

# Expedition 905, Hole C9010F X-RAY CT scan image snapshot date:

## Information

The 3D X-ray CT images for whole-round core sections are the first measurement to be done on board. Whole-core photography and X-ray imaging provide information about surface features and internal structure. The resolution of CT scanning is under 0.35 mm and allows 5 mm depth for beam width. The computed tomography (CT) scan provides 3D evidence of fractures, vugs, fault structure, sedimentary structure and methane hydrates without disturbing the sample. A pure water standard piece and air is used for calibrate giving CT-values. It requires about 5 minutes to scan each 1.5 m section of core.

## Image file

Each ZIP file corresponds to a section and the filename of a ZIP file consists of section identifier. A ZIP file contains DICOM files of [axial](#) images as well as a reformatted [coronal](#) image. Each DICOM file has DICOM header with image data. Pixel data are compressed without any losses by JPEG2000 in the DICOM files (See *Section 8.2.4. JPEG 2000 image compression in Digital Imaging and Communications in Medicine (DICOM) Part 5: Data Structures and Encoding* distributed in [DICOM Homepage](#)).

## Software Utilitys - They are not support by CDEX. -

- “[OsiriX](#) is an image processing software dedicated to DICOM images (".dcm" / ".DCM" extension) produced by imaging equipment (MRI, CT, PET, PET-CT, SPECT-CT, Ultrasounds, ...).”
- “[GDCM](#) is an open source DICOM library. It is meant to deal with DICOM files (as specified in part 10 of the DICOM standard).” Command line tool [gdcmconv](#) can convert encapsulated DICOM to RAW by issuing a command like `gdcmconv --raw compressed.dcm uncompressed.dcm`.

## lost data

Axial images for some sections were mistaken to archive while they were measured. Empty files whose names end with .lost indicate such sections.

## Data Index

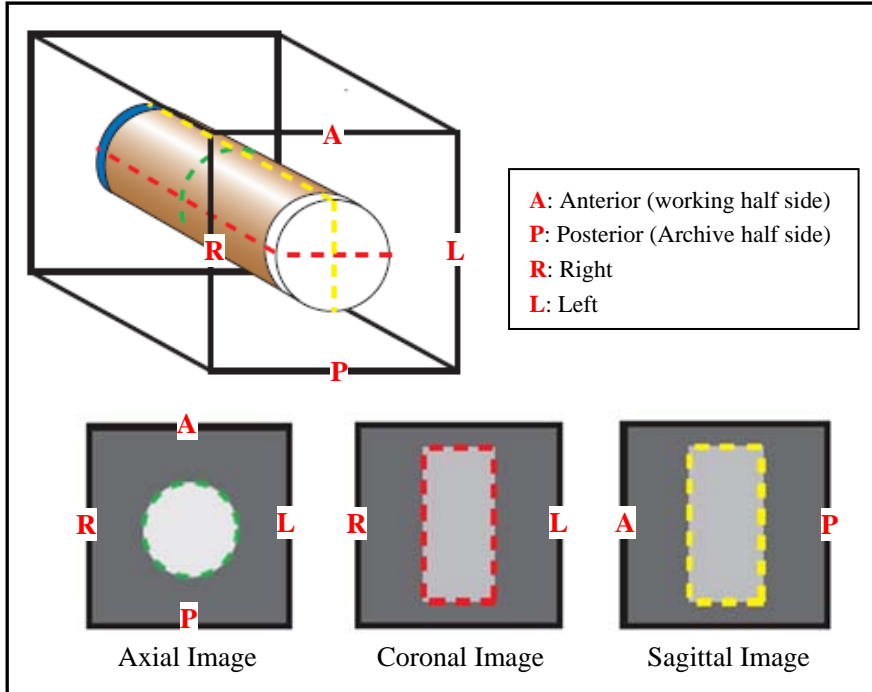
Section	Top CSF-A (m)	Bottom CSF-A (m)	Curated Length (m)	Coronal Image	Axial Image Set (length in bytes)
905-C9010F-1H-1	0.000	1.400	1.400	none	none
905-C9010F-1H-2	1.400	2.810	1.410	none	none
905-C9010F-1H-3	2.810	4.220	1.410	none	none
905-C9010F-1H-4	4.220	5.635	1.415	none	none
905-C9010F-1H-5	5.635	6.445	0.810	none	none
905-C9010F-1H-6	6.445	7.155	0.710	none	none
905-C9010F-1H-CC	7.155	7.410	0.255	none	none
905-C9010F-2H-1	7.350	8.750	1.400	none	none
905-C9010F-2H-2	8.750	10.160	1.410	none	none
905-C9010F-2H-3	10.160	11.620	1.460	none	none
905-C9010F-2H-4	11.620	13.035	1.415	none	none
905-C9010F-2H-5	13.035	14.430	1.395	none	none
905-C9010F-2H-6	14.430	15.840	1.410	none	none
905-C9010F-2H-7	15.840	16.905	1.065	none	none
905-C9010F-2H-CC	16.905	17.225	0.320	none	none
905-C9010F-3H-1	16.850	17.060	0.210	none	none
905-C9010F-3H-2	17.060	18.460	1.400	none	none
905-C9010F-3H-3	18.460	19.870	1.410	none	none

<b>Section</b>	<b>Top CSF-A (m)</b>	<b>Bottom CSF-A (m)</b>	<b>Curated Length (m)</b>	<b>Coronal Image</b>	<b>Axial Image Set (length in bytes)</b>
905-C9010F-3H-4	19.870	21.270	1.400	none	none
905-C9010F-3H-5	21.270	22.680	1.410	none	none
905-C9010F-3H-6	22.680	24.090	1.410	none	none
905-C9010F-3H-7	24.090	25.490	1.400	none	none
905-C9010F-3H-8	25.490	26.990	1.500	none	none
905-C9010F-3H-CC	26.990	27.400	0.410	none	none
905-C9010F-4H-1	26.350	26.750	0.400	none	none
905-C9010F-4H-2	26.750	28.160	1.410	none	none
905-C9010F-4H-3	28.160	29.565	1.405	none	none
905-C9010F-4H-4	29.565	30.980	1.415	none	none
905-C9010F-4H-5	30.980	32.380	1.400	none	none
905-C9010F-4H-6	32.380	33.780	1.400	none	none
905-C9010F-4H-7	33.780	35.190	1.410	none	none
905-C9010F-4H-8	35.190	36.495	1.305	none	none
905-C9010F-4H-CC	36.495	36.905	0.410	none	none
905-C9010F-5H-1	35.850	37.060	1.210	none	none
905-C9010F-5H-2	37.060	38.060	1.000	none	none
905-C9010F-5H-3	38.060	38.765	0.705	none	none
905-C9010F-5H-4	38.765	40.170	1.405	none	none
905-C9010F-5H-5	40.170	41.575	1.405	none	none
905-C9010F-5H-6	41.575	42.975	1.400	none	none
905-C9010F-5H-7	42.975	44.380	1.405	none	none
905-C9010F-5H-8	44.380	45.780	1.400	none	none
905-C9010F-5H-9	45.780	46.235	0.455	none	none
905-C9010F-5H-10	46.235	46.995	0.760	none	none
905-C9010F-5H-CC	46.995	47.105	0.110	none	none
905-C9010F-6H-1	45.350	45.765	0.415	none	none
905-C9010F-6H-2	45.765	47.170	1.405	none	none
905-C9010F-6H-3	47.170	48.575	1.405	none	none
905-C9010F-6H-4	48.575	49.985	1.410	none	none
905-C9010F-6H-5	49.985	51.390	1.405	none	none
905-C9010F-6H-6	51.390	52.800	1.410	none	none
905-C9010F-6H-7	52.800	54.210	1.410	none	none
905-C9010F-6H-8	54.210	55.475	1.265	none	none
905-C9010F-6H-CC	55.475	55.680	0.205	none	none
905-C9010F-7X-1	54.850	56.260	1.410	none	none
905-C9010F-7X-2	56.260	56.440	0.180	none	none
905-C9010F-7X-CC	56.440	56.505	0.065	none	none
905-C9010F-8X-1	59.550	60.950	1.400	none	none
905-C9010F-8X-2	60.950	62.360	1.410	none	none
905-C9010F-8X-3	62.360	63.095	0.735	none	none
905-C9010F-8X-CC	63.095	63.195	0.100	none	none
905-C9010F-9X-1	64.750	64.850	0.100	none	none
905-C9010F-9X-CC	64.850	65.050	0.200	none	none
905-C9010F-10X-1	69.450	70.450	1.000	none	none
905-C9010F-10X-2	70.450	71.235	0.785	none	none
905-C9010F-10X-CC	71.235	71.395	0.160	none	none
905-C9010F-11X-1	74.150	75.150	1.000	none	none
905-C9010F-11X-2	75.150	75.825	0.675	none	none
905-C9010F-11X-CC	75.825	75.985	0.160	none	none
905-C9010F-12H-1	76.750	77.525	0.775	none	none
905-C9010F-12H-2	77.525	78.815	1.290	none	none

Section	Top CSF-A (m)	Bottom CSF-A (m)	Curated Length (m)	Coronal Image	Axial Image Set (length in bytes)
905-C9010F-12H-3	78.815	80.320	1.505	none	none
905-C9010F-12H-CC	80.320	80.530	0.210	none	none
905-C9010F-13H-1	80.450	81.865	1.415	none	none
905-C9010F-13H-2	81.865	82.865	1.000	none	none
905-C9010F-13H-3	82.865	84.115	1.250	none	none
905-C9010F-13H-4	84.115	85.525	1.410	none	none
905-C9010F-13H-5	85.525	86.785	1.260	none	none
905-C9010F-13H-CC	86.785	87.000	0.215	none	none
905-C9010F-14H-1	87.370	87.675	0.305	<a href="#">dcm / png</a>	<a href="#">zip (58M)</a>
905-C9010F-14H-2	87.675	89.180	1.505	<a href="#">dcm / png</a>	<a href="#">zip (286M)</a>
905-C9010F-14H-3	89.180	90.680	1.500	<a href="#">dcm / png</a>	<a href="#">zip (289M)</a>
905-C9010F-14H-4	90.680	91.985	1.305	<a href="#">dcm / png</a>	<a href="#">zip (250M)</a>
905-C9010F-14H-5	91.985	93.320	1.335	<a href="#">dcm / png</a>	<a href="#">zip (253M)</a>
905-C9010F-14H-6	93.320	93.830	0.510	<a href="#">dcm / png</a>	<a href="#">zip (107M)</a>
905-C9010F-14H-7	93.830	95.330	1.500	<a href="#">dcm / png</a>	<a href="#">zip (319M)</a>
905-C9010F-14H-8	95.330	95.730	0.400	<a href="#">dcm / png</a>	<a href="#">zip (87M)</a>
905-C9010F-14H-CC	95.730	95.940	0.210	none	none
905-C9010F-15X-1	96.870	98.310	1.440	none	none
905-C9010F-15X-2	98.310	99.235	0.925	none	none
905-C9010F-15X-3	99.235	100.560	1.325	none	none
905-C9010F-15X-4	100.560	101.630	1.070	none	none
905-C9010F-15X-5	101.630	101.945	0.315	none	none
905-C9010F-15X-CC	101.945	102.345	0.400	none	none
905-C9010F-16X-1	101.570	102.980	1.410	none	none
905-C9010F-16X-2	102.980	104.005	1.025	none	none
905-C9010F-16X-CC	104.005	104.105	0.100	none	none
905-C9010F-17X-CC	106.270	106.280	0.010	none	none
905-C9010F-19X-1	114.850	115.615	0.765	none	none
905-C9010F-19X-CC	115.615	115.720	0.105	none	none
905-C9010F-20H-1	120.850	121.250	0.400	none	none
905-C9010F-20H-2	121.250	122.655	1.405	none	none
905-C9010F-20H-3	122.655	124.065	1.410	none	none
905-C9010F-20H-4	124.065	125.475	1.410	none	none
905-C9010F-20H-5	125.475	126.880	1.405	none	none
905-C9010F-20H-6	126.880	128.290	1.410	none	none
905-C9010F-20H-7	128.290	129.695	1.405	none	none
905-C9010F-20H-8	129.695	130.570	0.875	none	none
905-C9010F-20H-CC	130.570	130.725	0.155	none	none
905-C9010F-22X-CC	135.050	135.155	0.105	none	none
905-C9010F-23X-1	139.750	139.950	0.200	none	none
905-C9010F-23X-CC	139.950	140.000	0.050	none	none
905-C9010F-24X-1	144.450	145.260	0.810	none	none
905-C9010F-24X-2	145.260	146.365	1.105	none	none
905-C9010F-24X-CC	146.365	146.625	0.260	none	none

<b>Section</b>	<b>Top CSF-A (m)</b>	<b>Bottom CSF-A (m)</b>	<b>Curated Length (m)</b>	<b>Coronal Image</b>	<b>Axial Image Set (length in bytes)</b>
905-C9010F-25X-CC	149.150	149.180	0.030	none	none
905-C9010F-26X-1	153.150	154.430	1.280	none	none
905-C9010F-26X-2	154.430	155.225	0.795	none	none
905-C9010F-26X-3	155.225	156.125	0.900	none	none
905-C9010F-26X-4	156.125	156.865	0.740	none	none
905-C9010F-26X-CC	156.865	157.180	0.315	none	none
905-C9010F-27X-1	157.850	159.255	1.405	none	none
905-C9010F-27X-2	159.255	160.665	1.410	none	none
905-C9010F-27X-3	160.665	161.930	1.265	none	none
905-C9010F-27X-4	161.930	163.325	1.395	none	none
905-C9010F-27X-5	163.325	164.235	0.910	none	none
905-C9010F-27X-CC	164.235	164.435	0.200	none	none
905-C9010F-28X-1	162.550	163.890	1.340	none	none
905-C9010F-28X-2	163.890	165.390	1.500	none	none
905-C9010F-28X-3	165.390	166.775	1.385	none	none
905-C9010F-28X-4	166.775	167.685	0.910	none	none
905-C9010F-28X-5	167.685	168.850	1.165	none	none
905-C9010F-28X-6	168.850	169.935	1.085	none	none
905-C9010F-28X-CC	169.935	170.345	0.410	none	none
905-C9010F-29X-1	172.050	173.450	1.400	none	none
905-C9010F-29X-2	173.450	174.685	1.235	none	none
905-C9010F-29X-CC	174.685	174.885	0.200	none	none
905-C9010F-30X-1	176.750	178.155	1.405	none	none
905-C9010F-30X-2	178.155	179.170	1.015	none	none
905-C9010F-30X-CC	179.170	179.430	0.260	none	none
905-C9010F-31X-1	181.450	182.605	1.155	none	none
905-C9010F-31X-CC	182.605	182.905	0.300	none	none

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The concept of axial image, coronal image, and sagittal image