

Expedition 905, Hole C9010E 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-C9010E-1H-1	0.000	1.410	1.410	dcm / png	zip (278M)
905-C9010E-1H-2	1.410	2.820	1.410	dcm / png	zip (283M)
905-C9010E-1H-3	2.820	4.230	1.410	dcm / png	zip (279M)
905-C9010E-1H-4	4.230	5.640	1.410	dcm / png	zip (282M)
905-C9010E-1H-5	5.640	7.050	1.410	dcm / png	zip (287M)
905-C9010E-1H-6	7.050	7.710	0.660	dcm / png	zip (136M)
905-C9010E-1H-CC	7.710	8.015	0.305	dcm / png	zip (64M)
905-C9010E-2H-1	7.950	9.360	1.410	dcm / png	zip (289M)
905-C9010E-2H-2	9.360	10.800	1.440	dcm / png	zip (290M)
905-C9010E-2H-3	10.800	12.289	1.489	dcm / png	zip (301M)
905-C9010E-2H-4	12.289	13.822	1.533	dcm / png	zip (306M)
905-C9010E-2H-5	13.822	15.232	1.410	dcm / png	zip (318M)
905-C9010E-2H-6	15.232	16.652	1.420	dcm / png	zip (302M)
905-C9010E-2H-7	16.652	18.017	1.365	dcm / png	zip (278M)
905-C9010E-2H-CC	18.017	18.352	0.335	dcm / png	zip (73M)
905-C9010E-3H-1	17.450	18.855	1.405	none	none
905-C9010E-3H-2	18.855	20.260	1.405	none	none
905-C9010E-3H-3	20.260	20.520	0.260	none	none

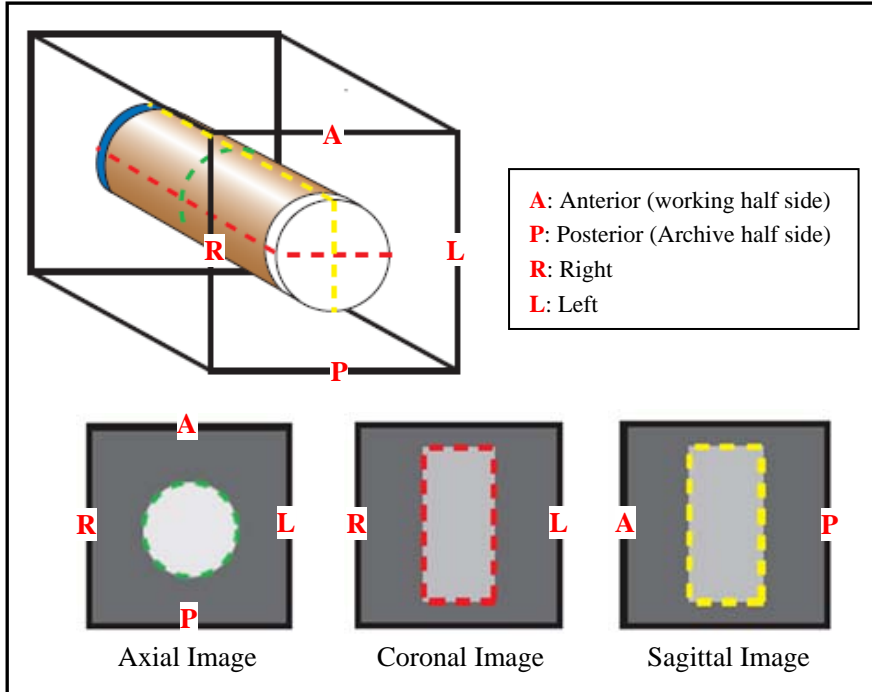
Section	Top CSF-A (m)	Bottom CSF-A (m)	Curated Length (m)	Coronal Image	Axial Image Set (length in bytes)
905-C9010E-3H-4	20.520	21.930	1.410	none	none
905-C9010E-3H-5	21.930	23.340	1.410	none	none
905-C9010E-3H-6	23.340	24.785	1.445	none	none
905-C9010E-3H-7	24.785	26.185	1.400	none	none
905-C9010E-3H-8	26.185	27.195	1.010	none	none
905-C9010E-3H-9	27.195	27.715	0.520	none	none
905-C9010E-3H-CC	27.715	28.220	0.505	none	none
905-C9010E-4H-1	26.950	28.350	1.400	none	none
905-C9010E-4H-2	28.350	29.760	1.410	none	none
905-C9010E-4H-3	29.760	31.160	1.400	none	none
905-C9010E-4H-4	31.160	32.565	1.405	none	none
905-C9010E-4H-5	32.565	33.965	1.400	none	none
905-C9010E-4H-6	33.965	35.375	1.410	none	none
905-C9010E-4H-7	35.375	36.700	1.325	none	none
905-C9010E-4H-CC	36.700	37.155	0.455	none	none
905-C9010E-5H-1	36.450	36.650	0.200	none	none
905-C9010E-5H-2	36.650	37.410	0.760	none	none
905-C9010E-5H-3	37.410	38.815	1.405	none	none
905-C9010E-5H-4	38.815	40.220	1.405	none	none
905-C9010E-5H-5	40.220	41.635	1.415	none	none
905-C9010E-5H-6	41.635	43.040	1.405	none	none
905-C9010E-5H-7	43.040	44.445	1.405	none	none
905-C9010E-5H-8	44.445	45.860	1.415	none	none
905-C9010E-5H-CC	45.860	46.610	0.750	none	none
905-C9010E-6H-1	45.950	46.015	0.065	none	none
905-C9010E-6H-2	46.015	47.415	1.400	none	none
905-C9010E-6H-3	47.415	48.770	1.355	none	none
905-C9010E-6H-4	48.770	50.130	1.360	none	none
905-C9010E-6H-5	50.130	51.200	1.070	none	none
905-C9010E-6H-6	51.200	52.580	1.380	none	none
905-C9010E-6H-7	52.580	53.250	0.670	none	none
905-C9010E-6H-8	53.250	54.235	0.985	none	none
905-C9010E-6H-9	54.235	55.320	1.085	none	none
905-C9010E-6H-CC	55.320	55.575	0.255	none	none
905-C9010E-7H-1	55.450	56.690	1.240	none	none
905-C9010E-7H-2	56.690	58.090	1.400	none	none
905-C9010E-7H-3	58.090	58.220	0.130	none	none
905-C9010E-7H-4	58.220	59.625	1.405	none	none
905-C9010E-7H-5	59.625	61.030	1.405	none	none
905-C9010E-7H-6	61.030	62.440	1.410	none	none
905-C9010E-7H-7	62.440	63.840	1.400	none	none
905-C9010E-7H-8	63.840	64.750	0.910	none	none
905-C9010E-7H-9	64.750	65.490	0.740	none	none
905-C9010E-7H-CC	65.490	65.945	0.455	none	none
905-C9010E-8H-1	64.950	65.105	0.155	none	none
905-C9010E-8H-2	65.105	66.510	1.405	none	none
905-C9010E-8H-3	66.510	67.890	1.380	none	none
905-C9010E-8H-4	67.890	69.300	1.410	none	none
905-C9010E-8H-5	69.300	70.710	1.410	none	none
905-C9010E-8H-6	70.710	72.100	1.390	none	none
905-C9010E-8H-7	72.100	73.510	1.410	none	none
905-C9010E-8H-8	73.510	74.830	1.320	none	none
905-C9010E-8H-CC	74.830	75.135	0.305	none	none

Section	Top CSF-A (m)	Bottom CSF-A (m)	Curated Length (m)	Coronal Image	Axial Image Set (length in bytes)
905-C9010E-9H-1	74.450	75.205	0.755	none	none
905-C9010E-9H-2	75.205	76.590	1.385	none	none
905-C9010E-9H-3	76.590	77.710	1.120	none	none
905-C9010E-9H-4	77.710	79.125	1.415	none	none
905-C9010E-9H-5	79.125	80.535	1.410	dcm / png	zip (286M)
905-C9010E-9H-6	80.535	81.945	1.410	dcm / png	zip (305M)
905-C9010E-9H-7	81.945	83.350	1.405	dcm / png	zip (264M)
905-C9010E-9H-8	83.350	84.780	1.430	dcm / png	zip (279M)
905-C9010E-9H-CC	84.780	85.035	0.255	dcm / png	zip (55M)
905-C9010E-10H-1	83.950	84.625	0.675	dcm / png	zip (152M)
905-C9010E-10H-2	84.625	85.135	0.510	dcm / png	zip (107M)
905-C9010E-10H-3	85.135	86.635	1.500	dcm / png	zip (281M)
905-C9010E-10H-4	86.635	88.135	1.500	dcm / png	zip (283M)
905-C9010E-10H-5	88.135	89.635	1.500	dcm / png	zip (277M)
905-C9010E-10H-6	89.635	90.190	0.555	dcm / png	zip (106M)
905-C9010E-10H-7	90.190	90.600	0.410	dcm / png	zip (76M)
905-C9010E-10H-8	90.600	91.005	0.405	dcm / png	zip (79M)
905-C9010E-10H-9	91.005	91.395	0.390	dcm / png	zip (75M)
905-C9010E-10H-10	91.395	91.945	0.550	dcm / png	zip (106M)
905-C9010E-10H-11	91.945	92.705	0.760	dcm / png	zip (144M)
905-C9010E-10H-12	92.705	92.920	0.215	dcm / png	zip (46M)
905-C9010E-10H-CC	92.920	92.970	0.050	none	none
905-C9010E-11H-1	93.450	93.720	0.270	none	none
905-C9010E-11H-2	93.720	95.120	1.400	none	none
905-C9010E-11H-3	95.120	96.550	1.430	none	none
905-C9010E-11H-4	96.550	97.955	1.405	none	none
905-C9010E-11H-5	97.955	99.360	1.405	none	none
905-C9010E-11H-6	99.360	100.770	1.410	none	none
905-C9010E-11H-7	100.770	102.175	1.405	none	none
905-C9010E-11H-8	102.175	103.610	1.435	none	none
905-C9010E-11H-CC	103.610	104.015	0.405	none	none
905-C9010E-12H-1	102.950	104.355	1.405	dcm / png	zip (291M)
905-C9010E-12H-2	104.355	105.765	1.410	dcm / png	zip (256M)
905-C9010E-12H-3	105.765	107.175	1.410	dcm / png	zip (310M)
905-C9010E-12H-4	107.175	107.680	0.505	dcm / png	zip (117M)
905-C9010E-12H-CC	107.680	107.750	0.070	none	none
905-C9010E-13H-1	107.730	109.135	1.405	none	none
905-C9010E-13H-2	109.135	110.540	1.405	none	none
905-C9010E-13H-3	110.540	110.725	0.185	none	none
905-C9010E-13H-CC	110.725	110.830	0.105	none	none
905-C9010E-14H-CC	110.810	111.120	0.310	none	none
905-C9010E-15H-1	113.110	113.745	0.635	none	none
905-C9010E-15H-CC	113.745	113.850	0.105	none	none
905-C9010E-17H-1	123.830	125.230	1.400	none	none
905-C9010E-17H-2	125.230	126.635	1.405	none	none
905-C9010E-17H-3	126.635	127.655	1.020	none	none
905-C9010E-17H-CC	127.655	127.865	0.210	none	none
905-C9010E-18H-1	127.930	129.330	1.400	none	none

Section	Top CSF-A (m)	Bottom CSF-A (m)	Curated Length (m)	Coronal Image	Axial Image Set (length in bytes)
905-C9010E-18H-2	129.330	129.580	0.250	none	none
905-C9010E-18H-3	129.580	131.015	1.435	none	none
905-C9010E-18H-4	131.015	132.255	1.240	none	none
905-C9010E-18H-5	132.255	133.090	0.835	none	none
905-C9010E-18H-CC	133.090	133.165	0.075	none	none
905-C9010E-19H-1	134.430	135.835	1.405	none	none
905-C9010E-19H-2	135.835	137.245	1.410	none	none
905-C9010E-19H-3	137.245	138.650	1.405	none	none
905-C9010E-19H-4	138.650	139.830	1.180	none	none
905-C9010E-19H-5	139.830	141.030	1.200	dcm / png	zip (248M)
905-C9010E-19H-6	141.030	142.440	1.410	dcm / png	zip (301M)
905-C9010E-19H-7	142.440	143.215	0.775	dcm / png	zip (165M)
905-C9010E-19H-CC	143.215	143.470	0.255	none	none
905-C9010E-20H-1	139.130	140.535	1.405	none	none
905-C9010E-20H-2	140.535	141.940	1.405	none	none
905-C9010E-20H-3	141.940	143.035	1.095	none	none
905-C9010E-20H-4	143.035	143.575	0.540	none	none
905-C9010E-20H-5	143.575	143.980	0.405	none	none
905-C9010E-20H-CC	143.980	144.335	0.355	none	none
905-C9010E-21H-1	144.130	144.450	0.320	none	none
905-C9010E-21H-2	144.450	145.855	1.405	none	none
905-C9010E-21H-3	145.855	147.265	1.410	none	none
905-C9010E-21H-4	147.265	148.670	1.405	none	none
905-C9010E-21H-5	148.670	150.075	1.405	none	none
905-C9010E-21H-6	150.075	151.475	1.400	none	none
905-C9010E-21H-7	151.475	152.880	1.405	none	none
905-C9010E-21H-8	152.880	154.355	1.475	none	none
905-C9010E-21H-CC	154.355	154.760	0.405	none	none
905-C9010E-22H-1	153.630	154.985	1.355	none	none
905-C9010E-22H-2	154.985	155.835	0.850	none	none
905-C9010E-22H-CC	155.835	155.935	0.100	none	none
905-C9010E-23H-1	155.930	156.070	0.140	none	none
905-C9010E-23H-2	156.070	157.470	1.400	none	none
905-C9010E-23H-3	157.470	158.885	1.415	none	none
905-C9010E-23H-4	158.885	160.290	1.405	none	none
905-C9010E-23H-5	160.290	161.780	1.490	none	none
905-C9010E-23H-6	161.780	163.215	1.435	none	none
905-C9010E-23H-7	163.215	164.675	1.460	none	none
905-C9010E-23H-8	164.675	166.170	1.495	none	none
905-C9010E-23H-CC	166.170	166.480	0.310	none	none
905-C9010E-24X-1	165.430	166.835	1.405	none	none
905-C9010E-24X-2	166.835	168.245	1.410	none	none
905-C9010E-24X-3	168.245	169.655	1.410	none	none
905-C9010E-24X-4	169.655	170.520	0.865	none	none
905-C9010E-24X-CC	170.520	170.575	0.055	none	none
905-C9010E-25X-1	171.250	172.655	1.405	none	none
905-C9010E-25X-2	172.655	173.395	0.740	none	none

Section	Top CSF-A (m)	Bottom CSF-A (m)	Curated Length (m)	Coronal Image	Axial Image Set (length in bytes)
905-C9010E- 25X-CC	173.395	173.705	0.310	none	none
905-C9010E- 26X-CC	175.950	175.960	0.010	none	none
905-C9010E- 27X-CC	180.650	180.955	0.305	none	none
905-C9010E- 29X-CC	190.050	190.380	0.330	none	none

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