

Following a Thread

Matte Glazes at Mid Range

by Donna Polseno

I am not sure when my interest in creating a kind of visual depth with my ceramic surfaces first consumed me, but in some ways it surely must harken back to my childhood. My father was a landscape painter who supported our family with his work, so I passed endless hours in his studio where one could get lost in a world of scenes with natural perspective and distance created by building layers of oil paint. It is odd to say that I did not make that connection until fairly recently, perhaps because my thoughts were more concerned with the challenge of making three-dimensional work. The surface itself was meant foremost to unassumingly enhance the form, without standing on its own like a painting does.

Looking back to the earliest work in raku that I originally became known for, I can see that I was often building layers of slips and later patterns that overlapped. Even the pieces that had simple flashing slip marks and smoked raw surfaces had a kind of

richness and depth to their surfaces. A bit later when I split off into two realms of work, sculpture and pottery, I became more conscious of the idea of visual depth. My early figurative work had surfaces painted with groggy thick slip in swirling motions, that were then sprayed after the bisque firing with stains and oxides. Patterns were created using latex resist between layers of sprayed glaze and finally in the end all were wiped off leaving a weathered, layered-looking pattern due to the roughness of the slip. Eventually my interest in the depth of the pattern led me to carve designs into the surface of the figures. I also made a series of bas-relief pieces that were still lifes and figures carved and built up on large urns, creating a kind of three-dimensional painting. Following that same thread of interest I have developed glazes for my pottery that are very much about visual depth.

My first foray into using wax resist and latex to build layers with glazes came with a body of stoneware pots that I made in the



early 1980s. I used a high-fire shino glaze first, then resists and various glazes over that. The complex shino underneath created some very rich areas and marks. I did not take up the technique again until about a dozen years ago, when I was once again transitioning into a new body of work.

Seeking Complexity

I had been using a very straightforward method of just dipping one glaze on vases that were slip cast, figurative in nature, and referred back to my sculpture. I had always used matte glazes on those pieces, which I had developed by doing as many potters do—finding a few base formulas for firing to cone 6 temperatures and playing with them until they suited my clay body and then started adding colorants. I started noticing a nice effect where the outer glaze overlapped the liner glaze. Perhaps that seems an odd thing to fixate on, but I think that ceramic artists notice little details that the magic of the firing and the melt bring forth that a painter can only create by the directness of his hand and the material.

With the new body of work I knew that I wanted something more complex, instead of leaving the major statement to the form as I had been doing. I decided to start testing the glazes overlapping each other and I could see right away that there was a complex character to them. Over time and testing I came to a series of glazes that all have basically the same base but about ten different color variations.

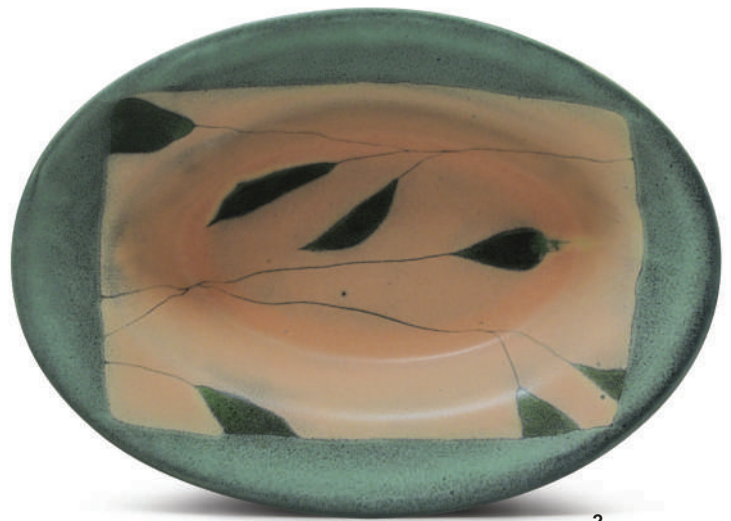
Finding the Right Surface

My glazes are calcium-mattes that are fired in an electric kiln. The calcium is derived from wollastonite, a calcium silicate material, and from Gerstley borate, a calcium borate. I also have strontium carbonate as another matting agent in my glaze, which, like barium carbonate, enhances the colors. Wollastonite is known for forming minute calcium silicate crystals when cooling.

Many people down fire their kilns in order to slow the cooling rate to promote the formation of crystals, but I do not. My kiln is well insulated and therefore cools very slowly. Finding out that my kiln cooled slowly enough on its own to aid in the minute crystal formation was one of the lucky things I learned by chance in my goal to create mid-range glazes with the richness and visual depth that is often associated with high-fire or reduction ware.

The things that I experimented with in that quest for visual richness and depth were, first of all, layering glazes on top of each other—not only trying one or two layers, but also discovering the different effects of certain glazes over others. Some combinations create a kind of micro-crystallization. My black glaze, for instance, makes nice specks of crystals over one of my base glazes and not the others because of the differing surface tension.

A second important part of the search was finding out how different stains and oxides completely change the melt of the same base glazes and how to use that to my advantage. Part of using stains and oxides successfully at mid range in



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1 Vase, 14 in. (36 cm) in length, layered Polseno Peach and Polseno Terra Cotta with additional glazes. 2 Oval dish 7 in. (18 cm) in width, Polseno Peach with additional glazes. 3 Bowl, 8 in. (20 cm) in height, layered Polseno Watery Yellow, Polseno Peach, and Polseno Black glazes. 4 Lidded box, 6 in. (15 cm) in height, layered Polseno Turquoise and Polseno Terra Cotta with additional glazes. All pieces are mid-range white casting slip, fired to cone 5 in oxidation.



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5 Vase, 7 in. (18 cm) in height, Polseno Yellow layered with other glazes.
6 Vase, 11 in. (28 cm) in height, Isyered Polseno Peach, Polseno Watery Yellow, and Polseno Black glazes. 5–6 Mid-range white casting slip, fired to cone 5.

an oxidation atmosphere is using several of them in the same glaze in order to achieve a more complex look rather than a more industrial out-of-the-jar look.

The third aspect to discover was the exact thickness of each glaze that would allow me to dip up to three layers of glazes. Due to the numbers of glazes I use in my process my glazes all need to be thin. I could not live without my hydrometer. I mix each glaze to a different specific gravity (see page 61). The feel of the glaze can fool me sometimes and precision is crucial to my glazes success.

The fourth variable that took experimentation was the temperature. I have fired from cone 4 to cone 7, firmly settling on cone 5. I kept searching for the right amount of melt that would soften, yet maintain my complex decorative work.

Lastly, another factor that impacts the final appearance of my glazes is the fact that I choose a clay body that has a lot of ball clay and therefore is not overly white, as many people desire, but it gives a lot of the character to the overall look of the work.

The Perfect Melt

For me it is all about the perfect melt. The glaze has to melt and move my marks and therefore have a bit of mystery as well as depth. Initially, when I started this work, I had a regular electric kiln and relied on a visual cone to judge when the firing was complete. If the glaze melted the slightest bit more than I had determined was perfect, I was distraught. The designs were too mushy. If it was a shade less than desired, I was also distraught because the marks were too stiff. I now enjoy the precision of a computerized kiln with three thermocouples. My glazing method is complex with many mundane details, but my basic process is to dip the pieces in one glaze first. I then make my various lines and marks with fine Chinese brushes using liquid Forbes wax. I sometimes paint different shapes with liquid latex before dipping a second glaze. More wax is then painted or latex peeled off, before dipping a third glaze. My glazes are naturally hard in their dry state rather than powdery and this is very useful when using resists and multiple layers. With the perfect melt, the wax resist lines actually move in on themselves so that they look even more delicate than when I painted them. The right melt gives fluidness to the marks and a subtle translucency to the layers.

Recognizing Influences

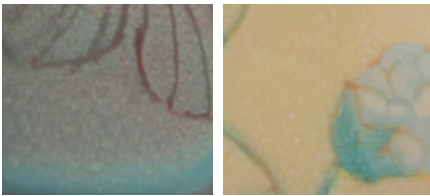
My pottery is slip cast. Many times it is pieces joined together, feet and handles added, or altered in a fairly soft state. The forms are inspired by many things, ranging from Classical pottery forms that I deconstruct, to Han Dynasty fountains and Yuan Dynasty funerary urns, Kutani ware, Nabeshima ware, laquer ware, and textiles. Many of my forms are simple plates and bowls, providing surfaces for my painterly/decorative impulses, which continue to remind me that I am the daughter of a painter.

My glazed surfaces have a strong Asian influence dating back to my formative years spent lingering long hours at the Nelson-Atkins Museum in Kansas City, Missouri, and from studying with Ken Ferguson and Victor Babu at Kansas City Art Institute also in Kansas City, Missouri. It was only reinforced by subsequent opportunities to travel and work in Asia. But perhaps foremost my pottery is inspired by nature, as was my father's work. He modeled for me a deep appreciation of the natural world in every aspect of daily life and so, like him, I attempt to express that beauty as an artist.

the author Donna Polseno is an artist and educator who, along with her husband and fellow ceramic artist Richard Hensley, lives in Floyd, Virginia. See more of her work at www.donnapolseno.com.

Subscribers can access an archive article about Polseno's figurative sculptures, and another featuring both Polseno and Richard Hensley's work in the Subscriber Extras section on www.ceramicsmonthly.org.





POLSENO TURQUOISE/WATERY YELLOW

Cone 5-6

Gerstley Borate	8.08 %
Strontium Carbonate	15.15
Wollastonite	15.15
Nepheline Syenite	38.89
EPK Kaolin	11.11
Silica	<u>11.62</u>
	100.00 %

For Turquoise

Add the following Mason Stains:

MS 6242 Bermuda	1.50 %
MS 6129 Golden Ambrosia	0.50 %
MS 6374 Dark Turquoise	0.30 %
MS 6315 Zirconium Blue	2.70 %

For Watery Yellow

Substitute Mason Stains below for those used to create turquoise:

MS 6433 Praseodymium Yellow	0.60 %
MS 6404 Vanadium Yellow	2.00 %

I apply all of my glazes in thin coatings when layering. Mix the Turquoise glaze to a specific gravity of 1.38, and Watery Yellow to a specific gravity of 1.52.



POLSENO PEACH/YELLOW

Cone 5-6

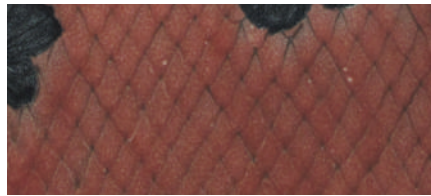
Gerstley Borate	8.3 %
Strontium Carbonate	12.1
Wollastonite	16.1
Nepheline Syenite	40.1
EPK Kaolin	11.4
Silica	<u>12.0</u>
	100.0 %

Add: Zircopax 9.5 %

For Peach, add the following Mason Stains and colorants:

MS 6032 Zinc Coral	0.2 %
MS 6410 Canary Yellow	2.5 %
MS 6001 Alpine Rose	1.7 %
MS 6404 Vanadium Yellow	0.4 %
Dark Rutile	2.1 %

For Yellow, omit the Dark Rutile. Mix both the Yellow and Peach versions of this glaze to a specific gravity of 1.52



POLSENO TERRA COTTA

Cone 5-6

Use the same glaze base as for Polseno Peach, but substitute the following additions:

Add: Zircopax 3.5 %

Add the following Mason Stains:

MS 6001 Alpine Rose	2.1 %
MS 6404 Vanadium yellow	1.0 %
MS 6129 Golden Ambrosia	1.7 %
MS 6117 Red Iron	0.4 %
MS 6031 Salmon	2.3 %

Mix the glaze to a specific gravity of 1.42.



POLSENO BLACK

Cone 5-6

Gerstley Borate	8.1 %
Strontium Carbonate	15.5
Wollastonite	15.5
Nepheline Syenite	39.8
EPK Kaolin	10.3
Silica	<u>10.8</u>
	100.0 %

Add the following Mason Stains:

MS 6600 Best Black	3.6 %
MS 6300 Mazerine	1.2 %

Mix the glaze to a specific gravity of 1.46.



Stacked boxes, mid-range casting slip, layered Polseno Yellow, Polseno Peach, and Polseno Black glazes, fired to cone 5.