

# Purple Rain- $\Delta$ 10

Lab 5b-Color Wheel 2-Individual

# Purple Rain

Original  
062722-1

|                  |       |
|------------------|-------|
| Neph Sy          | 40.93 |
| Dolomite         | 30.27 |
| EPK              | 5.04  |
| Flint            | 23.76 |
| Cobalt Carbonate | 1     |
| Water            | 60    |



1-3 Second Dip



2-3 Second Dips



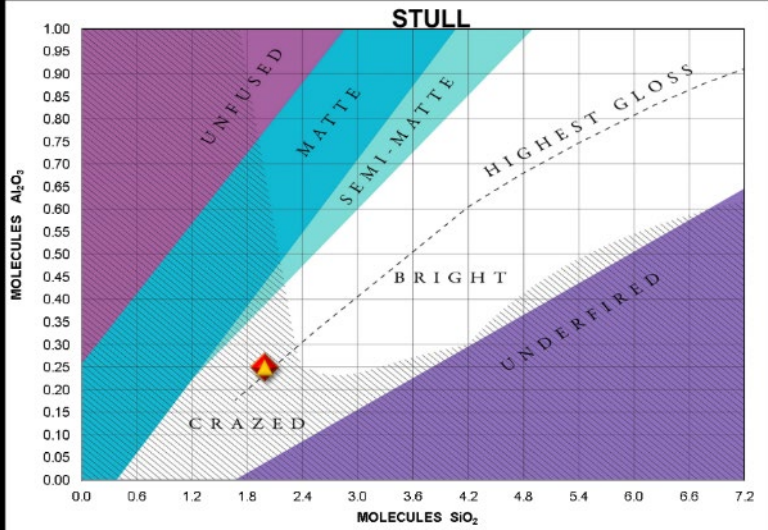
Reduction



Oxidation

## UMF

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.21          |                          | Alkaline Earths<br>0.79 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>2.03                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.26 | Na <sub>2</sub> O<br>0.16      | K <sub>2</sub> O<br>0.05 | MgO<br>0.39             | CaO<br>0.40 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.26               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub>                                                  | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



## EUMF

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.20          |                          | Alkaline Earths<br>0.80 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.99                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.25 | Na <sub>2</sub> O<br>0.16      | K <sub>2</sub> O<br>0.05 | MgO<br>0.38             | CaO<br>0.39 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.25               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub>                                                  | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO<br>0.02 |



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# Purple Rain

|                  |       |
|------------------|-------|
| Neph Sy          | 40.93 |
| Dolomite         | 30.27 |
| EPK              | 5.04  |
| Flint            | 23.76 |
| Cobalt Carbonate | 1.00  |
| Chrome Oxide     | 1.00  |
| Water            | 60    |



1-3 Second Dip



2-3 Second Dips

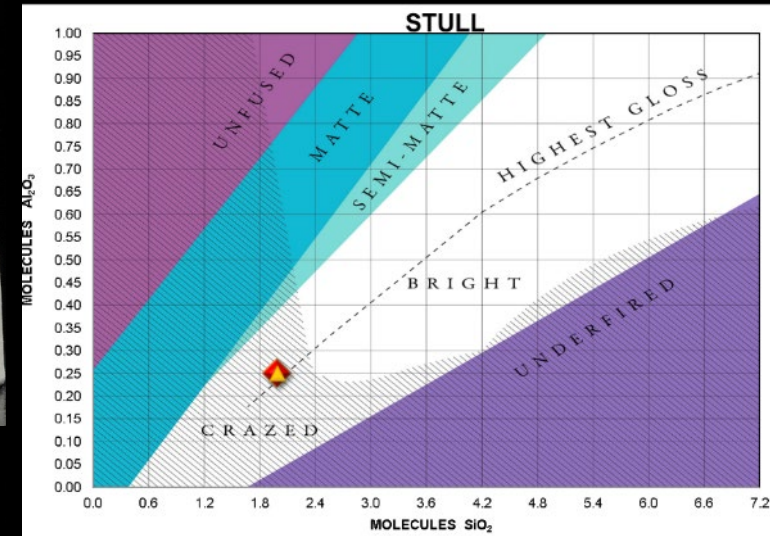


Reduction



Oxidation

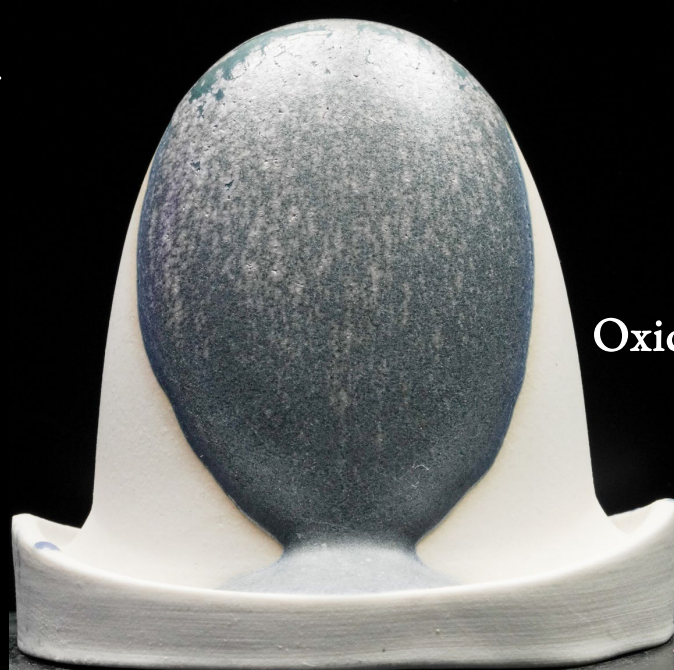
| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.20          |                          | Alkaline Earths<br>0.80 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.99                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.25 | Na <sub>2</sub> O<br>0.16      | K <sub>2</sub> O<br>0.05 | MgO<br>0.38             | CaO<br>0.39 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.25               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub><br>0.02                            | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO<br>0.02 |



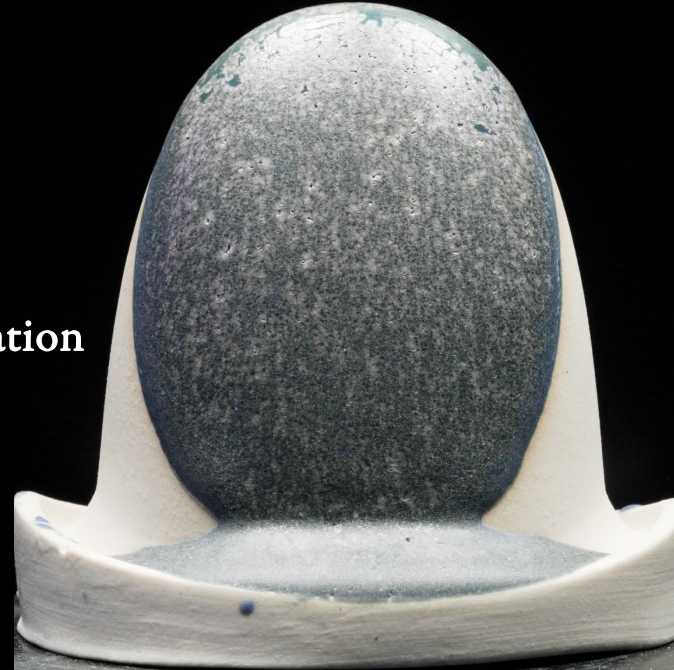
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# Purple Rain

|                  |       |
|------------------|-------|
| Neph Sy          | 40.93 |
| Dolomite         | 30.27 |
| EPK              | 5.04  |
| Flint            | 23.76 |
| Cobalt Carbonate | 1.00  |
| Copper Carbonate | 3.00  |
| Water            | 60    |



1-3 Second Dip



2-3 Second Dips

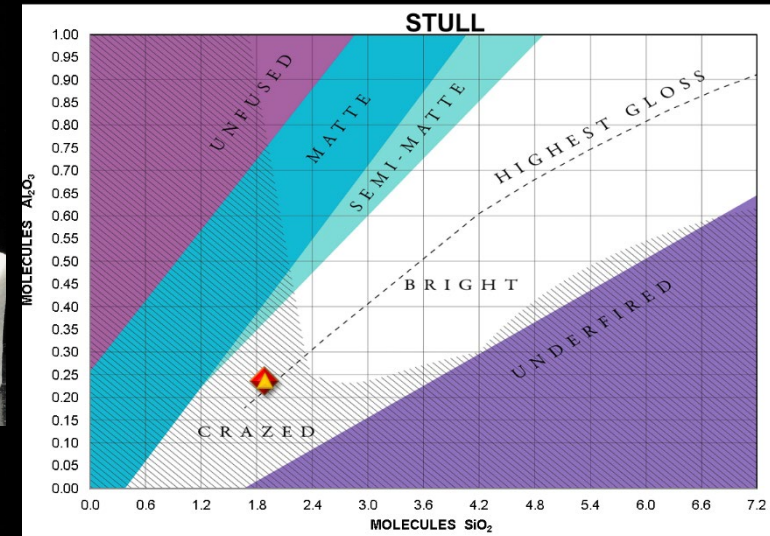
Oxidation



Reduction



| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.25          |                          | Alkaline Earths<br>0.75 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.88                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.24 | Na <sub>2</sub> O<br>0.15      | K <sub>2</sub> O<br>0.04 | MgO<br>0.36             | CaO<br>0.37 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.24               | Li <sub>2</sub> O              | CuO<br>0.05              | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO<br>0.02 |

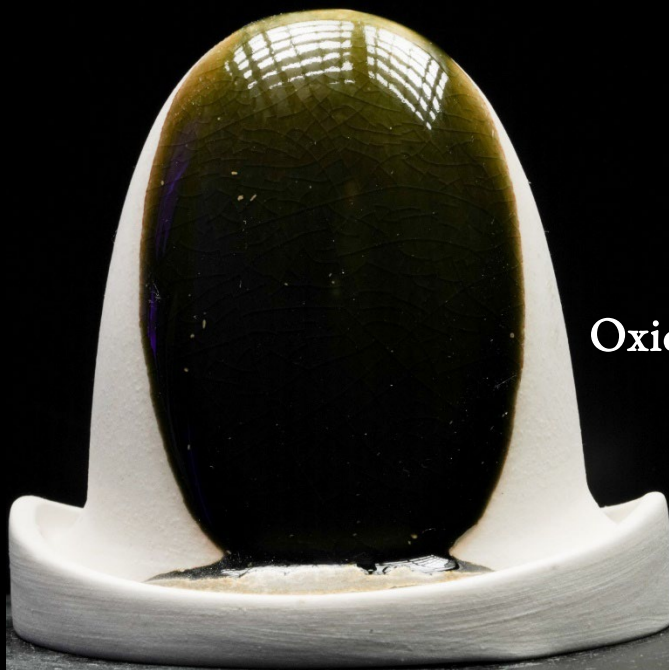


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|                  |       |
|------------------|-------|
| Neph Sy          | 40.93 |
| Dolomite         | 30.27 |
| EPK              | 5.04  |
| Flint            | 23.76 |
| Cobalt Carbonate | 1.00  |
| Red Iron Oxide   | 6.00  |
| Water            | 60    |



1-3 Second Dip



2-3 Second Dips

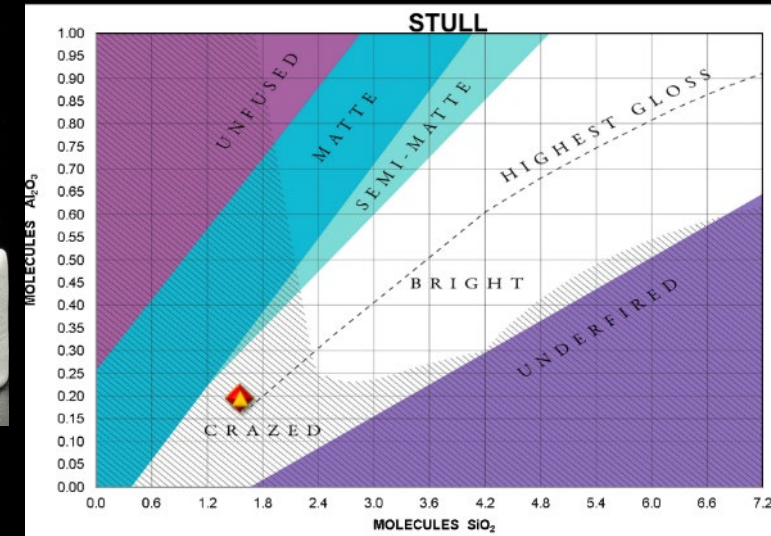


Reduction



Oxidation

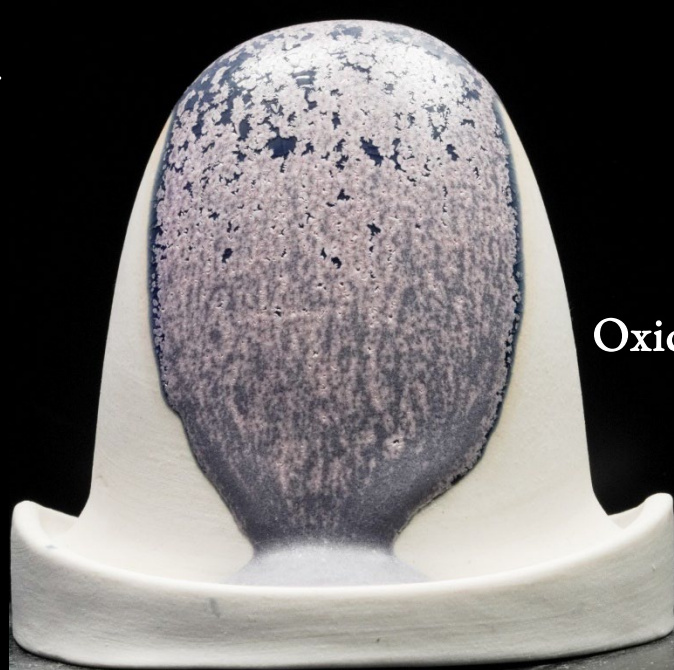
| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.16          |                          | Alkaline Earths<br>0.84 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.56                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.20 | Na <sub>2</sub> O<br>0.12      | K <sub>2</sub> O<br>0.04 | MgO<br>0.30             | CaO<br>0.30 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.20               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.22 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO<br>0.02 |



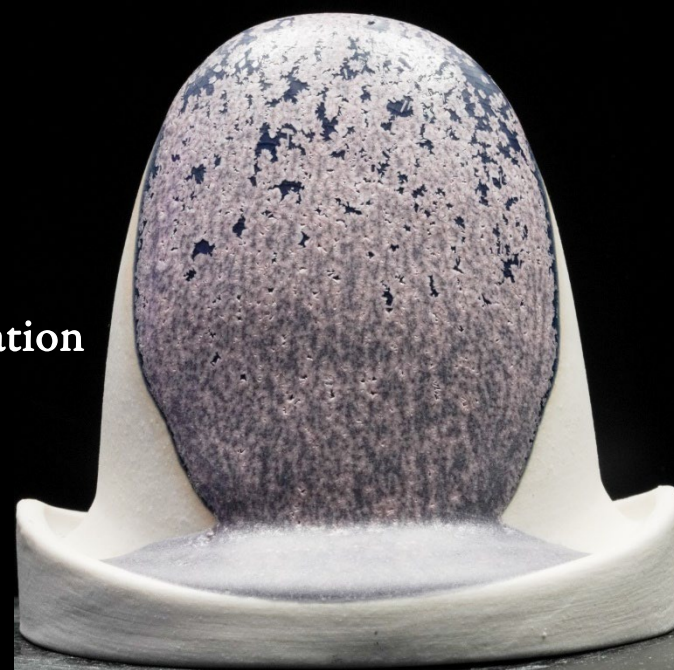
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# Purple Rain

|                   |       |
|-------------------|-------|
| Neph Sy           | 40.93 |
| Dolomite          | 30.27 |
| EPK               | 5.04  |
| Flint             | 23.76 |
| Cobalt Carbonate  | 1.00  |
| Manganese Dioxide | 3.00  |
| Water             | 60    |



1-3 Second Dip



2-3 Second Dips

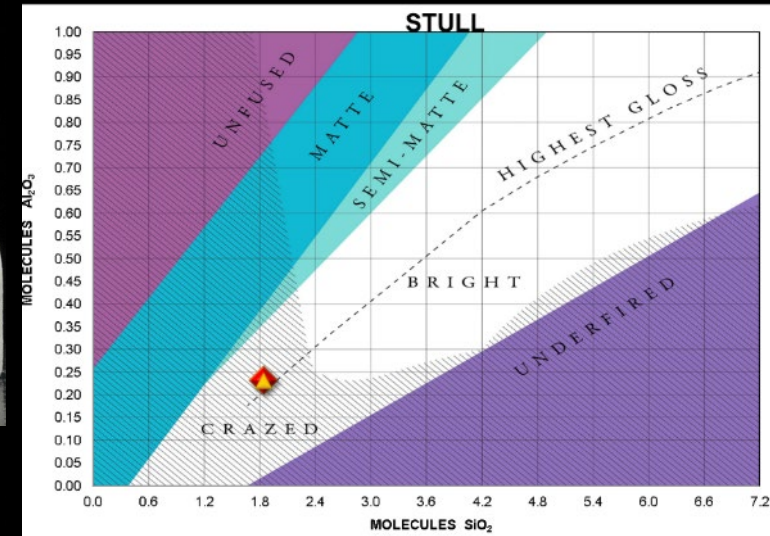


Reduction



Oxidation

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.19          |                          | Alkaline Earths<br>0.81  |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|--------------------------|-------------|
| SiO <sub>2</sub><br>1.84                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.23 | Na <sub>2</sub> O<br>0.15      | K <sub>2</sub> O<br>0.04 | MgO<br>0.36              | CaO<br>0.36 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.23               | Li <sub>2</sub> O              | CuO                      | SrO                      | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                      | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub><br>0.07 | CoO<br>0.02 |



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# Purple Rain

|                     |       |
|---------------------|-------|
| Neph Sy             | 40.93 |
| Dolomite            | 30.27 |
| EPK                 | 5.04  |
| Flint               | 23.76 |
| Cobalt Carbonate    | 1.00  |
| Nickel Carb (Green) | 2.50  |
| Water               | 60    |



1-3 Second Dip



2-3 Second Dips

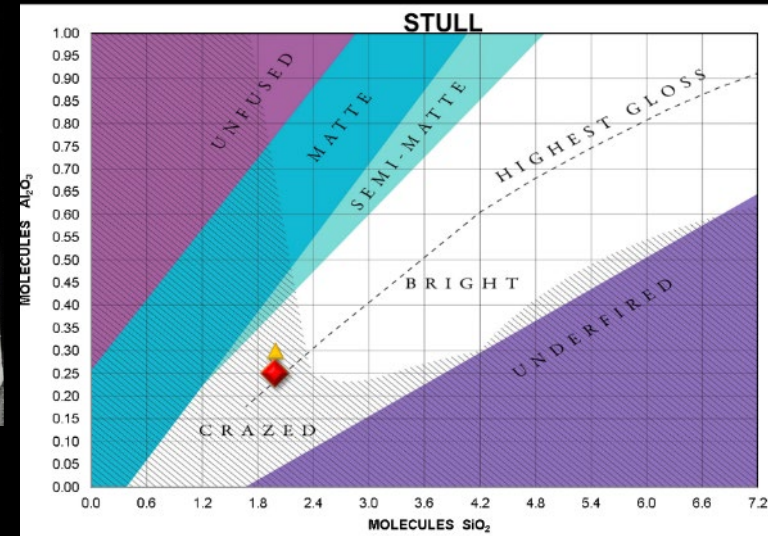
Oxidation



Reduction



| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>6.63 :1 |                                                      | Alkali Metals<br>0.20          |                          | Alkaline Earths<br>0.80 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.99                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.30 | Na <sub>2</sub> O<br>0.16      | K <sub>2</sub> O<br>0.05 | MgO<br>0.38             | CaO<br>0.39 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.25               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO<br>0.05                                          | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO<br>0.02 |

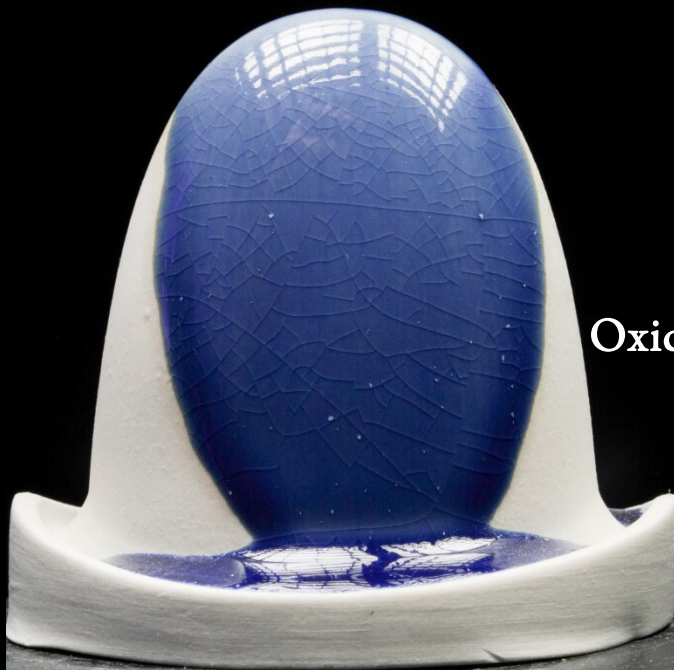


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|                  |       |
|------------------|-------|
| Neph Sy          | 40.93 |
| Dolomite         | 30.27 |
| EPK              | 5.04  |
| Flint            | 23.76 |
| Cobalt Carbonate | 1.00  |
| Titanium Dioxide | 6.00  |
| Water            | 60    |



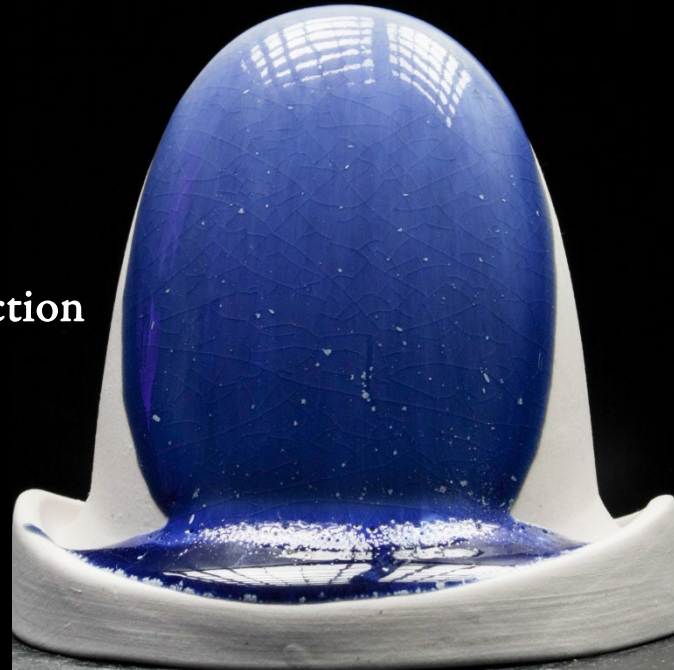
1-3 Second Dip



2-3 Second Dips

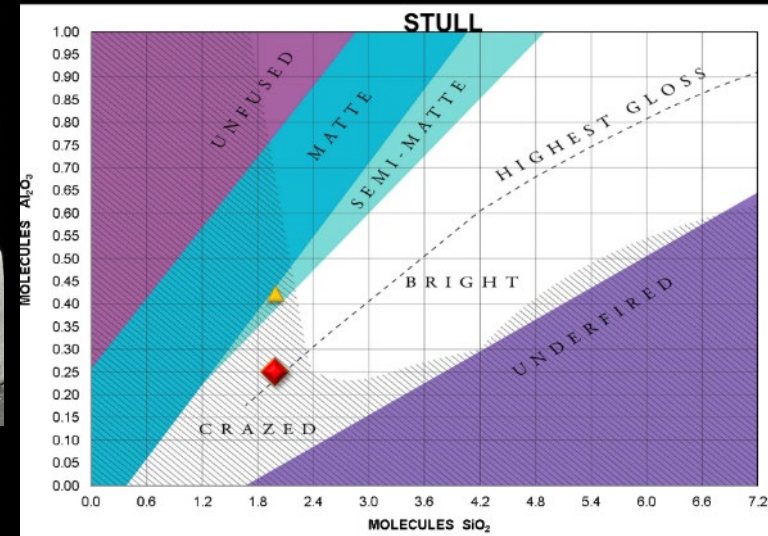


Reduction



Oxidation

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>4.69 :1 |                                                      | Alkali Metals<br>0.20          |                          | Alkaline Earths<br>0.80 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.99                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.42 | Na <sub>2</sub> O<br>0.16      | K <sub>2</sub> O<br>0.05 | MgO<br>0.38             | CaO<br>0.39 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.25               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.17                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO<br>0.02 |



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# Purple Rain

|                  |       |
|------------------|-------|
| Neph Sy          | 40.93 |
| Dolomite         | 30.27 |
| EPK              | 5.04  |
| Flint            | 23.76 |
| Cobalt Carbonate | 1.00  |
| Tin Oxide        | 5.00  |
| Water            | 60    |

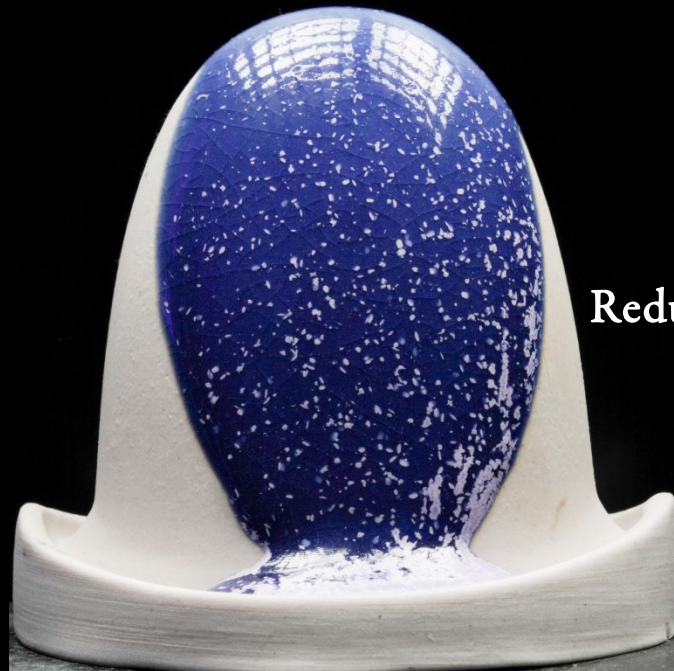


1-3 Second Dip



2-3 Second Dips

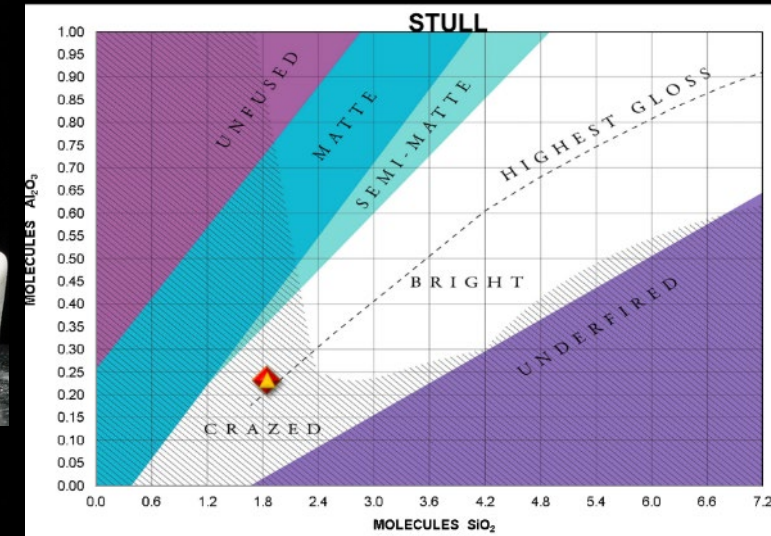
Oxidation



Reduction



| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.26          |                          | Alkaline Earths<br>0.74 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.85                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.23 | Na <sub>2</sub> O<br>0.15      | K <sub>2</sub> O<br>0.04 | MgO<br>0.36             | CaO<br>0.36 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.23               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub><br>0.07 | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO<br>0.02 |



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# Purple Rain

|                   |       |
|-------------------|-------|
| Neph Sy           | 40.93 |
| Dolomite          | 30.27 |
| EPK               | 5.04  |
| Flint             | 23.76 |
| Cobalt Carbonate  | 1.00  |
| Ultrax (Zircopax) | 10.00 |
| Water             | 60    |



1-3 Second Dip

Oxidation



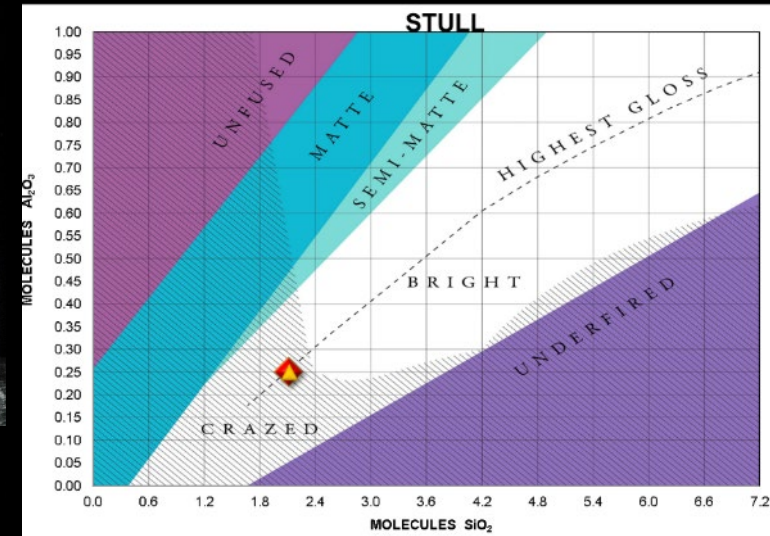
2-3 Second Dips



Reduction



| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>8.43 :1 |                                                      | Alkali Metals<br>0.20          |                          | Alkaline Earths<br>0.80 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>2.12                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.25 | Na <sub>2</sub> O<br>0.16      | K <sub>2</sub> O<br>0.05 | MgO<br>0.38             | CaO<br>0.39 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.25               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO<br>0.02 |



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|                  |       |
|------------------|-------|
| Neph Sy          | 40.93 |
| Dolomite         | 30.27 |
| EPK              | 5.04  |
| Flint            | 23.76 |
| Chrome Oxide     | 1.00  |
| Copper Carbonate | 3.00  |
| Water            | 60    |



1-3 Second Dip

Oxidation



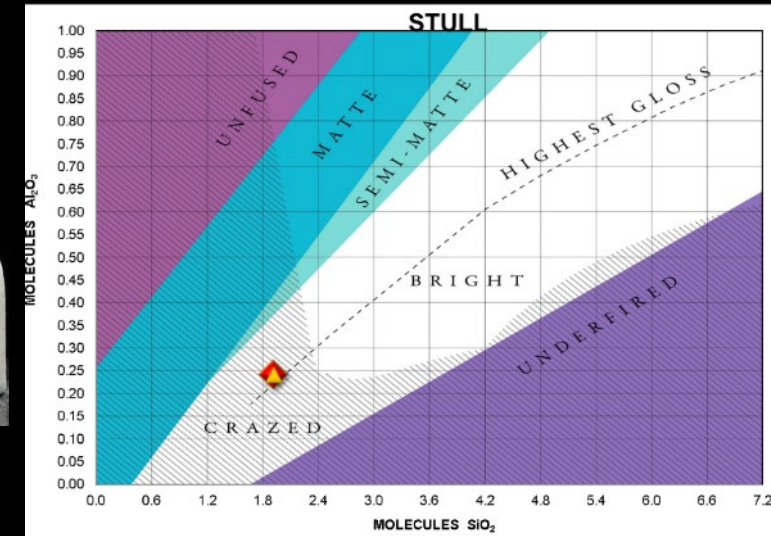
2-3 Second Dips



Reduction



| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.25          |                          | Alkaline Earths<br>0.75 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.92                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.24 | Na <sub>2</sub> O<br>0.15      | K <sub>2</sub> O<br>0.04 | MgO<br>0.37             | CaO<br>0.38 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.24               | Li <sub>2</sub> O              | CuO<br>0.05              | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub><br>0.01                            | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



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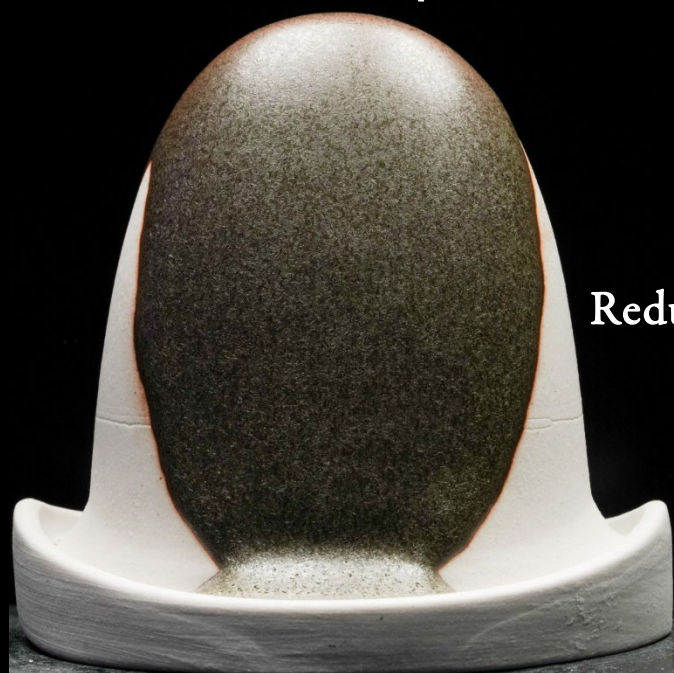
|                |       |
|----------------|-------|
| Neph Sy        | 40.93 |
| Dolomite       | 30.27 |
| EPK            | 5.04  |
| Flint          | 23.76 |
| Chrome Oxide   | 1.00  |
| Red Iron Oxide | 6.00  |
| Water          | 60    |



1-3 Second Dip



2-3 Second Dips

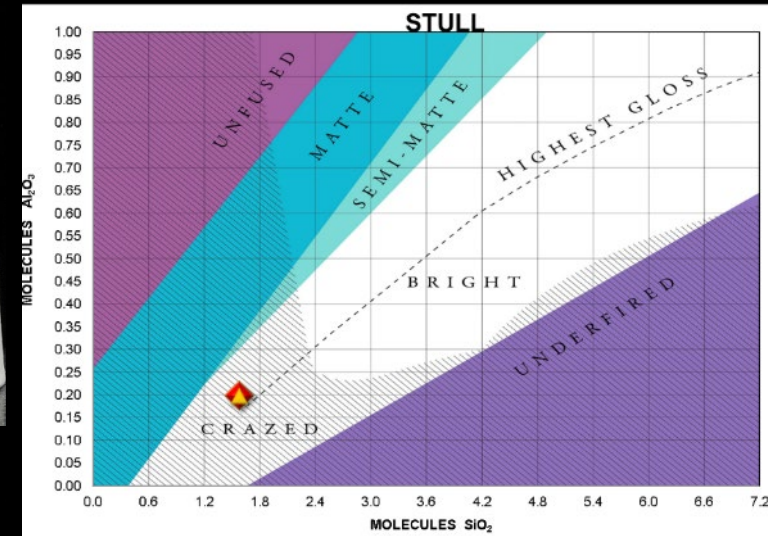


Reduction



Oxidation

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.16          |                          | Alkaline Earths<br>0.84 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.58                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.20 | Na <sub>2</sub> O<br>0.13      | K <sub>2</sub> O<br>0.04 | MgO<br>0.30             | CaO<br>0.31 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.20               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.22 |
| Cr <sub>2</sub> O <sub>3</sub><br>0.01                            | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



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# Purple Rain

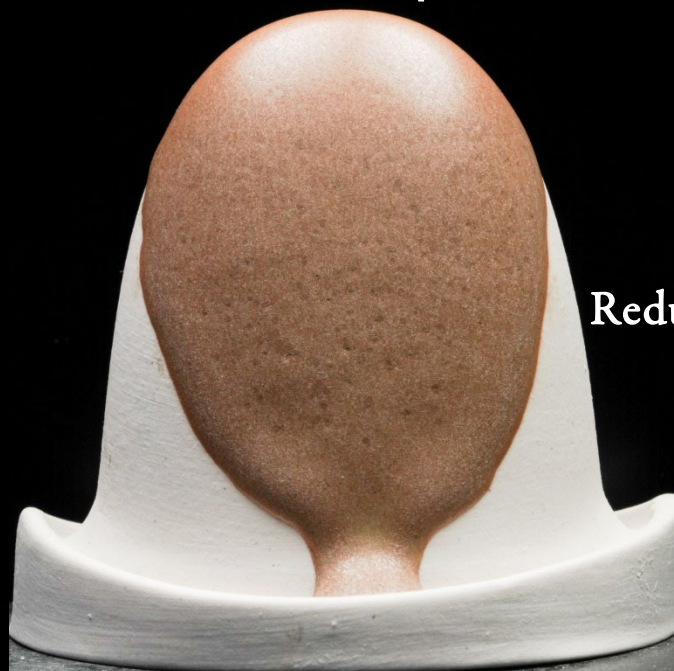
|                   |       |
|-------------------|-------|
| Neph Sy           | 40.93 |
| Dolomite          | 30.27 |
| EPK               | 5.04  |
| Flint             | 23.76 |
| Chrome Oxide      | 1.00  |
| Manganese Dioxide | 3.00  |
| Water             | 60    |



1-3 Second Dip



2-3 Second Dips

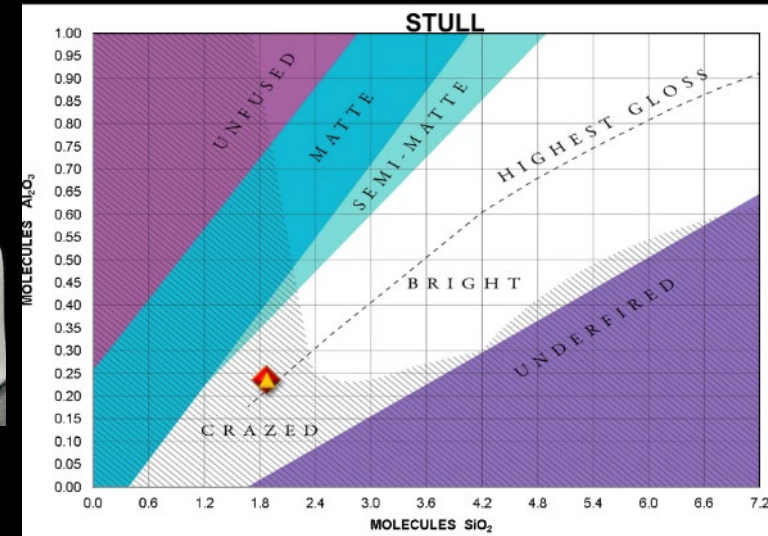


Reduction



Oxidation

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.19          |                          | Alkaline Earths<br>0.81  |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|--------------------------|-------------|
| SiO <sub>2</sub><br>1.88                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.24 | Na <sub>2</sub> O<br>0.15      | K <sub>2</sub> O<br>0.04 | MgO<br>0.36              | CaO<br>0.37 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.24               | Li <sub>2</sub> O              | CuO                      | SrO                      | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                      | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub><br>0.01                            | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub><br>0.08 | CoO         |



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# Purple Rain

|                     |       |
|---------------------|-------|
| Neph Sy             | 40.93 |
| Dolomite            | 30.27 |
| EPK                 | 5.04  |
| Flint               | 23.76 |
| Chrome Oxide        | 1.00  |
| Nickel Carb (Green) | 2.50  |
| Water               | 60    |



1-3 Second Dip



2-3 Second Dips

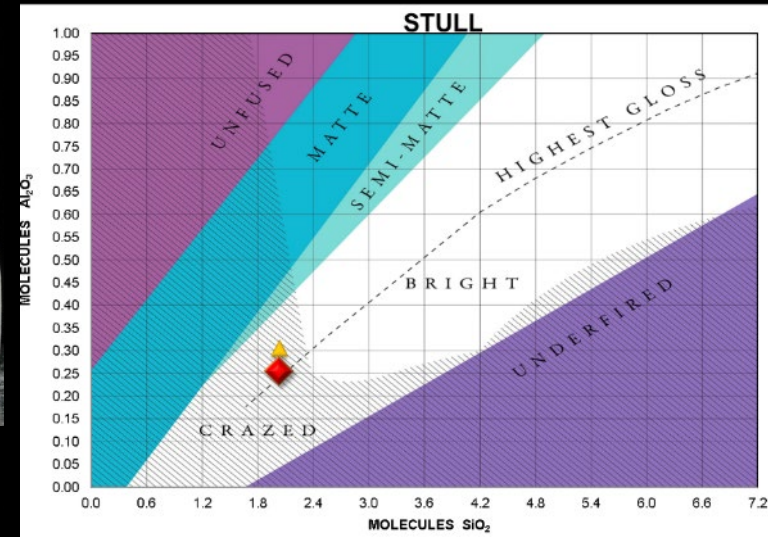


Reduction



Oxidation

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>6.63 :1 |                                                      | Alkali Metals<br>0.21          |                          | Alkaline Earths<br>0.79 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>2.03                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.31 | Na <sub>2</sub> O<br>0.16      | K <sub>2</sub> O<br>0.05 | MgO<br>0.39             | CaO<br>0.40 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.26               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO<br>0.05                                          | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub><br>0.02                            | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



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# Purple Rain

|                  |       |
|------------------|-------|
| Neph Sy          | 40.93 |
| Dolomite         | 30.27 |
| EPK              | 5.04  |
| Flint            | 23.76 |
| Chrome Oxide     | 1.00  |
| Titanium Dioxide | 6.00  |
| Water            | 60    |



1-3 Second Dip



2-3 Second Dips

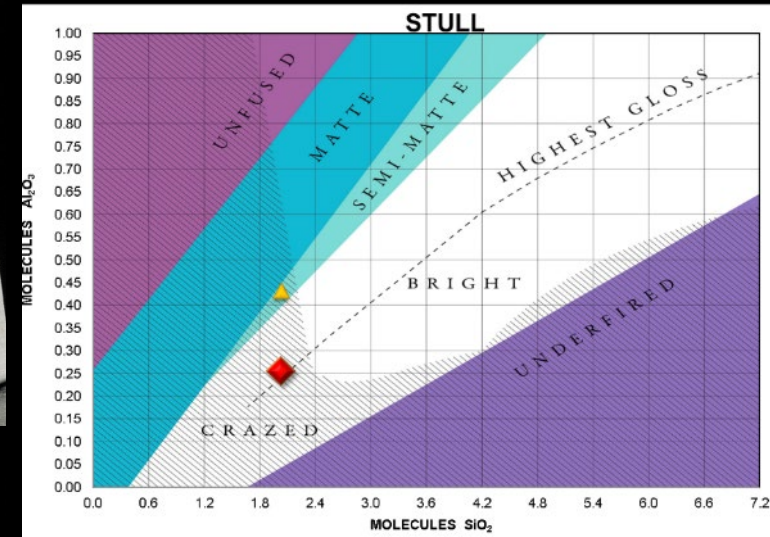


Reduction



Oxidation

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>4.69 :1 |                                                      | Alkali Metals<br>0.21          |                          | Alkaline Earths<br>0.79 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>2.03                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.43 | Na <sub>2</sub> O<br>0.16      | K <sub>2</sub> O<br>0.05 | MgO<br>0.39             | CaO<br>0.40 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.26               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.18                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub><br>0.02                            | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



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# Purple Rain

|              |       |
|--------------|-------|
| Neph Sy      | 40.93 |
| Dolomite     | 30.27 |
| EPK          | 5.04  |
| Flint        | 23.76 |
| Chrome Oxide | 1.00  |
| Tin Oxide    | 5.00  |
| Water        | 60    |



1-3 Second Dip



2-3 Second Dips

Oxidation



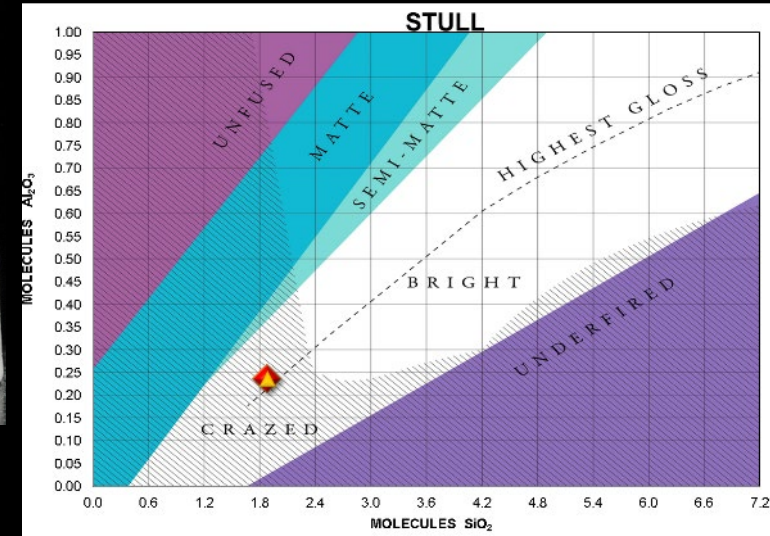
1-3 Second Dip



2-3 Second Dips

Reduction

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.27          |                          | Alkaline Earths<br>0.73 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.88                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.24 | Na <sub>2</sub> O<br>0.15      | K <sub>2</sub> O<br>0.04 | MgO<br>0.36             | CaO<br>0.37 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.24               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub><br>0.07 | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub><br>0.01                            | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



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# Purple Rain

|                   |       |
|-------------------|-------|
| Neph Sy           | 40.93 |
| Dolomite          | 30.27 |
| EPK               | 5.04  |
| Flint             | 23.76 |
| Chrome Oxide      | 1.00  |
| Ultrax (Zircopax) | 10.00 |
| Water             | 60    |



1-3 Second Dip



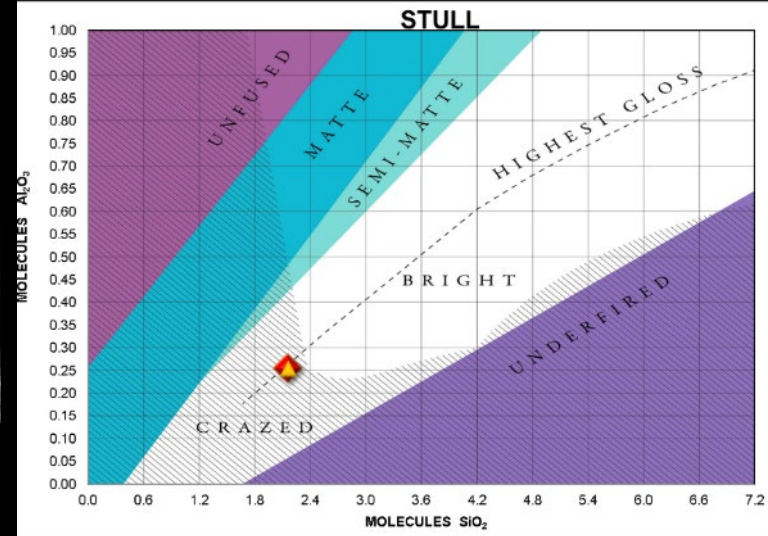
2-3 Second Dips



Reduction



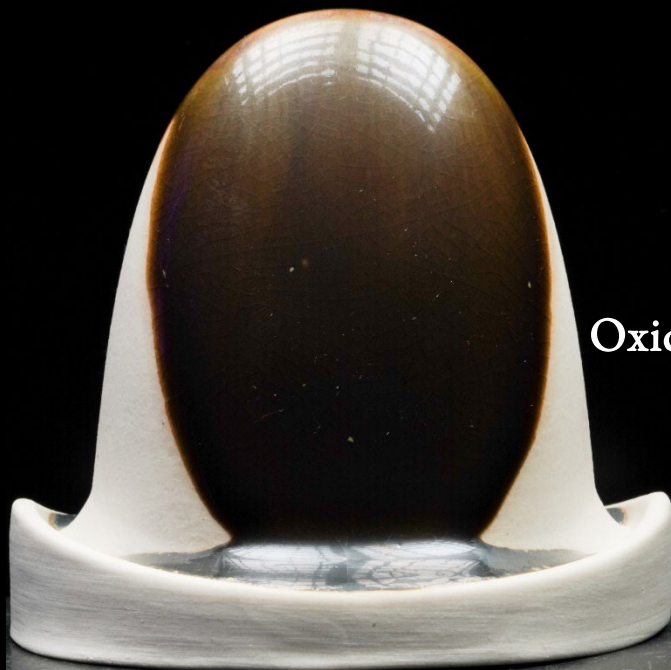
| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>8.43 :1 |                                                      | Alkali Metals<br>0.21          |                          | Alkaline Earths<br>0.79 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>2.16                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.26 | Na <sub>2</sub> O<br>0.16      | K <sub>2</sub> O<br>0.05 | MgO<br>0.39             | CaO<br>0.40 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.26               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub><br>0.02                            | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



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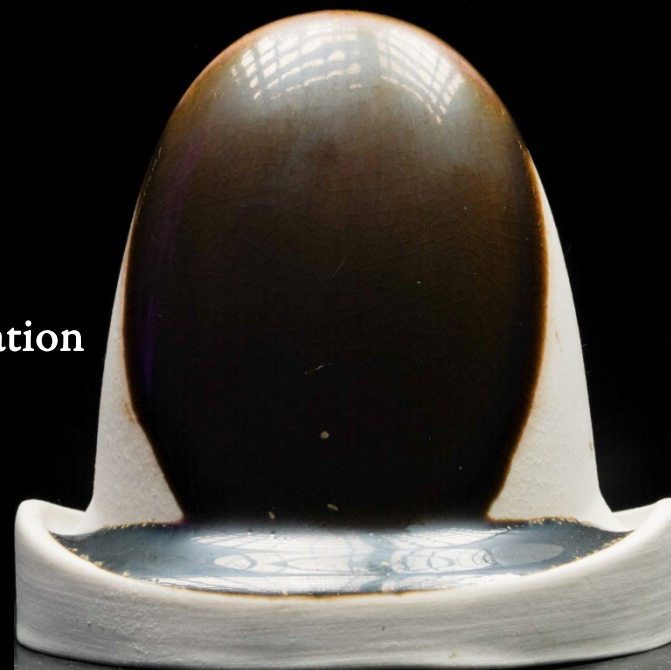
# Purple Rain

|                  |       |
|------------------|-------|
| Neph Sy          | 40.93 |
| Dolomite         | 30.27 |
| EPK              | 5.04  |
| Flint            | 23.76 |
| Copper Carbonate | 3.00  |
| Red Iron Oxide   | 6.00  |
| Water            | 60    |



Oxidation

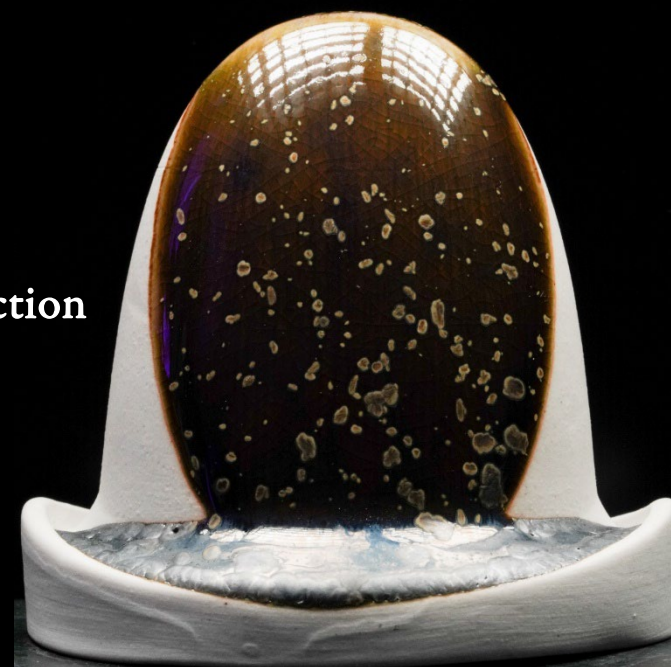
1-3 Second Dip



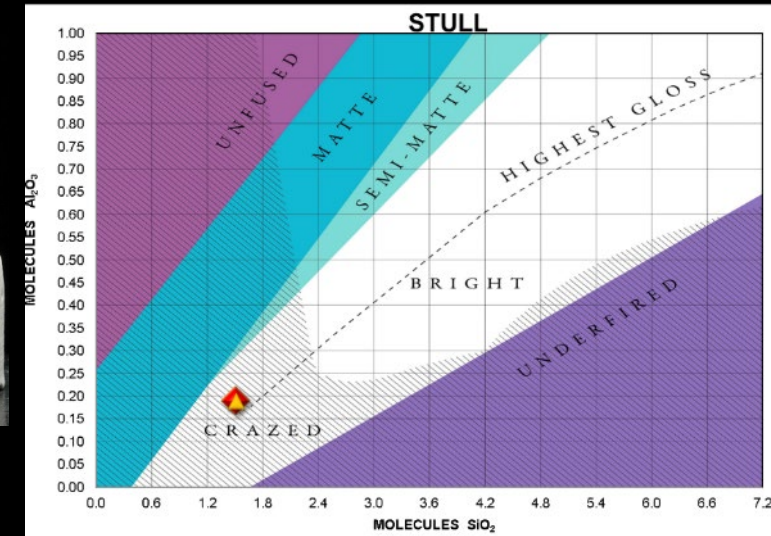
2-3 Second Dips



Reduction



| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.20          |                          | Alkaline Earths<br>0.80 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.51                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.19 | Na <sub>2</sub> O<br>0.12      | K <sub>2</sub> O<br>0.03 | MgO<br>0.29             | CaO<br>0.30 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.19               | Li <sub>2</sub> O              | CuO<br>0.04              | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.22 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



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# Purple Rain

|                   |       |
|-------------------|-------|
| Neph Sy           | 40.93 |
| Dolomite          | 30.27 |
| EPK               | 5.04  |
| Flint             | 23.76 |
| Copper Carbonate  | 3.00  |
| Manganese Dioxide | 3.00  |
| Water             | 60    |



1-3 Second Dip



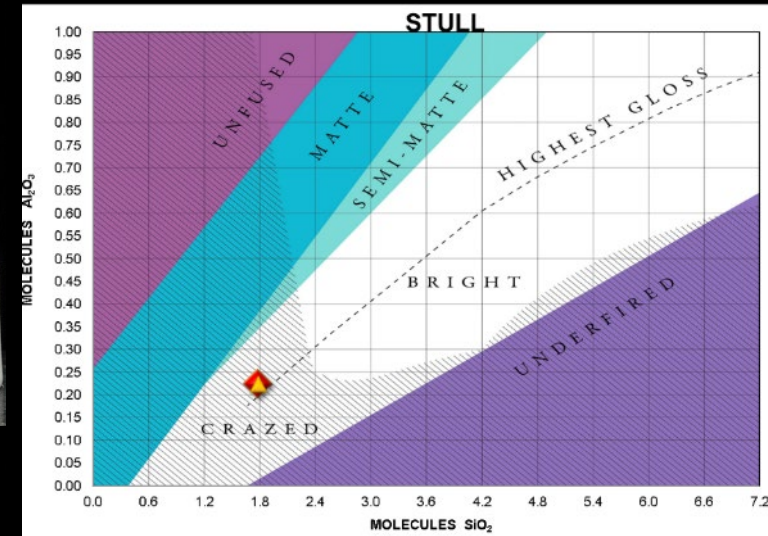
2-3 Second Dips

Oxidation



Reduction

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.23          |                          | Alkaline Earths<br>0.77  |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|--------------------------|-------------|
| SiO <sub>2</sub><br>1.78                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.22 | Na <sub>2</sub> O<br>0.14      | K <sub>2</sub> O<br>0.04 | MgO<br>0.34              | CaO<br>0.35 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.22               | Li <sub>2</sub> O              | CuO<br>0.05              | SrO                      | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                      | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub><br>0.07 | CoO         |



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# Purple Rain

|                     |       |
|---------------------|-------|
| Neph Sy             | 40.93 |
| Dolomite            | 30.27 |
| EPK                 | 5.04  |
| Flint               | 23.76 |
| Copper Carbonate    | 3.00  |
| Nickel Carb (Green) | 2.50  |
| Water               | 60    |



1-3 Second Din



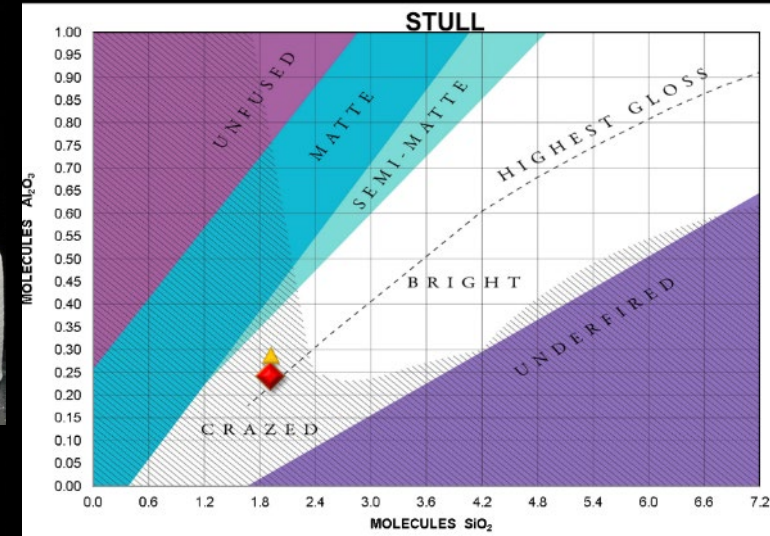
2-3 Second Dins

Oxidation



Reduction

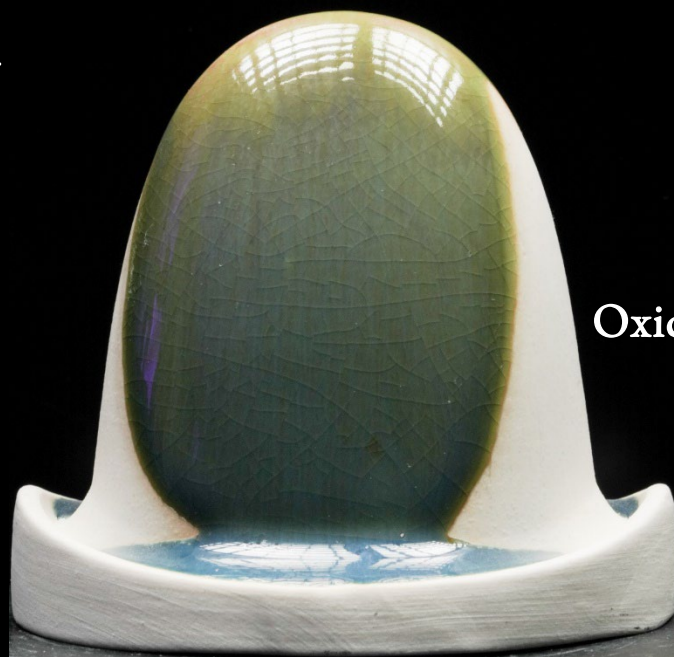
| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>6.63 :1 |                                                      | Alkali Metals<br>0.25          |                          | Alkaline Earths<br>0.75 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.92                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.29 | Na <sub>2</sub> O<br>0.15      | K <sub>2</sub> O<br>0.04 | MgO<br>0.37             | CaO<br>0.38 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.24               | Li <sub>2</sub> O              | CuO<br>0.05              | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO<br>0.05                                          | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



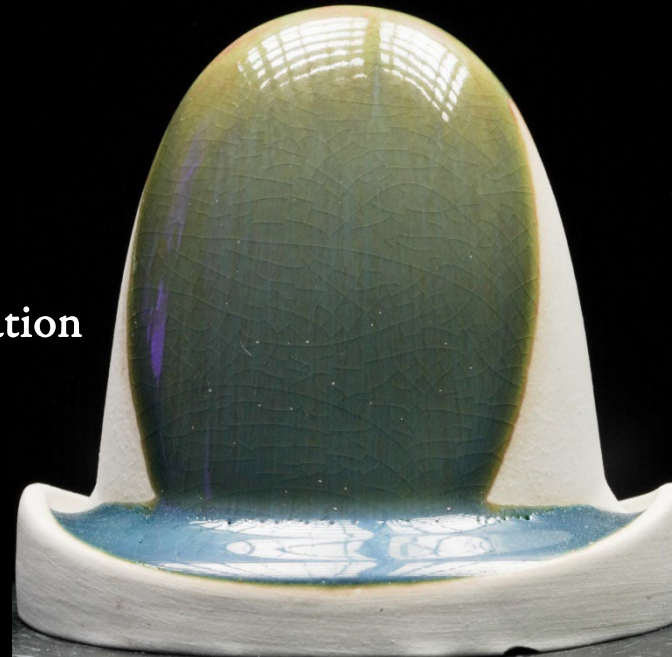
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# Purple Rain

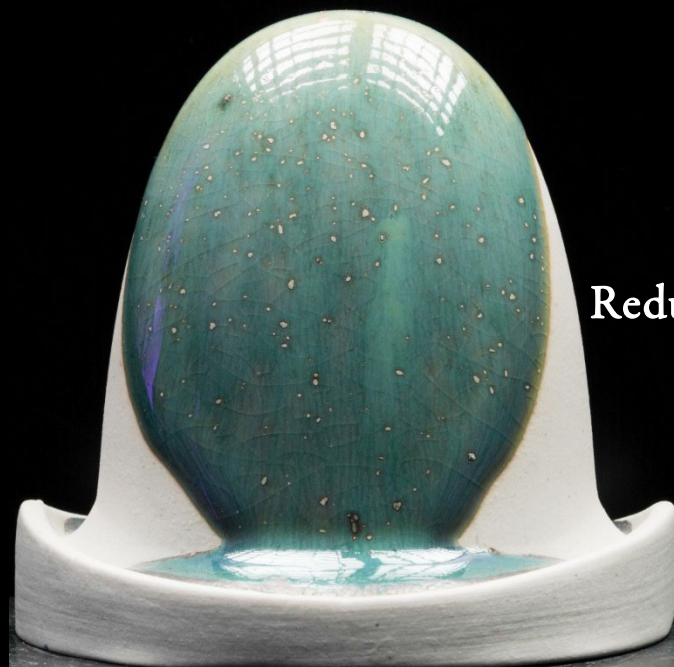
|                  |       |
|------------------|-------|
| Neph Sy          | 40.93 |
| Dolomite         | 30.27 |
| EPK              | 5.04  |
| Flint            | 23.76 |
| Copper Carbonate | 3.00  |
| Titanium Dioxide | 6.00  |
| Water            | 60    |



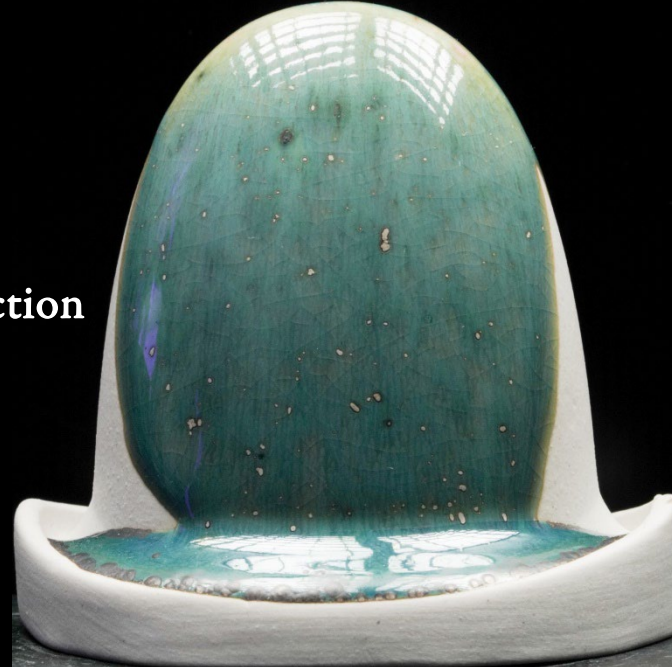
1-3 Second Dip



2-3 Second Dips

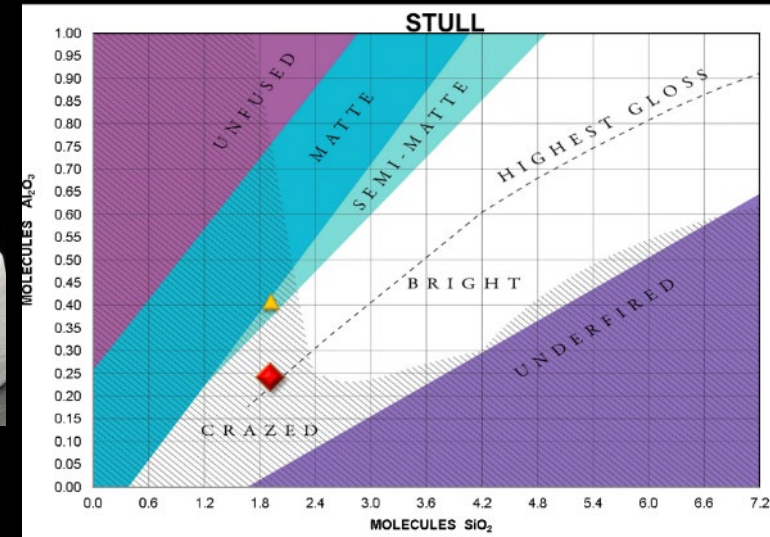


Reduction



Oxidation

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>4.69 :1 |                                                      | Alkali Metals<br>0.25          |                          | Alkaline Earths<br>0.75 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.92                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.41 | Na <sub>2</sub> O<br>0.15      | K <sub>2</sub> O<br>0.04 | MgO<br>0.37             | CaO<br>0.38 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.24               | Li <sub>2</sub> O              | CuO<br>0.05              | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.17                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |

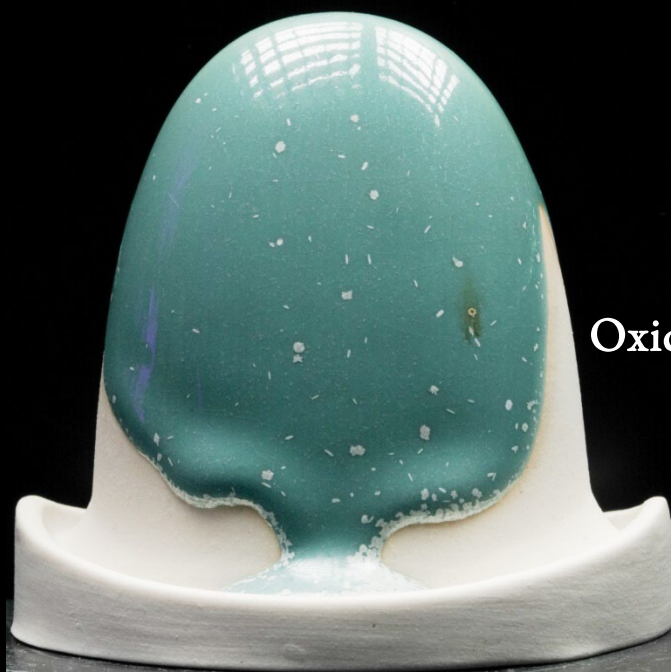


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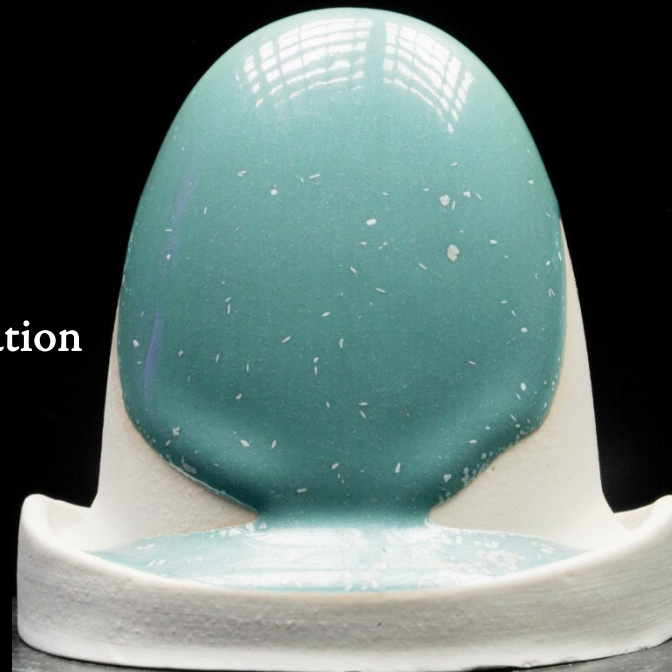
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# Purple Rain

|                  |       |
|------------------|-------|
| Neph Sy          | 40.93 |
| Dolomite         | 30.27 |
| EPK              | 5.04  |
| Flint            | 23.76 |
| Copper Carbonate | 3.00  |
| Tin Oxide        | 5.00  |
| Water            | 60    |



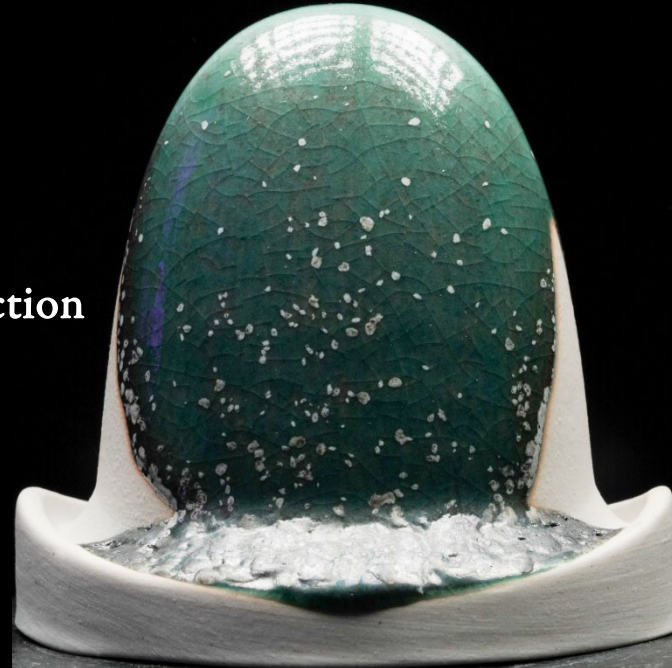
1-3 Second Dip



2-3 Second Dips

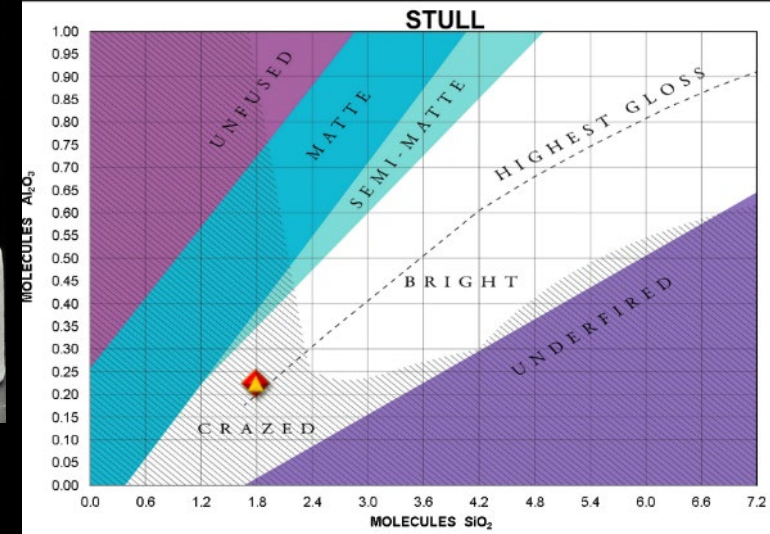


Reduction



Oxidation

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.30          |                          | Alkaline Earths<br>0.70 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.79                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.23 | Na <sub>2</sub> O<br>0.14      | K <sub>2</sub> O<br>0.04 | MgO<br>0.34             | CaO<br>0.35 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.22               | Li <sub>2</sub> O              | CuO<br>0.05              | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub><br>0.07 | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |

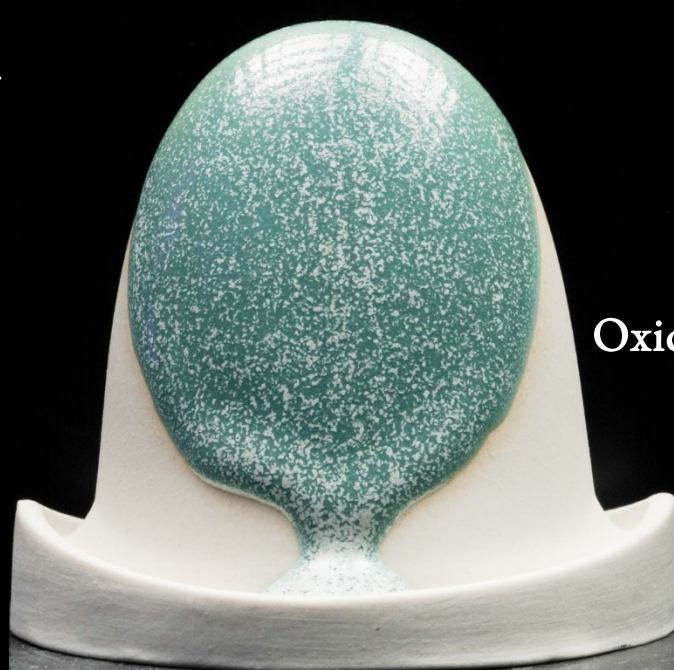


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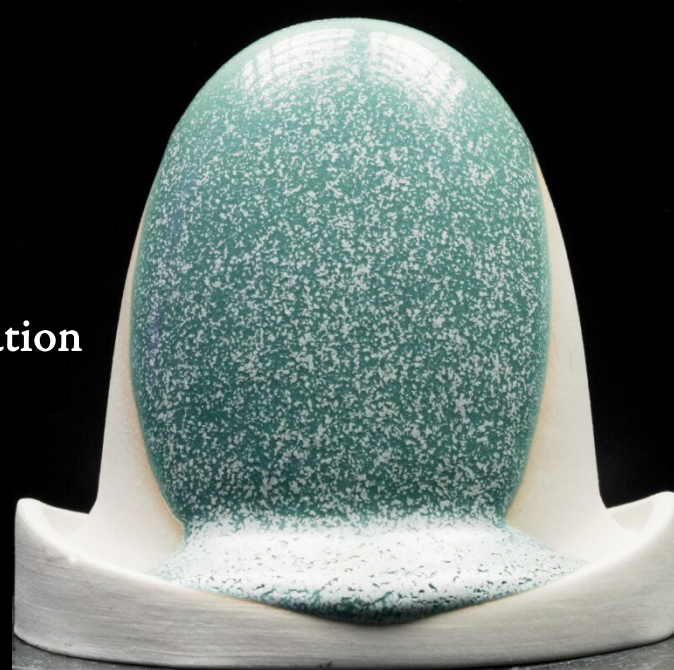
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# Purple Rain

|                   |       |
|-------------------|-------|
| Neph Sy           | 40.93 |
| Dolomite          | 30.27 |
| EPK               | 5.04  |
| Flint             | 23.76 |
| Copper Carbonate  | 3.00  |
| Ultrax (Zircopax) | 10.00 |
| Water             | 60    |



1-3 Second Dip



2-3 Second Dips

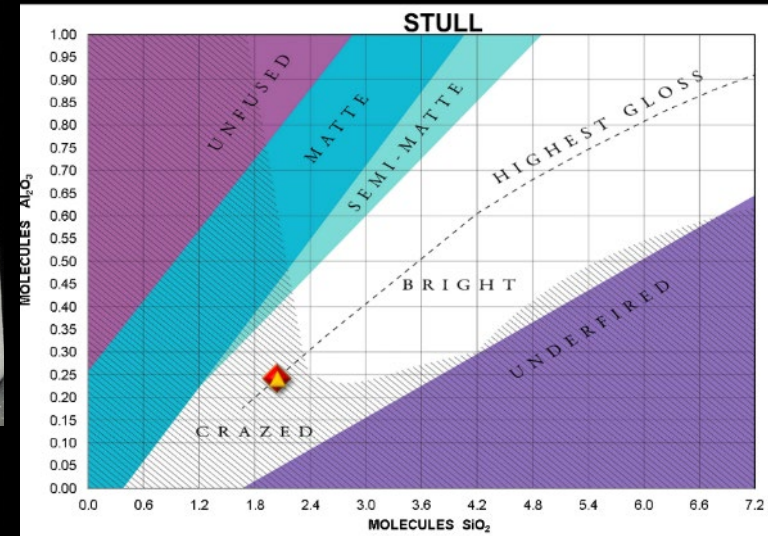


Reduction



Oxidation

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>8.43 :1 |                                                      | Alkali Metals<br>0.25          |                          | Alkaline Earths<br>0.75 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>2.04                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.24 | Na <sub>2</sub> O<br>0.15      | K <sub>2</sub> O<br>0.04 | MgO<br>0.37             | CaO<br>0.38 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.24               | Li <sub>2</sub> O              | CuO<br>0.05              | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



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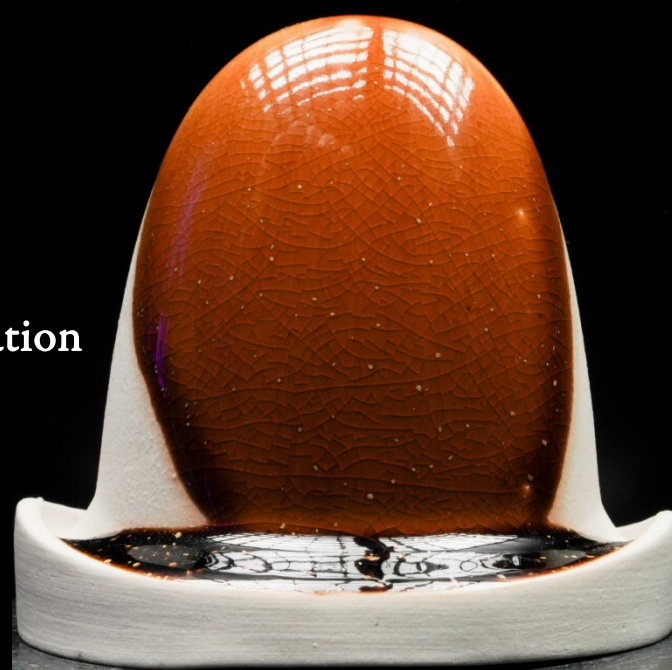
# Purple Rain

|                   |       |
|-------------------|-------|
| Neph Sy           | 40.93 |
| Dolomite          | 30.27 |
| EPK               | 5.04  |
| Flint             | 23.76 |
| Red Iron Oxide    | 6.00  |
| Manganese Dioxide | 3.00  |
| Water             | 60    |



Oxidation

1-3 Second Din



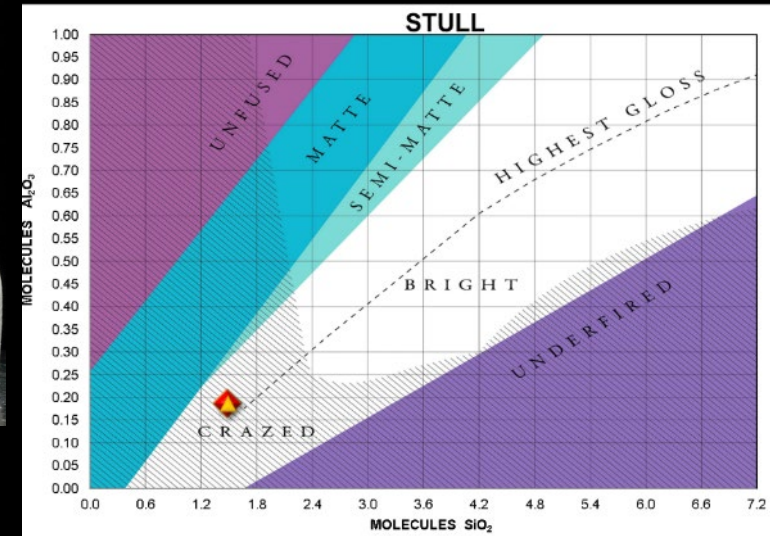
2-3 Second Dins



Reduction



| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.15          |                          | Alkaline Earths<br>0.85  |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|--------------------------|-------------|
| SiO <sub>2</sub><br>1.48                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.19 | Na <sub>2</sub> O<br>0.12      | K <sub>2</sub> O<br>0.03 | MgO<br>0.29              | CaO<br>0.29 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.19               | Li <sub>2</sub> O              | CuO                      | SrO                      | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                      | FeO<br>0.21 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub><br>0.06 | CoO         |



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# Purple Rain

|                     |       |
|---------------------|-------|
| Neph Sy             | 40.93 |
| Dolomite            | 30.27 |
| EPK                 | 5.04  |
| Flint               | 23.76 |
| Red Iron Oxide      | 6.00  |
| Nickel Carb (Green) | 2.50  |
| Red Iron Oxide      | 6.00  |



1-3 Second Dip



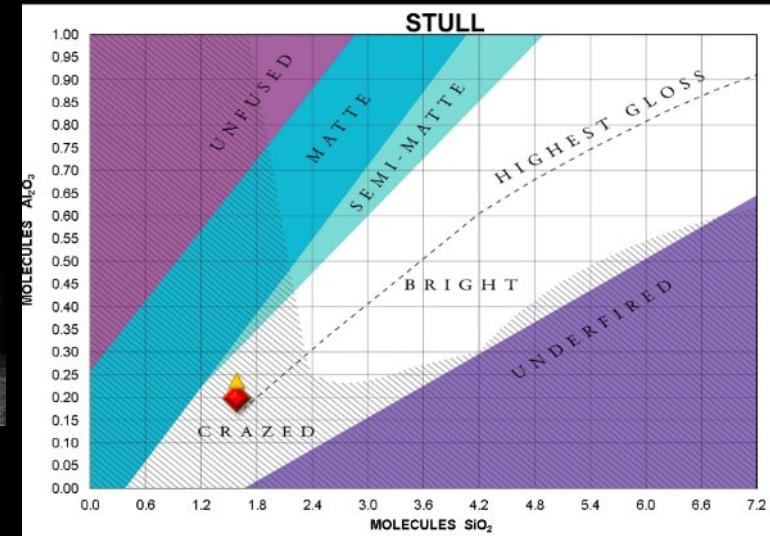
2-3 Second Dips



Reduction



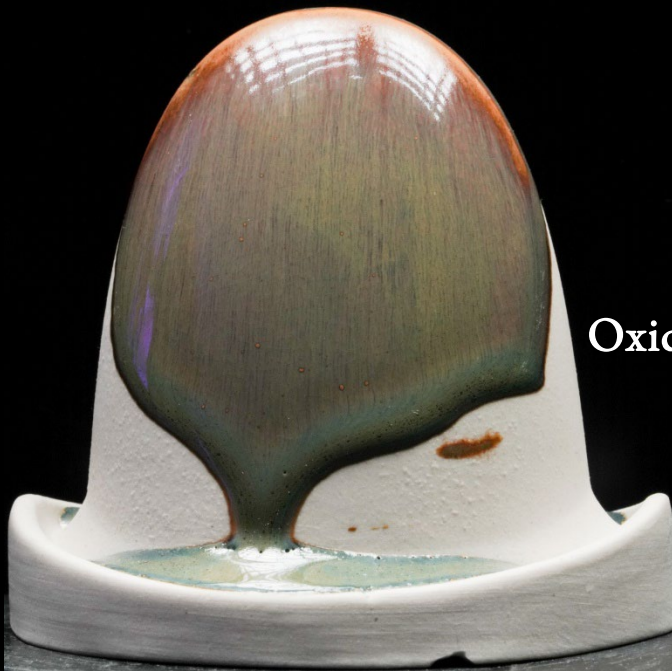
| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>6.63 :1 |                                                      | Alkali Metals<br>0.16          |                          | Alkaline Earths<br>0.84 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.58                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.24 | Na <sub>2</sub> O<br>0.13      | K <sub>2</sub> O<br>0.04 | MgO<br>0.30             | CaO<br>0.31 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.20               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO<br>0.04                                          | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.22 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



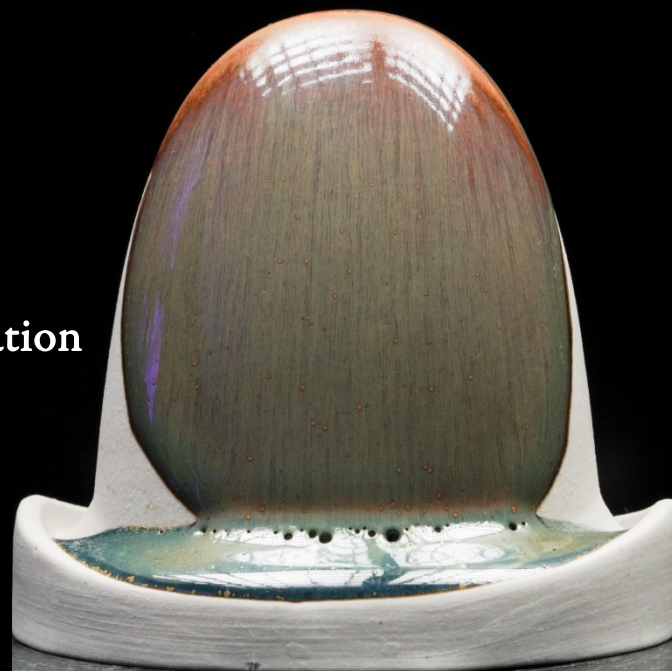
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# Purple Rain

|                  |       |
|------------------|-------|
| Neph Sy          | 40.93 |
| Dolomite         | 30.27 |
| EPK              | 5.04  |
| Flint            | 23.76 |
| Red Iron Oxide   | 6.00  |
| Titanium Dioxide | 6.00  |
| Water            | 60    |

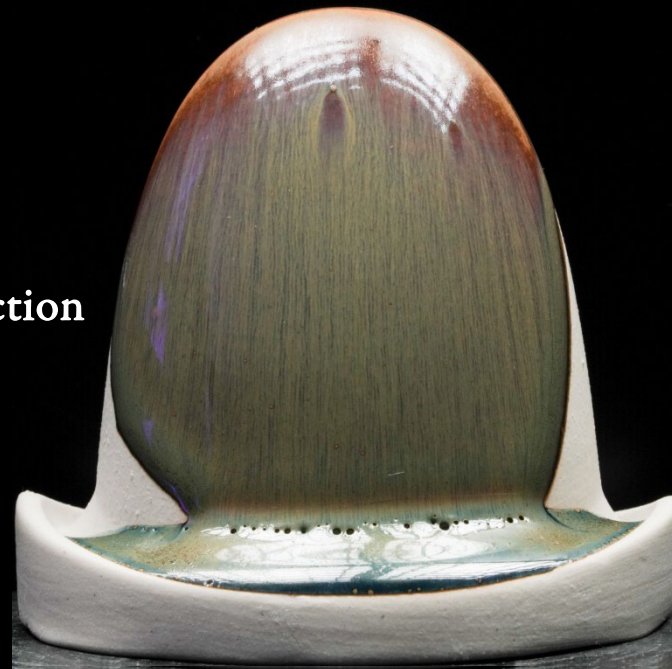
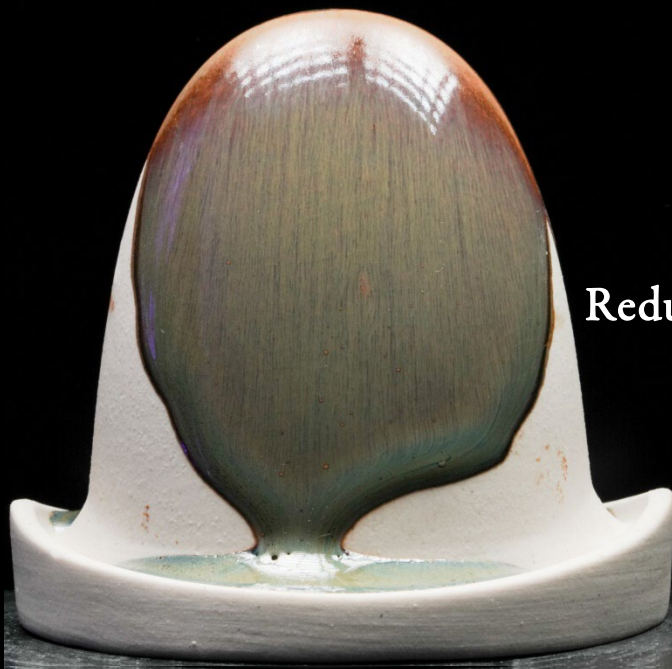


1-3 Second Dip



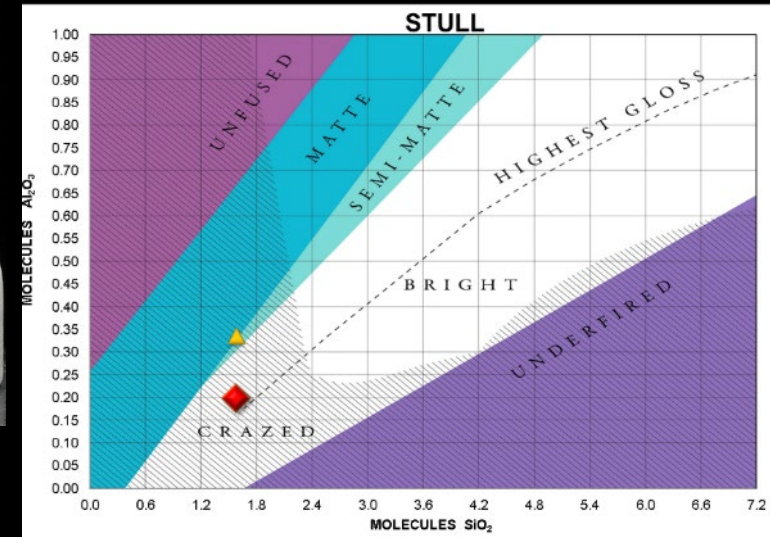
2-3 Second Dips

Oxidation



Reduction

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>4.69 :1 |                                                      | Alkali Metals<br>0.16          |                          | Alkaline Earths<br>0.84 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.58                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.34 | Na <sub>2</sub> O<br>0.13      | K <sub>2</sub> O<br>0.04 | MgO<br>0.30             | CaO<br>0.31 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.20               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.14                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.22 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



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# Purple Rain

|                |       |
|----------------|-------|
| Neph Sy        | 40.93 |
| Dolomite       | 30.27 |
| EPK            | 5.04  |
| Flint          | 23.76 |
| Red Iron Oxide | 6.00  |
| Tin Oxide      | 5.00  |
| Water          | 60    |



1-3 Second Dip



2-3 Second Dips

Oxidation



Reduction

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.21          |                          | Alkaline Earths<br>0.79 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.49                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.19 | Na <sub>2</sub> O<br>0.12      | K <sub>2</sub> O<br>0.03 | MgO<br>0.29             | CaO<br>0.29 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.19               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub><br>0.06 | ZnO                     | FeO<br>0.21 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



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# Purple Rain

|                   |       |
|-------------------|-------|
| Neph Sy           | 40.93 |
| Dolomite          | 30.27 |
| EPK               | 5.04  |
| Flint             | 23.76 |
| Red Iron Oxide    | 6.00  |
| Ultrax (Zircopax) | 10.00 |
| Water             | 60    |



1-3 Second Dip



2-3 Second Dips

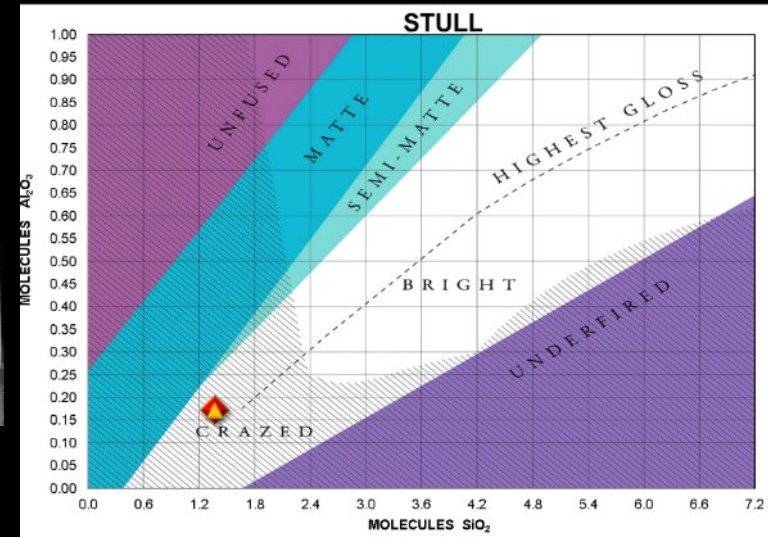


Reduction



Oxidation

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.14          |                          | Alkaline Earths<br>0.86 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.37                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.17 | Na <sub>2</sub> O<br>0.11      | K <sub>2</sub> O<br>0.03 | MgO<br>0.26             | CaO<br>0.27 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.17               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.19 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO<br>0.13 |



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# Purple Rain

|                     |       |
|---------------------|-------|
| Neph Sy             | 40.93 |
| Dolomite            | 30.27 |
| EPK                 | 5.04  |
| Flint               | 23.76 |
| Manganese Dioxide   | 3.00  |
| Nickel Carb (Green) | 2.50  |
| Water               | 60    |



1-3 Second Dip



2-3 Second Dips

Oxidation



1-3 Second Dip



2-3 Second Dips

Reduction

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>6.63 :1 |                                                      | Alkali Metals<br>0.19          |                          | Alkaline Earths<br>0.81  |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|--------------------------|-------------|
| SiO <sub>2</sub><br>1.88                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.28 | Na <sub>2</sub> O<br>0.15      | K <sub>2</sub> O<br>0.04 | MgO<br>0.36              | CaO<br>0.37 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.24               | Li <sub>2</sub> O              | CuO                      | SrO                      | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO<br>0.05                                          | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                      | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub><br>0.08 | CoO         |



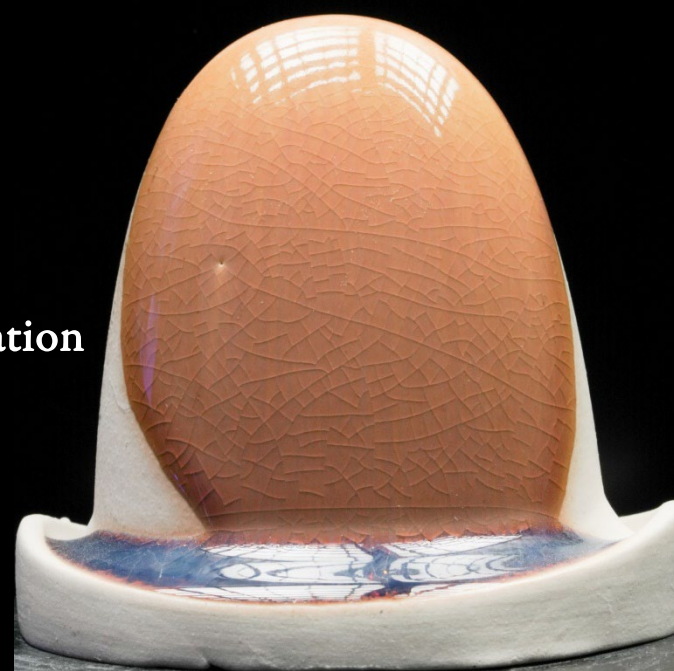
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# Purple Rain

|                   |       |
|-------------------|-------|
| Neph Sy           | 40.93 |
| Dolomite          | 30.27 |
| EPK               | 5.04  |
| Flint             | 23.76 |
| Manganese Dioxide | 3.00  |
| Titanium Dioxide  | 6.00  |
| Water             | 60    |

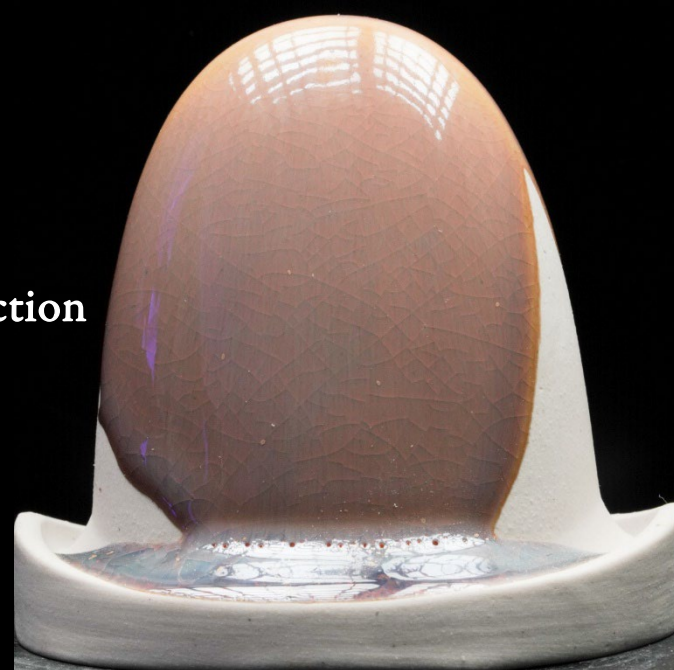
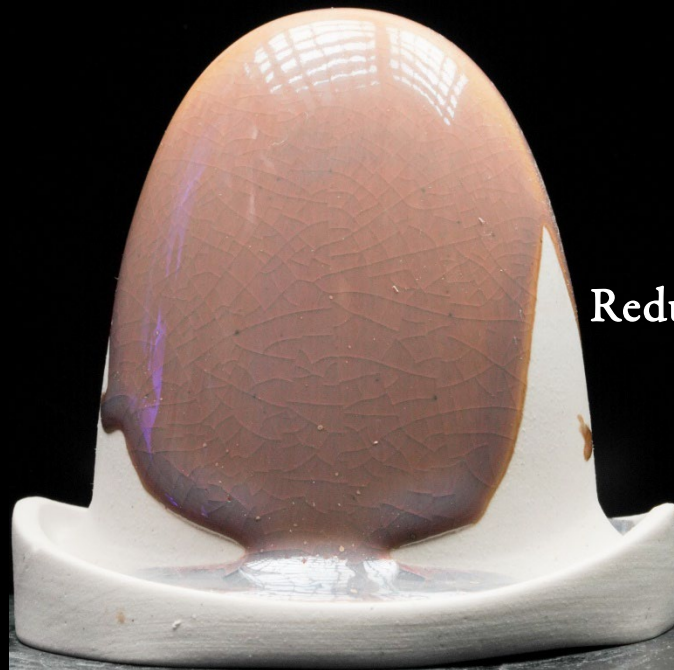


1-3 Second Dip



2-3 Second Dips

Oxidation



Reduction

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>4.69 :1 |                                                      | Alkali Metals<br>0.19          |                          | Alkaline Earths<br>0.81  |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|--------------------------|-------------|
| SiO <sub>2</sub><br>1.88                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.40 | Na <sub>2</sub> O<br>0.15      | K <sub>2</sub> O<br>0.04 | MgO<br>0.36              | CaO<br>0.37 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.24               | Li <sub>2</sub> O              | CuO                      | SrO                      | BaO         |
| TiO <sub>2</sub><br>0.16                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                      | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub><br>0.08 | CoO         |



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# Purple Rain

|                   |       |
|-------------------|-------|
| Neph Sy           | 40.93 |
| Dolomite          | 30.27 |
| EPK               | 5.04  |
| Flint             | 23.76 |
| Manganese Dioxide | 3.00  |
| Tin Oxide         | 5.00  |
| Water             | 60    |



1-3 Second Dip



2-3 Second Dips

Oxidation



Reduction



| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.93 :1 |                                                      | Alkali Metals<br>0.25          |                          | Alkaline Earths<br>0.75  |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|--------------------------|-------------|
| SiO <sub>2</sub><br>1.75                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.22 | Na <sub>2</sub> O<br>0.14      | K <sub>2</sub> O<br>0.04 | MgO<br>0.34              | CaO<br>0.34 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.22               | Li <sub>2</sub> O              | CuO                      | SrO                      | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub><br>0.07 | ZnO                      | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub><br>0.07 | CoO         |



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# Purple Rain

|                   |       |
|-------------------|-------|
| Neph Sy           | 40.93 |
| Dolomite          | 30.27 |
| EPK               | 5.04  |
| Flint             | 23.76 |
| Manganese Dioxide | 3.00  |
| Ultrax (Zircopax) | 10.00 |
| Water             | 60    |



1-3 Second Dip



2-3 Second Dips

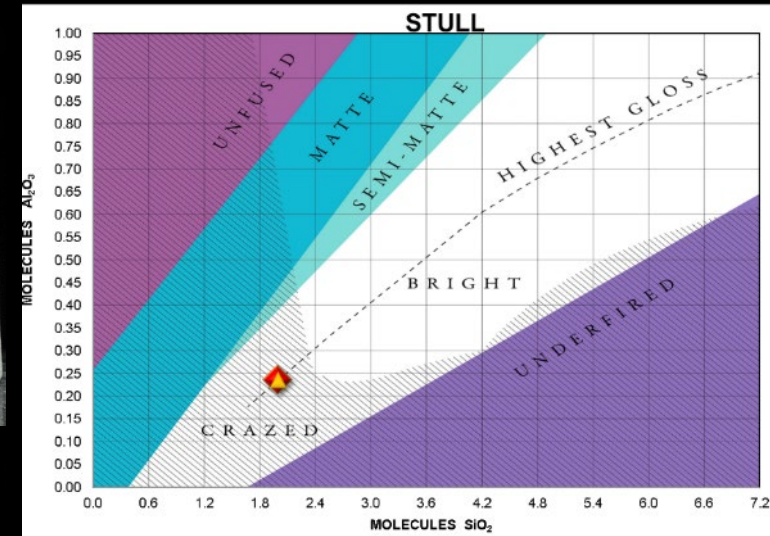
Oxidation



Reduction



| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>8.43 :1 |                                                      | Alkali Metals<br>0.19          |                          | Alkaline Earths<br>0.81  |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|--------------------------|-------------|
| SiO <sub>2</sub><br>2.00                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.24 | Na <sub>2</sub> O<br>0.15      | K <sub>2</sub> O<br>0.04 | MgO<br>0.36              | CaO<br>0.37 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.24               | Li <sub>2</sub> O              | CuO                      | SrO                      | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                      | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub><br>0.08 | CoO         |



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# Purple Rain

|                     |       |
|---------------------|-------|
| Neph Sy             | 40.93 |
| Dolomite            | 30.27 |
| EPK                 | 5.04  |
| Flint               | 23.76 |
| Nickel Carb (Green) | 2.50  |
| Titanium Dioxide    | 6.00  |
| Water               | 60    |



1-3 Second Dip



2-3 Second Dips

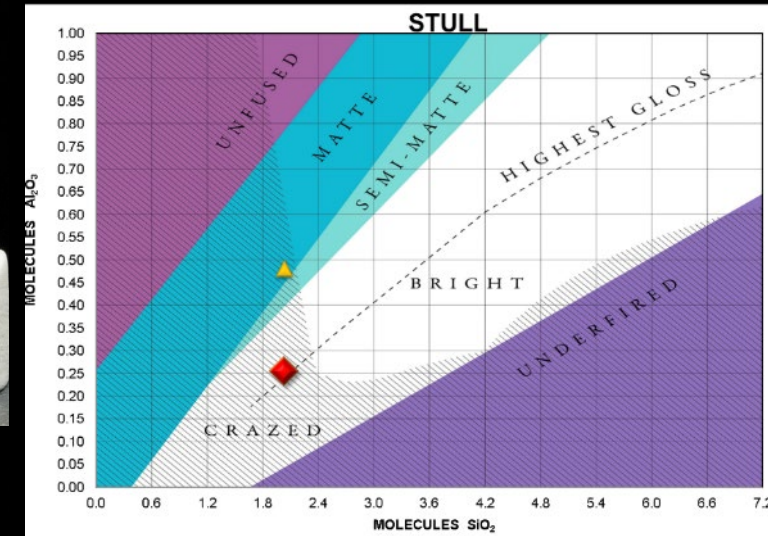


Reduction



Oxidation

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>4.21 : 1 |                                                      | Alkali Metals<br>0.21          |                          | Alkaline Earths<br>0.79 |             |
|--------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>2.03                                           | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.48 | Na <sub>2</sub> O<br>0.16      | K <sub>2</sub> O<br>0.05 | MgO<br>0.39             | CaO<br>0.40 |
| B <sub>2</sub> O <sub>3</sub>                                      | Al <sub>2</sub> O <sub>3</sub><br>0.26               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.18                                           | NiO<br>0.05                                          | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                     | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



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# Purple Rain

|                     |       |
|---------------------|-------|
| Neph Sy             | 40.93 |
| Dolomite            | 30.27 |
| EPK                 | 5.04  |
| Flint               | 23.76 |
| Nickel Carb (Green) | 2.50  |
| Tin Oxide           | 5.00  |
| Water               | 60    |



1-3 Second Dip

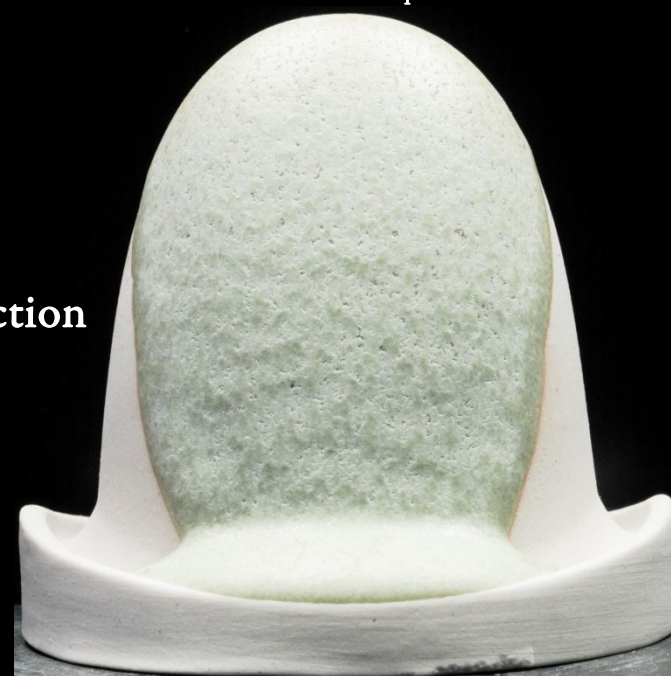


2-3 Second Dips

Oxidation



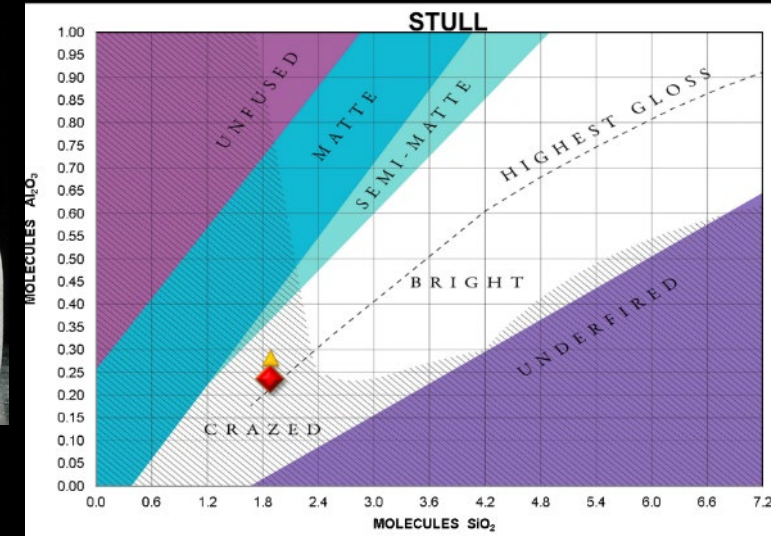
1-3 Second Dip



2-3 Second Dips

Reduction

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>6.63 :1 |                                                      | Alkali Metals<br>0.27          |                          | Alkaline Earths<br>0.73 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.88                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.28 | Na <sub>2</sub> O<br>0.15      | K <sub>2</sub> O<br>0.04 | MgO<br>0.36             | CaO<br>0.37 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.24               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO<br>0.05                                          | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub><br>0.07 | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



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# Purple Rain

|                     |       |
|---------------------|-------|
| Neph Sy             | 40.93 |
| Dolomite            | 30.27 |
| EPK                 | 5.04  |
| Flint               | 23.76 |
| Nickel Carb (Green) | 2.50  |
| Ultrax (Zircopax)   | 10.00 |
| Water               | 60    |



1-3 Second Dip



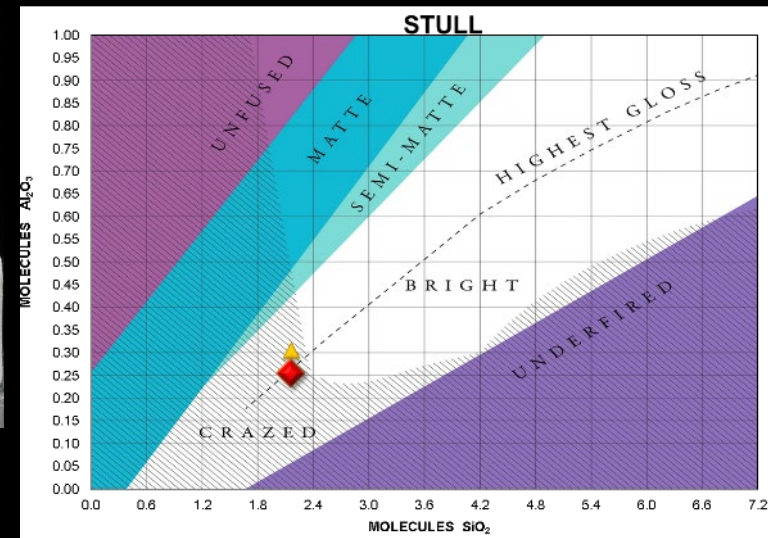
2-3 Second Dips

Oxidation



Reduction

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>7.05 :1 |                                                      | Alkali Metals<br>0.21          |                          | Alkaline Earths<br>0.79 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>2.16                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.31 | Na <sub>2</sub> O<br>0.16      | K <sub>2</sub> O<br>0.05 | MgO<br>0.39             | CaO<br>0.40 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.26               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO<br>0.05                                          | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



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# Purple Rain

|                  |       |
|------------------|-------|
| Neph Sy          | 40.93 |
| Dolomite         | 30.27 |
| EPK              | 5.04  |
| Flint            | 23.76 |
| Titanium Dioxide | 6.00  |
| Tin Oxide        | 5.00  |
| Water            | 80    |

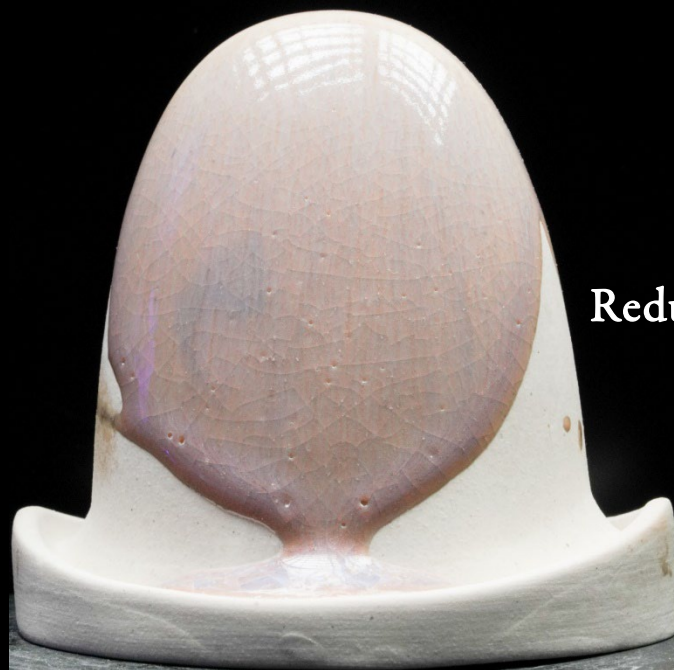


1-3 Second Dip



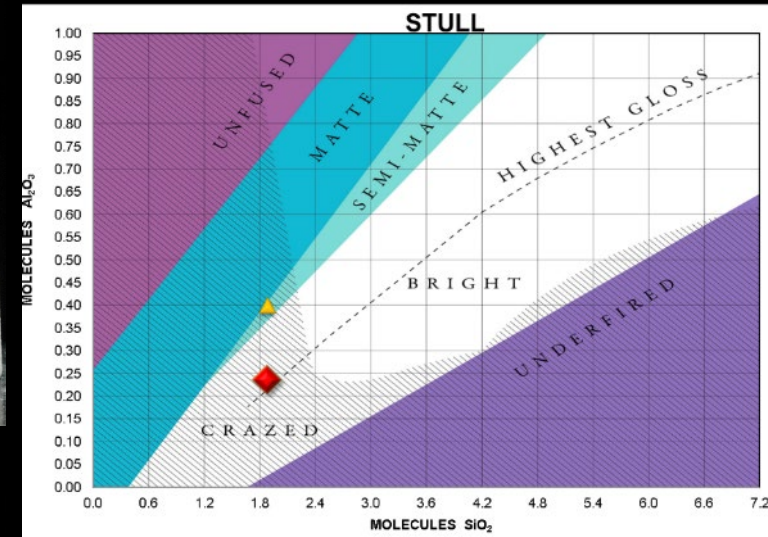
2-3 Second Dips

Oxidation



Reduction

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>4.69 :1 |                                                      | Alkali Metals<br>0.27          |                          | Alkaline Earths<br>0.73 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>1.88                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.40 | Na <sub>2</sub> O<br>0.15      | K <sub>2</sub> O<br>0.04 | MgO<br>0.36             | CaO<br>0.37 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.24               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.16                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub><br>0.07 | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



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# Purple Rain

|                   |       |
|-------------------|-------|
| Neph Sy           | 40.93 |
| Dolomite          | 30.27 |
| EPK               | 5.04  |
| Flint             | 23.76 |
| Titanium Dioxide  | 6.00  |
| Ultrax (Zircopax) | 10.00 |
| Water             | 80    |



1-3 Second Dip



2-3 Second Dips

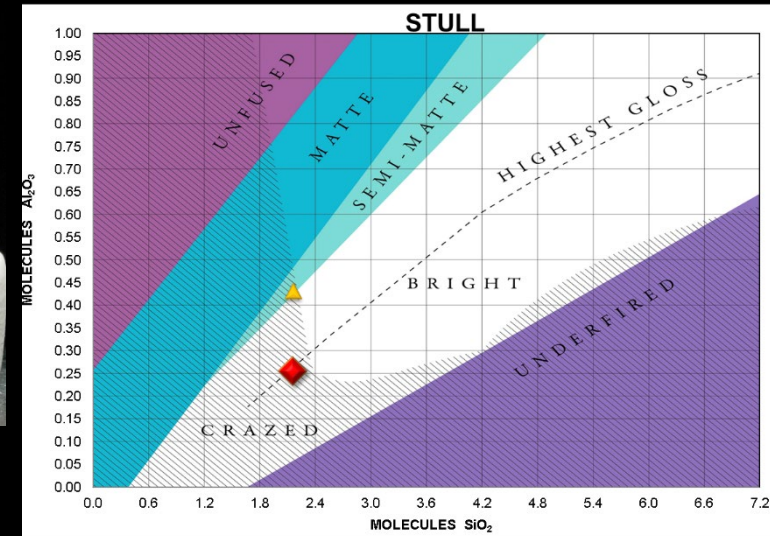


Reduction



Oxidation

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>4.99 :1 |                                                      | Alkali Metals<br>0.21          |                          | Alkaline Earths<br>0.79 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>2.16                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.43 | Na <sub>2</sub> O<br>0.16      | K <sub>2</sub> O<br>0.05 | MgO<br>0.39             | CaO<br>0.40 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.26               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.18                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub>         | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



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# Purple Rain

|                      |       |
|----------------------|-------|
| Neph Sy              | 40.93 |
| Dolomite             | 30.27 |
| EPK                  | 5.04  |
| Flint                | 23.76 |
| Tin Oxide            | 5.00  |
| Ultrox<br>(Zircopax) | 10.00 |
| Water                | 80    |



1-3 Second Dip



2-3 Second Dips

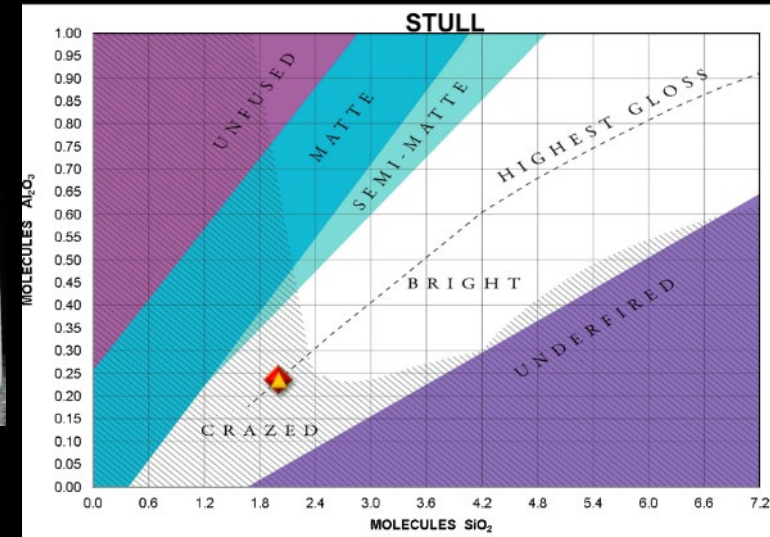


Reduction



Oxidation

| SiO <sub>2</sub> :Al <sub>2</sub> O <sub>3</sub> Ratio<br>8.43 :1 |                                                      | Alkali Metals<br>0.27          |                          | Alkaline Earths<br>0.73 |             |
|-------------------------------------------------------------------|------------------------------------------------------|--------------------------------|--------------------------|-------------------------|-------------|
| SiO <sub>2</sub><br>2.00                                          | Collective "Al <sub>2</sub> O <sub>3</sub> "<br>0.24 | Na <sub>2</sub> O<br>0.15      | K <sub>2</sub> O<br>0.04 | MgO<br>0.36             | CaO<br>0.37 |
| B <sub>2</sub> O <sub>3</sub>                                     | Al <sub>2</sub> O <sub>3</sub><br>0.24               | Li <sub>2</sub> O              | CuO                      | SrO                     | BaO         |
| TiO <sub>2</sub><br>0.00                                          | NiO                                                  | Bi <sub>2</sub> O <sub>3</sub> | SnO <sub>2</sub><br>0.07 | ZnO                     | FeO<br>0.00 |
| Cr <sub>2</sub> O <sub>3</sub>                                    | ZrO <sub>2</sub>                                     | P <sub>2</sub> O <sub>5</sub>  |                          | MnO <sub>2</sub>        | CoO         |



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