

**APPENDIX G:
POROSITY AND PERMEABILITY CORE-
PLUG DATA AND CROSS-PLOTS,
BUG AND CHEROKEE FIELDS, SAN JUAN
COUNTY, UTAH**



MAY-BUG 2		
DEPTH	PERM	POROSITY
6298-99	270	4.8
6299-6300	24	7.6
6300-01	25	4.4
6301-02	34	8.4
6302-03	88	10.4
6303-04	28	11.2
6304-05	99	10.9
6305-06	75	11.5
6306-07	60	10.6
6307-08	54	10.8
6308-09	49	13.6
6309-10	73	14.2
6310-11	71	15.6
6311-12	31	14.5
6312-13	30	14.9
6313-14	20	13.4
6314-15	10	12.6
6315-16	5.7	10.3
6316-17	0.27	5.7
6317-18	0.02	3.2
6318-19	0.03	4.8
6322-23	0.06	3.6
6323-24	0.49	1.5
6324-25	0.01	2.7
6325-26	16	3
6326-27	19	2.1
6327-28	0.04	2.2

BUG 4		
DEPTH	PERM	POROSITY
6284-85	2.5	6.9
6285-86	5.9	7.8
6286-87	0.81	5.7
6287-88	86	12.5
6288-89	64	13.7
6289-90	92	14.5
6290-91	39	14.4
6291-92	56	13
6292-93	51	16.1
6293-94	41	14.2
6294-95	87	13.5
6295-96	39	11.9
6296-97	27	10.2
6297-98	18	10.5
6298-99	7.2	8.2
6299-6300	7.8	8.4
6300-01	1.3	5.2

BUG 7-A		
DEPTH	PERM	POROSITY
6357-58	0.01	1.7
6358-59	0.03	4.2
6359-60	0.01	4.3
6360-61	0.02	5.8
6361-62	0.01	3.9
6362-63	0.01	1.3
6363-64	0.01	2.1

BUG 10		
DEPTH	PERM	POROSITY
6319-20	0.19	6.5
6320-21	0.33	6
6321-22	0.07	3.4
6322-23	4.9	5.7
6323-24	62	7.7
6324-25	7	8.5
6325-26	16	10.4
6326-27	6.2	8.7
6327-28	7.5	10.5
6328-29	10	7.6
6329-30	0.4	5
6330-31	0.01	0.5
6331-32	0.01	3.6
6332-33	0.01	1.3
6333-34	0.6	0.9
6334-35	0.01	0.8
6335-36	0.01	3.1
6336-37	8.6	5.2
6337-38	4.1	4.8
6338-39	0.14	3.8
6339-40	0.01	0.9
6340-41	0.02	0.4
6341-42	0.08	1.3

BUG 13			BUG 16		
DEPTH	PERM	POROSITY	DEPTH	PERM	POROSITY
5926-27	0.01	1.8	6295-96	0.7	12.9
5927-28	0.01	6.7	6296-97	0.8	4.5
5928-29	3.4	15.4	6297-98	16	6.7
5929-30	5.3	15.5	6298-99	59	12.6
5930-31	15	9.3	6299-6300	3.4	10.3
5931-32	5.5	11	6300-01	76	15.9
5932-33	6.7	10.5	6301-02	28	12.2
5933-34	24	11.1	6302-03	2.3	9.6
5934-35	0.12	13.3	6305-06	59	13.3
5935-36	14	11.9	6313-14	28	14.8
5936-37	4.4	12	6314-15	14	13.8
5937-38	5.7	12.7	6315-16	0.3	7.7
5938-39	0.01	10	6316-17	3.7	8
5939-40	6.9	12	6317-18	0.05	4.1
5940-41	11	15.1			
5941-42	1.8	8.57			
5942-43	1.1	7.4			
5943-44	0.01	5.1			
5944-45	0.01	4.6			

CHEROKEE FED 22-14

DEPTH	PERM	POROSITY	DEPTH	PERM	POROSITY
5768-69	215	22.9	5826-27	7.6	23.9
5769-70	45	22.1	5827-28	4.5	17.1
5770-71	157	26.8	5828-29	2.3	17.8
5771-72	11	11.1	5829-30	4.9	19
5772-73	10	8.7	5830-31	0.04	2.3
5774-75	9	17.9	5831-32	0.63	6.8
5775-76	3.2	8.6	5832-33	3.9	14.6
5776-77	0.34	3	5833-34	4.7	14.7
5777-78	0.93	12.3	5834-35	4.9	12.6
5778-79	1.4	15.4	5835-36	0.52	5.5
5779-80	2.5	12.2	5836-37	2.3	9
5780-81	5.9	18.9	5837-38	1	6.6
5781-82	11	14.9	5838-39	2.5	7
5782-83	40	26	5839-40	2.7	8.6
5783-84	21	21.9	5840-41	0.91	9.1
5784-85	29	23.3	5841-42	0.93	10.2
5785-86	29	22.7	5842-43	1.6	6.3
5786-87	28	22.9	5843-44	2.8	8.3
5787-88	13	18.6	5844-45	3.5	6.6
5789-90	7.4	15.5	5845-46	12	6.7
5790-91	2	12.2	5846-47	0.97	10.1
5791-92	3.1	14.1	5847-48	0.79	6.6
5792-93	2	10.8	5848-49	1.2	8.6
5793-94	2.4	12.1	5849-50	1.4	6.1
5794-95	1.7	9.7	5850-51	2.6	9
5795-96	1.5	9.6	5851-52	3.1	10.9
5796-97	0.86	4.9	5852-53	1.2	8.2
5797-98	0.26	4.6	5853-54	1.5	6.9
5798-99	0.79	7.9	5854-55	0.74	6.6
5799-5800	3.4	12.7	5855-56	1.6	7.2
5800-01	16	20.1	5856-57	1.6	8.8
5801-02	8.3	18.4	5857-58	1.6	7.2
5802-03	2.7	9.6	5858-59	3.5	12.4
5803-04	2.3	19.1	5859-60	3	15.2
5804-05	6.5	16	5860-61	2.1	15.5
5807-08	4.3	18.3	5861-62	17	12.8
5808-09	7.9	18.6	5862-63	0.15	11
5809-10	5.1	17.3	5863-64	0.13	10.7
5810-11	11	19.9	5864-65	0.1	11.2
5811-12	3	17.1	5865-66	0.03	2.4
5812-13	6.8	20	5866-67	0.03	2.9
5813-14	3.5	19.8	5867-68	0.04	6.4
5814-15	19	23.9	5868-69	0.04	5.2
5815-16	6.6	23.1	5869-70	0.02	3.5
5816-17	15	22.8	5870-71	0.02	4.4
5817-18	14	15.9	5871-72	0.05	4
5818-19	6.1	9.8	5872-73	0.07	5.7
5819-20	1.1	6	5873-74	0.33	6.2
5820-21	0.7	4.2	5874-75	0.13	5.5
5821-22	0.79	4.6	5875-76	0.03	4.8
5822-23	0.34	2.5	5877-78	0.06	5.4
5823-24	1.1	4.1	5878-79	0.02	2.9
5824-25	2.2	4.2	5879-80	0.04	0.7
5825-26	8.2	18.7			

CHEROKEE 33-14

DEPTH	PERM	POROSITY
5773-74	11	19.1
5774-75	24	21.2
5775-76	12	15.2
5776-77	12	19.4
5777-78	37	21.9
5778-79	30	19
5779-80	12	17.1
5780-81	17	15.8
5781-82	103	23.6
5782-83	18	17.4
5783-84	17	15.8
5791-92	3.26	2.2
5792-93	0.77	1
5793-94	0.27	0.8
5794-95	0.73	1.2
5795-96	0.18	0.9
5796-97	0.8	1.7
5797-98	0.22	1.5
5798-99	0.05	2.2

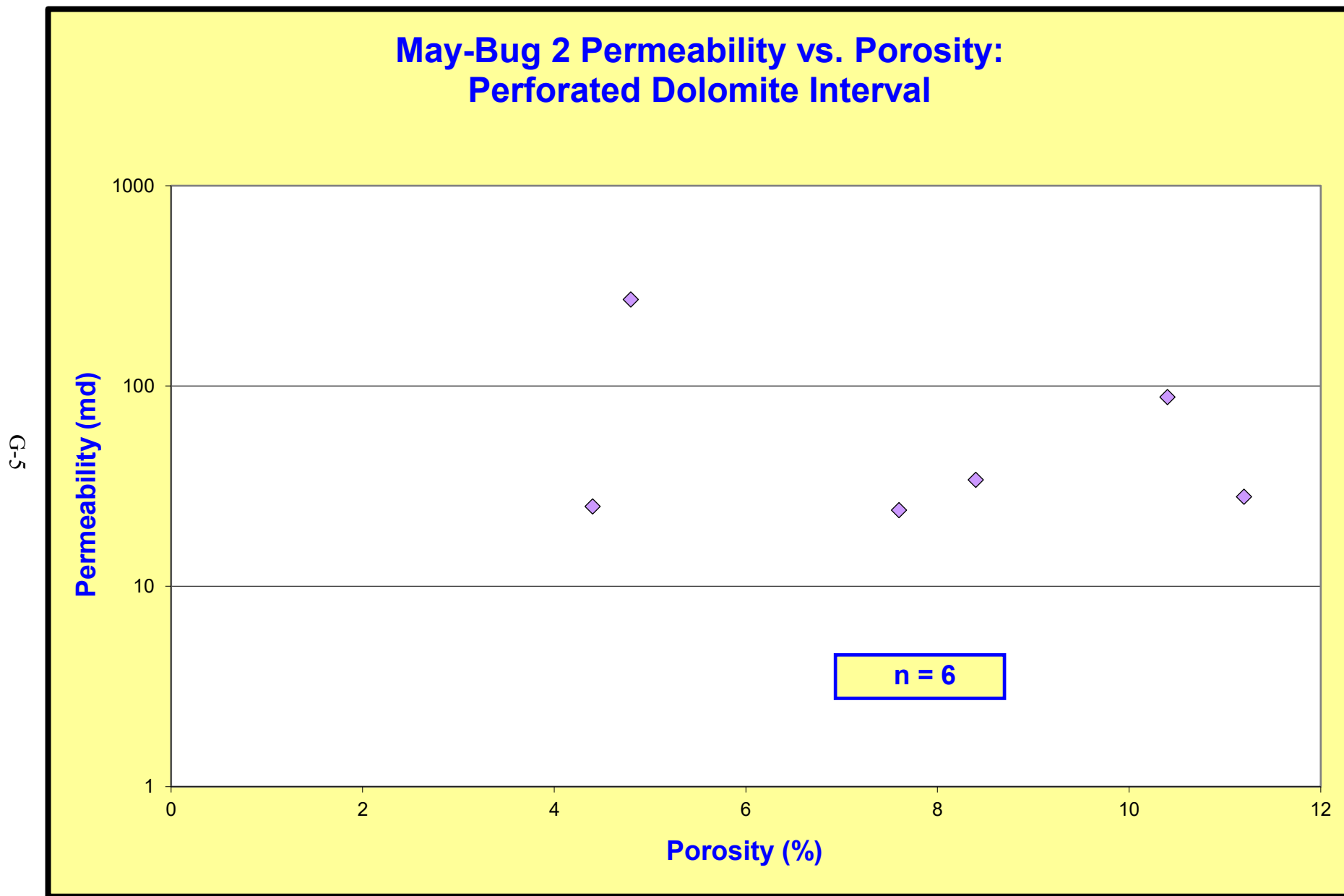


Figure G-1.

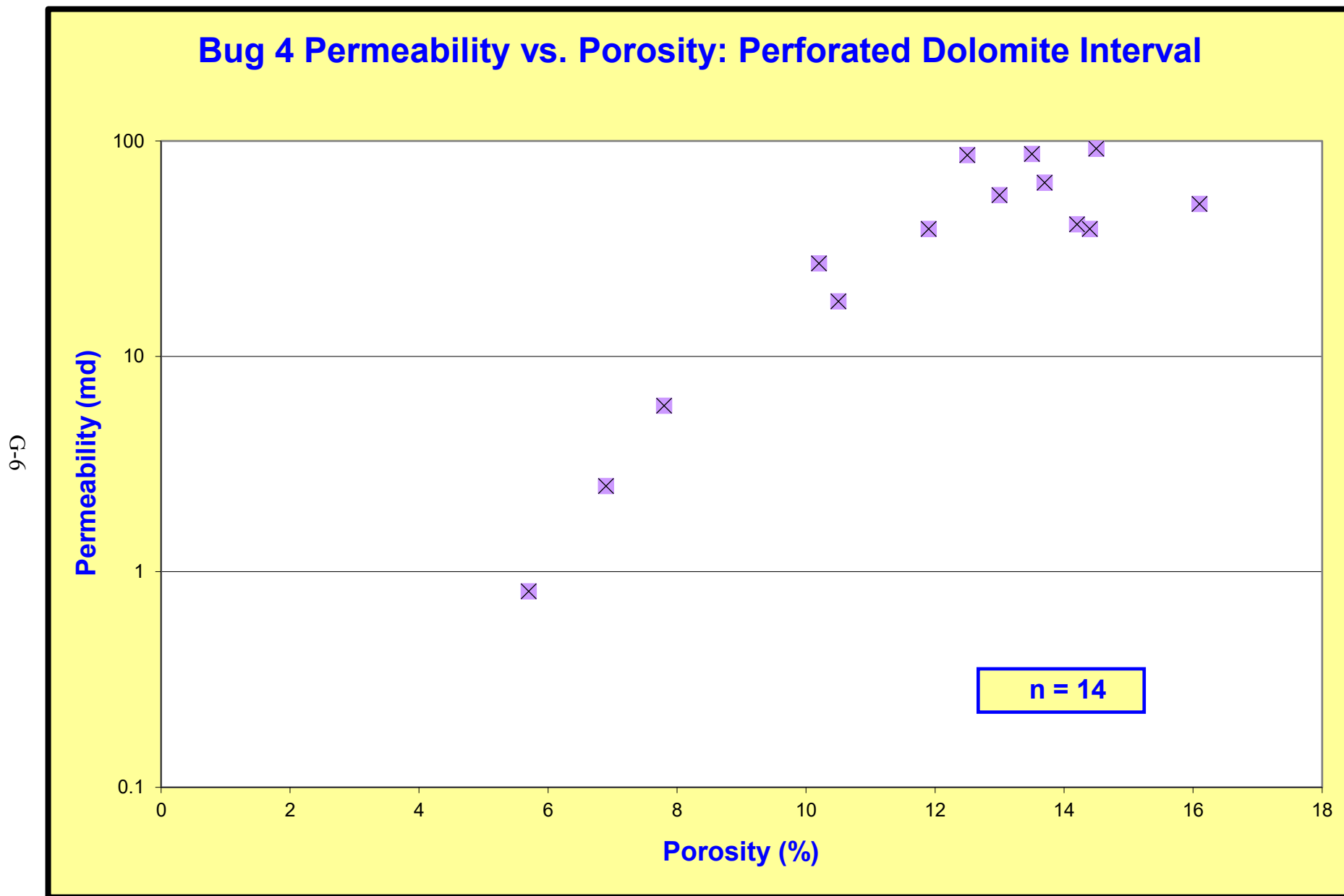


Figure G-2

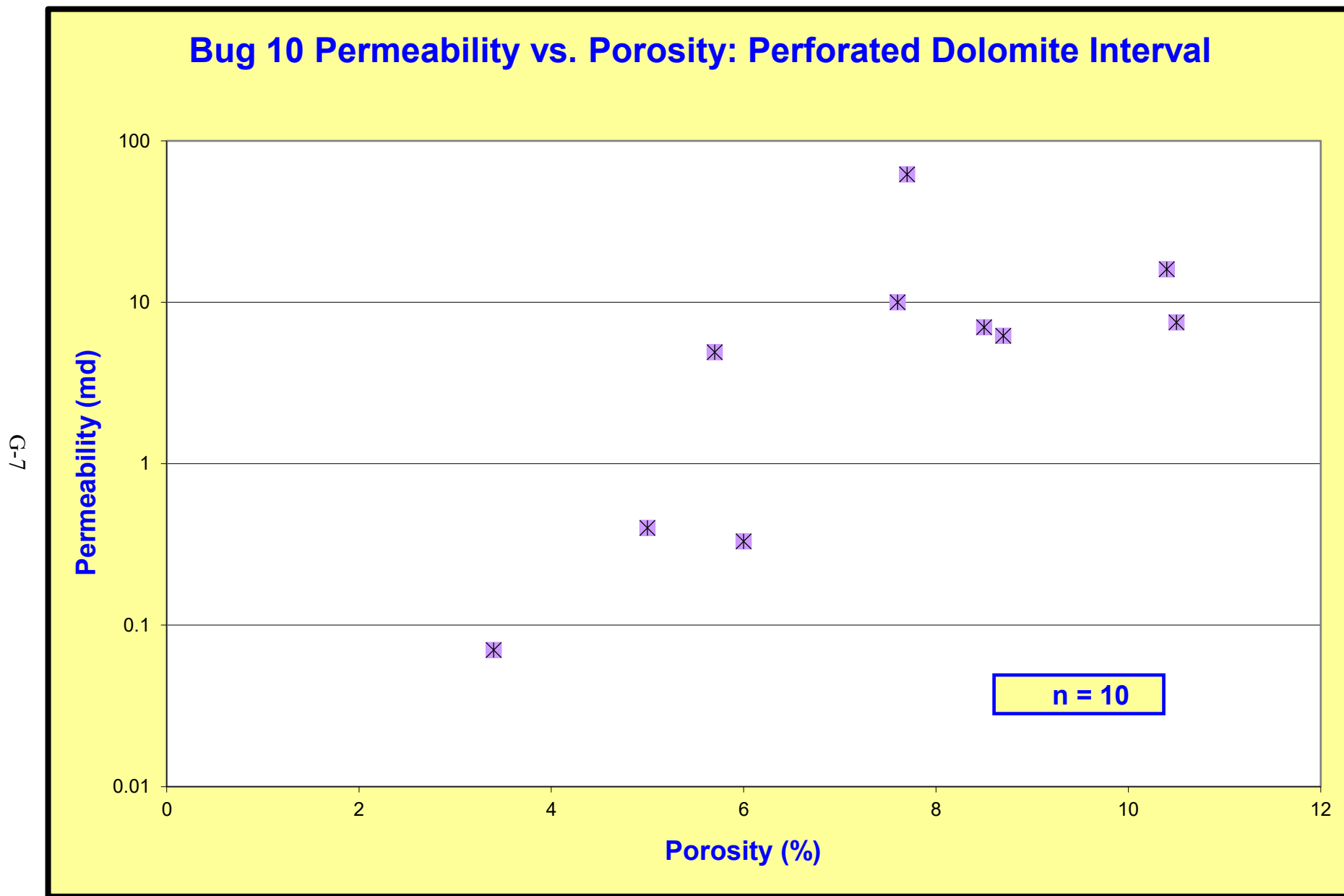


Figure G-3

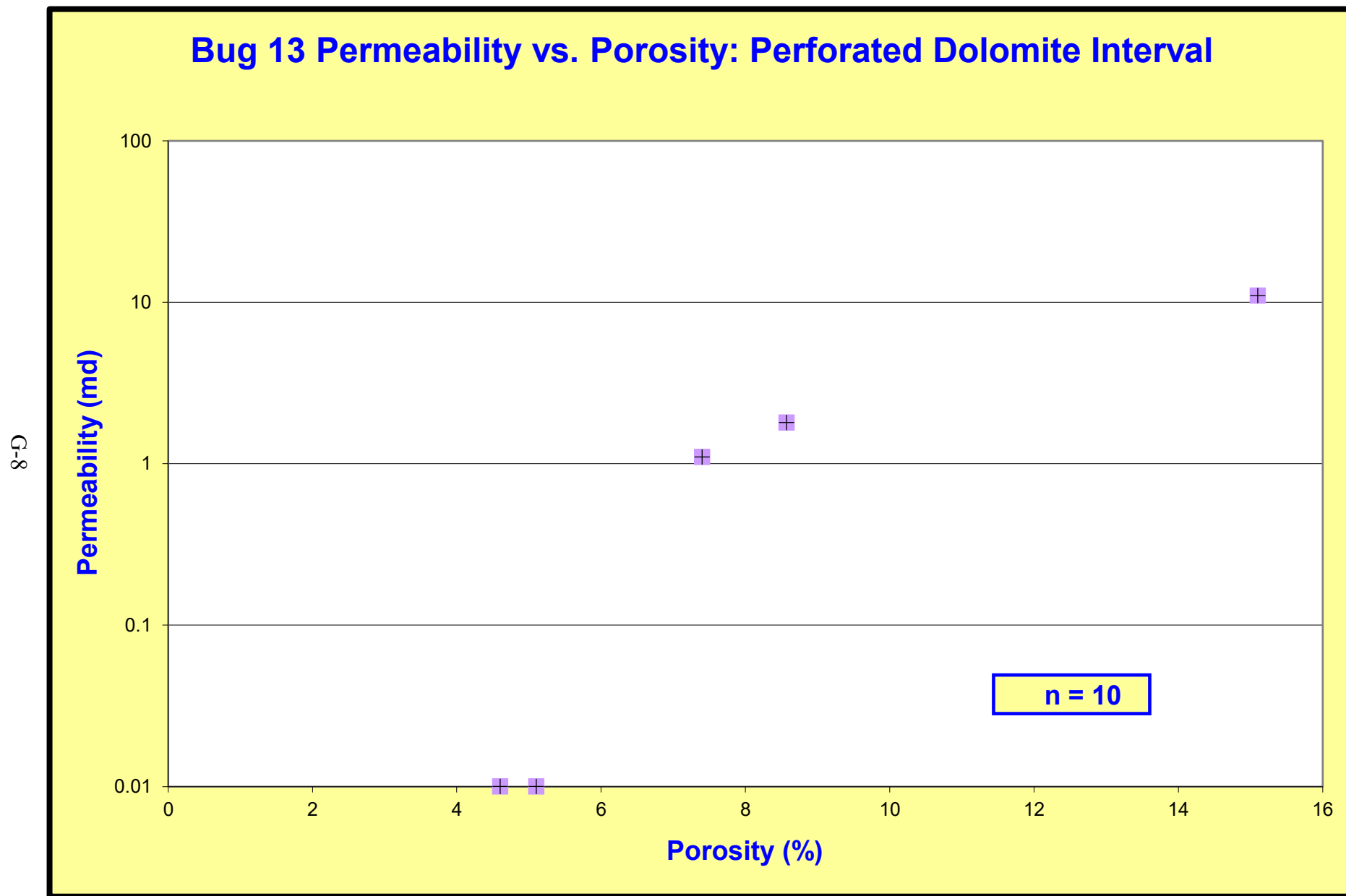


Figure G-4

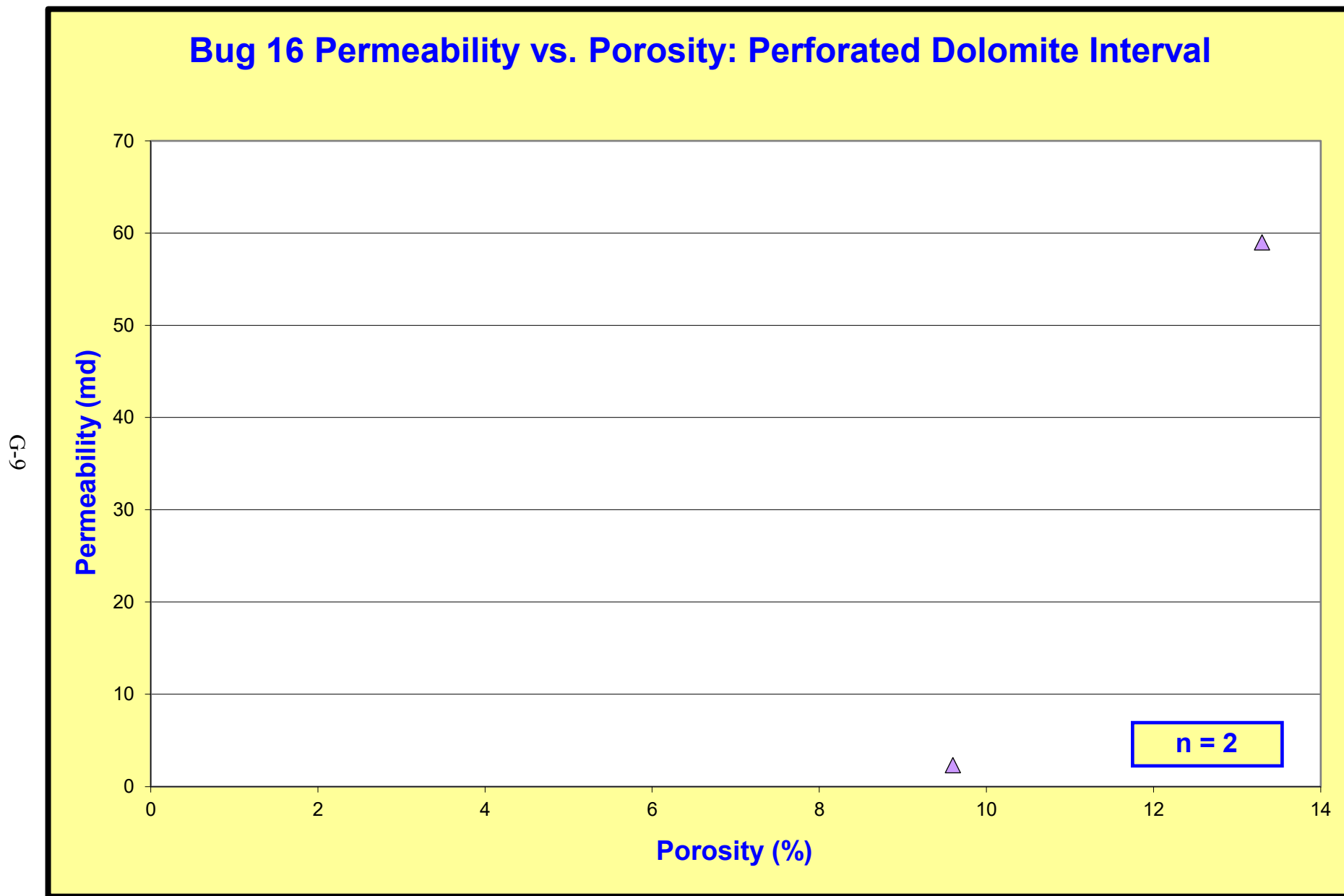


Figure G-5

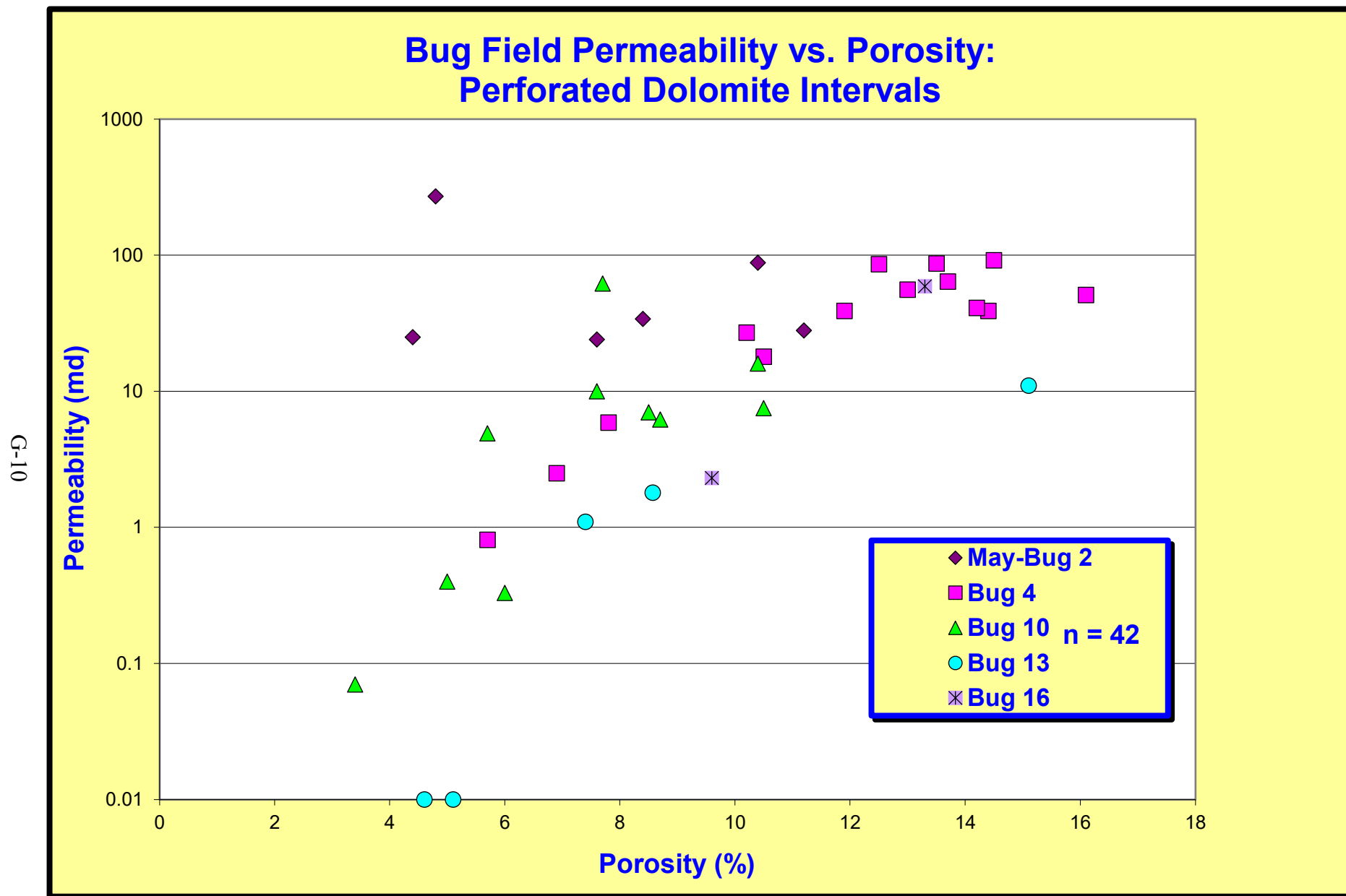


Figure G-6

May-Bug 2 Permeability vs. Porosity: Depositional Fabrics

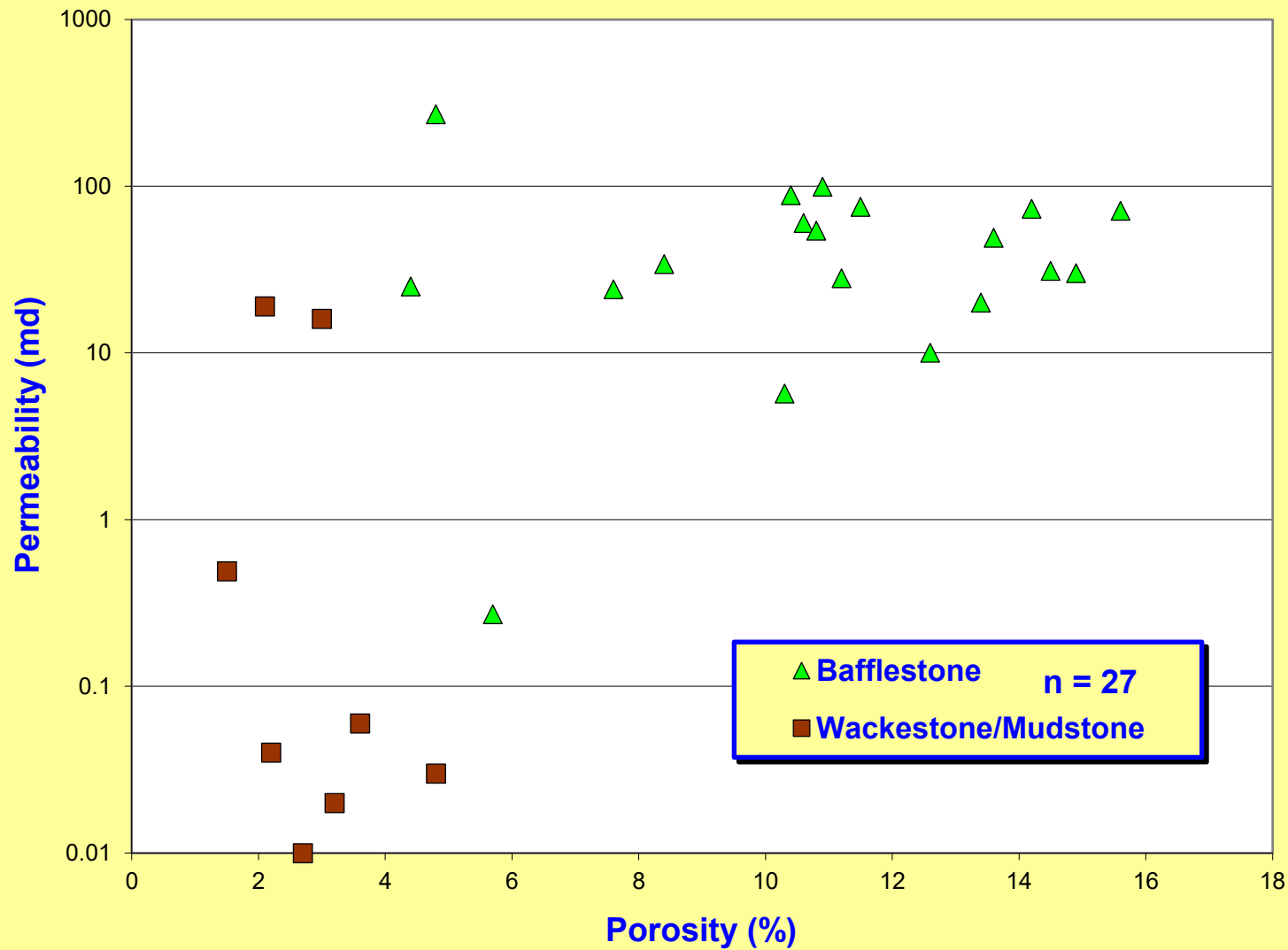


Figure G-7

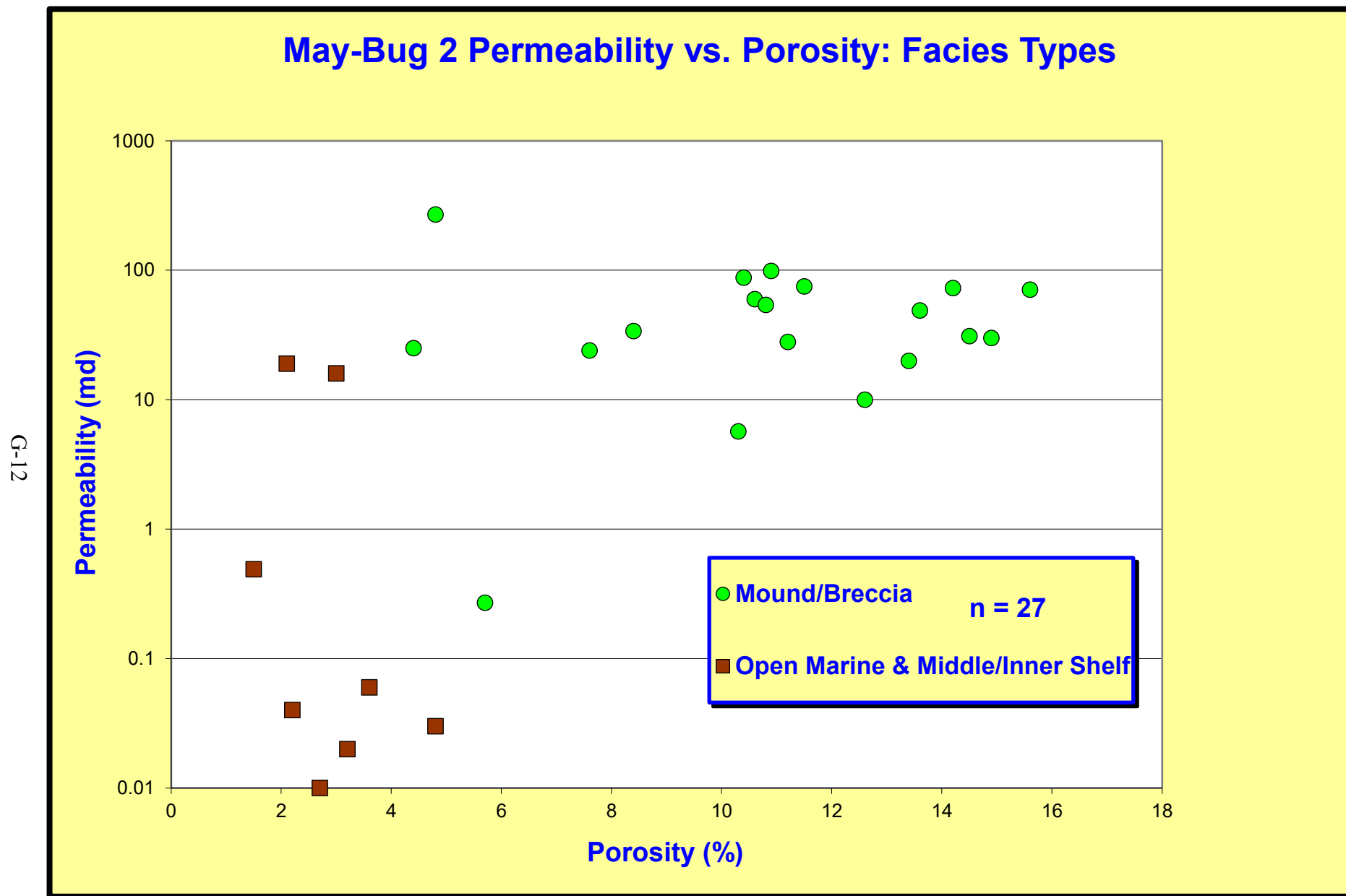


Figure G-8

Bug 4 Permeability vs. Porosity: Depositional Fabrics

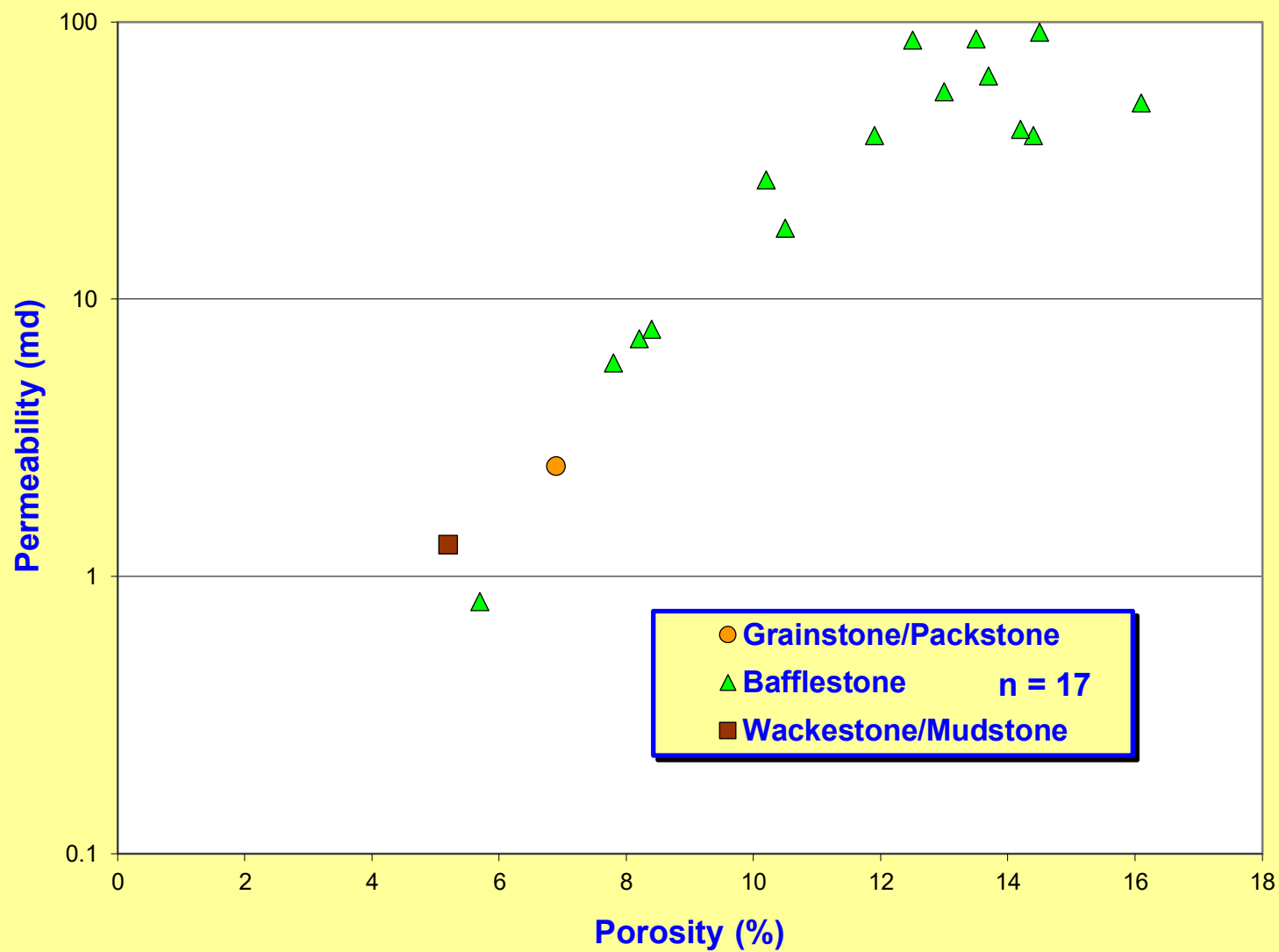


Figure G-9

Bug 4 Permeability vs. Porosity: Facies Types

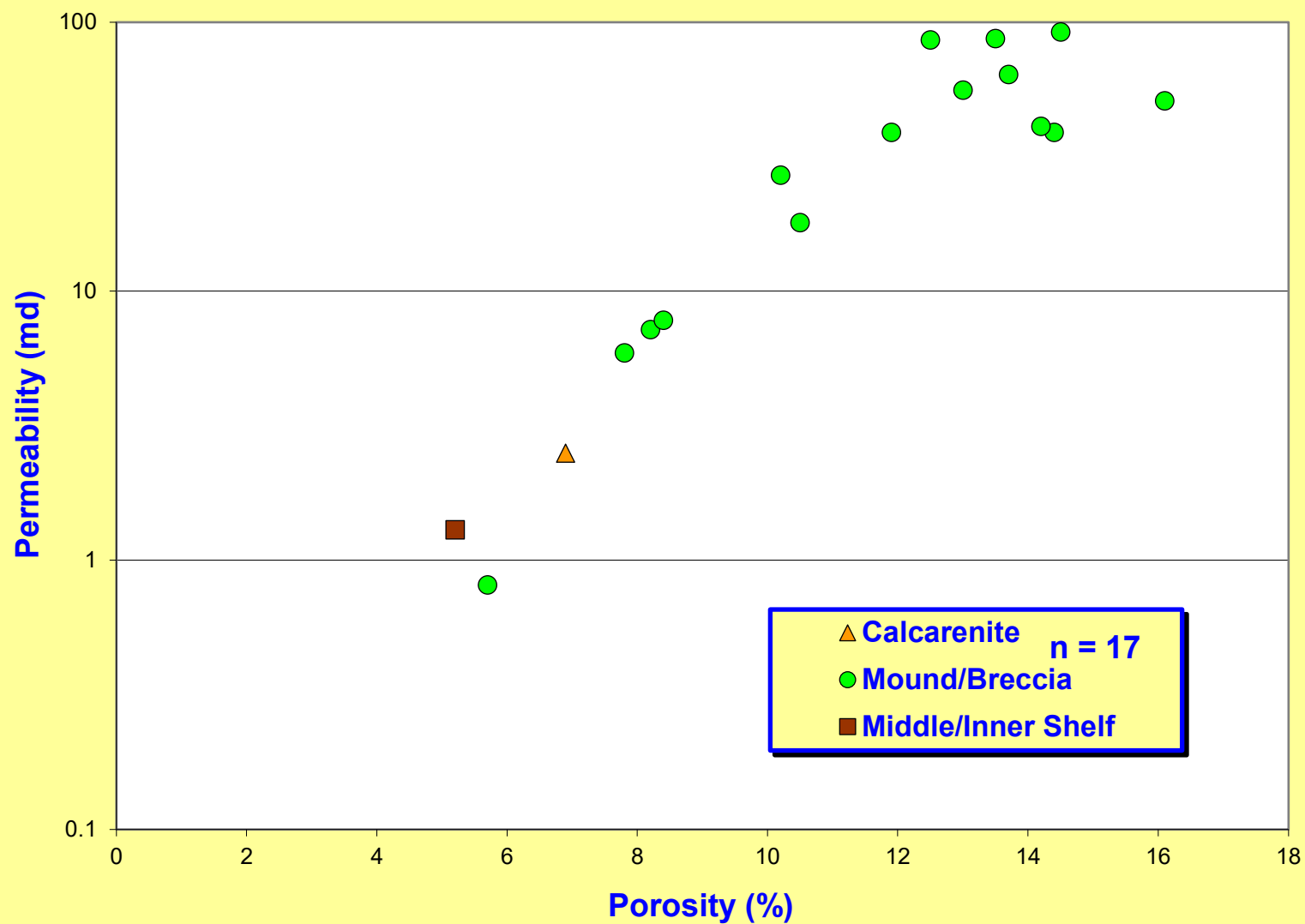


Figure G-10

Bug 10 Permeability vs. Porosity: Depositional Fabrics

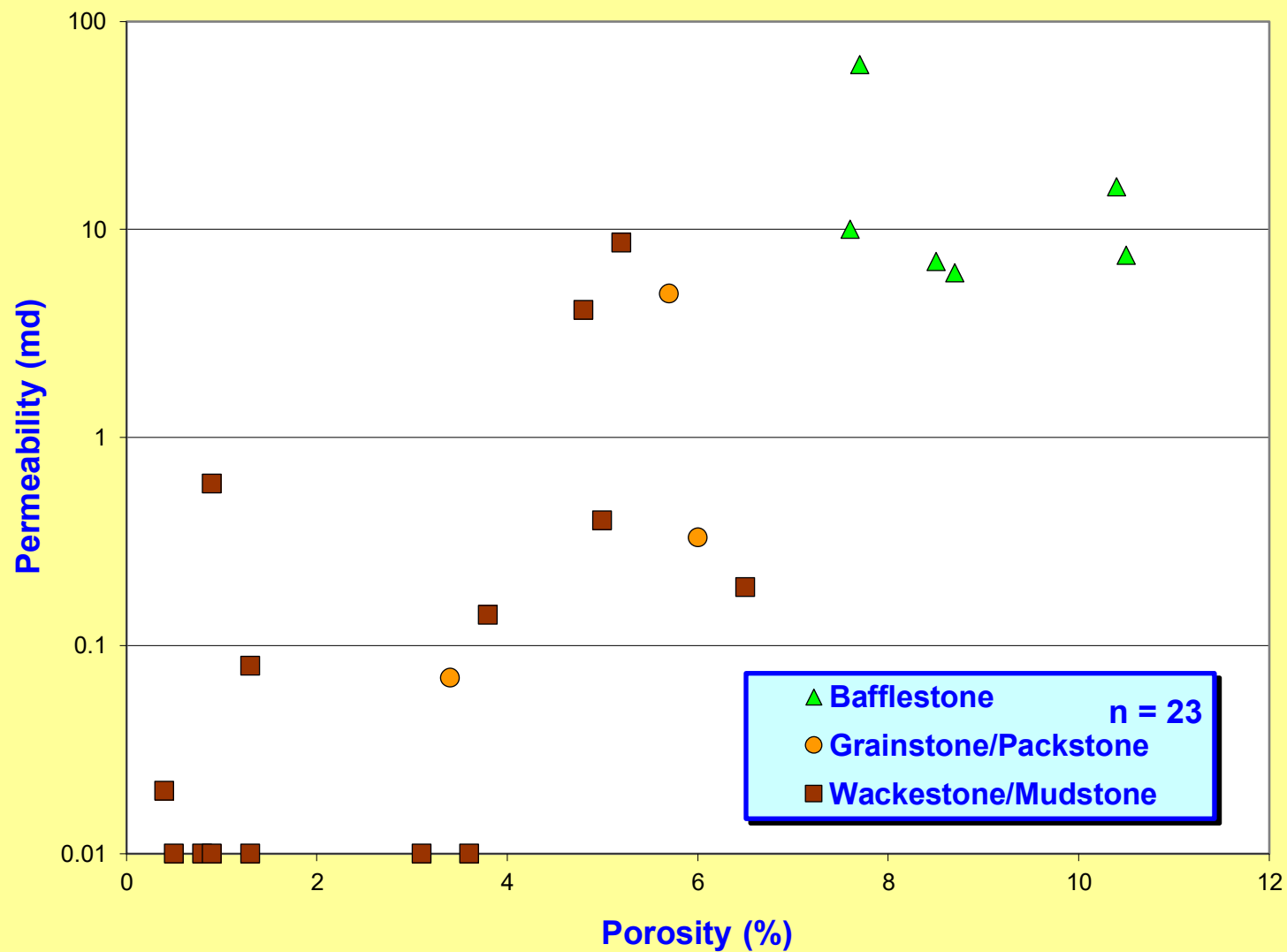


Figure G-11

Bug 10 Permeability vs. Porosity: Facies Types

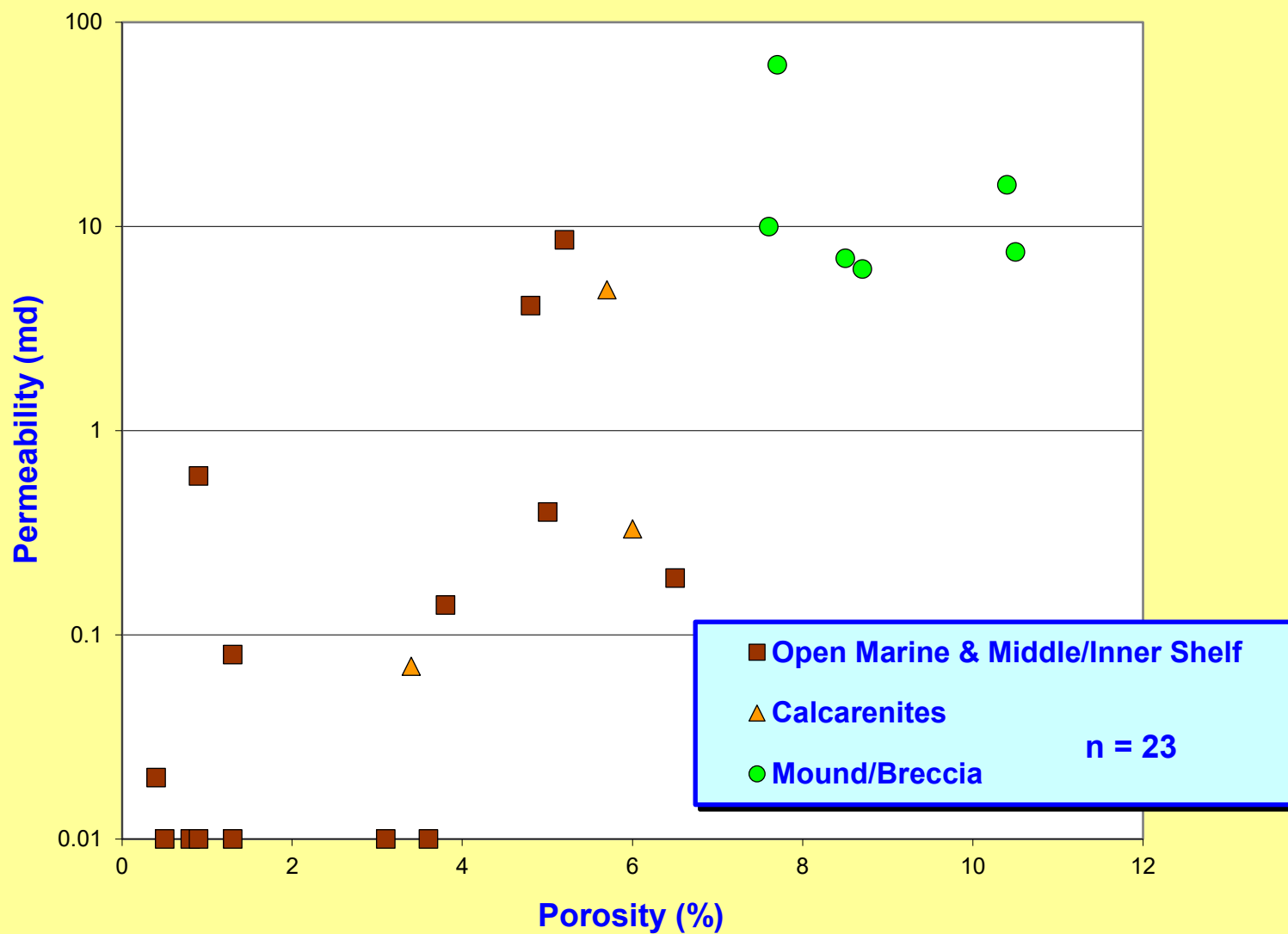


Figure G-12

Bug 13 Permeability vs. Porosity: Depositional Fabrics

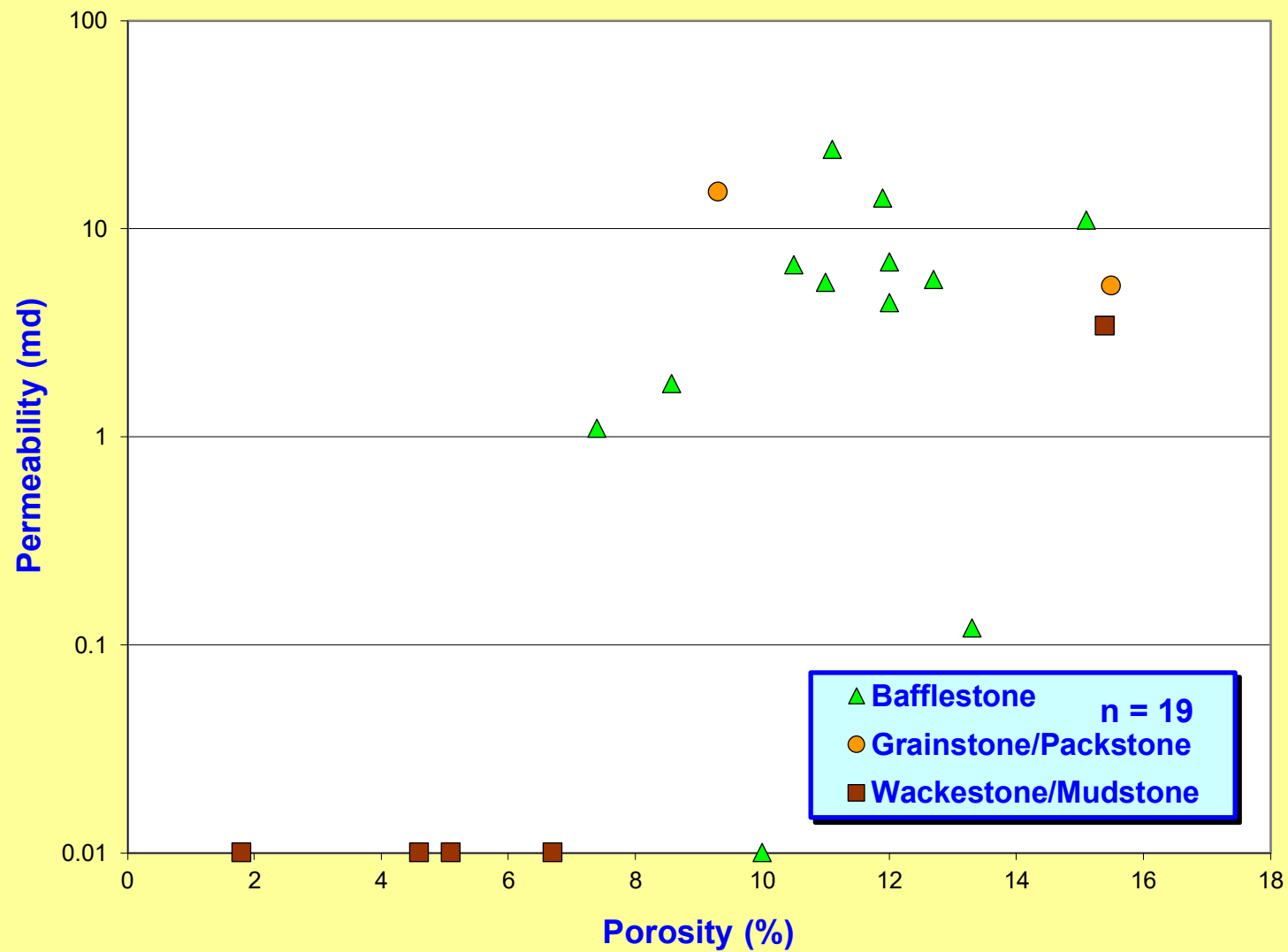


Figure G-13

Bug 13 Permeability vs. Porosity: Facies Types

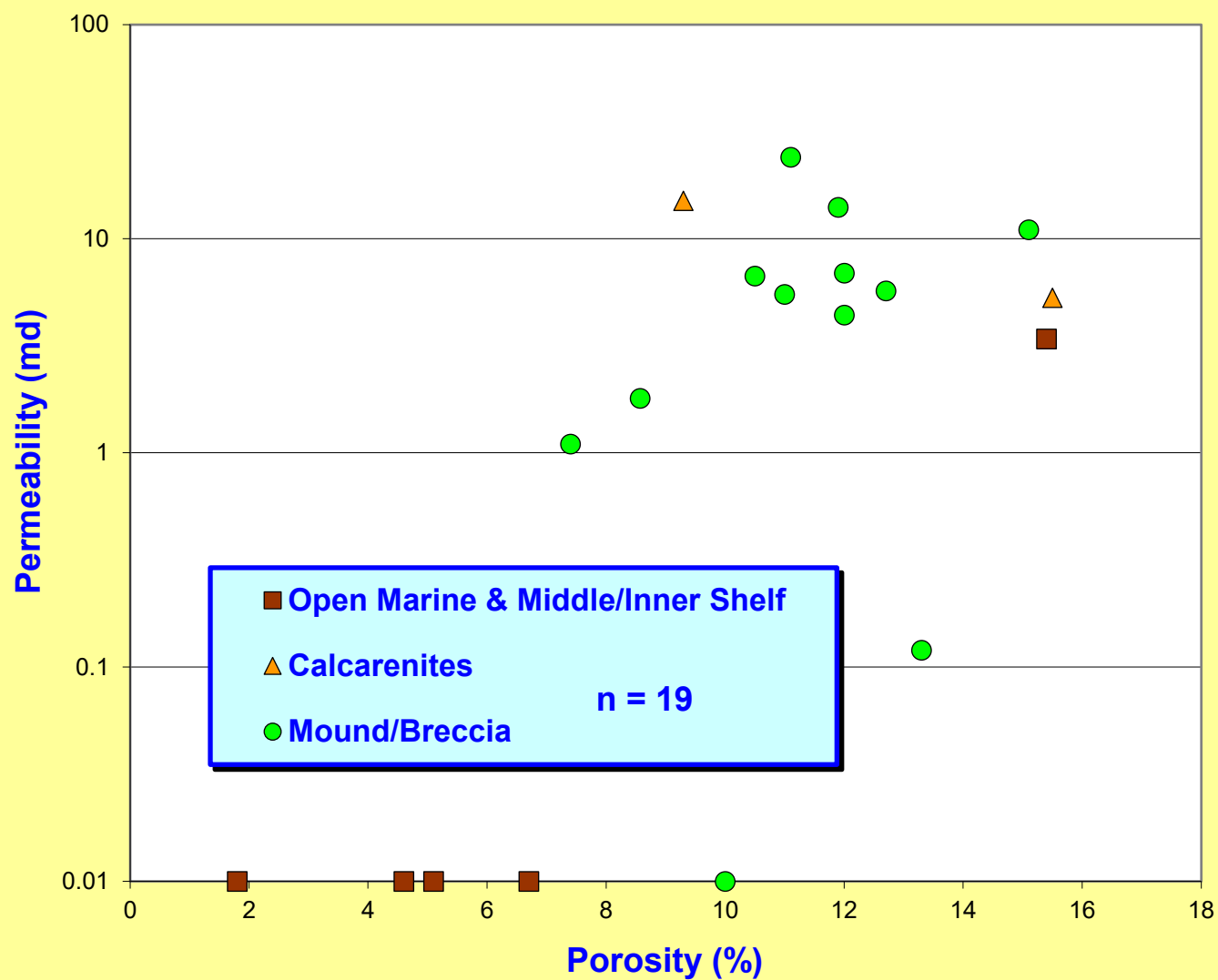
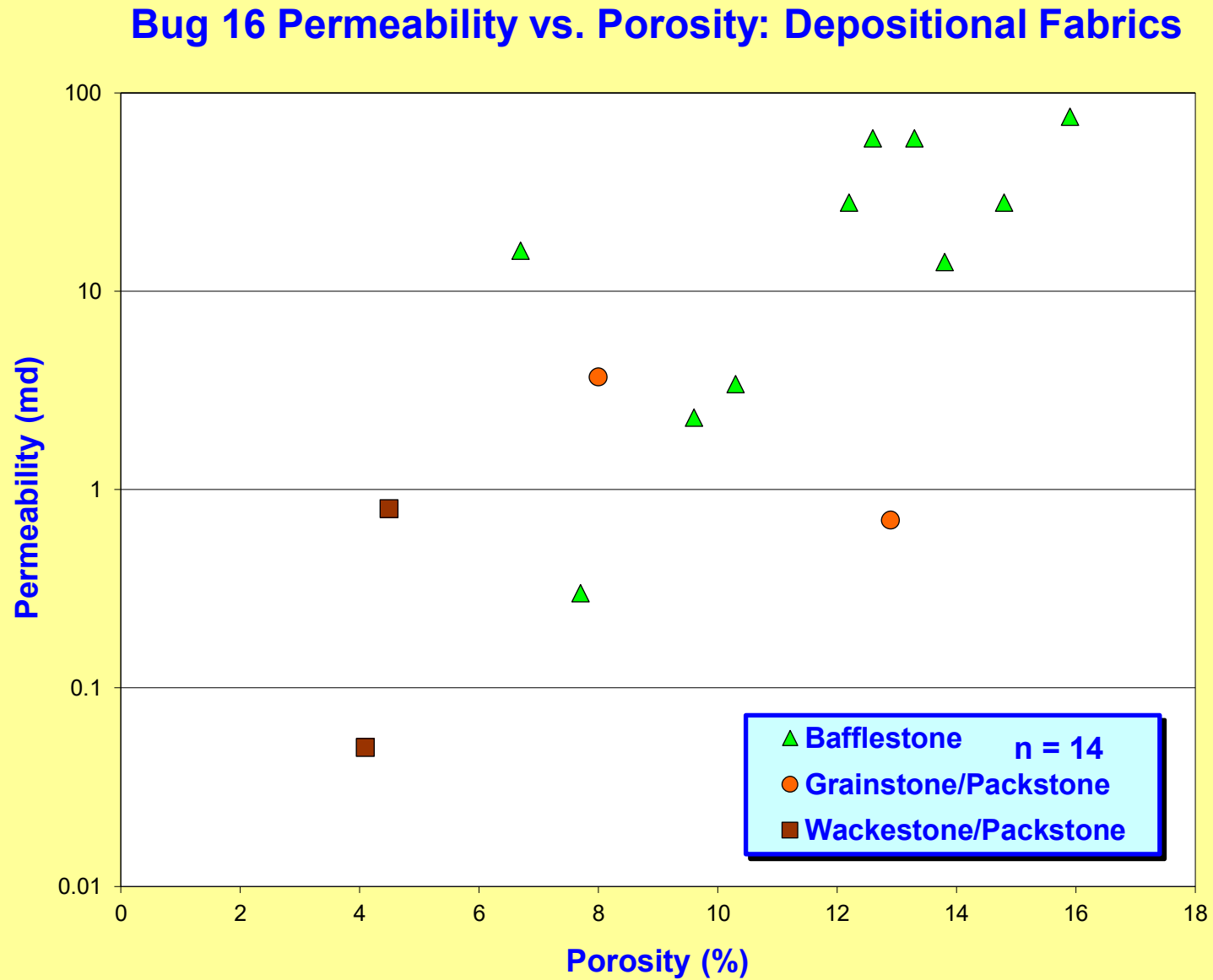


Figure G-14

*Figure G-15*

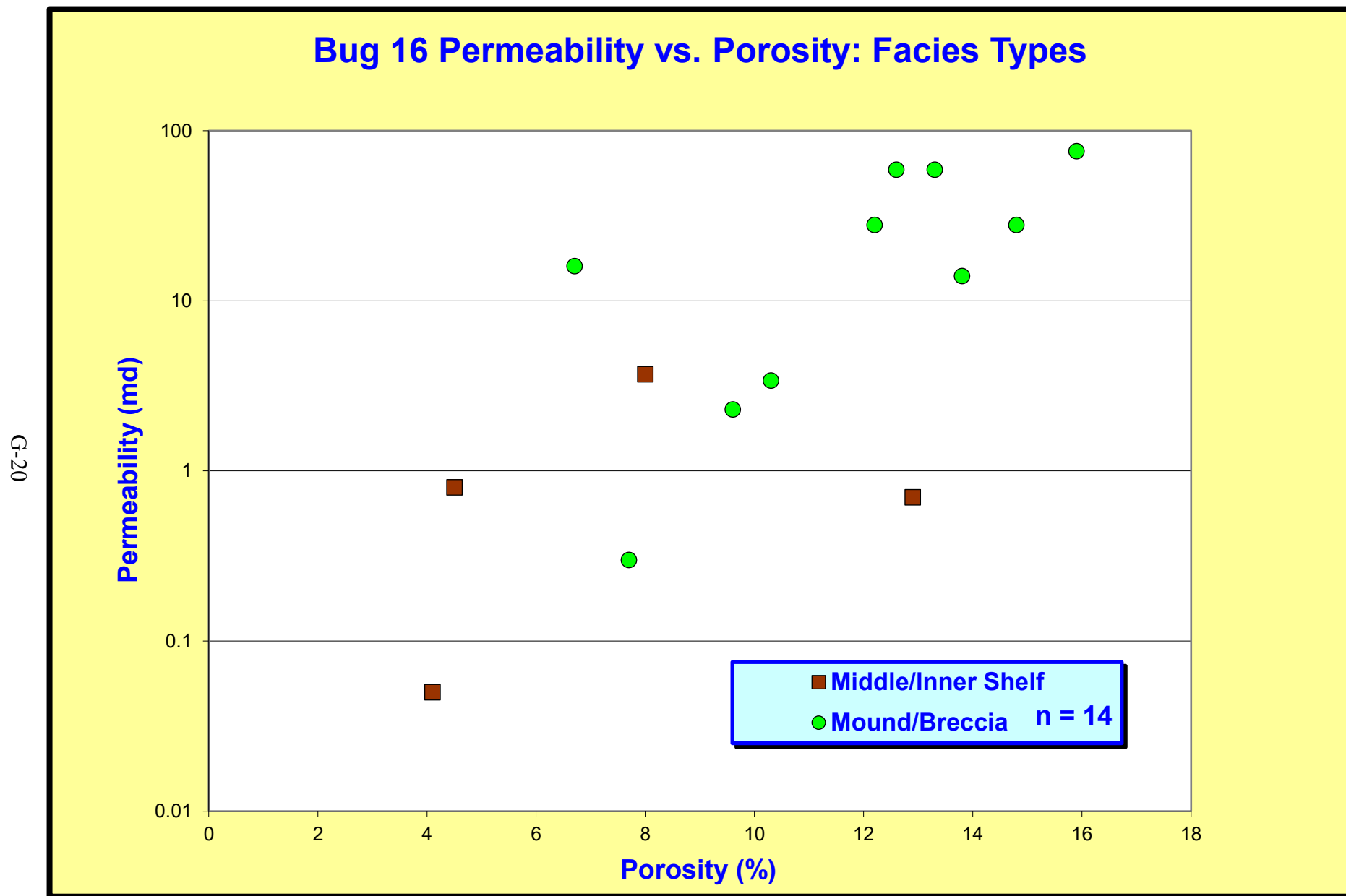


Figure G-16

Bug Field Permeability vs. Porosity: Depositional Fabrics

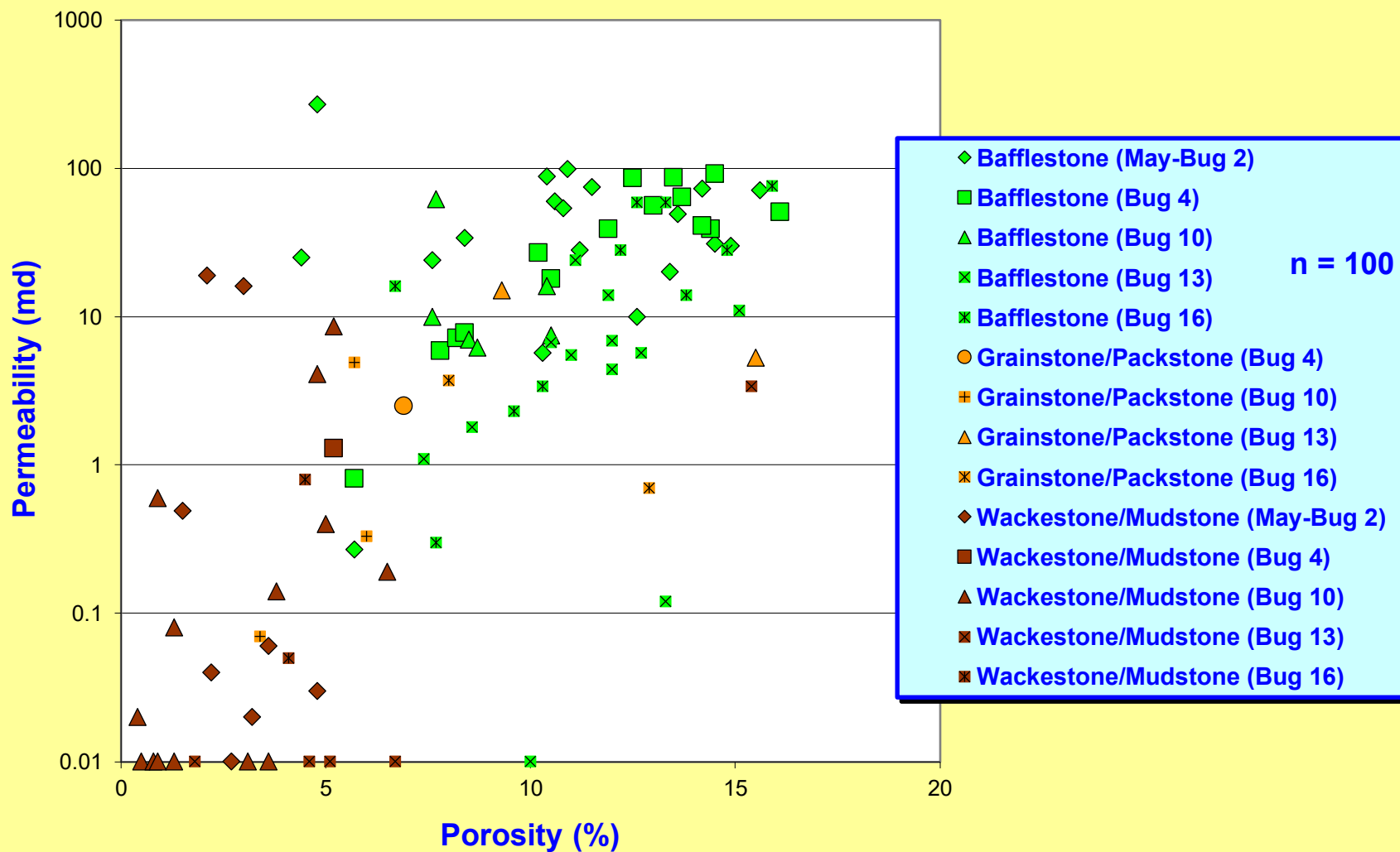


Figure G-17

Bug Field Permability vs. Porosity: Facies Types

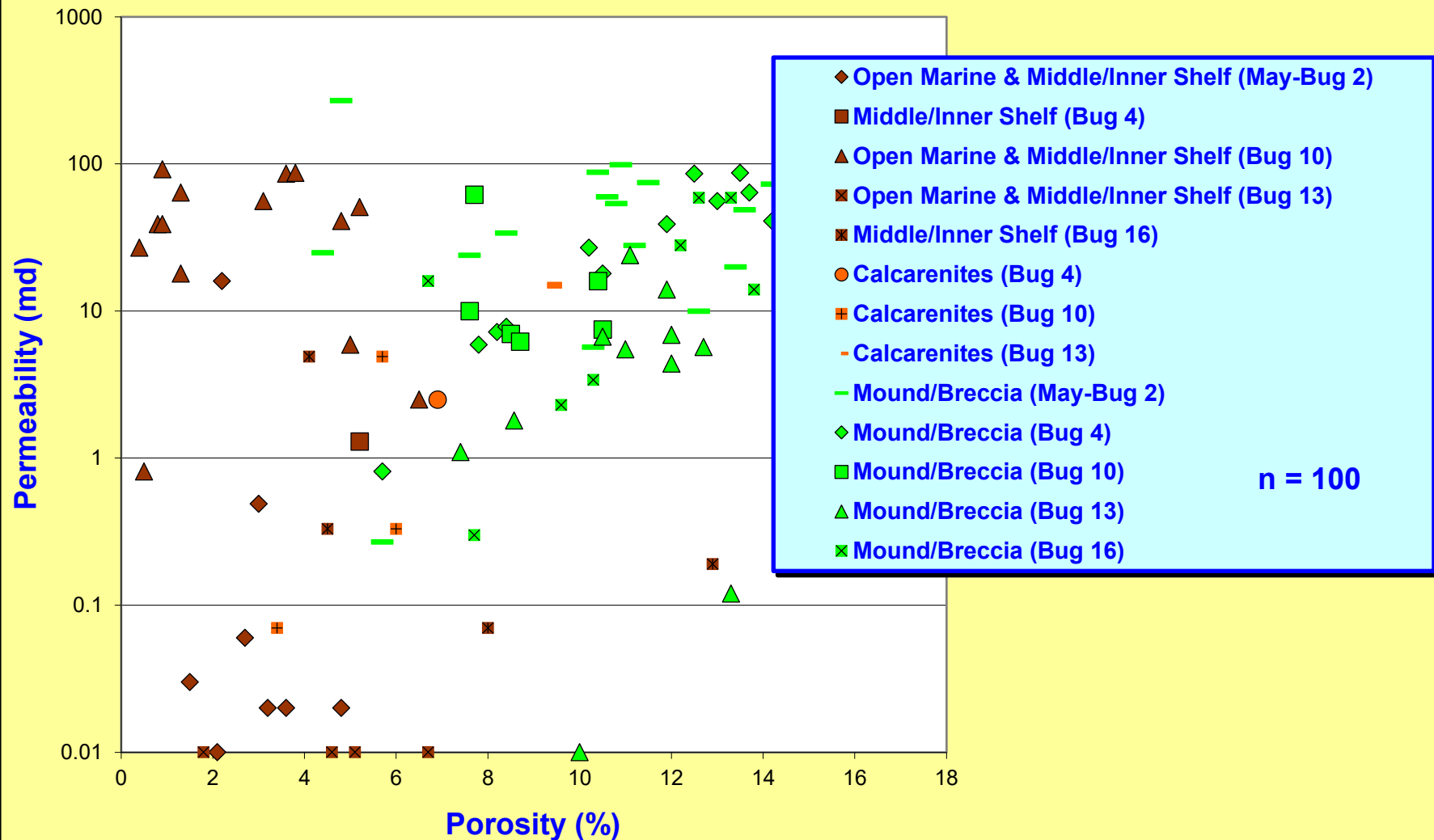


Figure G-18

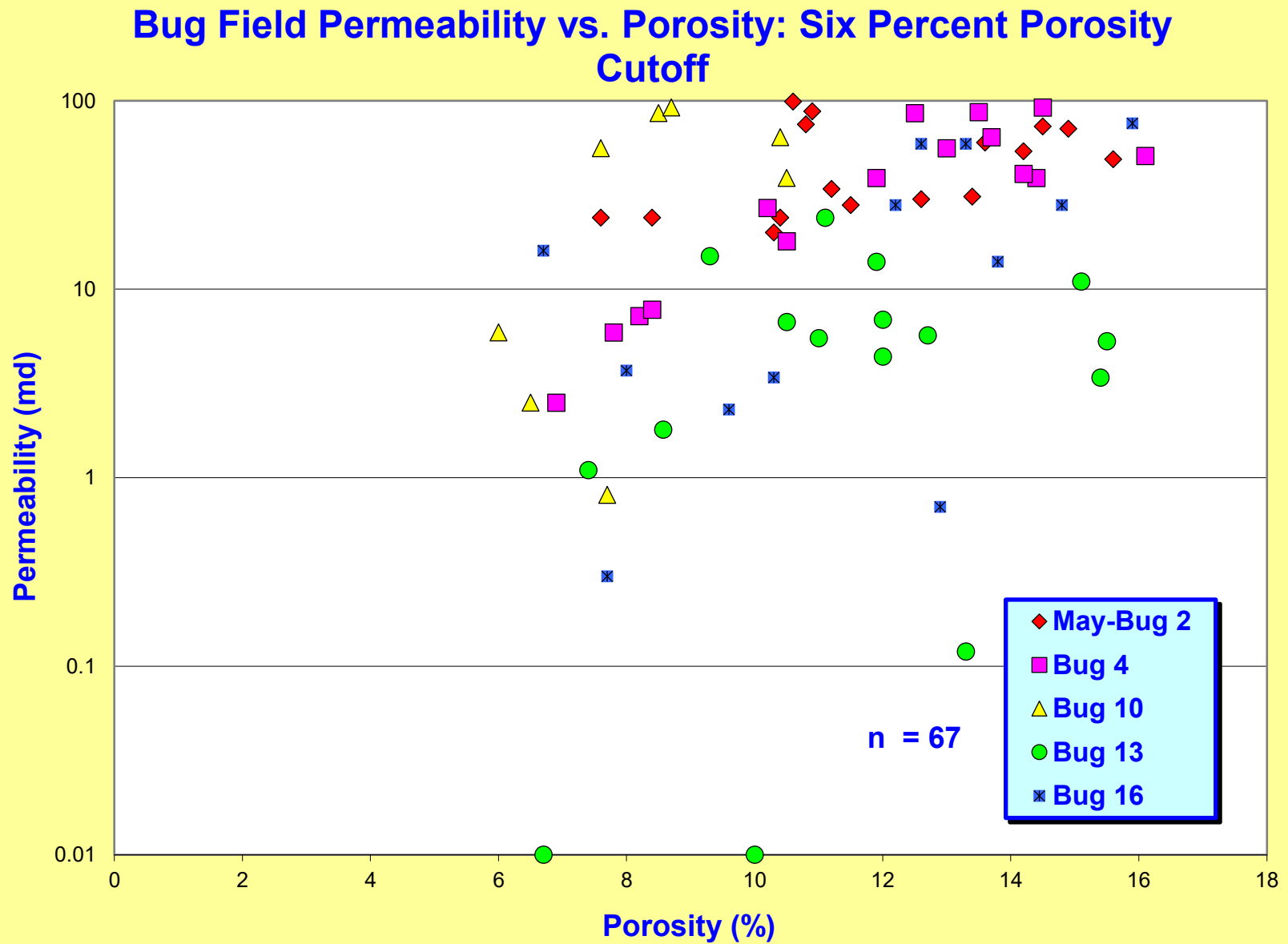


Figure G-19

May-Bug 2 Permeability vs. Porosity: Pore Types

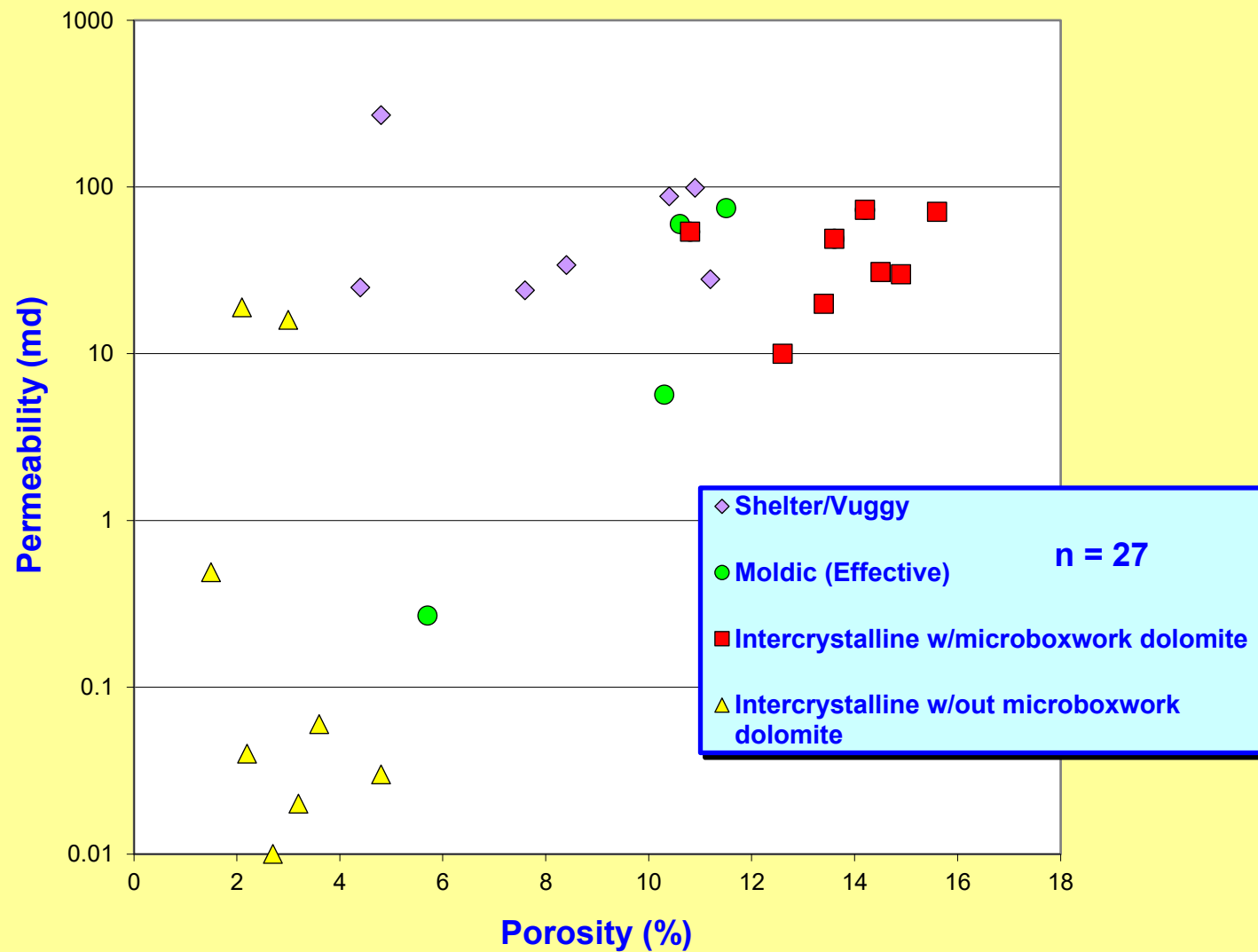


Figure G-20

Bug 4 Permeability vs. Porosity: Pore Types

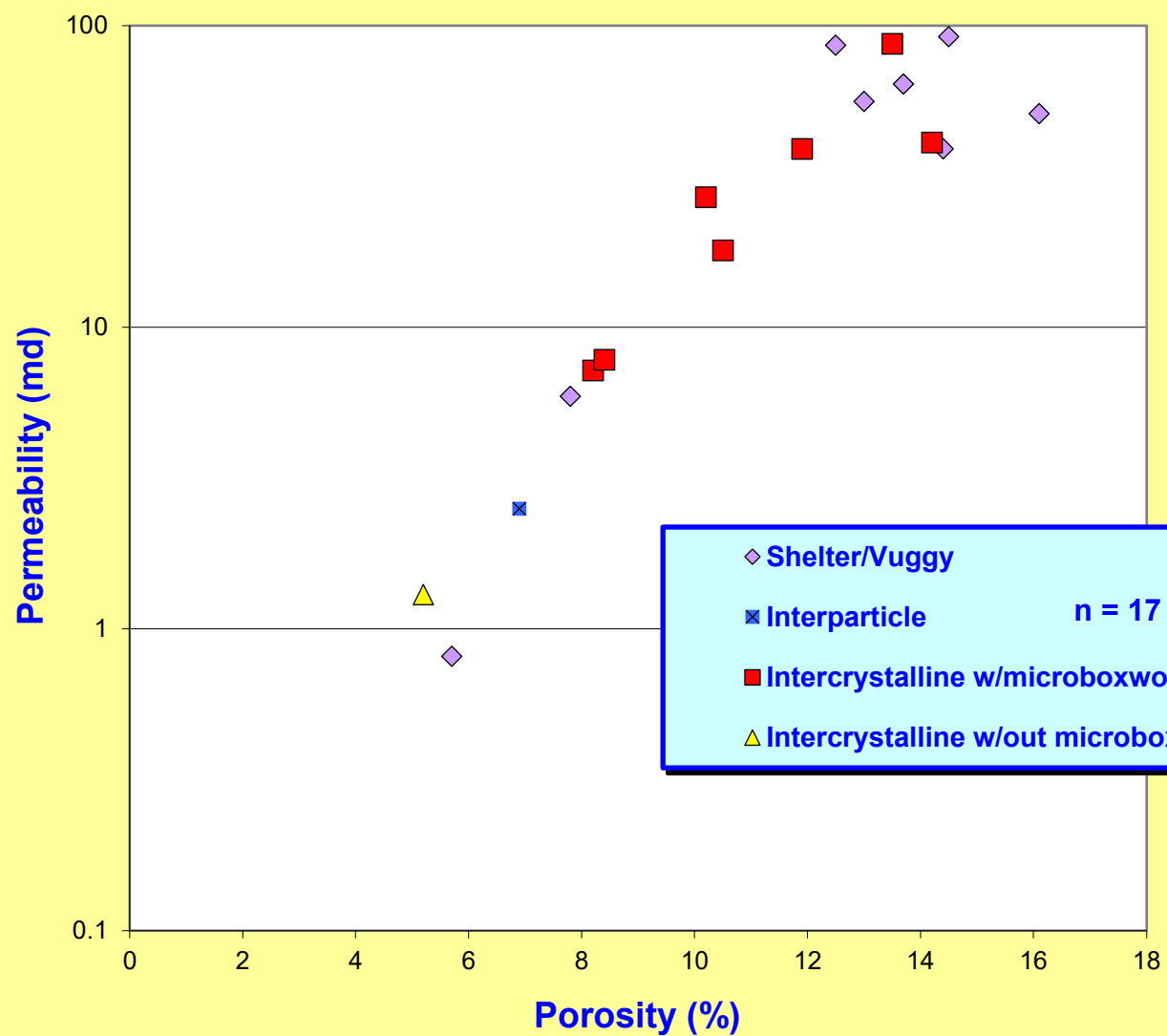


Figure G-21

Bug 10 Permeability vs. Porosity: Pore Types

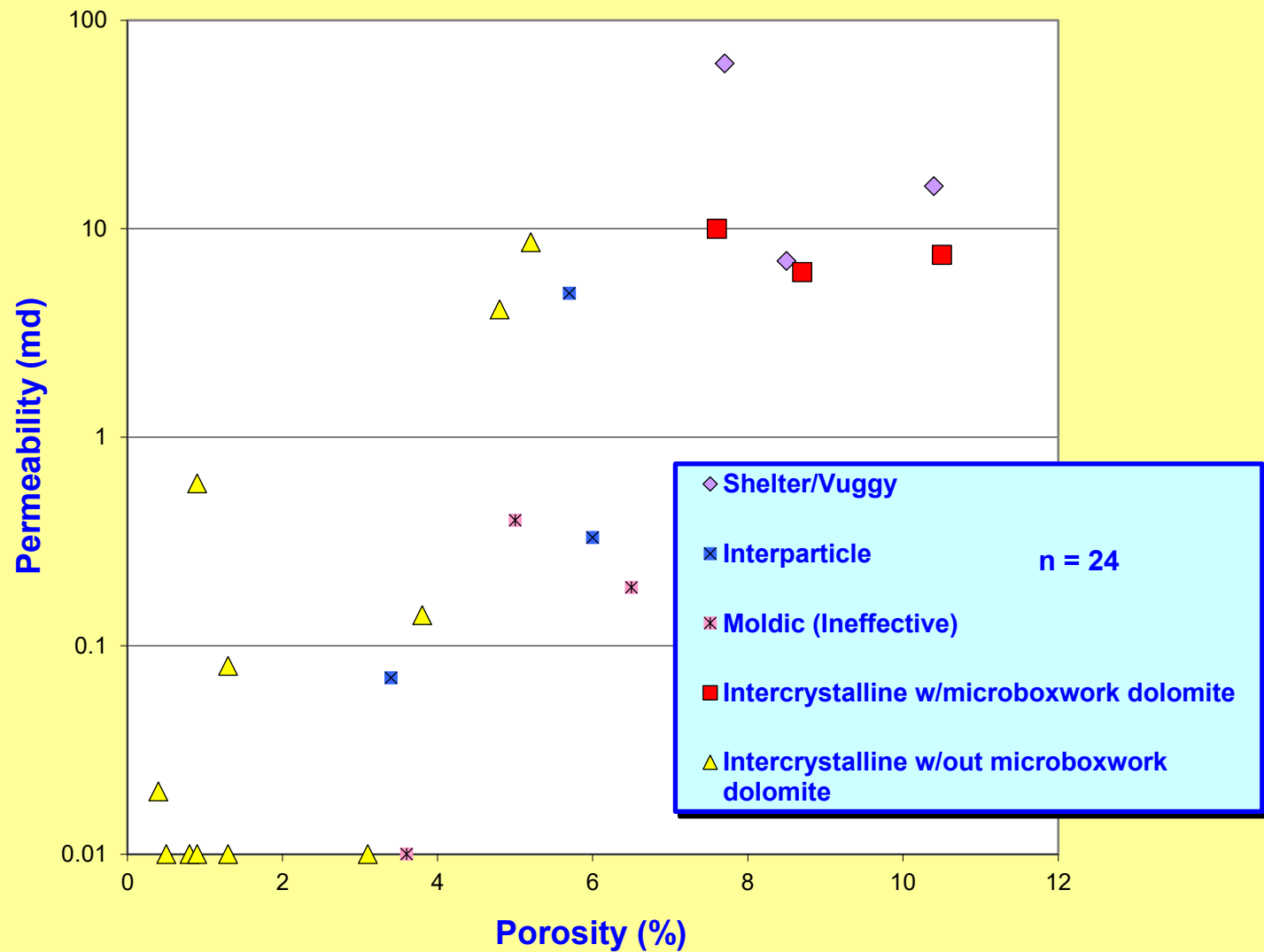


Figure G-22

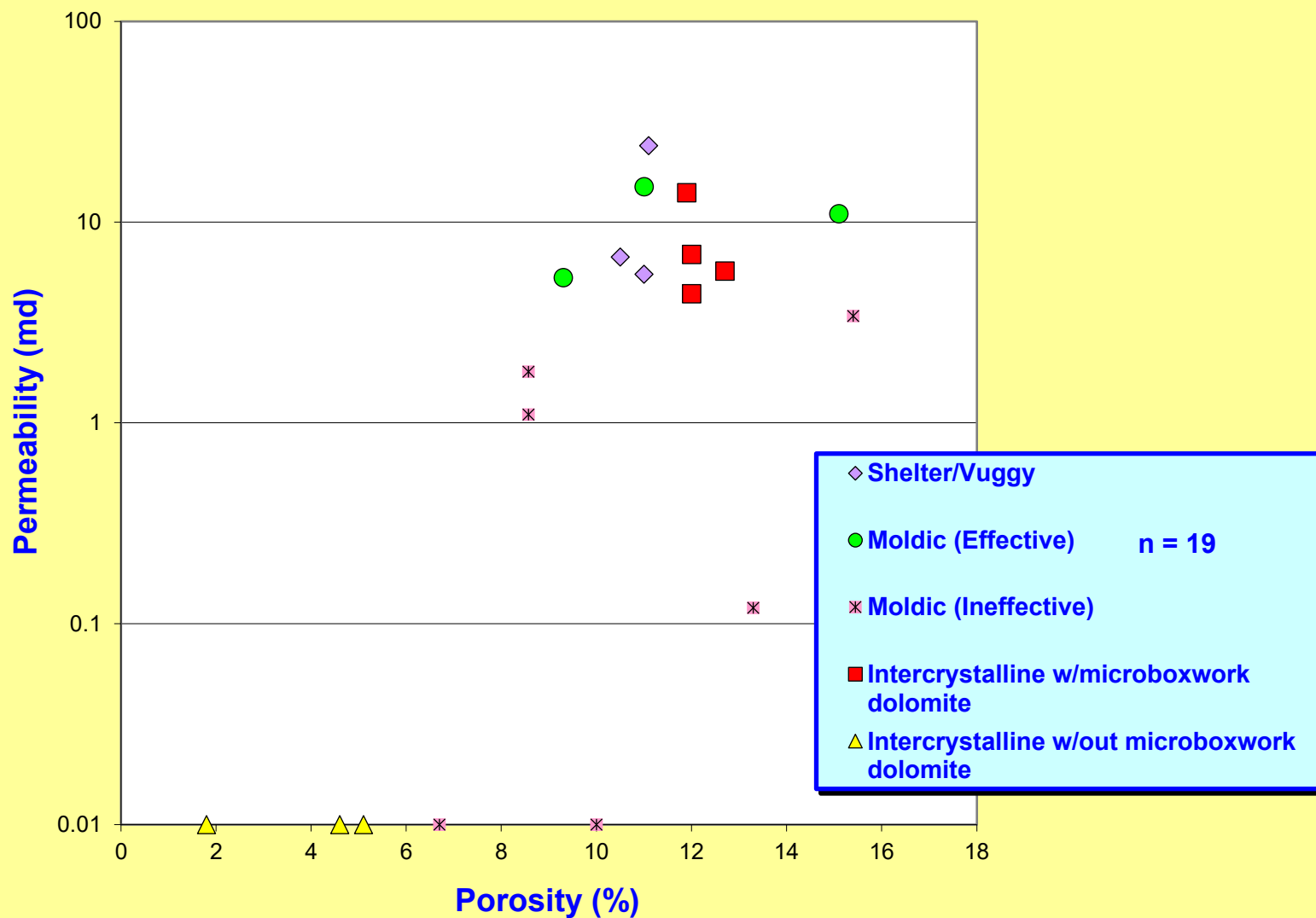


Figure G-23

Bug 16 Permeability vs. Porosity: Pore Types

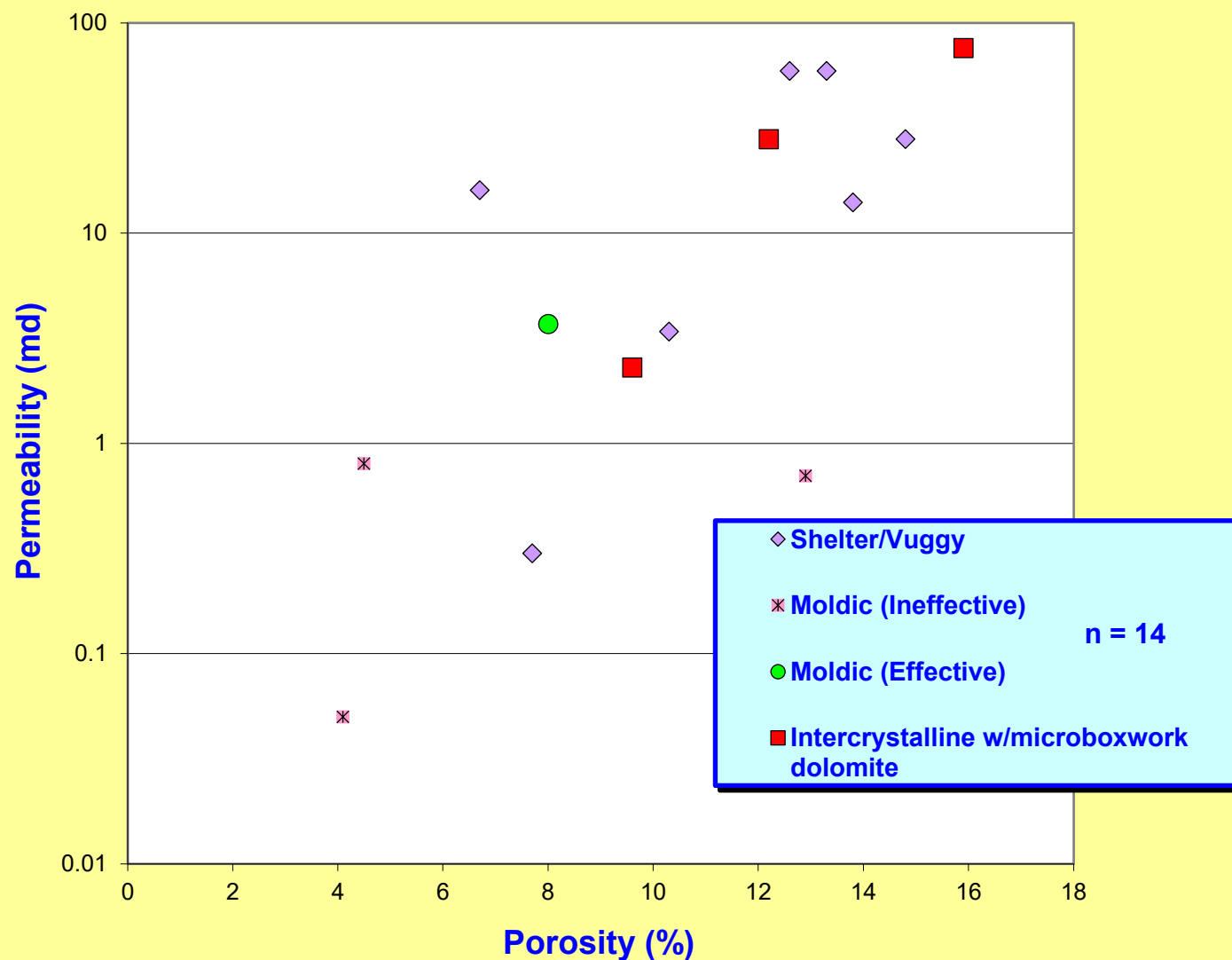
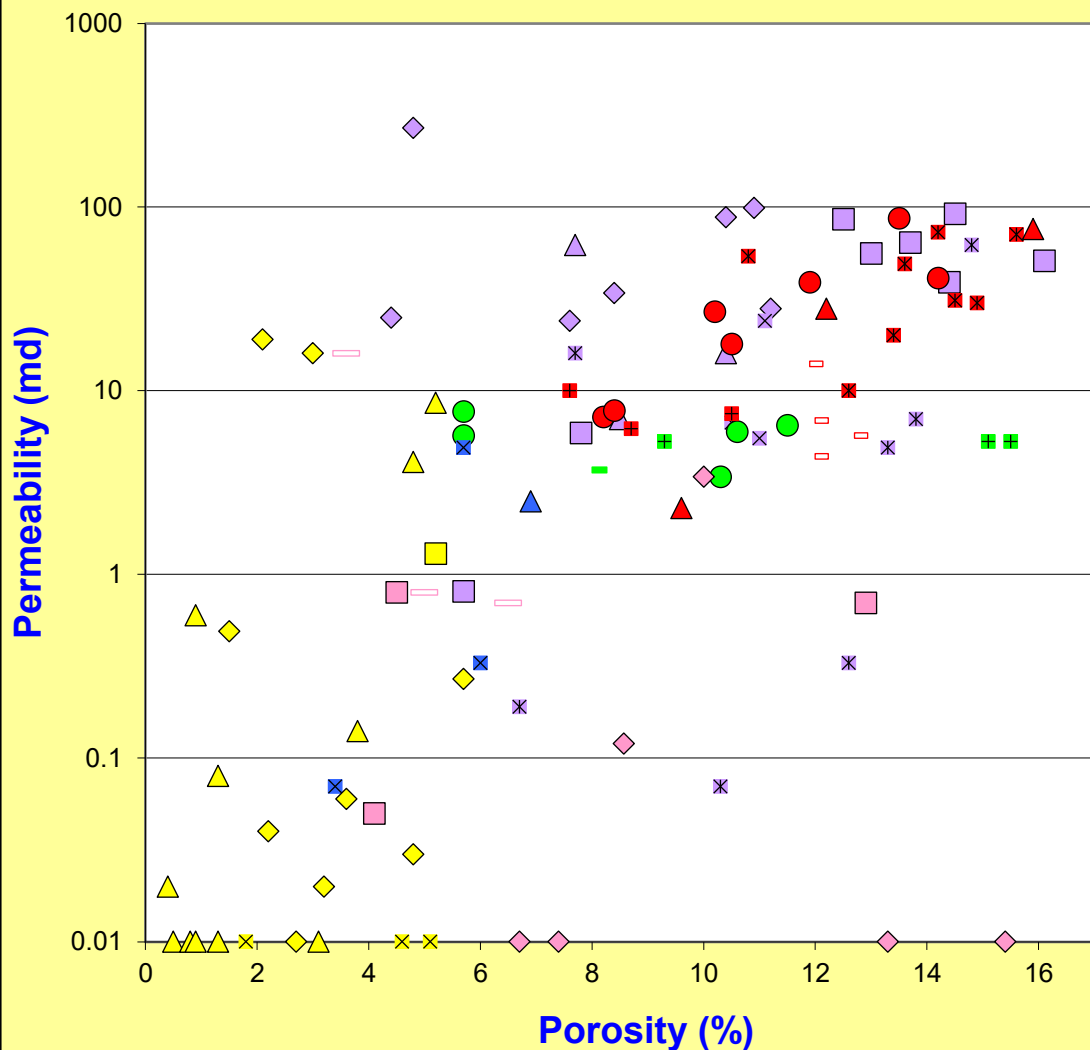


Figure G-24

Bug Field Permeability vs. Porosity: Pore Types



- ◇ Shelter/Vuggy (May-Bug 2)
- Shelter/Vuggy (Bug 4)
- △ Shelter/Vuggy (Bug 10)
- × Shelter/Vuggy (Bug 13)
- ✱ Shelter/Vuggy (Bug 16)
- Moldic, Effective (May-Bug 2)
- Moldic, Effective (Bug 13)
- Moldic, Effective (Bug 16)
- Moldic, Ineffective (Bug 10)
- ◇ Moldic, Ineffective (Bug 13)
- Moldic, Ineffective (Bug 16)
- △ Interparticle (Bug 4)
- ✱ Interparticle (Bug 10)
- Intercrystalline w/microboxwork dolomite (May-Bug 2)
- Intercrystalline w/microboxwork dolomite (Bug 4)
- Intercrystalline w/microboxwork dolomite (Bug 10)
- Intercrystalline w/microboxwork dolomite (Bug 13)
- △ Intercrystalline w/microboxwork dolomite (Bug 16)
- ◇ Intercrystalline w/out microboxwork dolomite (May-Bug 2)
- Intercrystalline w/out microboxwork dolomite (Bug 4)
- △ Intercrystalline w/out microboxwork dolomite (Bug 10)
- × Intercrystalline w/out microboxwork dolomite (Bug 13)"

n = 101

Figure G-48

Cherokee 22-14 Permeability vs. Porosity: Perforated Dolomite Interval

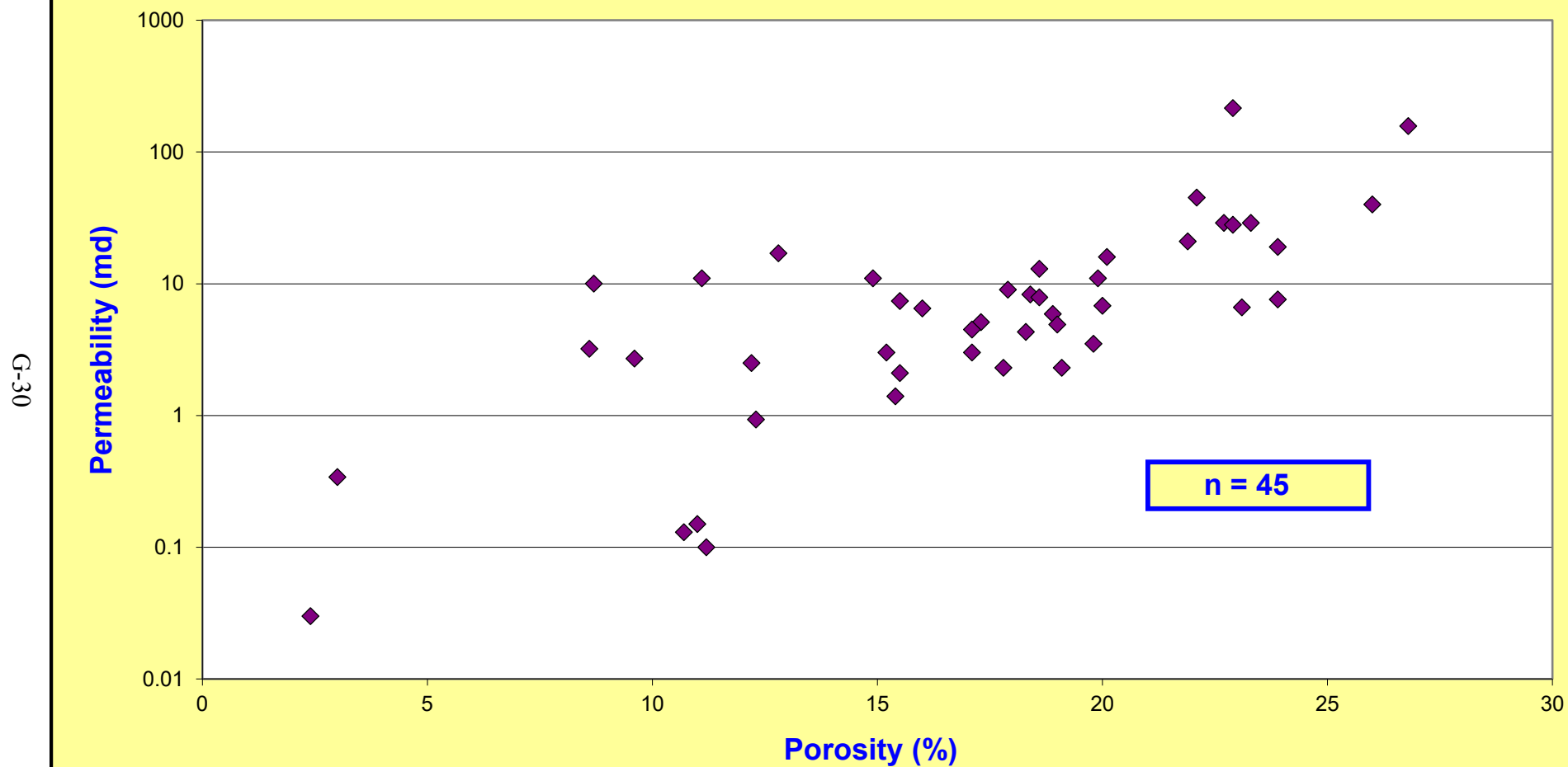


Figure G-25

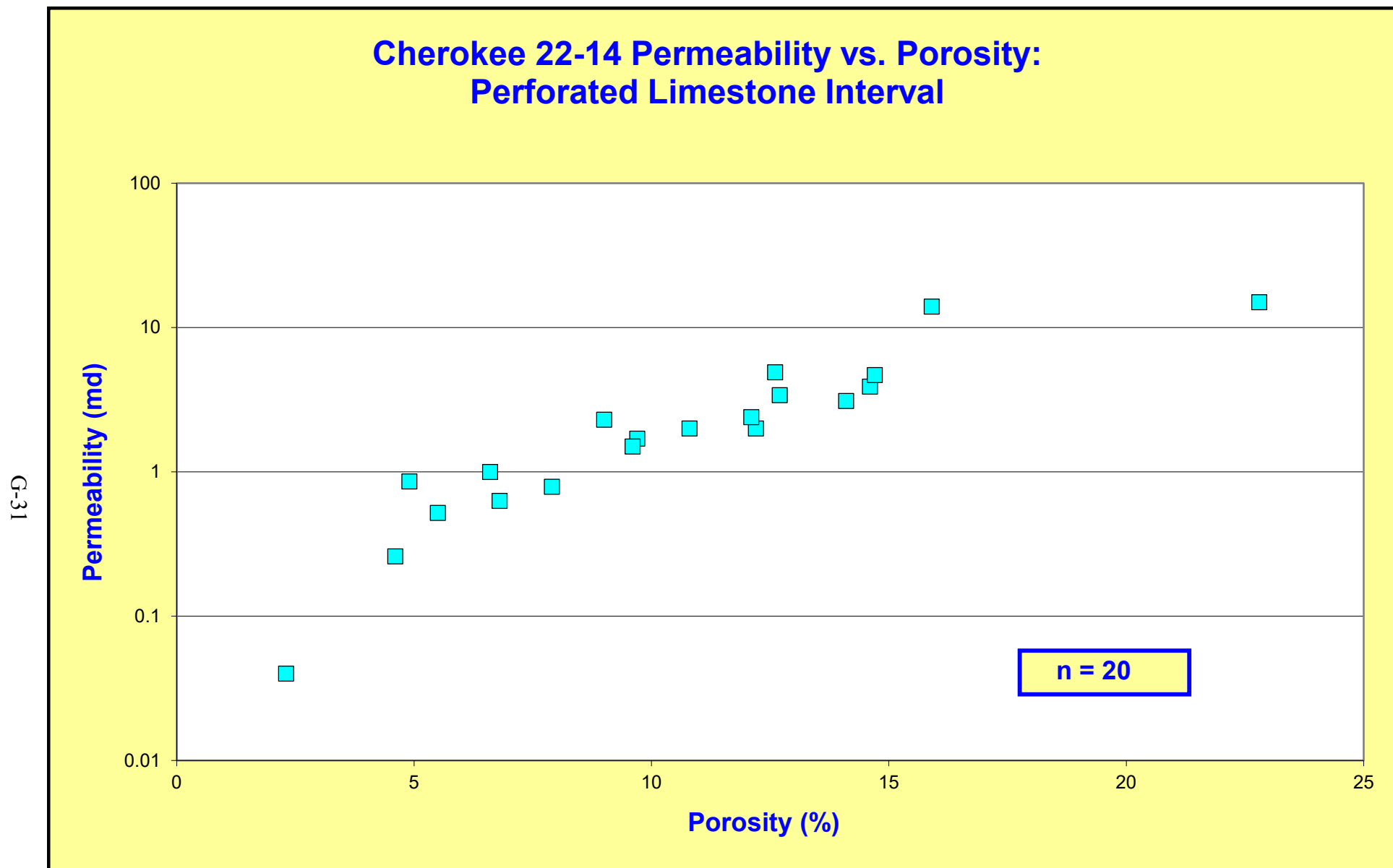


Figure G-26

G-32

Cherokee 33-14 Permeability vs. Porosity: Pay Interval

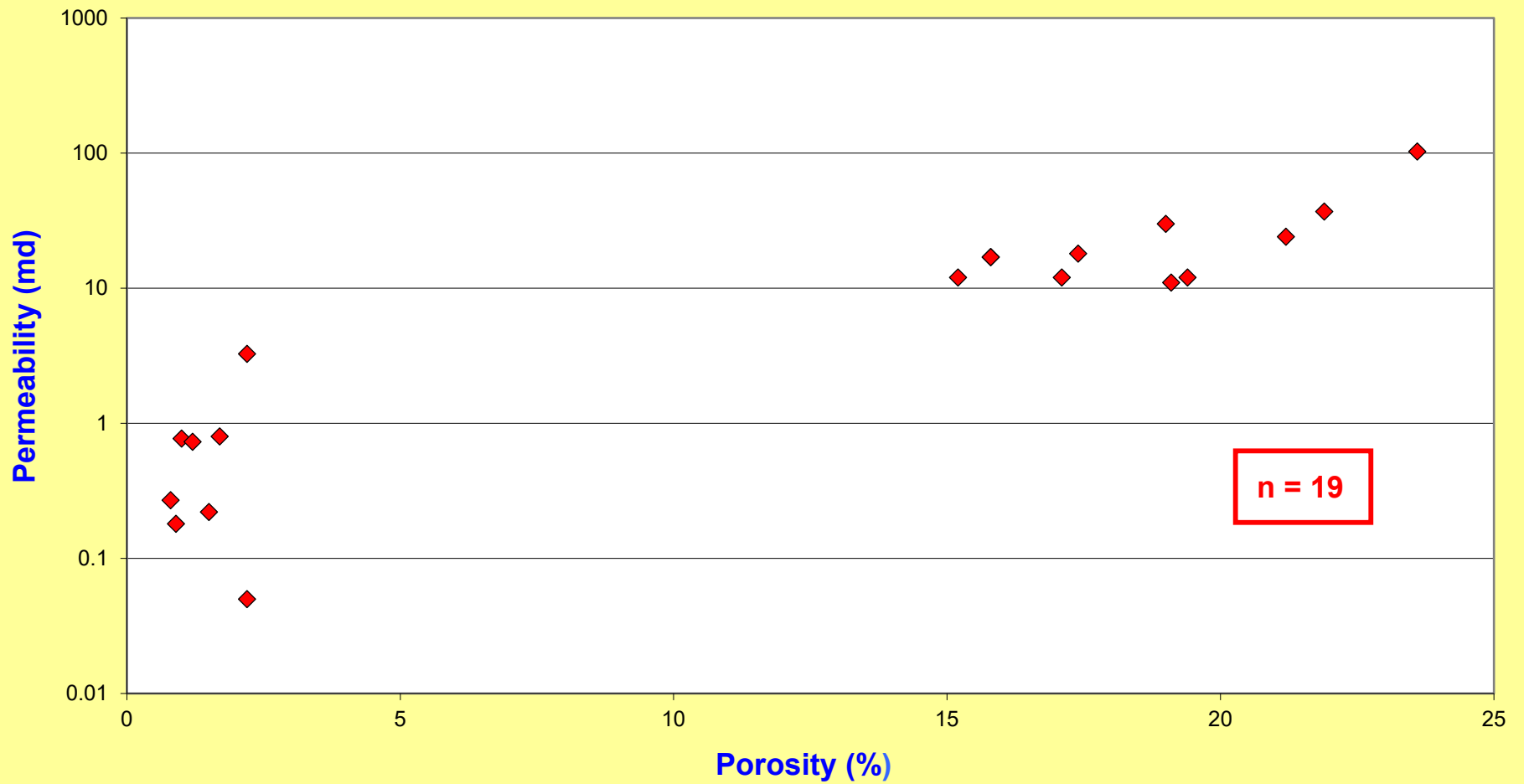


Figure G-27

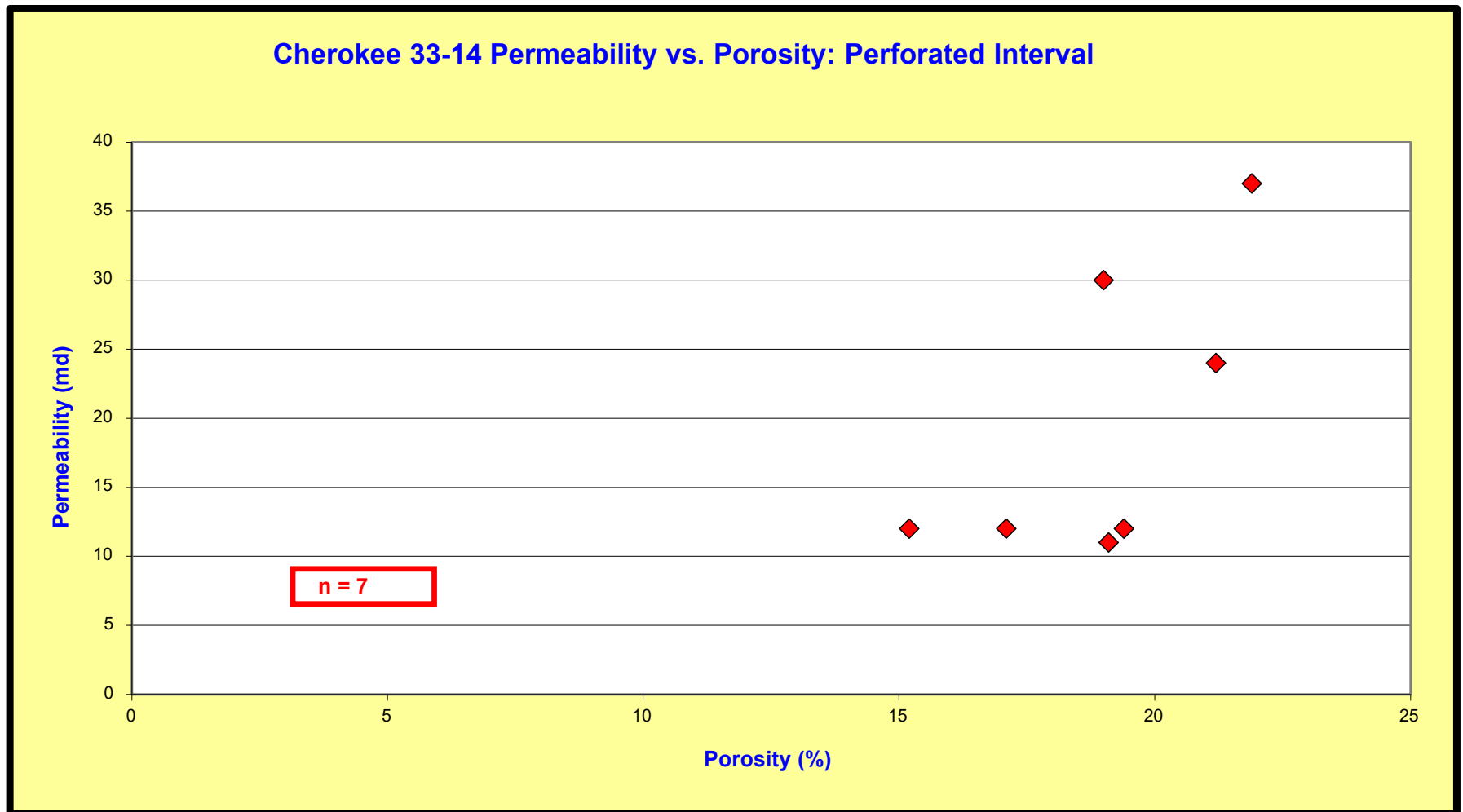


Figure G-28

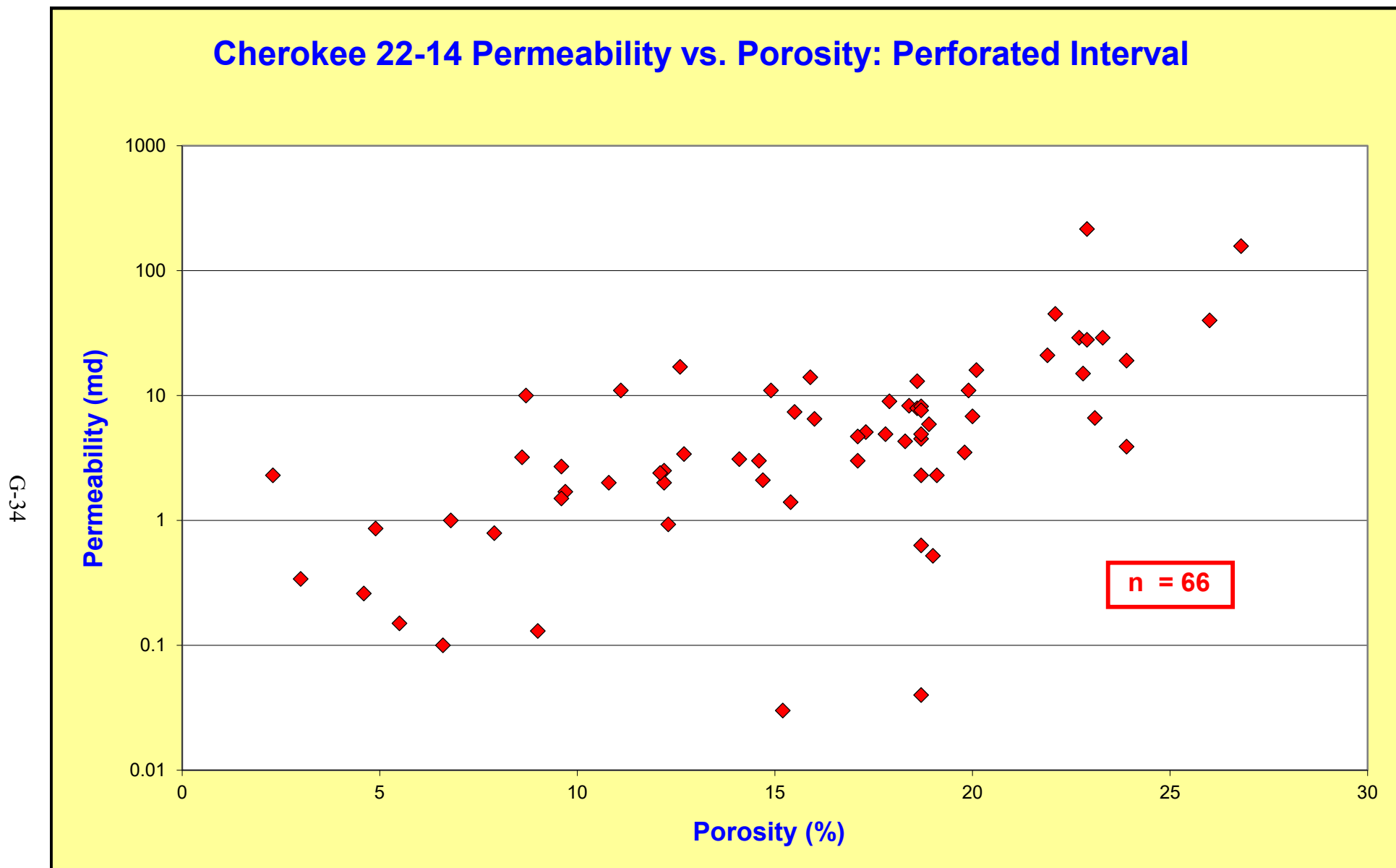


Figure G-29

Cherokee Field Permeability vs. Porosity: Dolomite & Limestone Perforated Intervals

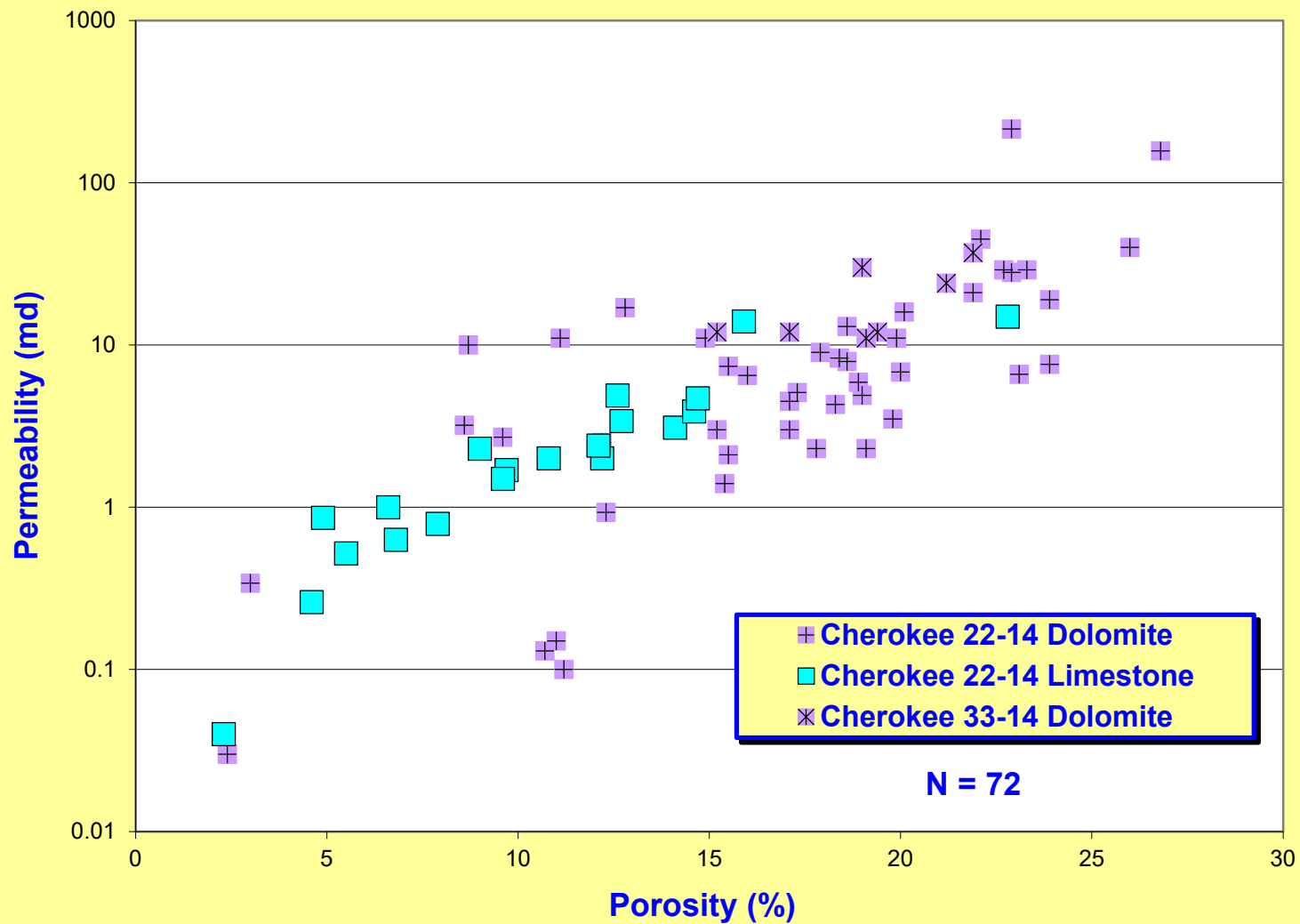


Figure G-30

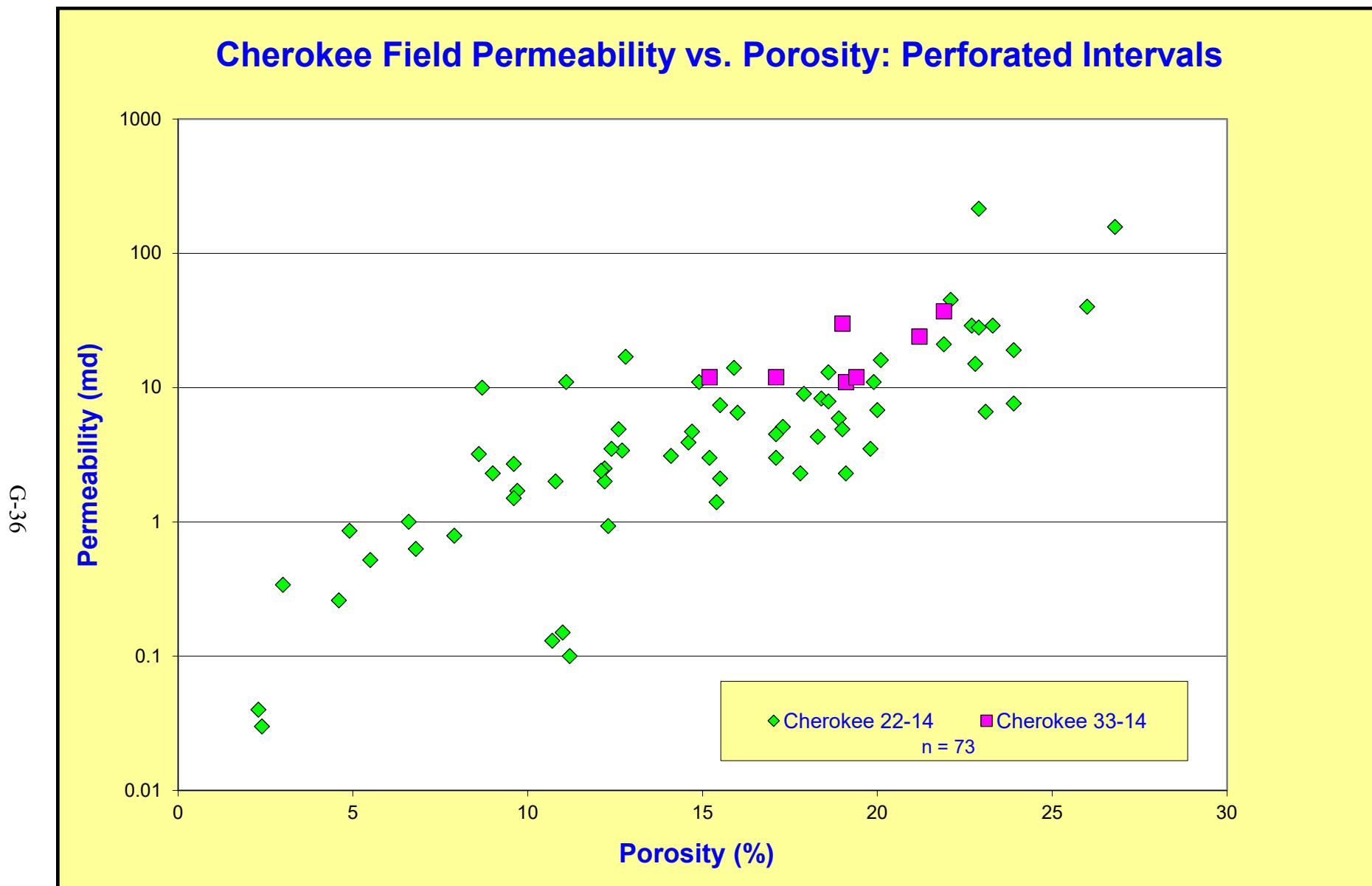


Figure G-31

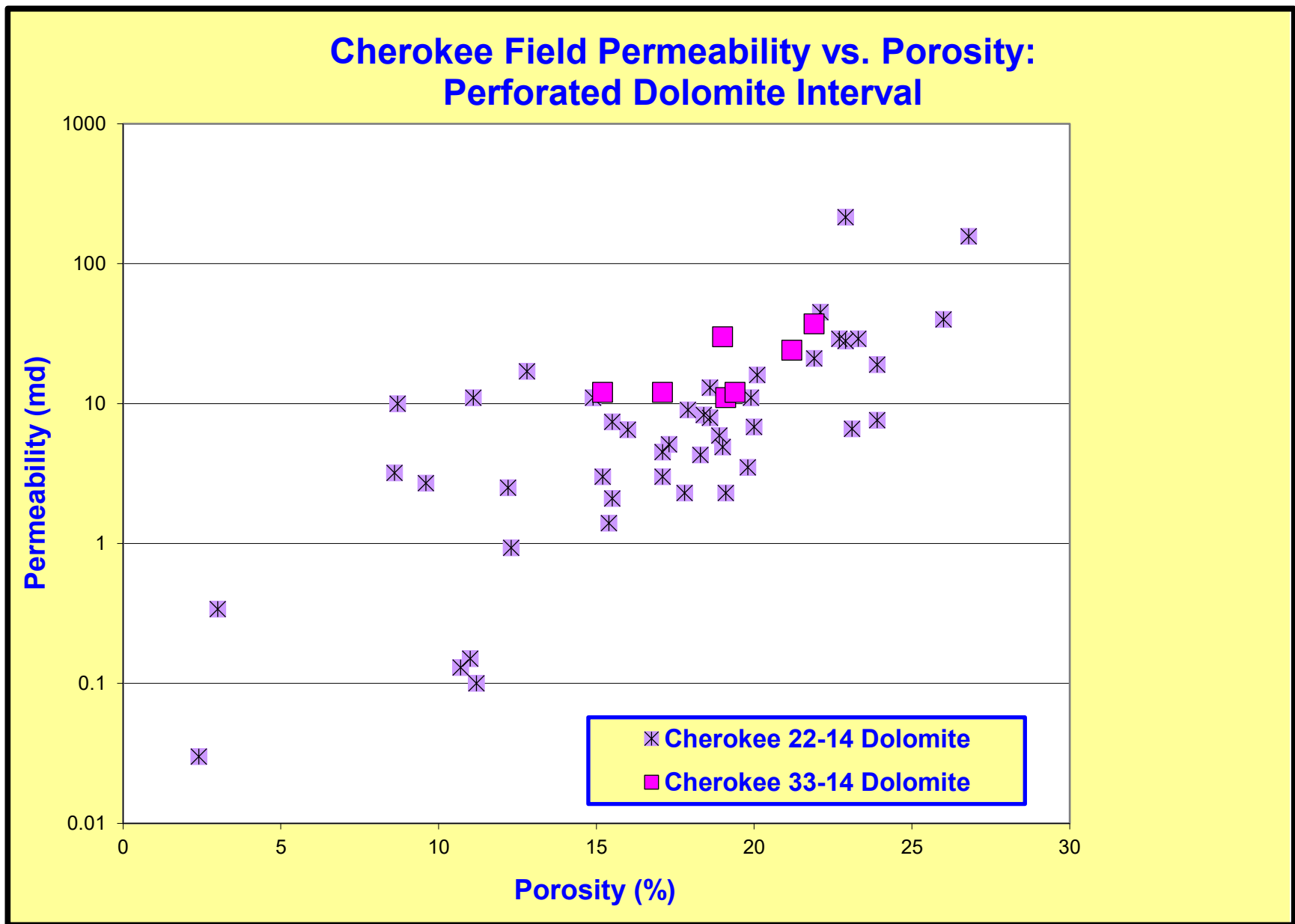


Figure G-32

Cherokee Field Permeability vs. Porosity: Six Percent Porosity Cutoff

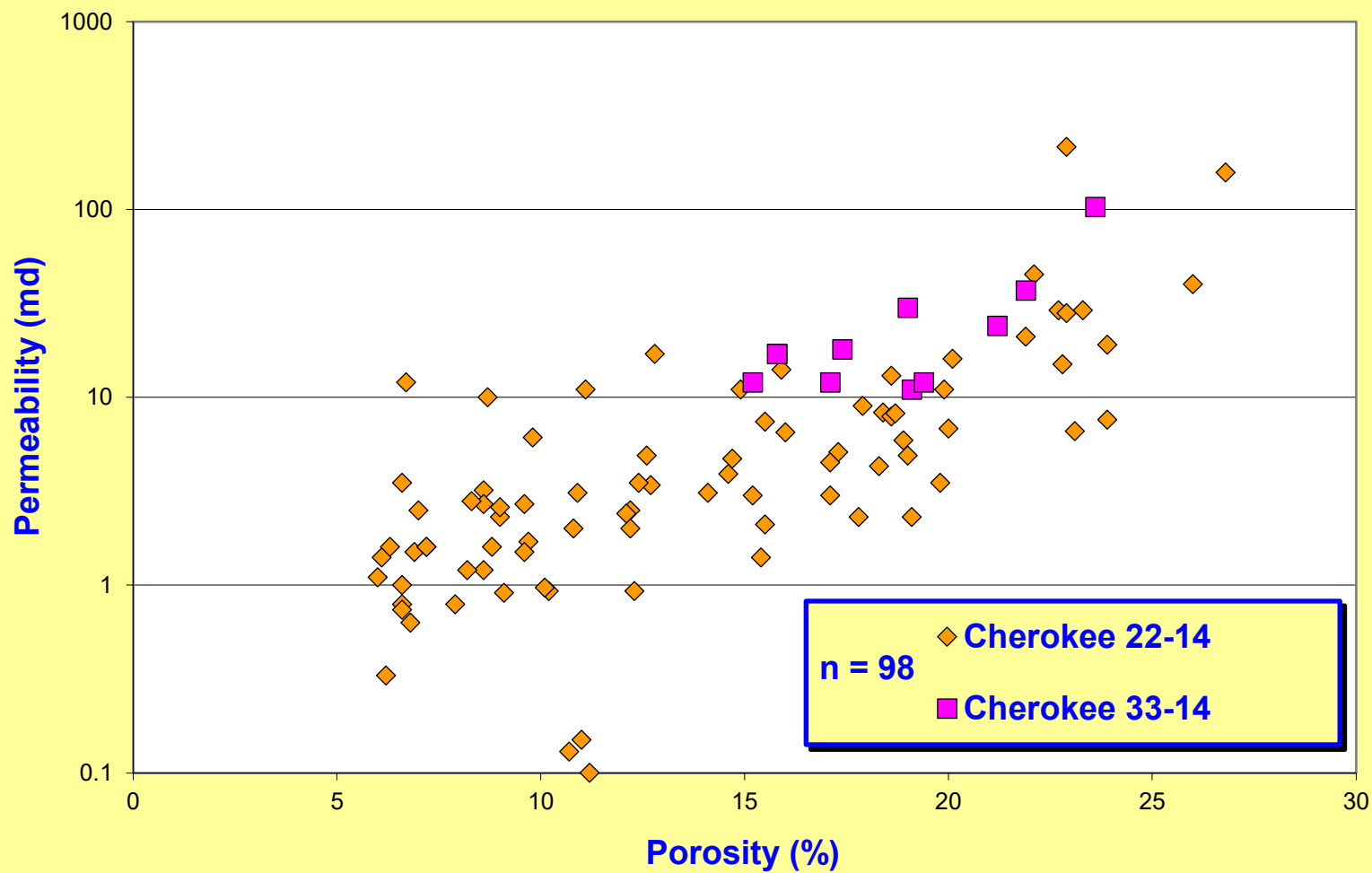


Figure G-33

Cherokee 22-14 Permeability vs. Porosity: Mound Facies

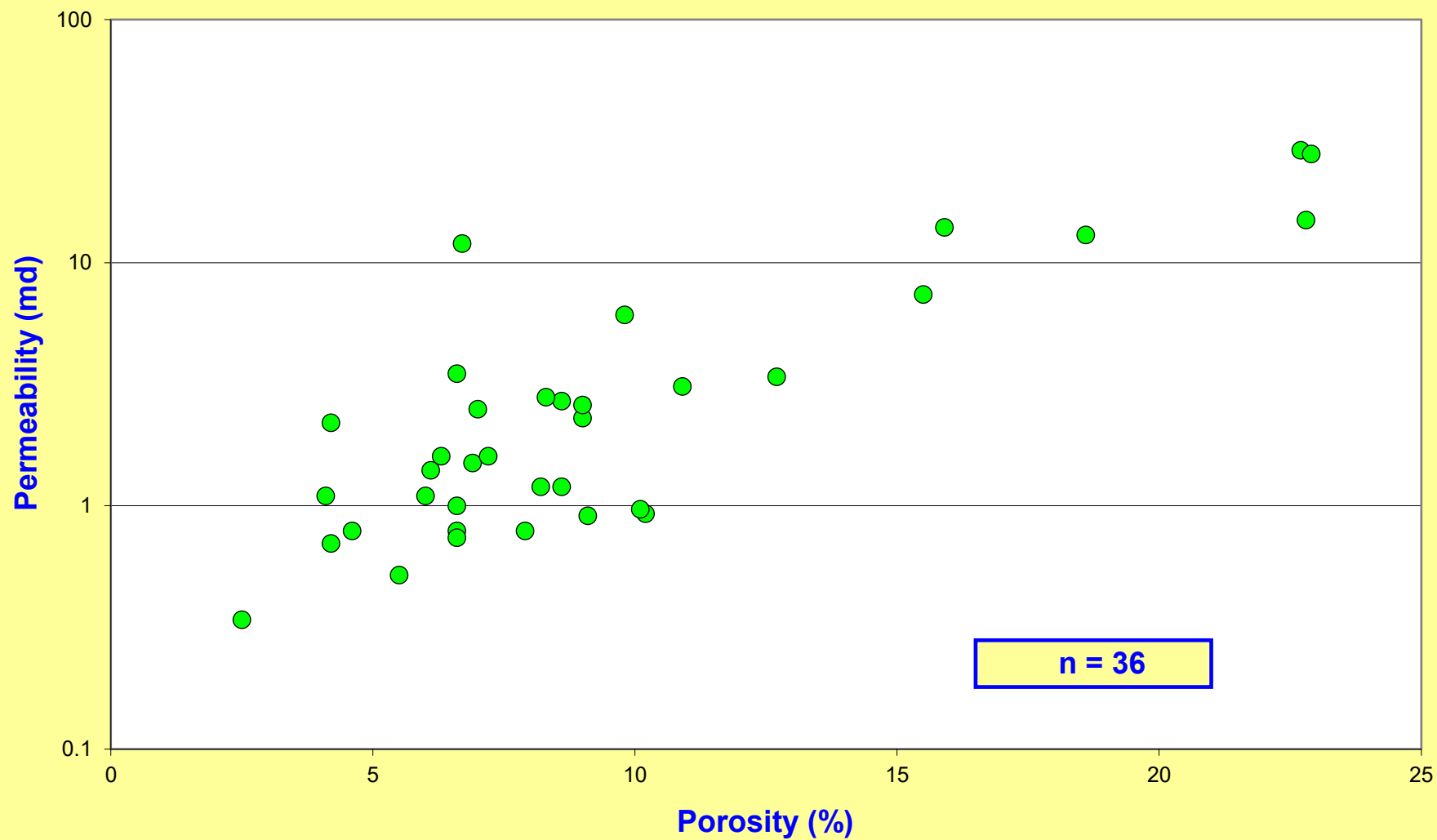


Figure G-34

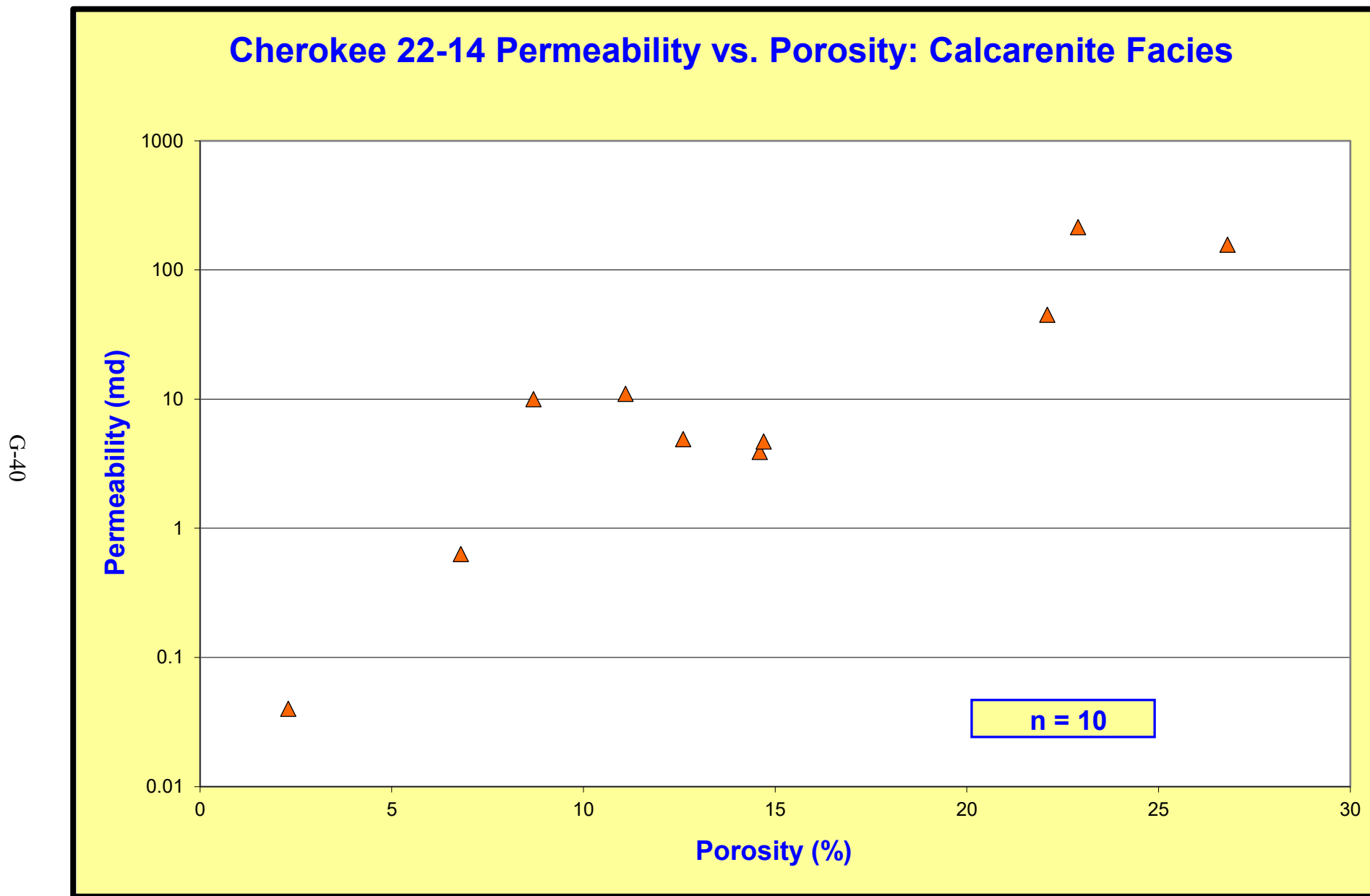


Figure G-35

Cherokee 22-14 Permeability vs. Porosity: Open Marine & Low Energy Middle/Inner Shelf Facies

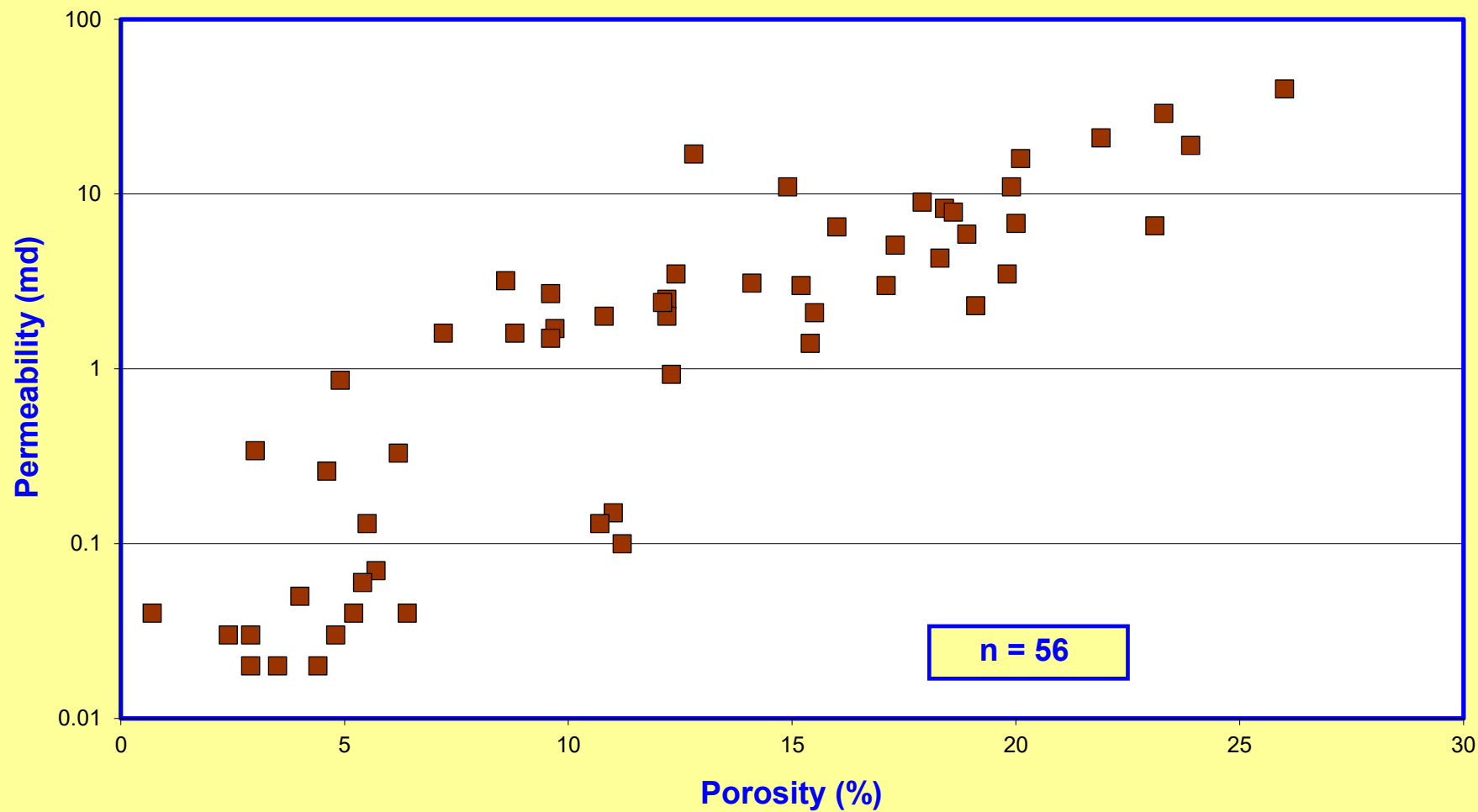


Figure G-36

G-42

Cherokee Field Permeability vs. Porosity: Mound Facies

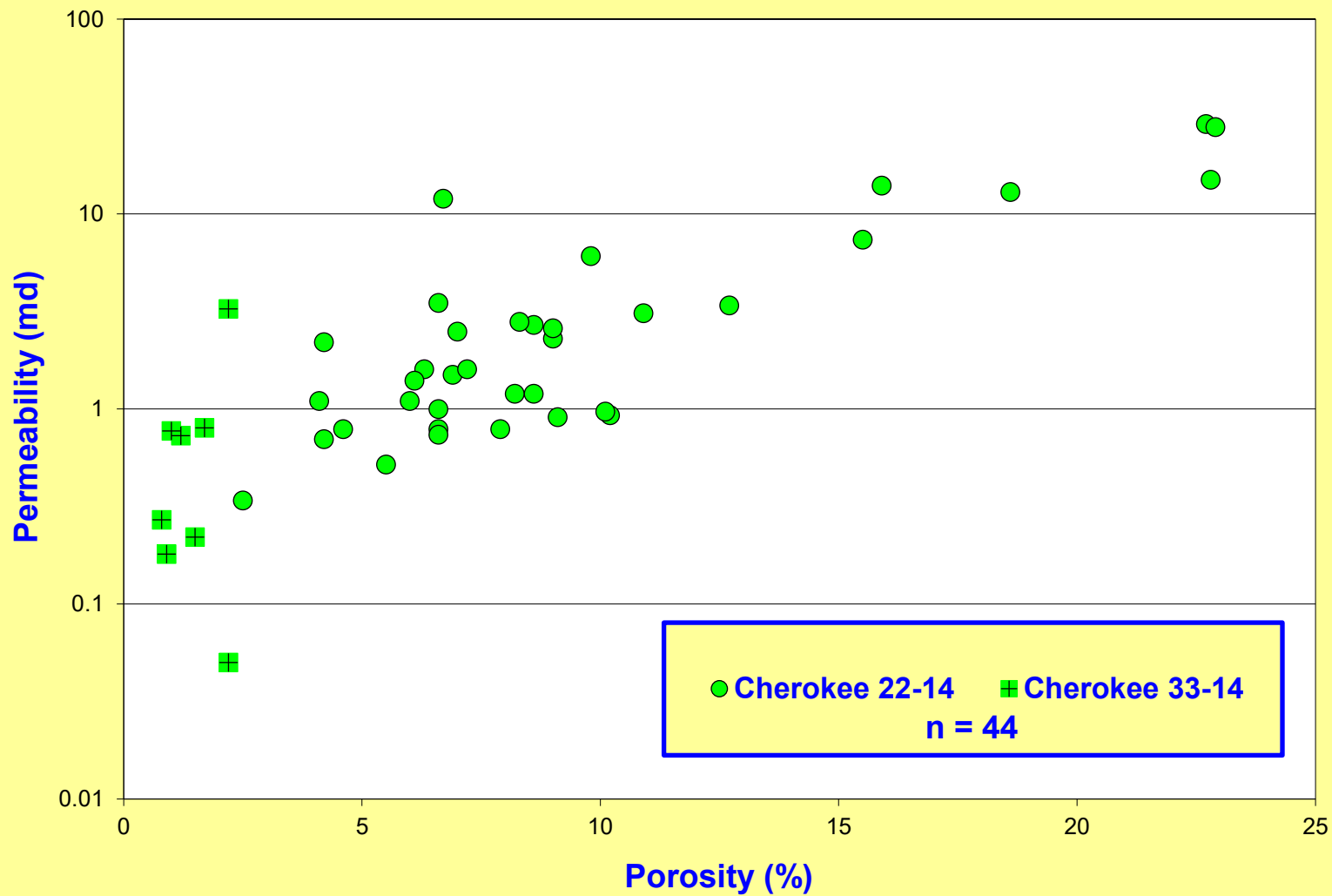


Figure G-37

Cherokee Field Permeability vs. Porosity: Calcareenite Facies

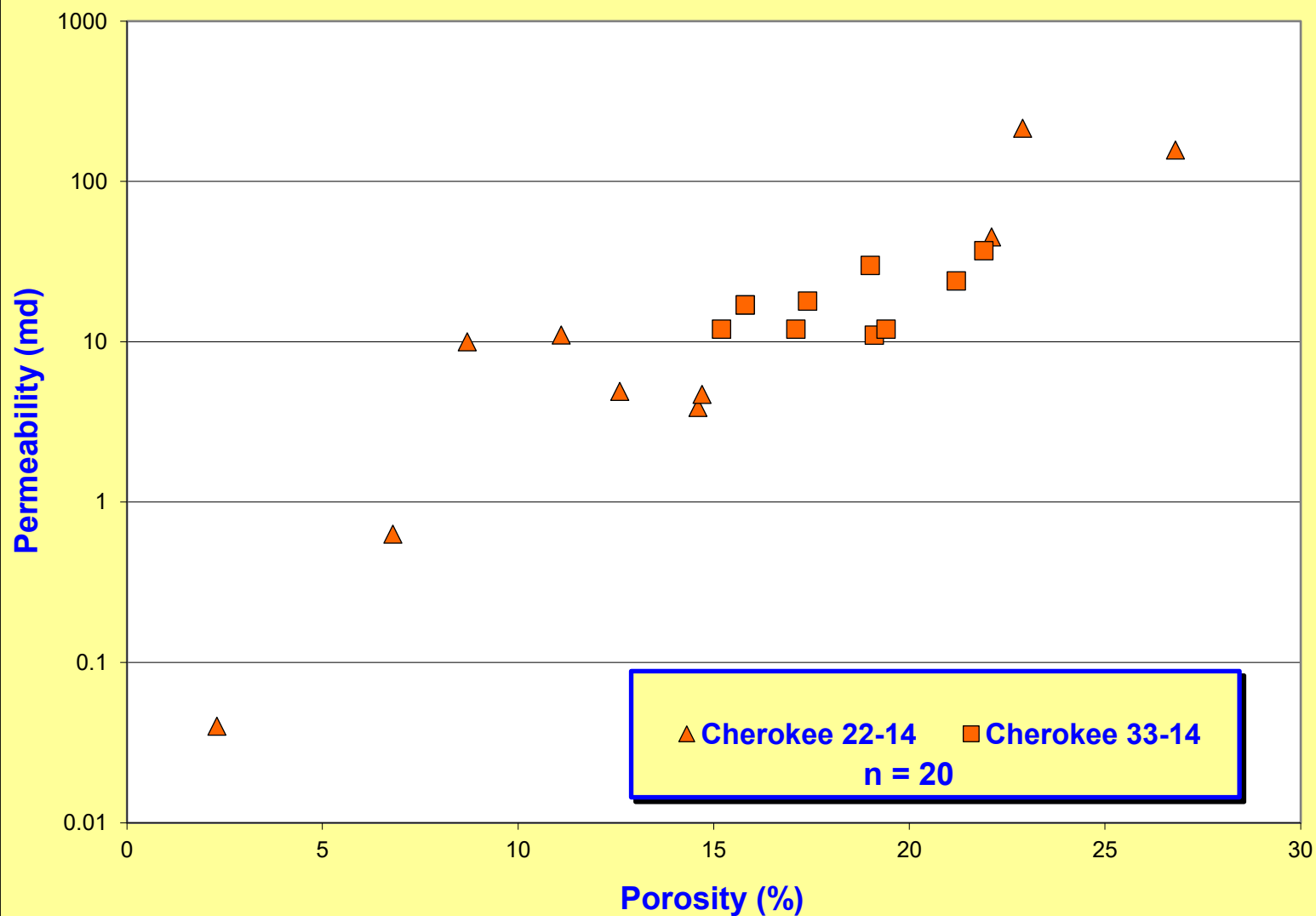


Figure G-38

Cherokee 22-14 Permeability vs. Porosity: Bafflestone Depositional Fabric

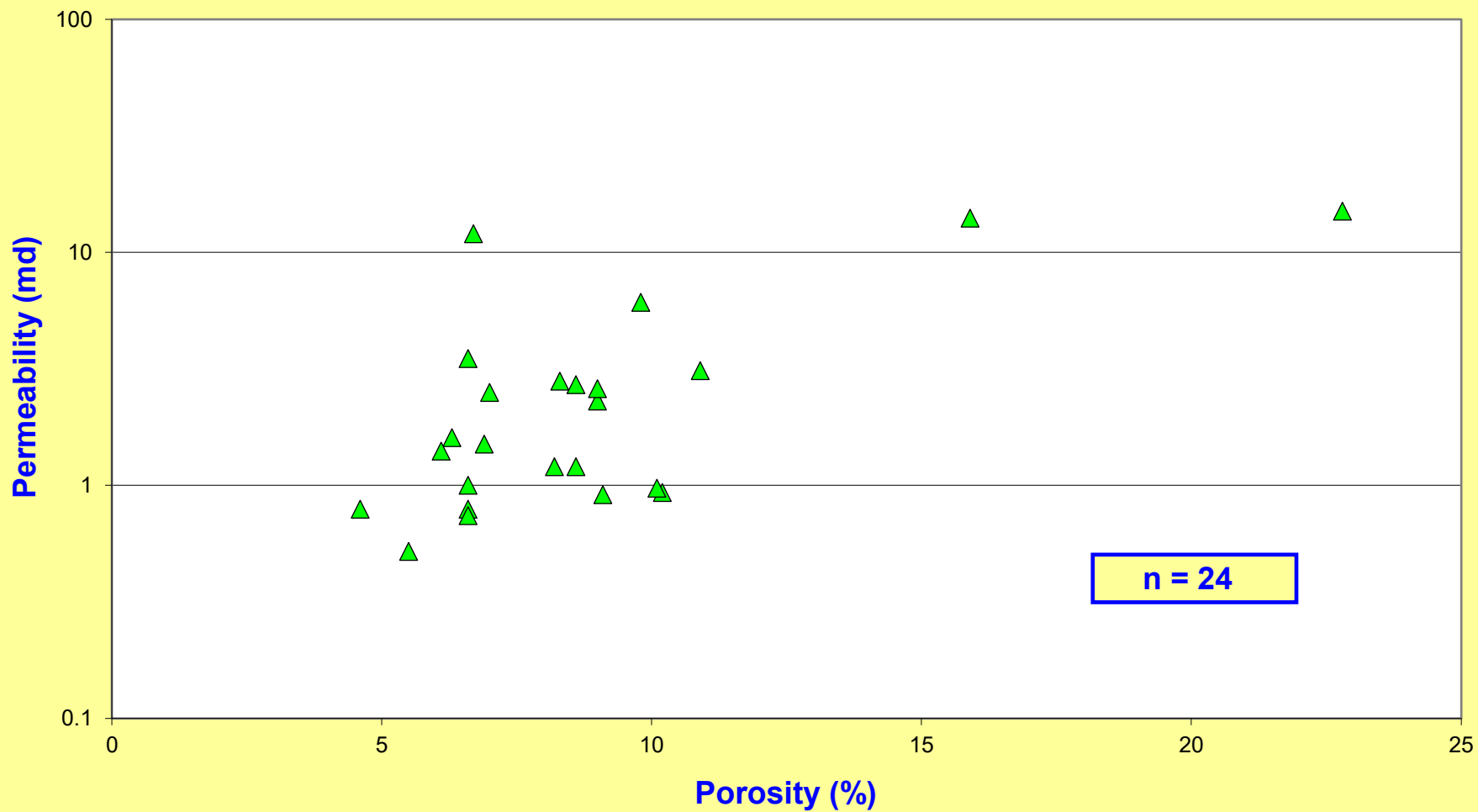


Figure G-40

Cherokee 22-14 Permeability vs. Porosity: Grainstone/Packstone Depositional Fabric

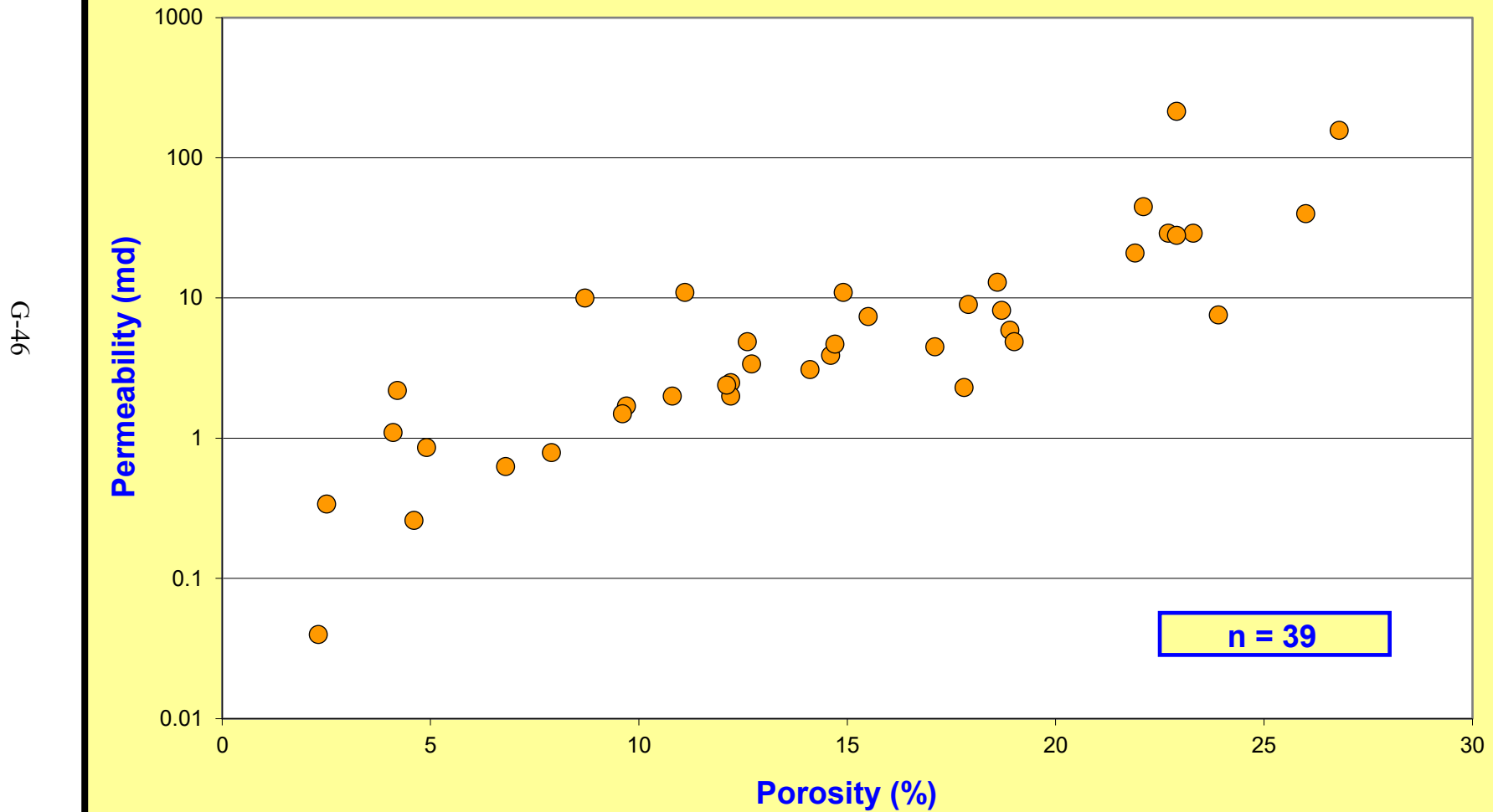


Figure G-41

G-47

Cherokee 22-14 Permeability vs. Porosity: Mudstone/Wackestone Depositional Fabric

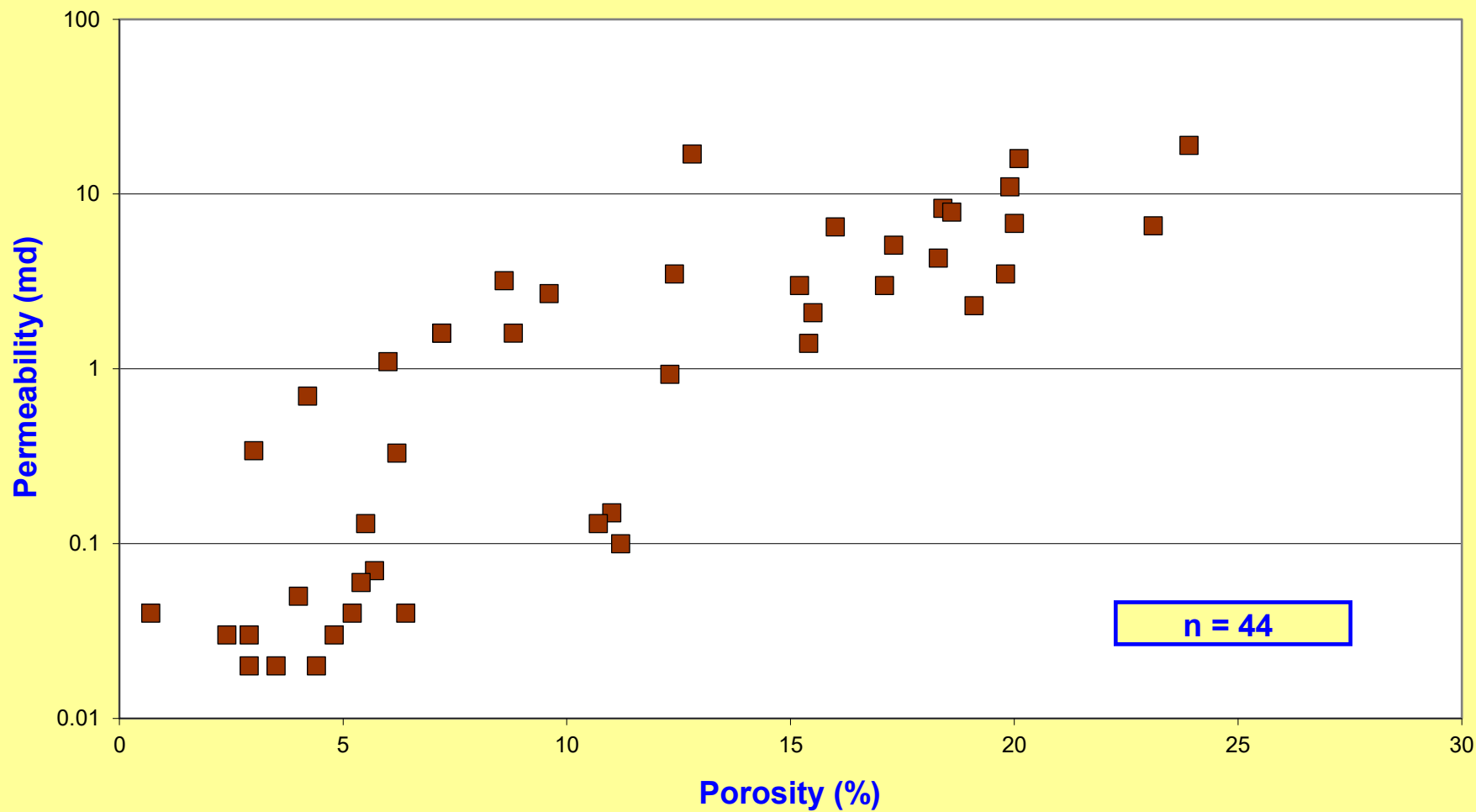


Figure G-42

Cherokee Field Permeability vs. Porosity: Bafflestone Depositional Fabric

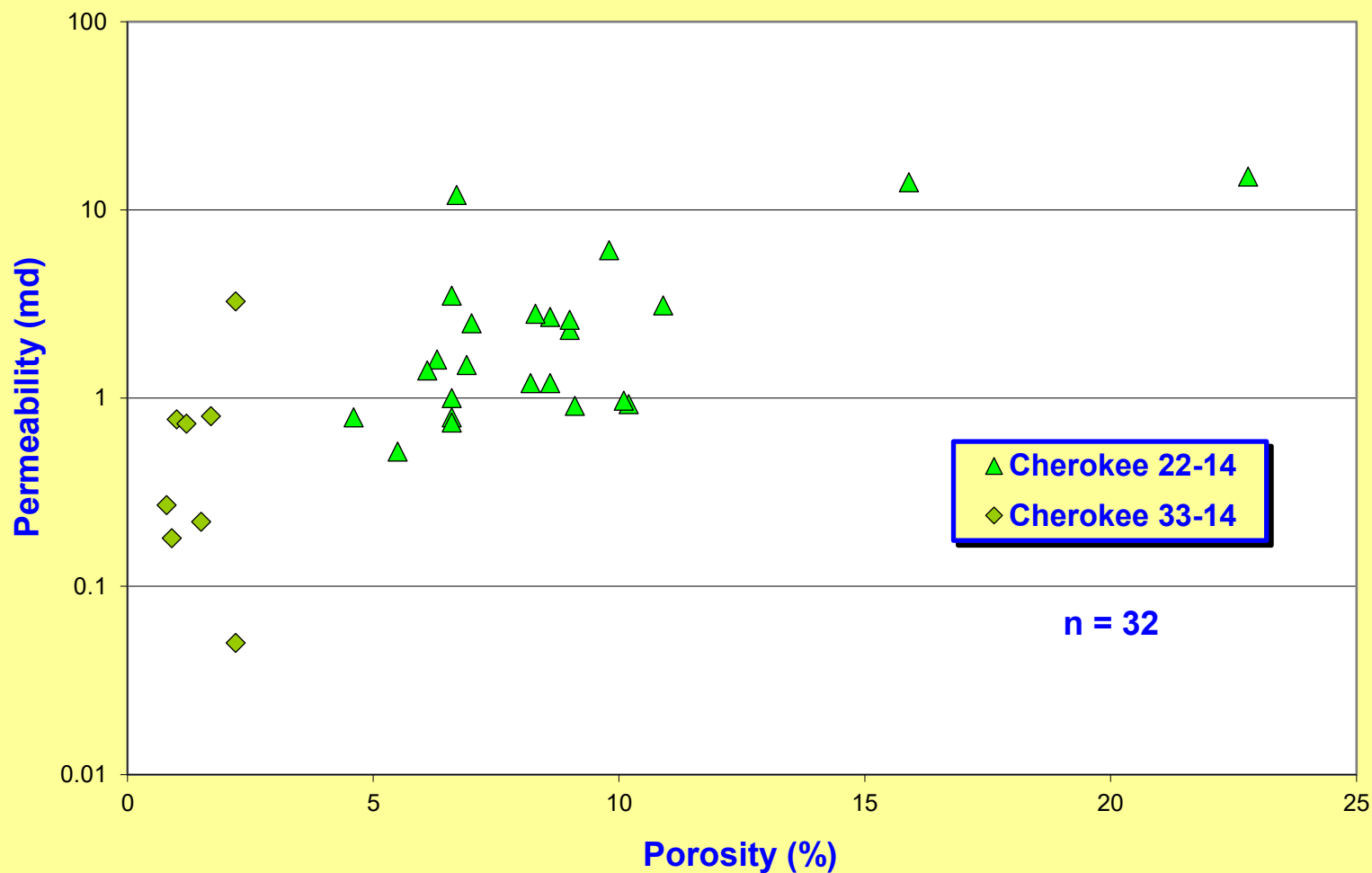


Figure G-43

Cherokee Field Permeability vs. Porosity: Grainstone/Packstone Depositional Fabric

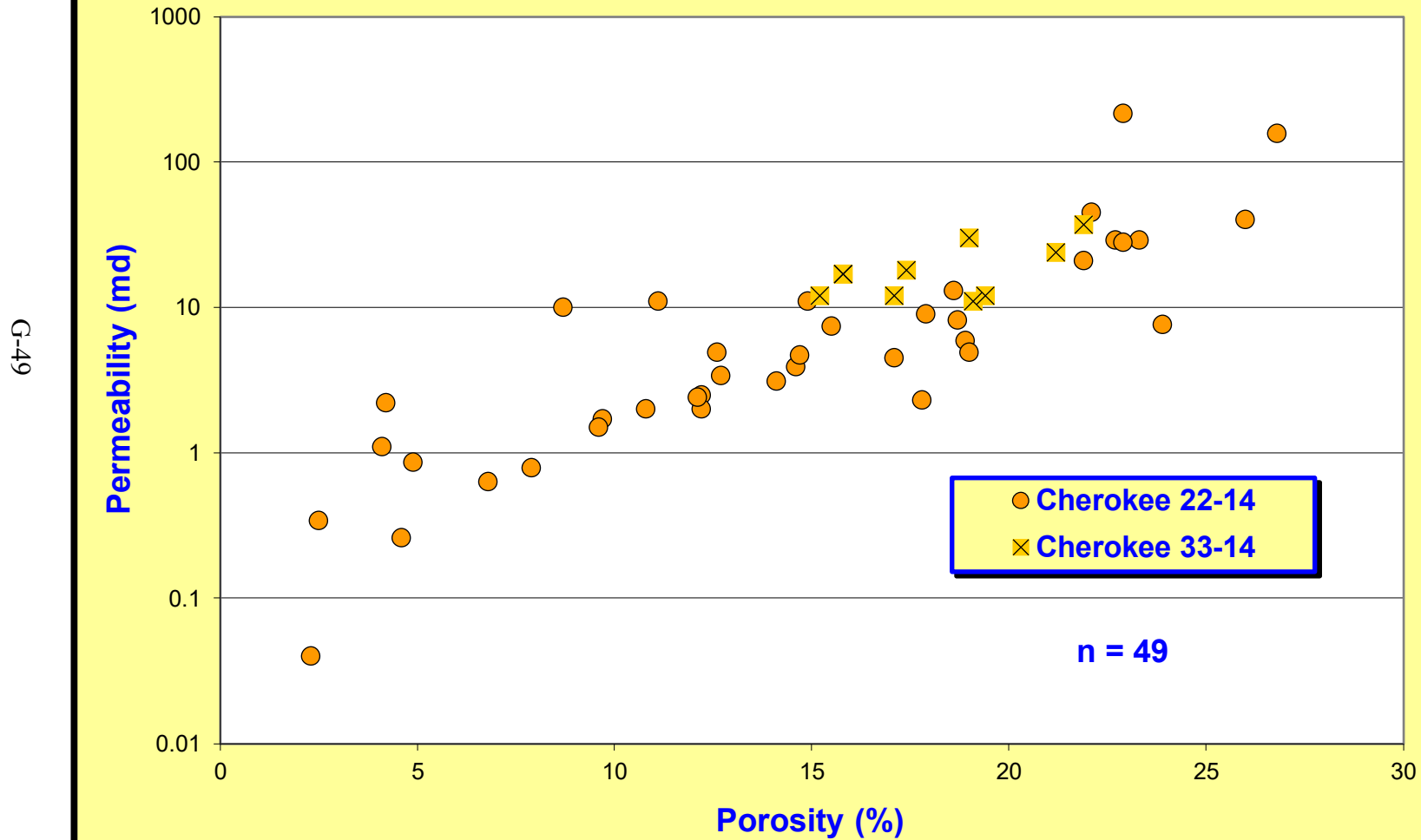


Figure G-44

Cherokee Field Permeability vs. Porosity: Mudstone/Wackestone Depositional Fabric

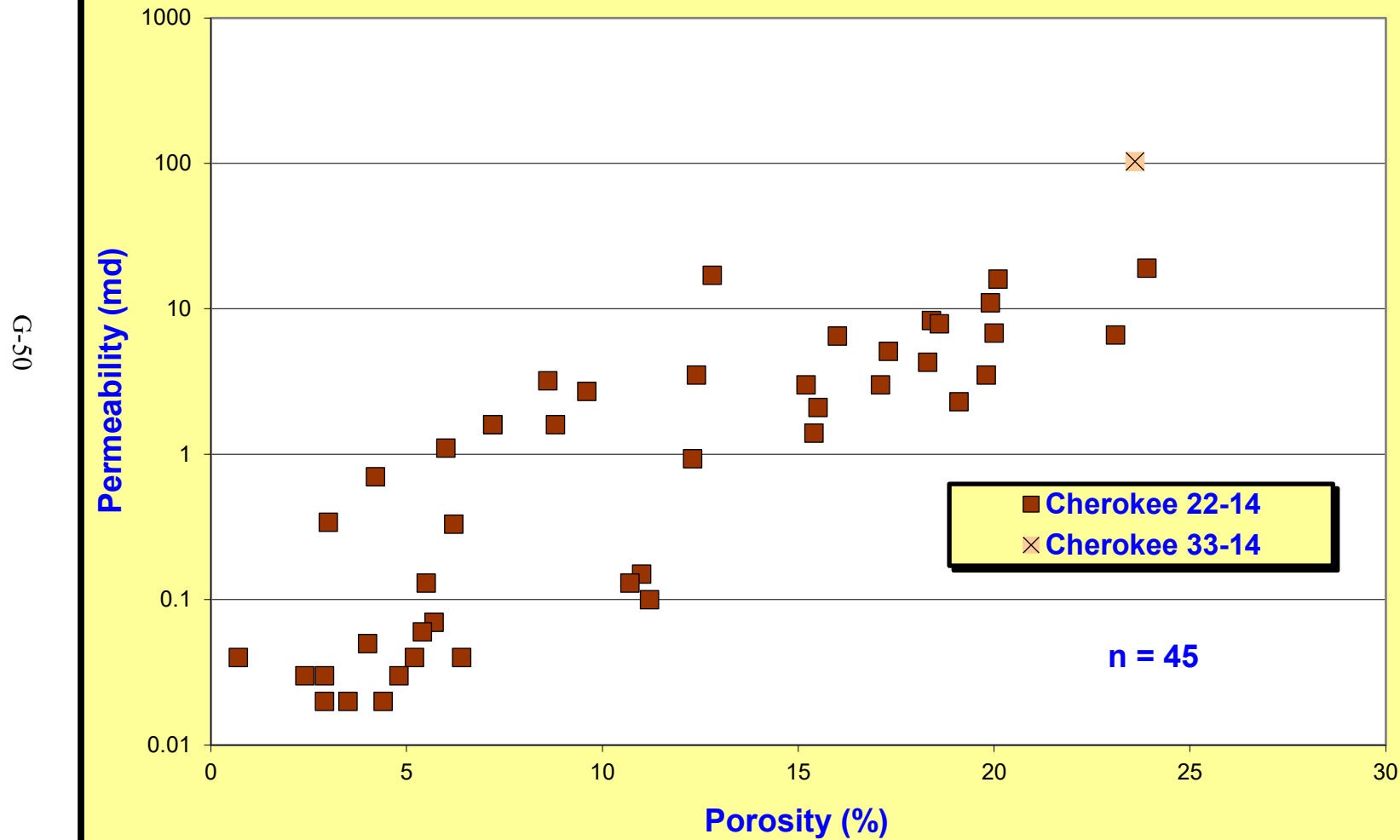


Figure G-45

Cherokee 22-14 Permeability vs. Porosity: Pore Types

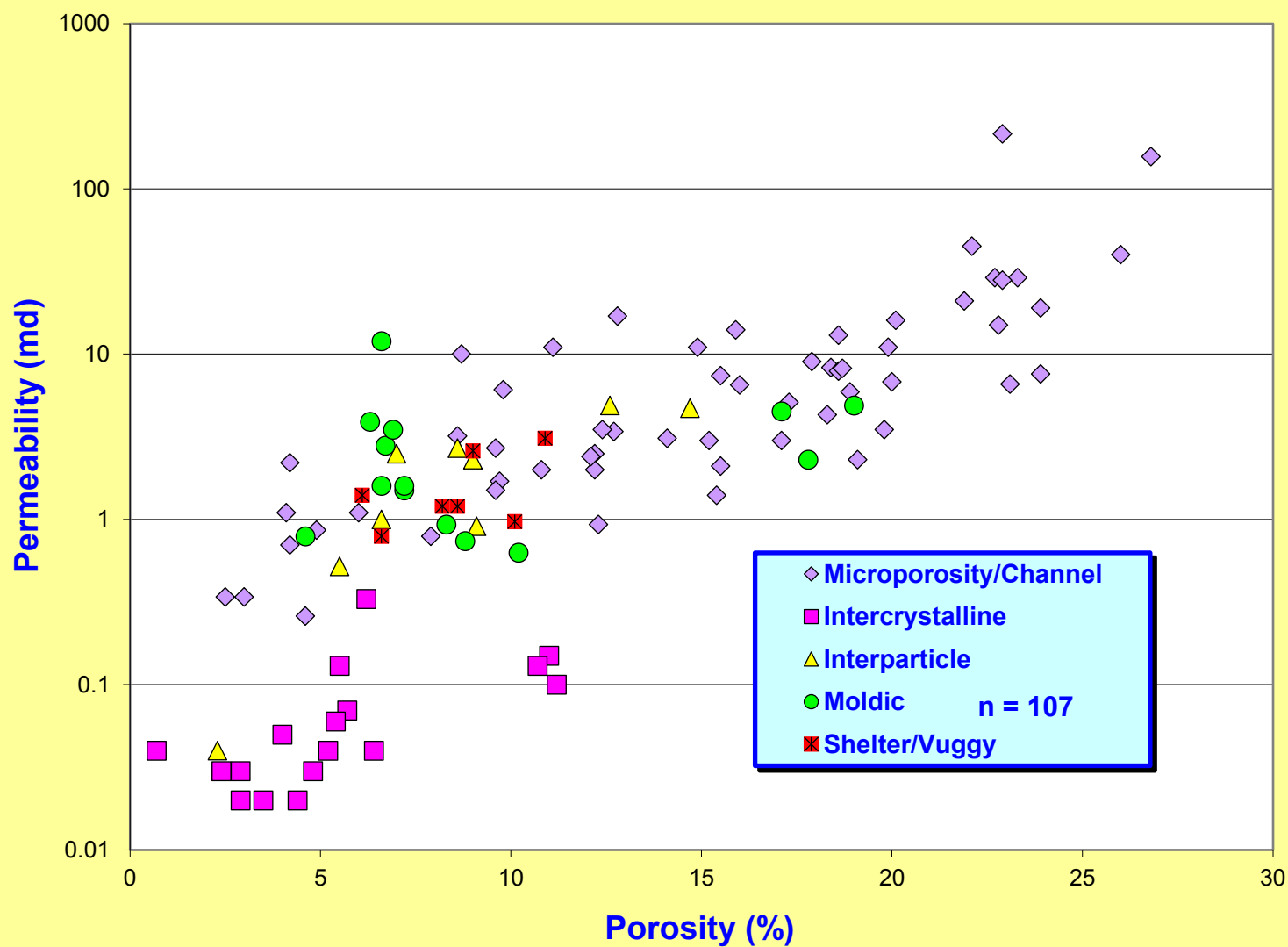


Figure G-46

Cherokee Field Permeability vs. Porosity: Pore Types

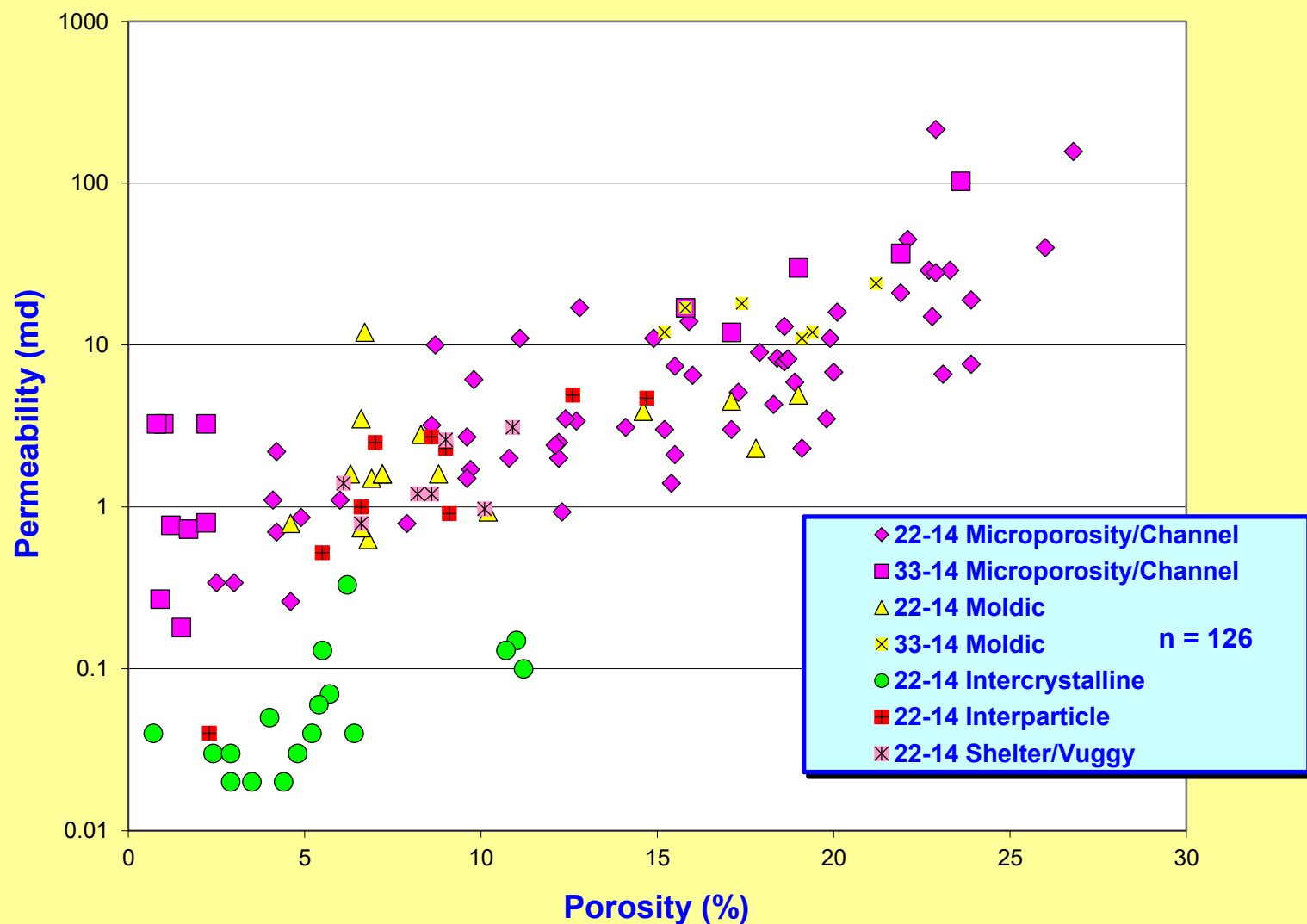


Figure G-47