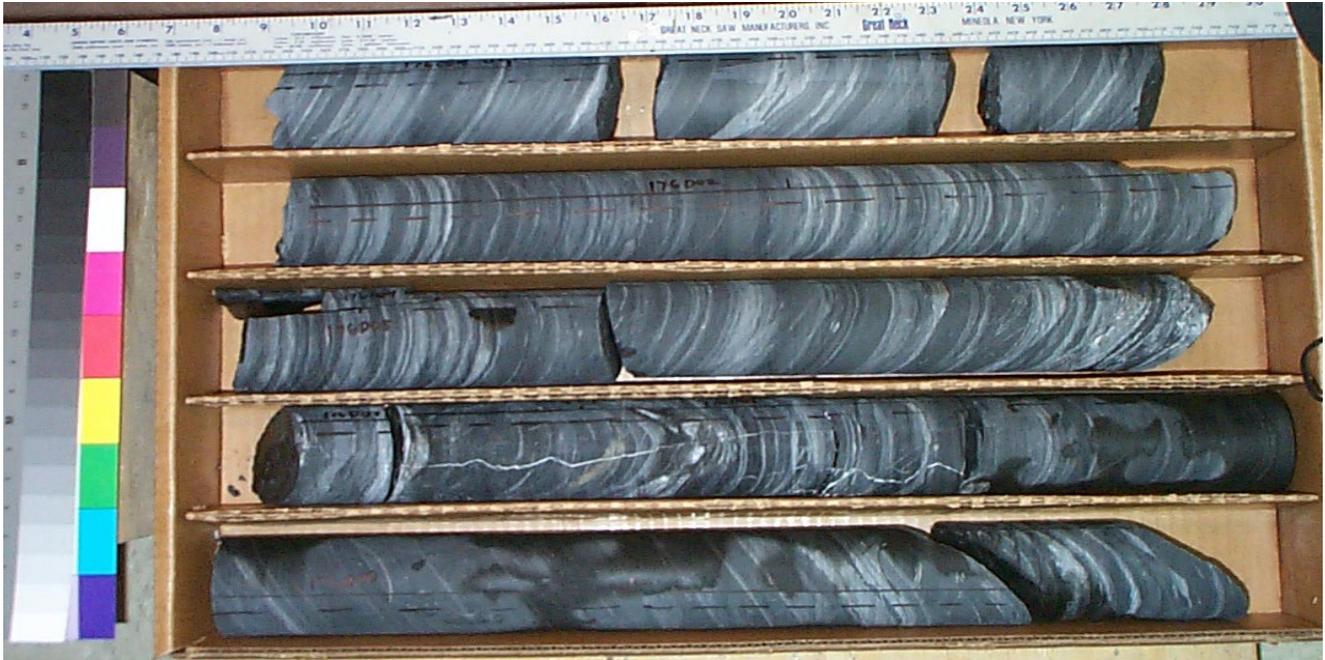


Core Scans included in this box
(listed by piece going downhole):

175A1100
175A1200
175A1300
175A1400
176A0100
176A0200
176B010A
176C0200
176C0300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 273
Depth Interval 8214.5'-8223.0'



Core Scans included in this box
(listed by piece going downhole):

176C0400
176C0500
176D0100
176D0200
176D0600
176D0700
176D0900
176D100A
176D1100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 274
Depth Interval 8223.0'-8231.8'



Core Scans included in this box
(listed by piece going downhole):

177A01A
177A0200
177A0300
177A0400
177A051A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 275
Depth Interval 8231.8'-8240.2'



Core Scans included in this box
(listed by piece going downhole):

177A052A
177A0600
177A070A
177A081A
177A082A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 276
Depth Interval 8240.2'-8248.7'



Core Scans included in this box
(listed by piece going downhole):

177A0900
177A100A
178A0100
178A0200
178A0600
178A0700
178A0800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 277
Depth Interval 8248.7'-8257.0'



Core Scans included in this box
(listed by piece going downhole):

178A090A
178A1000
178A1400
178A1500
178A1600
178A1700
178A181A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 278
Depth Interval 8257.0'-8263.1'



Core Scans included in this box
(listed by piece going downhole):

178A182A
179A0100
179A0200
179A0300
179C0300
179E0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 279
Depth Interval 8263.1'-8271.9'



Core Scans included in this box
(listed by piece going downhole):

179E021A
179E022A
179E030A
179E040A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 280
Depth Interval 8271.9'-8280.4'



Core Scans included in this box
(listed by piece going downhole):

179E1300
180B0100
180C0100
180C0200
180E0100
180E0400
180E0500
180E0600
180E0700
180E1100
180E1200
180E1500

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 281
Depth Interval 8280.4'-8285.2'



Core Scans included in this box
(listed by piece going downhole):

180E1600
180E1700
180E1900
180E2000
181A0100
181A0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 282
Depth Interval 8285.2'-8594.8'



Core Scans included in this box
(listed by piece going downhole):

181A0300
181A0400
181A0500
181A0600
182A0100
182A020A
182A041A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 283
Depth Interval 8294.8'-8303.7'



Core Scans included in this box
(listed by piece going downhole):

182A042A
182A0500
182A060A
182A071A
182A072A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 284
Depth Interval 8303.7'-8311.2'



Core Scans included in this box
(listed by piece going downhole):

182A072A
182A0800
182A091A
182A092A
182A1200
183A0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 285
Depth Interval 8311.2'-8319.3'



Core Scans included in this box
(listed by piece going downhole):

183A020A
183A0300
183A0600
183A0700
183A0800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 286
Depth Interval 8319.3'-8324.6'

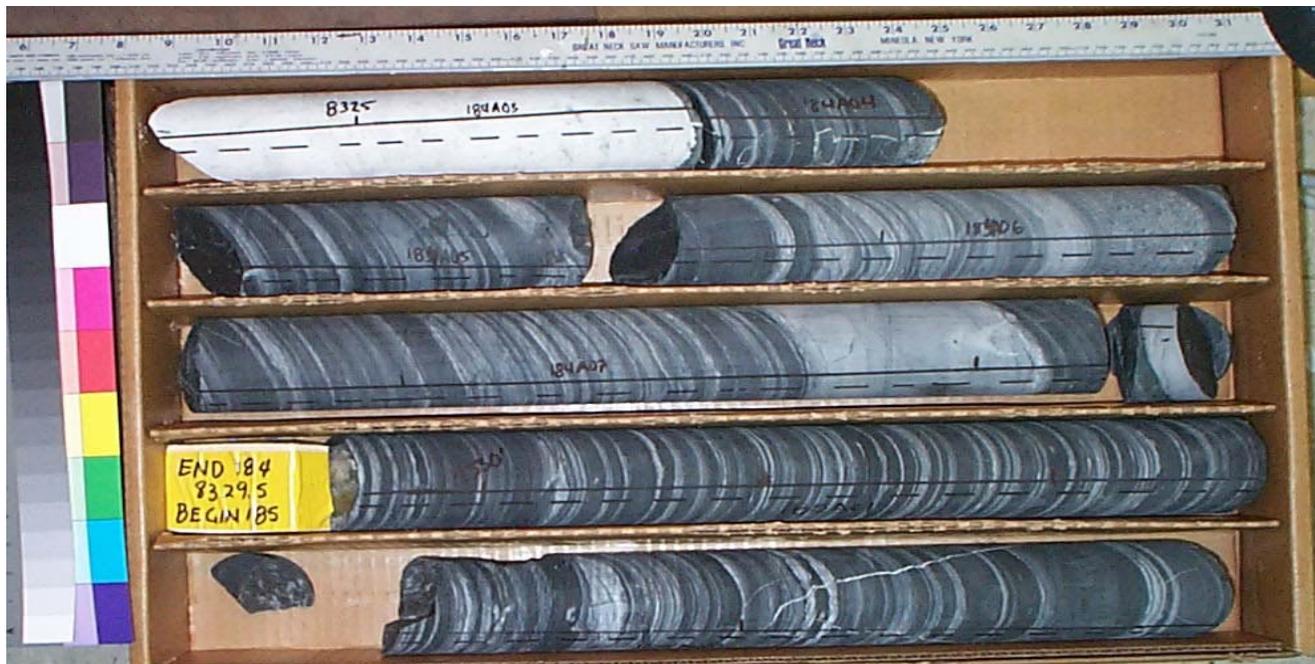


Core Scans included in this box
(listed by piece going downhole):

183B0500
183C0100
183C021A
183C022A
183C0300
184A0100
184A0200

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 287
Depth Interval 8324.6'-8332.9'

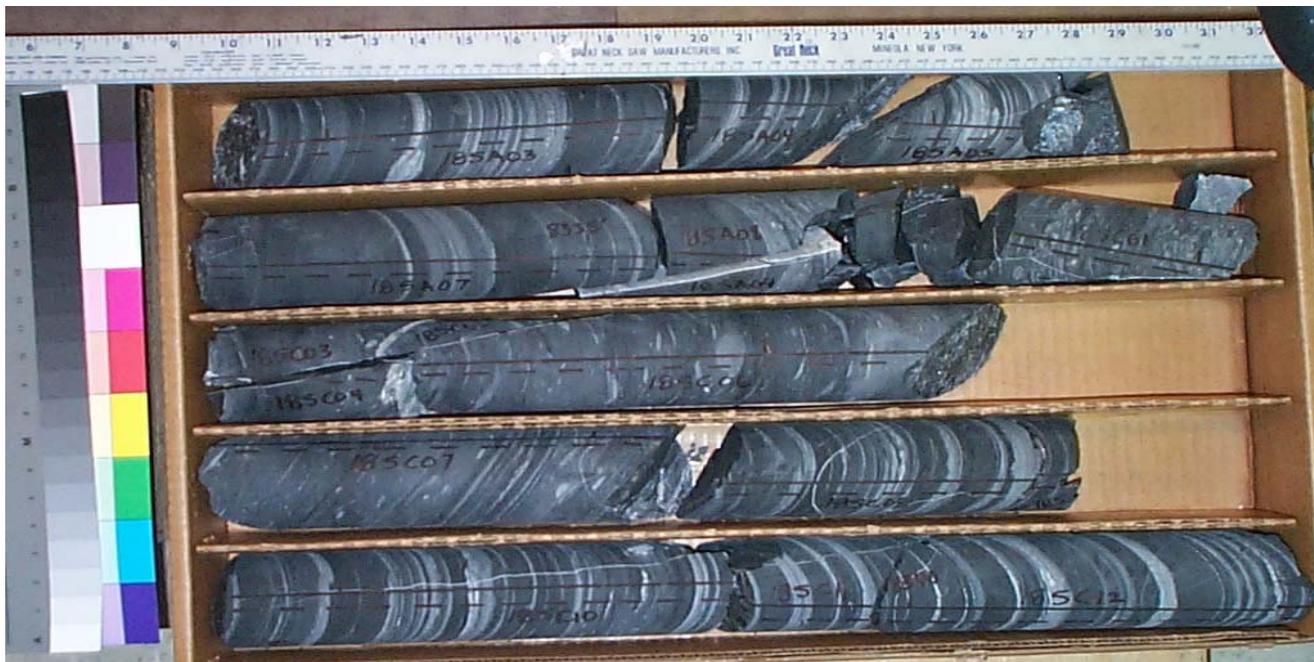


Core Scans included in this box
(listed by piece going downhole):

184A0300
184A0400
184A0500
184A0600
184A0700
184A0800
185A0100
185A0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 288
Depth Interval 8332.9'-8340.7'



Core Scans included in this box
(listed by piece going downhole):

185A0300
185A0400
185A0500
185A0700
185C0600
185C0700
185C0800
185C1000
185C1100
185C1200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 289
Depth Interval 8340.7'-8347.4'



Core Scans included in this box
(listed by piece going downhole):

185C1300
185C1500
186A0100
186A0200
186C0100
186C0200
186C0300
186C0400
186C0500
186C0700
186C1200

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 290
Depth Interval 8347.4'-8355.7'



Core Scans included in this box
(listed by piece going downhole):

186C1300
187A0100
187C0100
187C041A
187C042A
187C0500
188A0100

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 291
Depth Interval 8355.7'-8364.0'

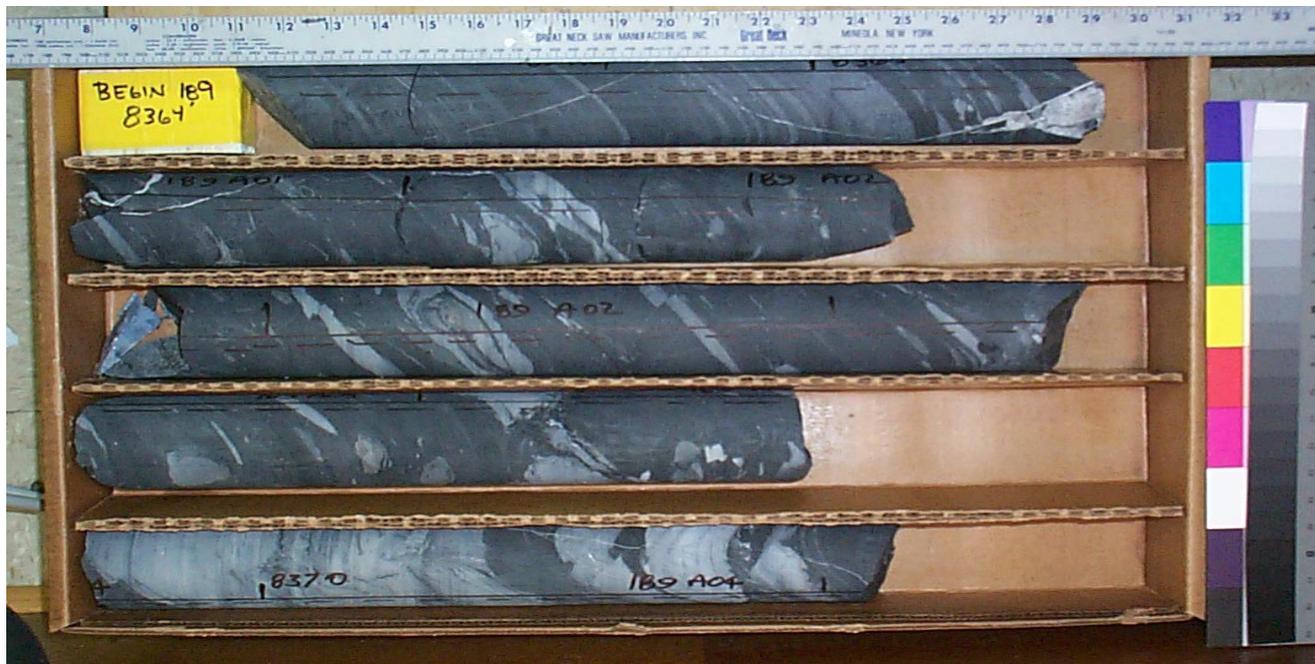


Core Scans included in this box
(listed by piece going downhole):

188A0200
188A0300
188C0200
188C0300
188C0400
188C0600
188E0100
188E0200
188E0300
188E0400
188E0500
188E0600
188E0700

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 292
Depth Interval 8364.0'-8371.1'



Core Scans included in this box
(listed by piece going downhole):

189A010A
189A020A
189A0300
189A040A

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 293
Depth Interval 8371.1'-8379.2'

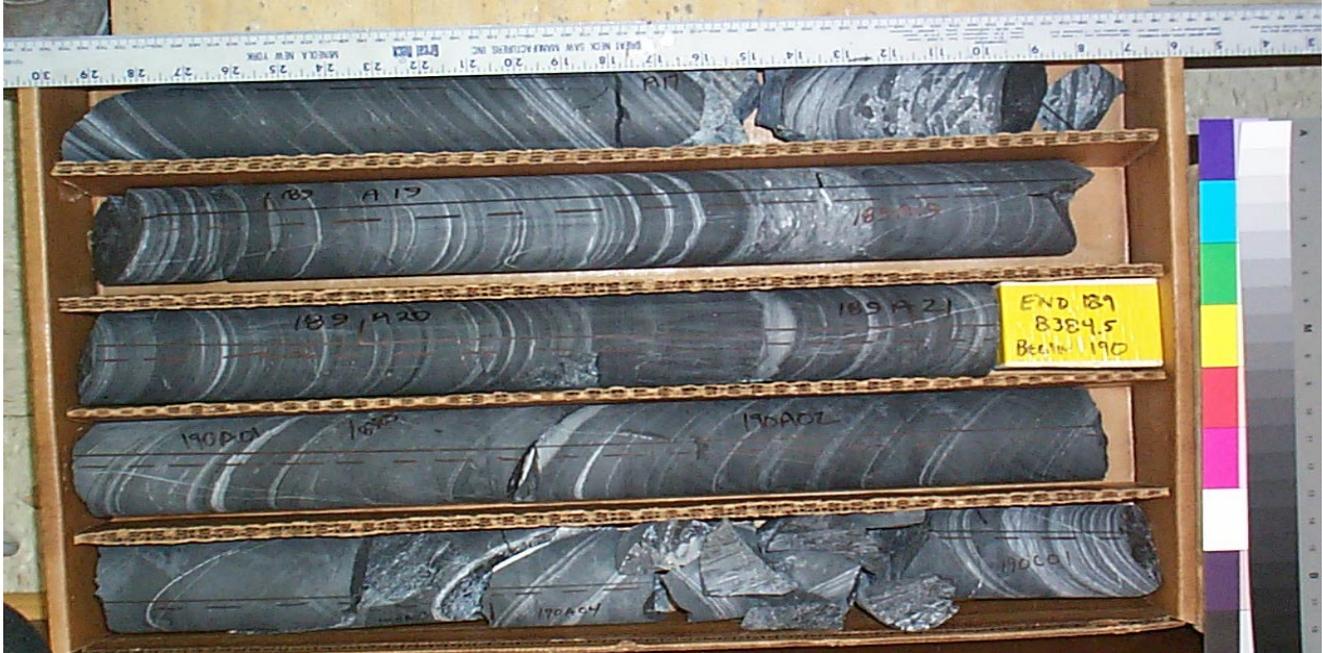


Core Scans included in this box
(listed by piece going downhole):

189A0500
189A0600
189A070A
189A0800
189A0900
189A1000
189A1100
189A120A
189A1300
189A1400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 294
Depth Interval 8379.2'-8387.7'



Core Scans included in this box
(listed by piece going downhole):

189A1500
189A1800
189A1900
189A2000
189A2100
190A0100
190A020A
190C0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 295
Depth Interval 8387.7'-8396.1'



Core Scans included in this box
(listed by piece going downhole):

190C0200
190C0300
190E0200
191A0100
191A020A
191A030A
191A0400

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 296
Depth Interval 8396.1'-8404.4'



Core Scans included in this box
(listed by piece going downhole):

191A0500
191A061A
191A062A
191A070A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 297
Depth Interval 8404.4'-8412.2



Core Scans included in this box
(listed by piece going downhole):

191A0800
191A1300
192A0100
192A021A
192A022A
192A023A
192A0300
192A0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 298
Depth Interval 8412.2'-8420.1'

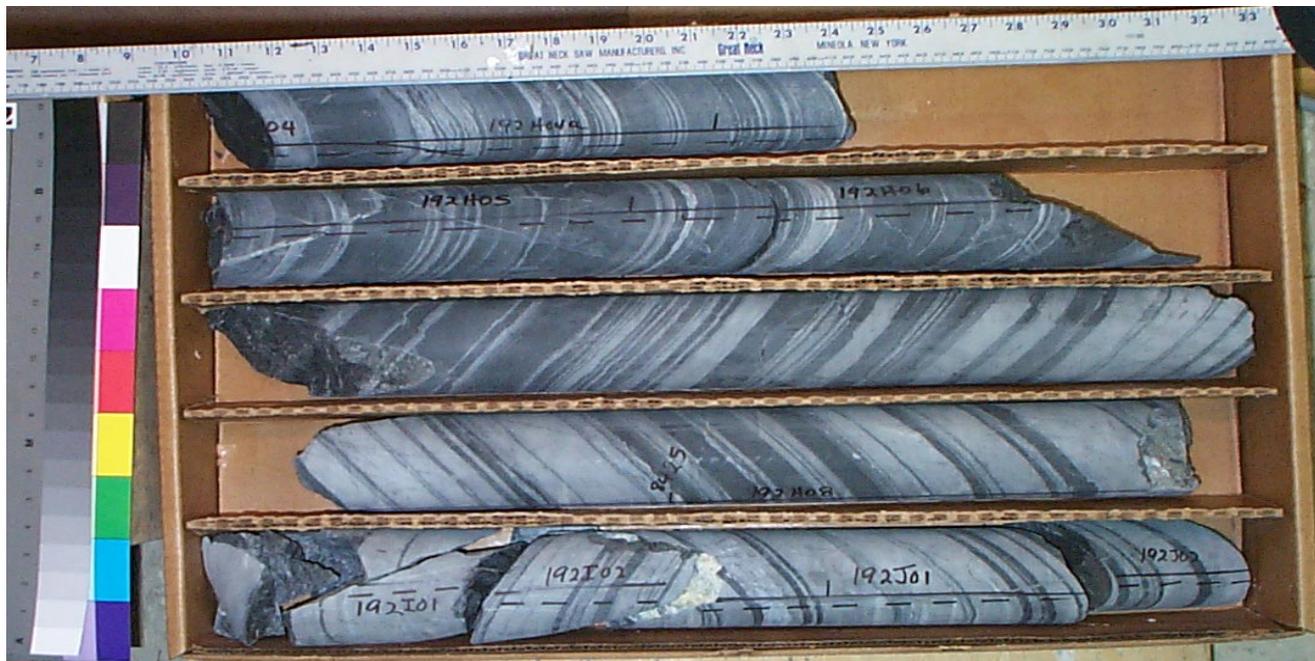


Core Scans included in this box
(listed by piece going downhole):

192A0500
192A0600
192C0100
192G0100
192H040A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 299
Depth Interval 8420.1'-8427.5'

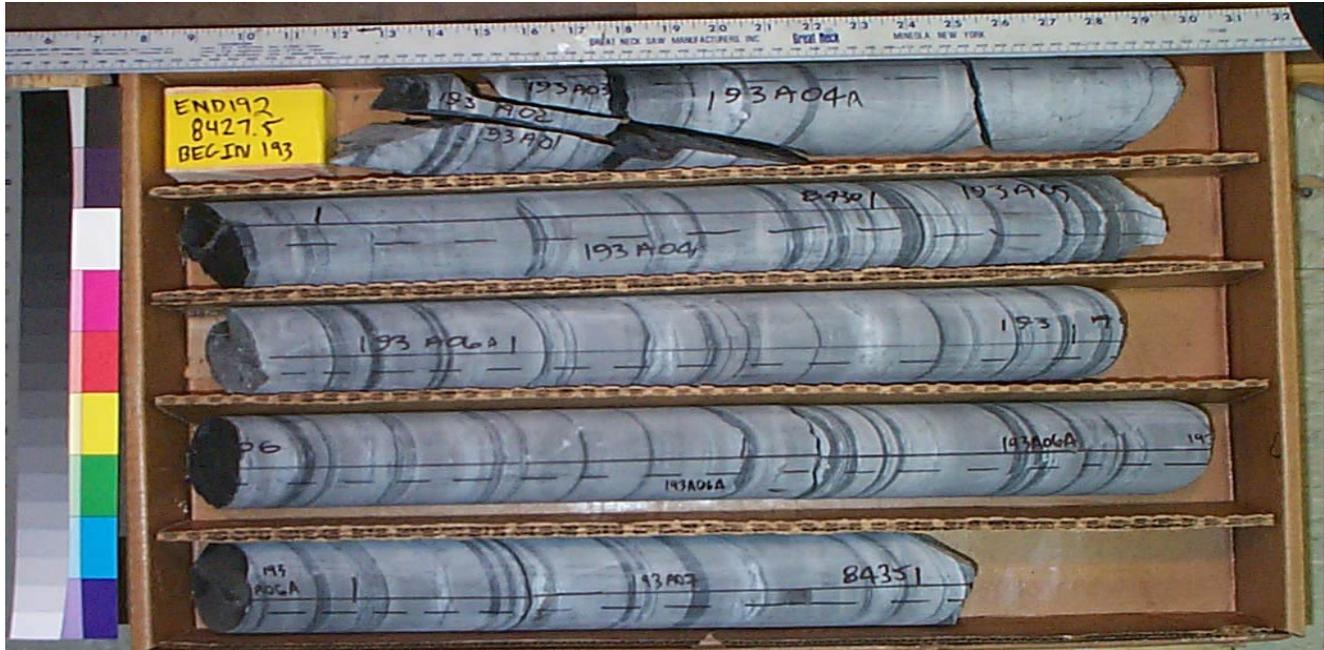


Core Scans included in this box
(listed by piece going downhole):

192H040A
192H0500
192H0600
192H0700
192H0800
192J0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 300
Depth Interval 8427.5'-8435.1'

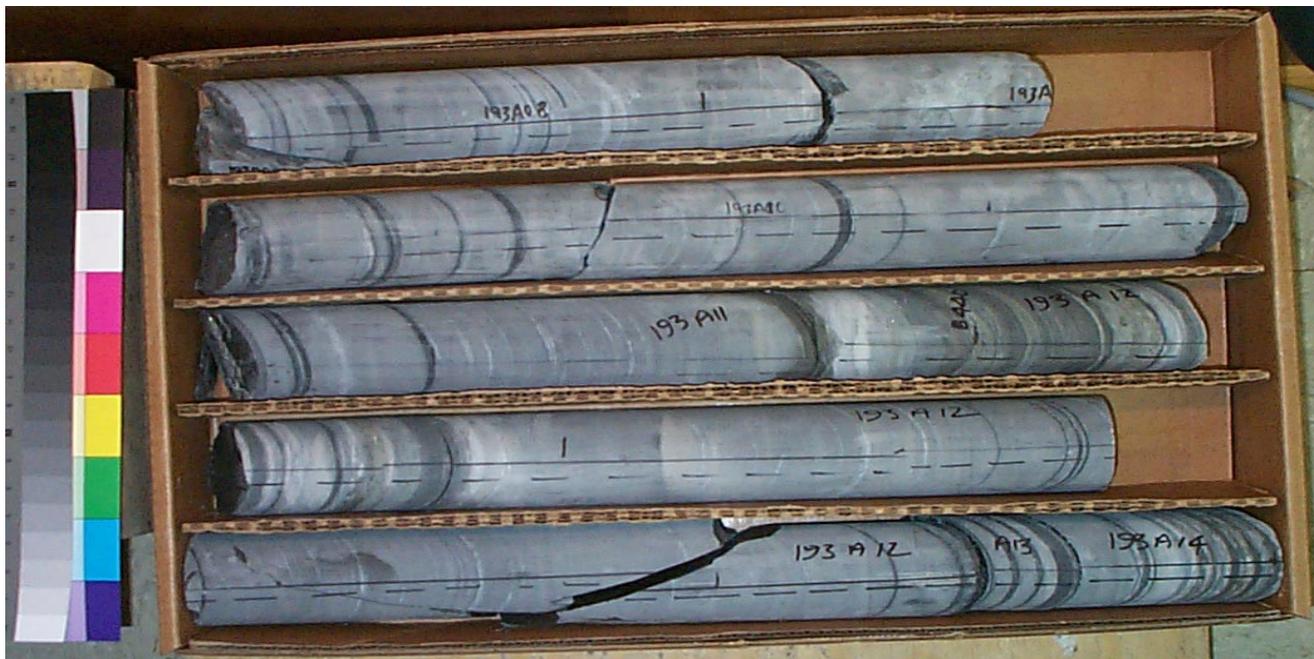


Core Scans included in this box
(listed by piece going downhole):

193A040A
193A0500
193A061A
193A062A
193A0700

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 301
Depth Interval 8435.1'-8444.0'



Core Scans included in this box
(listed by piece going downhole):

193A0800
193A090A
193A1000
193A1100
193A1200
193A1400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 302
Depth Interval 8444.0'-8452.6'



Core Scans included in this box
(listed by piece going downhole):

193A1500
193A1600
193A1700
194A010A
194A021A
194A022A
194A0300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 303
Depth Interval 8452.6'-8460.5'



Core Scans included in this box
(listed by piece going downhole):

194A0500
194A0600
194C0200
194C0300
194C0400
194C0500
194C0600
194C0700
194C0800
194C0900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 304
Depth Interval 8460.5'-8468.3'



Core Scans included in this box
(listed by piece going downhole):

194C1000
195B0400
196A021A
196A022A
196A0300
196A060A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 305
Depth Interval 8468.3'-8475.5'



Core Scans included in this box
(listed by piece going downhole):

196A060A
196A0700
197A0100
197A0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 306
Depth Interval 8475.5'-8483.3'



Core Scans included in this box
(listed by piece going downhole):

197A0300
197A040A
197A0500
197A090A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 307
Depth Interval 8483.3'-8493.0'



Core Scans included in this box
(listed by piece going downhole):

197A090A
197A100A
197A1100
198A0100
198A0300
198A0400
198A0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 308
Depth Interval 8493.0'-8498.9'

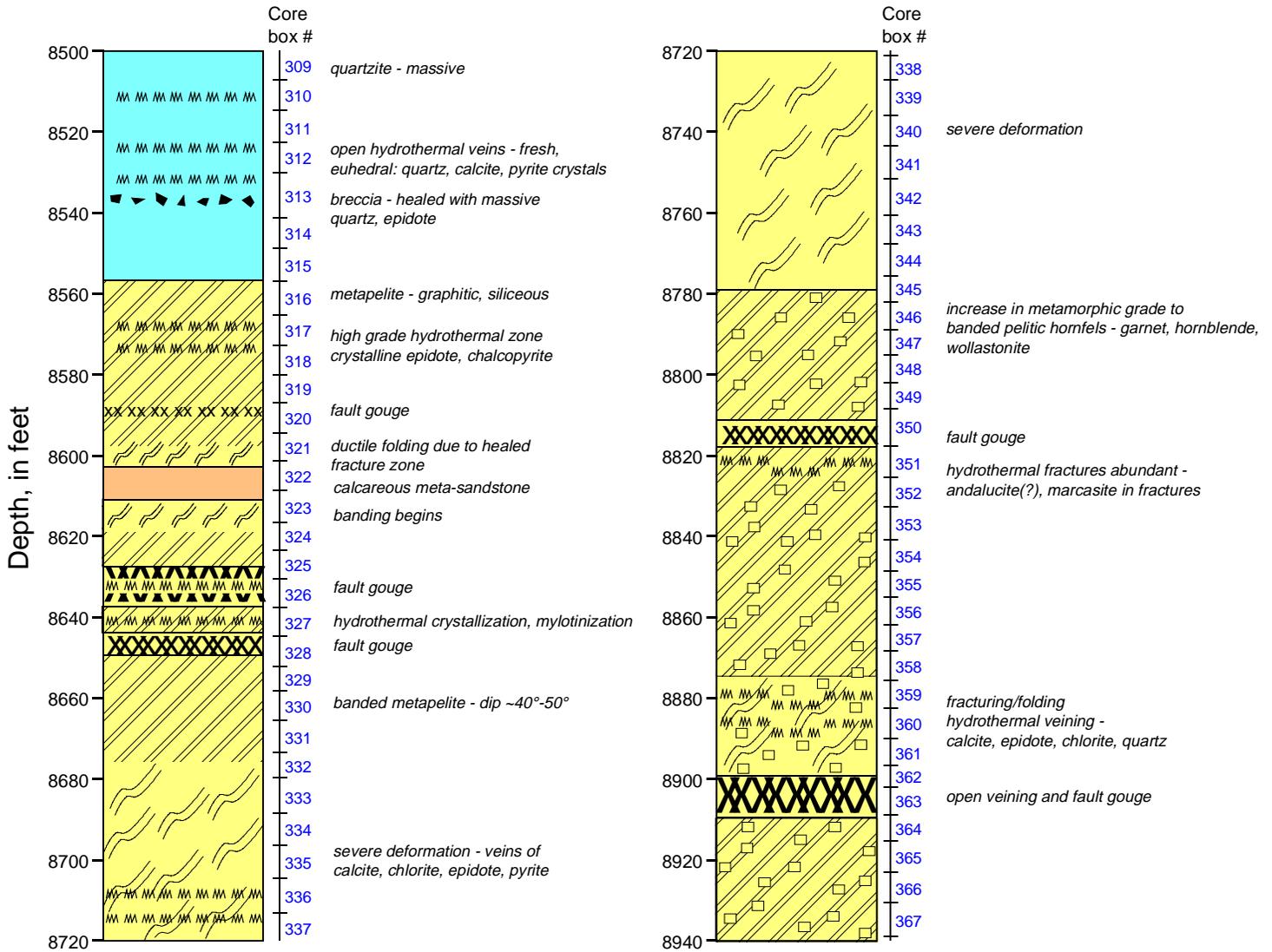


Core Scans included in this box
(listed by piece going downhole):

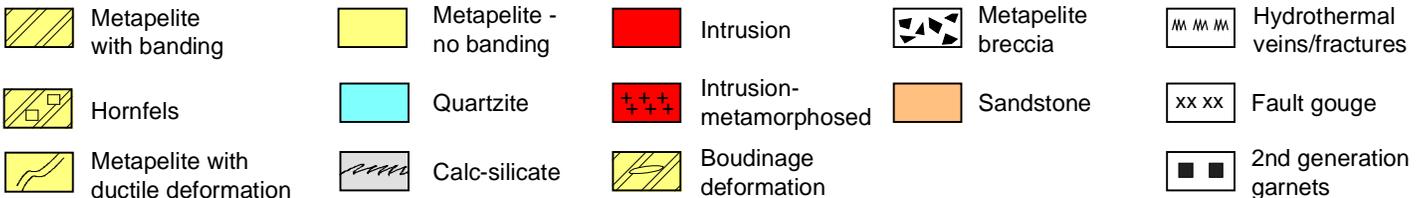
199C0100
199C0200
199C0300
199C0400
199C0600
199C0700
199C0800
199C0900
200A0100
200A0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

Stratigraphic Column for LVEW Phase III, page 4



Explanation



LVEW Core Box 309
Depth Interval 8498.9'-8507.0'



Core Scans included in this box
(listed by piece going downhole):

200A0300
200A0400
200A0500
200A0600
200A0700
200A0800
200A0900
200A1000
200A1100
200A1200
200A1400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 310
Depth Interval 8507.0'-8514.4'



Core Scans included in this box
(listed by piece going downhole):

202A0100
202A0200
202A0300
202A0400
202A0500
202A0600
202C0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 311
Depth Interval 8514.4'-8522.3'



Core Scans included in this box
(listed by piece going downhole):

202C0200
202C0300
202C0400
203A0200
203B0100
203B0200
203B0300
203B0400
203C0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 312
Depth Interval 8522.3'-8530.0'



Core Scans included in this box
(listed by piece going downhole):

203C0200
203D0100
203D0200
203D0300
203D0500
203E0100
205B0200
205C0300
205D0100
205E0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 313
Depth Interval 8530.0'-8541.0'



Core Scans included in this box
(listed by piece going downhole):

206A010R
206C0100
206D010R
208B0100
208D0100
208D0200
208D0300
210B0200
210B0400
210B0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 314
Depth Interval 8541.0'-8548.8'



Core Scans included in this box
(listed by piece going downhole):

211A0100
211A0200
211A0300
211A0400
211A0500
211A0700
212C0400
212C0600
212C0800
213A0100
213A0200
213A0300

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 315

Depth Interval 8548.8'-8557.1'



Core Scans included in this box
(listed by piece going downhole):

213A0400
214A0100
214A0200
214A0500
214A0600
214C0100
214C0300

214C0400
214C0500
214C060A
214C0700
214C0800
214C0900
214C1100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 316

Depth Interval 8557.1'-8565.1'



Core Scans included in this box
(listed by piece going downhole):

214C1200
214C1300
214E0100
214E0200
214E0500
214E0600
215A0100

215A0200
215A0300
215A0400
215A0500
215A0600
215A0700
215A0800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 317
Depth Interval 8565.1'-8572.8'



Core Scans included in this box
(listed by piece going downhole):

215A0900
215A101A
215A102A
215A1100
215A1300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 318
Depth Interval 8572.8'-8580.0'



Core Scans included in this box
(listed by piece going downhole):

215B0500
215B0600
215B0700
215B0900
216A0100
216A0200
216A0400
216A0500
216A0600
216A1000

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 319
Depth Interval 8580.0'-8587.2'



Core Scans included in this box
(listed by piece going downhole):

216A1300
216A1400
216A1600
216A1900
216A2000
217A0100
217A0200
217A0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 320
Depth Interval 8587.2'-8594.2'



Core Scans included in this box
(listed by piece going downhole):

217A0500
217A0600
217A0700
217A0900
217A1000
217C0100
218A0100

218A0200
218A0300
218A0400
218A0500
218A0700
218A0800
218A0900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 321
Depth Interval 8594.2'-8601.5'



Core Scans included in this box
(listed by piece going downhole):

218A1000
218A1100
218B0700
218E0200
219B0100
219B0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 322
Depth Interval 9601.5'-8608.5'

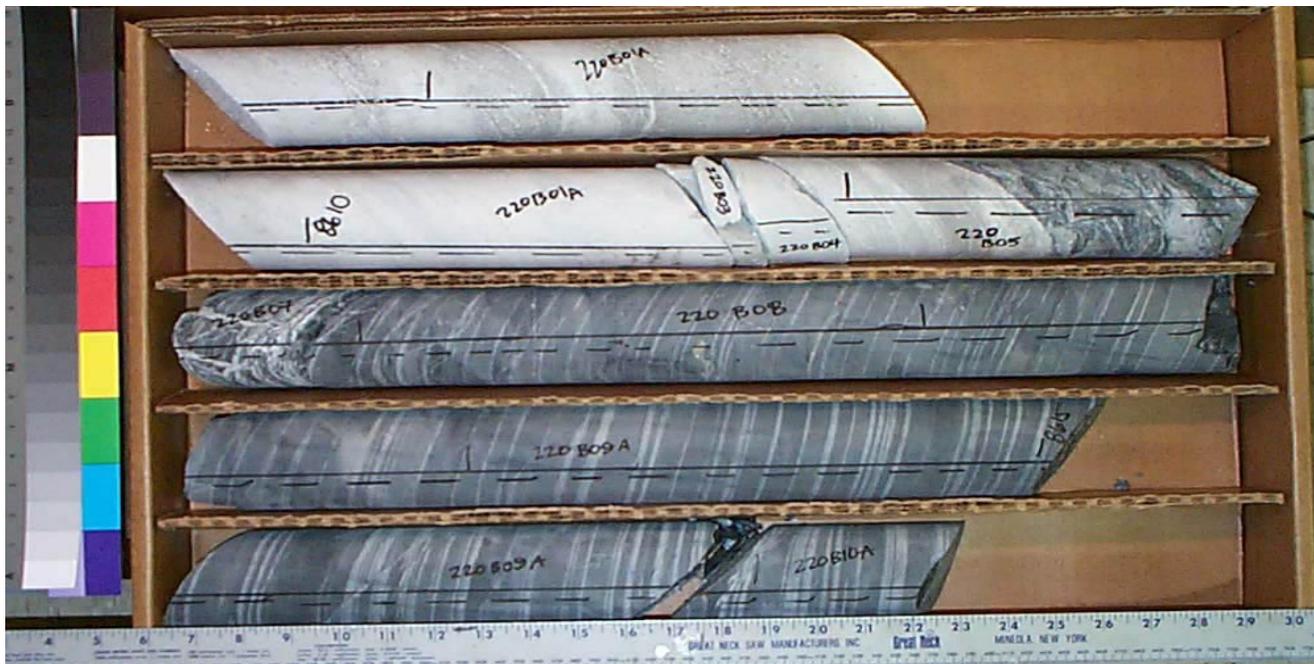


Core Scans included in this box
(listed by piece going downhole):

220A0100
220A0200
220A0300
220A0500
220A0600
220A0700
220B011A

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 323
Depth Interval 8608.5'-8616.4'



Core Scans included in this box
(listed by piece going downhole):

220B012A
220B0400
220B0500
220B0800
220B090A
220B100A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 324
Depth Interval 8616.4'-8623.5'



Core Scans included in this box
(listed by piece going downhole):

220B100A
220B1100
220B1200
220B1300
220B1400
220B1700
221A0100
221C0100
221C0200
221D0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 325
Depth Interval 8623.5'-8630.2'



Core Scans included in this box
(listed by piece going downhole):

221D0300
221D0400
222A0200
222B0300
222D0100
223A0300
223B0400
223B0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 326
Depth Interval 8630.2'-8637.7'

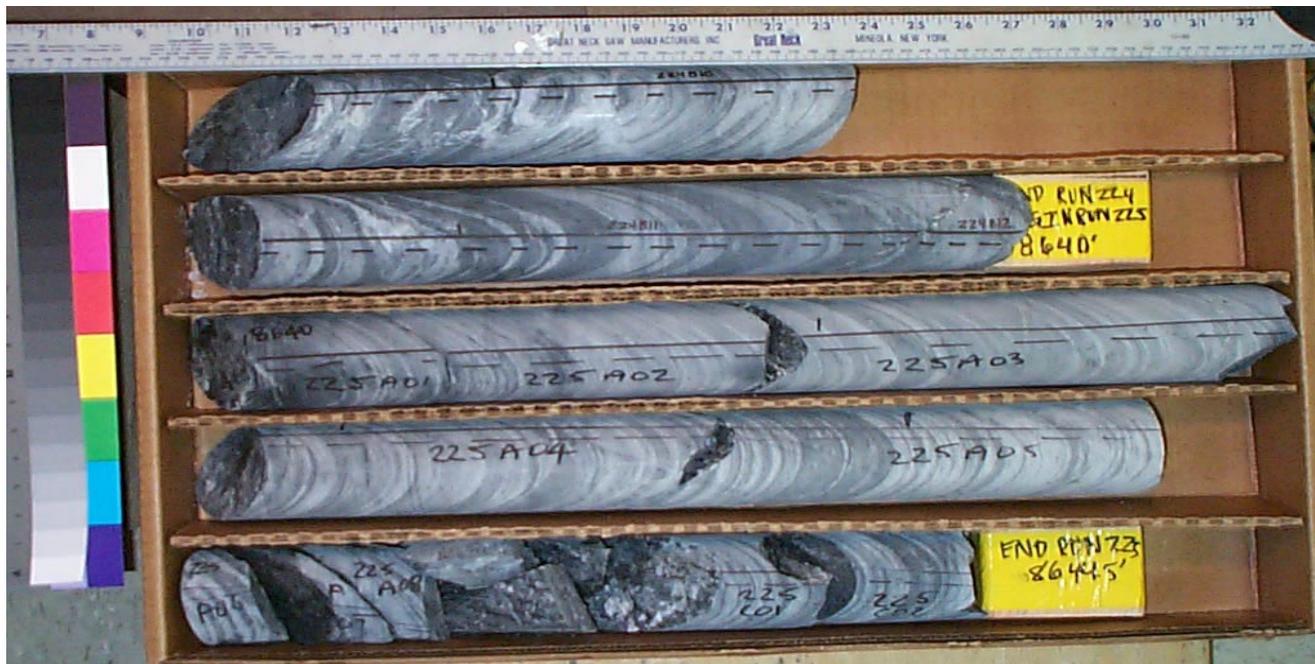


Core Scans included in this box
(listed by piece going downhole):

223B0700
223B0800
223C0100
223C0200
223C0300
224B0100
224B0700
224B0900

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 327
Depth Interval 8637.7'-8644.5'



Core Scans included in this box
(listed by piece going downhole):

224B1000
225A0100
225A0200
225A0300
225A0400
225A0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 328
Depth Interval 8644.5'-8652.0'



Core Scans included in this box
(listed by piece going downhole):

226A0400
226A0500
226A0600
226A0700
227D0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 329
Depth Interval 8652.0'-8658.2'



Core Scans included in this box
(listed by piece going downhole):

229A0100
230A0200
230A0300
231A0100
231A0200
231A0300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 330
Depth Interval 8658.2'-8665.6'



Core Scans included in this box
(listed by piece going downhole):

231A0400
231A0600
231A0700
231A0800
231A1100
231A1200
231A1400
231A1500
231A1700
232A010A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 331
Depth Interval 8665.6'-8673.4'



Core Scans included in this box
(listed by piece going downhole):

232A010A
232A0200
232A040A
232B0200
232B0300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 332
Depth Interval 8673.4'-8679.9'



Core Scans included in this box
(listed by piece going downhole):

232B0400
232B0500
232B0600
232B0700
233A0100
233A0200

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 333
Depth Interval 8679.9'-8688.4'



Core Scans included in this box
(listed by piece going downhole):

233A030A
233A0400
233A050A
233A060A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 334

Depth Interval 8688.4'-8696.1'



Core Scans included in this box
(listed by piece going downhole):

233A060A

233A070A

233A081A

233A082A

233A090A

233A1000

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 335
Depth Interval 8696.1'-8704.3'

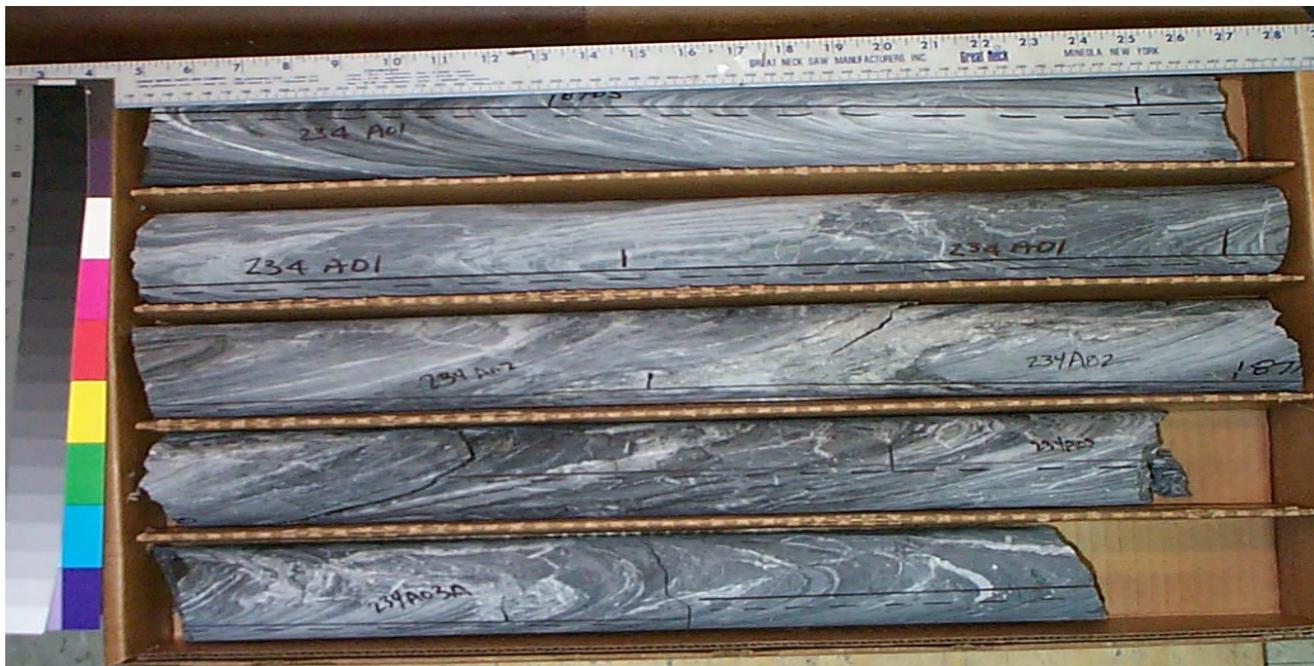


Core Scans included in this box
(listed by piece going downhole):

233A1100
233A1200
233A1300
234A011A
234A012A
234A013A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 336
Depth Interval 8704.3'-8713.0'

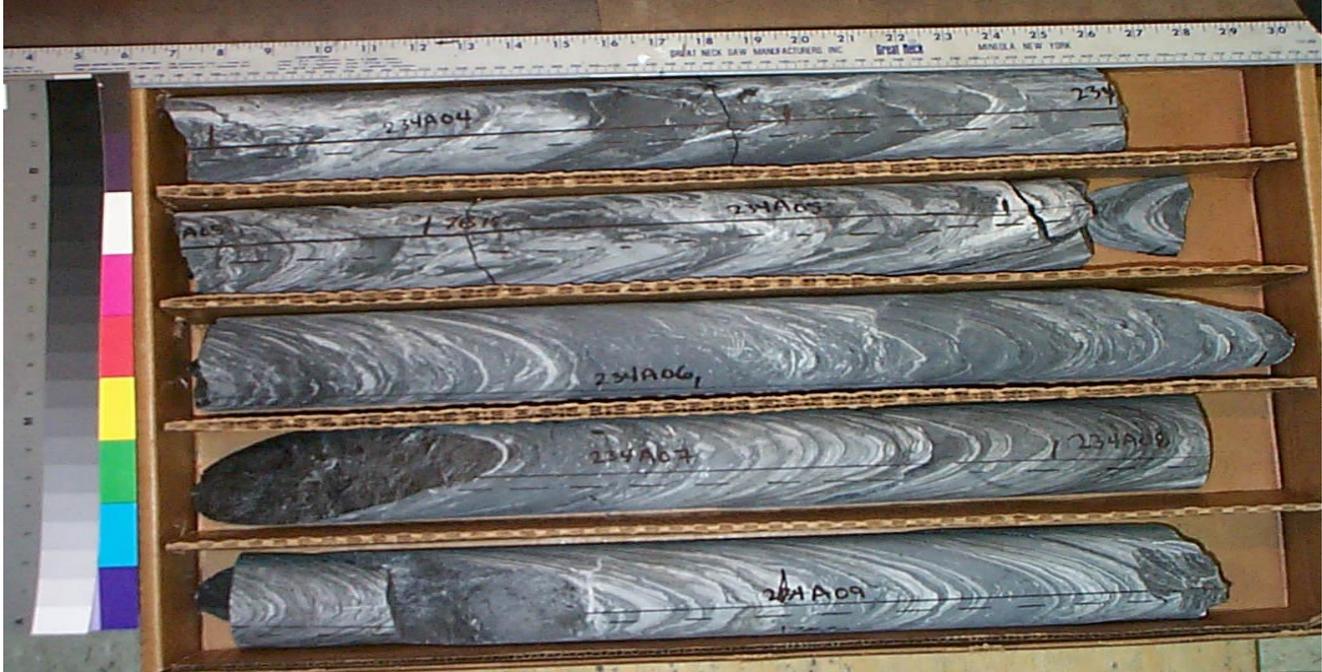


Core Scans included in this box
(listed by piece going downhole):

234A012A
234A013A
234A014A
234A020A
234A030A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 337
Depth Interval 8713.0'-8721.0'



Core Scans included in this box
(listed by piece going downhole):

234A040A
234A050A
234A0600
234A0700
234A0800
234A0900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 338
Depth Interval 8721.0'-8727.2'



Core Scans included in this box
(listed by piece going downhole):

235A0100
235A0400
235A0500
235A060A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 339
Depth Interval 8727.2'-8735.9'



Core Scans included in this box
(listed by piece going downhole):

235C0100
235C0200
235C0300
235C0400
235C0500
235C0600
235C0700
235C0800
235C091A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 340
Depth Interval 8735.9'-8743.6'



Core Scans included in this box
(listed by piece going downhole):

[235C092A](#)

[236A010A](#)

[236A030A](#)

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 341
Depth Interval 8743.6'-8751.4'



Core Scans included in this box
(listed by piece going downhole):

236A030A
236A041A
236A042A
236A0500
236A061A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 342
Depth Interval 8751.4'-8760.8'



Core Scans included in this box
(listed by piece going downhole):

236A062A
236A071A
236A072A
236A0800
236A0900
237A0100
237A0300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 343
Depth Interval 8760.8'-8767.8'



Core Scans included in this box
(listed by piece going downhole):

237A0400
237A0500
237A0600
237C0100
237C0200
237C0300
237C0400
237C050A
237C060A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 344

Depth Interval 8767.8'-8775.8'



Core Scans included in this box
(listed by piece going downhole):

237C060A

237C0700

237C080A

237C090A

237C1000

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 345
Depth Interval 8775.8'-8781.9'

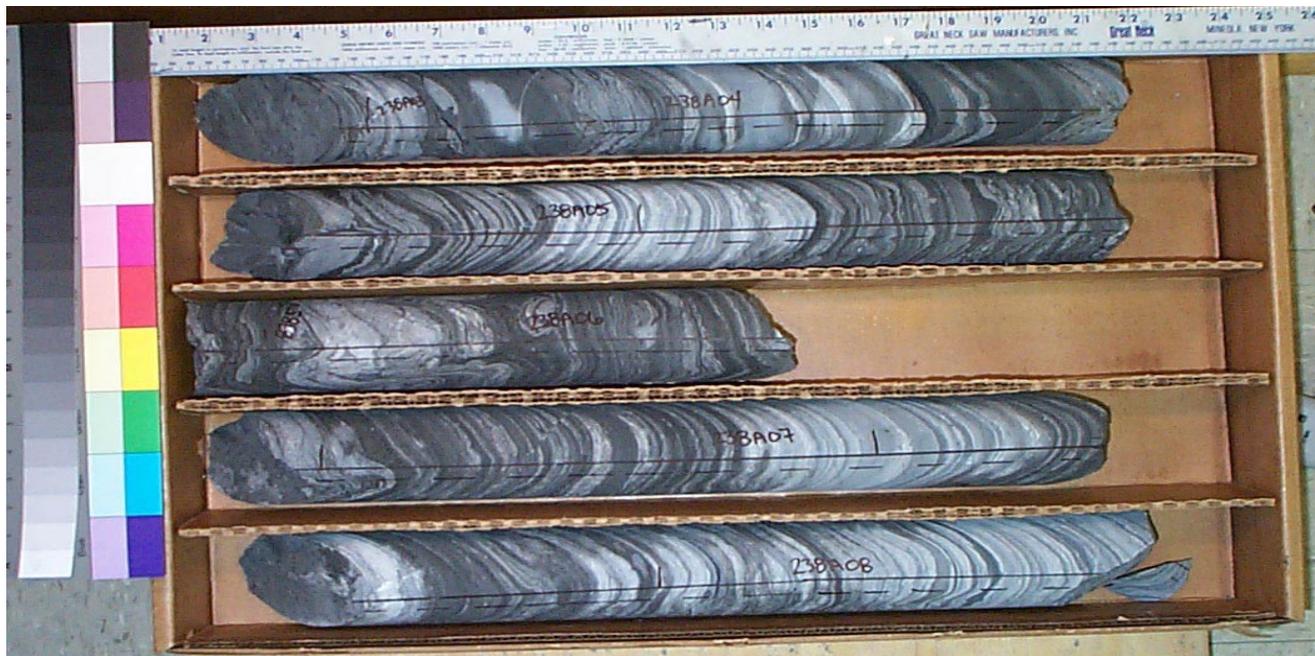


Core Scans included in this box
(listed by piece going downhole):

237C1100
237C1200
237C130A
237C1400
238A0100
238A0200

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 346
Depth Interval 8781.9'-8788.8'



Core Scans included in this box
(listed by piece going downhole):

238A0300
238A0400
238A050A
238A0600
238A0700
238A080A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 347
Depth Interval 8788.8'-8795.0'



Core Scans included in this box
(listed by piece going downhole):

[238A090A](#)

[238A100A](#)

[238A1100](#)

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 348
Depth Interval 8795.0'-8802.0'



Core Scans included in this box
(listed by piece going downhole):

238A1200
238A1300
238A1400
239A011A
239A012A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 349
Depth Interval 8802.0'-8808.5'

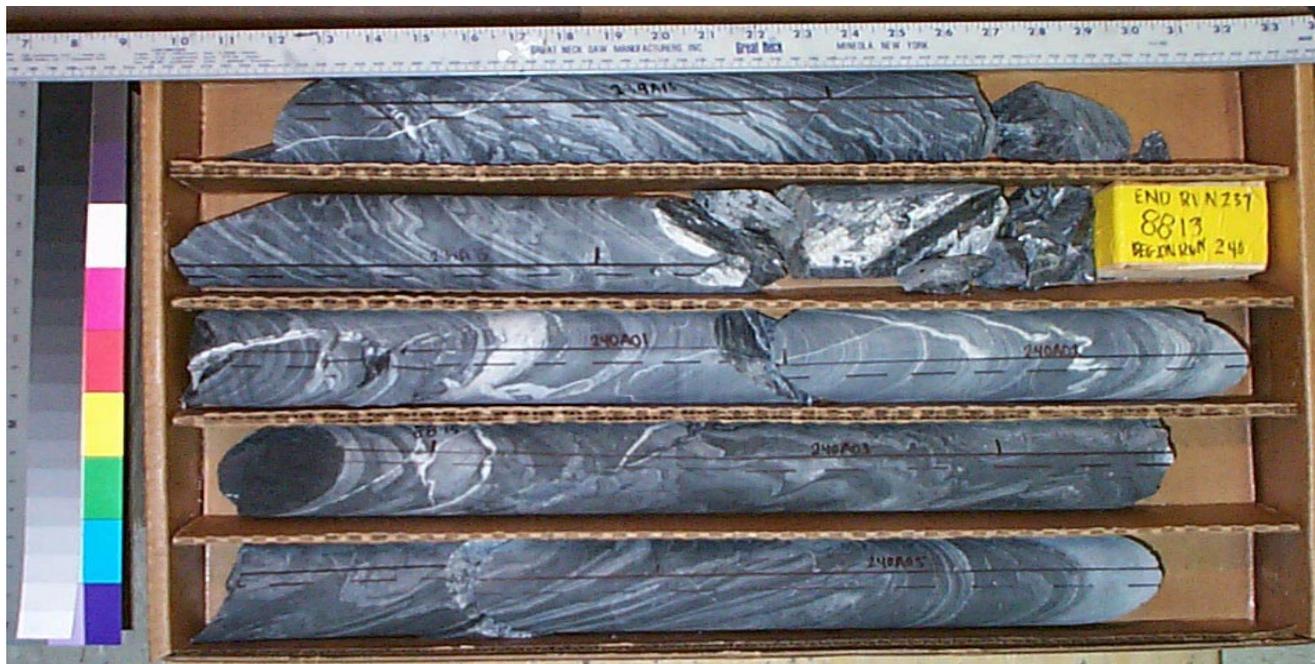


Core Scans included in this box
(listed by piece going downhole):

239A0200
239A0300
239A0400
239A0700
239A1100
239A1200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 350
Depth Interval 8808.5'-8817.9'

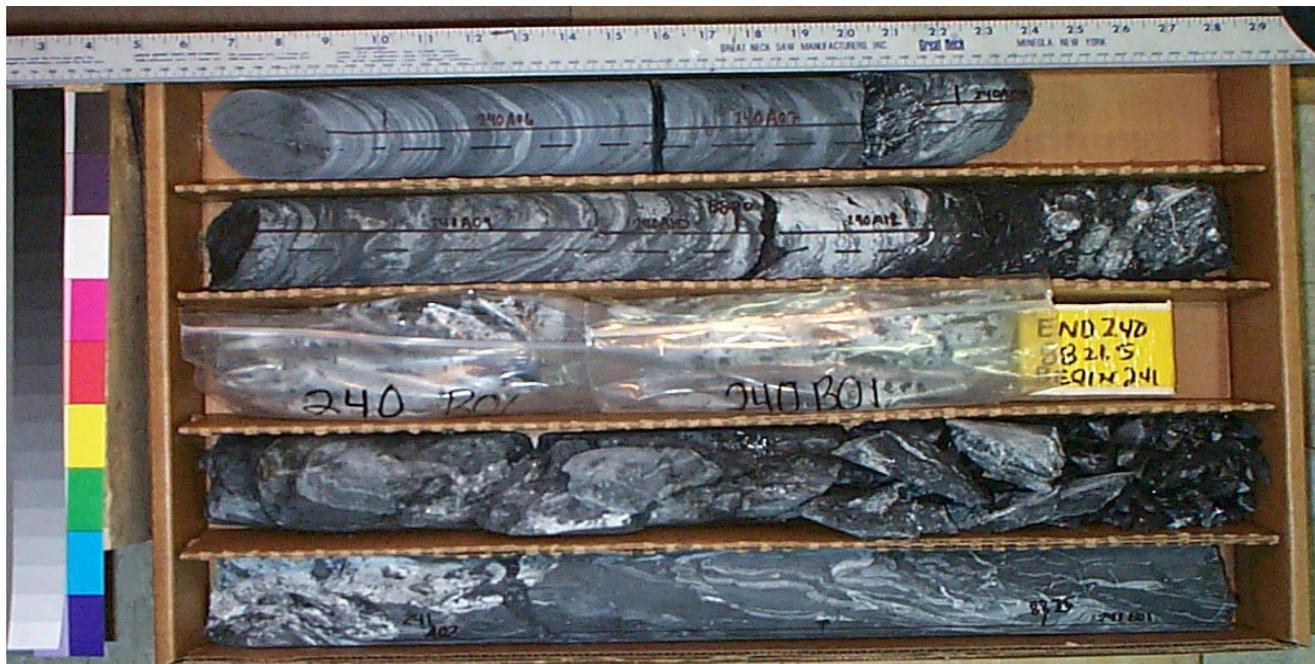


Core Scans included in this box
(listed by piece going downhole):

239A1300
239A1500
240A0100
240A0200
240A030A
240A0500

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 351
Depth Interval 8817.9'-8825.3'



Core Scans included in this box
(listed by piece going downhole):

240A0600
240A0700
240A0800
240A0900
240A1000
241B011A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 352
Depth Interval 8825.3'-8832.7'



Core Scans included in this box
(listed by piece going downhole):

241B011A
241B0300
241B0500
241B0800
241B0900
241B1000

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 353
Depth Interval 8832.7'-8840.7'



Core Scans included in this box
(listed by piece going downhole):

241B1100
242A011A
242A012A
242A013A

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 354
Depth Interval 8840.7'-8848.6'

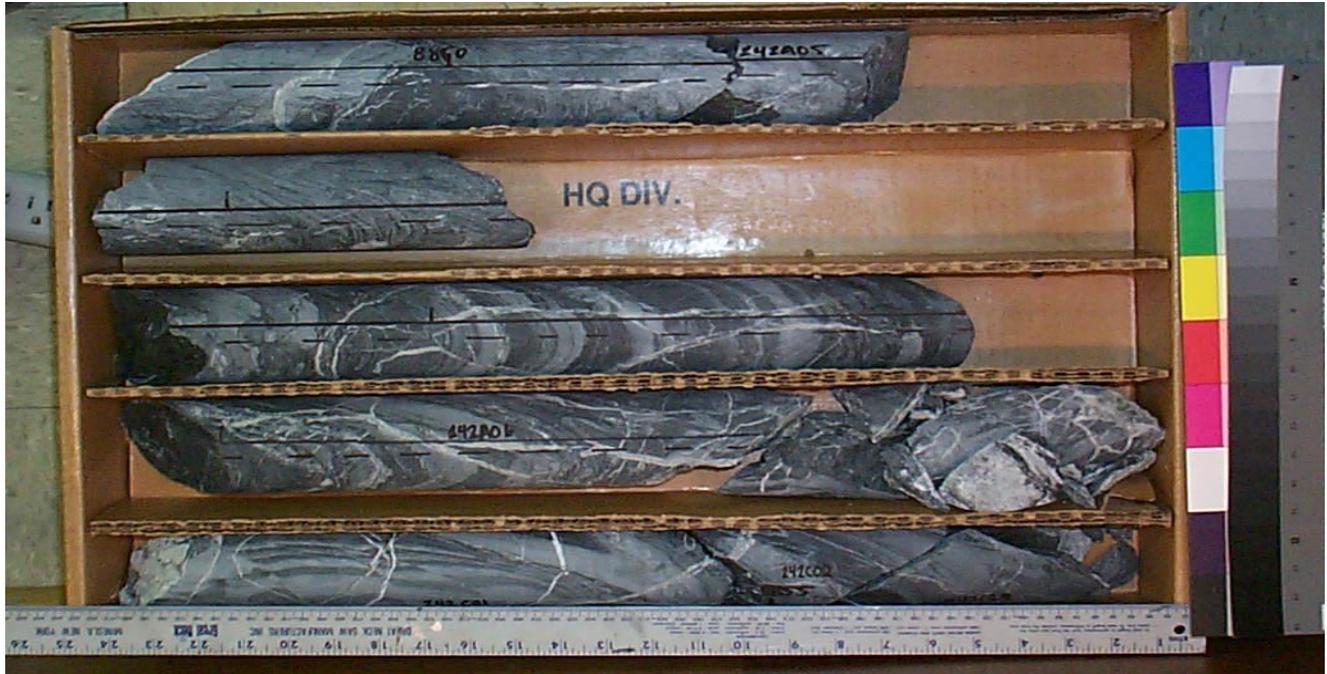


Core Scans included in this box
(listed by piece going downhole):

242A021A
242A022A
242A030A
242A040A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 355
Depth Interval 8848.6'-8855.0'



Core Scans included in this box
(listed by piece going downhole):

242A050A
242A060A
242C0100
242C0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 356
Depth Interval 8855.0'-8861.9'



Core Scans included in this box
(listed by piece going downhole):

243B0200
243C0100
243D0100
243F0100
243H0100
243I0100
243J0100
243K0100
243L0100
243M0100
243M0300
244A010A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 357
Depth Interval 8861.9'-8868.3'



Core Scans included in this box
(listed by piece going downhole):

244A0200
244C0100
244C0300
244C0400
245A010A
245A0200
245A0300
245A0400
245A0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 358
Depth Interval 8868.3'-8875.5'



Core Scans included in this box
(listed by piece going downhole):

245A0600
245A0800
245A0900
246A0200
246C0100
246E0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 359
Depth Interval 8875.5'-8882.3'



Core Scans included in this box
(listed by piece going downhole):

246F0200
246G0100
246G0400
246G0500
247A0100
247B0100
247B0200
247B0300

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 360
Depth Interval 8882.3'-8890.1'



Core Scans included in this box
(listed by piece going downhole):

247B0400
247B0500
247C0100
247D0100
247D0200
247D0300
247D0400
247D0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 361
Depth Interval 8890.1'-8896.3'



Core Scans included in this box
(listed by piece going downhole):

[247D0600](#)
[247D0700](#)

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 362
Depth Interval 8896.3'-8902.1'



Core Scans included in this box
(listed by piece going downhole):

249A0100
249A0200
249A0300
249A0400
249B0300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 363
Depth Interval 8902.1'-8908.8'



Core Scans included in this box
(listed by piece going downhole):

249C0100
249D0300
249E0300
249E0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 364
Depth Interval 8908.8'-8915.3'



Core Scans included in this box
(listed by piece going downhole):

249E0500
249E0600
250A0300
250A0500
250A0600
250A0700
250A0900
250A1000
250A1200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 365

Depth Interval 8915.3'-8923.1'



Core Scans included in this box
(listed by piece going downhole):

250C0100
250C0300
250C0500
250C0600
250C0700
250C0800
250C1000
250C1100
251A0100
251A0200
251A0300
251A0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 366
Depth Interval 8923.1'-8930.5'

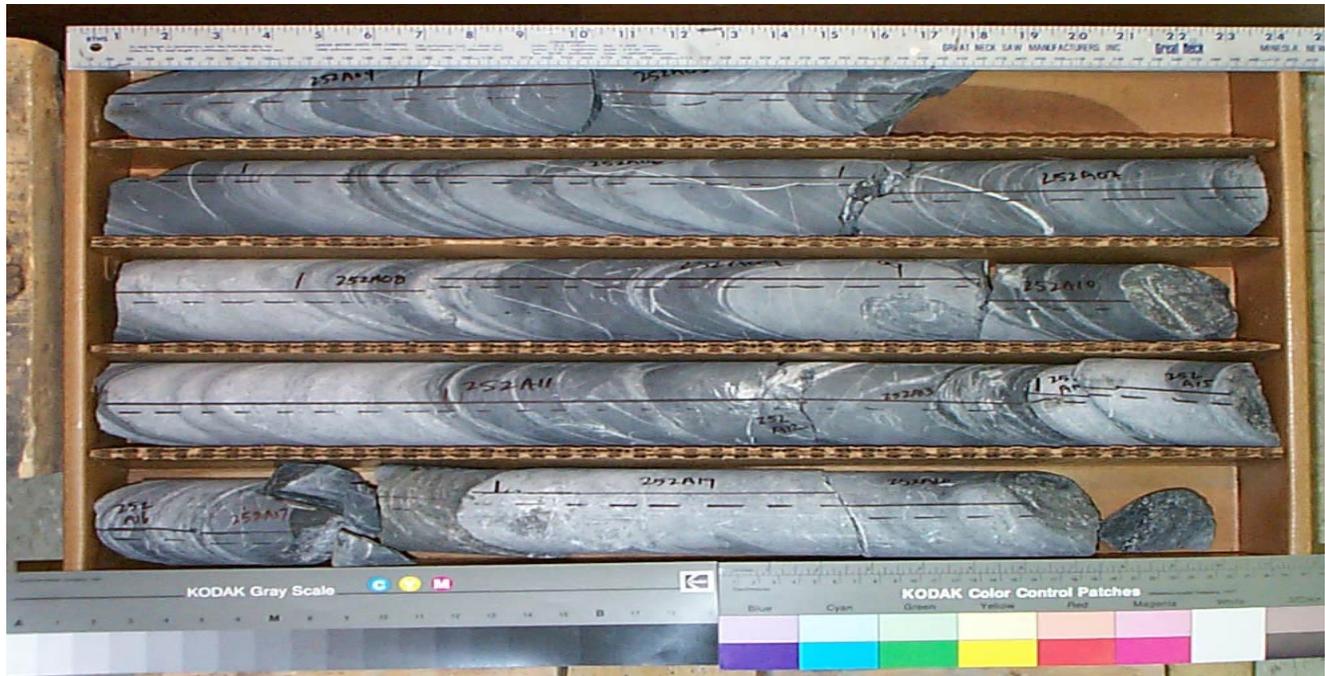


Core Scans included in this box
(listed by piece going downhole):

251A0500
251A0600
251A0700
251A0800
251A1200
251A1400
251A1500
251A1600
252A0100
252A0200
252A0300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 367
Depth Interval 8930.5'-8939.0'



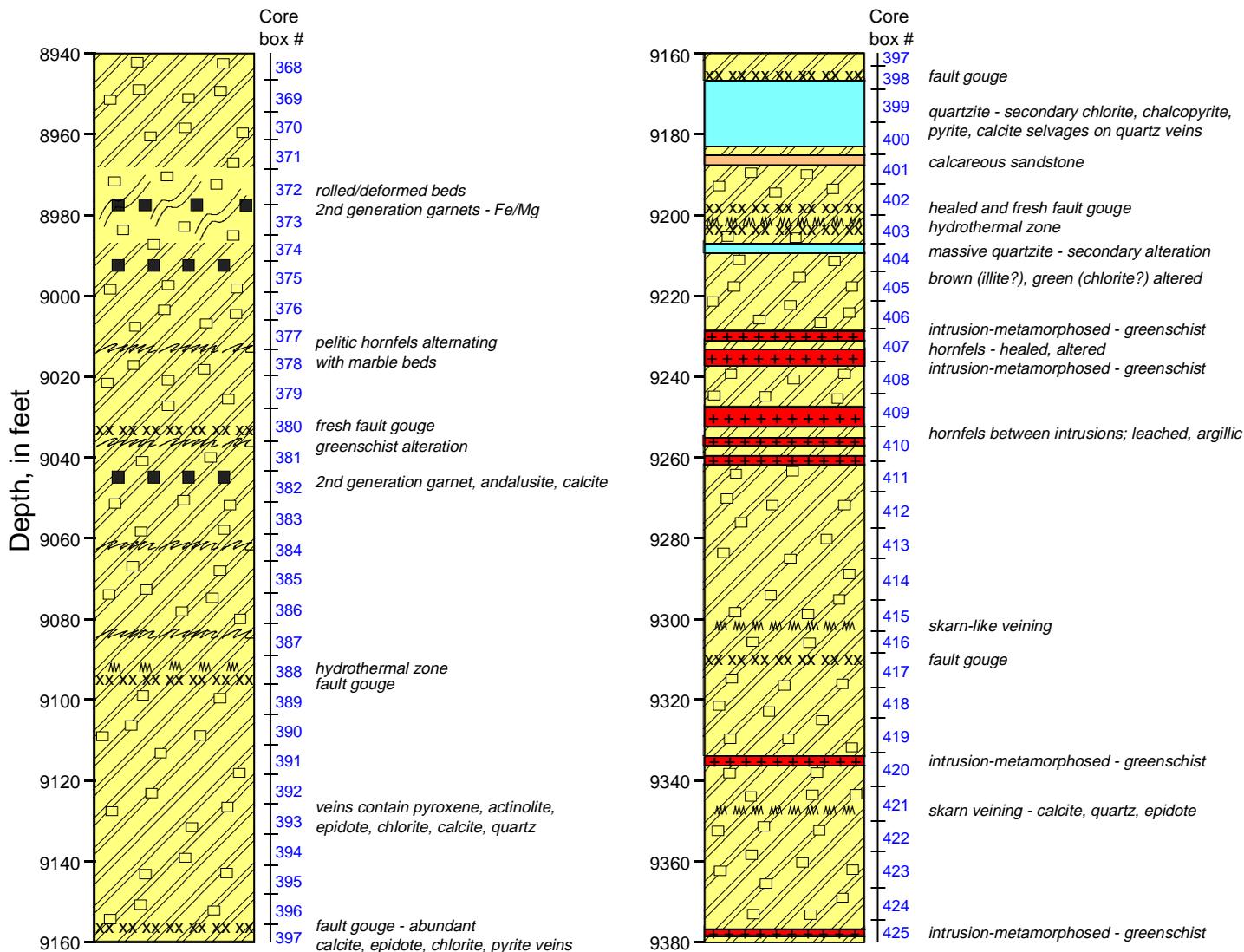
Core Scans included in this box
(listed by piece going downhole):

252A0400
252A0500
252A0600
252A0700
252A0800
252A0900
252A1000

252A1100
252A1300
252A1400
252A1600
252A1900
252A2000

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

Stratigraphic Column for LVEW Phase III, page 5



Explanation

- | | | | | |
|--|---|---|---|--|
|  Metapelite with banding |  Metapelite - no banding |  Intrusion |  Metapelite breccia |  Hydrothermal veins/fractures |
|  Hornfels |  Quartzite |  Intrusion-metamorphosed |  Sandstone |  Fault gouge |
|  Metapelite with ductile deformation |  Calc-silicate |  Boudinage deformation | |  2nd generation garnets |

LVEW Core Box 368
Depth Interval 8939.0'-8946.5'



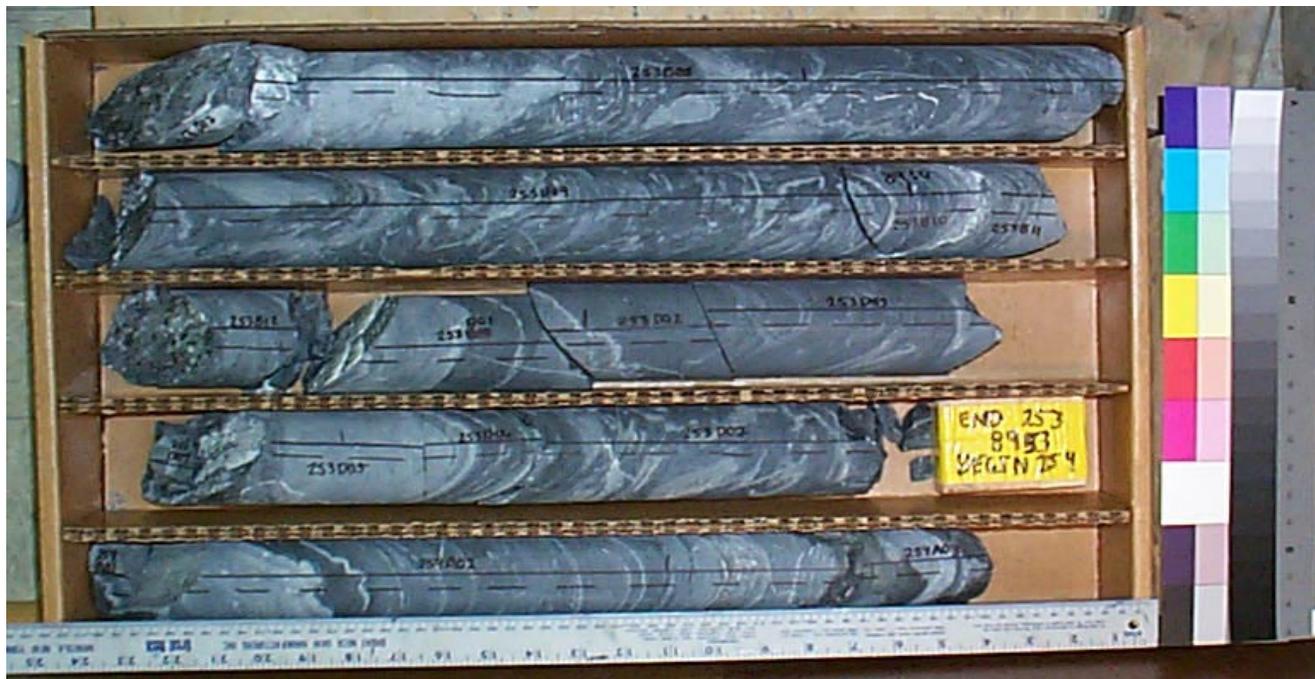
Core Scans included in this box
(listed by piece going downhole):

252A2200
252A2300
252A2500
252A2600
252A2700
253A0100

253B0100
253B0200
253B0300
253B0400
253B0500
253B0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 369
Depth Interval 8946.5'-8954.6'



Core Scans included in this box
(listed by piece going downhole):

253B0800
253B0900
253B1200
253D0100
253D0200
253D0300
253D0500
253D0700
254A0200
254A0300

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 370
Depth Interval 8954.6'-8961.5'



Core Scans included in this box
(listed by piece going downhole):

254A0400
254A050A
254A0600
254A070A
254A0800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 371
Depth Interval 8961.5'-8968.6'

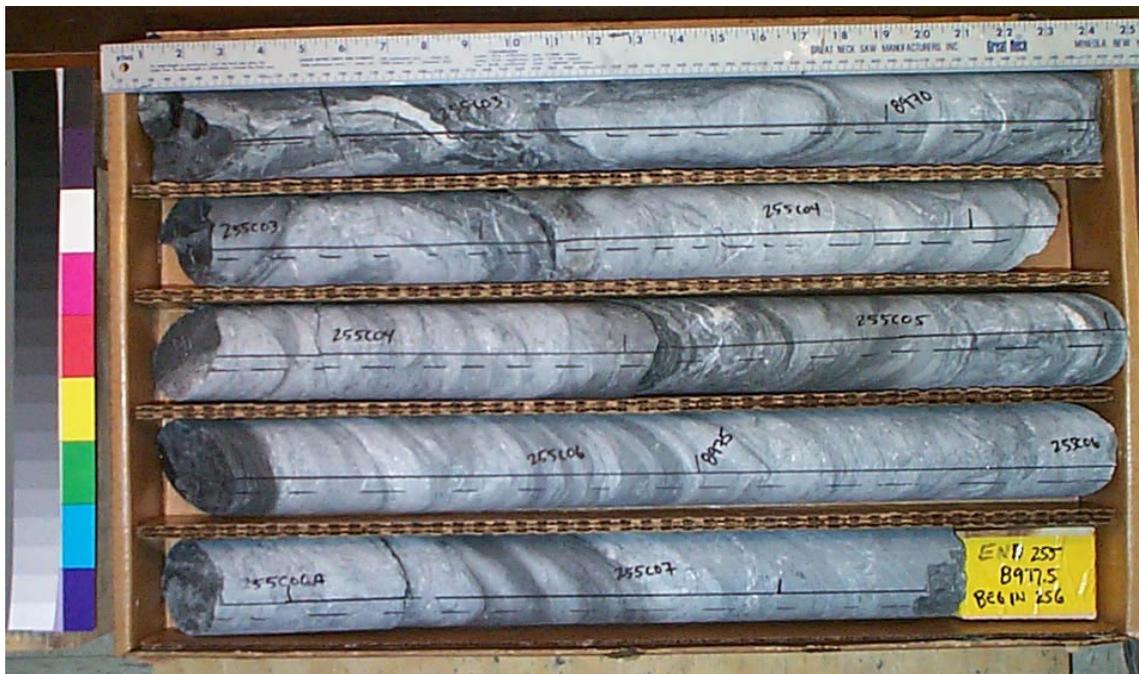


Core Scans included in this box
(listed by piece going downhole):

254A090A
254A1100
254A1200
254A1300
255A0100
255A0200
255A0300
255A0400
255A0500
255A0600
255A0700
255C0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 372
Depth Interval 8968.6'-8977.5'

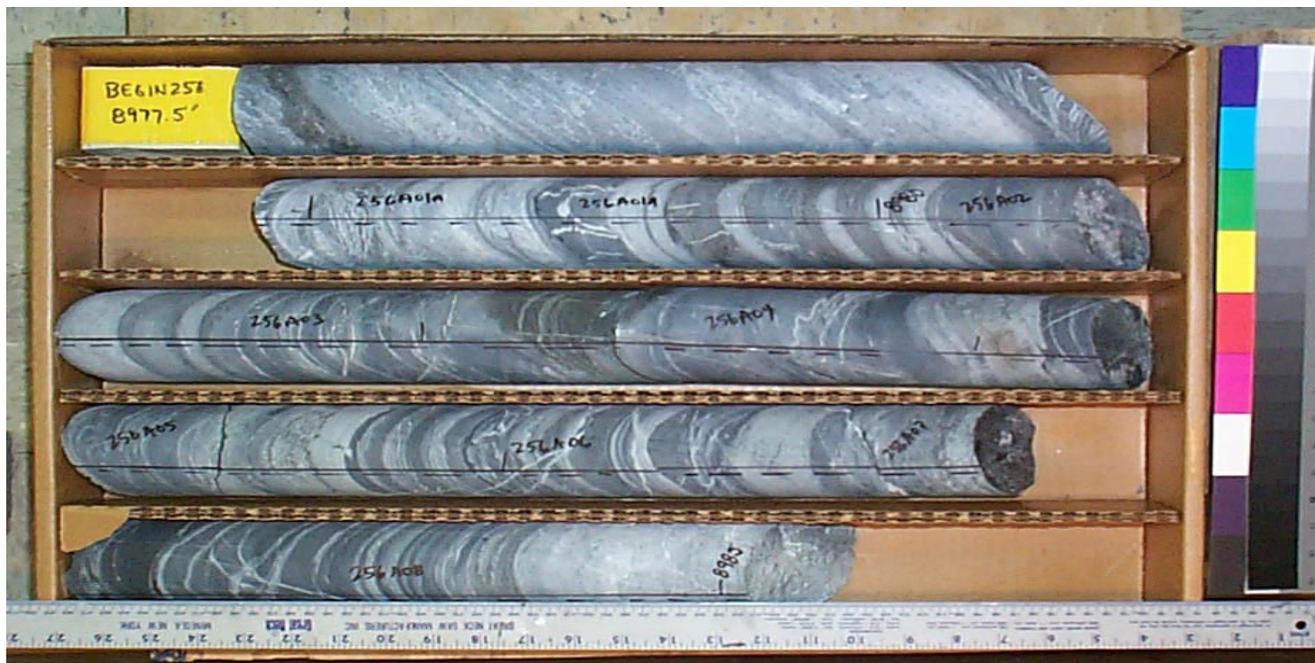


Core Scans included in this box
(listed by piece going downhole):

255C030A
255C040A
255C0500
255C060A
255C0700

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 373
Depth Interval 8977.5'-8985.0'



Core Scans included in this box
(listed by piece going downhole):

256A010A
256A0200
256A0300
256A0400
256A0500
256A0600
256A0700
256A0800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 374
Depth Interval 8985.0'-8991.3'



Core Scans included in this box
(listed by piece going downhole):

256A0900
256A1000
256A1100
256A1200
256A1400
256A1500
256A1600
257A0100
257A0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 375
Depth Interval 8991.3'-8998.8'



Core Scans included in this box
(listed by piece going downhole):

257A0300
257A0400
257A0700
257A0800
257C0100
257D0100
257E0100
257E030A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 376
Depth Interval 8998.8'-9006.0'

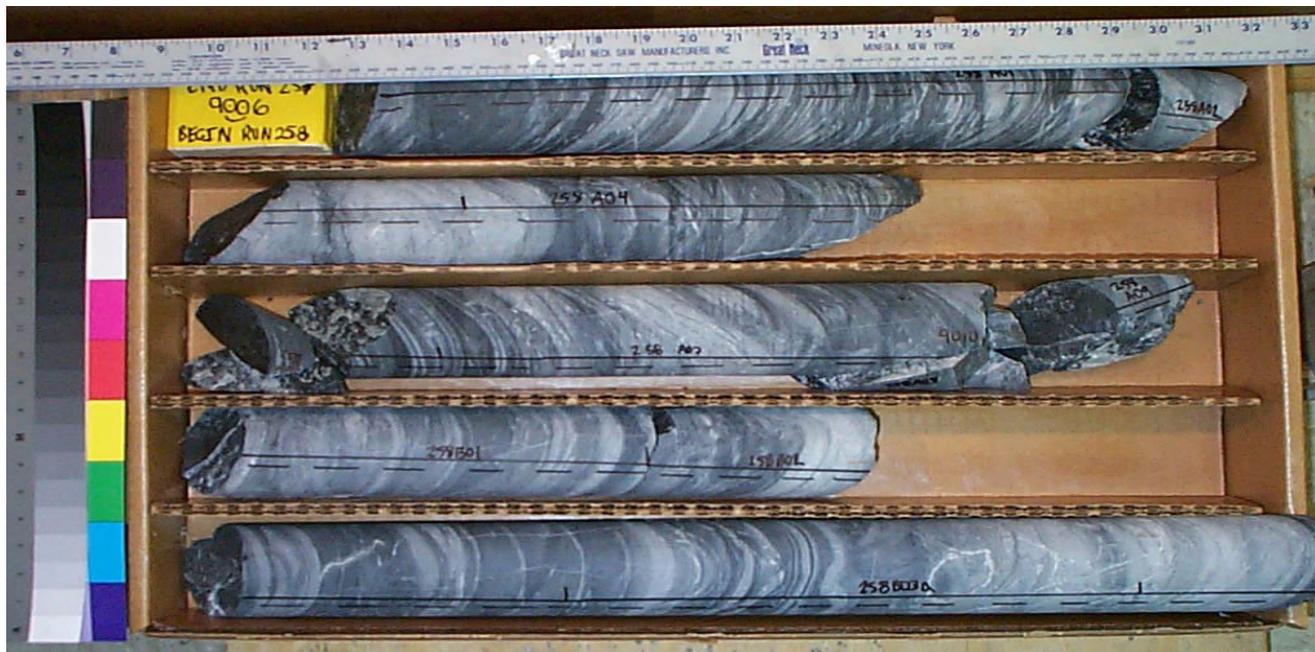


Core Scans included in this box
(listed by piece going downhole):

257E030A
257E060A
257E0700
257E0800
257G0300

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 377
Depth Interval 9006.0'-9013.3'



Core Scans included in this box
(listed by piece going downhole):

258A0100
258A0400
258A0700
258B0100
258B0200
258B031A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 378
Depth Interval 9013.3'-9019.8'



Core Scans included in this box
(listed by piece going downhole):

258B032A
258B0500
258B0600
258D0100
258D0200
258D0300
258D0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 379
Depth Interval 9019.8'-9028.0'



Core Scans included in this box
(listed by piece going downhole):

258D0500
258D0600
258D0700
258D0800
258D0900
259A0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 380
Depth Interval 9028.0'-9036.0'



Core Scans included in this box
(listed by piece going downhole):

259A0200
259A0300
259A0400
259A0500
259A0600
259A0700
259A0800

259A0900
259A1000
259A1200
259A1300
259A1500
259C0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 381
Depth Interval 9036.0'-9043.6'

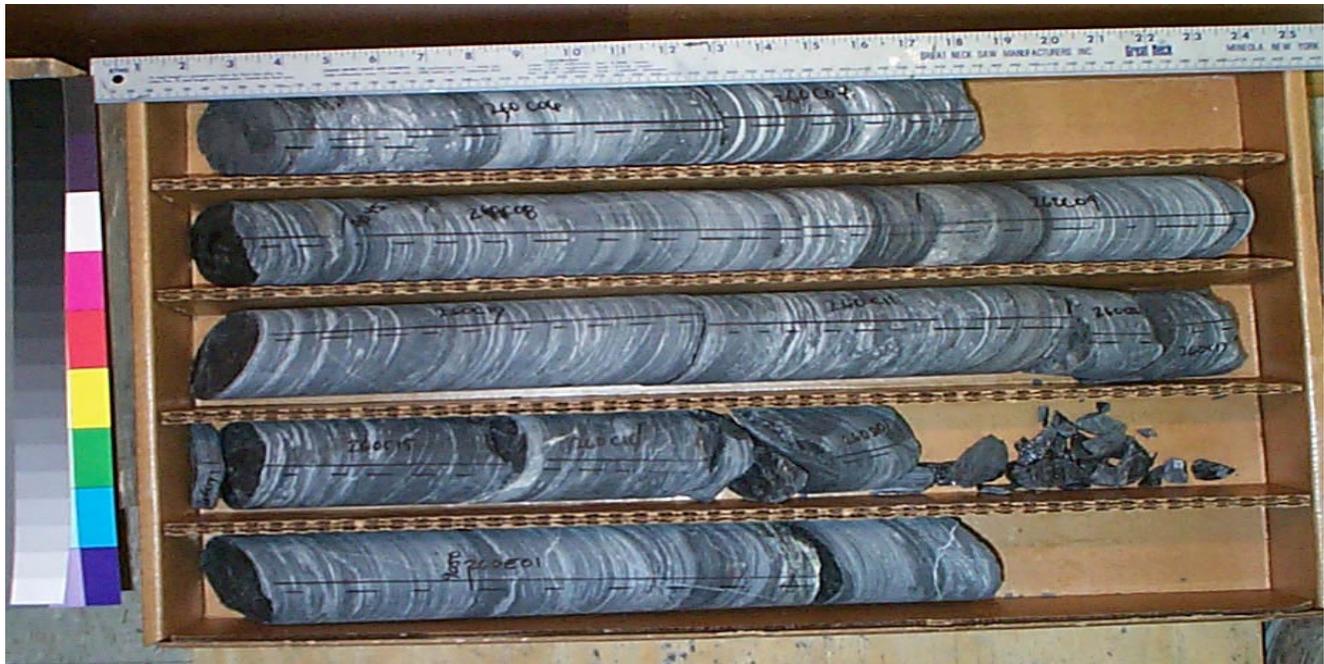


Core Scans included in this box
(listed by piece going downhole):

259C0300
259C0400
259D0100
259E0100
259E0200
260C0100
260C0200
260C030A
260C040A
260C0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 382
Depth Interval 9043.6'-9050.9'



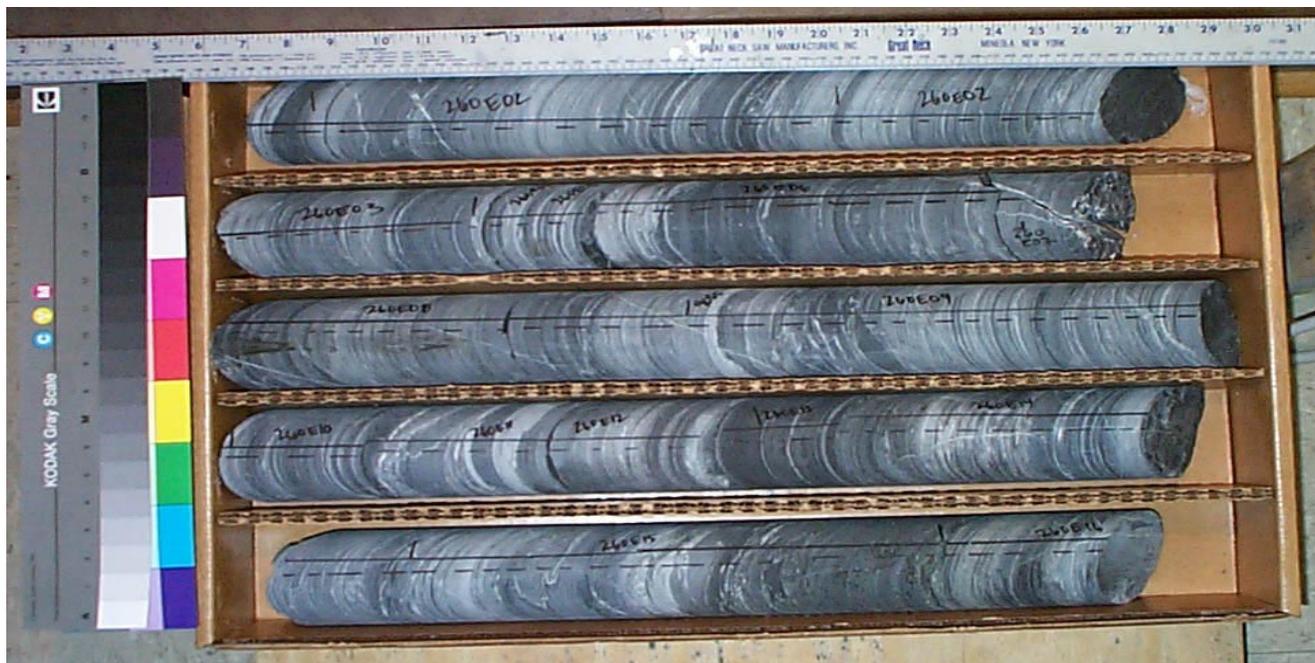
Core Scans included in this box
(listed by piece going downhole):

260C0600
260C0700
260C0800
260C0900
260C1000
260C1100
260C1300
260C1500
260C1600
260E0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 383

Depth Interval 9050.9'-9059.0'

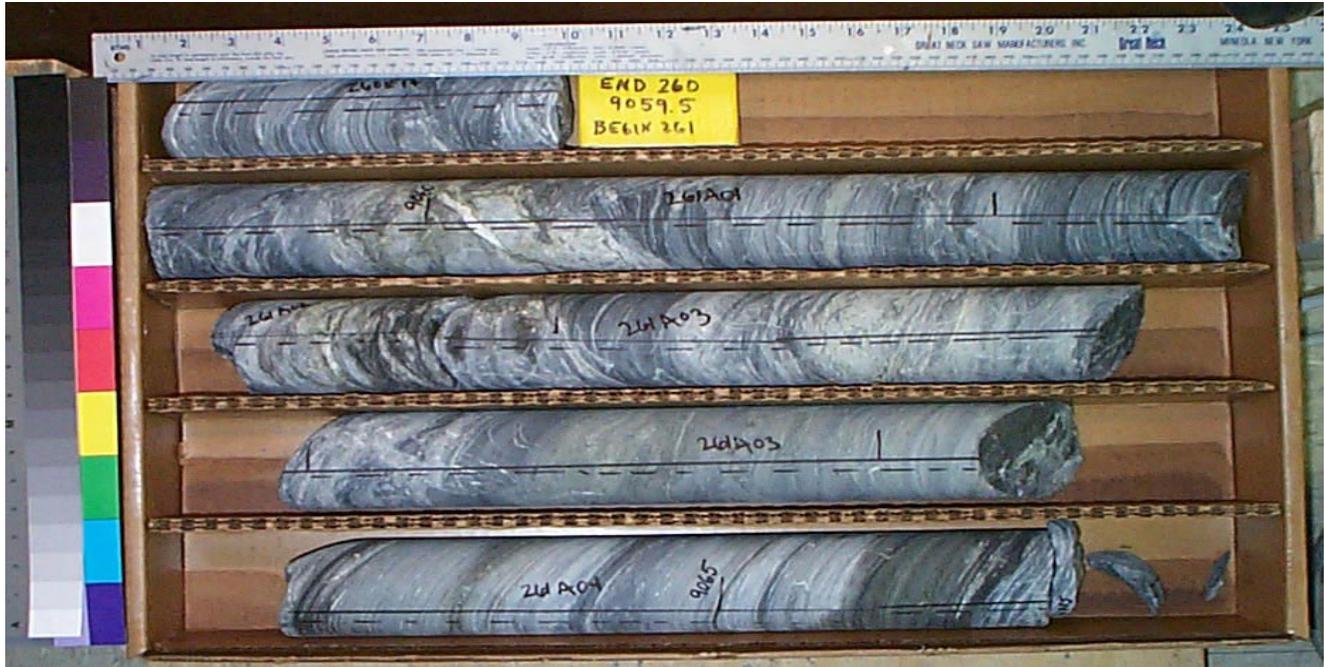


Core Scans included in this box
(listed by piece going downhole):

260E0200
260E0300
260E0600
260E0800
260E0900
260E1000
260E1100
260E1200
260E1300
260E1400
260E1500
260E1600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 384
Depth Interval 9059.0'-9065.7



Core Scans included in this box
(listed by piece going downhole):

260E1700
261A0100
261A0200
261A030A
261A0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 385
Depth Interval 9065.7'-9073.6'



Core Scans included in this box
(listed by piece going downhole):

261A0600
261A0700
261A0800
261A0900
261A1000
261A1100
261B0100

261B0200
261B0300
261B0400
261B0500
261B0600
261B0700
261B0800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 386
Depth Interval 9073.6'-9081.2'



Core Scans included in this box
(listed by piece going downhole):

261B0900
261B1000
261B1100
261B1200
261B1300
261B1400
262A0100
262A0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 387
Depth Interval 9081.2'-9089.1'



Core Scans included in this box
(listed by piece going downhole):

262A0300
262A0400
262A0500
262A0600
262A0700
262A0800
262A0900
262A1000

262A1200
262A1300
262A1400
262A1500
262A1600
262A1700
263A0100

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 388
Depth Interval 9089.1'-9096.1'



Core Scans included in this box
(listed by piece going downhole):

263F0100
263F0200
263F0300
263F0400
263F0500
264A010A
264A021A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 389
Depth Interval 9096.1'-9103.7'



Core Scans included in this box
(listed by piece going downhole):

264A021A
264A022A
264A030A
264A040A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 390
Depth Interval 9103.7'-9110.9'



Core Scans included in this box
(listed by piece going downhole):

264A0800
264A090A
264A1000
265A0100
265A0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 391
Depth Interval 9110.9'-9118.2'



Core Scans included in this box
(listed by piece going downhole):

265A030A
265A040A
265A050A
265A0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 392
Depth Interval 9118.2'-9125.8'



Core Scans included in this box
(listed by piece going downhole):

265A0700
265A0800
265A0900
265A1000
265A1100
265B0100
266B0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 393
Depth Interval 9125.8'-9133.5'



Core Scans included in this box
(listed by piece going downhole):

266B0300
266B0400
266B0600
267A0100
267A0200
267A0300
267A0400
267A0500
267A0600
267A0700

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 395
Depth Interval 9140.8'-9147.9'



Core Scans included in this box
(listed by piece going downhole):

268C0200
268C0300
268C0400
268C0500
268C0600
268C0700
268C0800
268C1000

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 396

Depth Interval 9147.9'-9155.3'

Box Photo Missing

Core Scans included in this box
(listed by piece going downhole):

268C1200

269A0100

269B0100

269C010A

269C0200

269C0400

269D0100

269D0200

269D0300

269D0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 397

Depth Interval 9155.3'-9163.0'

Box Photo Missing

Core Scans included in this box
(listed by piece going downhole):

269D0500

269D0600

269D0700

269D0800

269D0900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 398
Depth Interval 9163.0'-9168.8'



Core Scans included in this box
(listed by piece going downhole):

270A0100
270B0100
270C0100
270E0100
270F0100
271A0100
272A0100
272A0200
272A0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 399
Depth Interval 9168.8'-9177.0'

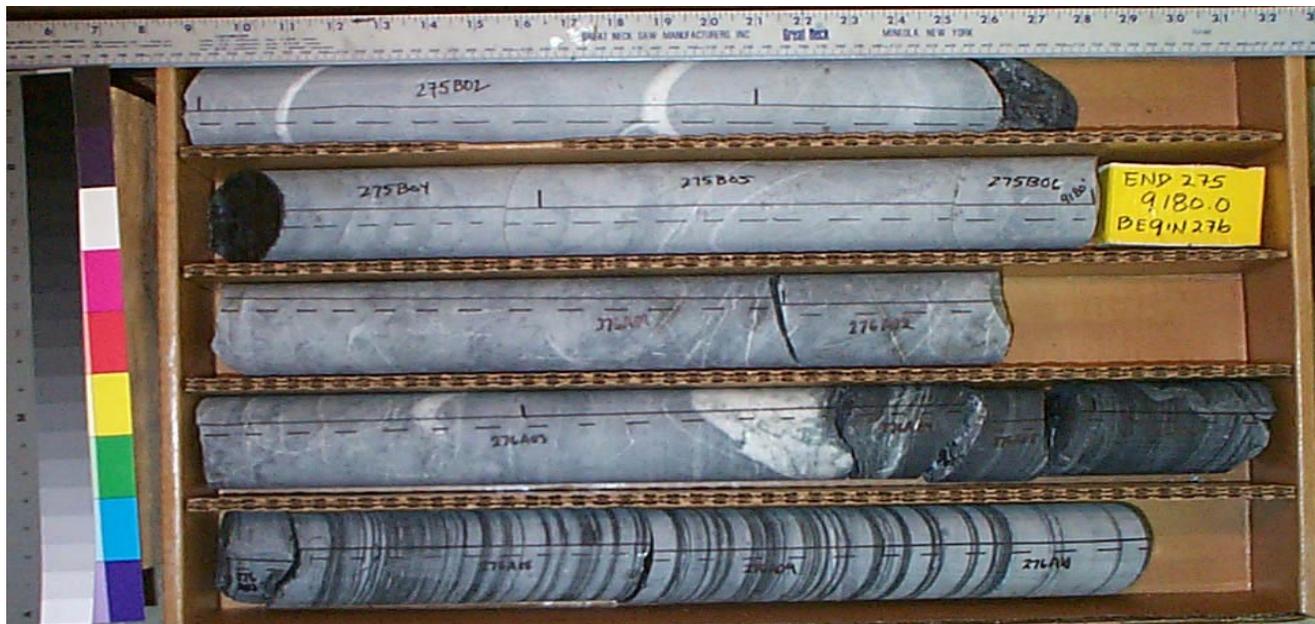


Core Scans included in this box
(listed by piece going downhole):

272A2700
272A2800
273A0100
274A0300
275B0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 400
Depth Interval 9177.0'-9185.0'

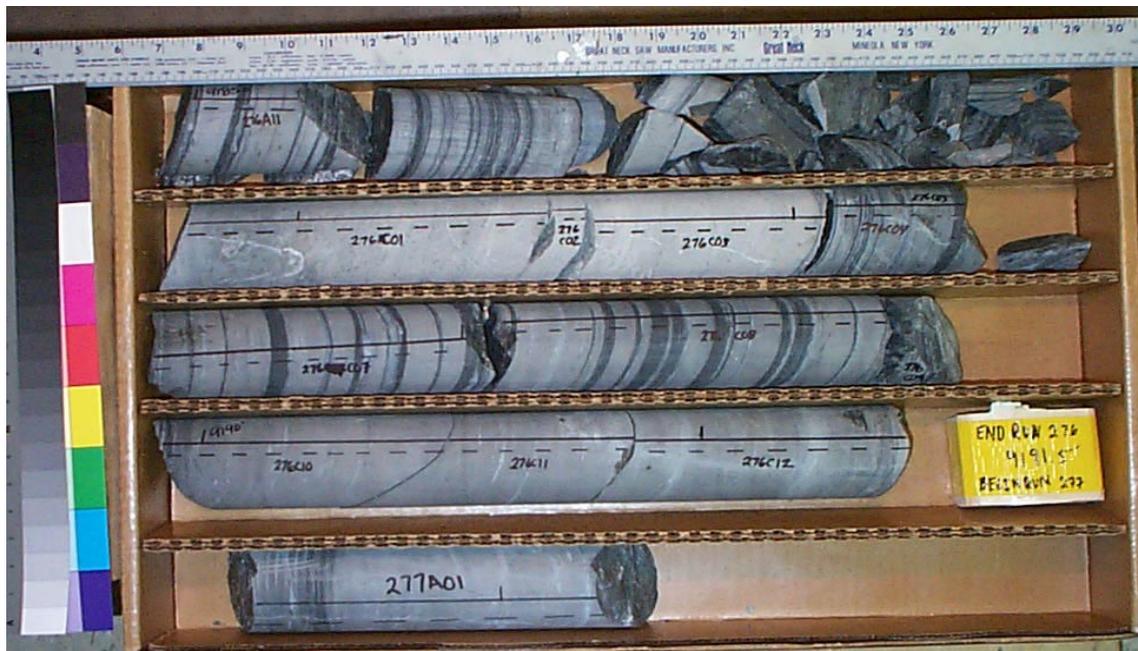


Core Scans included in this box
(listed by piece going downhole):

275B0200
275B0400
275B0500
275B0600
276A0100
276A0200
276A0300
276A0400
276A0600
276A0800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 401
Depth Interval 9185.0'-9192.2'



Core Scans included in this box
(listed by piece going downhole):

276C0100
276C0300
276C0400
276C0700
276C0800
276C1000
276C1100
276C1200
277A0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 402
Depth Interval 9192.2'-9200.0'



Core Scans included in this box
(listed by piece going downhole):

277A0200
277A0300
277A0600
277A0700
277A0800
277A0900
277A1000

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 403
Depth Interval 9200.0'-9207.0'



Core Scans included in this box
(listed by piece going downhole):

(No Core Scans Included in This Box)

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 405
Depth Interval 9214.0'-9221.3'



Core Scans included in this box
(listed by piece going downhole):

281E03A
281E0400
281E0500
281E0600
281F0100
282A0200
282A0300
282B0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 406
Depth Interval 9221.3'-9228.0'

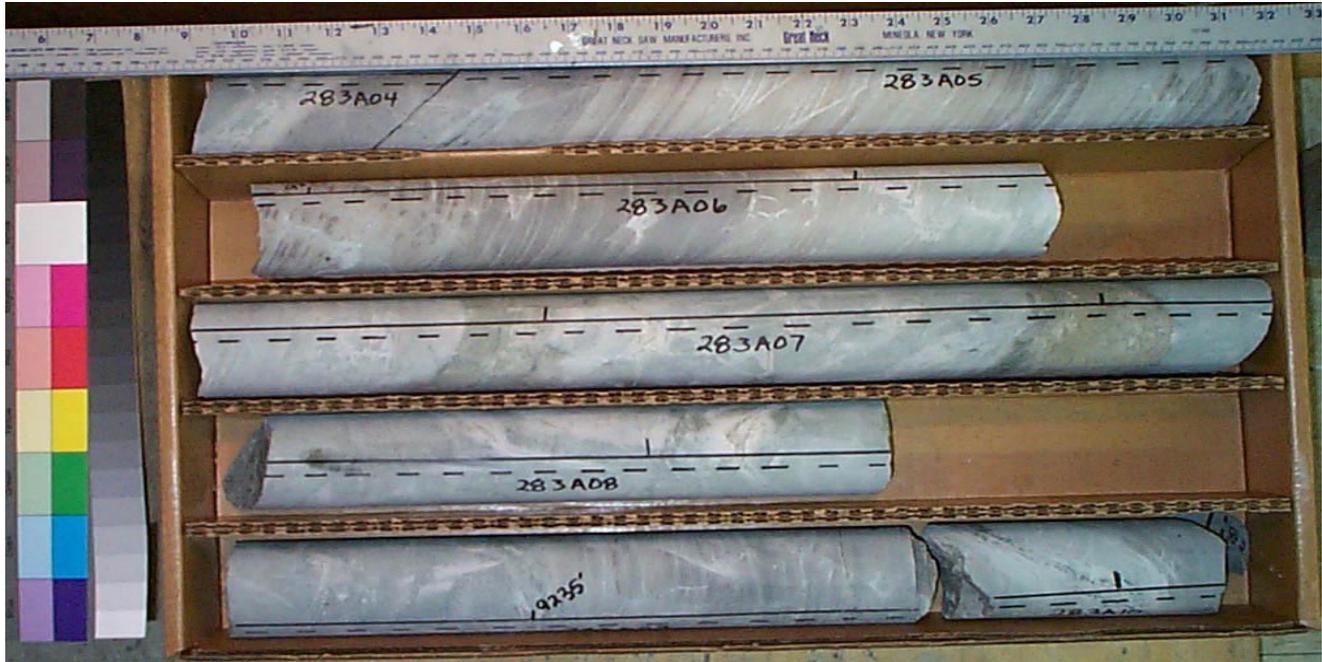


Core Scans included in this box
(listed by piece going downhole):

282B0300
282B0400
282B0700
283A0100
283A0200
283A0300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 407
Depth Interval 9228.0'-9236.2'



Core Scans included in this box
(listed by piece going downhole):

283A0400
283A0500
283A0600
283A0700
283A0800
283A0900
283A1000

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 408
Depth Interval 9236.2'-9244.1'



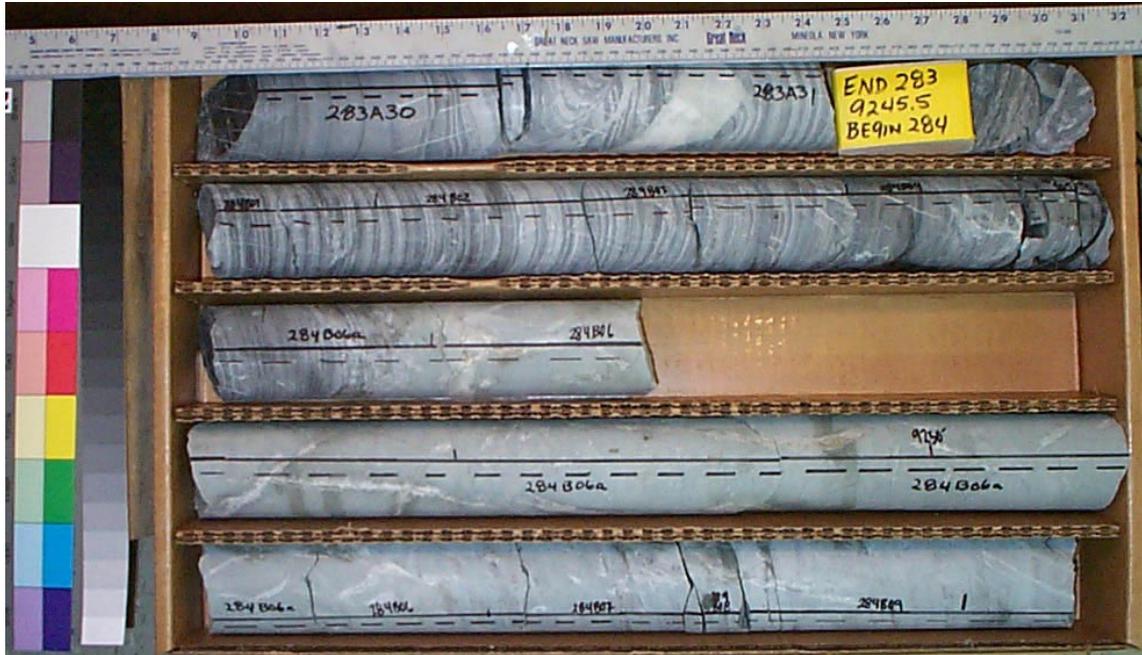
Core Scans included in this box
(listed by piece going downhole):

283A1200
283A1400
283A1500
283A1700
283A1800
283A1900
283A2000
283A2100

283A2200
283A2300
283A2400
283A2500
283A2600
283A2700
283A2800
283A2900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 409
Depth Interval 9244.1'-9252.2'

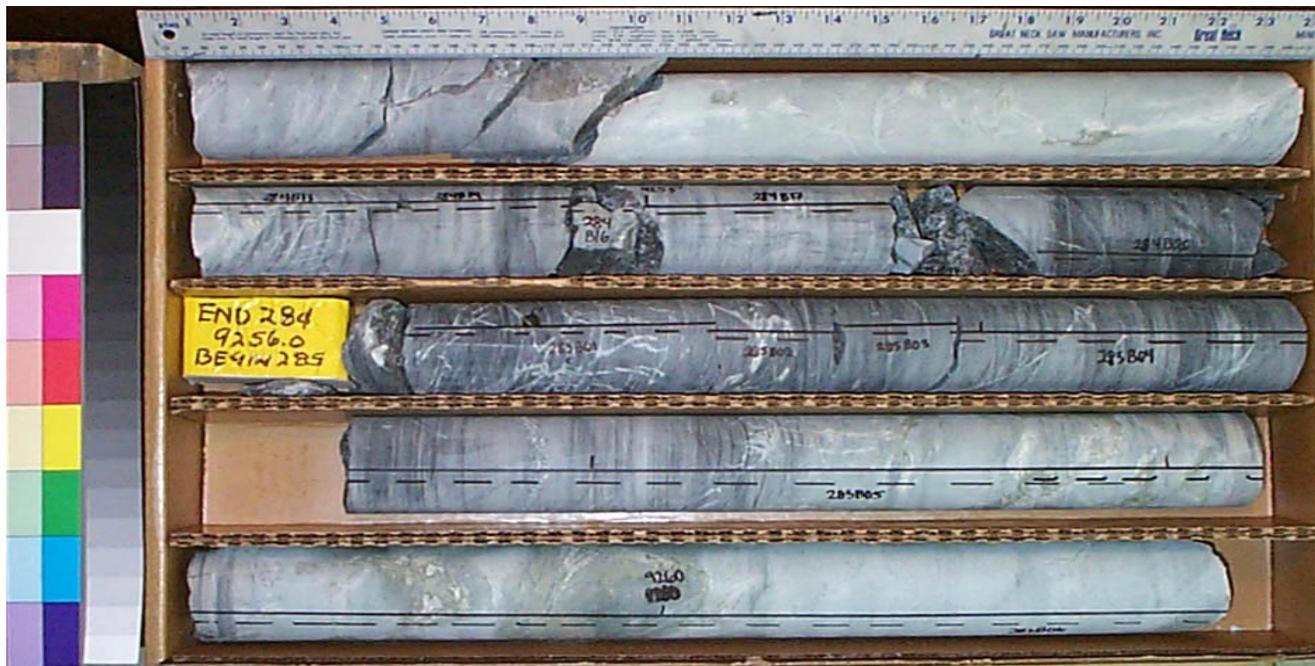


Core Scans included in this box
(listed by piece going downhole):

283A3000
283A3100
284B0100
284B0200
284B0300
284B0400
284B061A
284B062A
284B0700
284B0900

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 410
Depth Interval 9252.2'-9261.0'



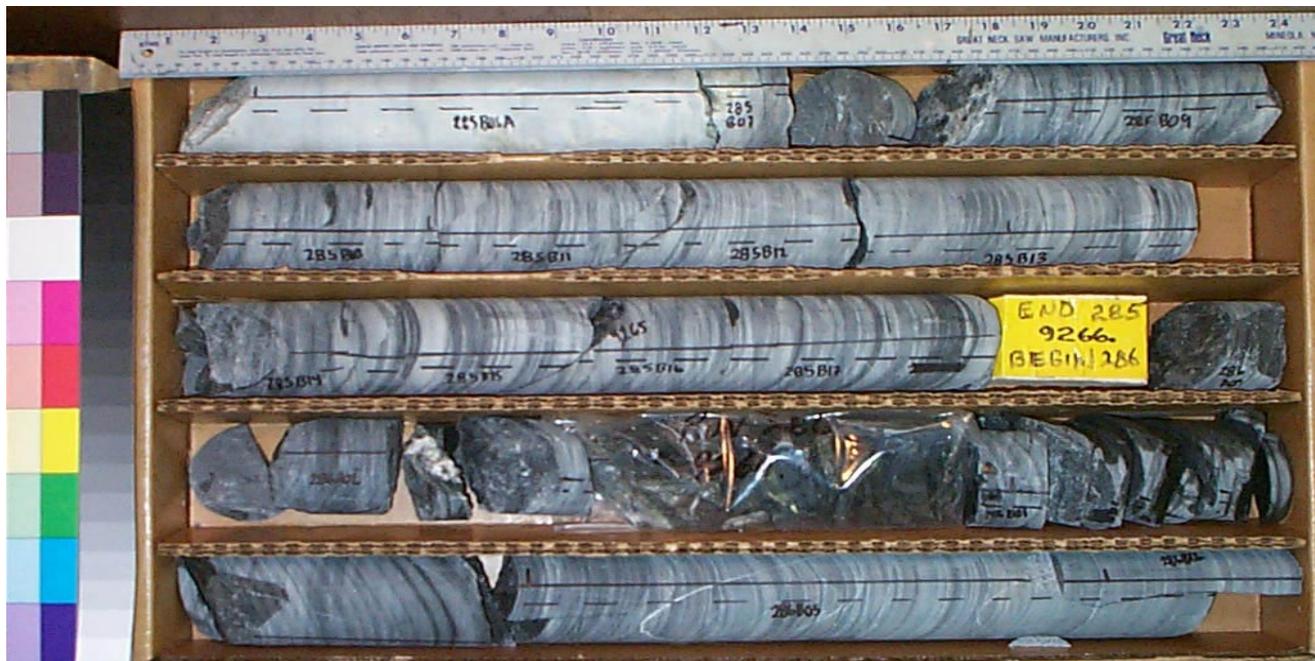
Core Scans included in this box
(listed by piece going downhole):

284B100A
284B1100
284B1200
284B1300
284B1400
284B1700
284B2000

285B0100
285B0200
285B0300
285B0400
285B0500
285B060A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 411
Depth Interval 9261.0'-9268.4'



Core Scans included in this box
(listed by piece going downhole):

285B06A
285B0700
285B0900
285B1000
285B1100
285B1200
285B1300

285B1400
285B1500
285B1600
285B1700
286A0200
286B0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 412
Depth Interval 9268.4'-9277.5'



Core Scans included in this box
(listed by piece going downhole):

286B0700
286B0800
286B0900
286B1000
286B1100
286B1200
286B1300
286B1400
287A0100
287A0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 413
Depth Interval 9277.5'-9285.0'



Core Scans included in this box
(listed by piece going downhole):

287G0400
287G0500
287G0700
287G0800
287G0900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 414
Depth Interval 9285.0'-9295.0'



Core Scans included in this box
(listed by piece going downhole):

289B0100
289D0100
289D0200
289D0300
289D0400
289D0500
289D0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 415
Depth Interval 9295.0'-9302.8'



Core Scans included in this box
(listed by piece going downhole):

291A0100
292A0100
292A0300
292A0400
292A0700
292A0900
292A1000
292A1100
292A1200
292A1300

292A1400
292A1500
292A1600
292A1700
292A1900
292A2000
292A2100
292A2200
292A2300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 416
Depth Interval 9302.8'-9308.2'



Core Scans included in this box
(listed by piece going downhole):

292A2400
292A2500
292A2900
292A3000
292A3100
293A0100
293A0200
293A030A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 417
Depth Interval 9308.2'-9317.2'



Core Scans included in this box
(listed by piece going downhole):

293A030A
293A0600
293B0100
293B0300
293B0400
293B0700

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 418
Depth Interval 9317.2'-9324.6'



Core Scans included in this box
(listed by piece going downhole):

293B0800
293B0900
293B1600
294A0100
294A0400
294A0500
294A0700

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 419
Depth Interval 9324.6'-9333.0'



Core Scans included in this box
(listed by piece going downhole):

294A1100
294A1200
294A1900
294A201A
294A202A
294A2300
294A2700

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 420
Depth Interval 9333.0'-9314.6'



Core Scans included in this box
(listed by piece going downhole):

295B010A
295B0400
295C0300
295C0500
295C0600
295C0700
295C081A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 421
Depth Interval 9341.6'-9350.0'



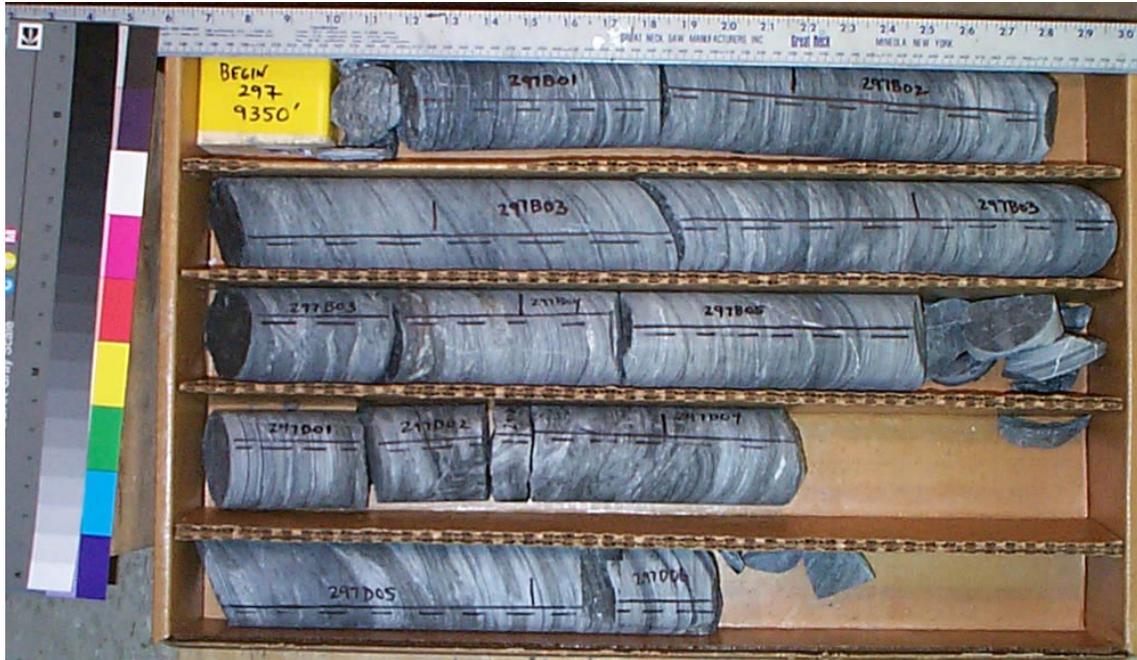
Core Scans included in this box
(listed by piece going downhole):

295C082A
296A0100
296A0200
296A0300
296A0400
296A0700
296A0800
296A0900

296A1000
296A1100
296A1400
296A1500
296A1600
296A1700
296A1900

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 422
Depth Interval 9350.0'-9357.4'

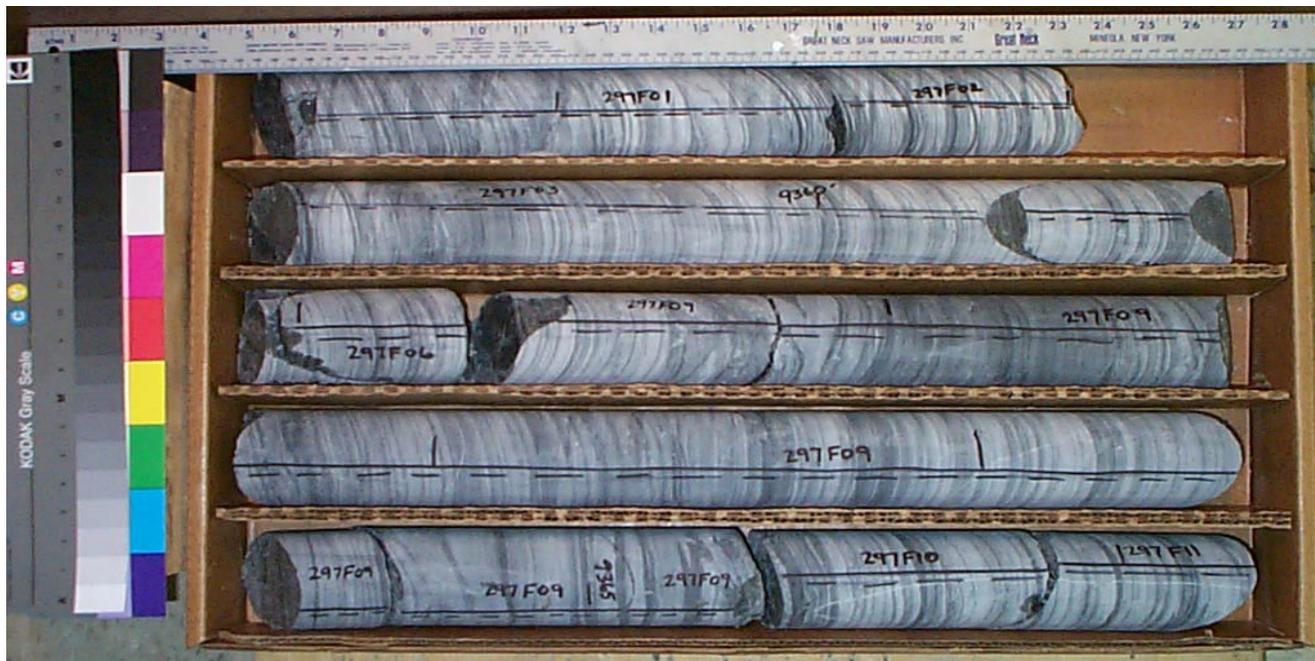


Core Scans included in this box
(listed by piece going downhole):

297B0100
297B0200
297B030A
297B0400
297B0500
297D0100
297D0200
297D0300
297D0400
297D0500
297D0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 423
Depth Interval 9357.4'-9366.3'



Core Scans included in this box
(listed by piece going downhole):

297F0100
297F0200
297F0300
297F091A
297F092A
297F1000
297F1100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 424
Depth Interval 9366.3'-9374.3'



Core Scans included in this box
(listed by piece going downhole):

297F1200
297F1300
297F1400
297F1500
297F1600
297F1700
298A0100
298A0200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 425
Depth Interval 9374.3'-9381.2'

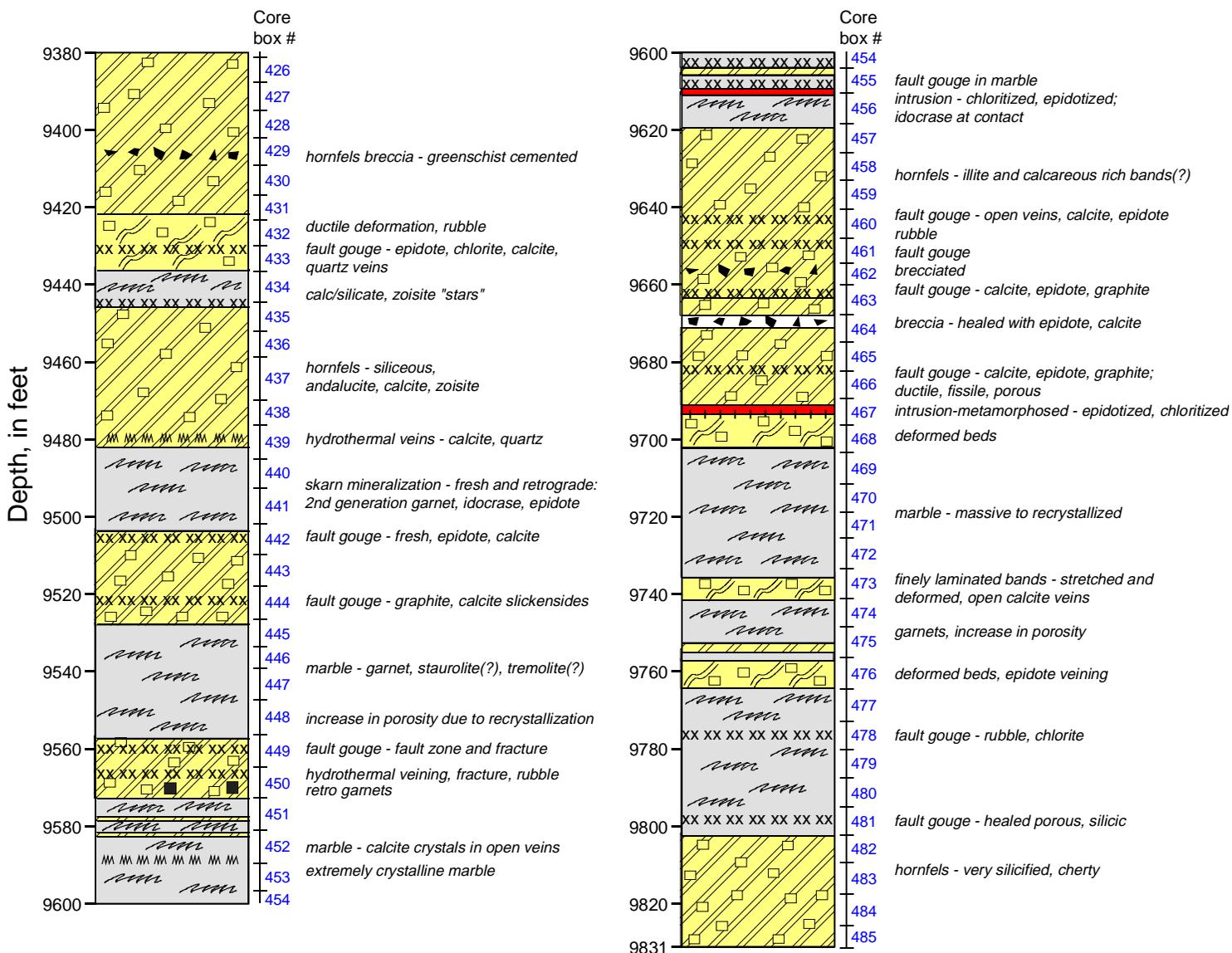


Core Scans included in this box
(listed by piece going downhole):

298B0100
298B0200
298C0100
298C0200
298C0300
298C0400
299B0100
299B0300
299B0400
299B0500

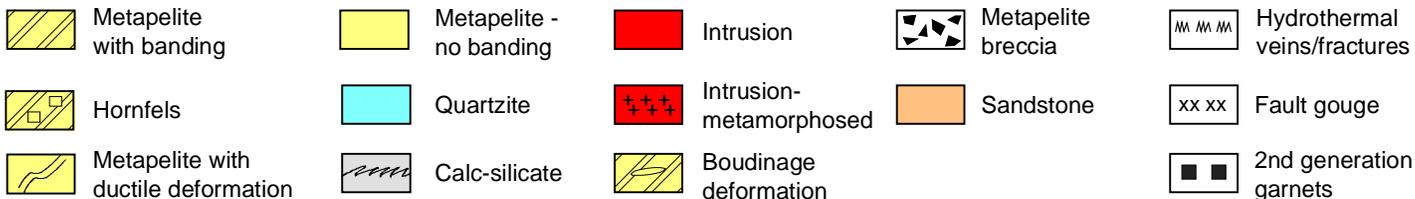
See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

Stratigraphic Column for LVEW Phase III, page 6



Explanation

stratigraphy by Vicki McConnell 1-99



LVEW Core Box 426
Depth Interval 9381.3'-9387.8'



Core Scans included in this box
(listed by piece going downhole):

299B0600
299B0700
300A0100
300A021A
300A022A
300A031A
300A032A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 427
Depth Interval 9387.8'-9394.9'



Core Scans included in this box
(listed by piece going downhole):

300A032A
300A033A
300A0500
300A0600
300A0700
300A0800
300A0900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 428
Depth Interval 9394.9'-9402.0'



Core Scans included in this box
(listed by piece going downhole):

300A1000
300A1100
301C0300
301F0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 429
Depth Interval 9402.0'-9409.2'



Core Scans included in this box
(listed by piece going downhole):

301G0100
302A0100
302A0200
302A0300
302A0400
302A0500
302A0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 430
Depth Interval 9409.2'-9416.8'

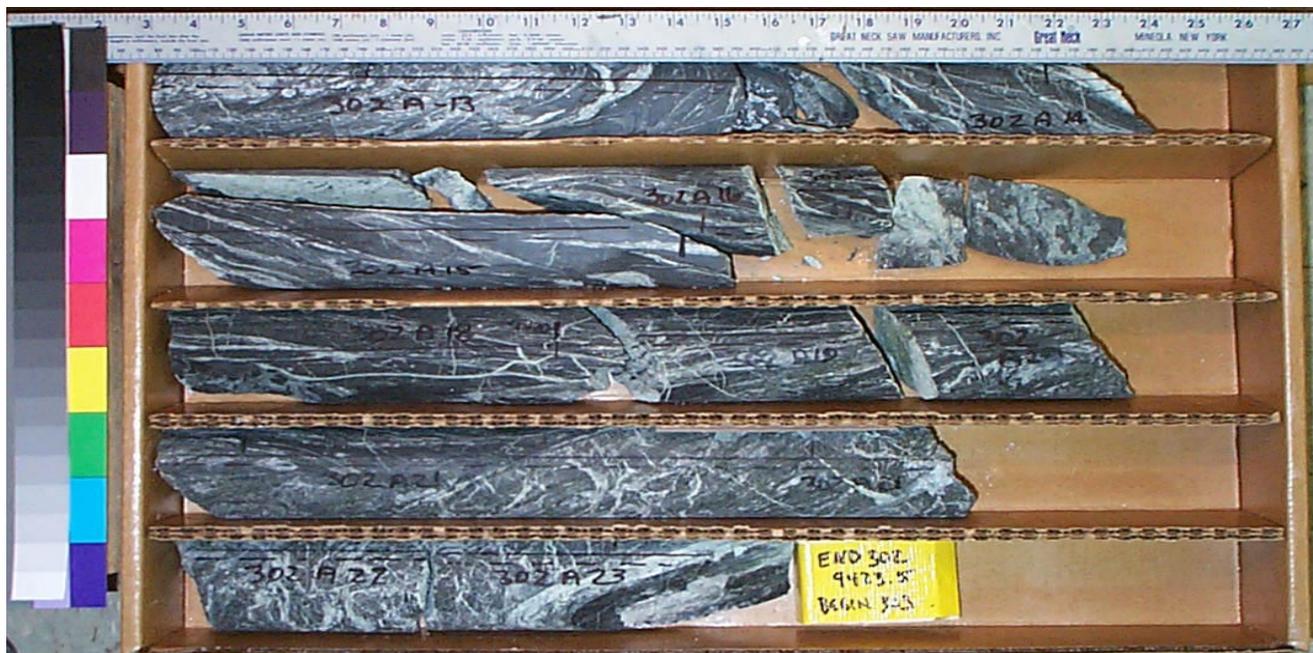


Core Scans included in this box
(listed by piece going downhole):

302A0700
302A0800
302A0900
302A1000
302A1100
302A1200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 431
Depth Interval 9416.8'-9423.5'



Core Scans included in this box
(listed by piece going downhole):

302A1300
302A1400
302A1800
302A1900
302A2000
302A2100
302A2200
302A2300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 432
Depth Interval 9423.5'-9430.0'



Core Scans included in this box
(listed by piece going downhole):

303A0100
303A0200
303A0300
303A0400
303A0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 433
Depth Interval 9430.0'-9436.3'



Core Scans included in this box
(listed by piece going downhole):

303A060A
303A0700
303A0800
303A091A
303A092A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 434
Depth Interval 9436.3'-9444.6'



Core Scans included in this box
(listed by piece going downhole):

303A092A
303A1000
303A1200
305A0100
305A0200
305A030A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 435
Depth Interval 9444.6'-9452.0'



Core Scans included in this box
(listed by piece going downhole):

305A030A
305A0600
305A1200
305A1300
305A150A
305A160A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 436
Depth Interval 9452.0'-9458.7'

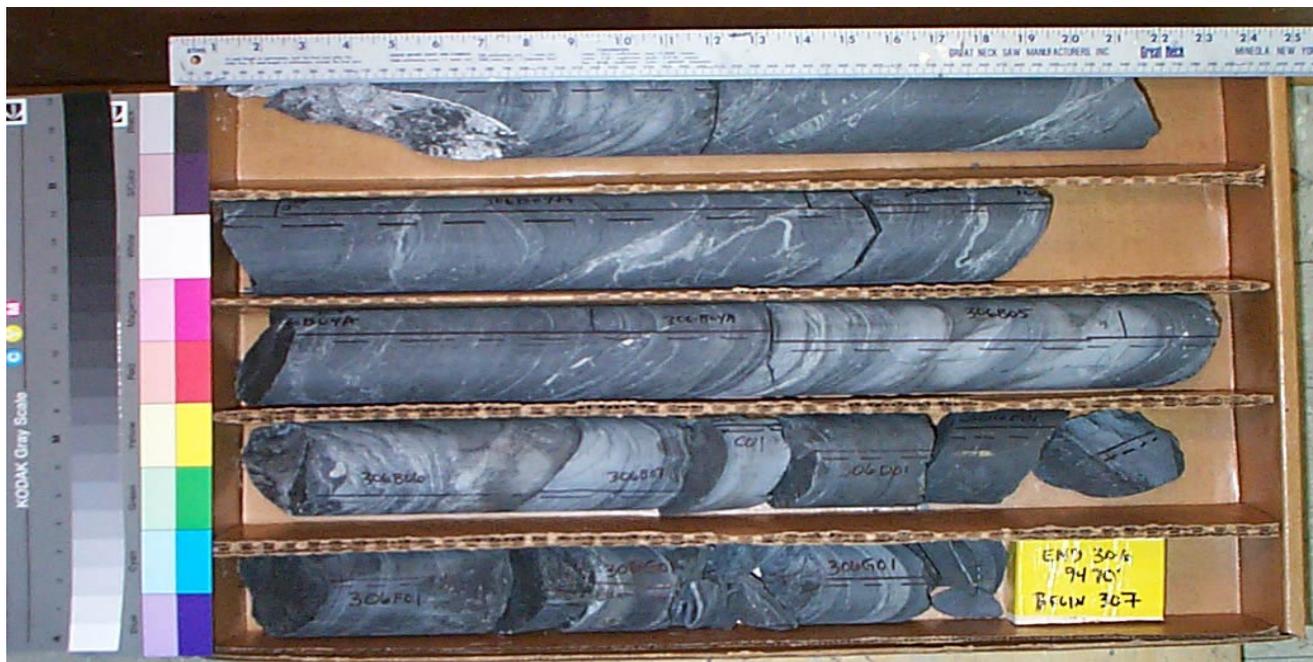


Core Scans included in this box
(listed by piece going downhole):

305B0100
305B0200
305B0400
305C0100
305C0300
306B0100
306B0200

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 437
Depth Interval 9458.7'-9470.0'



Core Scans included in this box
(listed by piece going downhole):

306B0300
306B040A
306B0500
306B0600
306B0700
306C010R
306D010R
306F010R
306G010R

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 438
Depth Interval 9470.0'-9476.2'



Core Scans included in this box
(listed by piece going downhole):

307A0100
307A0200
307A0300
307A0700
308A0100
308A0200
308A0300
308C0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 439
Depth Interval 9476.2'-9484.8'



Core Scans included in this box
(listed by piece going downhole):

308C0200
308C0300
308D0100
308D0200
308D0300
308D0500
308D0600
308D0700

308D0800
308D0900
309A010R
309B0300
309B0400
309B0500
309B0600
309B0800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 440
Depth Interval 9484.8'-9492.6'

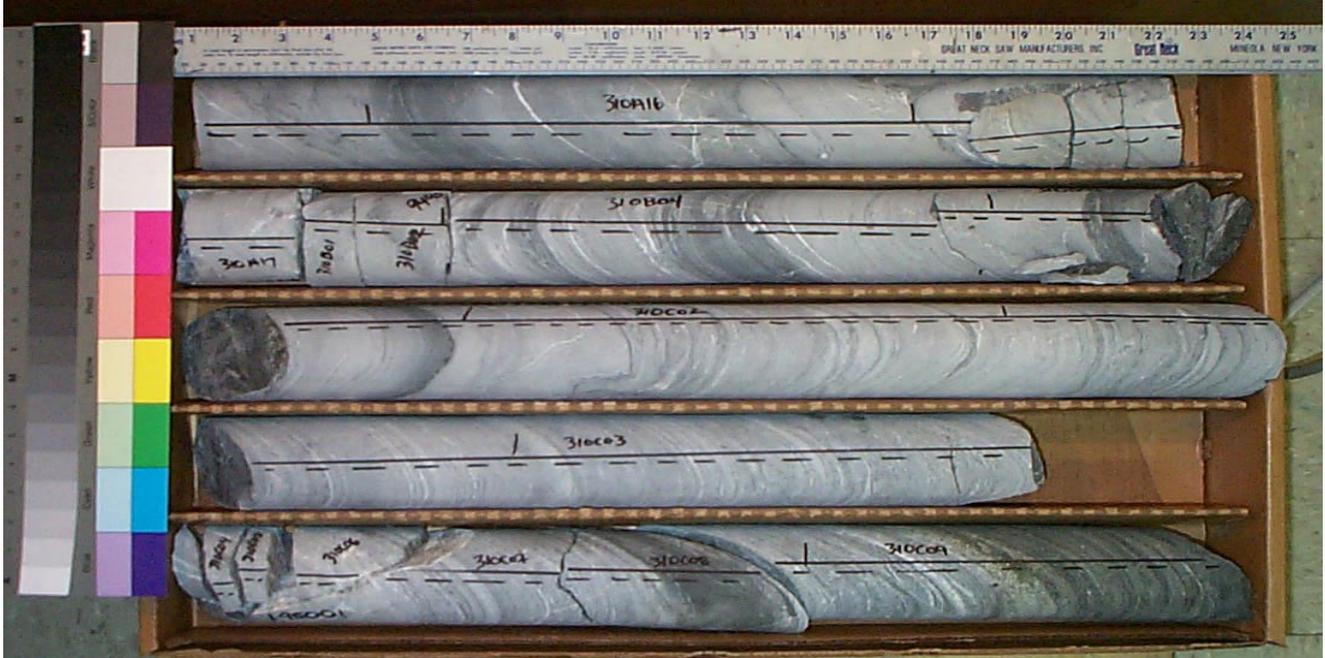


Core Scans included in this box
(listed by piece going downhole):

309C0100
309C0200
310A0100
310A0300
310A0400
310A0500
310A0800
310A0900
310A1000
310A1100
310A1500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 441
Depth Interval 9492.6'-9501.8'



Core Scans included in this box
(listed by piece going downhole):

310A1600
310B0400
310B0500
310C0200
310C0300
310C0700
310C0800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 442
Depth Interval 9501.8'-9509.9'



Core Scans included in this box
(listed by piece going downhole):

310C1000
310C1100
310C1200
310C1300
311A0300
311A0400
311A0500

311A070A
311A0800
311A0900
311A1000
311A1100
311A1200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 443
Depth Interval 9409.9'-9517.8'



Core Scans included in this box
(listed by piece going downhole):

311A1400
311A1500
311A1700
311A1800
311A1900
312B0100
312B0200
312B0300
312B0400
312B0500
312B0600

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 444

Depth Interval 9517.8'-9526.4'



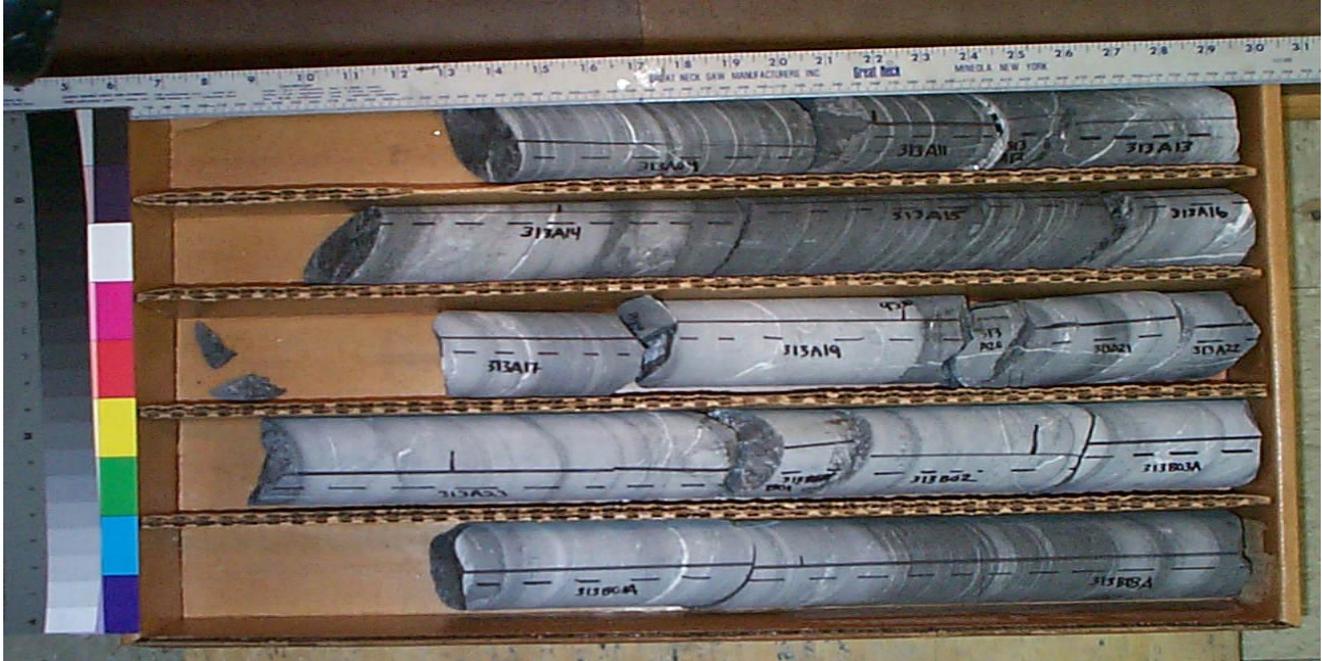
Core Scans included in this box
(listed by piece going downhole):

312B0700
312B0800
312B0900
312B1000
312B1100
312B1200
312B1300
312C0100

312C0200
312C0300
313A0100
313A0300
313A0500
313A0600
313A0700
313A0800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 445
Depth Interval 9526.4'-9533.8'



Core Scans included in this box
(listed by piece going downhole):

313A0900
313A1100
313A1300
313A1400
313A1500
313A1600
313A1700
313A190A
313A2100
313A2300
313B0100
313B030A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 446
Depth Interval 9533.8'-9539.4'

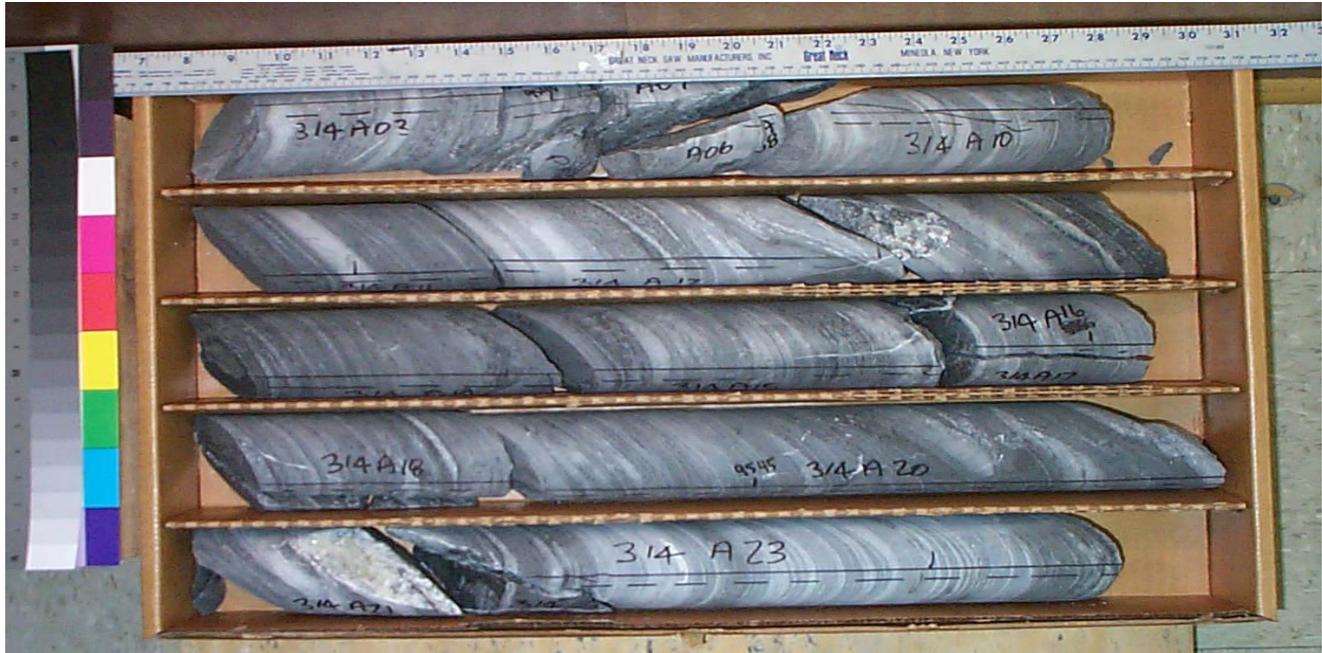


Core Scans included in this box
(listed by piece going downhole):

313B030A
313B0500
313B0600
313B0700

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 447
Depth Interval 9539.4'-9547.3'



Core Scans included in this box
(listed by piece going downhole):

314A0300
314A1000
314A1100
314A1200
314A1300
314A1400
314A1500
314A2000
314A2100
314A2300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 448
Depth Interval 9547.3'-9556.5'



Core Scans included in this box
(listed by piece going downhole):

314A2400
314A2500
315A010A
315A0200
315A0300
315A040A
315A0500
315A0600

315A0700
315A1000
315A1100
315A1200
315A1400
315A1700
315A1800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 449
Depth Interval 9556.5'-9564.7'



Core Scans included in this box
(listed by piece going downhole):

315C0100
315C0300
315C0600
315C0700
315C0800
315C0900
315C1000

316A0100
316A0300
316A0400
316A0500
316A0600
316A0700
316A0900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 450
Depth Interval 9564.7'-9572.5'

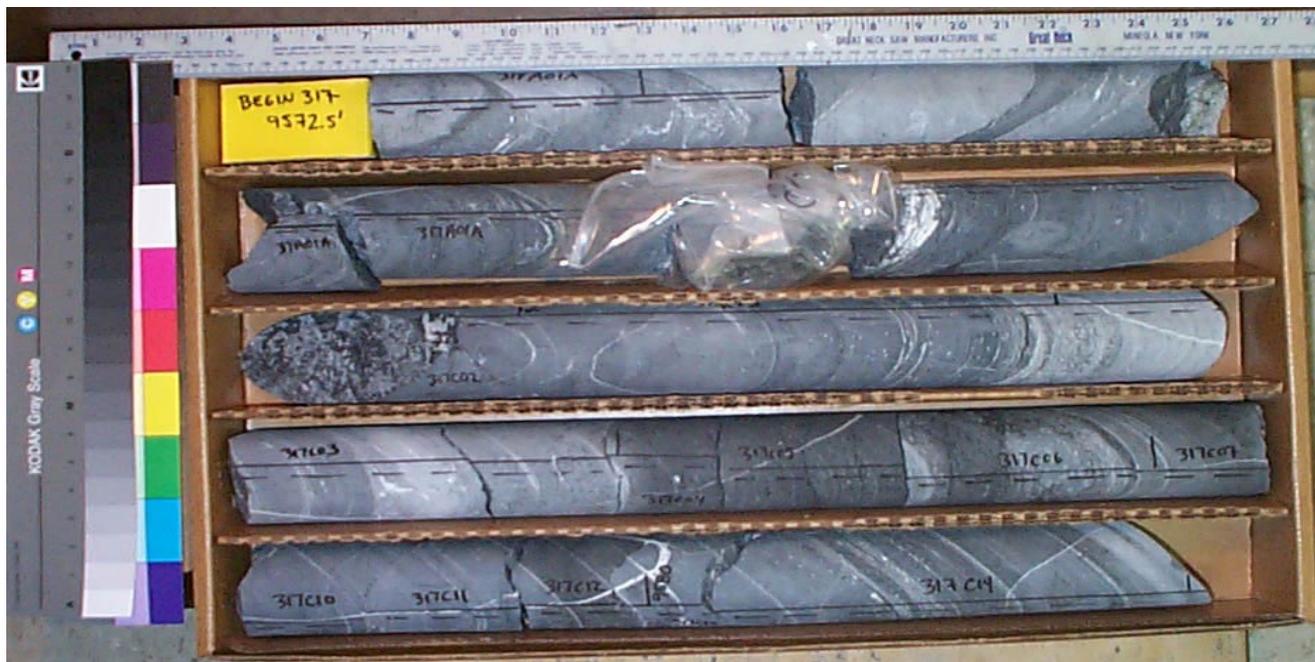


Core Scans included in this box
(listed by piece going downhole):

316C0100
316C0200
316E0200
316E0300
316E0600
316E0700
316E0800
316E1000
316E1100
316E1200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 451
Depth Interval 9572.5'-9581.0'



Core Scans included in this box
(listed by piece going downhole):

317A010A
317C0100
317C0200
317C030A
317C0400
317C0500
317C0600
317C0700
317C1000
317C1100
317C1200
317C1400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 452
Depth Interval 9581.0'-9589.4'



Core Scans included in this box
(listed by piece going downhole):

317C151A
317C152A
317C1900
317C2400
317C2500
317C290A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 453

Depth Interval 9589.4'-9596.4'



Core Scans included in this box
(listed by piece going downhole):

317C290A

318A0100

318A020A

318A0300

318A040A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 454
Depth Interval 9596.4'-9603.8'



Core Scans included in this box
(listed by piece going downhole):

318A040A
318C0100
318C0500
318C0600
318C0700
318C1100
318C1200
318C1300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 455
Depth Interval 9603.8'-9610.3'



Core Scans included in this box
(listed by piece going downhole):

319A0100
319A0500
319A0600
319C0100
319D0400

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 456
Depth Interval 9610.3'-9618.3'



Core Scans included in this box
(listed by piece going downhole):

319D0800
319D0900
319D1000
319D1100
320A010A
320A021A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 457
Depth Interval 9618.3'-9625.8'



Core Scans included in this box
(listed by piece going downhole):

320A022A
320A0300
320A0400
320A0500
320A060A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 458
Depth Interval 9625.8'-9632.9'



Core Scans included in this box
(listed by piece going downhole):

320A070A
320A080A
320A0900
320A100A
320A111A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 459
Depth Interval 9632.9'-9640.5'



Core Scans included in this box
(listed by piece going downhole):

320A112A
320A1200
321A0100
321A020A
321A0300
322C0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 460
Depth Interval 9640.5'-9648.0'



Core Scans included in this box
(listed by piece going downhole):

(No Core Scans Included in This Box)

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 461
Depth Interval 9648.0'-9654.5'



Core Scans included in this box
(listed by piece going downhole):

(No Core Scans Included in This Box)

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 462
Depth Interval 9654.5'-9660.0'



Core Scans included in this box
(listed by piece going downhole):

[327A0100](#)
[327A0300](#)

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 463
Depth Interval 9660.0'-9667.8'



Core Scans included in this box
(listed by piece going downhole):

328A0100
328A0500
328A0600
328A0700
328A0800
329A0100

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 464
Depth Interval 9667.8'-9675.0'



Core Scans included in this box
(listed by piece going downhole):

329A090
329A110
329A120
329A130
329A140
329A150

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 465
Depth Interval 9675.0'-9682.5'



Core Scans included in this box
(listed by piece going downhole):

330A0100
330A0200
330A0300
330A0400
330A0500
330C0700
330C0900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 466
Depth Interval 9682.5'-9689.8'



Core Scans included in this box
(listed by piece going downhole):

331A0100
331A0300
331A0700
331A0800
331A100A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 467
Depth Interval 9689.8'-9696.2'

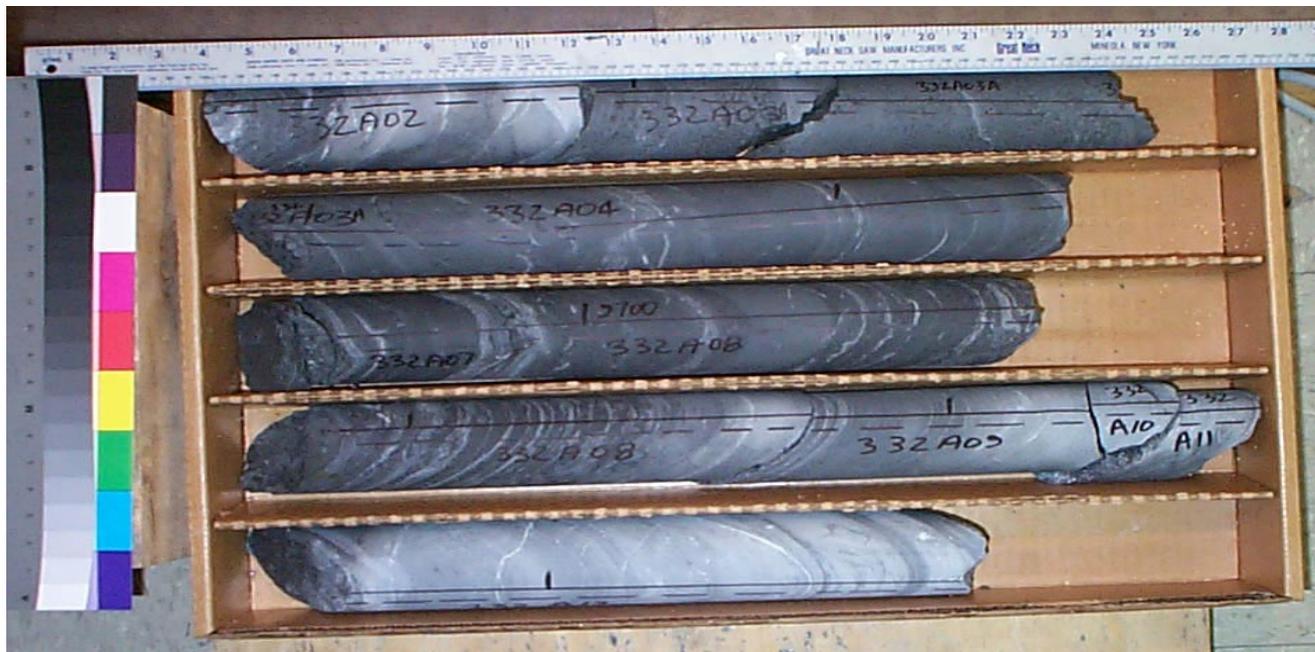


Core Scans included in this box
(listed by piece going downhole):

331A100A
331A1100
331A1200
331A1400
331A1500
332A0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 468
Depth Interval 9696.2'-9703.7'

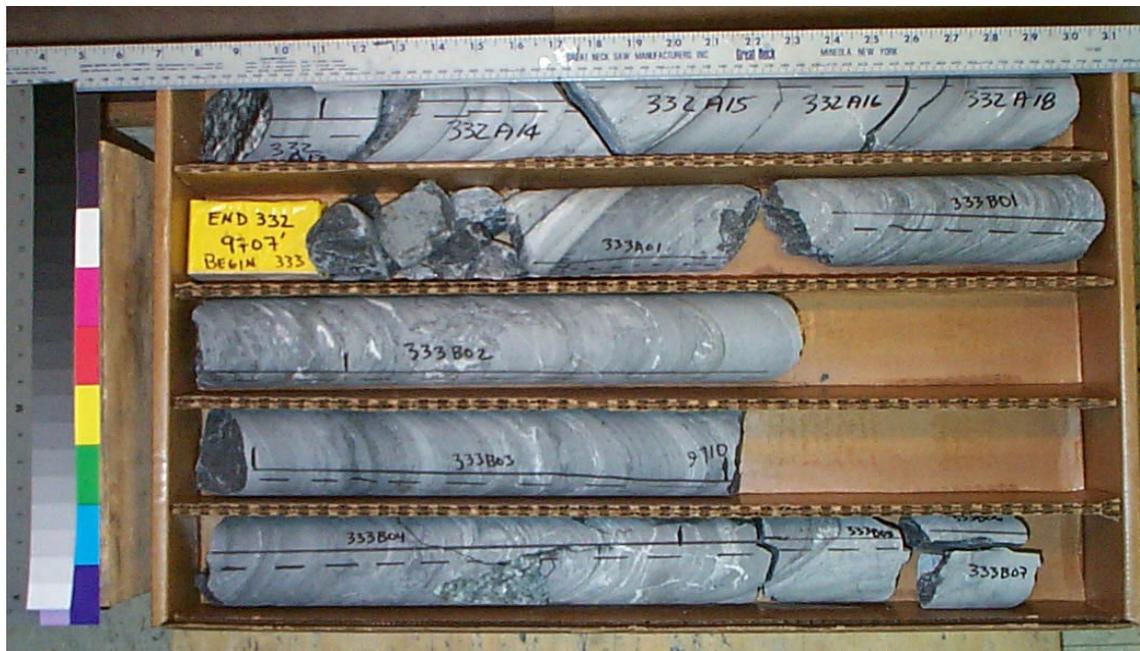


Core Scans included in this box
(listed by piece going downhole):

332A0200
332A030A
332A0400
332A0700
332A080A
332A0900
332A1100
332A1200

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 469
Depth Interval 9703.7'-9711.7



Core Scans included in this box
(listed by piece going downhole):

332A1300
332A1400
332A1500
332A1600
332A1800
333A010E
333B0100
333B0200
333B0300
333B0400
333B0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 470
Depth Interval 9711.7'-9719.2'



Core Scans included in this box
(listed by piece going downhole):

333B0800
333B0900
333B1100
333B1200
333B1900
334A0100
334A0200
334A0300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 471
Depth Interval 9719.2'-9725.8'



Core Scans included in this box
(listed by piece going downhole):

334A0500
334A0600
334A0700
334A0800
334A0900
334A1000
334A1100
334A1200
334A1300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 472
Depth Interval 9725.8'-9733.7'



Core Scans included in this box
(listed by piece going downhole):

334A1600
334A2000
334A2100
334A2200
334A2300
334A2500
334A2600
334A270A
334A2800

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 473
Depth Interval 9733.7'-9741.2'



Core Scans included in this box
(listed by piece going downhole):

334A3000
335A0100
335A0200
335A040A
335A0500
335A1100
335A1200
335A1400
335A1500

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 474
Depth Interval 9741.2'-9748.5'



Core Scans included in this box
(listed by piece going downhole):

335A2100
335A2200
335A230A
335A241A
335A242A
335A250A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 475
Depth Interval 9748.5'-9756.4'



Core Scans included in this box
(listed by piece going downhole):

335A2600
335A2700
336A0100
336A0200
336A030A
336A041A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 476
Depth Interval 9756.4'-9764.5'



Core Scans included in this box
(listed by piece going downhole):

336A042A
336A0500
336A0600
336A0700
336A0800
336A0900

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 477
Depth Interval 9764.5'-9772.8'



Core Scans included in this box
(listed by piece going downhole):

336A1000
336A1100
336A1200
336A1300
336A1400
336A1500
337A0100

337A0200
337A0300
337A0400
337A0500
337A0600
337A0700

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 478
Depth Interval 9772.8'-9780.2'



Core Scans included in this box
(listed by piece going downhole):

337C0100
337C0200
337C0400
337C0500
337C0800
337E0100
337E0200
337E0300
337E0500

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 479
Depth Interval 9780.2'-9787.8'



Core Scans included in this box
(listed by piece going downhole):

337E0600
337E0700
338A010A
338A040A

See the "reading instructions" section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 480
Depth Interval 9787.8'-9795.0'

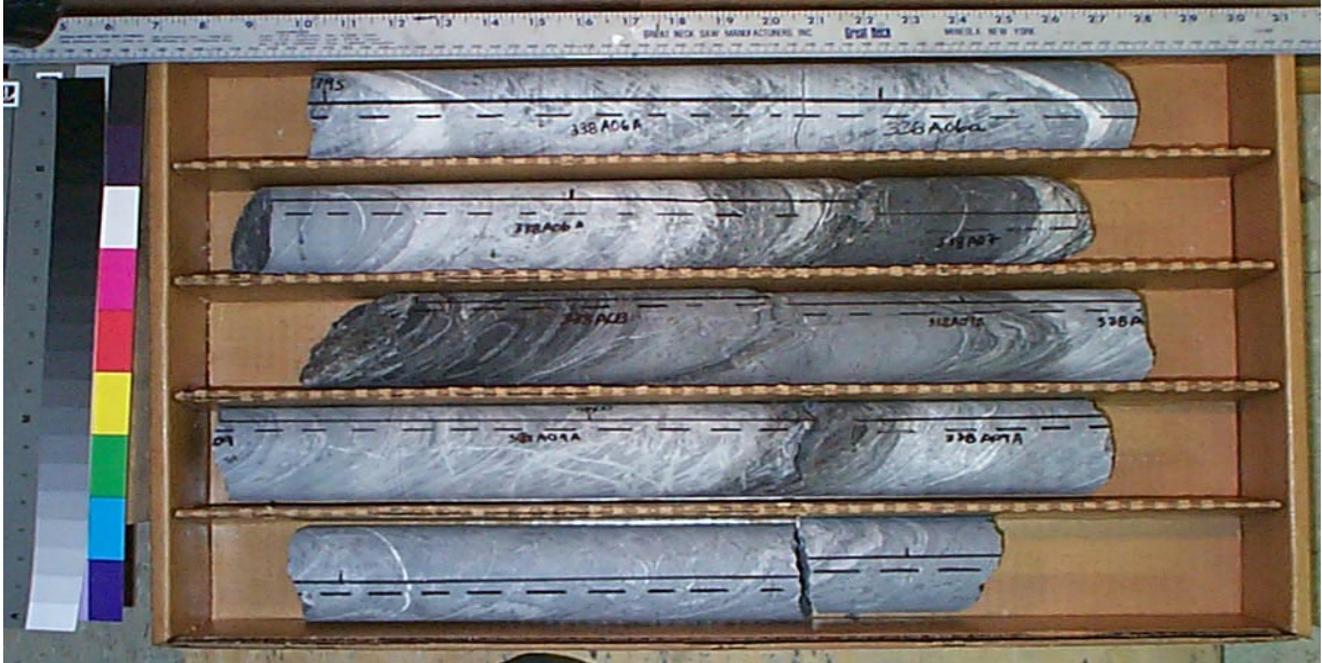


Core Scans included in this box
(listed by piece going downhole):

[338A040A](#)
[338A0500](#)
[338A061A](#)
[338A062A](#)

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 481
Depth Interval 9795.0'-9802.2'

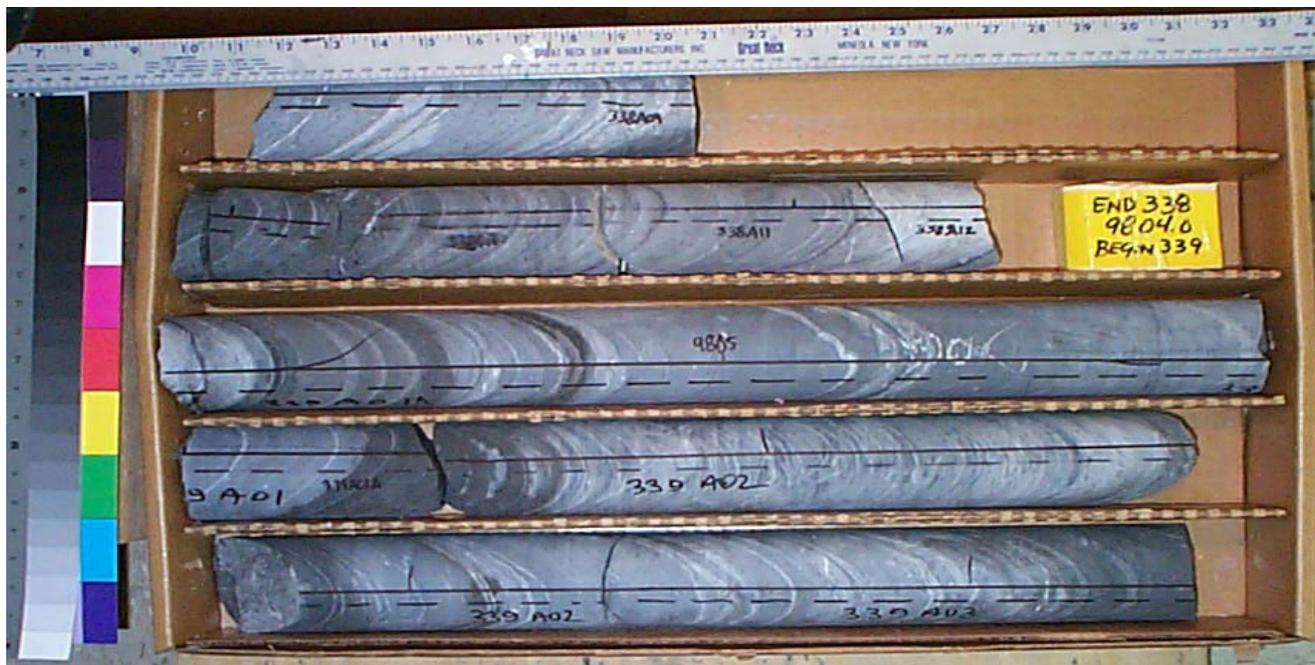


Core Scans included in this box
(listed by piece going downhole):

338A062A
338A063A
338A0700
338A0800
338A091A
338A092A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 482
Depth Interval 9802.2'-9809.4'

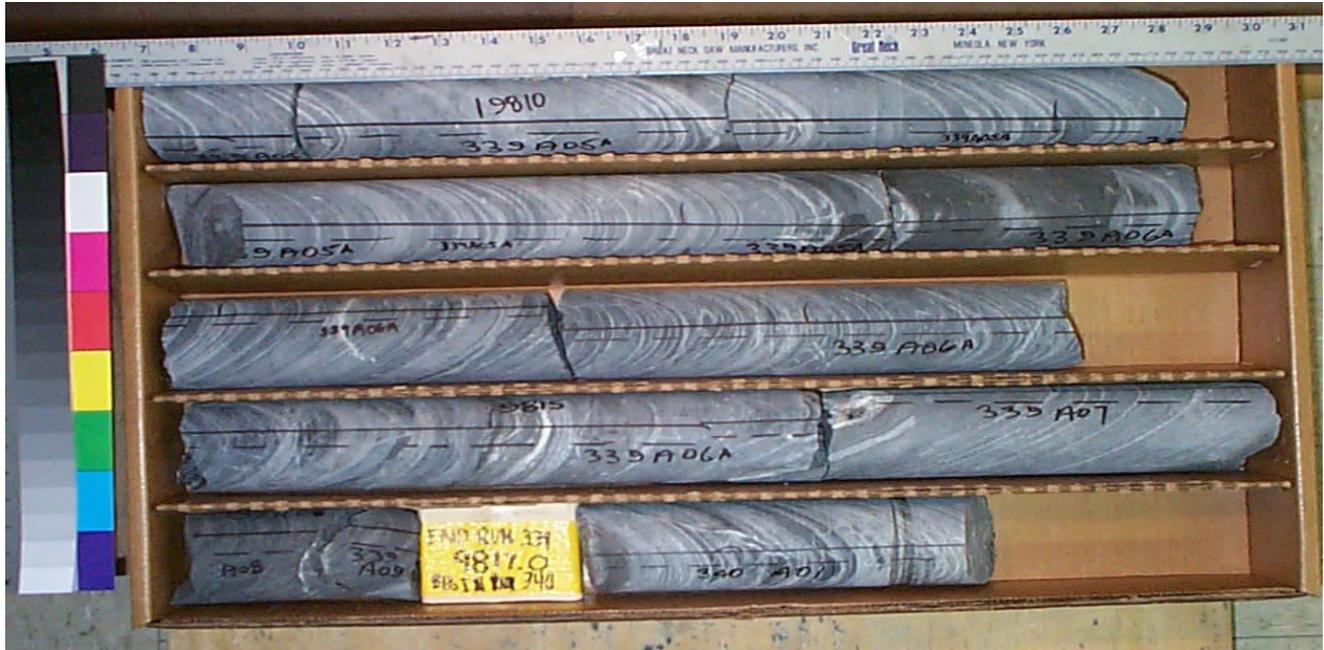


Core Scans included in this box
(listed by piece going downhole):

338A092A
338A1000
338A1100
338A1200
339A010A
339A020A
339A0300

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 483
Depth Interval 9809.4'-9817.7'



Core Scans included in this box
(listed by piece going downhole):

339A0400
339A050A
339A060A
339A0700
339A0800
340A010A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 484
Depth Interval 9817.7'-9825.8'



Core Scans included in this box
(listed by piece going downhole):

340A010A
340A020A
340A030A
340A041A
340A042A

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature

LVEW Core Box 485
Depth Interval 9825.8'-9831.0'



Core Scans included in this box
(listed by piece going downhole):

340A042A
340A0500
340A0600
340A0700
340A0900
341A0100

See the “reading instructions” section of the introduction for help interpreting core box photos and core piece nomenclature