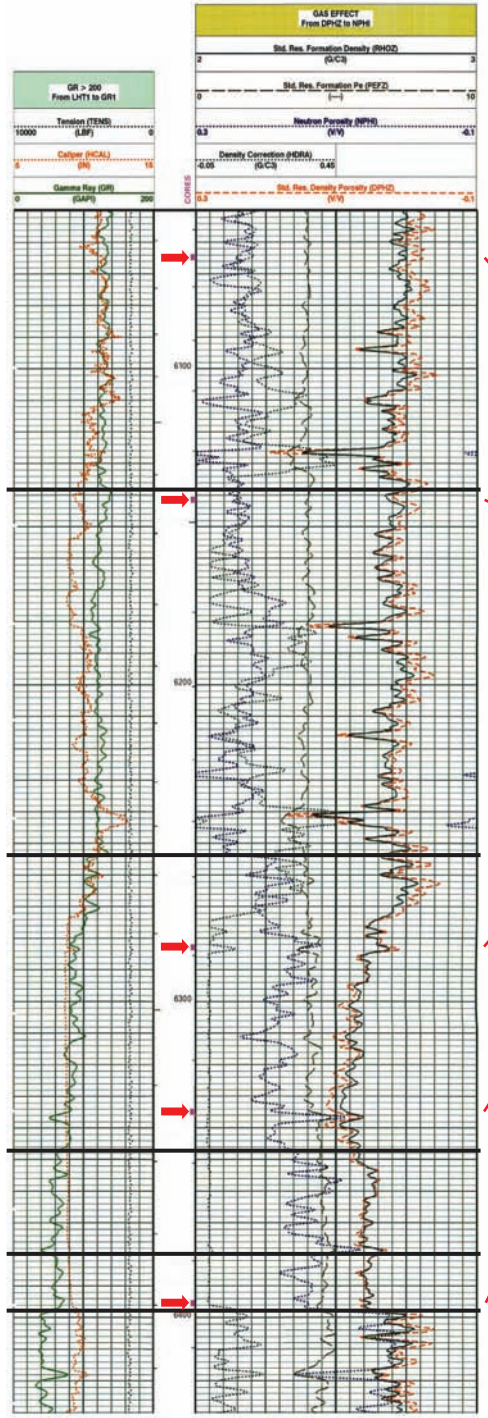
A Utica-Point Pleasant Type Log for Eastern Ohio

APINO 3415725334



Source Rock Analyses

Depth (ft)	Sample Type	TOC	Rock Unit
6064	core	0.48	Cincinnati gp
6141	core	2.72	Utica Sh
6282	core	2.41	Point Pleasant Fm
6336	core	3.73	Point Pleasant Fm
6396	core	1.61	Logana Mbr
7192	core	0.11	Wells Creek Fm
7579	core	0.14	Copper Ridge dol
8274	core	0.23	Conasauga gp

Recommended citation for page 1: Riley, R.A., 2010, A Utica-Point Pleasant type log for eastern Ohio: Ohio Department of Natural Resources, Division of Geological Survey, one sheet (PDF), available at <http://www.dnr.state.oh.us/Portals/10/Energy/Utica/TuscarawasWellRockAnalyses.pdf>.

TOC and ROCK-EVAL DATA REPORT

Ohio Division of Geological Survey, Tuscarawas, OH

Omni File #: HH-38266

HGS No.	Well Name	Top Depth (ft)	Bottom Depth (ft)	Median Depth (ft)	Sample Type	Leco TOC	**	S1	S2	S3	Tmax (°C)		Calc. %Ro	Meas. %Ro	HI	OI	S2/S3	S1/TOC	PI	Notes Checks	Notes Pyrogram
07-5156-220088	CO2 No. 1	6064		6064	core	0.48		0.23	0.51	0.18	442		0.80		106	38	3	48	0.31	c, lc	n
07-5156-220089	CO2 No. 1	6141		6141	core	2.72		3.22	4.42	0.35	442		0.80		163	13	13	118	0.42	lc	n
07-5156-220090	CO2 No. 1	6282		6282	core	2.41		3.73	3.09	0.52	447		0.89		128	22	6	155	0.55	lc	n
07-5156-220091	CO2 No. 1	6336		6336	core	3.73		5.35	5.63	0.43	451		0.96		151	12	13	143	0.49	lc	n
07-5156-220092	CO2 No. 1	6396		6396	core	1.61		2.04	1.54	0.31	443		0.81		96	19	5	127	0.57	lc	n;ltS2sh
07-5156-220093	CO2 No. 1	7192		7192	core	0.11		0.05	0.09	0.12	460	*	1.12		82	109	1	45	0.36	lc	f
07-5156-220094	CO2 No. 1	7579		7579	core	0.14		0.04	0.12	0.20	505	*	1.93		86	143	1	29	0.25	lc	f
07-5156-220095	CO2 No. 1	8274		8274	core	0.23		0.02	0.08	0.12	450	*	0.94		35	52	1	9	0.20	c, lc	f

Note: "-1" indicates not measured or meaningless ratio

* Tmax data not reliable due to poor S2 peak

TOC = weight percent organic carbon in rock
S1, S2 = mg hydrocarbons per gram of rock
S3 = mg carbon dioxide per gram of rock
Tmax = °C

HI = hydrogen index = S2 x 100 / TOC
OI = oxygen index = S3 x 100 / TOC
S1/TOC = normalized oil content = S1 x 100 / TOC
PI = production index = S1 / (S1+S2)
Calculcated%VRo = 0.0180 x Tmax - 7.16 (Jarvie et al., 2001)
Measured %Ro = measured vitrinite reflectance

Notes:
c = Rock-Eval analysis checked and confirmed
lc = Leco TOC analysis checked and confirmed

Pyrogram:
n=normal
ltS2sh = low temperature S2 shoulder
ltS2p = low temperature S2 peak
htS2p = high temperature S2 peak
f = flat S2 peak
na = printer malfunction pyrogram not available

Recommended citation for pages 2-12: Wickstrom, L.H., Riley, R.A., Spane, F.A., McDonald, James, Slucher, E.R., Baranoski, M.T., Zody, S.P., Wells, J.G., and Howat, Erica, 2011, Geologic assessment of the Ohio Geological Survey CO2 No. 1 Well in Tuscarawas County and surrounding vicinity: Ohio Department of Natural Resources, Division of Geological Survey report prepared for the Ohio Air Quality Development Authority grant/agreement number CDO/D-05-13 and the U.S. Department of Energy Cooperative Agreement DE-FC26-05NT42589, Appendix H, p. 483–493.

Geochemical Log

Ohio Division of Geological Survey, Tuscarawas, OH

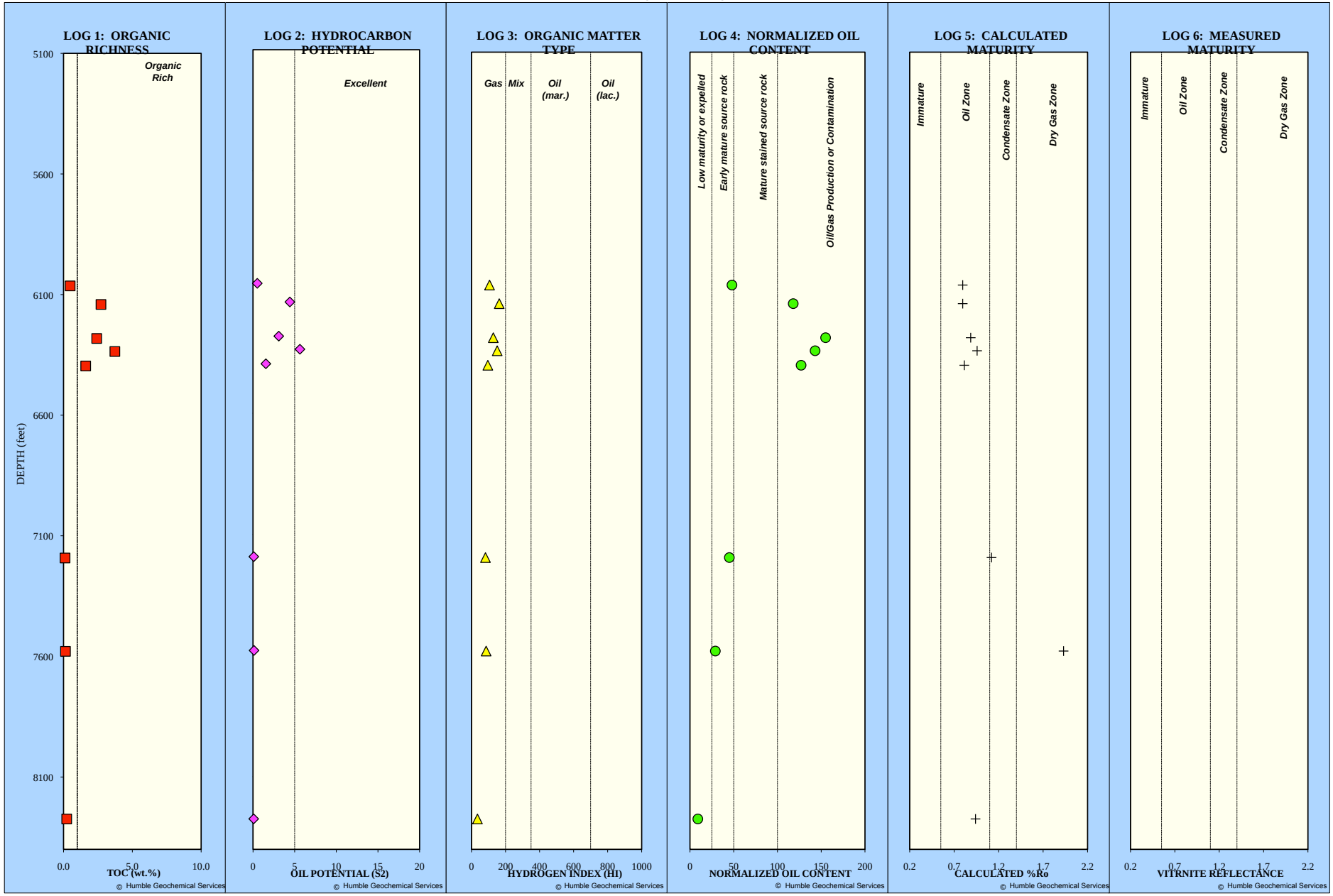


Figure 1. Geochemical log of TOC, remaining potential (S2), kerogen type (HI), normalized oil content, and calculated and measured vitrinite reflectance.

Humble Geochemical Services Division

KEROGEN QUALITY

Ohio Division of Geological Survey, Tuscarawas, OH

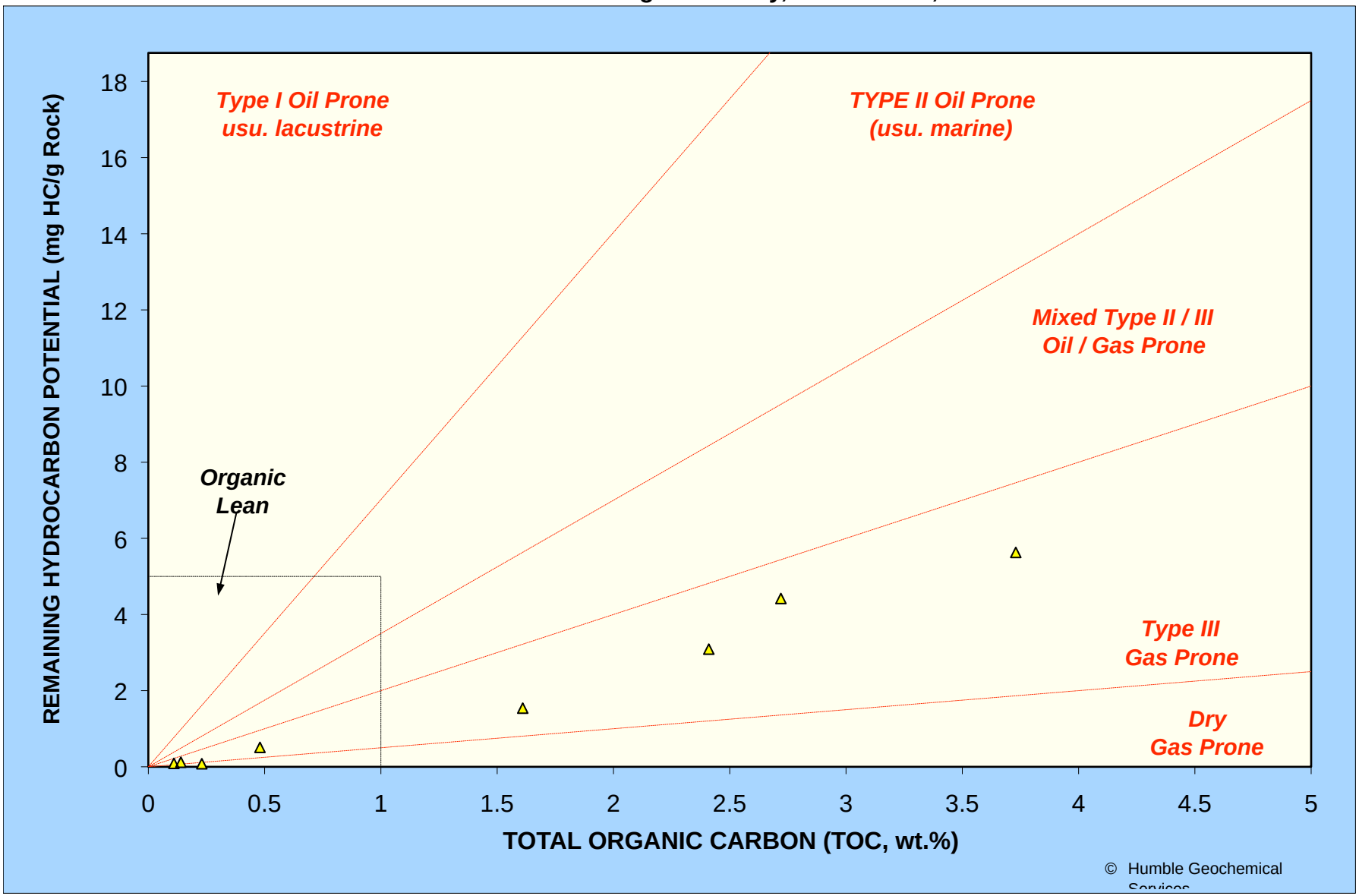


Figure 2. Kerogen Quality

KEROGEN QUALITY

Ohio Division of Geological Survey, Tuscarawas, OH

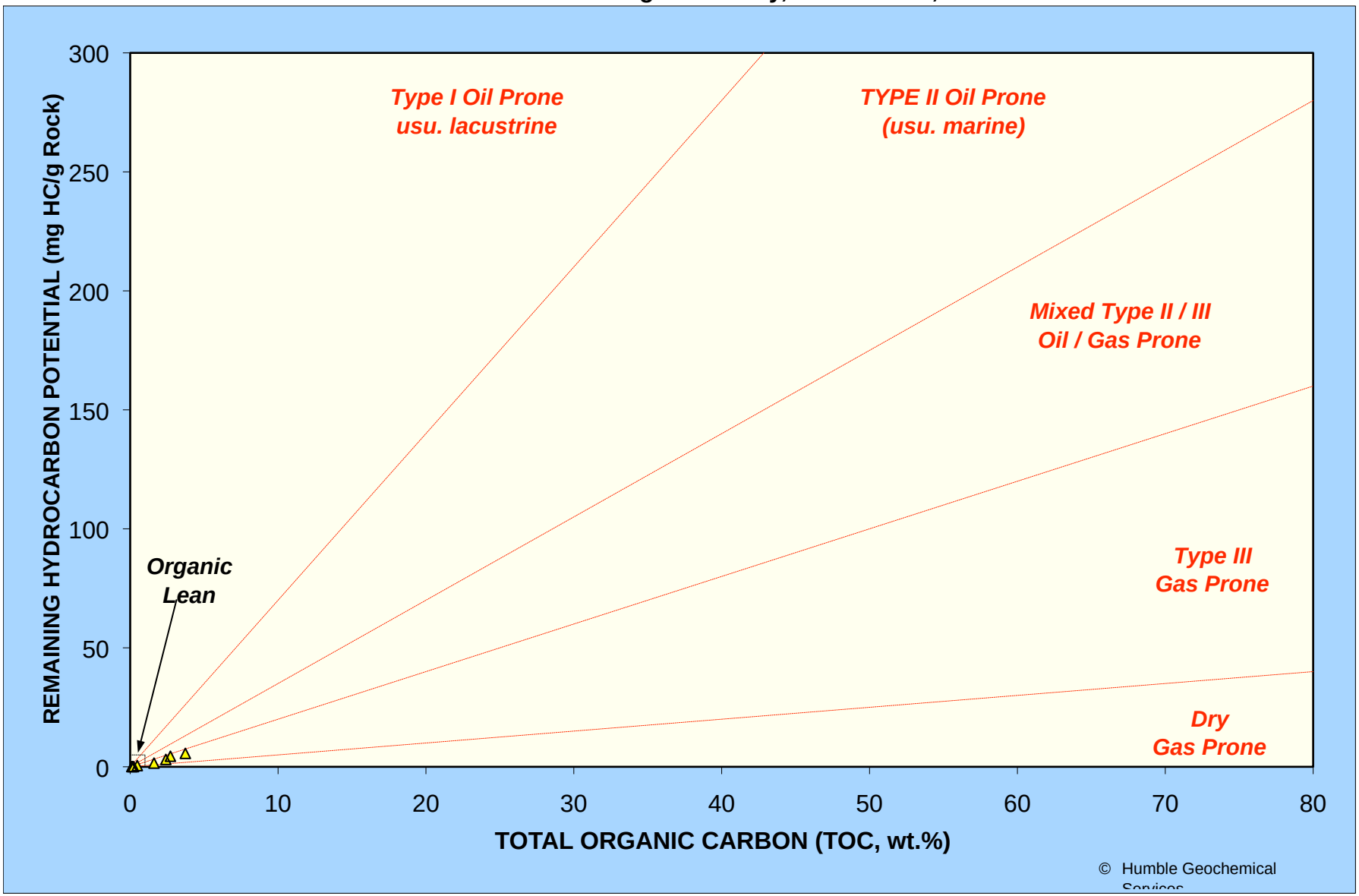


Figure 2. Kerogen Quality

Humble Geochemical Services Division

KEROGEN TYPE
Ohio Division of Geological Survey, Tuscarawas, OH

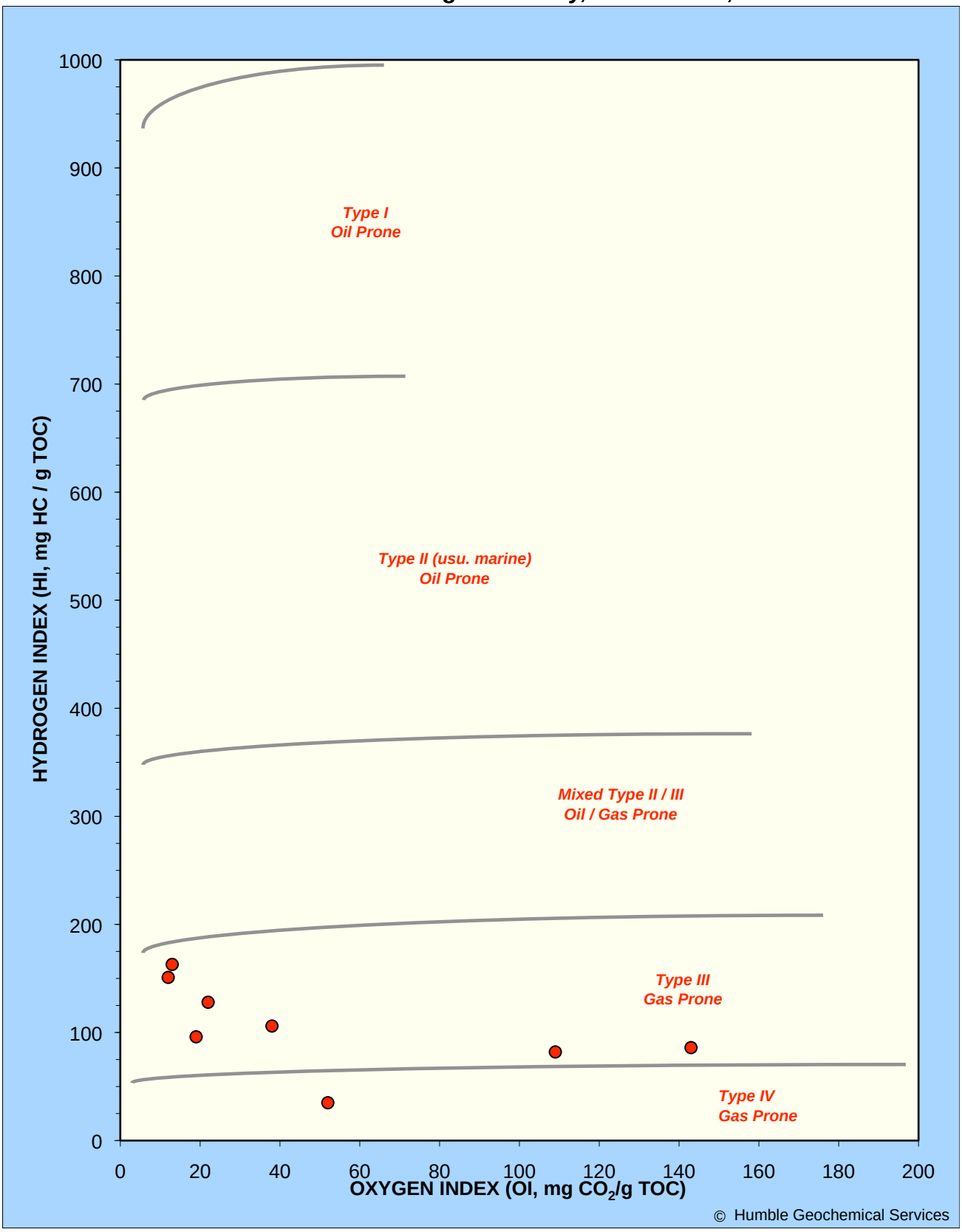


Figure 3. Kerogen type

KEROGEN TYPE and MATURITY

Ohio Division of Geological Survey, Tuscarawas, OH

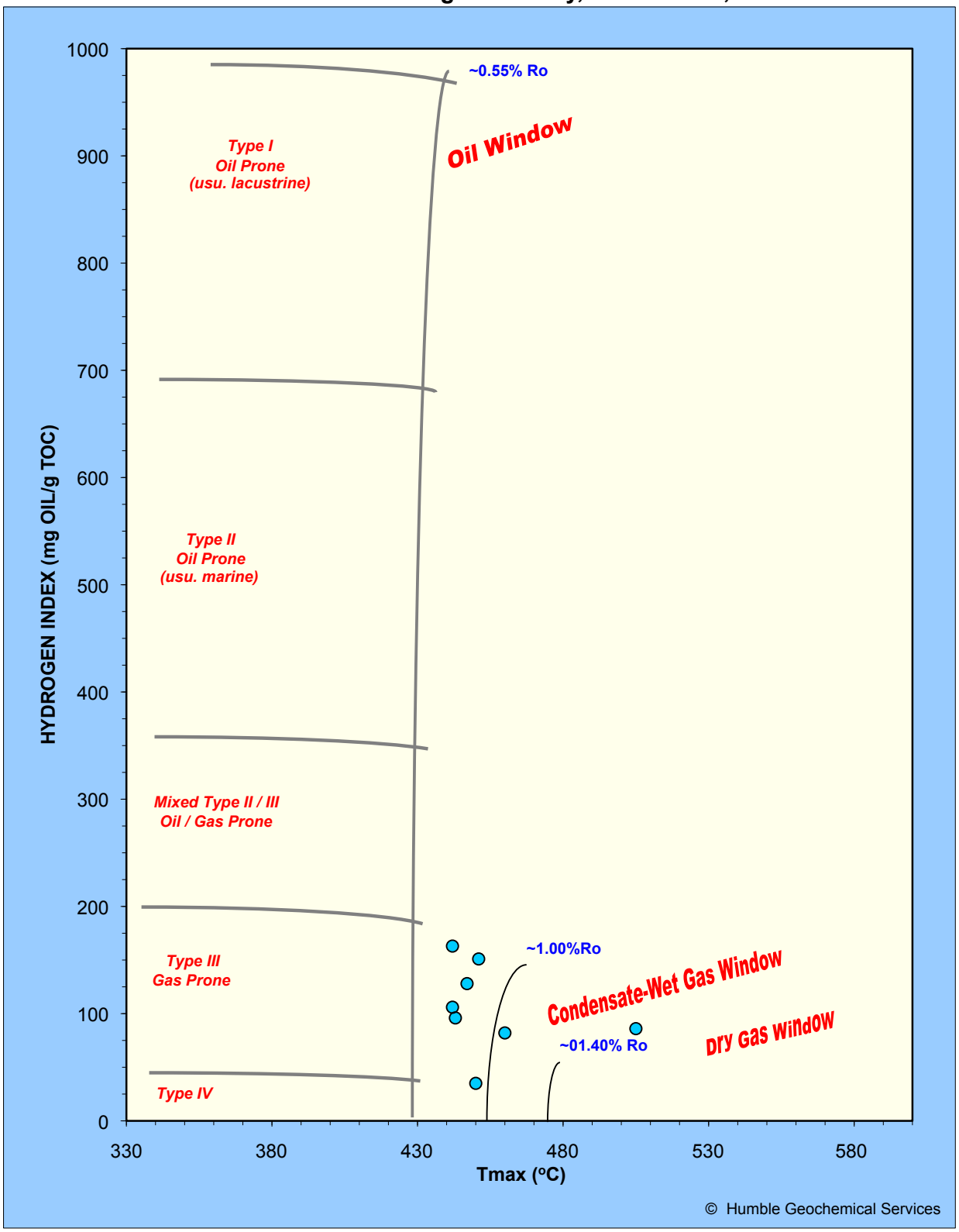


Figure 4a. Kerogen Type and Maturity (Tmax)

KEROGEN TYPE and MATURITY

Ohio Division of Geological Survey, Tuscarawas, OH

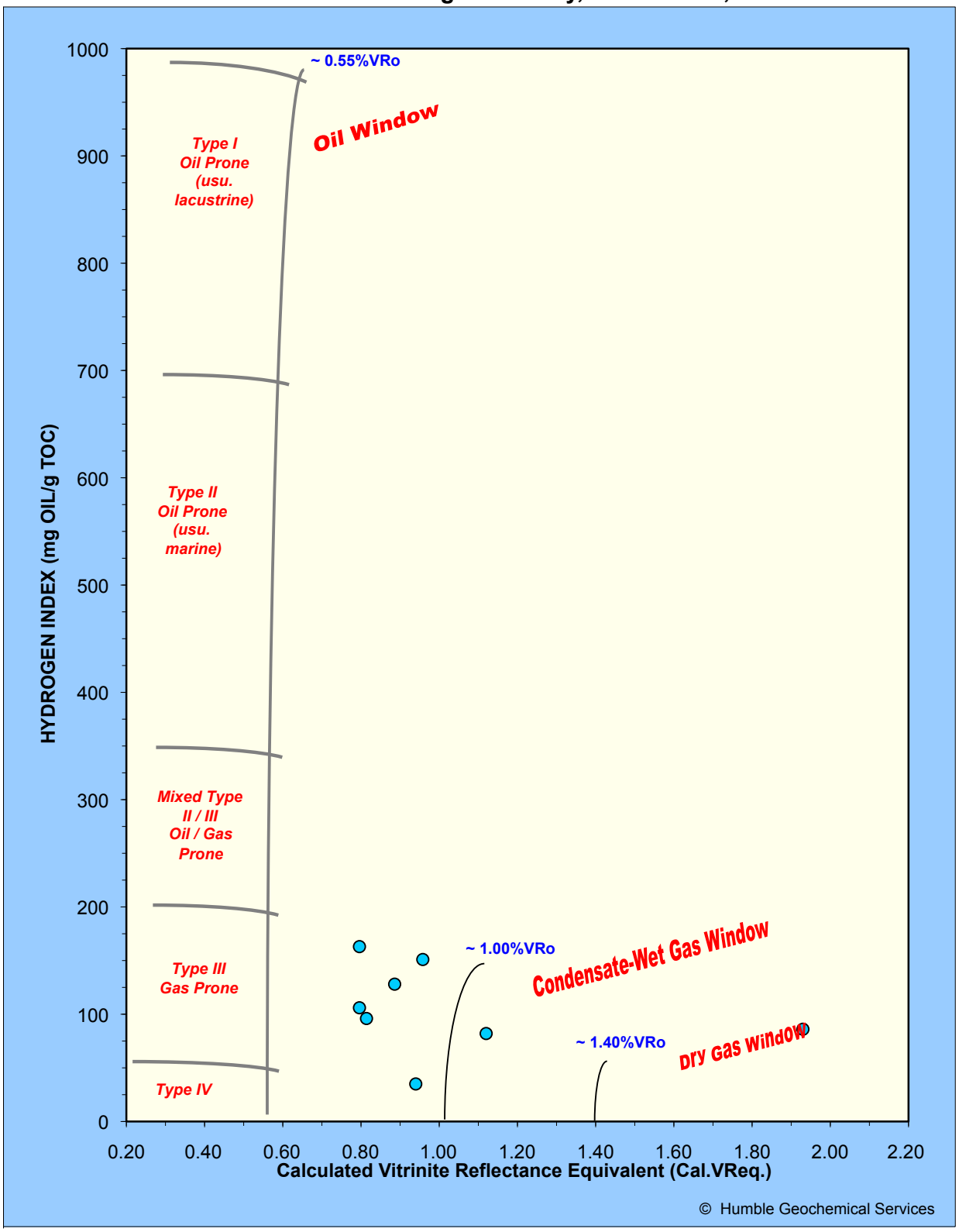


Figure 4b. Kerogen Type and Maturity (Tmax calculated %VRo)

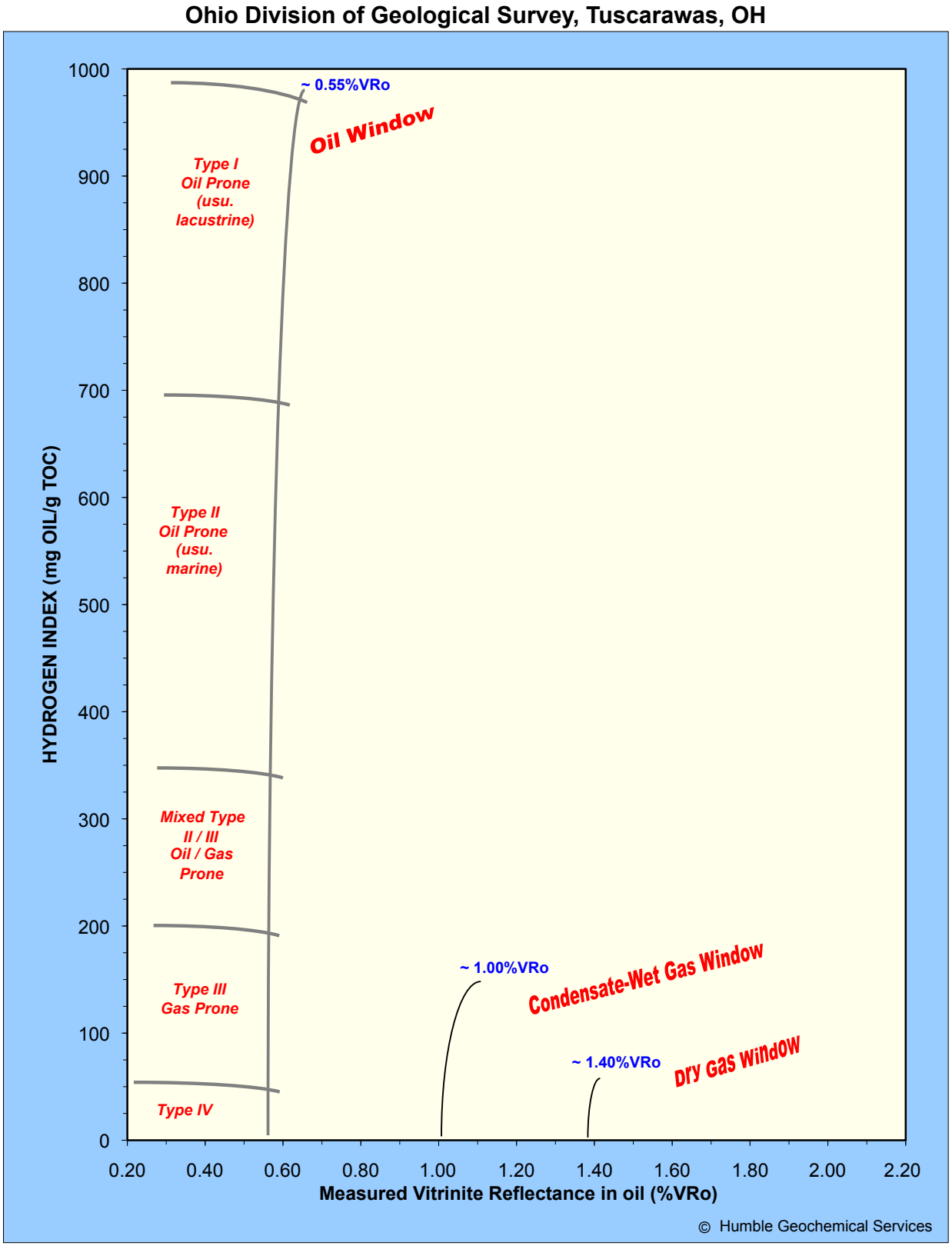


Figure 4c. Kerogen Type and Maturity (Measured vitrinite reflectance)

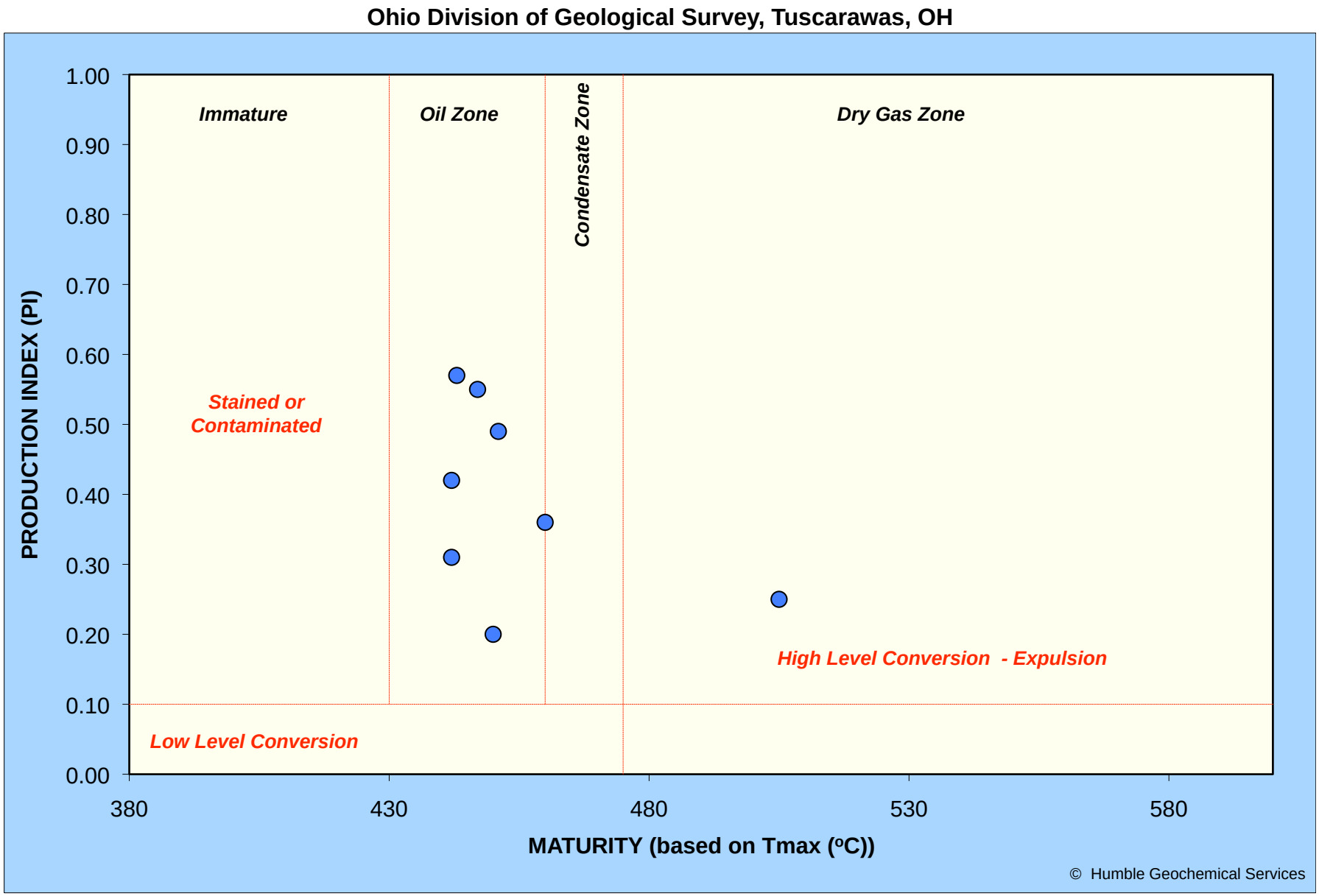


Figure 5a. Kerogen conversion and maturity (based on Tmax).

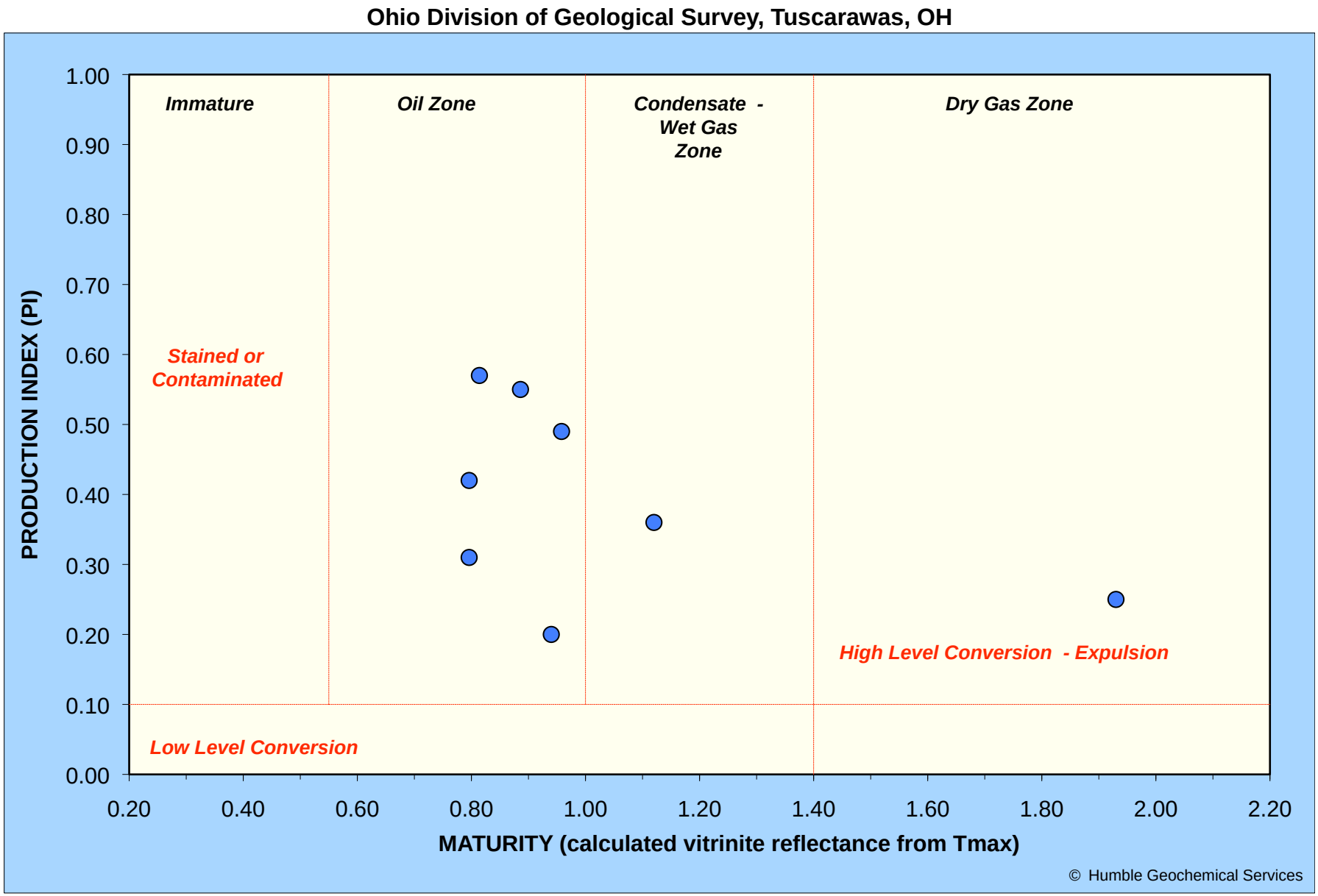


Figure 5b. Kerogen conversion and maturity (calculated %VRo from Tmax).

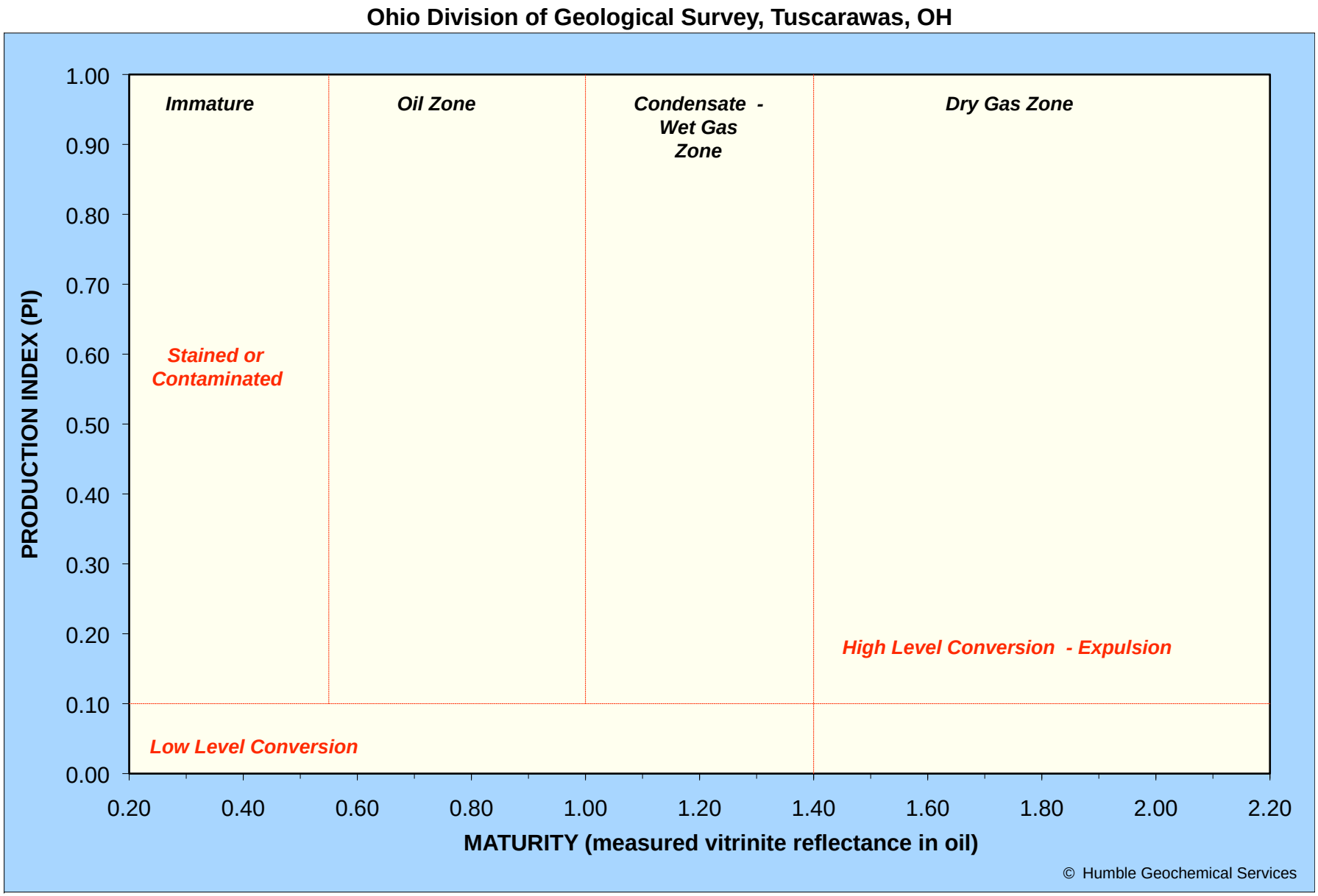


Figure 5c. Kerogen conversion and maturity (measured vitrinite reflectance).