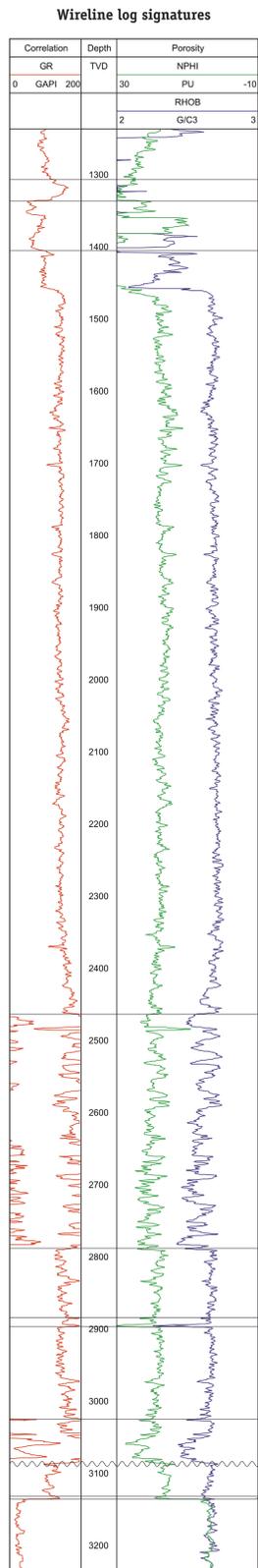
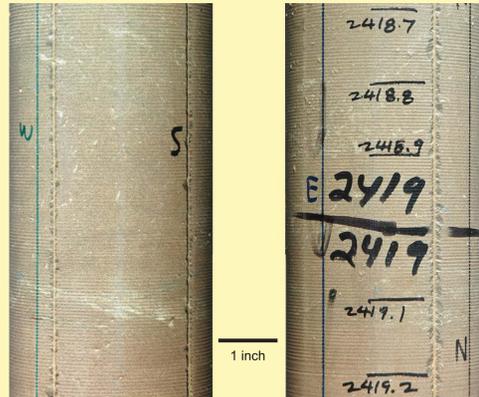


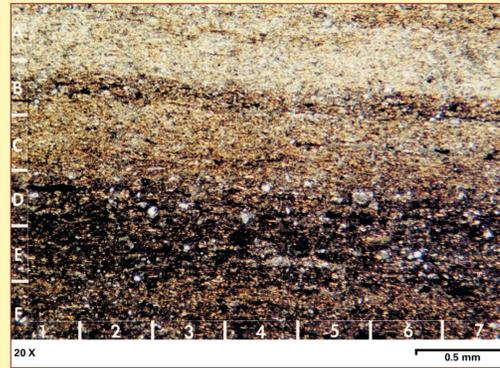
# Pulling it all Together: Geological Techniques and Analyses for Evaluating Potential Sites for CO<sub>2</sub> Storage Reservoirs in Ohio



Wireline logging truck on location of a drill rig in operation.



Core photo of the Devonian Shale interval.



Thin section photo (photomicrograph) of the Lower Huron Shale Member of the Ohio Shale interval. Note the absence of any porosity (void space) within the rock matrix.

**OMNI** S-20-06

**SUMMARY OF ROUTINE CORE ANALYSES RESULTS**  
Vacuum Dried at 180°F. Net Confining Stress (NCS) As Noted

Ohio Geological Survey  
Various Formations File: S-34847

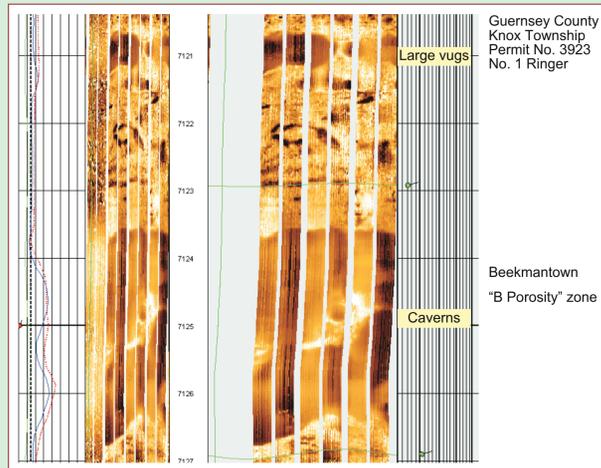
Sample ID	OMNI Sample Number	Formation	Sample Depth, feet	Net Confining Stress, psi	Permeability to Air at NCS, millidarcys			Porosity, percent		Grain Density, gm/cc
					to Air	Kirkinberg	to Brine	Ambient	NCS	
3258	1	Cincinnati Group	178.0	2000			0.0037			
3258	1V	Cincinnati Group	178.0	2000			0.0050	10.6	20.8	2.79
2846	2	Lockport Limestone	264.0	100	540.0	5320.0				2.82
2962	3	Ohio Shale	2168.0	1000			0.0018			2.77
2962	3V	Ohio Shale	2168.0	1000			0.0037	5.7		2.77
2962	4	Ohio Shale	2422.0	1000			0.0032			2.78
2962	4V	Ohio Shale	2422.0	1000			0.0015	6.8		2.78
2876	5	Oriskany Sandstone	3301.0	1100	0.055	0.029		2.7	2.7	2.65
2876	6	Oriskany Sandstone	3305.0	1100	0.092	0.053		3.1	2.8	2.66
2914	7	Oriskany Sandstone	3326.0	1100	0.0081	0.0027		2.1	2.1	2.69
2914	8	Oriskany Sandstone	3329.5	1100	770.0	728.0		8.5	8.5	2.87
2914	9	Oriskany Sandstone	3332.0	1100	1.86	1.48		4.2	4.1	2.64

**Nu Corp. Energy Company  
#1 Trepanier  
Jackson County, OH  
Franklin Township, Section 8  
Permit No. 102, OGS Core No. 2898**

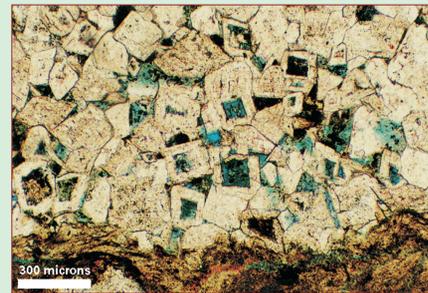
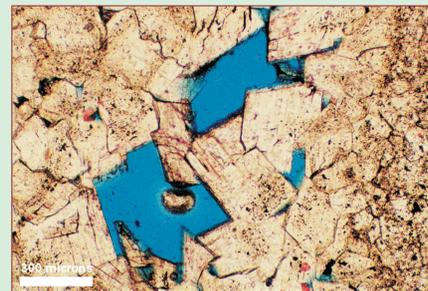
Source: Core Laboratories, Inc.; Note: Depths annotated on cores are 10' deeper than those on core descriptions.

Samp No.	Depth	Perm. To Air MD			Porosity Gex.Fld.	Fluid Sats.			Gr. Den.	Description
		Max.	90 deg.	Vert.		Oil	Water	Gr. Den.		
1	4498-99	0.1	0.1	0.1	1.5	0	94.7	2.77		DOL,SDY,SLSHY,FOSS
2	4499-00	3	2.5	0.2	3.1	0	56.5	2.68		SD,SLSHY
3	4500-01	17	17	0.9	7.8	0	24.8	2.67		SD,SLSHY
4	4501-02	33	32	1.9	9.6	0	62.3	2.64		SD,SLSHY
5	4502-03	26	26	14	11.5	0	89.5	2.65		SD,SLSHY
6	4503-04	156	152	11	12.8	0	94	2.63		SD,SLSHY
7	4504-05	60	17	1.2	10.4	0	82.8	2.62		SD,SLSHY
8	4505-06	17	15	0.6	8.6	0	71.3	2.64		SD,SLSHY
9	4506-07	6.3	5.8	0.5	8.4	0	71.1	2.64		SD,SLSHY
10	4507-08	6.7	6.6	1	9.1	0	72.9	2.66		SD,SLSHY
11	4508-09	3.5	3.4	0.6	7.7	0	73.4	2.64		SD,SLSHY
12	4509-10	0.3	0.2	0.1	5.2	0	88.4	2.63		SD,SLSHY,STY
13	4510-11	0.1	0.1	0.1	2.9	0	85.3	2.7		SD,SLSHY
14	4511-12	0.1	0.1	0.5	5.3	0	77.3	2.68		SD,SLSHY
15	4512-13	0.2	0.1	0.3	5.6	0	75	2.68		SD,SLSHY
16	4513-14	8.6	7	2	8	0	75.8	2.67		SD
17	4514-15	8.1	7.3	0.4	7.3	0	76.9	2.66		SD
18	4515-16	3.5	3.4	0.5	9.5	0	79.5	2.68		SD,SLSHY
19	4516-17	0.9	0.9	0.1	9	0	86	2.65		SD,SLSHY
20	4517-18	20	16	0.2	11.6	0	79.1	2.64		SD,SLSHY
21	4518-19	18	16	1.7	12.5	0	84.7	2.68		SD
22	4519-20	159	144	35	14.9	0	73.1	2.68		SD
23	4520-21	28	26	46	10.8	0	90.7	2.68		SD
24	4521-22	63	59	41	13.2	0	86	2.68		SD,SLSHY
25	4522-23	71	70	27	13.6	0	80.9	2.68		SD,SLSHY
26	4523-24	198	194	98	14.8	0	83.3	2.68		SD,SLSHY
27	4524-25	20	19	0.1	9.9	0	72	2.68		SD,SLSHY
28	4525-26	184	152	22	13.2	0	95.3	2.67		SD,SLSHY
29	4526-27	178	159	51	13	0	98.8	2.68		SD
30	4527-28	180	162	76	13.1	0	98.1	2.68		SD,SLSHY
31	4528-29	109	103	41	12.1	0	97.8	2.68		SD,SLSHY
32	4529-30	11	3.4	0.7	7	0	69.6	2.67		SD,SLSHY
33	4530-31	0.1	0.1	0.1	4.3	0	75.6	2.68		SD,SLSHY
34	4531-32	0.2	0.1	0.1	2	0	75	2.67		SD

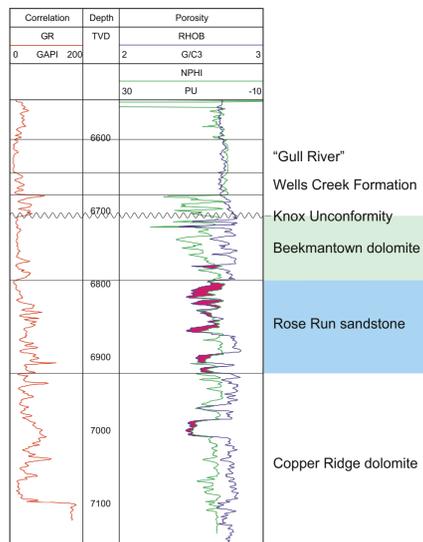
Wireline log signature of the Devonian Shale interval. This is one of the primary confining intervals (caprock/seal) for the underlying reservoirs for potential CO<sub>2</sub> sequestration.



FMI (Formation Microscanner Image) of the Beekmantown dolomite exhibiting large vugs and cavern-size voids.



Thin section photos (photomicrographs) of the Beekmantown dolomite. Note the well-developed porosity or void space (blue epoxy) between and within the individual dolomite grains.



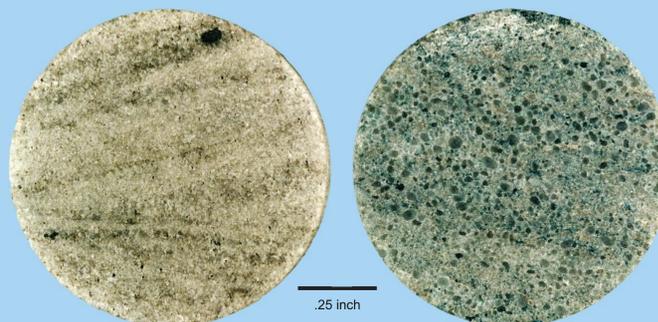
Wireline log signature of the Beekmantown dolomite, Rose Run sandstone, and Copper Ridge sandstone (Knox) intervals. These are potential reservoirs for CO<sub>2</sub> sequestration.



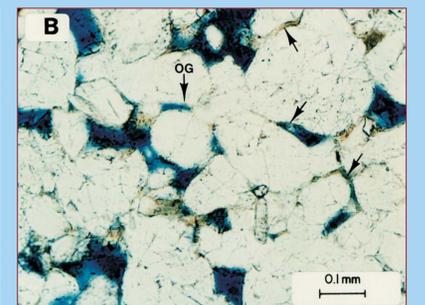
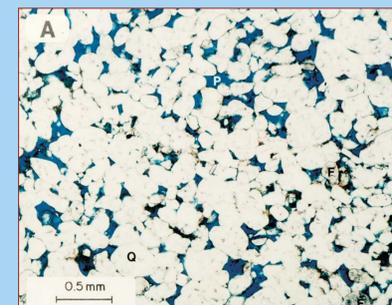
Core barrel extends out of the rotary sidewall coring tool.



Small sidewall cores.



Sidewall core photos of the Rose Run sandstone.



Thin section photos (photomicrographs) of the Rose Run sandstone. Note the presence of good porosity (P) development indicated by the blue epoxy within the individual quartz grains (Q).